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Commerce

National
Telecommunications
and Information
Administration

Environmental Assessment

Rosebud Broadband Fiber and Tower Installation

Todd and Mellette Counties, South Dakota

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Acronyms

AQI	Air Quality Index	NPDES	National Pollutant Discharge Elimination System
BMPs	Best Management Practices		
CWA	Clean Water Act	NPL	National Priority List
DOC	Department of Commerce	NRHP	National Register of Historic Places
EA	Environmental Assessment	NTIA	National Telecommunications and Information Administration
ECOS-IPaC	Environmental Conservation Online System – Information, Planning, and Conservation	ROW	Right-of-Way
EO	Executive Order	RST	Rosebud Sioux Tribe
EPA	Environmental Protection Agency	SDDANR	South Dakota Department of Agriculture & Natural Resources
ESA	Endangered Species Act	SDSGS	South Dakota State Geological Survey
FEMA	Federal Emergency Management Agency	SIP	State Implementation Plan
FIRM	Flood Insurance Rate Map	SWPPP	Stormwater Pollution Prevention Plan
FPPA	Farmland Protection Policy Act	THPO	Tribal Historic Preservation Office
HDD	Horizontal Direction Drilling	USACE	US Army Corp of Engineers
NAAQS	National Ambient Air Quality Standards	USDA	US Department of Agriculture
NEPA	National Environmental Protection Act	USFWS	US Fish & Wildlife Service
NHPA	National Historic Preservation Act	WNS	White Nose Syndrome
NLEB	Northern Long Eared Bat	WOTUS	Waters of the US

1.0 Executive Summary

The proposed project will supply quality broadband services of at least 100/20Mbps to approximately 1,500 Native American households in the Rosebud Sioux Tribe, in South Dakota. This project will help close the broadband connectivity and infrastructure disparity gap between tribal and non-tribal communities. The Tribe, working cooperatively with the Department of Commerce (DOC) National Telecommunications and Information Administration (NTIA) through the Tribal Broadband Connectivity Program, seeks to expand and improve broadband connectivity to Tribal households, business, and anchor institutions in Todd and Mellette Counties, South Dakota.

The need for the proposed project originates from a chronic underinvestment of broadband connectivity infrastructure on Tribal lands in the United States. The Rosebud Reservation and its trust lands are in an isolated area of South Dakota where private industry has not invested these technologies. Large, populated cities were the first areas in the United States (U.S.) to be provided these investments however, these investments have not been equally provided in the less populated and isolated area in the U.S. particularly Tribal Indian reservations.

Expanding and improving broadband connectivity will occur through the installation of approximately 30 miles of buried fiber optic cable, the installation of 17 new broadband towers, and retrofitting two existing radio towers. Three of the towers will be directly connected to one another via a buried fiber optic connection. The connected towers will broadcast a primary signal to the remaining broadband towers to then broadcast signal out wirelessly. This method of broadcasting is referred to as “band 41 5G microcell connection”. Upgrading the broadband infrastructure will allow households, business, and anchor institutions (for example, public schools, public or multi-family housing developments, library, healthcare providers, non-profit, or a government agency) in the area to access high-speed 5G LTE networks in an area where it was previously not available.

The proposed project has one build alternative. Considering the remote nature of this project, towers were located in high elevation points adjacent to communities they are connecting. In addition, each selected tower location was outside any water body/wetland/resource to avoid placing fill of any kind into a water of the U.S. These locations were selected to provide the greatest broadband highspeed coverage for the Reservation. The 20-mile buried fiber optic cable is proposed to be located along existing roadway ROW and where similar utilities may be present to minimize impacts to adjacent environmental or cultural resources.

An Environmental Assessment (EA) under the National Telecommunications and Information Administration has been completed to address the National Environmental Policy Act (NEPA) of 1969. The results of the EA indicate that the Proposed Action would not result in any significant adverse effects to the natural, cultural, or human environment. The findings are summarized in the table below.

Table 1: Effect Comparison of Alternatives

Resources	Proposed Action Alternative	No Action Alternative
Noise	No significant negative long-term impacts anticipated. Short term negative impacts may occur from construction activities but are expected to be temporary in nature.	No changes from current existing conditions
Air Quality	No significant negative long-term impacts anticipated. Short term negative impacts may occur from construction activities but are expected to be temporary in nature.	No changes from current existing conditions

Resources	Proposed Action Alternative	No Action Alternative
Geology and Soils	Anticipated minimal long-term impacts to soils due to the conversion of some land classified as prime farmland into non-agricultural land due to the expected footprint of broadband towers.	No changes from current existing conditions
Water Resources	No significant negative long-term impacts anticipated. Short term negative impacts may occur from construction activities but are expected to be temporary in nature due to avoidance and mitigation efforts.	No changes from current existing conditions
Biological Resources	No significant negative long-term impacts anticipated. Short term negative impacts may occur from construction activities but are expected to be temporary in nature due to mitigation efforts and avoidance measures where practical and will cease upon completion of construction activities.	No changes from current existing conditions
Historic and Cultural Resources	No significant negative long-term or short-term impacts are anticipated.	No changes from current existing conditions
Aesthetic and Visual Resources	No significant negative long-term impacts anticipated. Short-term negative impacts are likely to occur during construction activities but are expected to be temporary in nature and cease upon completion of construction activities.	No changes from current existing conditions
Land Use	Anticipated minimal long-term impacts to soils due to the conversion of some agricultural land into non-agricultural land due to the expected footprint of broadband towers.	No changes from current existing conditions
Transportation	No significant negative long-term impacts anticipated. Short-term negative impacts are likely to occur during construction activities but are expected to be temporary in nature and cease upon completion of construction activities.	No changes from current existing conditions
Utilities	No long-term or short-term negative impacts anticipated. Avoidance of belowground utilities will be accomplished by utilizing the 811 hotlines ("Call Before You Dig" nationwide hotline)	No changes from current existing conditions

Resources	Proposed Action Alternative	No Action Alternative
Human Health and Safety	No significant negative long-term impacts anticipated. Short-term negative impacts are anticipated to occur but are expected to be minor in nature (noise pollution, petroleum or hazardous liquid releases, air pollution from use of fossil fuels, and traffic hazards resulting from construction activities). Short-term impacts will be mitigated through the use of site-specific BMPs, routine education, safety briefings, careful planning, and proper preparation.	No changes from current existing conditions

2.0 Purpose and Need

2.1.1 Introduction

Rosebud Sioux Tribe was awarded a grant through the Tribal Broadband Connectivity Program (TBCP) administered under the NTIA. Under this award, the Broadband Infrastructure Deployment project proposes to install wireless long-term evolution (LTE) services directly connecting 1,526 unserved Native American households with fiber to the home and/or fixed wireless to the home. The EA document is being prepared to assist in identifying the potential environmental effects this project may have, in accordance with NEPA to satisfy funding, BIA, and NTIA requirements.

The proposed project will supply quality broadband services of at least 100/20Mbps to approximately 1,500 Native American households which will help to close the infrastructure disparity gap between tribal and non-tribal communities. The Tribe, working cooperatively with the Department of Commerce (DOC) National Telecommunications and Information Administration (NTIA) through the Tribal Broadband Connectivity Program seeks to expand and improve broadband connectivity to Tribal households, business, and anchor institutions in Todd and Mellette Counties, South Dakota.

2.1.2 Background

The Rosebud Sioux Tribe (referred to as “the Tribe” throughout this document) are Sicangu, a band of Lakota people. They reside on the Rosebud Indian Reservation in South Dakota, United States. The reservation includes within its recognized border all of Todd County, an unincorporated county of South Dakota. In addition, the Tribe has communities and extensive lands and populations in the four adjacent counties, which were once within the reservation boundaries: Tripp, Lyman, Mellette, and Gregory counties, all in South Dakota. Mellette County, especially, has extensive off-reservation trust land. The total land area of the reservation and its trust lands is 1,970.362 sq mi (5,103.214 km²) with a population of 10,469 in the 2000 census. See **Figure 1** for an overview of the Rosebud Sioux Reservation.

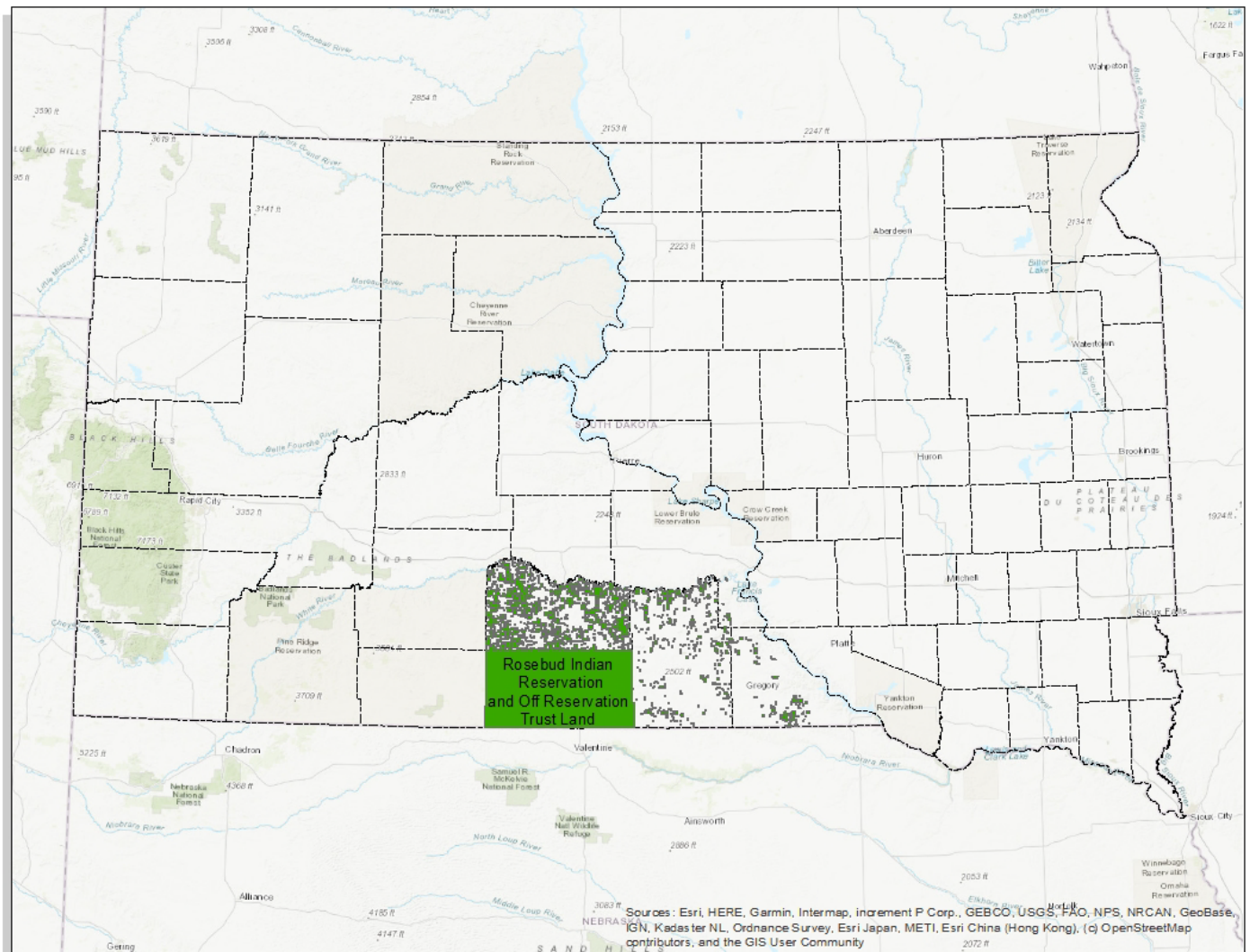


Figure 1: Rosebud Sioux Reservation and Off-Reservation Trust Land Map, South Dakota

3.0 Description of Proposed Action and Alternatives

This Chapter consists of a description of the proposed action and project alternatives, in addition to the rationale for the alternative selected for further evaluation.

3.1 Proposed Action

3.1.1 Location

The proposed project is located in Todd and Mellette Counties in south central South Dakota. **Figure 2** below illustrates the location of towers and fiber optic cable installation.

The proposed project will consist of placing approximately 30 miles of buried fiber optic cable, constructing 17 broadband towers, and retrofitting two existing radio towers. All construction activities associated with the installation of fiber optic cable, broadband tower construction, and radio tower upgrades will be performed by a Contractor(s) approved by the Tribe.

3.1.2 Project Description

Expanding and improving broadband connectivity will occur through the installation of approximately 30 miles of buried fiber optic cable, the installation of 17 new broadband towers, and retrofitting two existing radio towers. Three of the towers will be directly connected to one another via a buried fiber optic connection. The connected towers will broadcast a primary signal to the remaining broadband towers to then broadcast signal out wirelessly. This method of broadcasting is

referred to as “band 41 5G microcell connection”. Upgrading the broadband infrastructure will allow households, business, and anchor institutions (including, public schools, public or multi-family housing developments, library, healthcare providers, non-profit, or a government agency) in the area to access high-speed 5G LTE networks in an area where it was previously not available.

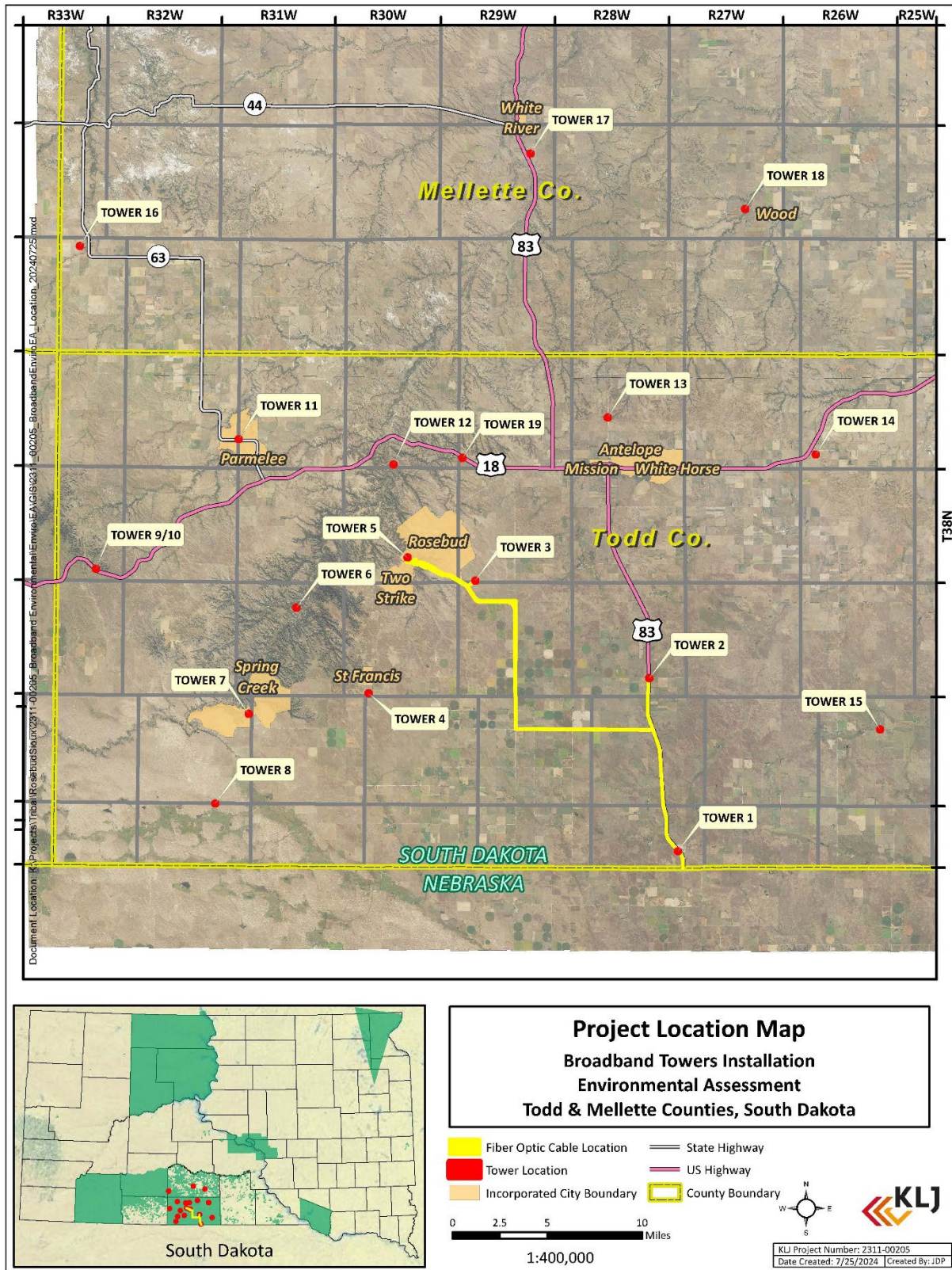


Figure 2: Project Location Map Broadband Tower and Fiber Optic Cable Installation

The proposed project is expected to be completed in three individual project phases involving both engineering and permitting (which may include any federal, state, or local permits necessary). Construction is anticipated to begin in late Spring of 2025. Phase 1 (fiber optic cable installation) will also consist of horizontal direction drilling (HDD) or pneumatic missile installation, trenching, boring, cable installation, and cable splicing. The pneumatic missile and HDD methods will provide similar results to one another, however, as their name implies each method uses different procedures to get the same result. The pneumatic missile is powered by compressed air and the HDD method is powered by pressurized water. Both methods utilize truck mounted equipment, but the HDD method also requires the use of a water and vacuum truck to supply and remove overflow water as needed. Employment of each method will be at the Contractors discretion. Phase 2 (broadband tower installation) will consist of drilling and aerial installation. Aerial installation will consist strictly of a standard 200' crane that is commonly used in tower construction. Phase 3 (radio tower retrofitting/upgrade) will consist of permitting and aerial installation activities. The following **Section 3.3** detail construction activities.

3.2 Construction

Optic Fiber Cable Construction

Installation of fiber optic cable will require the use of heavy construction equipment; primarily a trencher, skid-steer, and possibly the use of a backhoe. Other equipment and materials needed will consist of spools of fiber optic cable (30 miles worth of cable), proper personal protective equipment, and small hand tools (where the use of machinery is not practicable) utilized to assist in fiber optic cable installation. The trencher will be employed to cut small trench and directly install the fiber optic, while at the same time filling in the opening created at the top of the trench by utilizing a trenchless plowing method. Employing the trenchless plowing method will result in low levels of disturbance. It is anticipated that cable will be trenched to an approximate depth of 40" and in a 2.5" wide cut.

In locations where the route of the fiber optic cable passes through private/public driveways, roads, other hard surfaces, fiber optic cable will be placed utilizing either horizontal direction drilling (HDD) or pneumatic missile installation. Pneumatic missile installation is a process by which compressed air is forced through a tube into a cylinder that houses a piston and when injected with air moves forward. The air in the cylinder then allows for the rebound of the cylinder setting up the system for additional forward momentum. When this process is repeated in rapid succession it bores through the earth without having to disturb the surface. Both methods involve digging small pits on either side of the resource and using the selected device to bore holes underneath the hard surface (driveways, compacted dirt roads, and asphalt roadways) or other immovable resources followed by fitting the fiber optic cable through the bore holes. It is expected that fiber optic cable will be buried in all locations.

Tower Construction

Installation of broadband towers will require the use of similar (with some additional equipment) heavy construction equipment used to install the fiber optic cable; cranes, bucket trucks, a backhoe, drill-truck (air rotary rig), and a heavy-duty transport truck to carry the materials to construct the tower. Other equipment and materials needed will consist of 17 yet to be selected broadband tower models, which includes the necessary tower steel, installation hardware needed to put together the tower onsite, steel guidelines, and necessary safety equipment proper personal protective equipment, climbing harness, to ascend/descend the towers during the installation as needed. Current site conditions of the tower locations consist of a mix of undeveloped range land, semi forested areas, non-vegetated hilltops, and agricultural fields. Current design plans indicate that the total permanent disturbance of each constructed tower will be approximately 100 square feet. Access to each tower site location will occur by utilizing existing two track roads, dirt roads, and asphalt roads. According to current design plans, there are no current plans to construct access roads to the final tower site locations; all tower site locations are within 0.12 miles or less of the nearest access point. Vegetation is expected to be removed from only the tower foundation sites, anchor sites, and concrete pads that hold electronic equipment sheds, these pads will house a generator. With the exception of one tower, all towers are guyed towers, meaning that they are held up by guy cables from three sides, spaced at an interval of one guyed wire every 120°. Tower #5 will be the sole tower that is not supported by guyed wires due to site topography. Tower #5 will be 60' in height which will require a smaller footprint at the base when compared to other towers and therefore not need the support of guyed wires. Tower # 2, # 3, and # 5 will be directly connected to the buried fiber optic cable.

Each constructed tower will be no higher than 220ft and will be a self-supporting tower that is outfitted with equipment to function as either a transmission or receiving sites. Ultimately, three of the broadband towers will act as primary signal

transmission centers with the remaining towers acting as receivers. This method of transmission and receiver is referred to as “band 41 5G microcell connection”. 15 of the towers will be serviced with 120/240-volt Amp service. The power will be brought in along an acquired easement on poles. At the point the power lines reach the tower anchors it may or may not be buried and will be at the discretion of the power company requirements, installing electrician preferences, and site limitations. Four tower sites will be connected to 120/208 volt, three phase power in the same manner as the other tower sites. Ultimately, 15 tower sites will house a shelter (8’ x 12’), generator, and 500-gallon propane tank. The four tower sites receiving a higher load of electricity will have larger shelters to house more electrical equipment and larger generator if deemed necessary. The generators will be “on-demand” and will automatically power up in the event of power failure.

Construction of towers will be initiated by drill-truck drilling anchor holes to set the tower legs, followed by a stepwise process of piecemealing the tower together vertically. It is anticipated that total site disturbance at each tower location will consist of three areas of disturbance for the guyed wires and one area of disturbance for the tower base. Disturbance for each guyed wire will consist of a 5’ square concrete block buried 12’. The base of the tower is expected to be a 5’x 5’ concrete block buried 6’ with a 3’ diameter. A 6’ vertical concrete cylinder will rise from the concrete block to become the base of the tower. Ground disturbance is not expected to extend deeper than 5’. The ground disturbance at tower sites will be restricted to the size necessary to safely carry out construction activities. Construction of the tower itself will be accomplished via a crane and backhoe. It is likely that the Contractor will have to scale the tower as it is being constructed to assist the heavy equipment operators during tower construction. Contractors that scale the tower will be using proper climbing gear which will consist of a harness, a lineman’s belt, and a safety belt. Installation of the transmission and receiving equipment will be installed manually after each tower is fully constructed.

The upgrade/retrofitting process of the two existing radio towers will use the same equipment described for the tower construction phase. There will be no need for heavy construction equipment as the towers are already in place. Contractors will install equipment that will allow for the radio towers to function as Transmission and Receiving Sites using proper climbing gear which will consist of a harness, a lineman’s belt, and a safety belt. Contractors will also utilize general hand tools (pliers, wrenches, screwdrivers, sockets, etc.) to install the transmission and receiving equipment.

3.3 Alternatives

This analysis evaluates one alternative identified as the no action alternative.

No Action Alternative

The No Action Alternative would result in no upgrades to the existing telecommunications infrastructure. If no action is taken, members of the Tribe would not receive vital urban quality internet service. No construction impacts or benefits (i.e., Tribal households, business, and anchor institutions) described in **Section 2.0** would occur. There would be no changes to the broadband services offered on the Rosebud Sioux Tribe reservation and many households would continue to be underserved when compared to non-tribal households.

Alternative Considered but Eliminated from Further Study

One alternative design was considered early in the project development process. This alternative involved the installation of 17 new broadband towers with a direct fiber optic cable connection to the main buried fiber optic cable line. This alternative was eliminated from further study due to the greater potential impacts when compared to the build alternative due to the installation of more buried fiber optic cable and the increased cost of materials and labor.

4.0 Description of the Affected Environment

Per NEPA requirements, potential direct and indirect effects of the proposed project must be analyzed. This analysis made use of open-source, publicly available databases to ensure the most accurate analysis. The analysis also takes into account the probability that impacts would occur and also reflect the severity of anticipated impacts.

For the purposes of this document, NEPA defines indirect (secondary) impacts as impacts that are “caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the matter of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems” (40 CFR 1508.8).

NEPA also defines cumulative (additive) effects as “which are effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.8)(32 CFR 651.16). Cumulative impacts are discussed in **Section 5.16**.

4.1 Noise

In 1972 the EPA released the Noise Control Act, which established safe noise emission standards. Noise pollution is defined by the EPA as a sound that is “unwanted or disturbing sounds” and negatively affects one’s life by interfering with normal activities like sleeping, conversation, or generally negatively affects a person’s quality of life (*Noise effects handbook*, 1981). Noise pollution can loosely be classified as any noise that negatively impacts wildlife, naturally occurring processes (like migrations or mating behaviors), daily human activities, or can damage physical structures. The most common forms of noise pollution arise from transportation, entertainment, and industrial sectors.

It is anticipated that the proposed project will install infrastructure that will not generate chronic long-term audible noise for adjacent sensitive noise receptors. Anticipated noise disturbances associated with the proposed project is expected to occur during construction activities and future maintenance and upkeep activities of the broadband towers and fiber optic cable. It is expected that noise generated from future maintenance activities would result from the use of light machinery if access to fiber optic cable was needed or when vehicles are utilized to transport individuals to perform maintenance on the broadband towers.

4.1.1 Existing Environment

The proposed project area contains a variety of property types including cropland, pastureland, grassland, rolling woodlands, and residential properties. Ambient noise conditions in the proposed project are relatively low due to the largely rural nature of the proposed project. The proposed corridor that the fiber optic cable follow is used primarily for local traffic which consists of primarily passenger vehicles. Occasionally the proposed corridor is utilized by mid-size commercial vehicles delivering packages to residents or agricultural equipment moving between fields. Noise generated from the described types of traffic are not constant nor generally loud. Please refer to **Appendix A** for detailed maps showing the project area and nearby residential homes.

According to the EPA noise level thresholds are identified as 45 dBA for indoor residential areas, hospitals, and schools, 55 dBA is identified for outdoor activities, and 70 dBA is the threshold for all areas that could lead to hearing loss. A sensitive noise receptor is widely defined as a land use or activity that would be sensitive to an increase noise levels in a given area. The table below, **Table 1, Nearby Sensitive Noise Receptors** identifies potential sensitive noise receptors within and near the proposed project.

Table 2: Nearby Sensitive Noise Receptors

Noise Sensitive Receptors	Daily Noise Level Exposure Limit	Location
Single family residential lots	55 decibels (DBA)	Primarily located along the proposed route of the fiber optic cable as well as near broadband tower 1, 4, 5, 12, 16
Rosebud Casino & RV Park	55 decibels (DBA)	South of broadband tower 1
Wanbli Wiconi tipi (Youth Wellness and Renewal Center-Juvenile Detention Center)	55 decibels (DBA)	North of broadband tower 19

4.2 Air Quality

The Environmental Protection Agency (EPA) sets the National Ambient Air Quality Standards (NAAQS) nationwide as it relates to pollutants that are generated through stationary, mobile, and area sources. The AQI (Air Quality Index) is a measurement of air quality as it relates to the NAAQS. Using the NAAQS and the AIQ measurements, a discrete geographic location can be classified as in “attainment” if it is below the NAAQS standards or in “non-attainment” if above the NAAQS

standards. Areas where new construction activities are occurring and are in “non-attainment” status, may be required to modify or implement mitigation measures that were developed and conform with the residing states “State Implementation Plan” to reduce overall air pollution (EPA, 2023d). As outlined in the Clean Air Act, federal funding is not allowed for construction projects that are not in compliance with the residing states SIP (*Clean Air Act 42 U.S.C 7401 et seq.*).

4.2.1 Existing Environment

South Dakota does not have any non-attainment areas located within the State (EPA, *SIP status reports* 2021). Mellette and Todd Counties are not identified as counties with an air quality concern per the state of South Dakota SIP (*Regional Haze State Implementation Plan*).

The AQI tracks a total six different pollutants: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter also referred to as particulate pollution (10 micrometers or smaller and 2.5 micrometers or smaller), and sulfur dioxide (EPA, 2023). The table below **Table 2, National Ambient Air Quality Standard** details the EPA recommended exposure limit to each of the tracked pollutants. Information displayed in the table below is taken from the EPA “NAAQS Table” web page and the Ambient Air Monitoring Real Time Data provided by the South Dakota Department of Agriculture & Natural Resources (SDDANR) (*NAAQS Table | US EPA 2023e*) (*Air Quality in South Dakota 2024*). Data provided by the SDDANR show that of the air pollutants tracked by the SDDANR, pollutant levels are below the pollutant threshold limits set by the EPA. Data from the SDDANR station are reported averages. The closest monitoring station to the proposed project is the Badlands National Park Air Quality Monitoring Station.

Table 3: National Ambient Air Quality Standard

Pollutant		Primary/Secondary	Averaging Time	Level	Form	Badlands NP Air Quality Monitoring Station
Carbon Monoxide (CO)		Primary	8 hours	9 ppm	Not to be exceeded more than once per year	Not tracked
			1 hour	35 ppm		Not tracked
Lead (Pb)		Primary and Secondary	Rolling 3-month average	0.15 µg/m3	Not to be exceeded	Not tracked
Nitrogen Dioxide (NO2)		Primary	1 hour	100 ppb	98 th percentile of 1-hour daily maximum concentrations, averaged over 3 years	Not tracked
		Primary and secondary	1 year	53 ppb	Annual Mean	Not tracked
Ozone (O3)		Primary and secondary	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years	0.025 ppm
Particulate Matter (PM)	PM 2.5	Primary	1 year	12.0 µg/m3	Annual mean, averaged over 3 years	Not tracked

Pollutant	Primary/Secondary	Averaging Time	Level	Form	Badlands NP Air Quality Monitoring Station
	Secondary	1 year	15.0 µg/m ³	Annual mean, averaged over 3 years	Not tracked
	Primary and secondary	24 hours	35 µg/m ³	98 th percentile. Averaged over 3 years	9.0 ppm
	PM 10	24 hours	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years	8.4 ppm
Sulfur Dioxide (SO ₂)	Primary	1 hour	75 ppb	99 th percentile of 1-hour daily maximum concentrations, averaged over 3 years	Not tracked
	Secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year	Not tracked
(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m ³ as a calendar quarter average) also remain in effect. (2) The level of the annual NO ₂ standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level. (3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O ₃ standards are not revoked and remain in effect for designated areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour (1997) O ₃ standards. (4) The previous SO ₂ standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO ₂ standards or is not meeting the requirements of a SIP call under the previous SO ₂ standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.					(5)

4.3 Geology and Soils

Understanding the geology and soil characteristics of a particular region is critical determining potential soil impacts a project might have in a certain area. The existing geology and soil characteristics of the project area are important when considering the potential risks that a project could cause.

4.3.1 Existing Environment

As a state, South Dakota is divided into three main physiographic regions; the central lowlands of eastern South Dakota, the Great Plains of central South Dakota, and the Black Hills of western South Dakota (Malo, 1997). The proposed project occurs in the Great Plains region of South Dakota. Based on mapping data provided by the United States Geological Survey (USGS), the proposed project is located in parts of the Keya Paha Tablelands, Subhumid Pierre Shale Plains, and the Nebraska Sandhills. Geology in these regions is characterized by Cretaceous Pierre Shale, Eolian and alluvial sand and silt over Miocene soft sandstone, and Eolian sand over Miocene soft sandstone. Geology in these regions is not known to be

susceptible to sinkholes or collapse from construction activities and changes in drainage regimes. The geology of the bedrock give rise to soil types like Entisols, Mollisols, Inceptisols, and Vertisols. These soil orders produce varying quality of farmable soil due to how much organic content is present in the soil and how the soil formed. The table below **Table 4, Dominant Soils within the Proposed Project Area** details and describes the soil types that are found in the proposed project. Possible land use in an area is partially dictated by the soil and geology present in a particular area.

As defined in the National Soil Survey Handbook that is published the USDA (United States Department of Agriculture) soil is classified in units of prime farmland, farmland of statewide importance, farmland of local importance, and not prime farmland. The table below, **Table 3, Dominant Soils within the Proposed Project Area** shows the approximate acreage of classified farmland within the proposed project area.

Table 4: Dominant Soils within the Proposed Project Area

Map Unit Name	Map Unit Symbol	Approximate Area (Acreage)	Approximate Percentage of Proposed Project	Farmland Classification
Anselmo-Ronson fine sandy loams, 5 to 9% slopes	ArC	17.8	2.5%	Farmland of statewide importance
Anselmo-Longpine fine sandy loams, 9-21% slopes	AtE	57.3	8.1%	Not prime farmland
Anselmo-Vetal fine sandy loams, 0-2% slopes	AvA	44.6	6.3%	Prime farmland if irrigated
Anselmo-Vetal fine sandy loams, 2-6% slopes	AvB	0.0	0%	Prime farmland if irrigated
Doger loamy fine sand, 0 to 3% slopes	DfA	3.2	0.45%	Not prime farmland
Doger-Dunday loamy fine sands, 3-6% slopes	DgB	56.0	7.6%	Not prime farmland
Duda loamy fine sand, 0-6% slopes	DIB	9.6	1.4%	Not prime farmland
Duroc and Kadok silt loams, 2-5% slopes	DvB	0.7	0.09%	Farmland of statewide importance
Elsmere loamy fine sand, 0 to 3% slopes	EIA	1.1	0.15%	Not prime farmland
Epping-Huggin's silt loams, 5-15% slopes	EhD	0.3	0.04%	Not prime farmland
Holt fine sandy loam, 0-3% slopes	HfA	56.3	7.9%	Not prime farmland
Holt-Vetal fine sandy loams, 3-9% slopes	HIC	88.5	12.5%	Not prime farmland
Hoven silt loam, 0 to 1% slopes	HmA	0.0	0%	Not prime farmland
Huggins-Kadoka silt loams, 2-5% slopes	HuB	0.2	0.02%	Farmland of statewide importance

Map Unit Name	Map Unit Symbol	Approximate Area (Acreage)	Approximate Percentage of Proposed Project	Farmland Classification
Huggins-Kadoka silt loams, 2-9% slopes	HwB	0.5	0.07%	Farmland of statewide importance
Kadoka-Epping silt loams, 2-9% slopes	KbC	1.0	0.14%	Not prime farmland
Keya silt loam, 0-3% slopes	Ke	8.4	1.2%	Prime farmland if irrigated
Keota-Epping silt loams, 9-21% slopes	KhE	30.4	4.3%	Not prime farmland
Keota-Kadoka silt loams, 9-15% slopes	KkD	1.6	0.2%	Not prime farmland
Keota-Rock outcrop complex, 16-40% slopes	KrF	16.4	2.3%	Not prime farmland
Fluvents, loamy	La	0.4	0.05%	Not prime farmland
Loup-Elsmere loamy fine sands	Le	5.1	0.7%	Not prime farmland
Manter-Anselmo fine sandy loams, 9-15% slopes	MaD	1.4	0.2%	Not prime farmland
McKelvia-Peji-Blula complex, 25-80% slopes	MaHG	0.3	0.4%	Not prime farmland
Okaton-Lakoma silty cays, 15-40% slopes	ObE	1.5	0.2%	Not prime farmland
Rosebud and Canyon soils, 9-21% slopes	RcE	0.5	0.07%	Not prime farmland
Richfield-Dawes silt loams, 0-2% slopes	RdA	4.0	0.6%	Prime farmland if irrigated
Reliance silty clay loam, 3-6% slopes	RIB	2.9	0.4%	Prime farmland if irrigated
Richfield-Tuthill silt loams, 2-9% slopes	RhB	2.4	0.3%	Farmland of statewide importance
Reliance siltyclay loam, 6-9% slopes	RIC	0.0	0%	Farmland of statewide importance
Ronson-Anselmo fine sandy loams, 0 to 3% slopes	RnA	8.5	1.2%	Farmland of statewide importance
Ronson-Anselmo fine sandy loams, 3 to 5% slopes	RnB	5.6	0.8%	Farmland of statewide importance
Yockey-Bigwinder complex, channeled	Sd	3.8	0.5%	Not prime farmland
Valentine fine sand, rolling and hilly, 9-60% slopes	T151G	2.0	0.3%	Not prime farmland

Map Unit Name	Map Unit Symbol	Approximate Area (Acreage)	Approximate Percentage of Proposed Project	Farmland Classification
Valentine fine sand, rolling, 9-24% slopes	T153E	2.9	0.4%	Not prime farmland
Valentine-Els complex, 0-9% slopes	T158C	0.5	0.07%	Not prime farmland
Valentine-Tryon fine sands, 0-24% slopes	T163E	0.3	0.04%	Not prime farmland
Anselmo fine sandy loam, 3-6% slopes	T172B	69.2	9.8%	Prime farmland if irrigated
Anselmo fine sandy loam, 6-11% slopes	T172D	19.2	2.7%	Not prime farmland
Longpine-Ronson fine sandy loams, 3-30% slopes	TfE	57.2	8.1%	Not prime farmland
Longpine-Rock outcrop complex, 25-40% slopes	TcF	0.5	0.07%	Not prime farmland
Tuthill silt loam, 0-3% slopes	ThA	6.6	0.9%	Prime farmland if irrigated
Valentine fine sand, 9-25% slopes	VaE	9.7	1.4%	Not prime farmland
Valentine-Dunday complex, 3-9% slopes	VdC	42.6	6.0%	Not prime farmland
Valentine-Tassel complex, 5-30% slopes	VsE	39.5	5.6%	Not prime farmland
Vetal fine sandy loam, 0-3% slopes	Vt	21.2	3.0%	Prime farmland if irrigated
Wortman-Wanblee silt loams, 0-6% slopes	Ww	1.7	0.2%	Not prime farmland
Water	W	0.9	0.1%	Not prime farmland

4.4 Water Resources

4.4.1 Surface Water (i.e., Lakes and Rivers)

The proposed project is located in the White River and Niobrara River Basins (*2022 South Dakota Integrated Report Surface Water Quality Assessment*). The White River basin drain approximately 8,246 square miles into the White River which ultimately drains into the Missouri River. The Niobrara River basin drains approximately 1,742 square miles in South Dakota and ultimately drains into the Missouri River. Agricultural activities are the dominant economic driver in both the watersheds. The proposed project area does not include any perennial streams that directly drain into these river basins. Surface water resources that are within the proposed project area are Rosebud Lake and Rosebud Creek, both just southeast of the town of Rosebud, South Dakota. Other surface water resources near the proposed project area but outside of the proposed project area boundaries include Cut Meat Creek and Eagle Feather Lake. The nearest tower location (Tower #5) to Rosebud Lake and Rosebud Creek are approximately 0.5 and 0.6 miles away and approximately 0.02 miles away from the route of the proposed fiber optic cable.

4.5 Wetlands

As defined by the USACE a wetland is an area that has the following inundated or saturated soil conditions resulting from permanent or periodic inundation by ground water or surface water, a prevalence of vegetation typically adapted for life in saturated soil conditions (hydrophytic vegetation), and 3.) the presence of wetland hydrology (*US Army Corps of Engineers Headquarters Website* 1987). Under Section 404 of the Clean Water Act (CWA), a permit is required to dredge, or place fill in Waters of the US (WOTUS). Under EO 11990, construction activities are to avoid long, and short-term negative impacts associated with the destruction or modification of wetlands; avoid direct or indirect support of new construction in wetlands; minimize the destruction, loss or degradation of wetlands; preserve and enhance the natural beneficial values served by wetlands; and involve the public throughout the wetland's protection decision-making process (42 FR 26961).

4.5.1 Existing environment

The portion of the proposed project that involves the installation of broadband towers has been surveyed per USACE 1987 Manual and the Great Plains Regional Supplement guidelines and was found to have no wetlands present within any of the proposed tower locations. The portion of the proposed project that involves installing fiber optic cable has numerous wetlands present within the proposed project area. Wetlands that are present within the proposed project occur as drainage and basin wetlands with some of these wetlands connecting to aquatic resources outside of the proposed project area. Please refer to **Appendix A** to see locations of identified wetlands.

4.6 Groundwater

According to the USGS, groundwater is defined as water that exists underground in saturated zones beneath the land surface (*What is groundwater? | U.S. geological survey* 2018). Groundwater is widely used by humans particularly in areas that arid or receive low levels of annual precipitation. Groundwater is replenished through naturally occurring process like the natural percolation of water into the ground or by manually manipulating the flow of water to a managed area for groundwater recharge projects.

4.6.1 Existing environment

According to the EPAs' online Map of Sole Source Aquifer Locations there are no sole source aquifers located within the proposed project area (EPA, *Map of Sole Source Aquifer locations* 2023a).

The Tribe is a part of the Mni Wiconi Rural Water System and this system consists of multiples sources of supply, utilizing surface and groundwater as well as the necessary infrastructure to operate a public water system (disinfection stations, pump stations, control valve stations, and water storage tanks).

4.7 Floodplains

Under EO 11988, Floodplain management, the definition of a floodplain can be summarized as the following. a floodplain is the relatively flat lowland areas that adjoin inland and coastal waters, including the flood prone areas of offshore islands, including areas that at a minimum have a greater than one percent chance of being flooded in any given year (42 FR 26961). EO 11988 also details that when federal agencies are funding actions, agencies are required to avoid to the extent practicable the long and short-term negative impacts associated with the building in floodplains and to avoid direct and indirect support of floodplain development wherever there is a reasonable alternative (42 FR 26961).

4.7.1 Existing Environment

According to information provided by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Mellette and Todd Counties, South Dakota have not been mapped, therefore there is no FEMA floodplain data for the proposed project. However, Rosebud Lake is likely to have a floodplain associated with it. The proposed locations of the broadband towers are not located near Rosebud Lake (the closest proposed tower location is approximately 0.6 miles northwest up slope from Rosebud Lake). Rosebud Lake is formed by a dam that dams Rosebud Creek. The shore side of Rosebud Lake is stabilized by large boulders likely altering the likely floodplain. The outflow side of Rosebud Lake is bordered by concrete walls that are at a steep slope, this would suggest that if a floodplain were present, it would be located 50' below the dam head.

4.8 Wild and Scenic Rivers

The National Wild and Scenic Rivers System was established in 1968 to preserve certain rivers with “outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of current and future generations (*Wild and scenic rivers: U.S. Fish & Wildlife service* 1998).

4.8.1 Existing Environment

There are no designated Scenic or Wild Rivers within the proposed project area (National Wild and Scenic Rivers System, 2024).

4.9 Biological Resources

Habitat type located within the proposed project is made up of a mixture existing road ROWs, unmaintained grasslands, and scattered forested areas. Biological surveys of the proposed project area were conducted to identify any threatened or endangered species listed under the federal Endangered Species Act. Biological surveys were conducted by an employee of KLJ who has been conducting biological surveys professionally for the past two years and holds a college degree in the biological sciences.

The proposed project is located in the Subhumid Pierre Shale Plains, the Keya Paha Tablelands, and the Nebraska Sandhills ecoregions. Common species of wildlife found throughout these ecoregions include white-tailed deer, mule deer, American pronghorn, a number of non-game birds (raptors and non-raptor species), game birds (sharp-tailed grouse, greater prairie chicken, wild turkey), and a number of fish, reptile, and amphibian species primarily found in riparian areas. Native vegetation species that have potential to occur in the proposed project ecoregions include wheatgrasses, needle grass, porcupine grass, needle-and-thread, gramma grasses, little bluestem, sand bluestem, prairie sand-reed, big blue stem, and switch grass.

A detailed discussion of the threatened and endangered species and critical or endangered habitat, found within the proposed project is discussed below.

4.9.1 Threatened and Endangered Species Threatened and Endangered Species & Associated Critical Habitat

Under the federal Endangered Species Act of 1973, it is prohibited (*16 USC 1531*) to engage in actions that endanger the critical habitat or species or wildlife, fish, or plant species that is in danger of extinction. It is also prohibited to “take” (killing, harming, and harassing) of any threatened or endangered species.

4.9.2 Bald and Golden Eagle Protection Act

Under the federal Bald and Golden Eagle Protection Act of 1940, it is prohibited to “take” (killing, harming, and harassing) bald or golden eagles including their parts, including feathers, nests, or eggs without a permit issued by the Secretary of the Interior (*16 USC 668-668D*). Furthermore, the act provides criminal consequences for any individual who “take, possess, 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 including feathers, nests, or eggs (*16 USC 668-668D*).

4.9.3 Existing Environment

An inquiry via the United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System- Information, Planning, and Conservation (ECOS-IPaC) website submitted on February 2nd, 2024; March 4th, 2024; and November 19, 2024, identified federally protected resources that may occur within the proposed project area. The ECOS-IPaC inquiry also identified the probable presence of bald and golden eagles over the course of a year.

In addition to utilizing the ECOS-IPaC tool, the South Dakota Wildlife Action Plan and the associated Wildlife of South Dakota Explorer tool was also utilized to identify any state listed threatened or endangered species in the proposed project. The South Dakota Wildlife Action Plan is a state-level document that is intended to encourage voluntary partnerships among tribes, government entities, organizations, and private individuals so as to prevent fish and wildlife species from becoming federally endangered and to provide for the needs for fish, wildlife, and habitat diversity for continual use and enjoyment into the future (*South Dakota Wildlife Action Plan, 2014*). Information provided by the ECOS-IPaC and the South Dakota Wildlife Action Plan were consulted prior to the completion of biological surveys in the field. During the biological surveys no federally listed species of bald and golden eagles were observed.

See **Table 4, Federal & State Listed Species in the Proposed Project Area** for a full list of the federal and state listed species that could occur in the proposed project.

Table 5: Federal & State Listed Species in the Proposed Project Area

Common Name	Scientific Name	Federal Status	State Status	Observed in Project/Action Area (Yes/No)
Northern-Long Eared Bat	<i>Myotis septentrionalis</i>	Endangered	Not listed	No
Tricolored Bat	<i>Perimyotis subflavus</i>	Proposed Endangered	Not listed	No
Rufa Red Knot	<i>Calidris canutus rufa</i>	Threatened	Not listed	No
Whooping Crane	<i>Grus americana</i>	Endangered	State endangered	No
American Burying Beetle	<i>Nicrophorus americanus</i>	Threatened	Not listed	No
Monarch Butterfly	<i>Danaus plexippus</i>	Candidate	Not listed	No
Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	Threatened	Not listed	No
Western Regal Fritillary	<i>Argynnis idalia occidentalis</i>	Proposed Threatened	Not listed	No

Northern-Long Eared Bat (*Myotis septentrionalis*) (Endangered)

The northern-long eared bat (NLEB) is a medium sized bat that historically occurred in much of the eastern half of the United States and in the southern portions of eastern Canada (*Northern long-eared bat: U.S. Fish & Wildlife Service 2023*). The species is currently listed as endangered under the Endangered Species Act (ESA) (*Northern long-eared bat: U.S. Fish & Wildlife Service 2023*). The historical western extent of the NLEB are the far eastern and northeastern portions of Montana and Wyoming respectively. The NLEB is found across its' historical range albeit at significantly lower densities than was present historically. NLEB habitat is season dependent, with the species utilizing different habitat types during the non-hibernation months (spring through fall) and during the hibernation months (winter). During the winter, NLEB will make use of primarily caves and abandoned mines in more northern climates and occasionally also barns, sheds, and drainage pipes in more in southern climates (*Northern long-eared bat: U.S. Fish & Wildlife Service 2023*). During the non-hibernation months, the NLEB will make use of trees that have exfoliating bark, cavities, crevices, and snags (*Northern long-eared bat: U.S. Fish & Wildlife Service 2023*). During non-hibernation months, the NLEB will have a home range of approximately 1.5 miles from the bats' home roost.

The primary factor affecting recovery of the NLEB is the dramatic population decline that species has experienced due to the fungal disease called White-Nose Syndrome (WNS), which has caused a 99% decline in population densities in affected areas. (*Northern long-eared bat: U.S. Fish & Wildlife Service 2023*). There were no northern-long eared bats observed within the project during the biological surveys of the proposed project. Possible non-hibernation roost habitat in the form of trees with crevices, exfoliating barks, or snags was identified within the proposed project, specifically the portion where fiber optic cable is planned to be installed; however these trees are identified outside of the proposed limits of disturbance. Under the current design plans for the proposed project that are no plans to remove the identified non-hibernation roost trees.

Tricolored Bat (*Perimyotis subflavus*) (Proposed Endangered)

The tricolored bat is one of the smallest bat species found in North America and for the purpose of this document, share similar behavior with other bat species like the NLEB. The species is currently listed as proposed endangered under the ESA (*Tricolored Bat: U.S. Fish & Wildlife Service 2023*). Historically the tricolored bat was a common wide-ranging species that

spanned across the eastern and central portions of the United States and portions of southern Canada, Mexico, and Central America (*Tricolored Bat: U.S. Fish & Wildlife Service 2023*). Similar to the NLEB, the tricolored bat is still found across its' historical range although at significantly lower densities than what historically existed. Like the NLEB, the tricolored bat utilizes different types of habitats during the non-hibernation and hibernation seasons. During hibernation, the tricolored bat will occupy caves and abandoned mines, and in areas where caves are sparse and winter is more temperate, the tricolored bat can be found in road associated culverts (*Tricolored Bat: U.S. Fish & Wildlife Service 2023*). During the non-hibernation season (spring-fall) the tricolored bat will roost in trees, primarily roosting within dead and living leaf clusters at the end of branches (*Tricolored Bat: U.S. Fish & Wildlife Service 2023*). Where deciduous trees are not present, the tricolored bat has been observed to roost within clusters of pine needles, eastern red cedar, barns, and other manmade structures that offer overhead cover.

Similar to the NLEB, the primary factor affecting recovery of the tricolored bat is the significant population decline associated with fungal disease White Nose Syndrome (WNS), which in affected areas has reduced populations by 90%-100% (*Tricolored Bat: U.S. Fish & Wildlife Service 2023*). There were no tricolored bats observed within the project area during the biological surveys of the proposed project. Possible non-hibernation roost habitat in the form of trees with crevices, exfoliating barks, or snags was identified within the proposed project, specifically the portion where fiber optic cable is planned to be installed; however these trees are identified outside of the proposed limits of disturbance. Under the current design plans for the proposed project that are no plans to remove the identified non-hibernation roost trees.

Rufa Red Knot (*Calidris canutus rufa*) (Threatened)

The rufa red knot is a threatened migratory shore bird species that is approximately the size of the American robin (*Rufa Red Knot: U.S. Fish & Wildlife Service 2023*). The species is currently listed as threatened under the ESA (*Rufa Red Knot: U.S. Fish & Wildlife Service 2023*). During the breeding season (June or July) the species has a northern circumpolar distribution (*Rufa Red Knot: U.S. Fish & Wildlife Service 2023*). Beginning in the fall, the species will embark on one of the longest bird migrations known to science, with populations migrating south to the southeastern tip of the United States, the northern and far southern coasts of South America, the eastern shoreline of Africa, and the western and eastern coasts of Australia (*Rufa Red Knot: U.S. Fish & Wildlife Service 2023*). Preferred migration and wintering habitat is made up of highly productive ocean and bay front areas, as well as tidal flats. Ideal migration and wintering habitat will be made up of muddy or sandy coastal areas (estuaries, tidal flats, and unimproved tidal inlets). Current research suggests that the red knot will utilize inland saline lakes located in the Great Plains region, but it is not well understood if the red knot would utilize inland freshwater lakes as well. South Dakota does not have resident populations of the red knot; red knots are only present during the winter and spring migrations where they utilize South Dakota as stopover habitat.

Primary factors affecting the recovery of the red knot include climate and human induced habitat loss and a general decrease in the species primary food sources (hard-shelled mollusks, soft aquatic invertebrates, and horseshoe crab eggs) (*Rufa Red Knot: U.S. Fish & Wildlife Service 2023*). There were no rufa red knots observed within the project during the biological surveys of the proposed project. Additionally, no suitable stopover habitat for the red knot was observed during the biological surveys.

Whooping Crane (*Grus americana*) (Endangered)

The whooping crane is the largest and one of two native crane species to North America and is currently listed as an endangered species under the ESA. (*Whooping crane: U.S. Fish & Wildlife Service 2023*). The historic range of the whooping crane spanned from Canada to Mexico, and from the Rocky Mountains to the east coast of the United States (*Whooping crane: U.S. Fish & Wildlife Service 2023*). The only wild self-sustaining population of whooping cranes in North America migrates between central Canada and coastal southwest Texas with occasional stopovers in the central plains of the United States (*Whooping crane: U.S. Fish & Wildlife Service 2023*). Whooping cranes migrate south to overwinter and will breed in the springtime in the north. Preferred habitat of the cranes is dependent on the time of the year. Stopover habitat types where whooping cranes were documented include coastal marshes and estuaries, inland marshes, lakes, open ponds, shallow bays, salt marshes, upland swales, wet meadows and rivers, pastures, and agricultural fields (*Whooping crane: U.S. Fish & Wildlife Service 2023*). It should be noted that current research suggests that migrating whooping cranes avoid roads by a distance of approximately 0.3 miles and avoid human habitation by a distance of approximately 0.8 miles (Lewis & Slack, 2008). Of note, according to the citizen science database "iNaturalist", the most recent sighting of a whooping crane

in South Dakota was in 2021 south of Fort Thompson, South Dakota, which is located approximately 65 miles northeast of the proposed project area.

Primary factors affecting the recovery of whooping cranes include the alteration or destruction of migratory and wintering habitat from activities like wetland drainage, increased development and conversion of suitable habitat to agricultural fields (*Whooping crane: U.S. Fish & Wildlife Service 2023*). There were no whooping cranes observed within the project during the biological surveys of the proposed project. Some wetlands were identified within the project, but these occurred primarily in roadside ditches and would not provide suitable stopover habitat. Additionally, there was a significant amount of habitat in the form of upland swales, agricultural fields, and pastureland, but it is unlikely that this habitat would be utilized by whooping cranes due to the proximity of roadways and residential buildings.

American Burying Beetle (*Nicrophorus americanus*) (Threatened)

The American burying beetle is the largest member of the *Silphidae* (commonly referred to as carrion beetles) family in North America and is currently listed as Threatened under the ESA (*American burying beetle: U.S. Fish & Wildlife Service 2023*). When fully grown the average size of the beetle ranges from 1.0-1.8 inches in length (*American burying beetle: U.S. Fish & Wildlife Service 2023*). The species is known to hide under vegetation, leaf litter, and other similar naturally occurring objects during daytime hours, where they are inactive for the majority of the day (*American burying beetle: U.S. Fish & Wildlife Service 2023*). Typical habitat for the species can range from leafy and vegetative litter in forests, shrubland, and grasslands. They are primarily nocturnal and will seek out carrion when night falls. Historically, the species was present in the majority of the eastern half of the United States and eastern southern Canada (*American burying beetle: U.S. Fish & Wildlife Service 2023*). Currently the species are believed to be only present in parts of Arkansas, Kansas, Massachusetts, Nebraska, Ohio, Oklahoma, Rhode Island, Texas, and South Dakota. Locally, they are known to occur in central South Dakota, but according to the citizen science database “iNaturalist” there have not been documented sightings of the species in South Dakota.

Primary factors affecting the recovery of the American burying beetle are habitat loss and fragmentation due to human caused development (*American burying beetle: U.S. Fish & Wildlife Service 2023*). There was no American burying beetles observed within the project during the biological surveys of the proposed project. It is likely that marginal habitat for the American burying beetle does exist within the proposed project area as there were numerous grasslands and some forested areas observed within the project that had little vegetative litter on the ground and there was no carrion observed within the project. It is anticipated that some vegetation clearing will be required for the installation of towers. Vegetation cleared in previously non-disturbed areas are comprised of non-native grasses and emergent wetland vegetation species. No tree removal is anticipated to occur as a part of the proposed project.

Monarch Butterfly (*Danux plexippus*) (Candidate)

The monarch butterfly is considered to be a small species of butterfly that is a part of the *Nymphalidae* family and is currently listed as a Candidate species under the ESA (*Monarch: U.S. Fish & Wildlife Service 2023*). The monarch relies on healthy grasslands that have substantial populations of milkweed (*Asclepias spp.*), which are an obligate host species for monarch butterfly larvae (*Monarch: U.S. Fish & Wildlife Service 2023*). Adult monarch butterflies will feed on the nectar of a wide range of flowering plants. Historically monarchs were found across the continental United States, while they are still present in their historical range, they exist at much lower densities than what existed historically. Monarchs east of the Rocky Mountains make annual migrations to mountainous regions in central Mexico to overwinter and populations west of the Rocky Mountains will migrate to coastal sites along the Pacific coast of California (*Monarch: U.S. Fish & Wildlife Service 2023*).

Primary factors affecting the recovery of the monarch butterfly consist of habitat loss and a decline in milkweed densities across the monarch range due to human causes like development and herbicide use (*Monarch: U.S. Fish & Wildlife Service 2023*). There were no monarch butterflies observed within the project during the biological surveys of the proposed project nor were there any milkweed, flowering plants, or substantial forb populations observed. It is unlikely that there exists suitable habitat for monarch larvae or adult monarchs within the project as there was no milkweed or flowering plant species observed and no substantial forb populations observed, the lack of these plants would eliminate the presence of

both larvae and adult monarchs.

Western Regal Fritillary (*Argynnis idalia occidentalis*) (Proposed Threatened)

The Western Regal Fritillary is considered to be a larger brush-footed butterfly with large, orange and black wings. The western regal fritillary has a wingspan ranging from 2.67 to 4.13 inches, making it similar in size to the monarch butterfly (Zhang, Joanna & Tyler, Jess.2024). Historically, their range occurred from Maine to Montana and south to Oklahoma and North Carolina (U.S. Fish and Wildlife Service 2024). The species is currently under review to be listed as threatened under the ESA. Today, the species is found in 14 states in the native grassland areas of the central and northern great plains regions of the Midwest. The species relies on three main components for habitat: violet plants that act as hosts for larvae, food source for adults (nectar), and native warm-season bunch grasses that the butterfly uses for protection during all life stages (Swartz et al. 2015). General habitat for the butterfly consists of tall-grass prairie and other open locations that provide a large amount of sun and may consist of damp meadows, marshes, wet fields, and mountain pastures (Selby, G. 2007).

The main factor for the proposal of listing of the species is the loss and fragmentation of native prairie habitats due to conversion to agricultural and development lands. Other potential threats to the western regal fritillary include herbicide use on prairie landscapes which reduces the availability of food sources and can be toxic to the butterfly, and encroachment of other non-native and invasive plant species (Zhang, Joanna & Tyler, Jess.2024). No western regal fritillaries were observed during the biological surveys of the proposed project, nor were there any violets, or other flowering plants observed. It is unlikely that the species inhabits the proposed project areas due to the absence of large areas of potential habitat. However, although unlikely, it is possible that species could be near the proposed project area as some warm season bunch grass was found.

Western Prairie Fringed Orchid (*Platanthera praeclara*)

The western prairie fringed orchid is one of the more than 200 species of orchids found in the United States and is currently listed as an Endangered species under the ESA (Western prairie fringed orchid: U.S. Fish & Wildlife Service 2023). Historically, the United States range of the orchid occupied states like Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Oklahoma, and South Dakota (Species Profile-Western Prairie Fringed Orchid, 2023). However, current data suggests that the orchid has been extirpated from Oklahoma and South Dakota (Western prairie fringed orchid: U.S. Fish & Wildlife Service 2023). When fully grown the orchid can reach heights of up to 4 feet tall and is most commonly found in moist native tall grass prairies growing amongst native sedges, reed grasses, and rushes (Western prairie fringed orchid: U.S. Fish & Wildlife Service 2023).

Primary factors affecting the recovery of the western prairie fringed orchid consist of the conversion of remnant prairie to cropland, use of harmful pesticides and herbicides, fire suppression, changes in hydrology, sedimentation of wetlands, encroachment of woody vegetation, and the spread of invasive species (Western prairie fringed orchid: U.S. Fish & Wildlife Service 2023). There were no western prairie fringed orchids observed within the project during the biological surveys. It should be noted that while wetlands were identified within the project area these wetlands occurred primarily in roadside ditches and would likely not support to a population of western prairie fringed orchids due to past disturbances.

Federally Designated Critical Habitat

The ECOS-IPaC tool was consulted to determine the presence of federally designated critical habitat. As of February 2, 2024, and November 19, 2024, there is no federally designated critical habitat for any species located within the proposed project area. Please refer to **Appendix B** for consultation letters received from the USFWS that denote an absence of federally designated critical habitat in the proposed project area.

4.10 Historic and Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) requires projects that involve a federal nexus to take into consideration the effects that a proposed project may have on historic properties. This requirement typically involves identifying consulting parties, identify and evaluate potential historical properties located within the project area, assess

adverse effects to properties that are listed or have the potential to be listed on the National Register of Historic Places (NRHP) and consult with the State Historic Preservation Officer (in this case the Tribal Historic Preservation Officer, as the project occurs on tribal land).

Additionally, under American Indian Religious Freedom Act, American Indians have the federal protection that preserves their inherent right of freedom to believe, express, and exercise their traditional religions including, but not limited to access to sites, and possession of sacred objects, and the freedom to worship through ceremonial and traditional sites (American Indian Religious Freedom Act 1994). Therefore, projects that involve a federal nexus and occurs on tribal land or involves tribal cultural sites require a consultation with the associated Tribal Preservation Historic Office (THPO).

4.10.1 Existing Environment

An archaeological field survey was carried out at the proposed locations of the broadband towers by Archaeologist Jennifer Galindo and field assistant Ben Young of the Rosebud Sioux Tribe (RST) Tribal Historic Preservation Office THPO. Upon completion of the field survey, a “Letter of No Effect” was issued on September 28th, 2023, by the RST THPO stating that no further cultural work is required as “no historic properties will be affected” by the proposed project. On March 26th, 2024 a “Letter of No Effect” was issued for the fiber optic cable portion of the project after a Class 1 Archaeological Survey was completed by Ben Young of the RST in acting role for the Tribal Historic Preservation Office. The RST THPO recommends that a Tribal Cultural Specialist be present for the installation of the fiber optic cable. RST states in both letters that in the event that archaeological resources are inadvertently discovered during construction activities, all ground moving activities should halt and contact the lead RST Tribal Historic Preservation Office should be notified. Please refer to **Appendix C – Agency Responses** to review the “Letter of No Effect” issued by the RST THPO for both phases of the project.

4.11 Aesthetic and Visual Resources

Aesthetic and visual resources are natural and cultural landscape features that contribute to the public’s enjoyment of the environment. Aesthetic and visual resource impacts are generally defined in terms of the extent to which the project would change the visual character and quality of the viewed landscape as well as the public’s perceived visual character of the landscape.

4.11.1 Existing Environment

The project is located in Mellette and Todd Counties, South Dakota and is located in a variety of landscapes. The proposed fiber optic line is surrounded by agricultural land. The tower locations are spread through a variety of land cover types that include agricultural land, grassland, pastureland, woodlands with rolling topography, and residential homes.

4.12 Land Use

4.12.1 Existing Environment

A review of aerial photography indicates that much of the proposed project passes through agricultural and pastoral land uses. Small portions of the proposed project pass through communities with light commercial and industrial uses. As previously discussed, the proposed project is located in the Subhumid Pierre Shale Plains, Keya Paha Tablelands, and the Nebraska Sandhills ecoregions. Predominant land use across these ecoregions consists of primarily agricultural activities such as cattle grazing, dryland farming, and grassland cover. Residential home also scattered within the proposed project area.

As the proposed project is located within the boundaries of the Reservation and owned by the Rosebud Sioux Nation, zoning regulations pertaining to land use on tribal land offers greater flexibility than county zoning regulations pertaining to non-tribal land. It should be noted that Todd and Mellette Counties and the Tribe have no designated land use regulations.

4.13 Infrastructure

4.13.1 Transportation

Transportation infrastructure includes roads, railways, airways, waterways, canals, pipelines, and terminals (airports, railway stations, bus stations, warehouses, trucking terminals etc.)

4.13.2 Existing environment

The proposed project is served by paved roads US Highway 18, US Highway 83, County Road 5, County Road 1, and County

Road 7. Multiple gravel roads intersect the proposed project area as well.

4.13.4 Utilities

Utilities include services provided by public utility organizations such as electricity, natural gas, water, sewage, and telephone services.

4.13.5 Existing environment

Power lines, natural gas lines, and existing cell towers are present throughout the proposed project. The fiber optic cable will be placed in the existing ROW where other utilities are typically placed. Final design plans will identify all buried utilities to ensure proper placement of the fiber cables and footings for the tower structures.

4.14 Human Health and Safety

Public health and safety are key concerns on any construction project. One major objective while constructing the project would be to minimize the risk to public health and safety. Typically, the highest probability of an accident occurs during the construction phase due to the variety of equipment, personnel onsite, and types of activity during this period.

4.14.1 Existing environment

The EPA NEPA Assist Tool was utilized to identify hazardous waste sites near the proposed project area. Based on the NEPA Assist Tool, ten Brownfield sites are identified within one mile of the project area. Eight of these sites are structures where asbestos containing materials, lead-based paint, and/or mold were found. The proposed project will not disturb these buildings. The two remaining sites are illegal dump sites. One of these dump sites is adjacent to the proposed fiber line. This dump site was cleaned up by the BIA as part of 128(a) Brownfield grant program. However, the soil was not tested for contaminants. Since the proposed fiber line is going to be constructed within the existing ROW that has been previously disturbed, it is not expected that the project will encounter any contamination. If contamination is encountered plans detailed in the project SWPPP will be followed and the appropriate state, federal, and tribal authorities will be notified immediately.

5.0 Analysis of Environmental Impacts

5.1 Noise

5.1.1 Potential Impacts

Multiple sensitive noise receptors are located within 0.5 mile of the proposed project area. These include single family homes, government buildings, and commercial buildings.

The nearest residential home to any of the proposed tower locations is more than 150 feet away from the tower location. While the closest residential home to the proposed path of the fiber optic cable is 200 feet away.

Temporary impacts from construction the proposed project are expected to affect wildlife and nearby residents, however, no unique concerns have been identified. Construction equipment will be properly muffled to reduce noise, construction crews will turn off idling equipment and place noisy equipment away from nearby sensitive noise receptors when possible. Noise from construction activities would be confined to daylight hours of a typical workweek (Monday-Friday).

Given the temporary nature of noise generated during construction activities associated with the proposed project, few number of sensitive noise receptors, and low density of noise receptors, no significant temporary noise-related impacts are anticipated to occur.

The routine operation and maintenance of components associated with the proposed project are not expected to generate a significant amount of noise. Routine and emergency maintenance associated with the proposed project would generate similar levels of noise during construction and occur at similar times of day and last for a similar duration. As noise generated in this manner would not be constant, no significant permanent impacts are anticipated.

5.1.2 Mitigation Measures

The following mitigation measures will be implemented to lessen noise impacts during construction:

- Construction activities will be limited to daylight hours;
- Proper muffling of heavy equipment to reduce noise will be employed by the contractor;
- Construction crews will turn off idling equipment and place noisy equipment away from nearby sensitive noise receptors when possible;
- Neighboring residents will be contacted prior to the start of construction to inform them of the noise producing activities; and
- Construction crews will comply with any local or Tribal noise ordinances.

5.2 Air Quality

5.2.1 Potential Impacts

Construction activities related to the proposed project would locally generate particulate matter from soil moving activities and the burning of fossil fuels from construction equipment. Soil moving activities like digging hand holes, trenching, and boring would likely generate dust and construction equipment would generate greenhouse gas emissions from normal operation.

Overall, air quality impacts resulting from the proposed project will be minor and temporary in nature.

The proposed project is not expected to significantly increase the long-term release of greenhouse gas emissions or particulate matter generation into the atmosphere upon project completion. There will temporary particulate matter generation and greenhouse gas emissions associated with the temporary construction activities of the proposed project, however, once the project is complete greenhouse gas emissions and particulate matter will return to ambient levels.

Given the temporary nature of construction activities associated with the proposed project and the anticipated ground moving activities there are anticipated minor and temporary impacts to air quality that are associated with the proposed project. Please refer to Section 5.2.2 Mitigation Measures below for mitigation activities for impacts to air quality. The routine operation of components associated with proposed project are not anticipated to impact air quality, however, routine and emergency maintenance associated with the proposed project are anticipated to have similar types of impacts and those present during construction albeit at lower levels due to the scale of maintenance activities on day-to-day basis. Please refer to Section 5.2.2 Mitigation Measures below for mitigation activities for impacts to air quality.

5.2.2 Mitigation Measures

The following mitigation measures will be implemented to reduce air quality impacts and greenhouse gas emissions due to the proposed project:

- Dust suppression via water trucks;
- Avoiding construction on abnormally windy days;
- Installation of rumble strips at the entrance/exit sites;
- Avoiding unnecessary idling of heavy-duty construction equipment;
- After all ground moving activities are complete, the contractor will employ seeding and stabilizing measures in accordance with Storm Water Pollution Prevention (SWPPP) Best Management Practices (BMPs). A certified weed free mixture will be used and seeded at a level that is sufficient to ensure a minimum of 70% revegetation of the disturbed area. The seed mixture will be approved by the Tribal THPO. It is the goal of the contractor to keep exposed soil that require reseeding to no more than 10% of each tower area; and
- Utilizing SWPPP BMPs like reseeding, soil stabilization, and revegetation will help to ensure that impacts to air quality via dust are kept to a minimum.

5.3 Geology and Soils

5.3.1 Potential Impacts

Construction activities are not expected to reach the bedrock layers or create any sink hole risk. The majority of the project

area is made up of grassy fields and exposed dirt/gravel patches which do not require major ground moving activities. A review of the South Dakota State Geological Survey (SDSGS) website and the US Geological Survey website did not yield any information pertaining to characteristics of the bedrock found in the project area.

It is likely that the proposed project would result in temporary physical impacts to soil resources and possible chemical impacts to soil resources within the project area. Construction activities could result in inadvertent spills of machinery fluids during fueling or field maintenance of equipment that could interact chemically with the soil. Construction activities associated with the proposed project would also result in the clearing of vegetation from the soil surface in the Project area. It is the intention of the contractor to minimize unnecessary damage to all plant types at the tower sites. It is expected that vegetation clearing will occur at the guyed wire anchor points and the base of each tower for a combined cleared area of 100 square feet per tower location. Cleared vegetation would consist primarily of native and non-native grasses and small shrub species like western snowberry. The vegetation removal process would likely significantly disturb the upper soil horizons and as a result, temporarily destabilize the soil. Disturbed and exposed soil surfaces would be prone to sediment transport outside of the Project area via wind disturbance and precipitation events. Additionally, the use of heavy machinery would compact the soil and increase the overall level of surface runoff during precipitation event. It is also possible to that the mixing of soil horizons could occur inadvertently during ground disturbing activities if the Contractor does not remove the topsoil separately.

Construction activities associated with the proposed project could introduce chemical contamination to soils in the Project area if accidental spills or inadvertent leaks of vehicle or other fluids during the construction activities. These leaks would be accidental and temporary in nature and would be immediately addressed if discovered. Machinery onsite will be equipped with spill kits on hand to properly clean up accidental spills.

Per the Farmland Protection Policy Act (FPPA) conversion of prime and unique farmland to non-agricultural uses must be minimized as much as possible. The project is not expected to adversely affect prime farmland, farmland of statewide importance, farmland of local importance, or not prime farmland.

It is anticipated that the proposed project will require minimal conversion of prime farmland if irrigated into non-agricultural land. No prime farmland has been identified in the proposed project area for broadband tower installation or fiber optic cable installation. Of the areas that are classified as prime farmland, prime farmland if irrigated, and farmland of statewide importance located within the project area, approximately 10.7 acres are located within the planned locations of the broadband towers and approximately 156.7 acres are located with the planned route of the fiber optic cable. It is expected that no prime farmland, prime farmland if irrigated, and statewide farmland of importance would be taken out of agriculture use in the proposed route of the fiber optic cable as this area is a pre-disturbed road ROW and is not used for agricultural activities. Minimal conversion of prime farmland, if irrigated, would occur due to the proposed locations of the broadband towers. However, due to the expected permanent footprint of the towers (approximately 100 square feet) minimal conversion of prime farmland if irrigated is expected to occur. The permanent footprint of the towers would be small enough to still allow for the continued historical use of the land prior to the proposed project. It should be noted that of all the broadband tower locations, only one tower location appeared to be used for cultivated agriculture (specifically, a planted alfalfa field) and the remainder of the tower locations are open pastureland or woodland areas.

Minor impacts associated with the construction of the proposed project are expected to occur due to the conversion of prime if irrigated farmland to non-agricultural land. The routine operation and maintenance of components associated with proposed project are not expected further impact land use in the proposed project area as no additional land would need to be converted from its' current use. Please refer to Section 5.12.2 Mitigation Measures for mitigation activities associated with land use resources in the proposed project area.

Impacts to geological and soil resources in the project area resulting from construction of the proposed project are anticipated to be minor and largely temporary in nature due to the construction methods employed (HDD and trenchless plowing) and the small permanent footprint of broadband towers (approximately 100 square feet). The routine operation and the foreseen and unforeseen maintenance activities associated with the proposed in the future are not expected to create additional last impacts due to there being no additional expansions associated with the proposed project. Please refer to Section 5.3.2 Mitigation Measures below for mitigation activities for impacts to geology and soils in the proposed project area.

5.3.2 Mitigation Measures

The following mitigation measures will be followed to prevent impacts to soils and geologic resources due to the proposed project.

- To minimize erosion and sediment transport during and after construction activities, SWPPP BMPs will be implemented that are within compliance with the National Pollutant Discharge Elimination System (NPDES) Permit system. Potential BMPs include site watering via water trucks to prevent dust generation, soil stabilization (straw mulch, and fiber mats), silt fences, straw wattles, and reseeding utilizing a certified weed free mix. These BMPs would be utilized during active construction activities and site reclamation activities.
- Per correspondence with the NRCS, no mitigation measures for impacts to land resources in the proposed project area are proposed as the amount of agricultural land converted to non-agricultural land does not exceed the limit identified in the National Resource Conservation Service Farmland Conservation Impact Rating Form. Documentation for the land assessment was provided to the NRCS for concurrence. A concurrence letter from the NRCS dated July 24, 2024, was provided stating that they agreed that the if the proposed project site assessment scoring is less than 160 points. The proposed project totaled 63 points from the impact rating form, therefore, the project will have no significant impact on prime farmland or farmland of statewide importance. Please refer to **Appendix D – Agency Correspondence** for correspondence and completed forms.

5.4 Water Resources

5.4.1 Potential Impacts

Short-term impacts to surface water resources as a result of construction activities related to the proposed project are expected to be negligible. The proposed project will not cross any surface water resources, however, there are numerous roadside ditches that occur in the proposed project. It is possible that in the event of a precipitation event that sediment is moved from the proposed project into the roadside ditches which would ultimately drain into creeks and eventually the White and Niobrara Rivers. To minimize this potential impact BMPs would be installed to help prevent sediment transport during a precipitation event. BMPs would be put in place as border controls to prevent sediment movement during active construction as well as to prevent sediment movement from any temporary sediment stockpiles that are created during construction activities.

Consultation with the South Dakota Department of Agriculture and Natural Resources (SDDANR) state that there are surface water resources that are regulated by the State of South Dakota within the project area. As the proposed project will have a disturbance area greater than one acre, a National Pollutant Discharge Elimination System permit will be acquired prior to the start of construction activities.

No water resources would be crossed at the surface level during construction/installation, therefore no impacts to aquatic resources are anticipated as a part of the proposed project. No surface level impacts would occur during routine operation and maintenance associated with the proposed project; therefore the project is expected to have no impact on aquatic resources and any associated maintenance activity being temporary and less intrusive than during the initial construction. Please refer to Section 5.4.2 Mitigation Measures below for mitigation activities to impacts associated with water resources.

5.4.2 Mitigation Measures

BMPs installed per the SWPPP will be put in place to reduce potential impacts to surface waters. BMPs utilized may include straw wattles and silt fences installed on steep slopes or in areas with the potential for high rates of run off and surface roughening on gradually sloped areas that have exposed soils but are not at risk for high rates of runoff to occur.

5.5 Wetlands

5.5.1 Potential Impacts

The fiber optic portion of the proposed project is routed through several roadside ditch wetlands. Impacts to wetlands during construction of the proposed project are expected to be temporary. Installation of fiber optic cable utilizes the trenchless plow method where applicable to minimize ground disturbance. In addition to the relatively low impact construction activity, BMPs will be installed as appropriate throughout the duration of soil disturbing activities. Any wetlands found within the proposed project area will be assumed to be under jurisdiction from the US Army Corps of Engineers and permitted under Nationwide Permit # 57 – Electrical Utility Line and Telecommunications Activities. Impacts

to wetlands will be avoided by using boring and HDD methods. No impacts are expected to occur to the surface of wetlands within the project area. Please refer to Section 5.5.2 Mitigation Measures below for mitigation activities to impacts associated with wetlands.

5.5.2 Mitigation Measures

BMPs will be installed to prevent erosion and stabilize soil after ground moving activities in order to reduce impacts to wetlands. BMPs utilized may include straw wattles and silt fences installed on steep slopes or in areas with the potential for high rates of run off and surface roughening on gradually sloped areas that have exposed soils but are not at risk for high rates of runoff to occur. Additionally, the use of straw mulch may be employed at the discretion of the Contractor to assist in the immediate stabilization of soils while other BMPs are installed.

5.6 Groundwater

5.6.1 Potential Impacts

The proposed project is expected to have no effect on groundwater resources. Construction of the fiber optic line will occur exclusively in existing road ROWs where there are no groundwater wells. Construction of the broadband towers will occur largely in open fields and some forested areas where there are also no groundwater wells. The proposed project will not require any dewatering activities.

Construction activities associated with the proposed project are not anticipated to impact groundwater resources in the proposed project area due to a lack of groundwater resources in the proposed project area. The routine operation and maintenance of components associated with the proposed project is not anticipated to impact groundwater resources for identical reasons stated above. Please refer to Section 5.6.2 Mitigation Measures below for mitigation activities associated with groundwater resources.

5.6.2 Mitigation Measures

No mitigation measures are proposed due to a lack of impacts to groundwater resources. BMPs will still be installed in the proposed project area in the form of perimeter controls and ground stabilization BMPs to prevent the transport of sediment outside of the proposed project area in the event of precipitation events.

5.7 Floodplains

5.7.1 Potential Impacts

No permanent impacts to floodplains are expected. No proposed tower locations are adjacent to Rosebud Lake or other bodies of water with potential to have a floodplain. The proposed pathway of the fiber optic cable is adjacent to Rosebud Lake, the one body of water likely to have a floodplain associated with it. The planned installation method of the buried fiber optic cable (utilizing the trenchless plow method) does not leave permanent impacts on the landscape by the nature of the backfilling any disturbed areas while installing cable. If any impacts to floodplains in the proposed project area are expected to occur, they would be minor and temporary in nature due to the planned installation methods and use of BMPs. Given the short length that the proposed fiber optic route shares with Rosebud Lake and the temporary impacts created by utilizing a trenchless plow, no significant impacts are expected to occur. The routine operation and maintenance of components associated with proposed project would require similar levels of disturbance during construction near Rosebud Lake. This disturbance would be limited in nature. Please refer to Section 5.7.2 Mitigation Measures below for mitigation activities associated with groundwater resources.

5.7.2 Mitigation Measures

BMPs will be installed to prevent erosion and stabilize soil after ground moving activities in order to reduce impacts to floodplains (movement of sediment into floodplains). BMPs utilized may include straw wattles and silt fences installed adjacent to Rosebud Lake.

5.8 Wild and Scenic Rivers

5.8.1 Potential Impacts

There are no designated Scenic or Wild rivers within the proposed project area (*National Wild and Scenic River System*).

5.8.2 Mitigation Measures

There are no anticipated impacts to Wild and Scenic Rivers, therefore no mitigation measures are needed.

5.9 Biological Resources

5.9.1 Potential Impacts

Please refer to **Table 8: Affected Listed Species** below for a summary of potential impacts to federally listed species below and the additional sections for a more detailed discussion of potential impacts. No tree removals of trees over three inches in diameter are proposed as part of the project. This led to a may affect, not likely to adversely affect determination for the northern-long eared bat and tricolored bat using the USFWS consistency letters in IPaC. The USFWS provided consistency letters on February 2, 2024, that address determination of effect for the American burying beetle and the northern long-eared bat. Please refer to **Appendix D USFWS Consultation** to see consistency letters provided by the USFWS. Impacts to the listed federally listed species were determined based on completing the USFWS consistency letters for the northern-long eared bat and the tricolored bat and consultation with FWS South Dakota field office for the American Burying Beetle. Indirect impacts to federally listed species during construction could occur due to the generation of noise near possible roost habitat outside and within the proposed project area. Foreseen and unforeseen maintenance associated with the proposed project could result in temporary impacts to the identified listed species below due to the generation of noise near possible roost habitat, however, noise would be temporary in nature.

No suitable habitat containing dead vegetative litter and carrion for the American Burying Beetle were observed within the project area. Therefore, a no effect determination was made for the American Burying Beetle.

There are no anticipated impacts to bald or golden eagles due to the proposed project. The determination is based on a lack of observed bald or golden eagles during the biological surveys and lack of identified eagle nests in the proposed project area.

Please refer to Section 5.9.2 below for mitigation activities associated with biological resources.

Table 6: Affected Listed Species

Species	Potential Impact	Areas and Resources Affected
Northern-Long Eared Bat (<i>Myotis septentrionalis</i>)	May affect but is not likely to adversely affect	Potential roost trees within and in adjacent areas of the project area where fiber optic cable is to be installed, under current design there are no planned tree removals or trimming
Tricolored Bat (<i>Perimyotis subflavus</i>)	May affect but is not likely to adversely affect	Potential roost trees within and in adjacent areas of the project area where fiber optic cable is to be installed, under current design there are no planned tree removals or trimming
Rufa Red Knot (<i>Calidris canutus rufa</i>)	No effect	The proposed project lacks saline wetlands which are the preferred by the Rufa Red Knot.

Species	Potential Impact	Areas and Resources Affected
Whooping Crane (<i>Grus americana</i>)	No effect	The proposed project lacks suitable stopover habitat for whooping cranes. Identified swales, agriculture fields, and pastureland in the proposed project area would not function as suitable stopover habitat due their proximity to commonly use roadways and human dwellings. The only wetlands identified in the proposed project were in roadside ditches, which is not preferred by Whooping Cranes.
American Burying Beetle (<i>Nicrophorus americanus</i>)	No effect	There is a lack of habitat containing dead vegetative litter and carrion within the proposed project.
Monarch Butterfly (<i>Danaus plexippus</i>)	No effect	No significant population of milkweed, forbs, or flowering plant species were observed within the proposed project. There is a lack of suitable larval and adult monarch habitat in the proposed project area.
Western Regal Fritillary (<i>Argynnis idalia occidentalis</i>)	May affect but is not likely to adversely affect	Project study area lacked a population of violets and other forbs. Some marginal habitat may exist as warm season bunch grasses, however, habitat is marginal as there was non native species present and intermixed.
Western Prairie Fringed Orchid (<i>Platanthera praeclara</i>)	No effect	No suitable habitat is identified within the proposed project.

5.9.2 Mitigation Measures

The following mitigation measures will be implemented to lessen possible impacts to biological resources during construction:

- Construction activities will be limited to daylight hours;
- Proper muffling of heavy equipment to reduce noise will be employed by the contractor;
- Construction crews will turn off idling equipment and place noisy equipment away from nearby sensitive noise receptors when possible; and
- In the event of bald or golden eagle sighting or nest discovery during construction, construction will be halted and the local USFWS office will be contacted for further consultation.

5.10 Historic and Cultural Resources

5.10.1 Potential Impacts

A letter of no effect was received from the RST THPO on September 28th, 2023, detailing that no significant cultural resources are in the proposed project area that encompasses the locations of the broadband towers. The THPO stated that as no historic properties will be affected by the proposed project, clearance for Section 106 of the NHPA is recommended, and the project should proceed as planned. If, however, archeological resources are inadvertently discovered during the construction process, all ground disturbing activities should stop, and the RST Tribal Historic Preservation Officer should be contacted immediately.

Due to the letter of no effect received from the RST THPO no impacts are expected to occur during the construction of the proposed project, furthermore, with no identified significant cultural resources identified no impacts are expected to occur during the operation or maintenance of components associated with the proposed project. Please refer to Section 5.10.2

below for mitigation activities associated with historic and cultural resources.

5.10.2 Mitigation Measures

The RST THPO recommends that a Tribal Cultural Specialist be present for the installation of the fiber optic cable portion of the proposed project. If archaeological resources are inadvertently discovered during construction activities, all ground moving activities will halt and the lead RST THPO will be notified. Based on the letters received from THPO there are no anticipated impacts to historical properties resulting from the proposed project.

5.11 Aesthetic and Visual Resources

5.11.1 Potential Impacts

The proposed project is expected to have minimal impacts to aesthetic and visual resources. During construction of the fiber optic line there may be temporary impacts to visual resources due to obstructions caused by heavy machinery and earth moving activities. Once construction of the fiber optic line is completed, the landscape will be graded to pre-grading contours and the visual character is expected to return to the existing character.

Eight of the proposed tower locations are located within 0.5 mile of residential homes or developed areas. All eight of these proposed tower locations are within 0.25 mile of existing infrastructure including powerlines and water towers, or they are situated so the topography either partially or wholly obstruct the view of the towers from residential and developed areas. There are minimal anticipated impacts to local parks or greenspaces from the proposed locations of broadband towers. Tower 11 is located approximately 0.3 miles from a public fishing access at Eagle Feather Lake. An existing tower is located near the fishing access at Eagle Feather Lake as well. Furthermore, the lower portion of the proposed tower would be partially obscured from view by trees. Impacts from construction of this tower are not expected to significantly add to the disturbance of visual aesthetics due to the likelihood of being partially obscured, the existing tower in place, and remaining open spaces surrounding the public green space. The remaining proposed tower locations not already addressed are expected to have minor impacts to visual aesthetics in the proposed project location due to the construction of broadband towers that are several stories high in an open landscape with minimal multistory buildings or structures.

Given the permanence of certain aspects of the proposed project on the landscape (broadband towers), the project is expected to have minor impacts during construction and the routine operation and maintenance associated with the proposed project. Please refer to Section 5.11.2 Mitigation Measures for mitigation activities associated with aesthetic and visual resources.

5.11.2 Mitigation Measures

There are no mitigation measures proposed to offset minor impacts to the aesthetic and visual resources in the proposed project area.

5.12 Land Use

5.12.1 Potential Impacts

No negative impacts to current land uses are anticipated. The proposed project will install fiber optic cable in a road ROW, the cable will have no impact on the function of the road ROW to act as a ROW. Broadband towers are planned to be constructed in areas that are unused range land, upon construction of these towers, the land will continue to be utilized as range land.

It is anticipated that there will be no impacts to current land use practices during the construction of the proposed project or during the routine operation or maintenance of components associated with the proposed project. Please refer to Section 5.12.2 Mitigation Measures for mitigation activities associated with current land use practices in the proposed project area.

5.12.2 Mitigation Measures

No mitigation measures for impacts to land resources in the proposed project area are proposed as there are no permanent impacts to current land use that are expected to occur as a result of the proposed project.

5.13 Infrastructure

5.13.1 Potential Impacts (Transportation)

Temporary minor traffic impacts may occur during construction while construction vehicles are mobilized along the above-mentioned roadways. A traffic plan may be developed during the design phase as necessary. The overall traffic flow on adjacent roadways will be maintained during the construction period. If detours are necessary during construction, it will be short in nature and signed appropriately. Any traffic impact will be temporary and traffic conditions would return to normal conditions once construction is completed.

Given the temporary nature of construction, general location, and the type of construction planned for the proposed project impacts to transportation are anticipated to be temporary and minor during active construction. Identical to the impacts of associated with active construction, impacts from the routine operation and maintenance of the proposed project will be minor and temporary in nature and will not result in long term impacts. Please refer to Section 5.13.2 Mitigation Measures for mitigation activities associated with transportation resources in the proposed project area.

5.13.2 Mitigation Measures (Transportation)

If any detours are required appropriate signage will be installed to properly notify motorists.

5.13.3 Potential Impacts (Utilities)

No negative impacts are anticipated. As part of the design process utilities were identified within the project area. In addition to the measures taken to identify utilities by the project designers, contractors will call 811 (Call Before You Dig) to verify utility locations prior to the start of construction. No impacts or conflicts with underground utilities are expected as part of the project.

5.13.4 Mitigation Measures (Utilities)

Due to no anticipated impacts to utility resources in the proposed project area, no mitigation measures are proposed.

5.14 Human Health and Safety

5.14.1 Potential Impacts

Limited negative impacts on human health and safety are anticipated as a result of the proposed project. These include temporary impacts such as noise, petroleum or hazardous liquid releases, dust, air pollution from fossil fuels, and traffic hazards from construction. Negative impacts associated with the proposed project are anticipated to occur during construction of the proposed project but will abate upon completion. Temporary impacts realized during construction will not be present during the routine operation of components associated with the proposed project. Temporary impacts realized during construction will be present during foreseen and unforeseen maintenance of components associated with proposed project, however, these impacts will be temporary and minor in nature due to the limited scope of maintenance activities (for example, maintenance would not involve repairing 20 miles of fiber optic cable in one mobilization, rather it would likely focus on repairing small segments that could become inadvertently damaged).

According to the online EPA NEPAAssist tool there are no hazardous waste sites, NPL sites, toxic releases, or hazardous waste sites near the proposed project area that could affect human health and safety. Construction is not expected to encounter contamination. If contamination is encountered plans detailed in the project SWPPP will be followed and the appropriate state, federal, and tribal authorities will be notified immediately (NEPAAssist, 2023). The proposed project is expected to generate some waste associated with standard construction projects (excess or damaged building materials, expandable equipment, and other non-hazardous miscellaneous materials). Please refer to Section 5.15.2 Mitigation Measures for mitigation activities associated with human health and safety factors in the proposed project area.

5.14.2 Mitigation Measures

Generally, negative impacts, such as noise, petroleum or hazardous liquid releases, dust, air pollution from fossil fuels, and traffic hazards from construction, are temporary. These temporary impacts will be mitigated through implementation of BMPs during construction and any maintenance activities, routine education of contractors during construction, safety

reminders/briefings for contractors, careful project planning and preparation, and the collection of generated waste onsite being disposed of at an approved waste disposal facility selected by the contractor.

5.15 Cumulative Impacts

The Council on Environmental Quality defines a cumulative effect as impacts on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. This cumulative impact analysis reviews projects that have occurred or are proposed to occur on the Rosebud Sioux Reservation to analyze the cumulative effects of these projects.

Wolakota Buffalo Range

In 2020, the Wolakota Buffalo Range was established on 28,000 acres on the Rosebud Sioux Reservation. This bison range is now home to over 1,000 bison and plays a restorative role in the ecosystem. This project preserves and/ or restores approximately 28,000 acres of grassland.

Keya Wakpala Woicageyapi

The Keya Wakpala Woicageyapi or Turtle Creek Regenerative Development involves an approximately 590 acre site that will be developed into 200-600 affordable and accessible quality-built, energy-efficient homes that will be intermixed with community gardens, multi-use gathering spaces, and places to work and shop. Portions of this project are currently under construction.

SD 44 from White River to SD 63 and SD 63 from SD 44 to I-90

This project consists of a full-depth reclamation with asphalt surfacing with modification of the SD 63/44 intersection with additional lighting. This project will also include bridge repair and rehabilitation. This project is currently ongoing and construction is expected to finalize in November 2024.

This project involves the reconstruction of approximately 13 miles of South Dakota Highway 44 in Mellette County. The project will involve grading, interim surfacing, and replacement of some bridge structures.

BIA Route 7 to US Highway 83 Improvement Project

This project consisted of the reconstruction of 16 miles BIA Route 7 from the city of Rosebud to US 83. This segment of the roadway is a main arterial for the area of southeast of the city of Rosebud and deteriorating conditions had limited its use. The roadway was reconstructed with 12' lanes, 4' shoulders, safety pavement edges, recoverable side slopes, rumble strips, pavement striping, signage, ditches to carry drainage and hold snow, and culverts to meet the current FHWA safety standards. In addition, a multi-use paved trail was constructed alongside the road improvements from the city of Rosebud to approximately 1 mile southeast of the city limits.

Rosebud Sioux Tribal Transportation Improvement Program

The Rosebud Sioux Tribal Transportation Program has 33 road/street projects and bridge projects identified in their 2019-2024 Tribal Transportation Improvement Program. These projects designed and built based need and the availability of funding so timing is unknown of when all the projects will be constructed.

SDDOT Statewide Transportation Improvement Program

Numerous roadway projects have been approved in Todd and Mellette Counties as part of the SDDOT's Statewide Transportation Improvement Program. These projects have been designated to occur between 2025 and 2028, however the exact timing is unknown at this time.

With mitigation measures and BMPs discussed throughout Section 5, cumulative impacts would be negligible to minor.

The proposed project is consistent with the goals to provide reliable broadband infrastructure throughout this rural area. Additionally, the construction disturbances necessary to install the proposed project are expected to be minimal and may be coordinated with other construction projects where practicable. No substantial impacts will result from the proposed project.

The No Action Alternative would have no impacts to cumulative effects.

Please refer to **Table 8: Comparison of the Potential Environmental Impacts by Alternative** below for comparison impacts between the No Action Alternative and the Proposed Action.

Table 7: Comparison of the Potential Environmental Impacts by Alternative

Alternative		Potential Impacts
Aesthetic Resources		
Proposed Action		Under the proposed action, impacts to aesthetic resources would consist of temporary and permanent impacts. Temporary impacts would involve disrupted viewsheds from the presence of construction equipment during construction and permanent impacts from the presence of new broadband towers on a relatively open landscape. The permanent impacts would be offset by the benefits of the completed project.
No Action Alternative		Under the no action alternative of the proposed project there would be no impact to aesthetic resources within the proposed project area and existing conditions of aesthetic resources would persist.
Vegetation		
Proposed Action		Under the proposed action, impacts to vegetation resources would be temporary and be relatively moderate in nature. Areas where construction activities will be temporary cleared of vegetation species. Cleared areas would be reseeded after construction activities are completed and additional soil stabilizing BMPs would be installed to promote the reestablishment of vegetation.
No Action Alternative		Under the no action alternative of the proposed project there would be no impact to vegetation resources within the project area and existing conditions would persist.
Water Resources, Floodplains, and Fish		
Proposed Action		Under the proposed action, novel impacts to water resources, floodplains, and fish will be minor and temporary in nature. Construction activities associated with the installation and construction broadband towers and fiber optic cable may create an environment that allows for sediment to be transported outside the project area in the event of precipitation events because of exposed soils that have had vegetation cleared for construction. Areas that are temporarily cleared of vegetation will have perimeter BMPs and soil stabilization BMPs installed to help prevent the transport of sediment. It is reasonable to assume that cleared areas will be low as the actual footprint of broadband towers will not occupy the entire tower location and the disturbance from the installation of fiber optic cable will be confined to the narrow plow line created from ditch digging activities.
No Action Alternative		Under the no action alternative of the proposed project there would be no impact to water, floodplain, and fish resources within the project area and existing conditions of water, floodplain, and fish resources would persist.
Soils and Geologic Hazards		

Alternative	Potential Impacts
Proposed Action	<p>Under the proposed action, novel impacts to geological hazards would be non-existent and novel impacts to soils in the area would be low to moderate during the installation of the broadband towers and non-existent for the installation of the fiber optic cable. No new impacts would occur in areas where the fiber optic cable is installed as these areas will occur in road ROWs where previous disturbance has already occurred.</p> <p>Impacts from the installation of broadband towers would be low to moderate as construction activities would temporarily prevent the current land use. However, the permanent footprint of the broadband towers is relatively small, land use will revert to pre-construction uses easily.</p>
No Action Alternative	<p>Under the no action alternative of the proposed project there would be no impact to soils or geological hazards within the proposed project area and existing conditions of soils and geological hazards would persist.</p>
Wetlands	
Proposed Action	<p>Under the proposed action, novel impacts to wetlands in the project area will be low and temporary in nature. Wetlands within the proposed project area exist solely in the portion that will house the fiber optic cable, there were no identified wetlands in the broadband tower locations. Impacts to wetlands within the planned route of the fiber optic cable will be temporary in nature due to the planned installation methods of the fiber optic cable (trenchless plow). Additionally, upon completion of fiber optic cable installation, ground stabilizing BMPs and revegetation methods will be employed to return disturbed wetlands back to pre-disturbance conditions. Prior to construction the contractor will review either side of the road the fiber optic cable and will select the route with the fewest wetlands present.</p>
No Action Alternative	<p>Under the no action alternative of the proposed project there would be no impact to wetland resources within the project area and existing conditions of wetland resources would persist.</p>
Wildlife	
Proposed Action	<p>Under the proposed action, novel impacts to wildlife in the project area may affect but is not likely to adversely affect the northern long-eared bat (NLEB) (<i>Myotis septentrionalis</i>) and the tricolored bat (<i>Perimyotis subflavus</i>). It is likely that the proposed action will have no adverse effect the rufa red knot (<i>Calidris canutus rufa</i>), whooping crane (<i>Grus americana</i>), American burying beetle (<i>Nicrophorus americanus</i>), monarch butterfly (<i>Danaus plexippus</i>), and the western prairie fringed orchid (<i>Platanthera praeclara</i>).</p> <p>Potential roost habitat for the NLEB and the tricolored bat exists within the project area, specifically in the area where fiber optic cable is planned to be installed. Potential roost habitat exists in the form of trees with crevices, cracks, and sloughing bark. While in their current form, design plans do not have tree removal planned, if tree removal were to occur there would be a localized loss of potential roost habitat that would affect individuals but not likely negatively populations as a whole.</p>
No Action Alternative	<p>Under the no action alternative of the proposed project there would be no impact to wildlife resources within the project area and existing conditions of wildlife resources</p>

Alternative	Potential Impacts
	would persist.
Cultural Resources	
Proposed Action	Under the proposed action, there are no anticipated novel impacts to cultural resources within the project area. The determination of no impacts is based on the letter from the RST THPO stating that “no historic properties will be affected” by the installation of broadband towers. Furthermore, there are no anticipated impacts from the installation of fiber optic cable as the fiber optic cable will be installed in areas that have been previously disturbed.
No Action Alternative	Under the no action alternative of the proposed project there would be no impact to cultural resources within the project area and existing cultural resources conditions would persist.

The project is not likely to have significant impacts on resources as most impacts would be temporary (except impacts to visual resources) and minor in nature.

6.0 Applicable Environmental Permits and Regulatory Requirements

Table 8: Potential Applicable Statutory, Regulatory, and Other Requirements

Potentially Applicable Requirement	Relevant Project Information
All Resources	
National Environmental Policy Act (NEPA) of 1969 42 U.S.C. § 4321 et seq.	NEPA EA and associated involvement procedures are underway.
Vegetation, Wildlife, and Fish	
Endangered Species Act of 1973 16 U.S.C. § 1531 et seq.	Consultation with the USFWS is recommend if tree removal is required as this would affect the northern-long eared bat and the tricolored bat. (Under their most current form, design plans do not call for tree removal)
Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) of 1976 16 U.S.C. 1801 et seq.	Not applicable due to a lack of fishery resources in the proposed project area.
Bald Eagle and Golden Eagle Protection Act (Eagle Act) of 1940 16 U.S.C. § 668-668d	Not applicable due to a lack of bald and golden eagles within the proposed project area.
Migratory Bird Treaty Act (MBTA) of 1918 16 U.S.C. § 703-712 Responsibilities to Federal Agencies to Protect Migratory Birds Executive Order 13186	Not applicable as the proposed activities are not expected to have impacts to migratory birds.

<p>Fish and Wildlife Conservation Act 16 U.S.C. § 2901 et seq.</p> <p>Fish and Wildlife Coordination Act 16 U.S.C. § 661 et seq.</p>	<p>Not applicable as the project will not affect wildlife resources.</p>
Waters, Wetlands, and Floodplain Protection	
<p>Clean Water Act 33 U.S.C. § 1251 et seq.</p> <p>Floodplain/Wetlands Environmental Review Requirements 10 CFR 1022.12</p> <p>Floodplain Management Executive Order 11988</p> <p>Protection of Wetlands Executive Order 11990</p>	<p>Wetlands identified will be assumed to be under the jurisdiction of the US Army Corps of Engineers. Impacts to wetlands will need to be permitted through Section 404 of the Clean Water Act. The project will likely qualify for Nationwide Permit #57.</p>
<p>Coastal Zone Management Act (CZMA) 16 U.S.C. § 1451 et seq.</p>	<p>Not applicable as the project is not located in a coastal zone.</p>
Air Quality and Greenhouse Gases	
<p>The Clean Air Act, as revised in 1990 42 U.S.C. § 4701</p>	<p>Not applicable.</p>
<p>Final Mandatory Reporting of Greenhouse Gases Rule 40 CFR 98</p> <p>Federal Leadership in Environmental, Energy, and Economic Performance Executive Order 13514</p>	<p>The project is located an area that meets the EPA's attainment threshold which means greenhouse gas reporting is not needed.</p>
Cultural and Historic Resources	
<p>Antiquities Act of 1906 16 U.S.C. § 431- 433</p> <p>Historic Sites Act of 1935 16 U.S.C. § 461- 467</p> <p>National Historic Preservation Act (NHPA), as amended, inclusive of Section 106 54 U.S.C. § 306108 et seq.</p>	<p>Not applicable due to a lack of cultural resources within the proposed project area.</p>

<p>Archaeological Data Preservation Act of 1974 (16 U.S.C. § 469 – 469-1)</p> <p>Archaeological Resources Protection Act of 1979, as amended. 16 U.S.C. § 469 a-c</p> <p>Native American Graves Protection and Repatriation Act 25 U.S.C. § 3001 et seq.</p> <p>Indian Sacred Sites Executive Order 13007</p> <p>American Indian Religious Freedom Act of 1978 (42 U.S.C. § 1996)</p>	
Noise, Public Health, and Safety	
Noise Control Act of 1972 42 U.S.C. § 4901 et seq.	Construction work will be performed during normal business hours, between 8am and 6pm, to reduce construction noise to offsite sensitive receptors.
<p>Spill Prevention Control and Countermeasures Rule 40 CFR 112</p> <p>Comprehensive Environmental Response, Compensation, and Liability Act 42 U.S.C. § 9601 et seq.</p> <p>Resource Conservation and Recovery Act 42 U.S.C. § 6901 et seq.</p>	The Grantee will operate under a SWPPP to ensure worker protection and proper clean up in the event of potentially contaminated media.
<p>The Toxic Substances Control Act 15 U.S.C. 2601 et seq.</p> <p>Federal Communications Commission (FCC)</p>	
State, County, and Local Plan Consistency	
List Any State, County or Local Planning agencies	

Rosebud Sioux Tribe Tribal Land & Historic Preservation Office	Section 106 Historic Preservation Consultation
South Dakota Department of Agriculture & Natural Resources	Surface Discharge Water Permit

7.0 Consultations

Table 9: Agency Consultation

Agency and Name	Consultation	Status
<p>Rosebud Sioux Tribe Tribal Historic Preservation Office – Jenifer Galindo. State of Any Archeological resources and Native American Resources P.O Box 750, Rosebud, South Dakota 57570</p> <p>Rosebud Sioux Tribe Tribal Historic Preservation Office- Ben Young. State of Any Archeological resources and Native American Resources P.O Box 750, Rosebud, South Dakota 57570</p>	<p>Section 106 Historic Preservation Consultation</p>	<p>Complete: THPO letter received on 9/9/2024 THPO letter received on 9/28/2023</p>
<p>South Dakota Department of Agriculture and Natural Resources – Joe Foss. State of Any Archeological resources, Native American resources, and Native American Resources 523 East Capitol Avenue, Pierre, South Dakota 57501</p>	<p>Impacts to air quality, drinking water, ground water, and solid and hazardous waste</p>	<p>Complete: Consultation letter received on 1/23/2024</p>
<p>Fish and Wildlife Service South Dakota Ecological Services Field Office</p>	<p>Determination of Effect in accordance with Endangered Species Act of 1973</p>	<p>Complete: Consultation letter received on 3/26/2024</p>
<p>South Dakota Natural Resource Conservation Service</p>	<p>Determination of impacts to prime and statewide important farmland in accordance with the Farmland Policy Protection Act</p>	<p>Complete: Consultation letter received on 03/06/2024</p>

8.0 List of Preparers

Table 10: Document Preparers

Affiliation	Name	Title	Project Role
KUJ	Kory Rude	Environmental Specialist III	Project Manager/QAQC
KUJ	Jessica Callahan	Environmental Specialist III	Primary Author
KUJ	Jeff Price	GIS Analyst III	Figure Creation
KUJ	Vincent Popyk	Environmental Specialist I	Primary Author

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Appendix A – Wetland Documentation

WETLAND DELINEATION REPORT

**Telecommunications Installation
297th Street, 269th Avenue & BIA 5**

**Rosebud Sioux Tribe
Project Number 2311-00815**

**TODD COUNTY,
SOUTH DAKOTA**

July 24th, 2024

SUBMITTED BY:

Vincent Popyk, Environmental Specialist
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1.0 Introduction

1.1 Project Location

KLJ was contracted to conduct a field wetland delineation by the Rosebud Sioux Tribe to assist with determining wetland impacts associated with the installation of fiber optic cable within the road right-of-way along 297th Street, 269th Avenue, BIA Highway 5, and US Hwy 83, in Todd County, South Dakota. The study area measured approximately 30.5 miles in length (7.25 miles east and west on 297th Street, 12.75 miles north and south on BIA 5, 10 miles north and south on US Hwy 83, and approximately 0.5 miles east and west on BIA 7 west of Rosebud, SD) and approximately 670 acres in size. Please refer to **Figure 1. Project Location Map** in the figures section.

1.2 Purpose and Need

The purpose of the installation project is to connect 1,562 underserved households with high-speed internet connections via fiber to the home connections or fixed wireless to the home connections. There is limited availability of high-speed internet infrastructure in the area.

The need for the project is infrastructure driven by the historically underserved/underdeveloped nature of the area when compared to neighboring communities outside of the Rosebud Sioux Tribe. The project will assist in improving the wellbeing and increase the intra-connectivity and interconnectivity within and outside the local community.

2.0 Survey Methodology

KLJ conducted the field wetland delineation in accordance with the US Army Corp of Engineers (USACE) Wetland Delineation Manual (Environmental Laboratory, 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) (Environmental Laboratory, 2010). The study area was delineated on July 6th, 2023, May 28th, 2024, and July 21st, 2024. The study area was delineated multiple times due to an expansion of the project area determined by the client.

The routine approach with onsite inspection was utilized, including the standard multi-parameter approach (vegetation, hydrology and soils) for wetland identification. An area is a wetland if indicators of hydrophytic vegetation, hydric soils, and wetland hydrology are all present. Definitions and methodologies for determining each of these three parameters are summarized below. Aquatic resources were mapped using a Trimble GEO XT global positioning system unit with submeter accuracy. Please refer to **Appendix A. Site Photographs** for photographs of the study area.

2.1 Vegetation

Definition: The prevalence of plant species that are adapted to life in saturated soil conditions.
Method: To determine if vegetation was hydrophytic, the scientific name, wetland indicator status and determination of dominance for the plant species in each stratum at each sample point were recorded on USACE wetland determination data forms. Dominance refers to the spatial extent of a species that is directly observed in the

field; it is calculated by identifying the species that individually or collectively account for at least 50 percent of the total coverage of vegetation in each stratum, as well as any other species that, by itself, accounts for at least 20 percent of the total for the stratum. The hydrophytic vegetation parameter was met if the vegetation passed the rapid test, dominance test or prevalence index. If problematic vegetation occurred at a sample point, detailed observations were documented.

2.2 Soils

Definition: Soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper 12 inches.

Method: Soil colors were characterized using a Munsell soil color book and the texture determined by the NRCS Guide to Texture by Feel (NRCS 2015). If one or more of the hydric soil indicators on the USACE data forms were identified, the soil was hydric. Please refer to **Table 1** that notes the dominant soils within the Study area (Web Soil Survey).

Table 1: Dominant Soils within Study Area

Map Unit Name	Map Unit Symbol	Approximate Area (acreage)	Slope (percent)	Hydric Soil (Y/N)	Associated Data Points
Duda-Fishberry loamy fine sands, 0-3% slopes	44756	0.1	0-3	N	N/A
Anselmo-Ronson fine sandy loams, 5-9% slopes	ArC	17.8	5-9	N	N/A
Anselmo-Longpine fine sandy loams, 9-21% slopes	AtE	55.0	9-21	N	UPL5, UPL7, UPL13, UPL14
Anselmo-Vtal fine sandy loams, 0-2% slopes	AvA	44.6	0-2	N	N/A
Doger loamy fine sand, 0-3% slopes	DfA	3.2	0-3	N	N/A
Doger-Dunday loamy fine sands, 3-6% slopes	DgB	56.0	3-6	N	N/A
Duda loamy fine sand, 0-6% slopes	DIB	9.6	0-6	N	N/A
Elsmere loamy fine sand, 0-3% slopes	EIA	1.1	0-3	N	UPL9
Holt fine sandy loam, 0-3% slopes	HfA	56.3	0-3	N	DP9, DP10, DP11, DP12,
Holt-Vetal fine sandy loams, 3-9% slopes	HIC	85.4	3-9	N	DP3, DP4, UPL1, UPL11, UPL12, UPL15
Hoven silt loam, 0-1% slopes	HmA	0.0	0-1	Y	N/A
Keya silt loam, 0-3% slopes	Ke	8.4	0-3	N	DP1, DP2, UPL16

Map Unit Name	Map Unit Symbol	Approximate Area (acreage)	Slope (percent)	Hydric Soil (Y/N)	Associated Data Points
Keota-Epping silt loams, 9-21% slopes	KhE	29.0	9-21	N	N/A
Keota-Rock outcrop complex, 16-40% slopes	KrF	16.4	16-40	N	N/A
Loup-Elsmere loamy fine sands	Le	5.1	n/a	Y	DP13, DP14, DP15, DP16, DP17, DP19, DP20
Ronson-Anselmo fine sandy loams, 0-3% slopes	RnA	8.5	0-3	N	N/A
Ronson-Anselmo fine sandy loams, 3-5% slopes	RnB	6.5	3-5	N	UPL3, UPL10
Yockey-Bigwinder complex, channeled	Sd	3.8	n/a	N	N/A
Anselmo fine sandy loam, 3-6% slopes	T172B	69.2	3-6	N	N/A
Anselmo fine sandy loam, 6-11% slopes	T172D	19.2	6-11	N	N/A
Longpine-Ronson fine sandy loams, 3-30% slopes	TfE	54.3	3-30	N	UPL8
Tuthill silt loam, 0-3% slopes	ThA	6.6	0-3	N	N/A
Valentine fine sand, 9-25% slopes	VaE	9.7	9-25	N	N/A
Valentine-Dunday complex 3-9% slopes	VdC	42.6	3-9	N	N/A
Valentine-Tassel complex, 5-30% slopes	VsE	39.5	39.5	N	N/A
Vetal fine sandy loam, 0-3% slopes	Vt	21.2	21.2	N	DP5, DP6, DP7, DP8, UPL4, UPL6
Water	W	0.9	0.9	N	N/A

2.3 Hydrology

Definition: 14 or more consecutive days of flooding, ponding, or water table within 12 inches of the surface during the growing season at a minimum frequency of 5 out of 10 years (50 percent).

Method: Wetland hydrology was determined by observing the presence of primary and/or secondary indicators listed on the USACE data form. If one primary indicator or two secondary indicators were present, the wetland hydrology parameter was met.

3.0 Delineation Results

The field wetland delineation was conducted on July 6th, 2023, May 28th, 2024, and July 21st, 2024 by Vincent Popyk of KLJ. The study area followed the road rights-of-way of 269th Avenue, 297th Street, BIA 5, BIA 7, and US Hwy 83 in rural Todd County. Additional delineations were required due to an expansion of the previous study area requested by the client. As identified by the US Geological Survey (USGS), the study area is located in the Keya Paha Ecoregion. This ecoregion is characterized by sandy, level to rolling plains topography that is dissected near streams within the ecoregion. Soils are dominated by the following orders: Mollisols (Argistolls and Haplustolls) and Entisols (Torriorthents). These soils allow for the growth of Shortgrass prairie grasses such as blue gramma, side oats gramma, western wheatgrass, little bluestem, and needle and thread grass. Land use is a combination of cattle grazing, rangeland and dryland farming of winter wheat, alfalfa, and sugar beets.

A review of antecedent precipitation for the region was conducted after the first delineation to determine if climatic conditions were considered normal at the time of the delineation. The nearest National Weather Service (NWS) station (Mission 14S) is in Mission, South Dakota, approximately 14 miles north from the study area. The NWS Mission station reported above average precipitation levels for two of the three months immediately prior to the delineation. The above average level of precipitation means that the conditions observed during the survey are atypical of what one would expect in the survey location. Please refer to **Table 2 & 3: Antecedent Precipitation**. A second review of antecedent precipitation for the region was not conducted after the second delineation due to a lack of wetlands identified during the second delineation. A third review of antecedent precipitation for the region was conducted after the third delineation (which identified wetlands) to determine if climatic conditions were considered normal at the time of the delineation. The nearest National Weather Service (NWS) station (Mission 14S) is in Mission, South Dakota, approximately 14 miles north from the study area. NWS Mission station reported above average precipitation conditions for the first month prior to the delineation, normal precipitation conditions for the second month preceding the delineation, and above normal precipitation conditions for the third month preceding the delineation. The predominant above average level of precipitation means that the conditions observed during the delineation are atypical of what one would expect in the study area. The above average precipitation conditions experienced during the first and third delineations suggest that some of the environmental characteristics observed (hydrological and vegetative) are not typical for what was seen in the field.

10 wetlands totaling approximately 2.91 acres in size were identified within the study area, one Other Waters of the United States (OWUS) were identified within the study area.

Table 2a: Antecedent Precipitation

Year	Month	30% Chance precipitation less than (Inches)	30% Chance precipitation more than (Inches)	2023 Rainfall (Inches)	Condition (Dry, Wet, Normal)	Condition Value ¹	Month Weight Value	Product of Previous Two Columns
2023	June	2.07	4.15	5.68	W	3	3	9
2023	May	2.21	4.36	5.18	W	3	2	6
2023	April	1.36	2.80	1.04	D	1	1	1
¹ Condition Values range from 1 (dry), 2 (normal), and 3 (wet). ² Total value ranges are Drier than normal (6-9), Normal (10-14), and Wetter than Normal (15-18).							Total ²	16

Table 3: Antecedent Precipitation

Year	Month	30% Chance precipitation less than (Inches)	30% Chance precipitation more than (Inches)	2023 Rainfall (Inches)	Condition (Dry, Wet, Normal)	Condition Value ¹	Month Weight Value	Product of Previous Two Columns
2024	June	2.11	4.21	5.93	W	3	3	9
2024	May	2.22	4.34	2.97	N	2	2	4
2024	April	1.38	2.83	3.62	W	3	1	3
¹ Condition Values range from 1 (dry), 2 (normal), and 3 (wet). ² Total value ranges are Drier than normal (6-9), Normal (10-14), and Wetter than Normal (15-18).							Total ²	16

3.1 Aquatic Resources

During the delineation, 2.91 acres of wetlands were identified and 281 linear feet (0.16 acres) of OWUS were identified. Wetlands identified within the study area were identified during the first delineation of the study area while the identified OWUS in the study area was identified during the second delineation of the study area. More information on the wetlands and OWUS within study area can be found in the section and tables below.

3.1.1 Drainage

Wetland 1 is drainage wetland that occurs within a roadside ditch, totaling 0.002 acres in size. Wetland 1 is classified as a nonpersistent palustrine emergent, temporary flooded wetland. Vegetation at the sampling point (DP1) as comprised of bald spike rush (*Eleocharis erythropoda*), fox sedge (*Carex vulpinoidea*), hairy water clover (*Marsilea vestita*), foxtail barley (*Hordeum*

jubatum), horseweed (*Erigeron canadensis*), common ragweed (*Ambrosia artemisiifolia*), and smartweed (*Persicaria bicornis*). Soil exhibited below dark surface (A11) as a hydric soil indicator. Wetland hydrology was indicated by the presence of surface water (A1), high water table (A2), saturation (A3), geomorphic position (D2), and the FAC-Neutral test (D5). Wetland 1 is likely non-jurisdictional due to its' lack of connection to other features that would connect to other features outside of study area.

Wetland 2 is drainage wetland that occurs within a roadside ditch, totaling 0.037 acres in size. Wetland 2 is classified as a nonpersistent palustrine emergent, temporary flooded wetland. Vegetation at the sampling point (DP3) as comprised of bald spike rush (*Eleocharis erythropoda*), hairy water clover (*Marsilea vestita*), foxtail barley (*Hordeum jubatum*), and horseweed (*Erigeron canadensis*). Soil exhibited below dark surface (A11) as a hydric soil indicator. Wetland hydrology was indicated by the presence of surface water (A1), high water table (A2), saturation (A3), geomorphic position (D2), and the FAC-Neutral test (D5). Wetland 2 is likely non-jurisdictional due to its' lack of connection to other features that would connect to other features outside of study area.

Wetland 3 is drainage wetland that occurs within a roadside ditch, totaling 0.418 acres in size. Wetland 3 is classified as a nonpersistent palustrine emergent, temporary flooded wetland. Vegetation at the sampling point (DP5) is comprised of fox sedge (*Carex vulpinoidea*), knotgrass (*Polygonum aviculare*), and smooth brome (*Bromus inermis*). Soil exhibited redox dark surface (F6) as a hydric soil indicator. Wetland hydrology was indicated by the presence of surface water (A1), high water table (A2), saturation (A3) geomorphic position (D2), and the FAC-neutral test (D5). Wetland 3 is likely non-jurisdictional due to its' lack of connection to other features that would connect to other features outside of study area.

Wetland 4 is drainage wetland that occurs within a roadside ditch, totaling 0.148 acres in size. Wetland 4 is classified as a nonpersistent palustrine emergent, temporary flooded wetland. Vegetation at the sampling point (DP7) is comprised of fox sedge (*Carex vulpnoidea*), knotgrass (*Polygonum aviculare*), horseweed (*Erigeron canadensis*), and common sunflowers (*Helianthus annuus*). Soil exhibited redox dark surface (F6) as a hydric soil indicator. Wetland hydrology was indicated by the presence of surface water (A1), geomorphic position (D2), and the FAC-neutral test (D5). Wetland 5 is likely non-jurisdictional due to its' lack of connection to other features that would connect to other features outside of study area.

3.1.2 Basin

Wetland 5 is an isolated basin wetland within a roadside ditch totaling 0.033 acres. Wetland 5 is classified as a nonpersistent palustrine emergent, temporary flooded wetland. Vegetation at the sample point (DP9) was comprised of bald spike rush (*Eleocharis erythropoda*), smooth brome (*Bromus inermis*), troublesome sedge (*Carex molesta*), and horseweed (*Erigeron canadensis*). Soil at DP9 exhibited depleted matrix (F3) as a hydric soil indicator. Wetland hydrology at DP9 was indicated by high water table (A2), saturation (A3), FAC-neutral test (D5), and geomorphic position (D2) as hydrological indicators. Wetland 5 is likely not jurisdictional due its' isolated nature from other features outside of the study area.

Wetland 6 is a basin wetland within a roadside ditch totaling 1.89 acres. Wetland 6 is classified as a nonpersistent palustrine emergent, seasonally flooded wetland. Vegetation at the sample point (DP11) was comprised of Canada blue joint (*Calamagrostis canadensis*), common spike rush (*Eleocharis palustris*), narrow leaf cattail (*Typha angustifolia*), scouring rush (*Equisetum hyemale*) fox tail barley (*Hordeum jubatum*), and panic grass (*Panicum virgatum*). Soil at DP11 exhibited

depleted below dark surface (A11) as a hydric soil indicator. Wetland hydrology at DP11 was indicated by high water table (A2), saturation (A3), FAC-neutral test (D5), and geomorphic position (D2) as hydrological indicators. Wetland 6 is likely not jurisdictional due its' isolated nature from other features outside of the study area.

3.1.2 Slope

Wetland 7 is a slope wetland within a roadside swale totaling 0.16 acres. Wetland 7 is classified as a persistent palustrine emergent, seasonally flooded wetland. Vegetation at the sample point (DP13) was comprised of narrow leaf cattail (*Typha angustifolia*), clustered field sedge (*Carex praegracilis*), panic grass (*Panicum virgatum*), common spike rush (*Eleocharis palustris*), and club rush (*Schoenoplectus acutus*) Soil at DP13 exhibited redox dark surface (F6) as a hydric soil indicator. Wetland hydrology at DP13 was indicated by saturation visible on aerial imagery (C9), FAC-neutral test (D5), and geomorphic position (D2) as hydrological indicators. Wetland 7 is likely jurisdictional due to the apparent connection to other aquatic features outside of the project area.

Wetland 8 is a slope wetland within a roadside swale totaling 0.14 acres. Wetland 8 is classified as a nonpersistent palustrine emergent, seasonally flooded wetland. Vegetation at the sample point (DP15) was comprised of clustered field sedge (*Carex praegracilis*), common spike rush (*Eleocharis palustris*), club rush (*Schoenoplectus acutus*), narrow leaf cattail (*Typha angustifolia*) bur reed (*Sparganium erectum*) and fox tail barely (*Hordeum jubatum*). Soil at DP15 exhibited depleted below dark surface matrix (A11) as a hydric soil indicator. Wetland hydrology at DP17 was indicated by was indicated by saturation visible on aerial imagery (C9), FAC-neutral test (D5), geomorphic position (D2), and saturation (A3), as hydrological indicators. Wetland 8 is likely jurisdictional due to the apparent connection to other aquatic features outside of the project area.

Wetland 9 is a slope wetland within a roadside swale totaling 0.02 acres. Wetland 9 is classified as a nonpersistent palustrine emergent, seasonally flooded wetland. Vegetation at the sample point (DP17) was comprised of clustered field sedge (*Carex praegracilis*), canada blue joint (*Calamagrostis canadensis*), common spike rush (*Eleocharis palustris*), club rush (*Schoenoplectus acutus*), and wild mint (*Mentha arvensis*) Soil at DP17 exhibited depleted below dark surface matrix (A11) as a hydric soil indicator. Wetland hydrology at DP17 was indicated by was indicated by saturation visible on aerial imagery (C9), FAC-neutral test (D5), geomorphic position (D2), and saturation (A3), as hydrological indicators. Wetland 9 is likely jurisdictional due to the apparent connection to other aquatic features outside of the project area.

Wetland 10 is a slope wetland within a roadside swale totaling 0.04 acres. Wetland 10 is classified as a nonpersistent palustrine emergent, seasonally flooded wetland. Vegetation at the sample point (DP19) was comprised of Canada blue joint (*Calamagrostis canadensis*), common spike rush (*Eleocharis palustris*), and narrow leaf cattail (*Typha angustifolia*) Soil at DP19 exhibited redox dark surface (F6) as a hydric soil indicator. Wetland hydrology at DP19 was indicated by was indicated by saturation visible on aerial imagery (C9), FAC-neutral test (D5), geomorphic position (D2), and saturation (A3), as hydrological indicators. Wetland 10 is likely jurisdictional due to the apparent connection to other aquatic features outside of the project area.

Table 3, Wetlands within Study area

Feature	Area (acreage)	Latitude (Dec Deg)	Longitude (Dec Deg)	Cowardin Classification	Jurisdictional Status*	NWI Identifier**
Wetland 1	0.002	43.1037401	-100.6401681	PEM2C	Likely Non-jurisdictional	N/A
Wetland 2	0.037	43.1037641	-100.6471103	PEM2C	Likely Non-jurisdictional	N/A
Wetland 3	0.418	43.1037885	-100.7176763	PEM2C	Likely Non-jurisdictional I	R4SBC
Wetland 4	0.148	43.1039227	-100.7174356	PEM2C	Likely Non-jurisdictional	R4SBC
Wetland 5	0.033	43.1038843	-100.6501377	PEM2C	Likely Non-Jurisdictional	N/A
Wetland 6	1.89	43.006705	-100.574128	PEM1C	Likely Non-Jurisdictional	N/A
Wetland 7	0.16	43.037354	-100.590967	PEM1C	Likely Jurisdictional	PEM1C
Wetland 8	0.14	43.052024	-100.594632	PEM1C	Likely Jurisdictional	PEM1C
Wetland 9	0.02	43.066023	-100.595867	PEM1C	Likely Jurisdictional	PEM1C
Wetland 10	0.04	43.085389	-100.597624	PEM1C	Likely Jurisdictional	PEM1C
Total Wetlands	2.91					
**Wetland type refers to the HGM classification: depressional, riverine, or slope wetlands; *Jurisdictional assists with determining whether or not the feature is under the authority of the USACE; please enter Likely Jurisdictional, Likely Non-Jurisdictional, or Preamble						

3.1.3 Other Waters of the US (Open Water)

OW1 is an open water OW1 identified as Rosebud Lake. OW1 measures 0.16 acres within the study area and is an artificial lake created by the damming of Rosebud Creek. OW1 receives hydrology from the surrounding upland areas and from Rosebud Creek. OW1 extends beyond the study area. OW1 is likely a jurisdictional feature.

Feature	Length (feet)	Area (acreage)	Latitude (Dec Deg)	Longitude (Dec Deg)	Cowardin Classification	Jurisdictional Status*	NWI Identifier**
Other Water 1 (OW1)	281	0.16	43.229833	-100.850001	PABFh	Likely Jurisdictional	PABFh
	**Wetland type refers to the HGM classification: depressional, riverine, or slope wetlands; *Jurisdictional assists with determining whether or not the feature is under the authority of the USACE; please enter Likely Jurisdictional, Likely Non-Jurisdictional, or Preamble						

4.0 Discussion

Ten wetlands totaling 2.91 acres and one OWUS totaling 0.16 acres (linear feet) were identified during the wetland delineation. Of the ten delineated wetlands and one OWUS, of the identified wetlands none are likely jurisdictional in nature and the identified OWUS is likely jurisdictional in nature. Final determination of jurisdictional features within the study area is ultimately the decision and responsibility of the US Army Corp of Engineers (USACE). All necessary permits shall be acquired if the delineated wetlands or OWUS within the study area will be affected by the proposed project.

5.0 Threatened or Endangered Species

In Todd County, South Dakota the USFWS (US Fish & Wildlife Service) has identified six federally listed threatened, endangered, or candidate species within the study area. Please refer to **Table 4 Summary of ESA listed species in Todd County, South Dakota** for a summary of species information and potential incidental take determinations. During the field aquatic resource delineation, the study area was also surveyed for the presence of threatened, endangered, proposed, or candidate species. No federally listed species were observed.

Table 4, Summary of ESA Listed Species in Todd County, South Dakota

Species	Guidance	Listing	Observed in Study Area	Effect Determination
Tricolored Bat (<i>Perimyotis subflavus</i>)	Potential incidental take if impacts to structures and trees during the summer maternity season (April 1st through September 30th). Per the 4(d) rule, incidental take is not prohibited outside of the White-nose Syndrome Zone (WNS Zone). USFWS coordination is required if there is potential for incidental take.	Proposed Endangered	No	May affect not likely to adversely affect
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Potential incidental take if impacts to structures and trees during the summer maternity season (April 1st through September 30th). Per the 4(d) rule, incidental take is not prohibited outside of the White-nose Syndrome Zone (WNS Zone). USFWS coordination is required if there is potential for incidental take.	Endangered	No	May affect not likely to adversely affect
Rufa Red Knot (<i>Calidris canutus rufa</i>)	Incidental take is unlikely as there is a lack of suitable habitat for the Rufa Red Knot within the study area	Threatened	No	No effect
Whooping Crane (<i>Grus americana</i>)	Incidental take is unlikely as there is a lack of suitable habitat for the Whooping Crane within the study area	Endangered	No	No effect
American Burying Beetle (<i>Nicrophorus americanus</i>)	Incidental take is unlikely as there is a lack of suitable habitat for the American Burying Beetle within the study area	Threatened	No	No effect
Monarch Butterfly (<i>Danus plexippus</i>)	Incidental take is unlikely as there is a lack of suitable	Candidate	No	No effect

Species	Guidance	Listing	Observed in Study Area	Effect Determination
	habitat for the Monarch within the study area			
Western Prairie Fringed Orchid (<i>Platanthera praeclara</i>)	Potential incidental take for ground disturbing activities in mesic or moist tallgrass prairie habitat.	Threatened	No	No effect

5.1 Listed Species

The study area was evaluated to determine potential occurs of federally listed threatened, endangered, proposed, and candidate species under Section 4 of the Endangered Species Act (ESA), as amended (16 United States Code (USC) 1531 et seq.). Section 9 of the ESA prohibits the “take” of species listed by USFWS as threatened or endangered. Take is defined as follows: “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct.” In recognition that take cannot always be avoided, Section 10(a) of the ESA includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Section 10(a)(1)(B) permits (Incidental Take Permits) may be issued if take is incidental and does not jeopardize the survival and recovery of the species.

According to the USFWS, an endangered species is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future. A proposed species is one that is officially proposed in the Federal Register to be listed under Section 4 of the ESA. The USFWS has one year after a species is proposed for listing under the ESA to make a final determination whether to list a species as threatened or endangered. A candidate species is a plant or animal for which the USFWS has sufficient information on its biological status and threats to propose it as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. While candidate species are not legally protected under the ESA, it is within the spirit of the ESA to consider said species as having significant value and worth protecting.

Occurring in the study area, the USFWS has listed the tricolored bat (*Perimyotis subflavus*) as proposed endangered, the whooping crane (*Grus americana*) and the northern long-eared bat (*Myotis septentrionalis*) as endangered, the monarch butterfly (*Danux plexippus*) as a candidate, and the American burying beetle (*Nicrophorus americanus*), rufa red knot (*Calidris canutus rufa*), and the western prairie fringed orchid (*Platanthera praeclara*) as threatened species. None of the listed species were observed during the field surveys. Habitat requirements, the potential for suitable habitat within the study area, and other information regarding listed species found in the study area are described below.

5.1.1 Threatened Species

Rufa Red Knot (*Calidris canutus rufa*)

The Rufa Red Knot (also referred to as just the “Red knot”) is a threatened migratory shore bird species that makes winter migrations to North and South America (coastal areas in Argentina,

Chile, Northeastern coast of South America, Texas to Mississippi) from breeding grounds in the Canadian Arctic (USFWS, 2020). The Red knot has been documented throughout South Dakota, Michigan, and portions of North Dakota for spring and fall stopovers during migration (USFWS, 2023a). The primary cause for listing the Red Knot as threatened is because of the market hunting in the later 1800's that killed large numbers of Knots. In addition to over harvesting the bird, a dwindling food supply in the wintering grounds is also suspected to have influenced declining populations. The species nests in the high arctic during the summer months (June & July). The Red knot prefers coastal marine and estuarine habitats with large areas of exposed intertidal sediment, this kind of environment provides a reliable source of food and protection for the bird (USFWS, 2023a). The Red Knot would most likely be found in the spring or early fall in South Dakota along the Missouri river and inland saline lakes as stopover points (USFWS, 2023a).

No critical habitat has been designated for the Red Knot in South Dakota. Due to the proximity of a main road to the study area and lack of preferred habitat existing within the study area, the proposed project will have **no effect** on the species.

American Burying Beetle (*Nicrophorus americanus*)

The American burying beetle is the largest carrion consuming beetle in North America. Sexually mature members of the species are typically 1-2in long. The beetle species is known to hide under vegetation, leaf litter, and other similar objects during the daytime staying inactive for most of the day. Typical habitat for the beetle can consist of leafy litter in forests, shrubland, and grasslands (*American Burying Beetle*, USFWS 2023). They are nocturnal species, seeking out carrion when night falls. Their native range is most of temperate eastern North America, with the Dakotas being the furthest west distribution. They have been extirpated from most of their home range being now found in isolated pockets in Arkansas, Kansas, Oklahoma, Nebraska, South Dakota, Texas, Rhode Island, Massachusetts, and Ohio. Locally, they are known to occur in south central South Dakota but there has not been documented evidence of their presence for some time. Like most endangered and threatened species, the greatest threats to the beetle are habitat loss and fragmentation because of human development.

There were no observed American burying beetles during the field survey. The potential of suitable habitat being present in the study area is unlikely, as the study area is confined primarily to roadside ditches that do not harbor year-round suitable habitat conditions for the beetle (resulting from road right-of-way maintenance and drying out of the vegetation litter during the warmer summer months). Due to the lack of potential habitat described above it is unlikely that the beetle will be present, therefore the proposed project will have **no effect** the species.

Western Prairie Fringed Orchid (*Platanthera praeclara*)

The western prairie fringed orchid is one of the many endangered orchid species found in North America. The preferred habitat type for this species is moist tall-grass prairies. Historically, the orchid was found from southern Canada down to Oklahoma. It is believed to be extirpated from Oklahoma and South Dakota (USFWS 2023b). The largest populations of the orchid are found in North Dakota, Minnesota, and Manitoba, Canada. Like most other prairie species, the western orchid faces threats from remnant prairie conversion to agricultural land, use of herbicides & pesticides, fire suppression, invasive species, and encroachment by woody species which drastically alter the habitat. Seed germination and proper plant growth depend on a symbiotic relationship between the plants' reduced root systems and a soil-inhibiting fungus for proper water uptake and nutrition (USFWS 2023b).

The majority of the study area has been impacted through roadway development and maintenance activities. No western prairie fringed orchids were observed within the study area and construction activities would be temporary and take place primarily in frequently disturbed areas. Therefore, the proposed project will have **no effect** on the western prairie fringed orchid.

5.1.2 Endangered Species

Whooping Crane (*Grus americana*)

The whooping crane is the tallest and one of two native crane species to North America (USFWS, 2023d). The species is currently listed as endangered under the ESA (Endangered Species Act) (USFWS, 2023d). Currently the only self-sustaining wild population of whooping cranes migrates between Texas and central Canada occasionally stopping in the central plain states during the migration. When whooping cranes are documented in South Dakota it is in the central portions of the state usually seen migrating with Sandhill cranes during the middle of spring and fall (Stukel, 2020). Historical breeding range for the whooping crane extends from Illinois to northwest North Dakota and into the Northwest Territories in Canada (BIA, 2014). Migration stopover habitat for the whooping crane consists of palustrine wetlands for roosting and croplands for feeding. Current threats to the whooping crane include human disturbance, habitat loss and degradation, and power lines.

There were no observed whooping cranes during the field survey. The potential of suitable habitat being present in the study area is unlikely, as the study area is confined primarily to roadside ditches that have ephemeral wetlands. Also, the majority of land immediately surrounding the study area is open range land not agricultural crops. Due to the lack of potential habitat occurring in the study area it is unlikely that whooping cranes will be present, and the proposed project will have **no effect** on the species.

Northern Long-eared Bat (*Myotis septentrionalis*)

The northern long-eared bat (NLEB) is a wide-ranging bat species historically found in 37 states in the continental United States. NLEB are dispersed across the Midwest (as far south as Louisiana) and eastern (as far east as Maine) parts of the country (USFWS, 2023f). While the species still exists in much of its' historical range, the species has experienced steep declines in overall population numbers, primarily due to White Nose Syndrome (WNS), habitat loss, and affects to its' food base as a result of climate change (USFWS, 2023f). During the non-hibernation months of the year NLEB will typically roost underneath exfoliating tree bark, in cavities or crevices or cracks found in living and dead trees, and less commonly in barns and sheds. During the hibernating months NLEB will roost in caves and abandoned mines.

No NLEB were observed during the field survey; however, trees were visually inspected that occurred within and immediately adjacent the study area. Potential habitat occurred as large trees with either crevice, snags, or exfoliating bark. All potential roost habitat occurred outside of the study area boundaries. If tree removal is required, it is recommended that removal be conducted prior to April 1st or after September 30th to avoid impacts to the NLEB. Should tree removal be required during the spring staging, fall swarming, or summer maternity seasons, KLJ

recommends additional consultation with the Rosebud Sioux Tribe Biologist to determine potential impacts to the NLEB. If Tribal biologists recommend further consultation, then consultation with the USFWS would occur to evaluate further impacts to the species. Construction activities may also affect the NLEB with increased noise, construction activities, and the generation of dust. Therefore, the proposed project **may affect, but is not likely adversely affect** the NLEB because the disturbance will be considered temporary in nature, and construction will likely not result in the removal of trees as any potential roost tree occurred immediately outside of the study area.

5.1.3 Other Listed Species

Tricolored Bat (*Perimyotis subflavus*) (Proposed Endangered)

The tricolored bat is one of the smallest bat species found in North America. The current range of the species is in eastern & central United States, portions of southern Canada, and Mexico. While the species still exists in much of its' historical range, the species has experienced steep declines in overall population (USFWS, 2023c). During the non-hibernating months of spring, summer, and fall; the tricolored bat will usually roost among live and dead leaf clusters of deciduous trees. Where deciduous trees are not present, tricolored bats have been documented roosting among the needles of pine trees and in eastern red cedar (USFWS, 2023c). During hibernation the bat species will hibernate in caves and mines, and, where warm enough in the south the bat will hibernate in road associated culverts. Like a number of other bat species, the greatest threat facing the tricolored bat is white-nose syndrome (WNS). WNS is a fungal disease that will grow on the bat during hibernation eventually killing the infected individual (USFWS, 2023c).

During the field survey there were no tricolored bats observed, however, there were multiple trees within and immediately adjacent to the study area that could be potential roost trees during non-hibernation season. Identified roost trees had crevices, sloughing bark, and snags that could all be utilized as roost habitat. If tree removal is required, it is recommended that removal be conducted prior to April 1 or after September 30 to avoid impacts to the species. Should tree removal be required during the spring staging, fall swarming, or summer maternity seasons, KLJ recommends additional consultation with the Rosebud Sioux Tribe Biologist to determine potential impacts to the tricolored bat. If tribal biologist recommends further consultation, then consultation with the USFWS would occur to evaluate further impact to the species. Construction activities may also disrupt the tricolored bat with increased noise, general construction activities, and dust. Therefore, the roadway project **may affect, but is not likely to adversely affect** the tricolored bat because disturbance is considered temporary, and construction will limit the removal of trees if removal is necessary.

Monarch Butterfly (*Danaus plexippus*) (Candidate)

The monarch butterfly is a small butterfly that is currently listed as a candidate species under the ESA as of December 17, 2020, due to habitat loss and degradation (USFWS 2023e). The Monarch relies on healthy grasslands that have healthy populations of milkweed (*Asclepias spp.*) which are an obligate host plant for monarch larvae (USFWS 2023e). The current range of the Monarch is the entire continental U.S, Southern Canada, all Central America, and the northern most boundaries of South America (USFWS 2023e). Monarch populations found in temperate climates (in the northern and Midwest regions of the U.S) will embark on annual migrations to Central and South America wintering sites. The Monarch Butterfly is typically not found in the temperate

regions of the United States from September-March, during which it will migrate to Central America for the winter and then return in the spring. Monarch larvae will feed exclusively on milkweed until they pupate and emerge as a butterfly at which point adult monarchs will feed on a wide variety of nectar bearing flowers (U.S Forest Service, 2022).

There were no observed monarch butterflies during the field survey. The potential of suitable habitat being present in the study area is unlikely, as there was no observed living milkweed plants and limited flowering plants observed during the field survey. Due to the lack of potential habitat and availability of nectar producing plants it is unlikely that monarch butterflies will be present, therefore the proposed project will have ***no effect*** on the species.

5.2 Conclusion

The proposed project consists of installing fiber optic cable and returning the study area back to pre-disturbance conditions upon completion of fiber optic installation. Habitat types within the study area include non-native grasslands, ephemeral wetlands, and maintained non-native roadside ditches. Immediately adjacent to the study area are non-native grasslands used for pastureland and hay fields.

Due to factors including study area location, surrounding habitat types, lack of preferred or suitable habitat, no known populations, as well as the disturbance of habitat being temporary in nature, the proposed linear telecom project is not anticipated to impact the endangered whooping crane, the threatened rufa red knot, western prairie fringed orchid, American burying beetle or the other listed species (candidate) the monarch butterfly.

Due to the presence of potential habitat within the study area, the proposed project may affect, but is not likely to adversely affect the proposed endangered tricolored bat. Trees are present in the study area and appear to display some characteristics (cracks, crevices, snags, and sloughing bark) that could be suitable habitat. Since the project plans to avoid removal of trees, the impact to the tricolored bat would be considered temporary and would not impact the continued existence of the species.

In the event that any federally listed species are observed in the study area or in the vicinity during construction, KLJ recommends construction activities be stopped and the Tribe's wildlife biologist be consulted on how to proceed.

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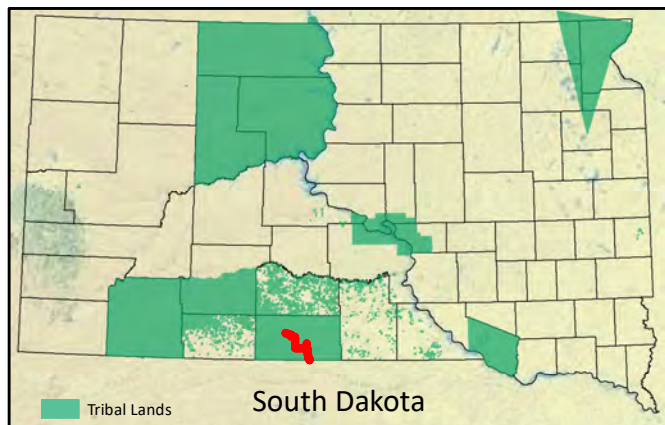
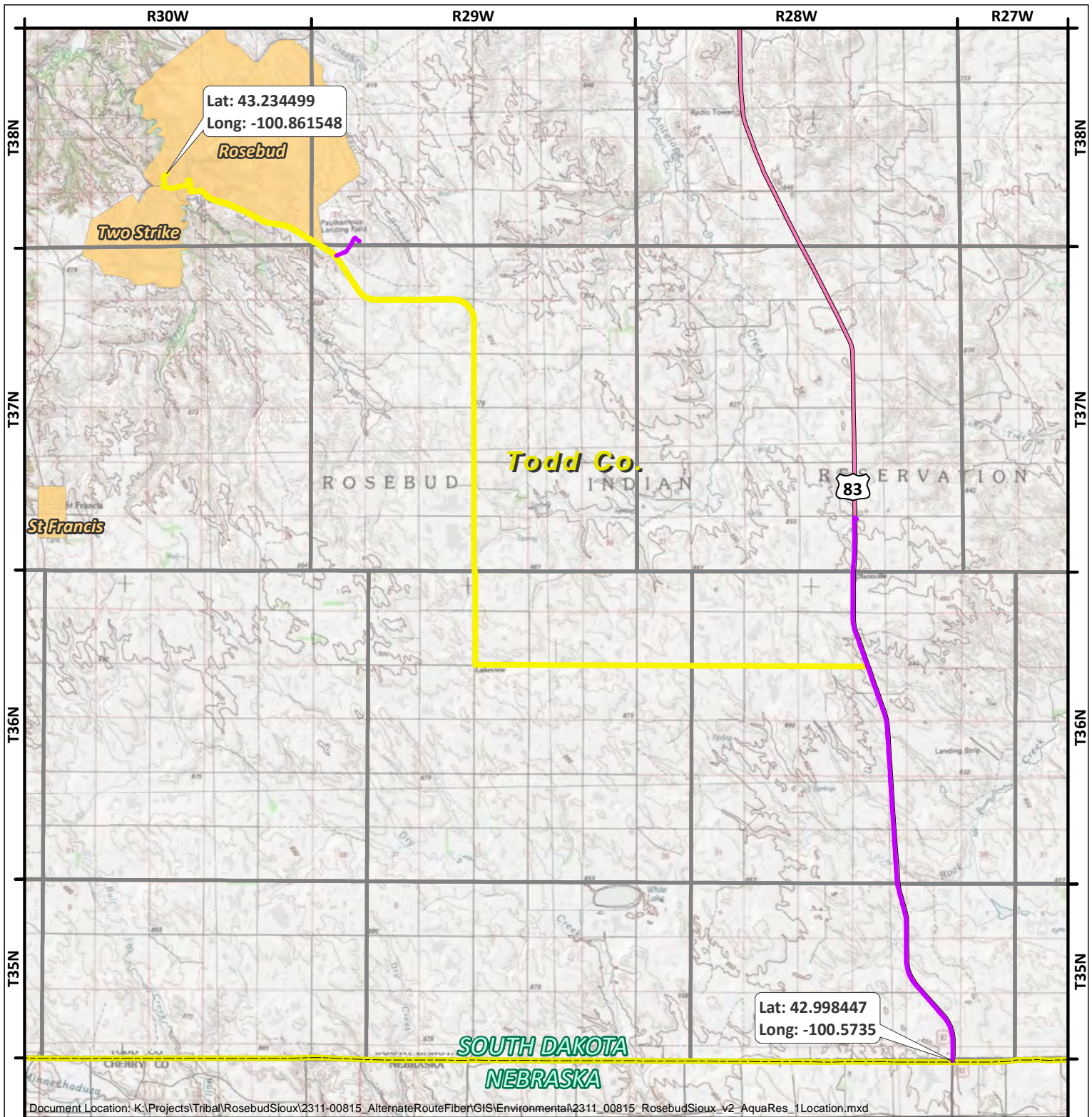
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Delineators Credentials

VINCENT POPYK	
Education	<ul style="list-style-type: none">› Madonna University- BS Biology› Eastern Michigan University – MS Ecology, Evolutionary and Organismal Biology
Training	<ul style="list-style-type: none">› Wetland Training Institute, Inc. – 40-hour Army Corps of Engineers Wetland Delineation Training Program› Stormwater ONE- Certified SWPPP Preparer and Administrator-Montana

Figures



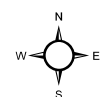
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Wetland Delineation
Todd County, South Dakota

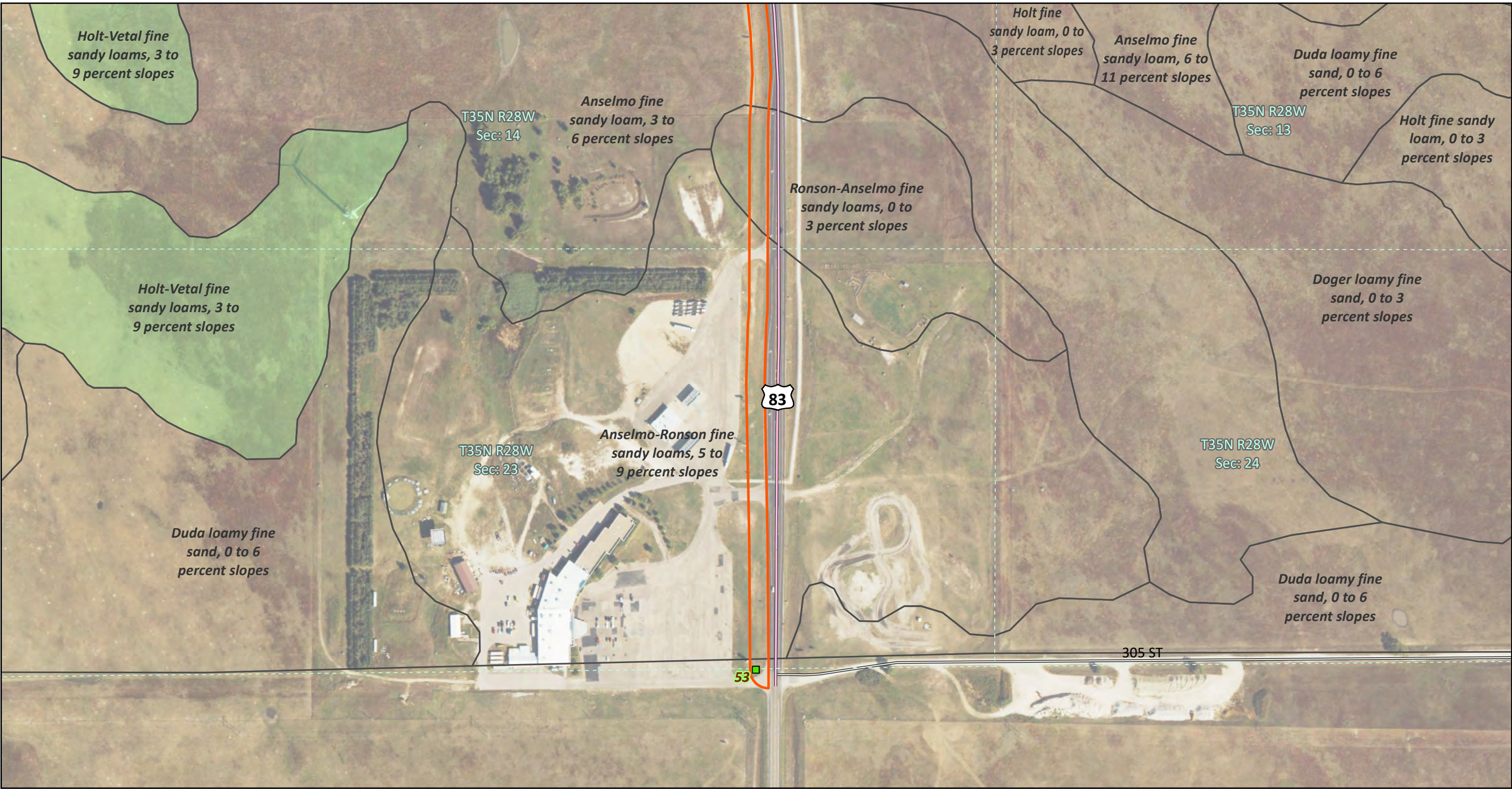
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- Proposed Fiber Study Area
- Incorporated City Boundary

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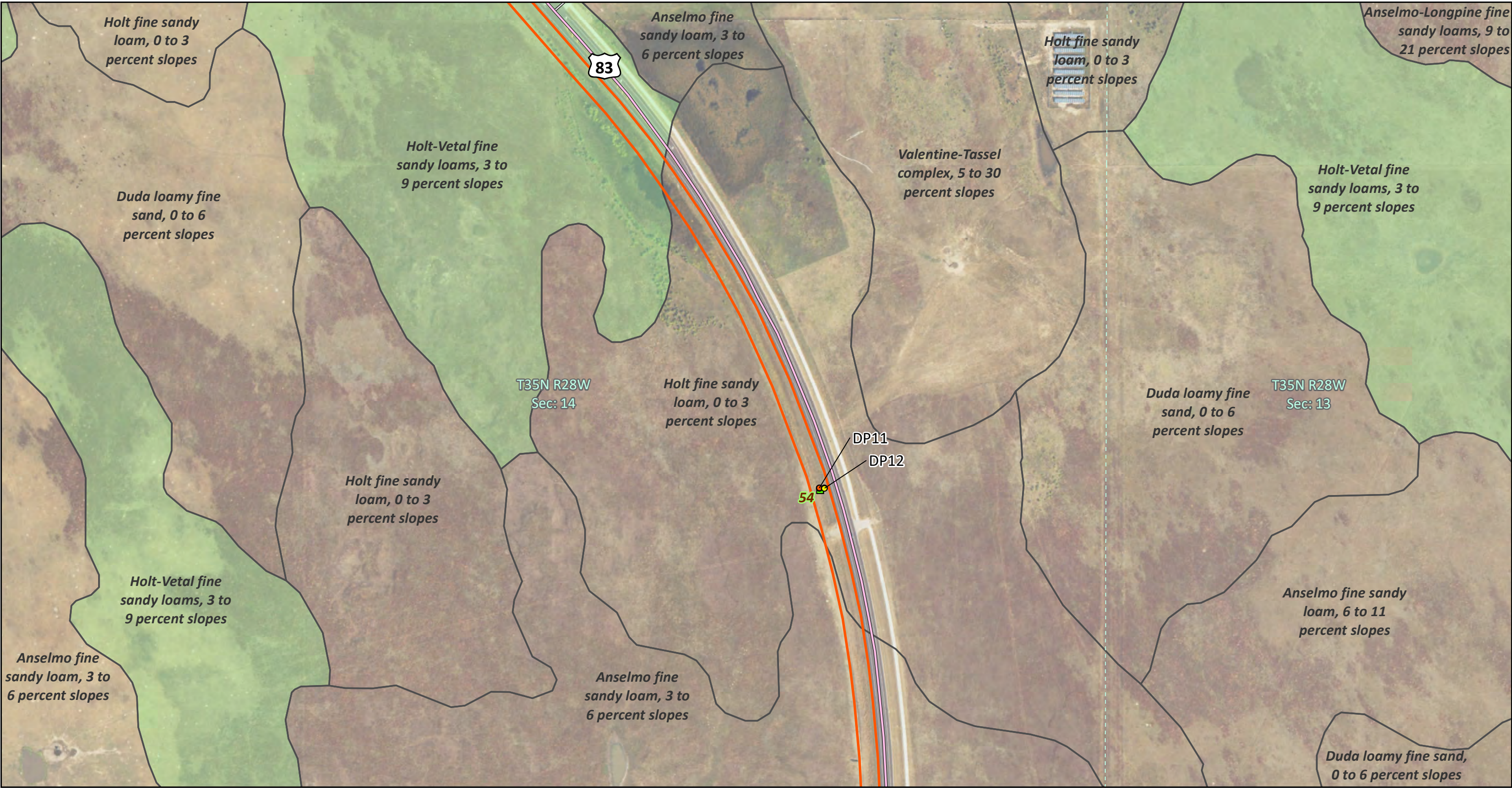
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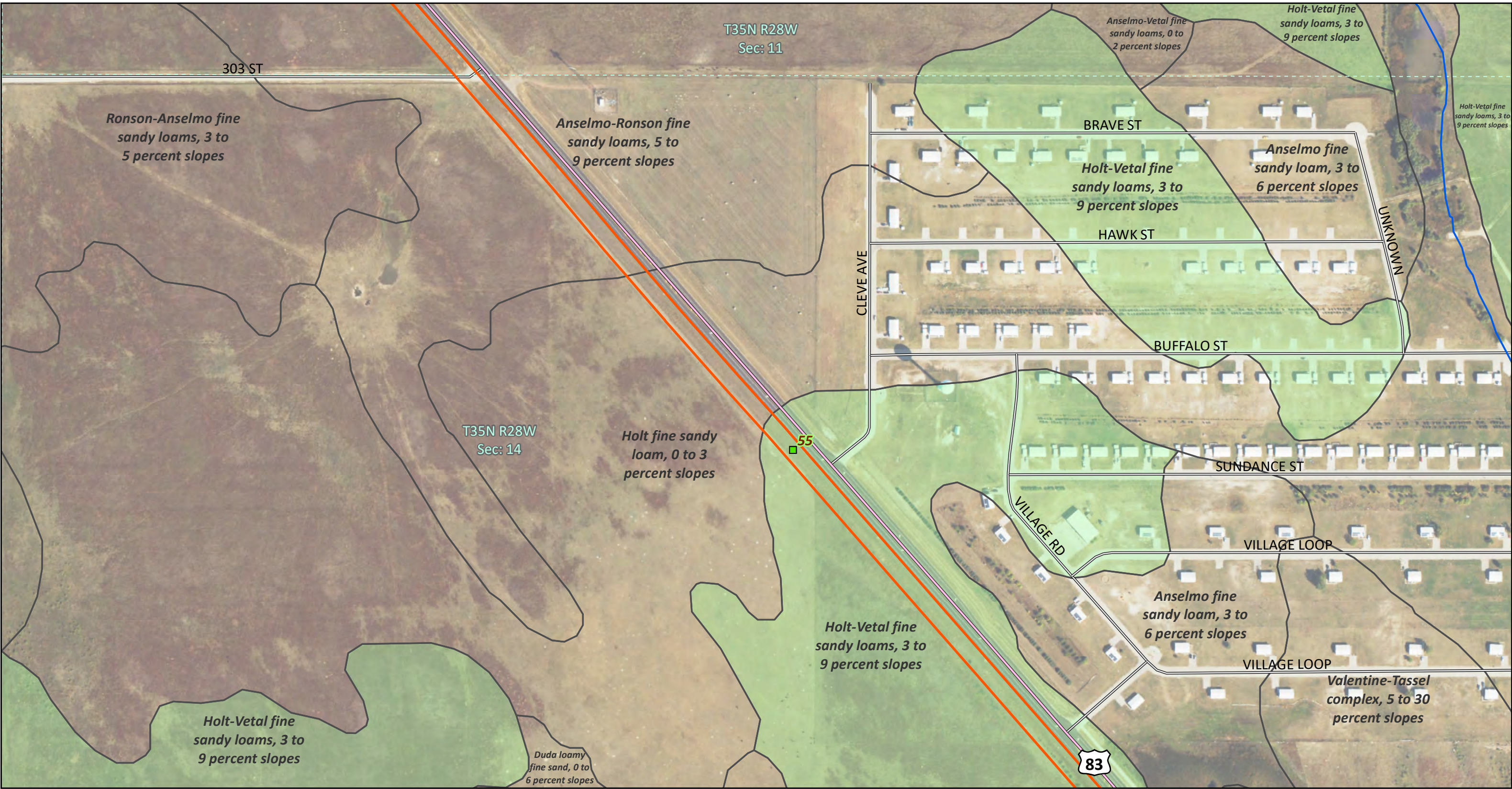


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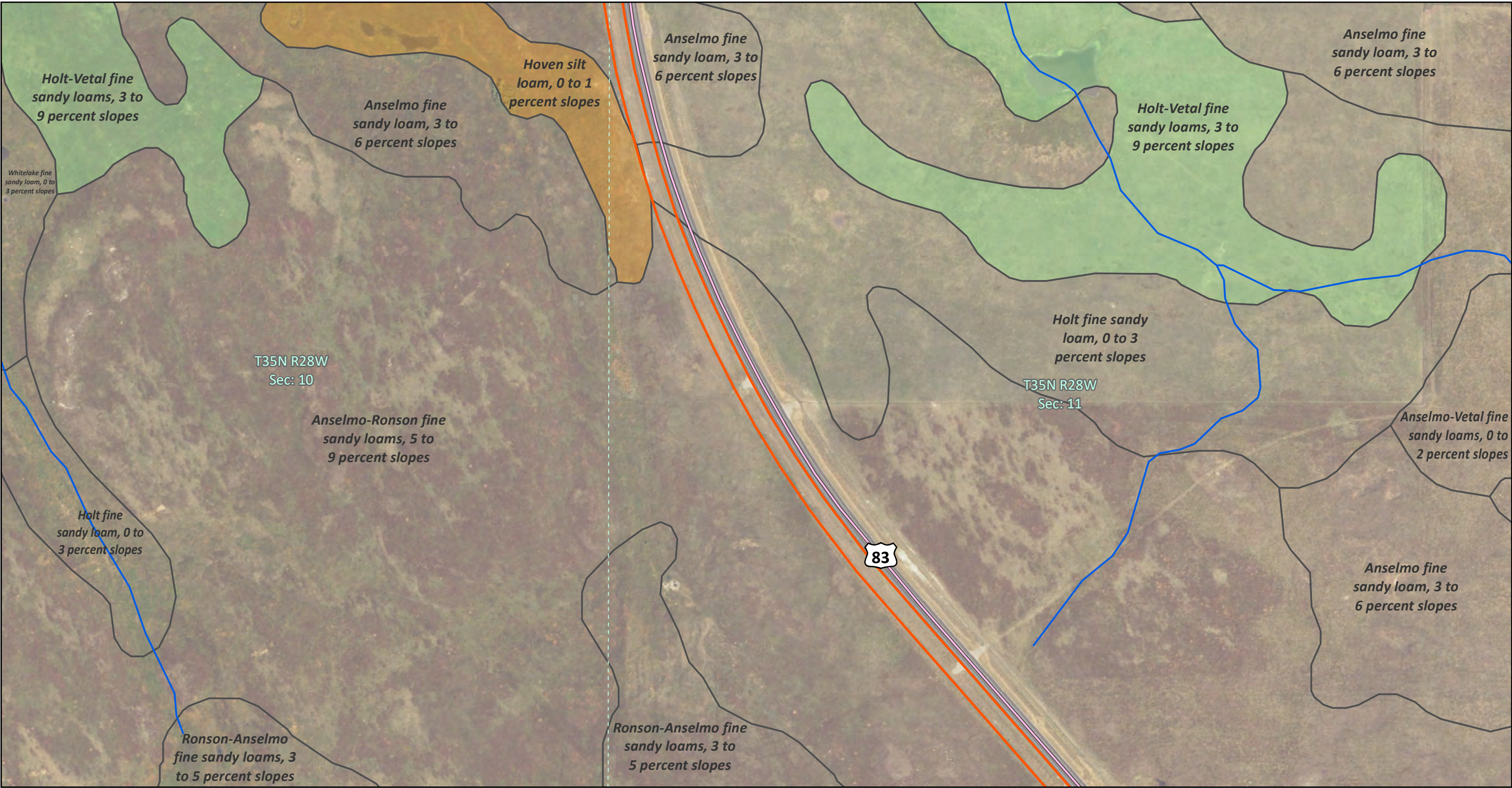


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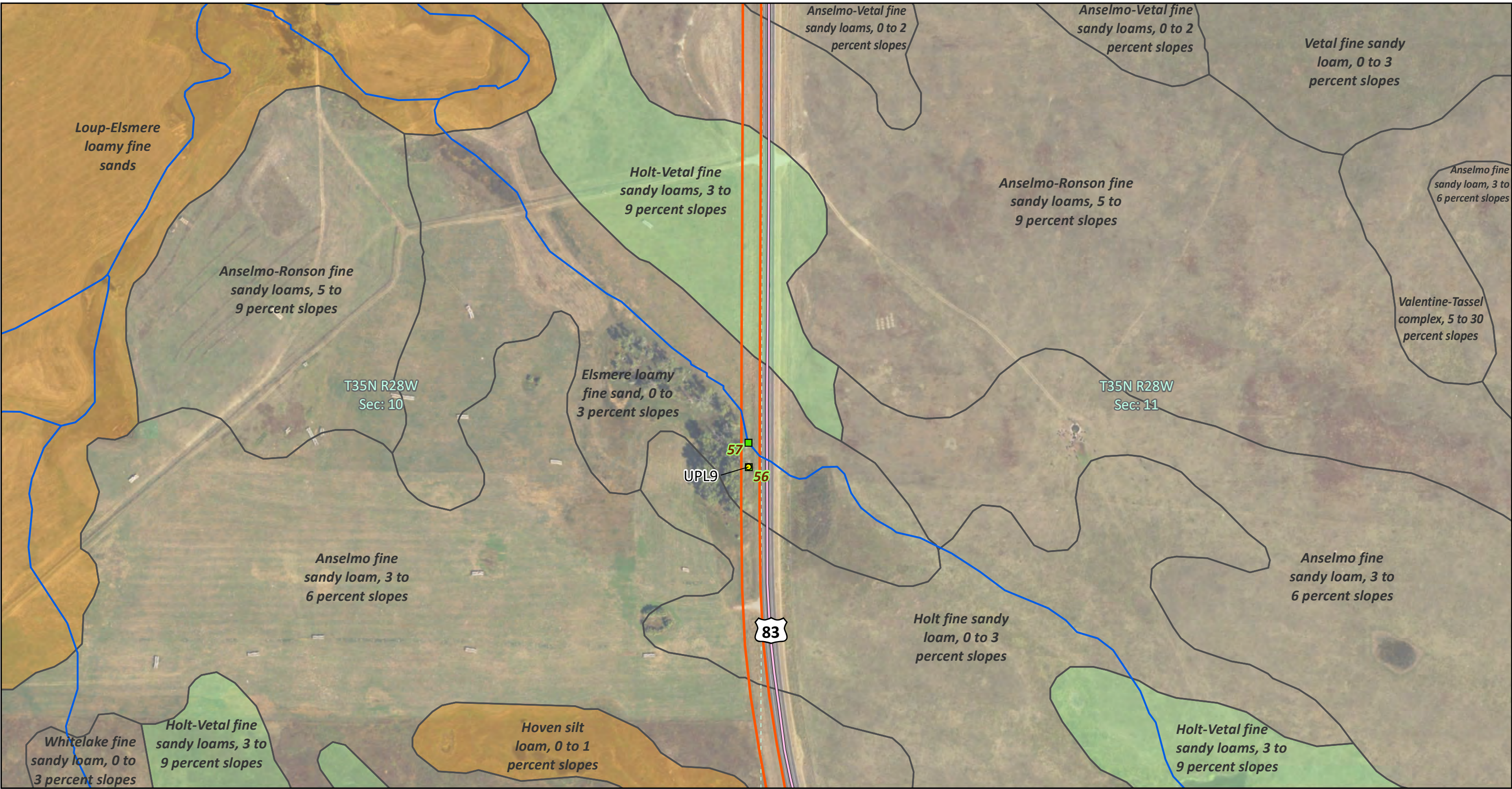
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* Legend only shows items in vicinity of project/map view

Aerial Photograph Map
Alternate Route Fiber Wetland Delineation Todd County, South Dakota
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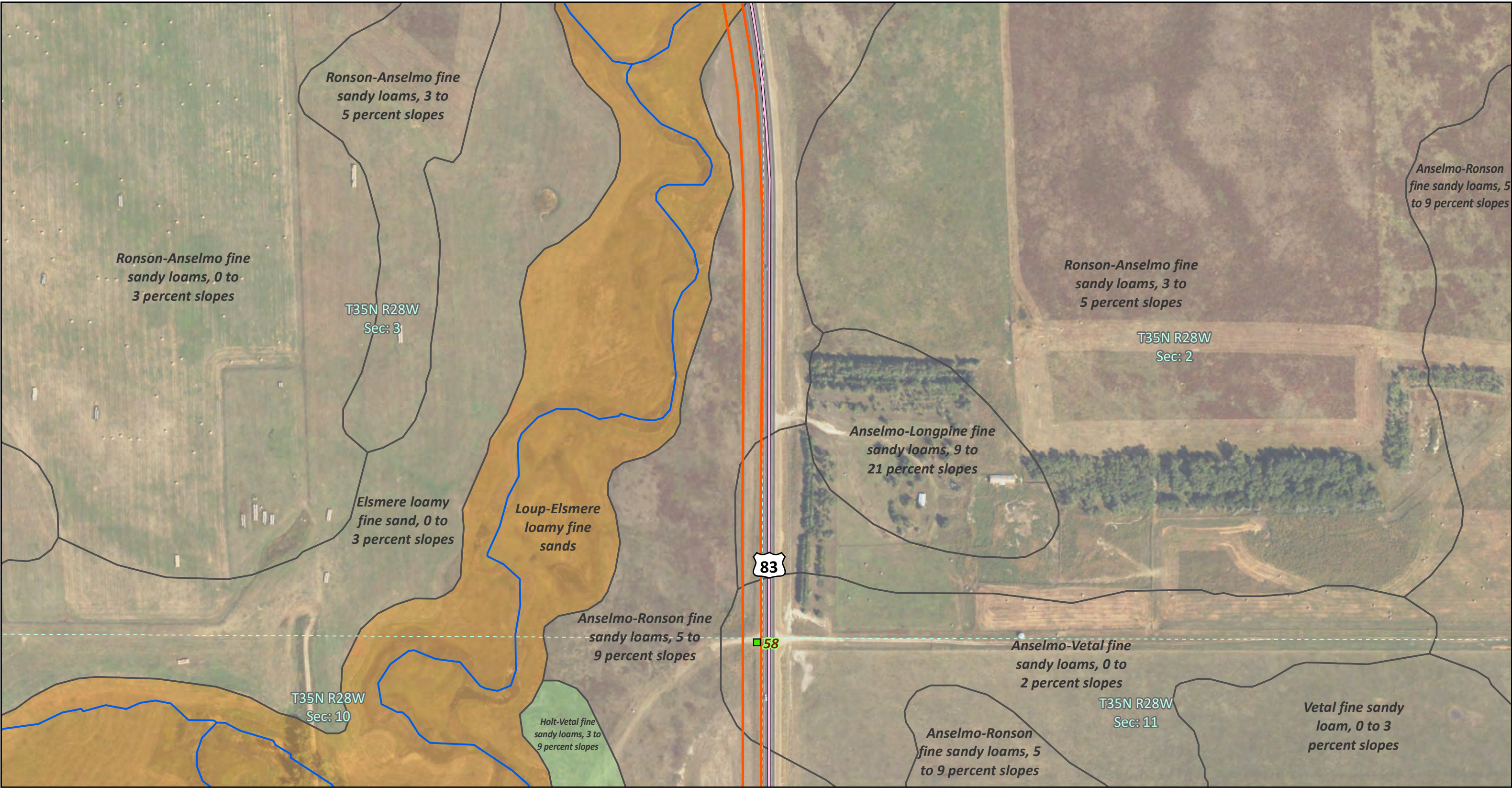
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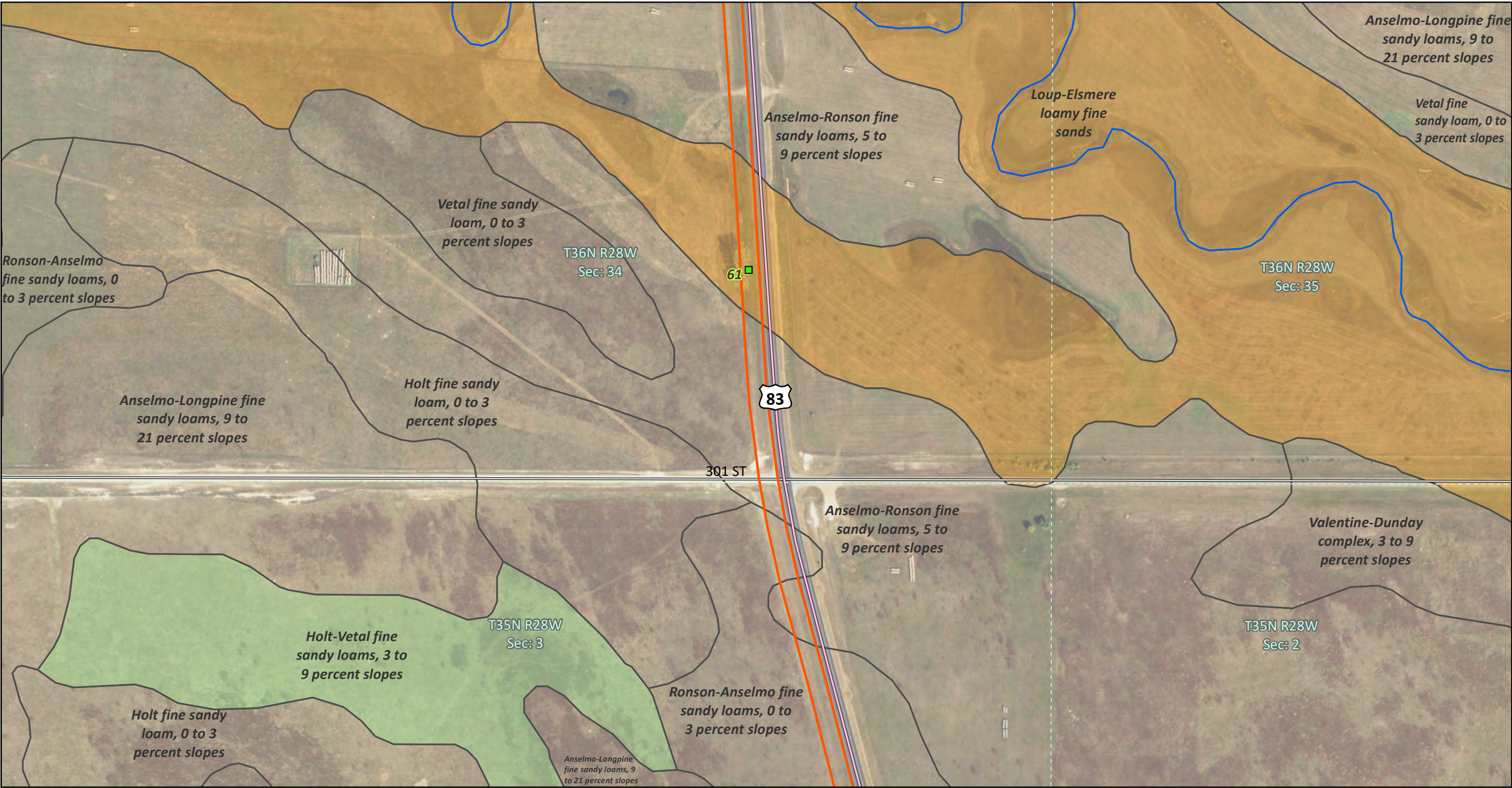
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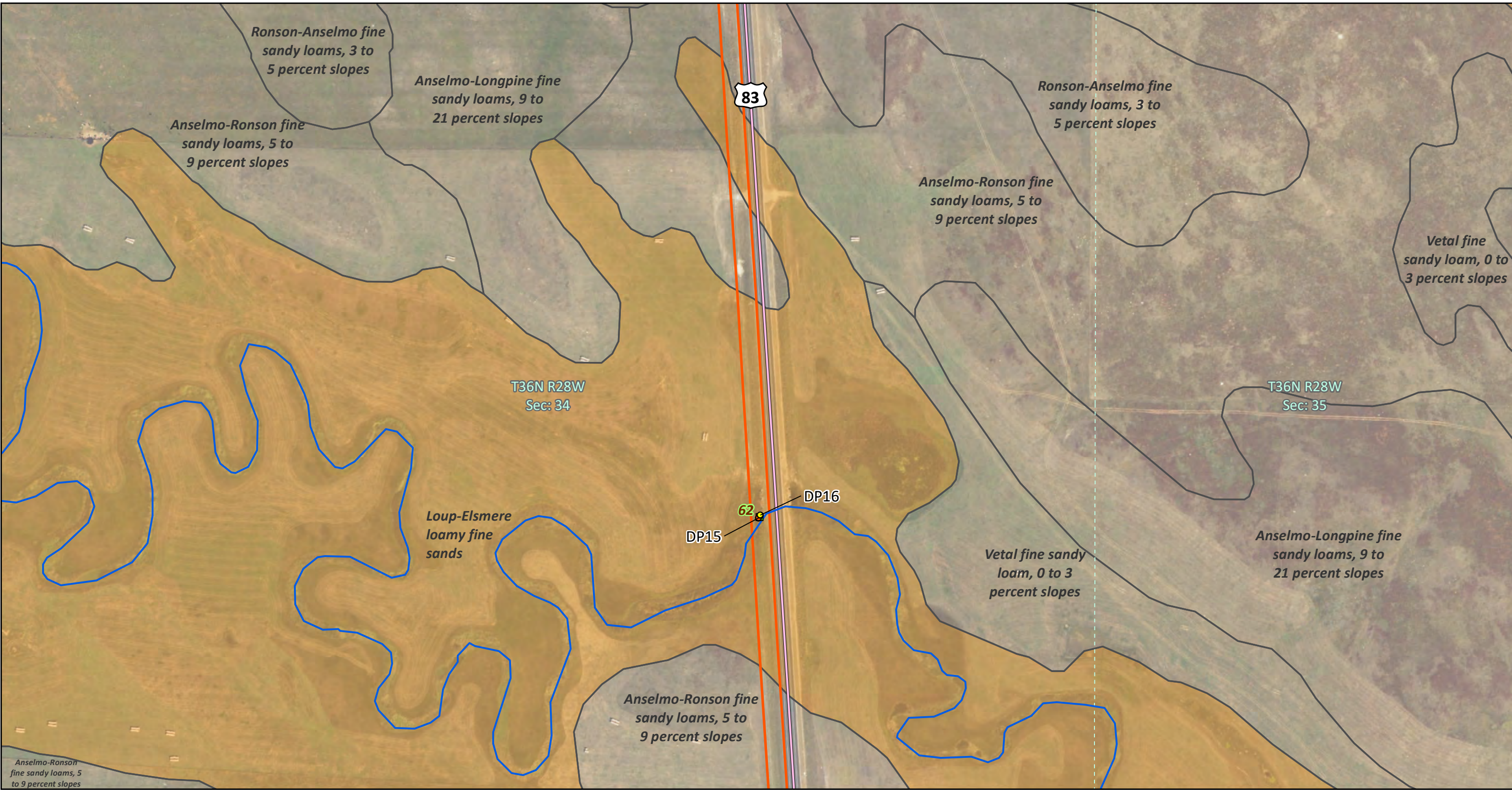
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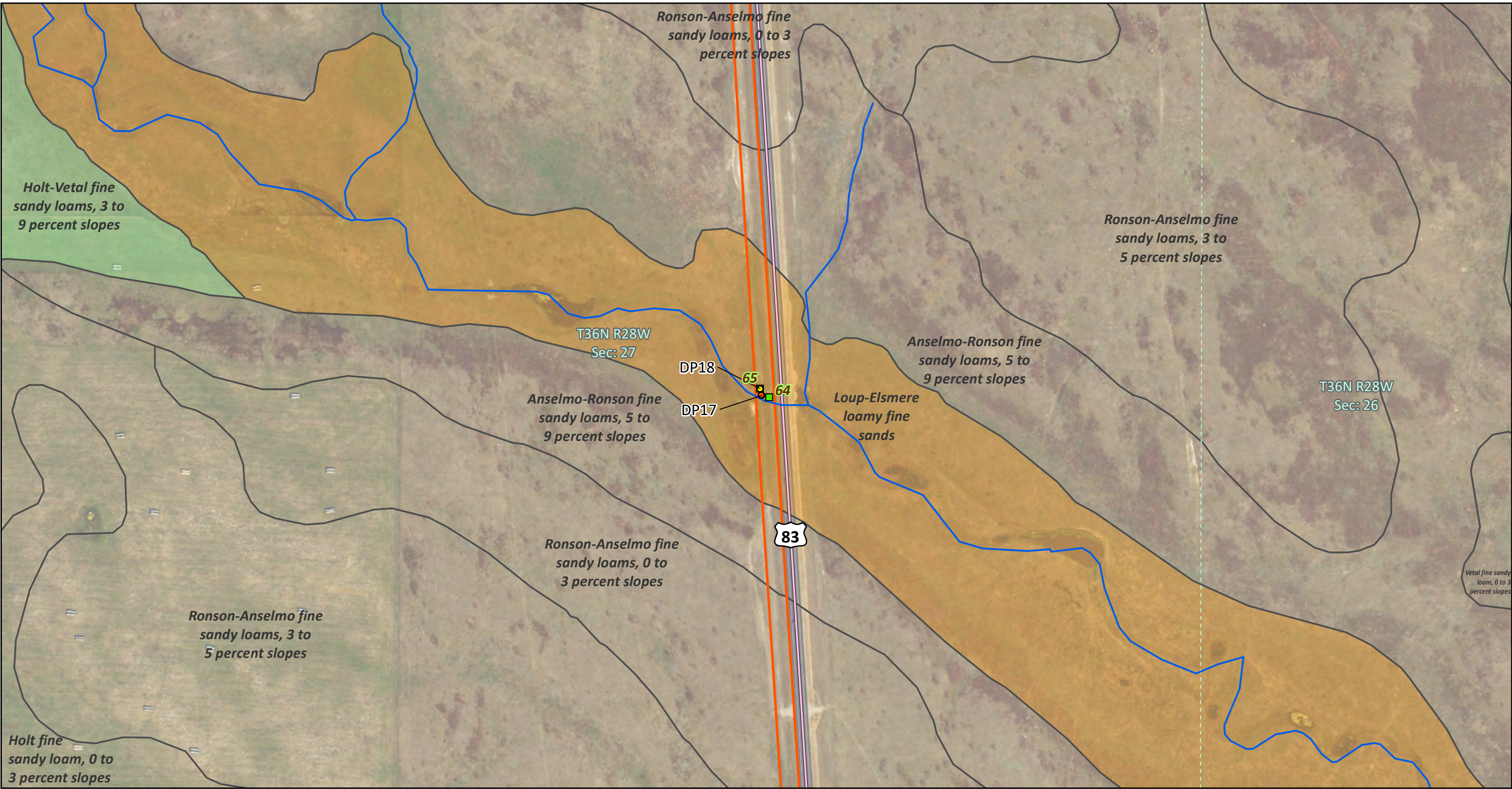
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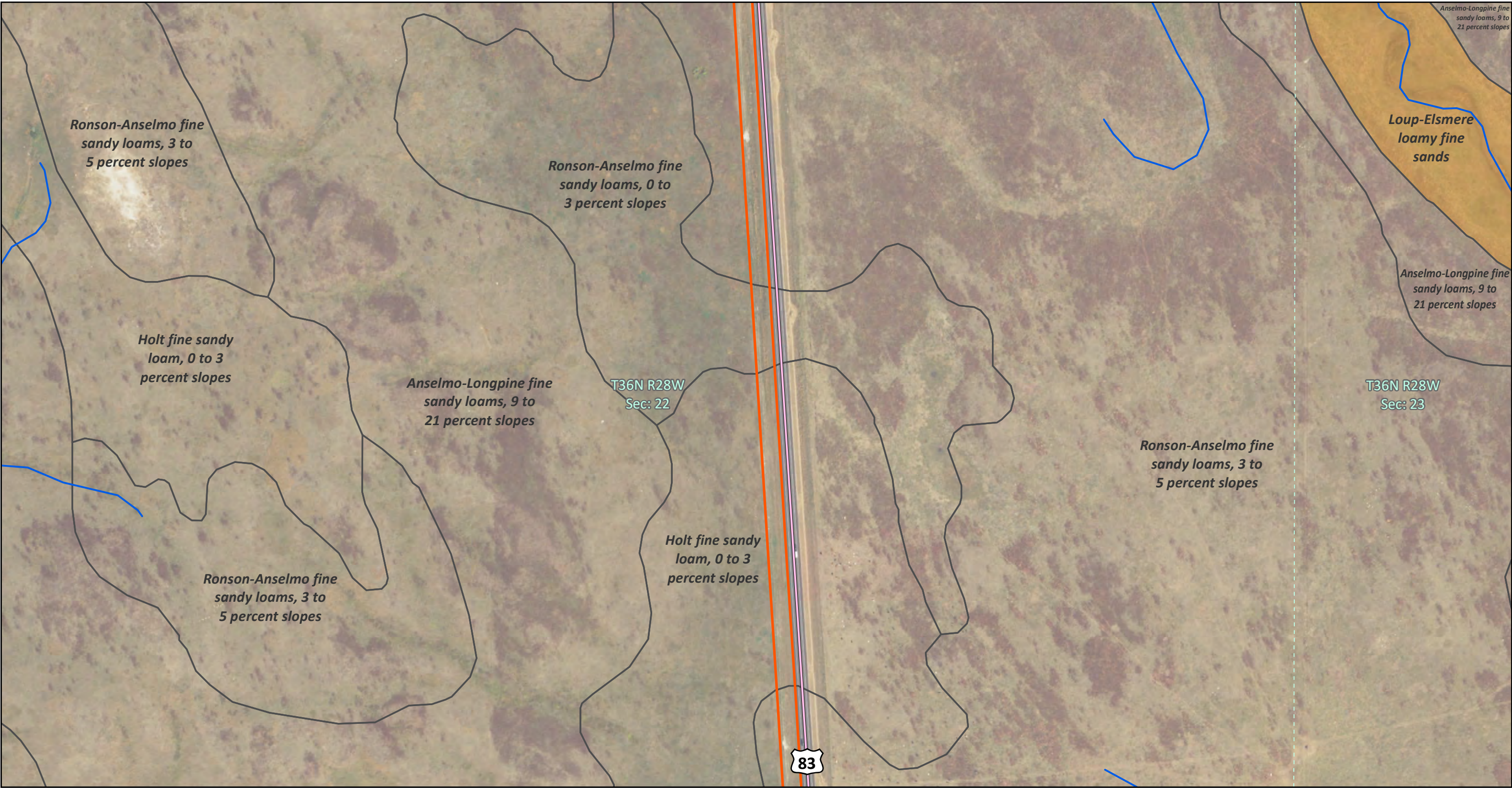
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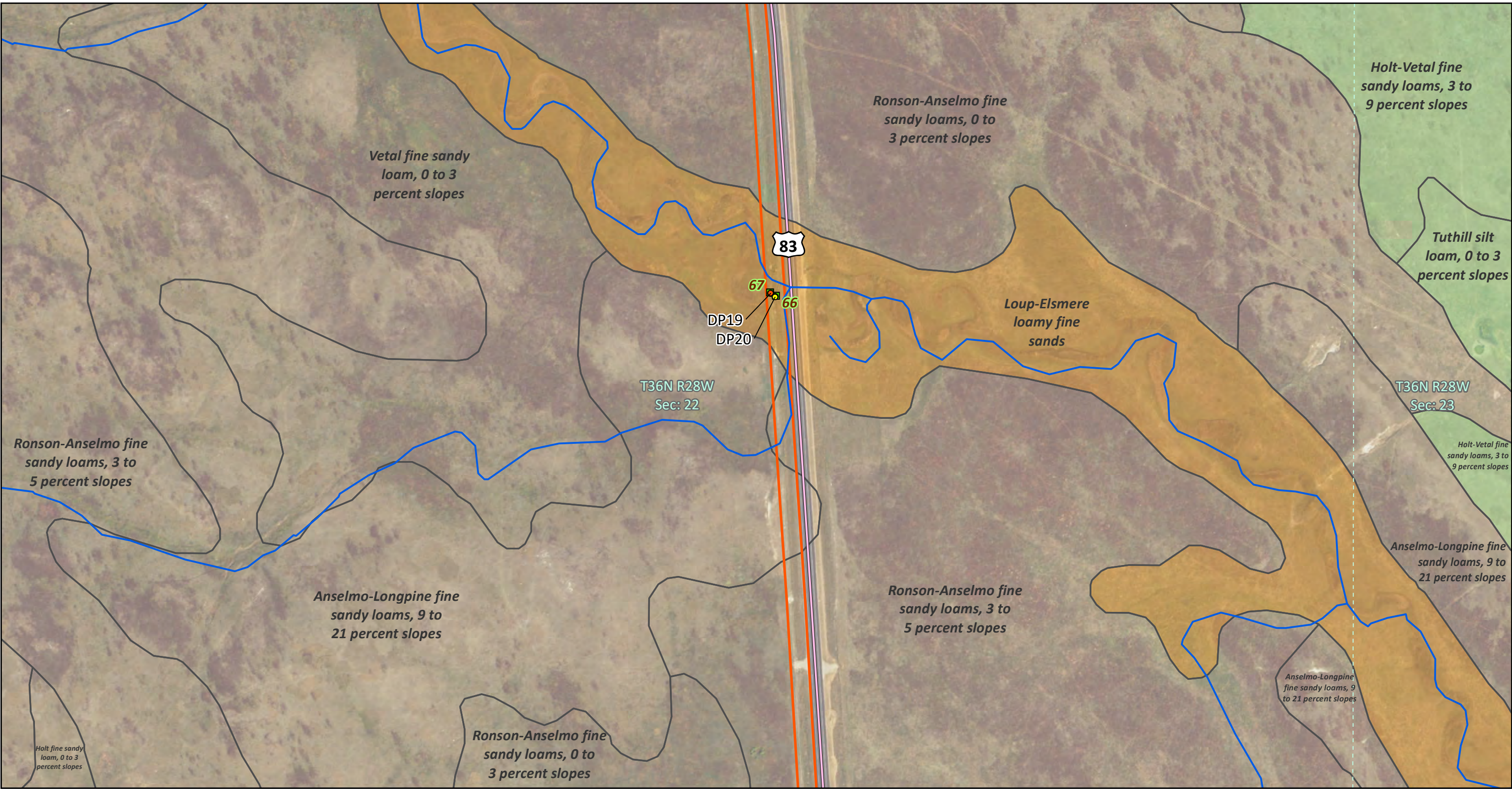
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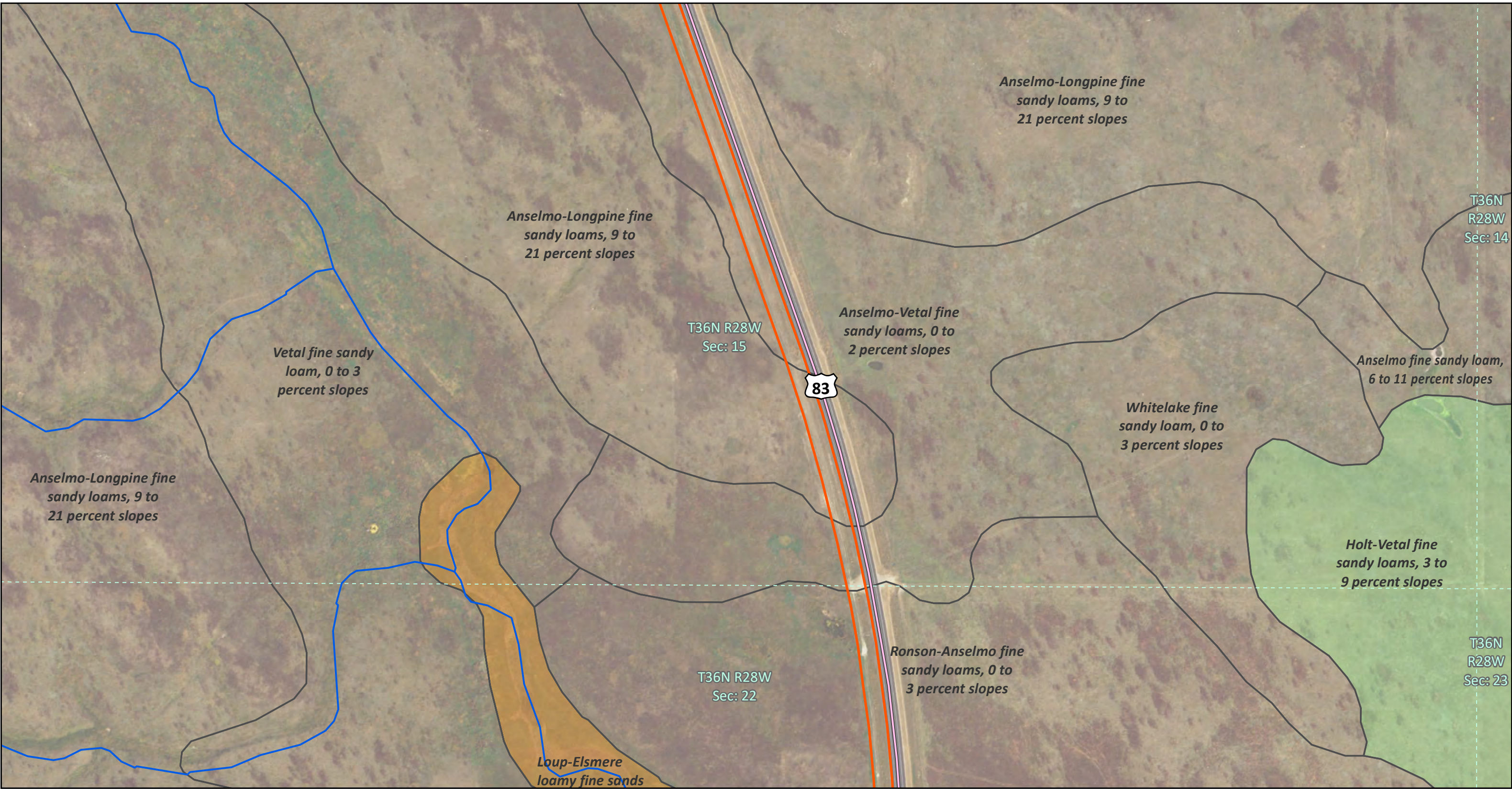


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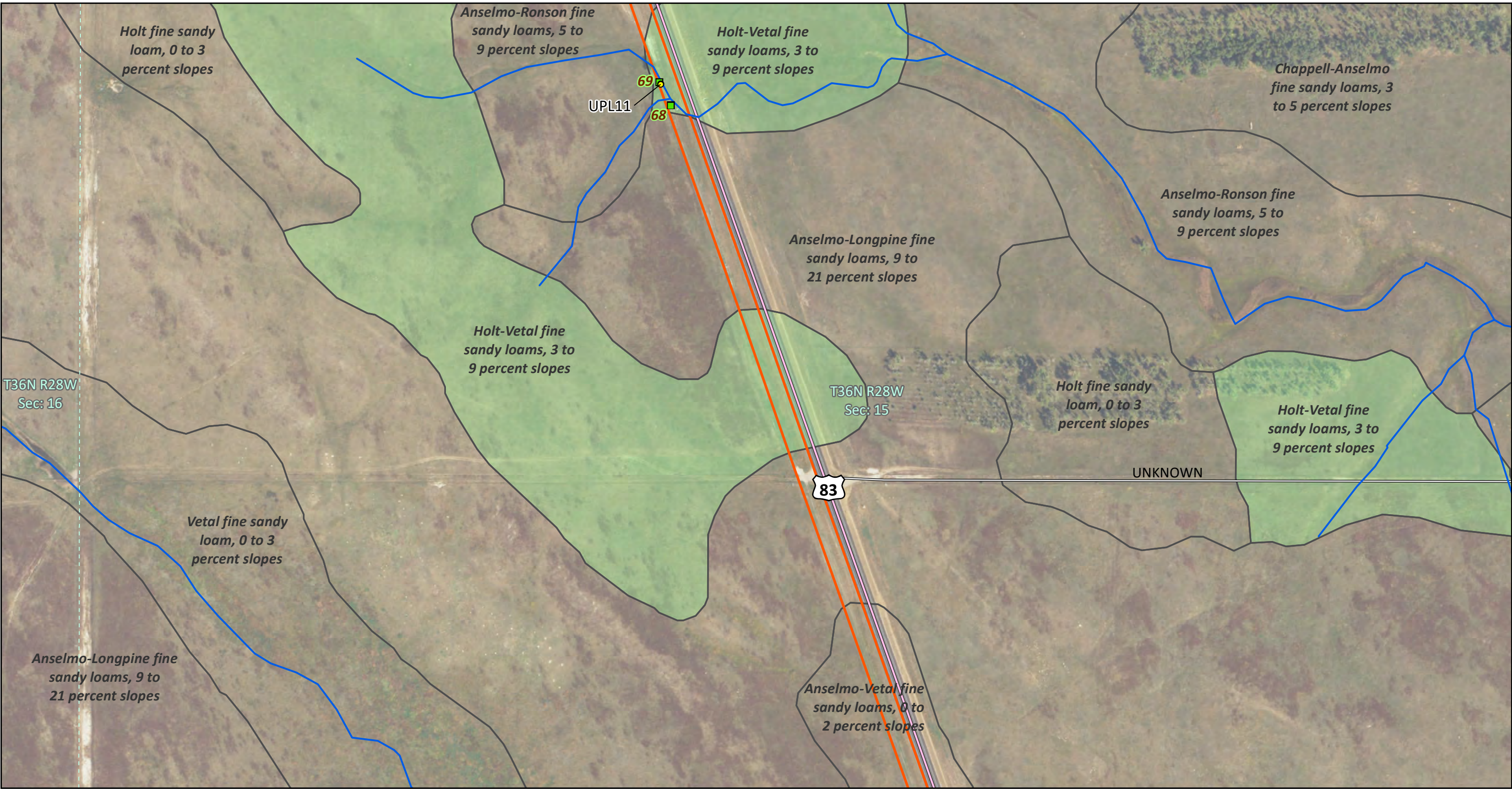
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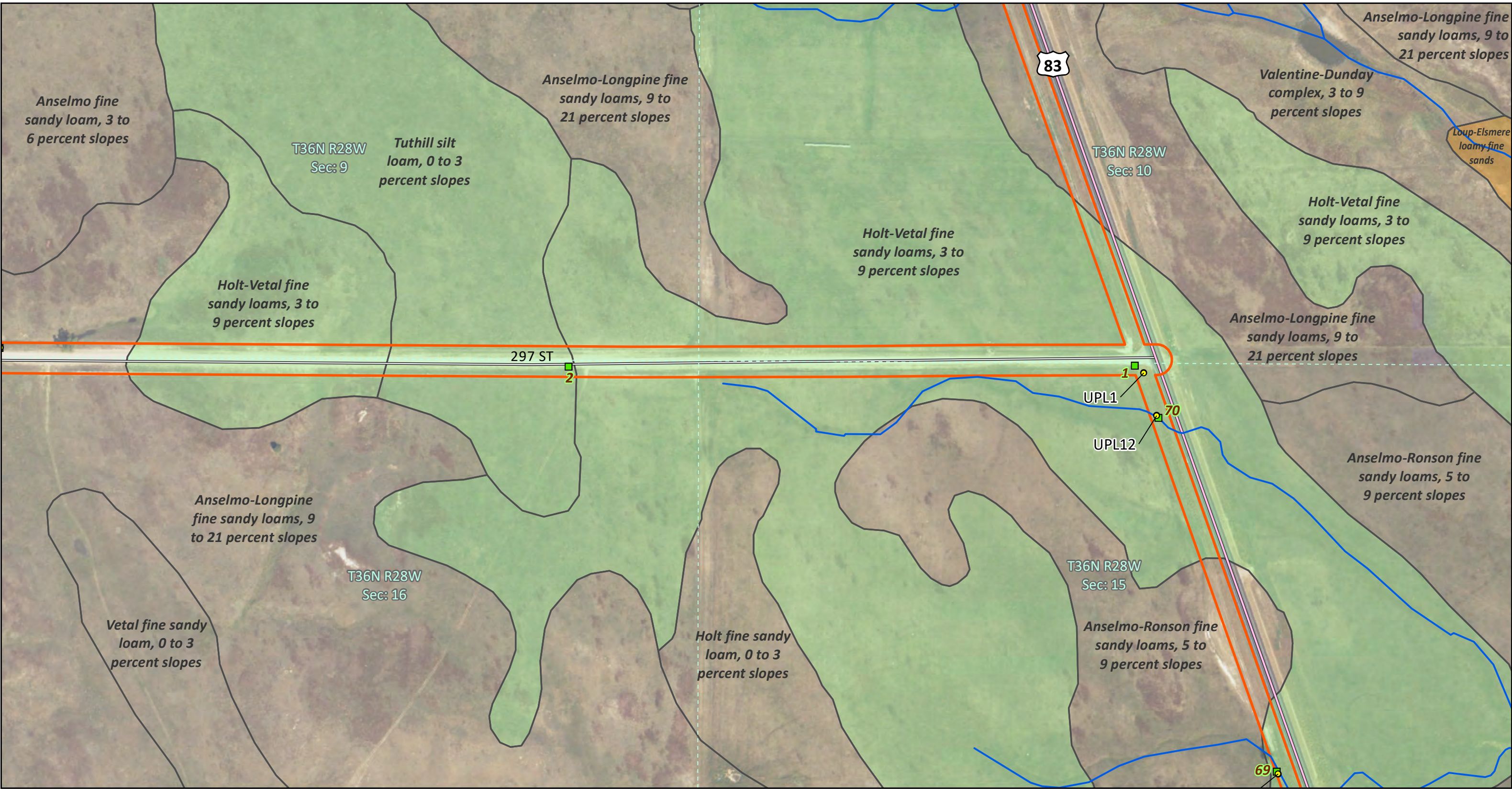


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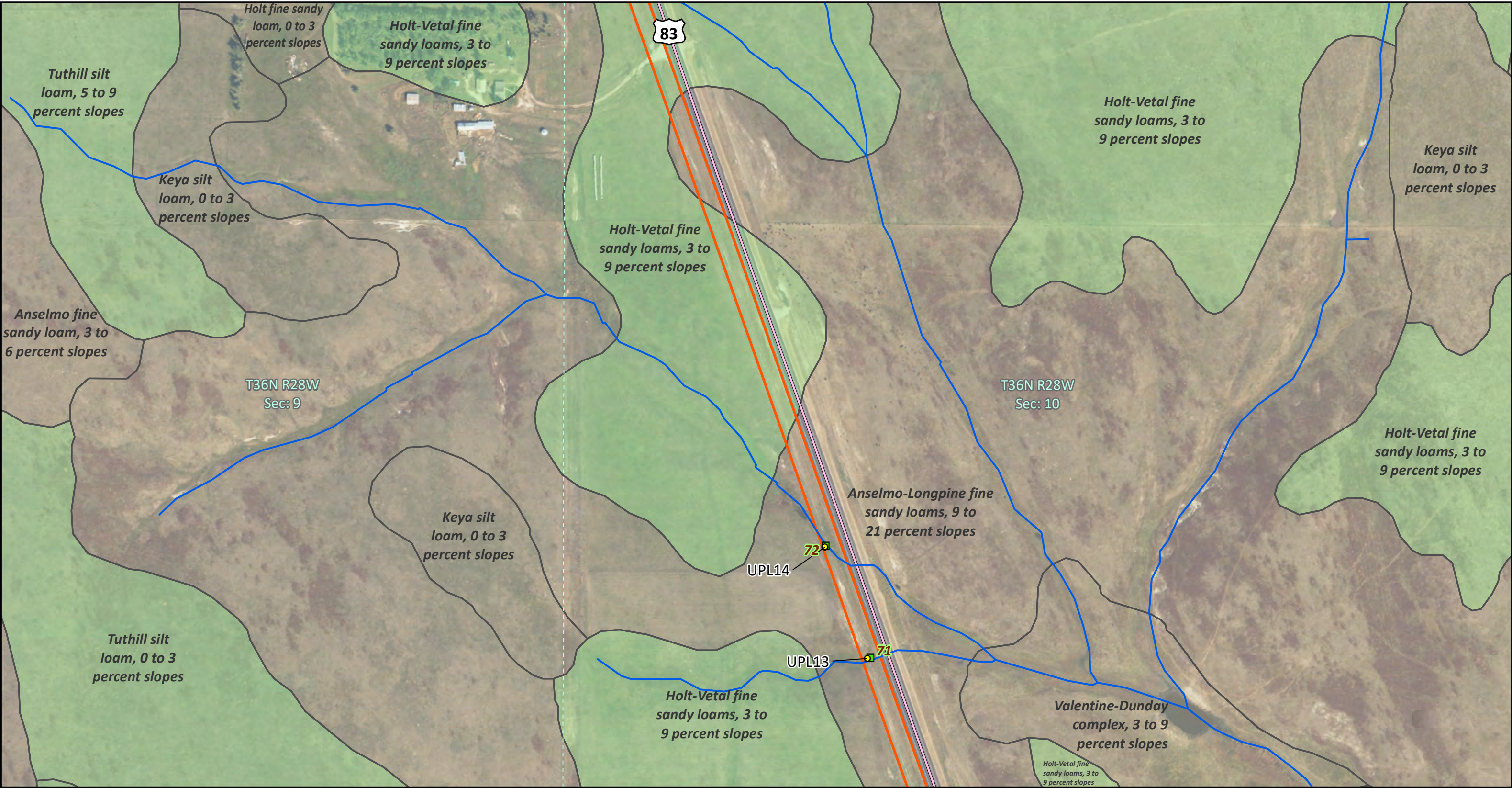
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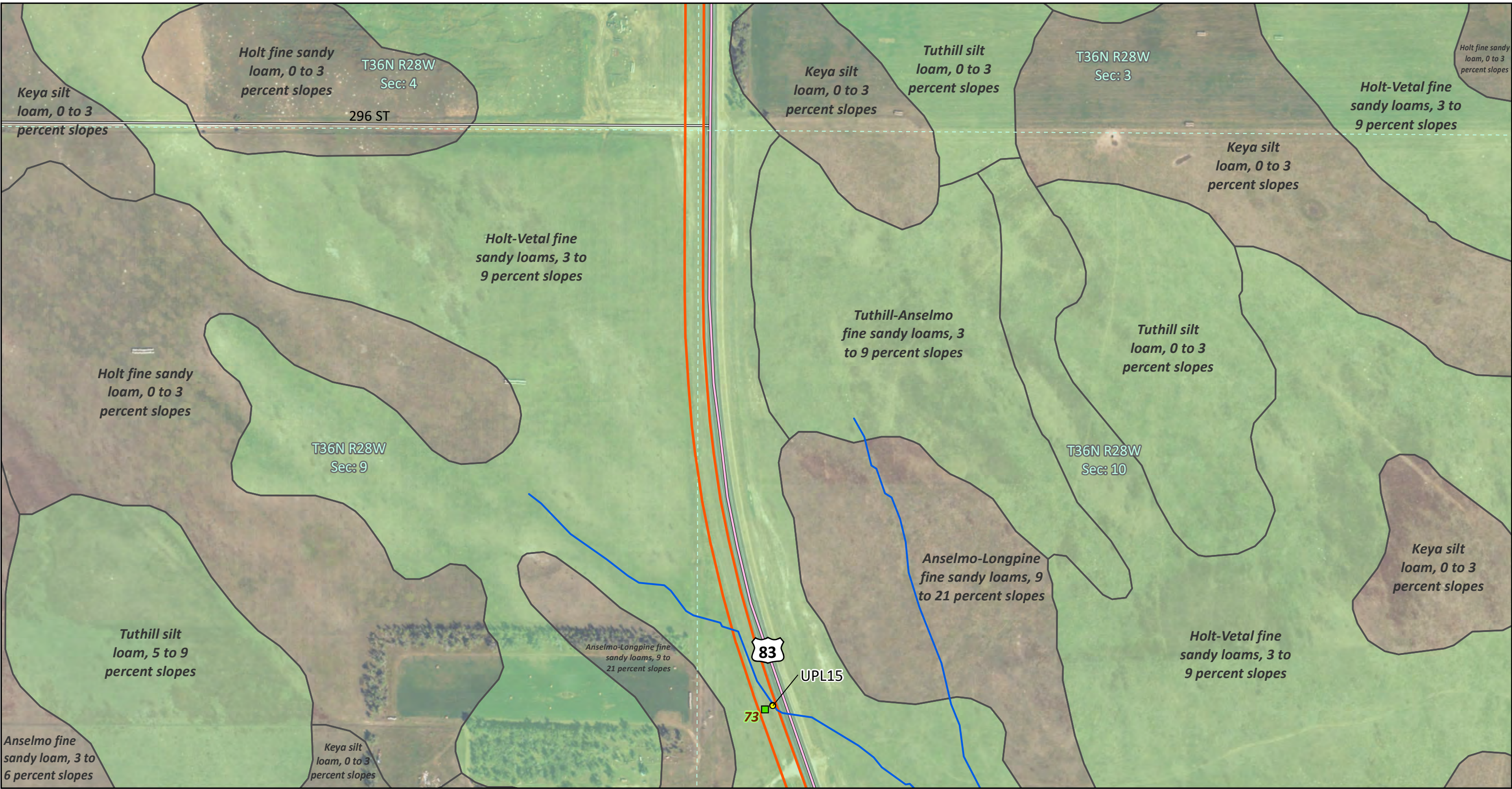
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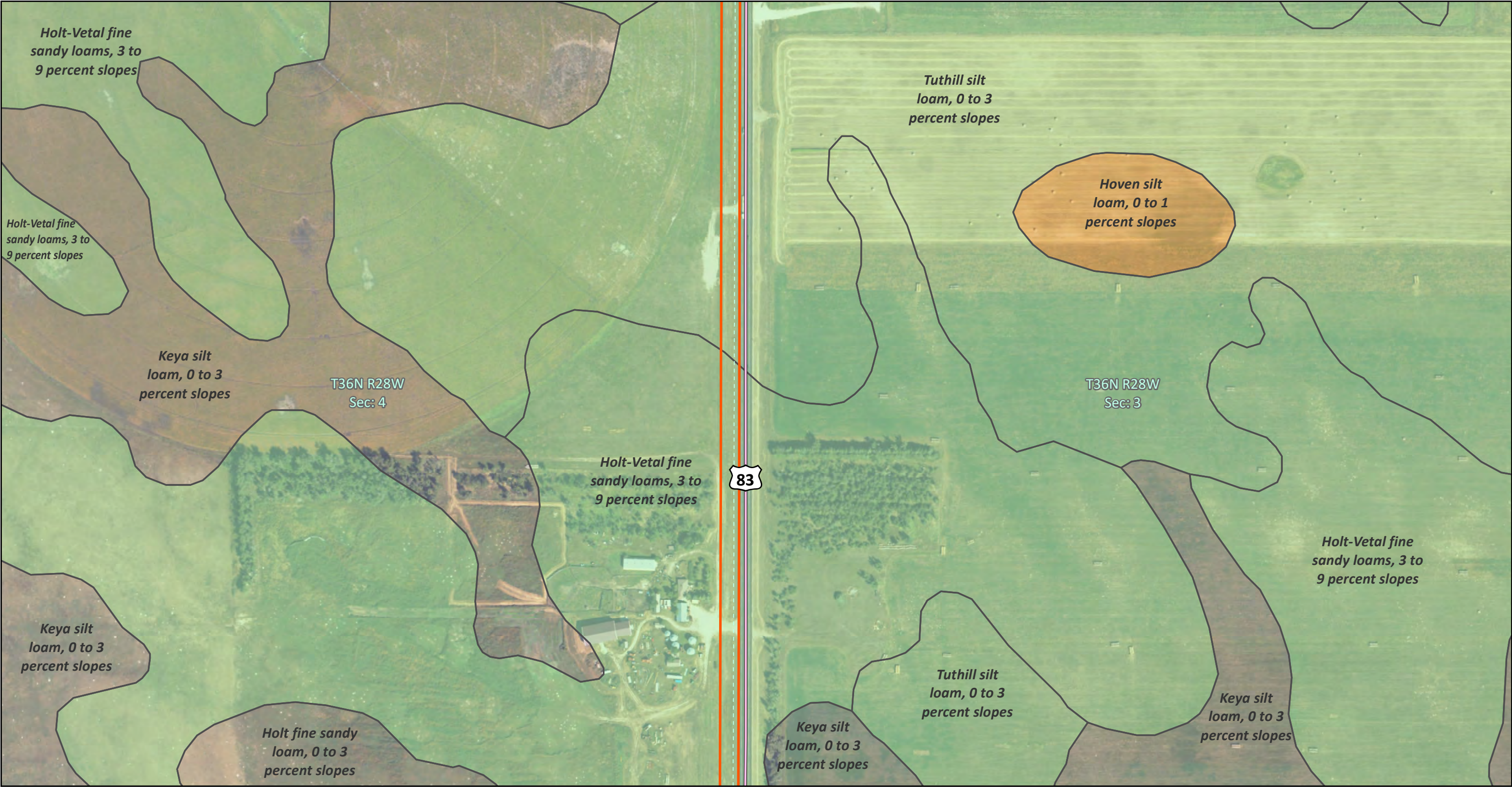
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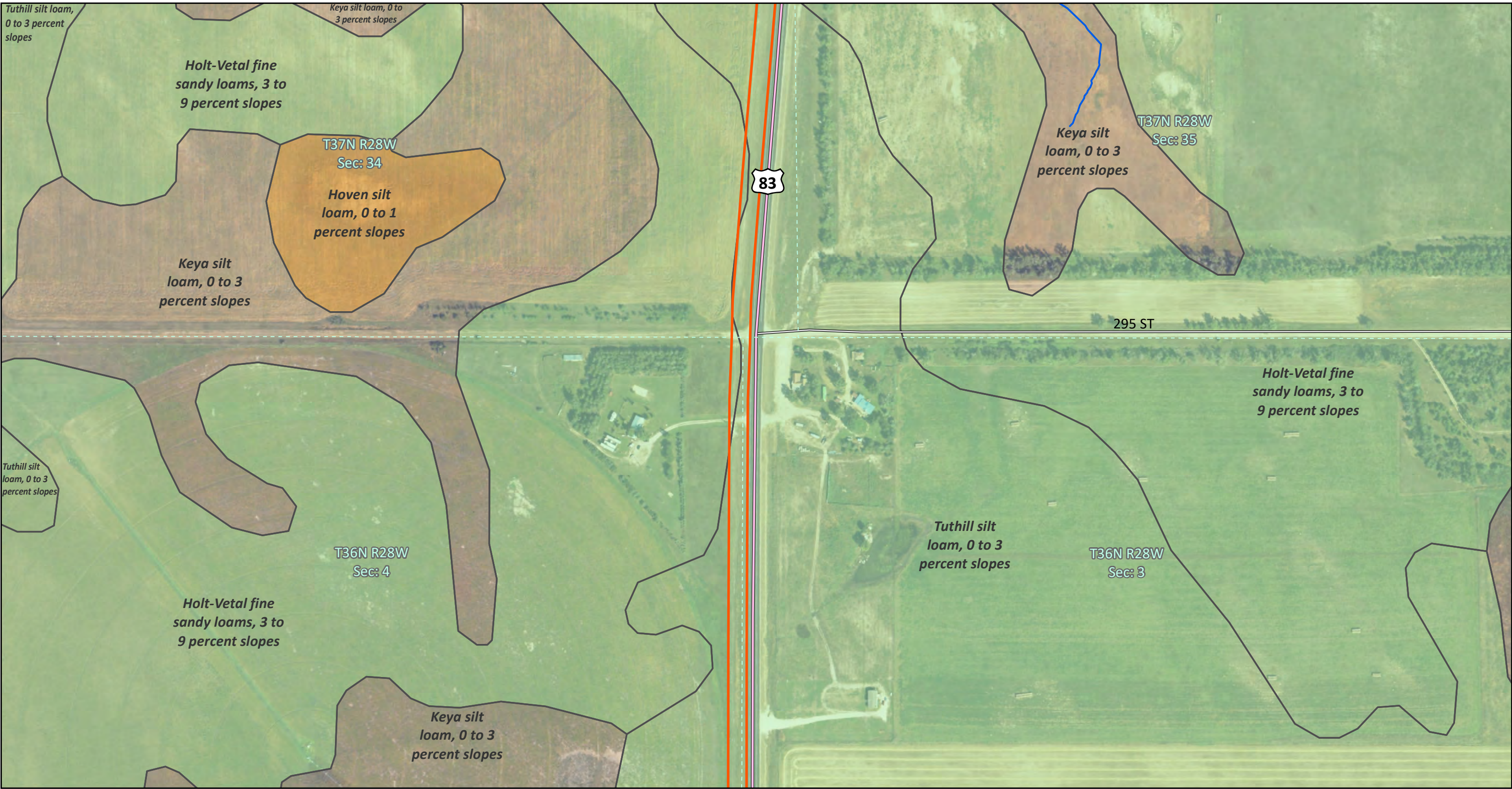


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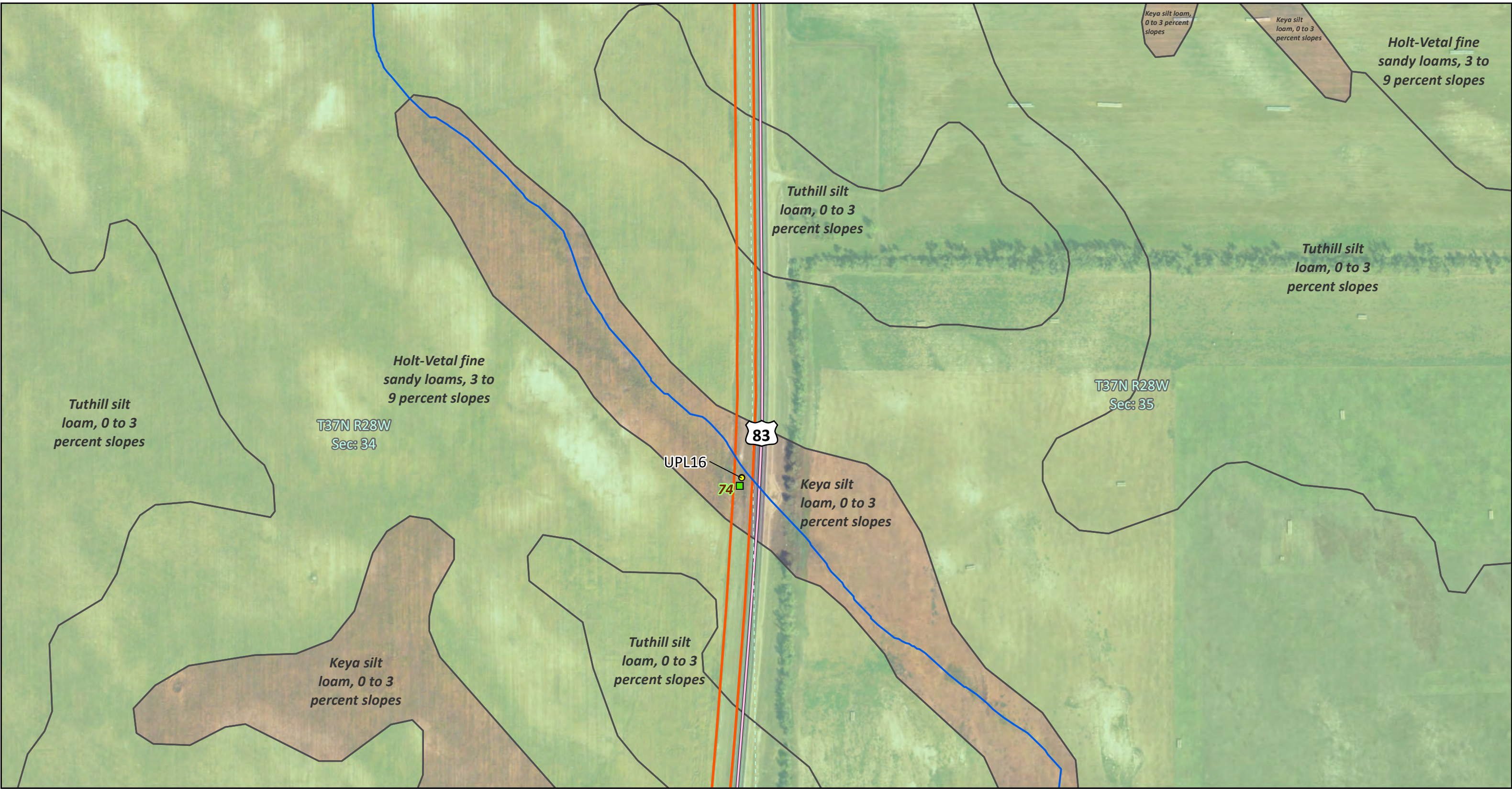


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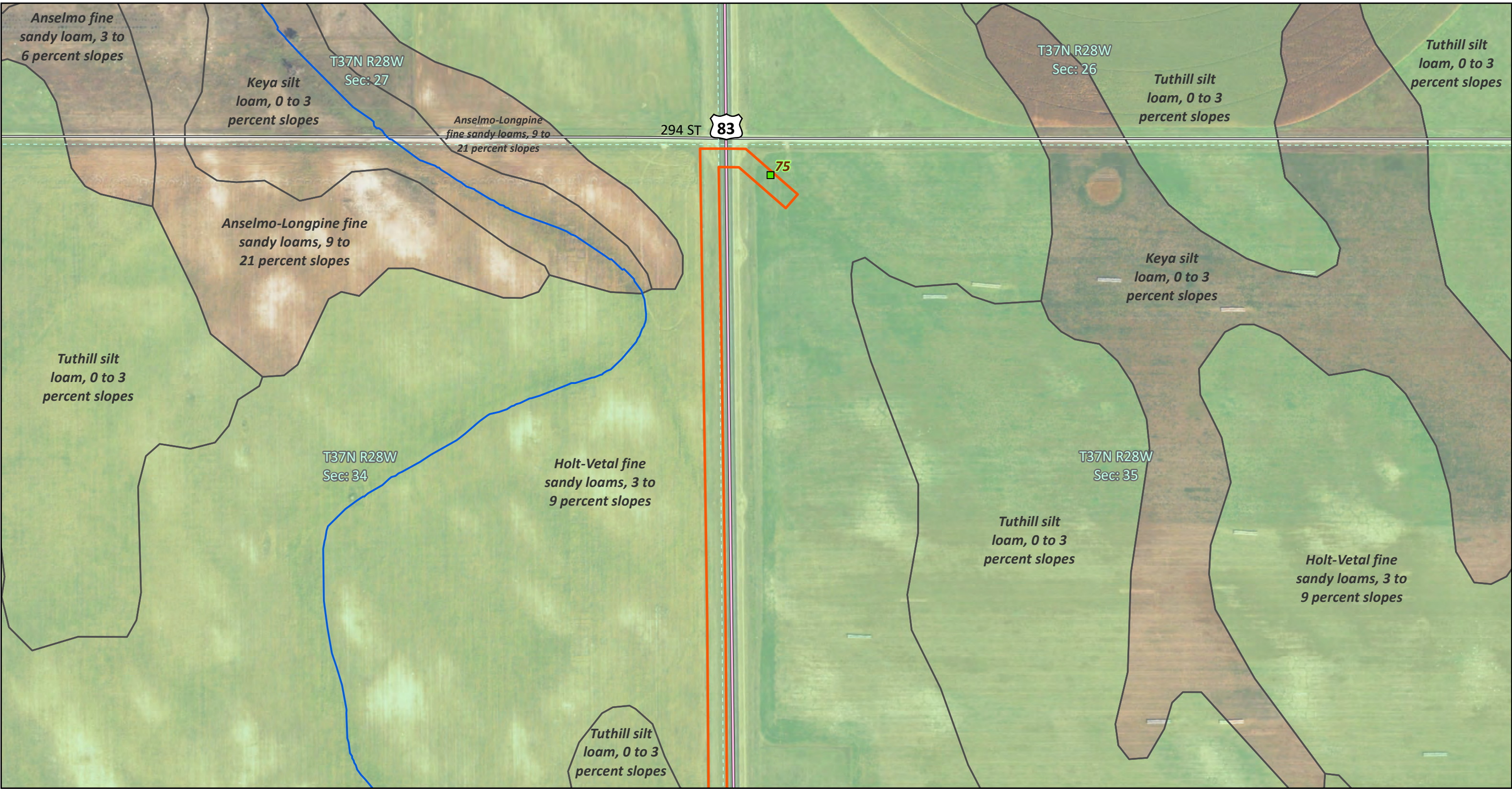
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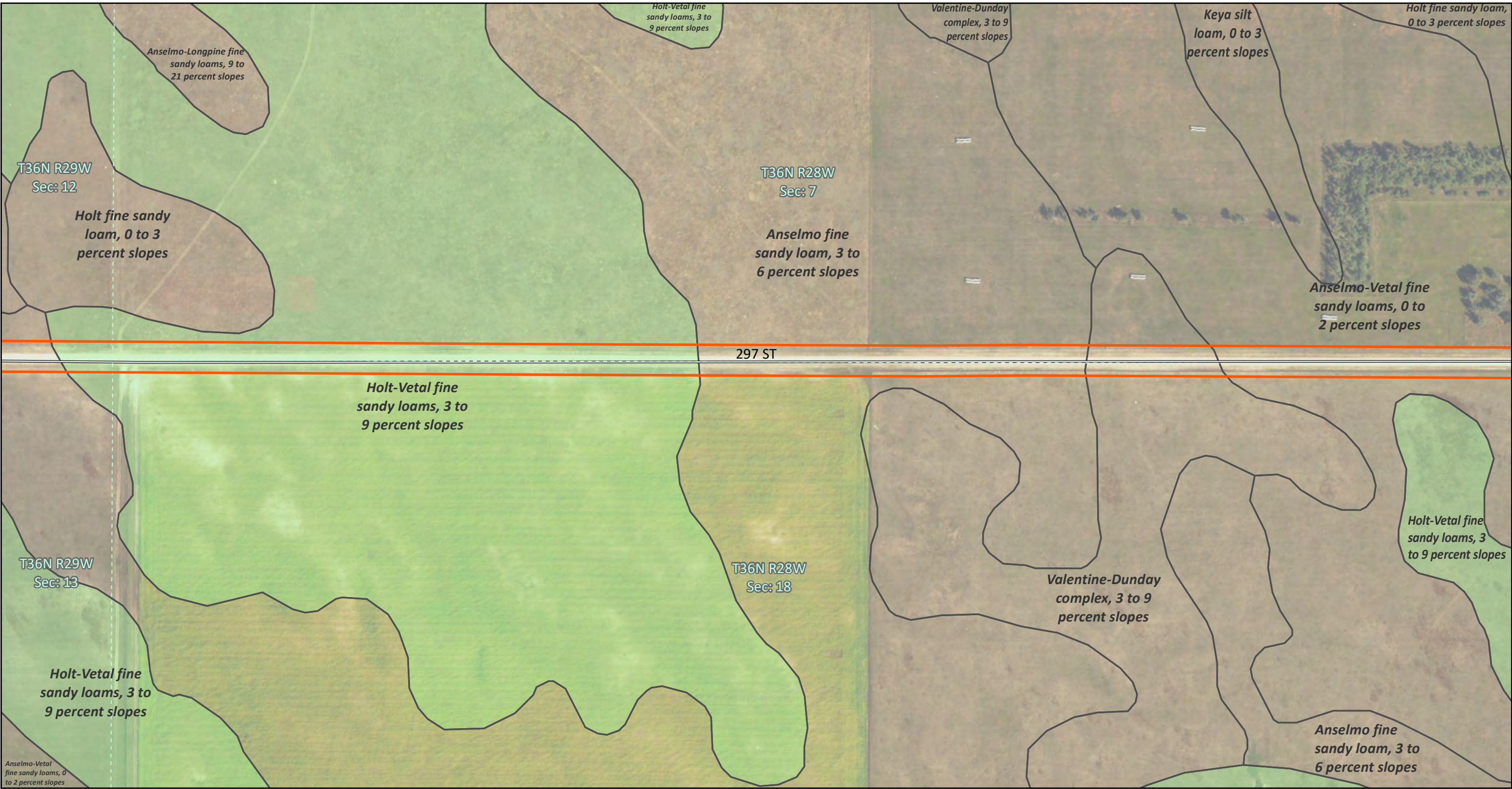
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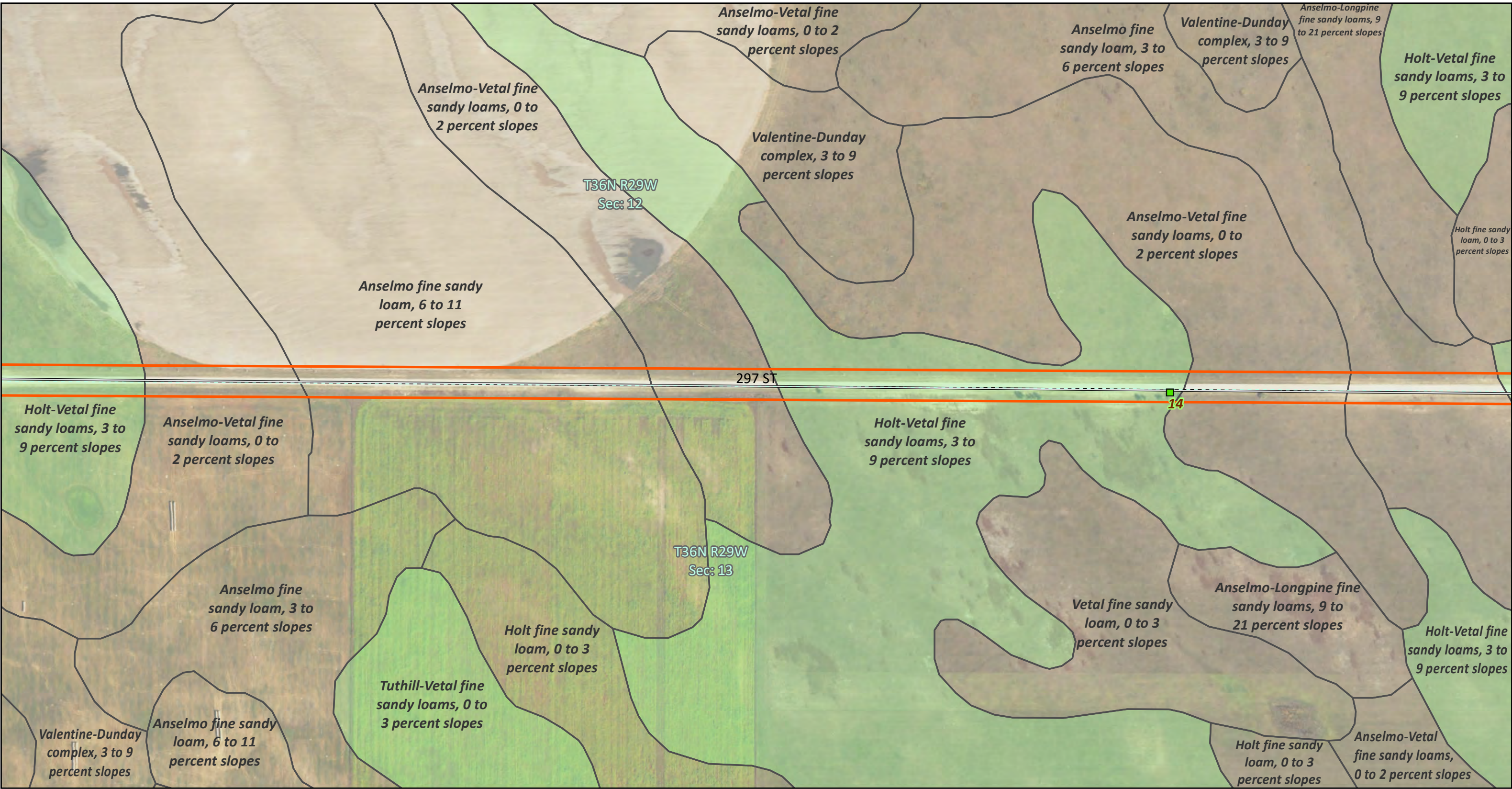
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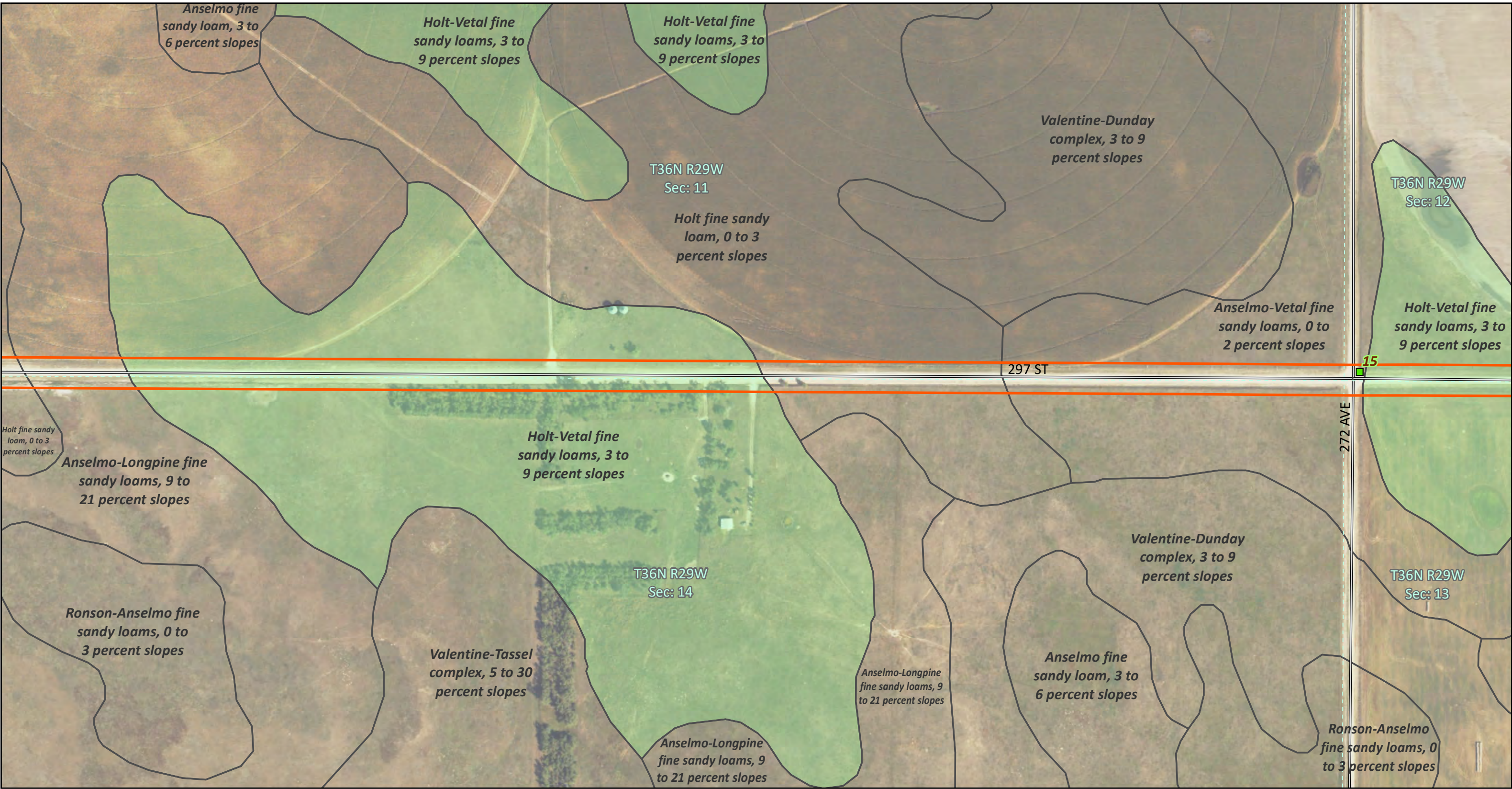


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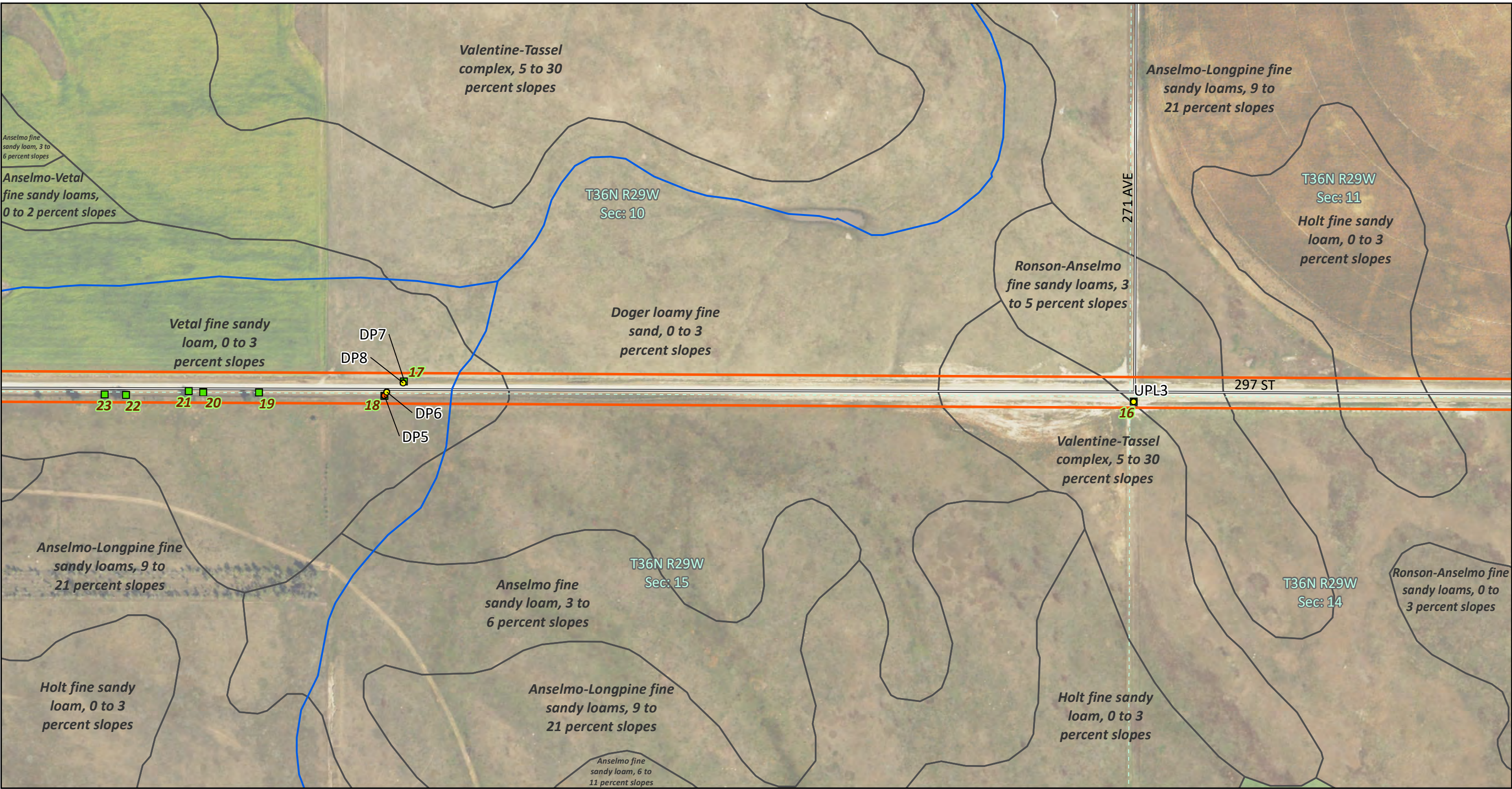


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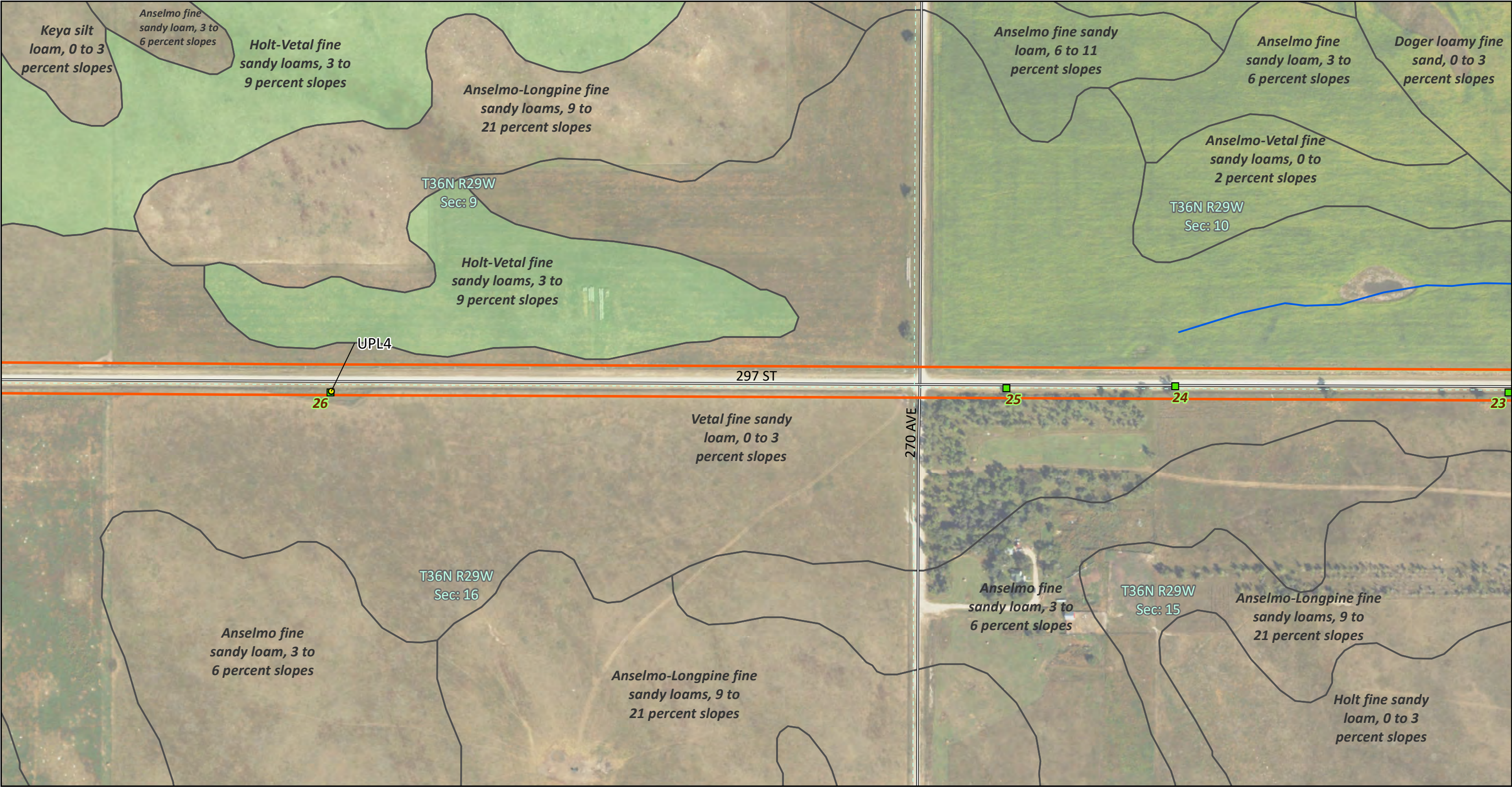


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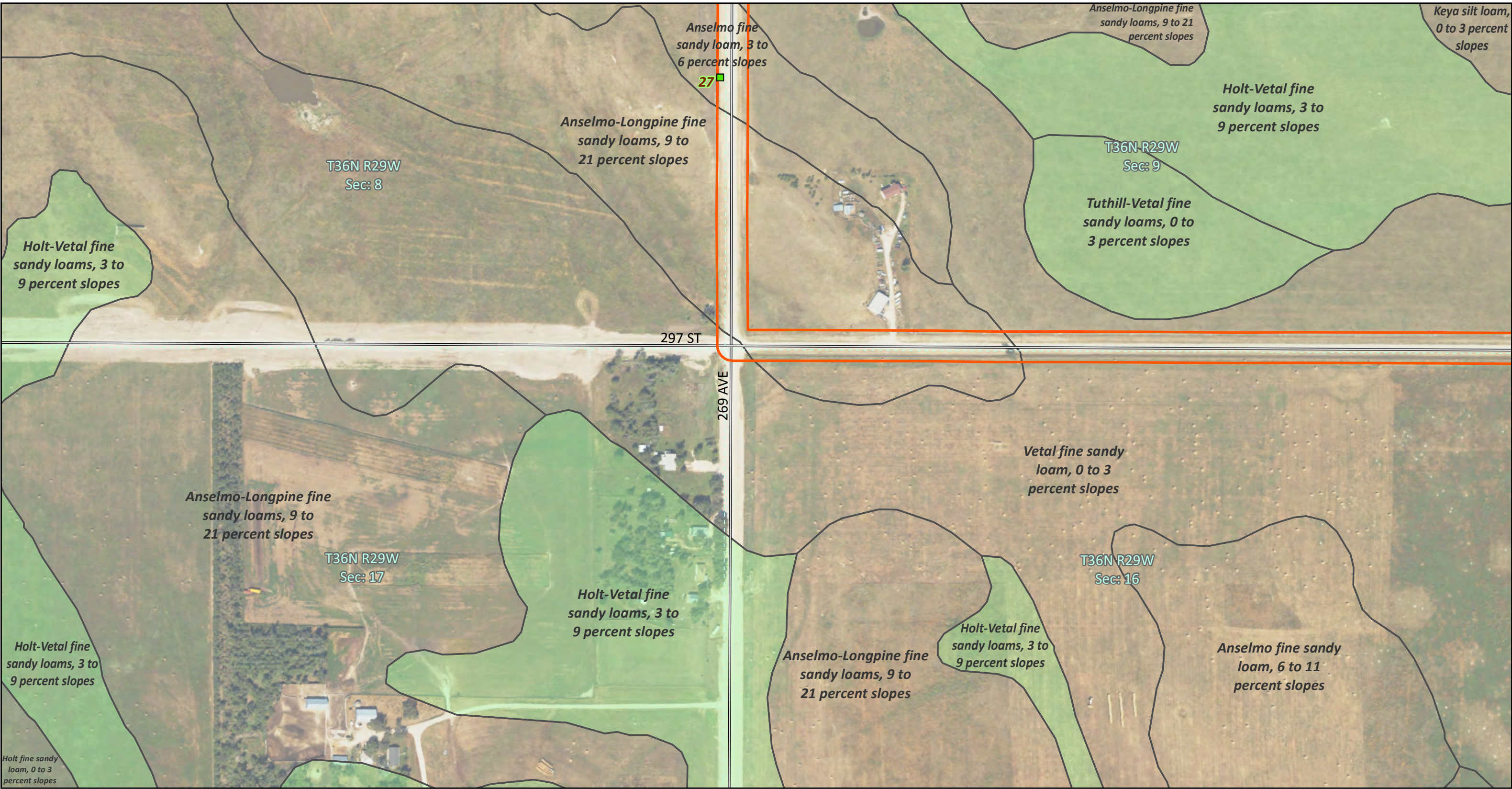


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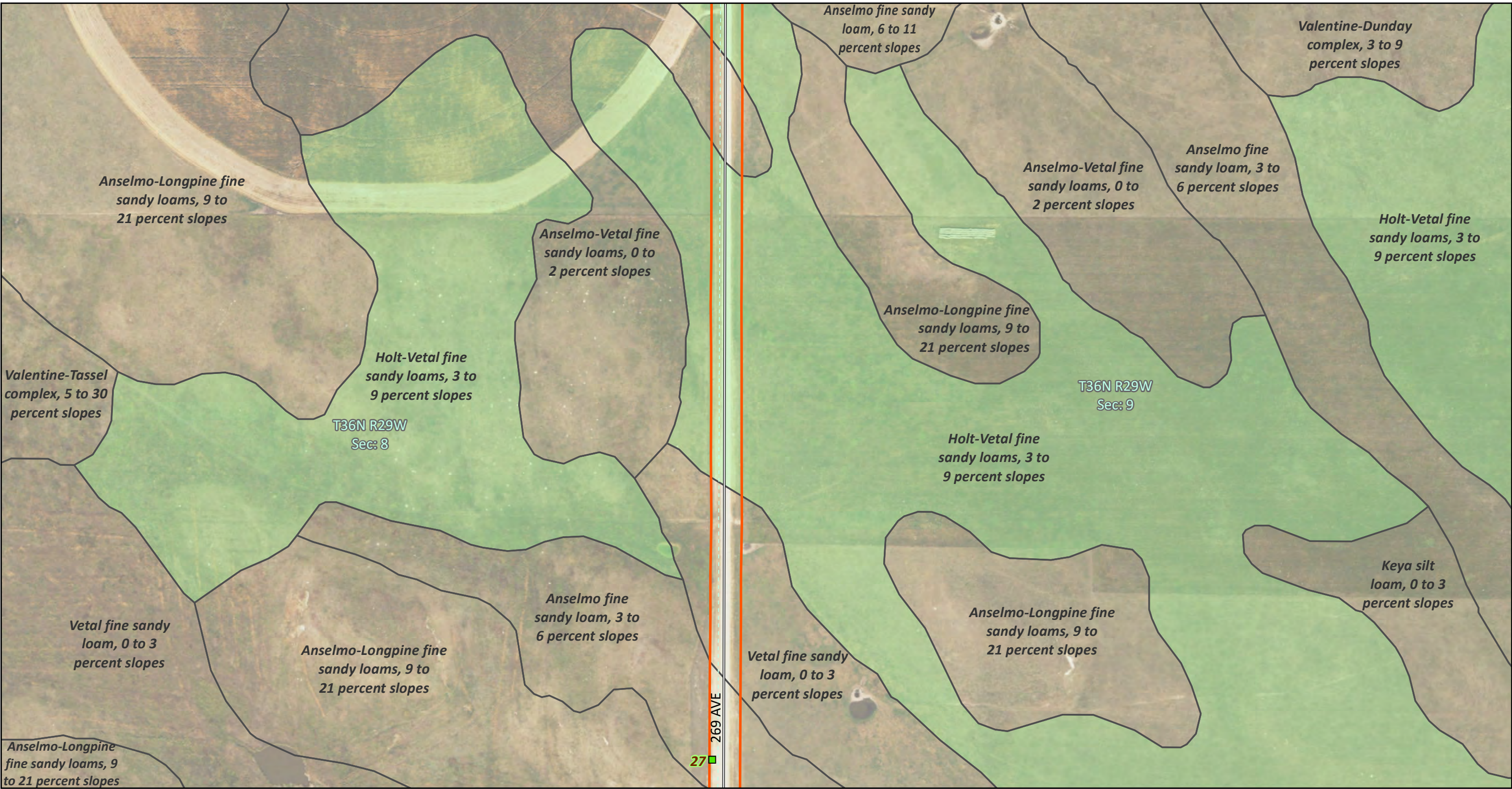


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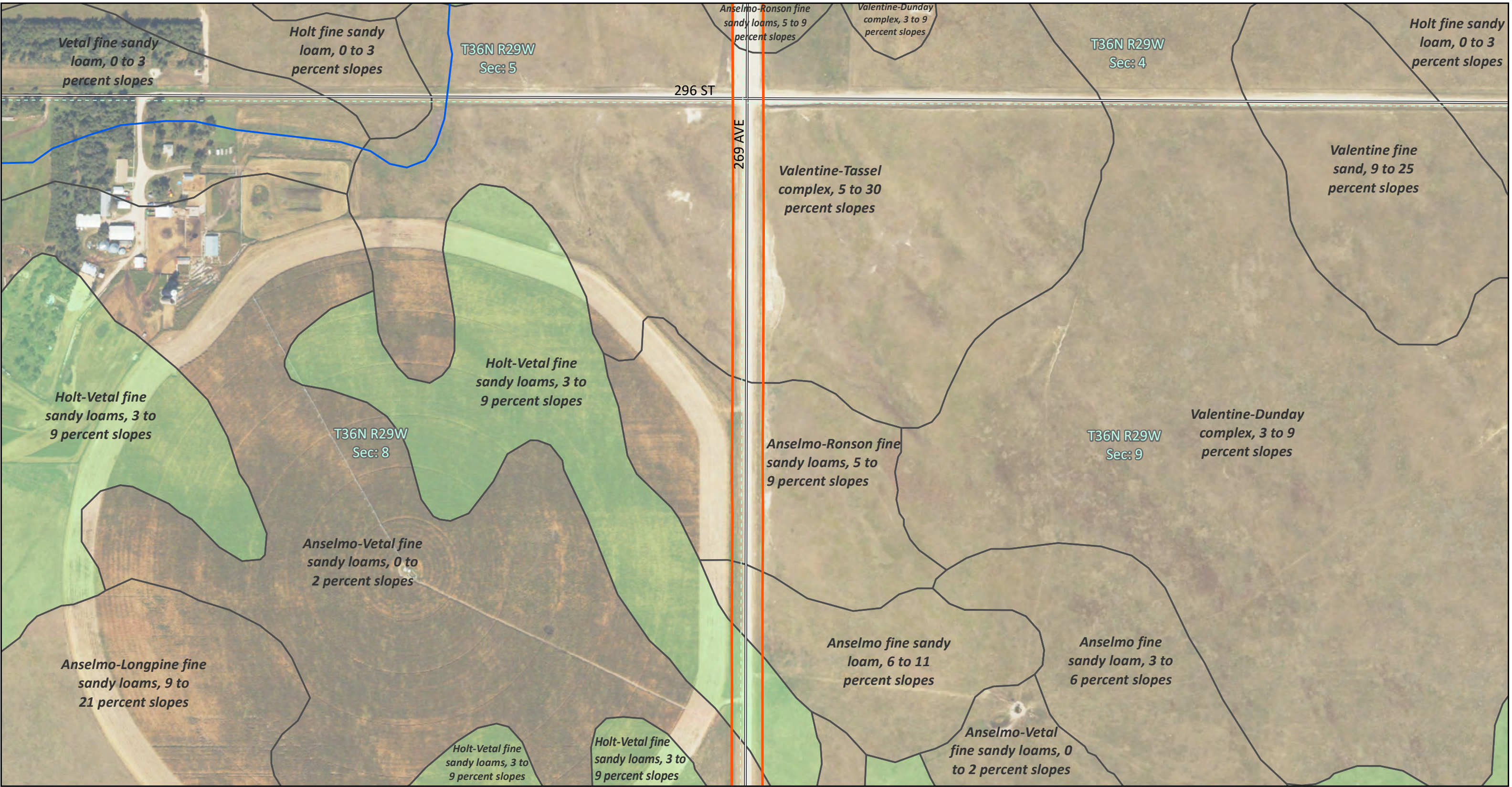


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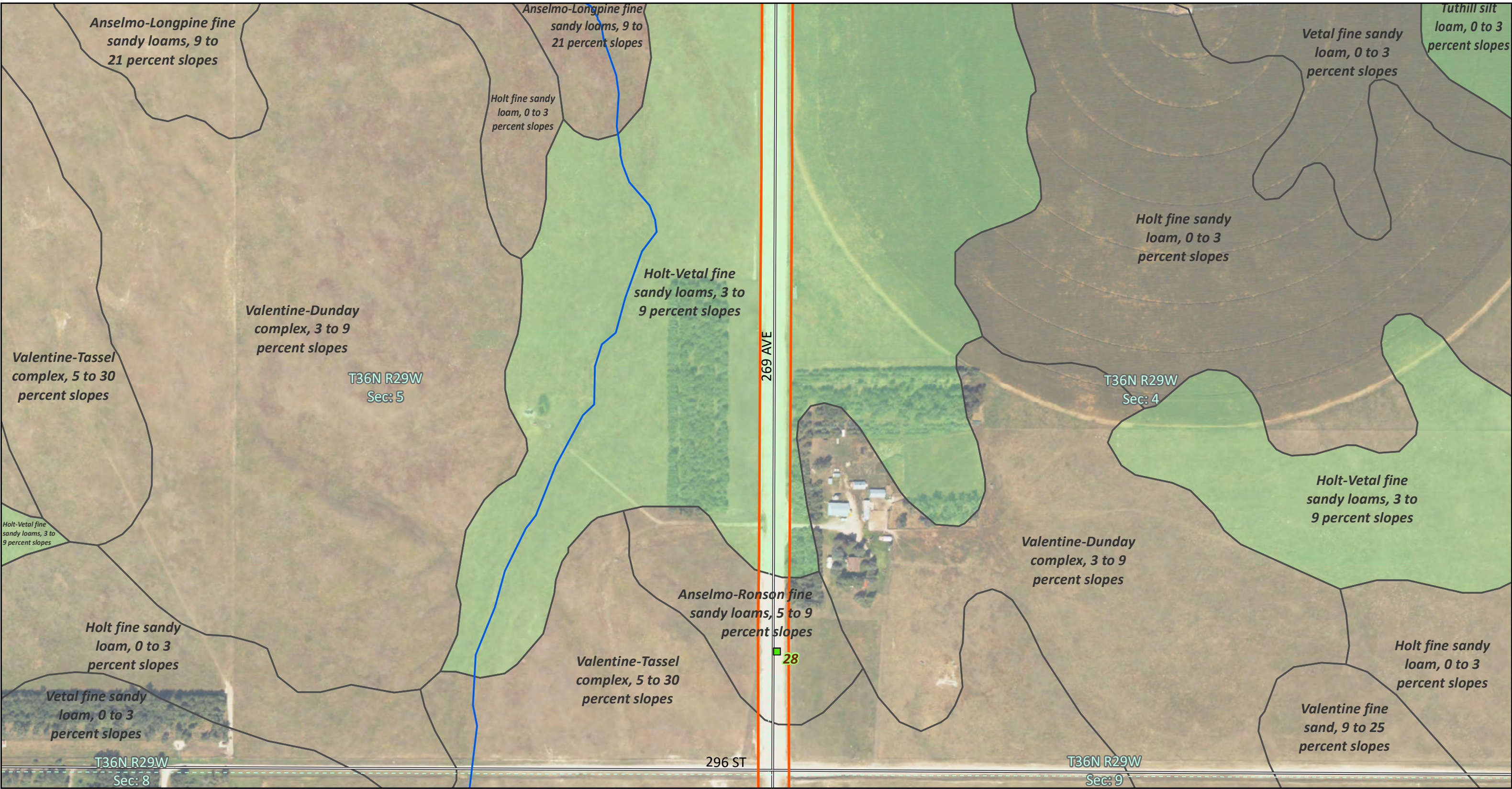
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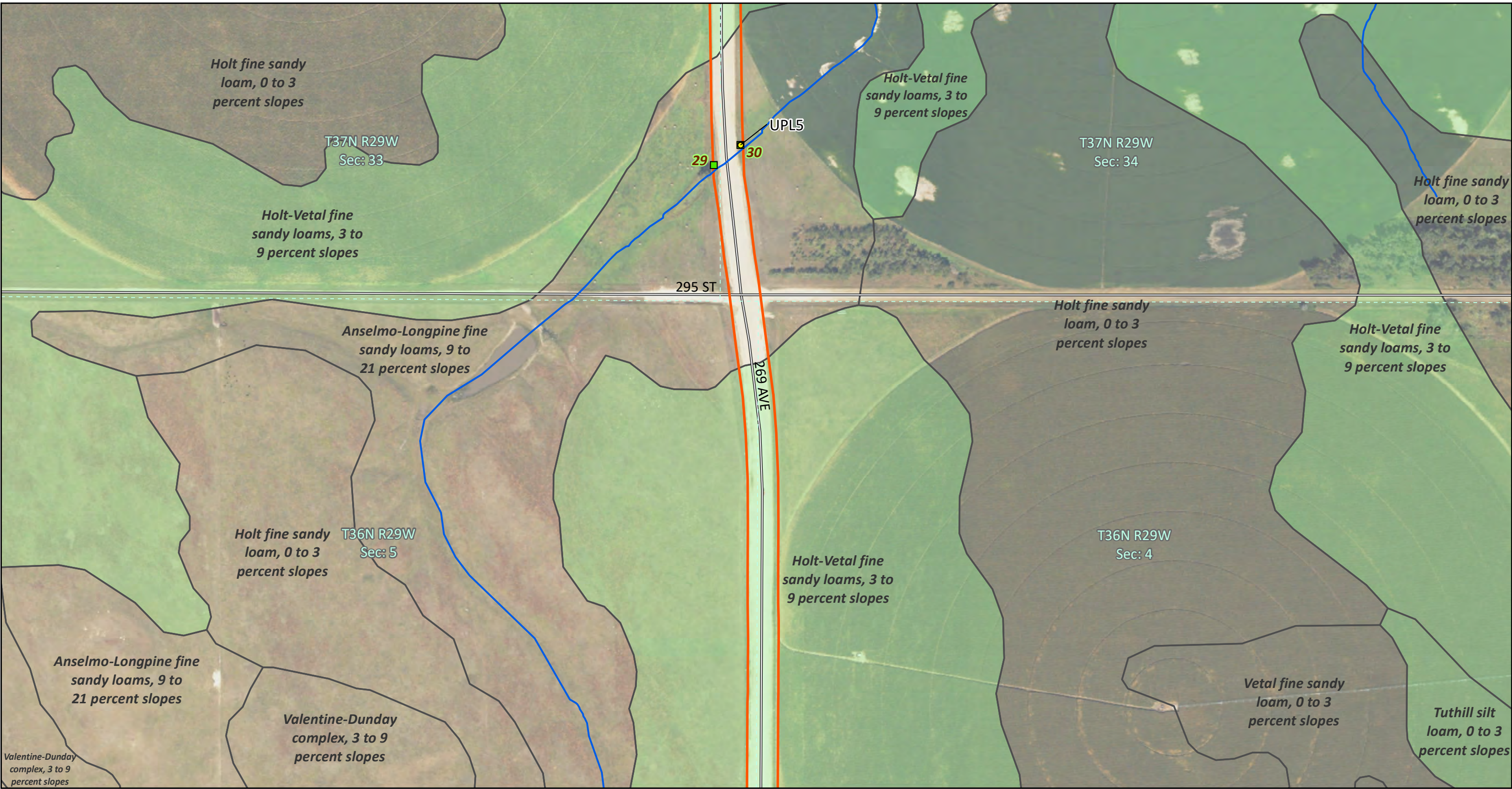


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● Upland Test Hole

■ Photo Point

— NHD Flowline

== Local Roads

Study Area

Soil Hydric Rating

Predominantly nonhydryc (1 to 32%)

Nonhydryc (0%)

* Legend only shows items in vicinity of project/map view

Aerial Photograph Map

Alternate Route Fiber

Wetland Delineation

Todd County, South Dakota

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Project #: 2311-00205

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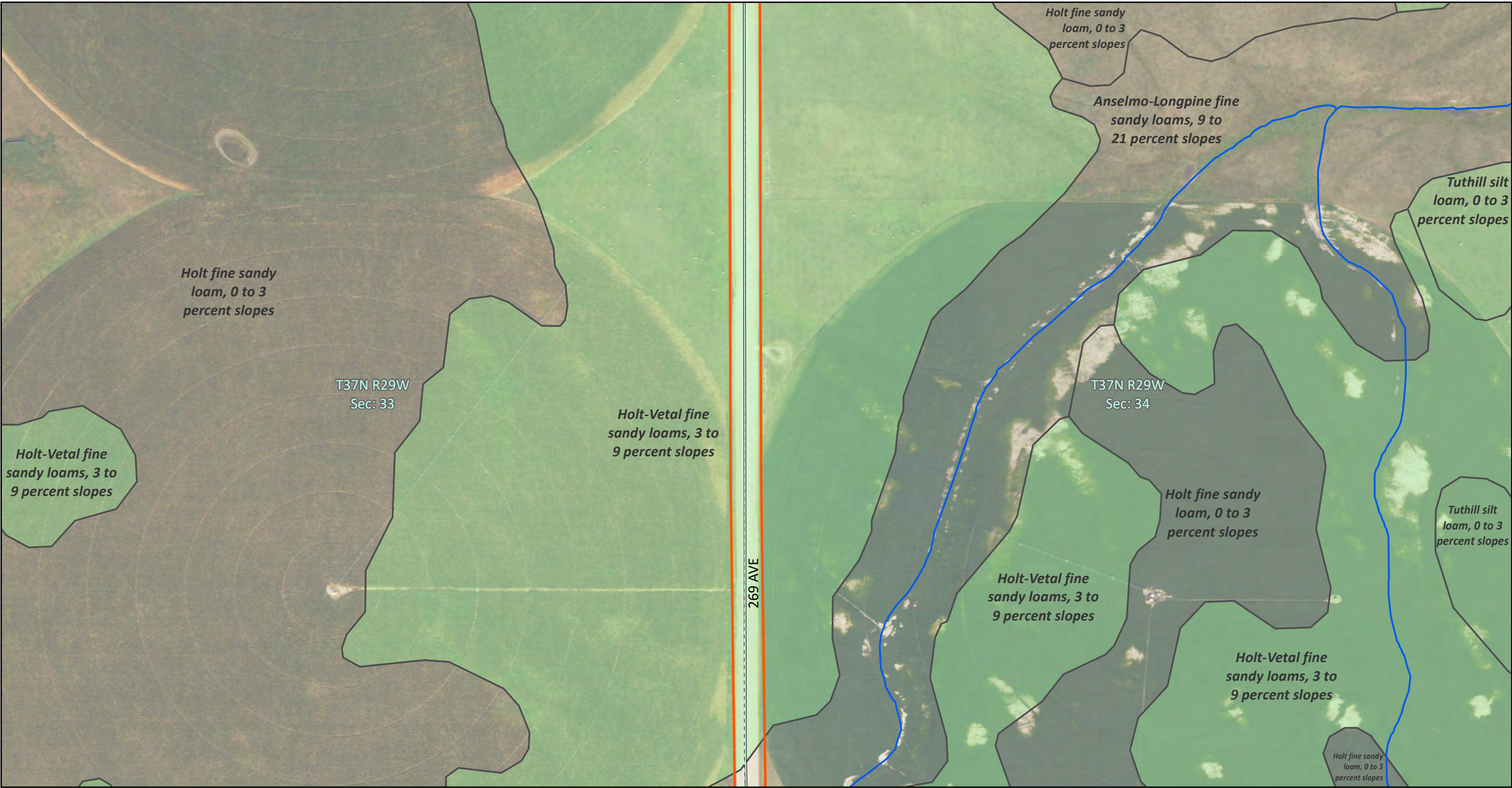
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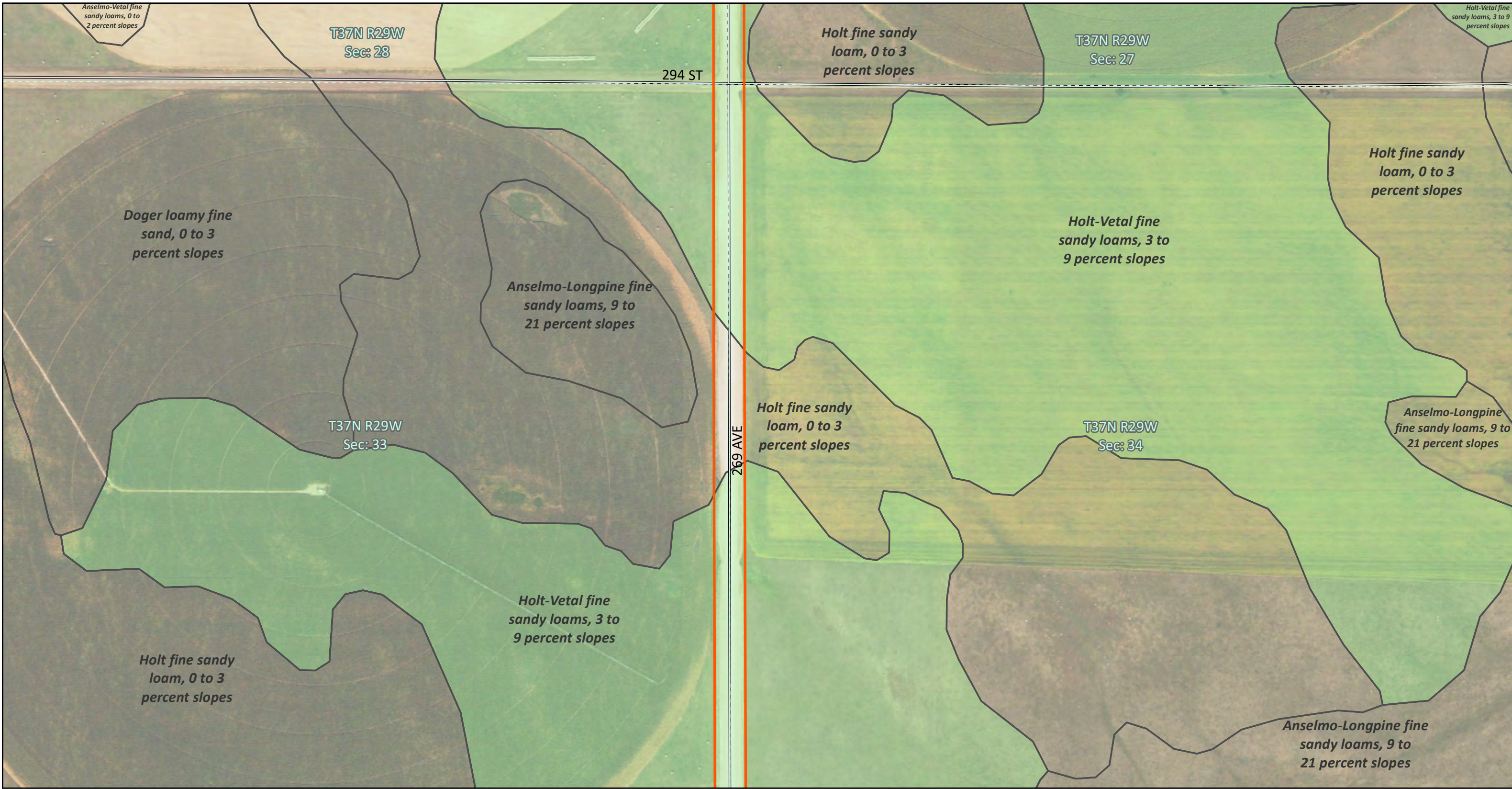
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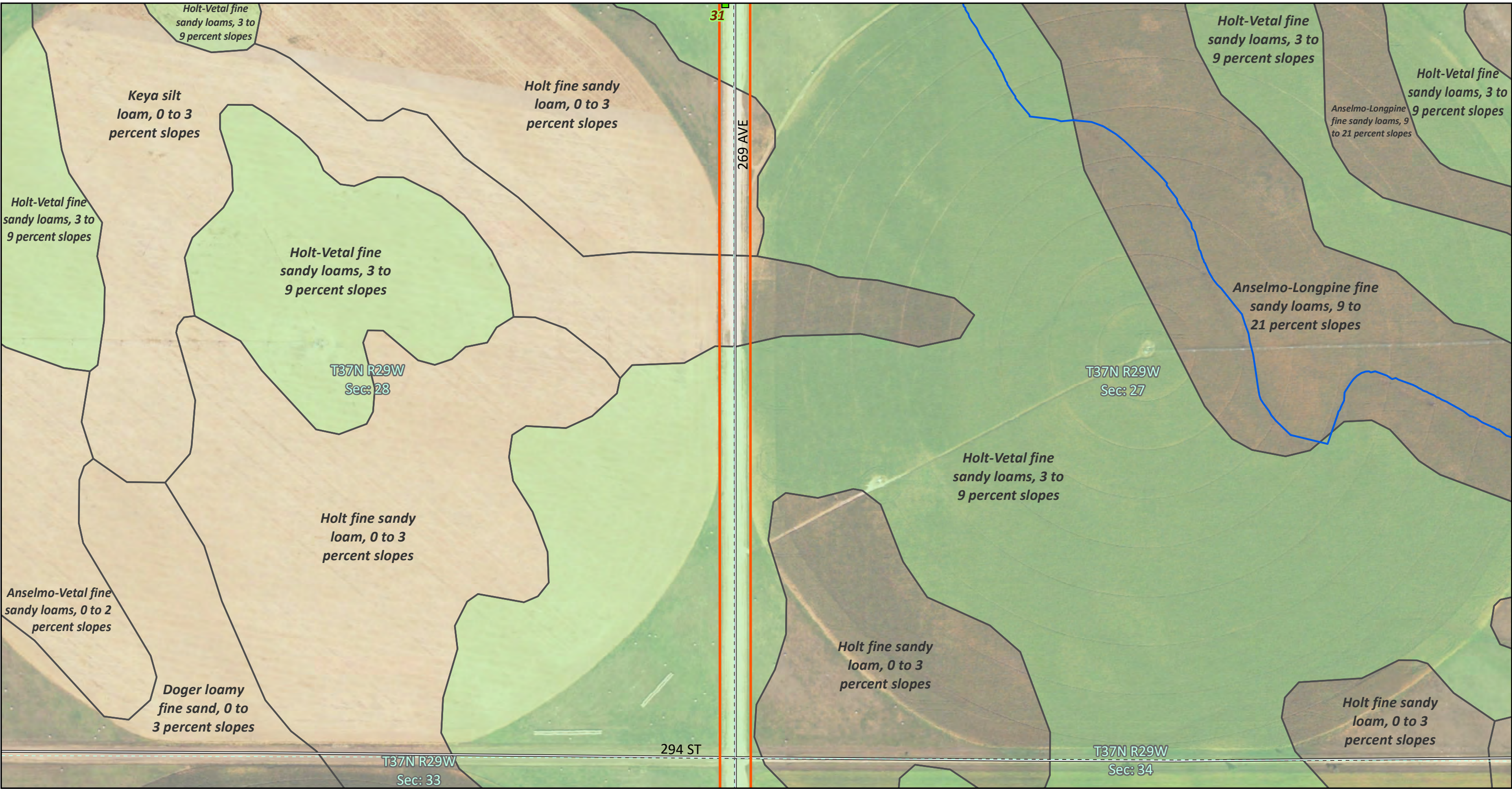


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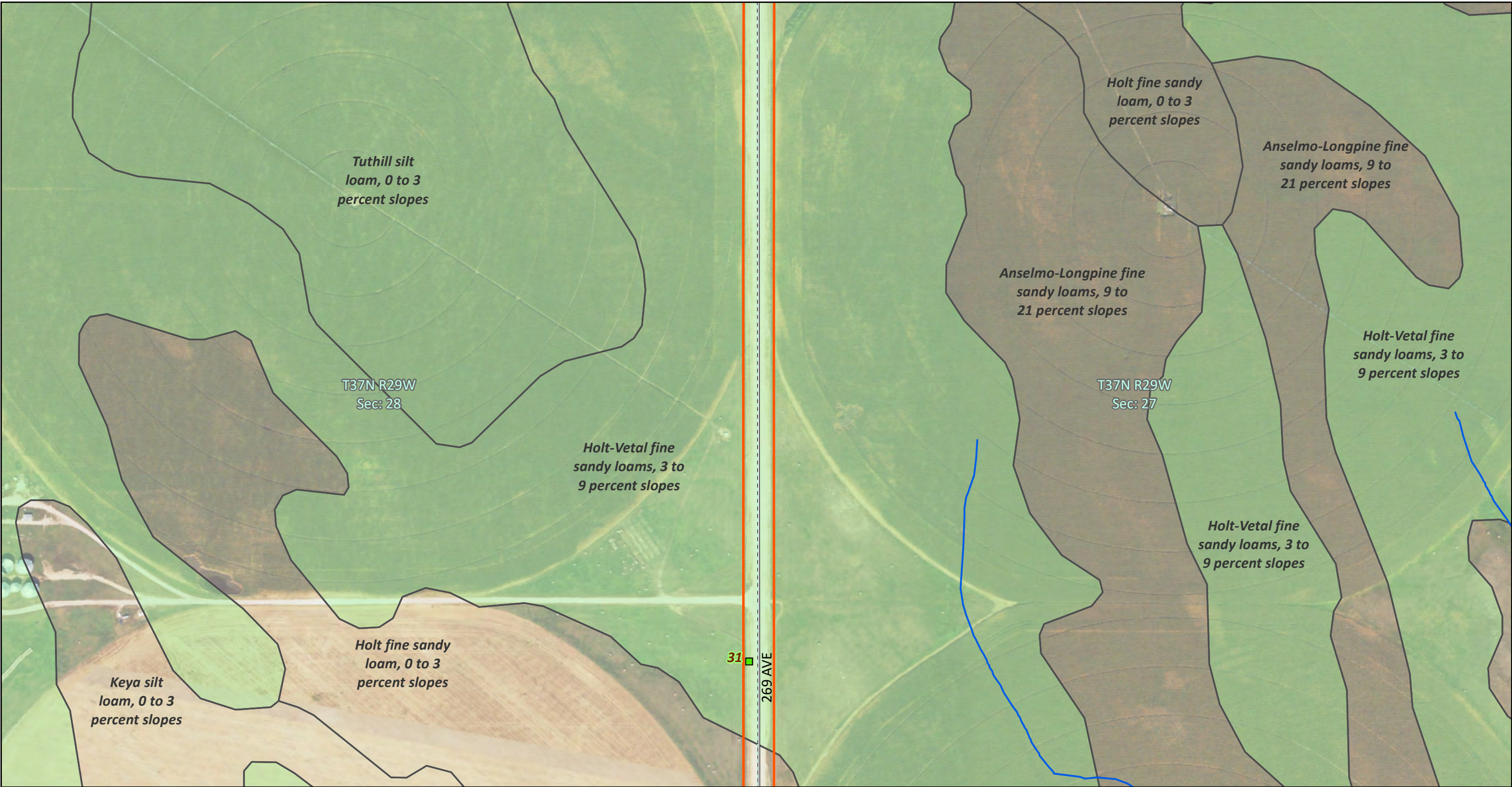
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<div><div><div>■ Photo Point</div><div>— NHD Flowline</div><div>— Local Roads</div><div>□ Study Area</div></div><div><div>Soil Hydric Rating</div><div><div>■ Predominantly nonhydric (1 to 32%)</div><div>□ Nonhydric (0%)</div></div></div></div> <div><div>* Legend only shows items in vicinity of project/map view</div></div>	<div>Aerial Photograph Map</div> <div><div>Alternate Route Fiber</div><div>Wetland Delineation</div><div>Todd County, South Dakota</div></div> <div><div>0200400800</div><div>Feet</div></div>	<div><div><div><div>N</div><div>W</div><div>E</div><div>S</div></div><div><div>KLJ</div><div>18 E Main St, Suite 229</div><div>Rapid City, SD</div><div>kljeng.com</div></div></div><div><div>Created by:</div><div>jeffprice</div></div><div><div>Date:</div><div>7/29/2024</div></div><div><div>Project #:</div><div>2311-00205</div></div></div>	<div><div>Two Two Strike</div><div>494847</div><div>46</div><div>45</div><div>44</div><div>43</div><div>42</div><div>41</div><div>40</div><div>39</div><div>38</div><div>37</div><div>36</div><div>35</div><div>34</div><div>33</div><div>32</div><div>31</div><div>30</div><div>29</div><div>28</div><div>27</div><div>26</div><div>25</div><div>24</div><div>23</div><div>22</div><div>21</div><div>20</div><div>19</div><div>18</div><div>17</div></div> <div><div>Revision #:</div><div>0</div></div> <div><div>Page 39 of 55</div></div>
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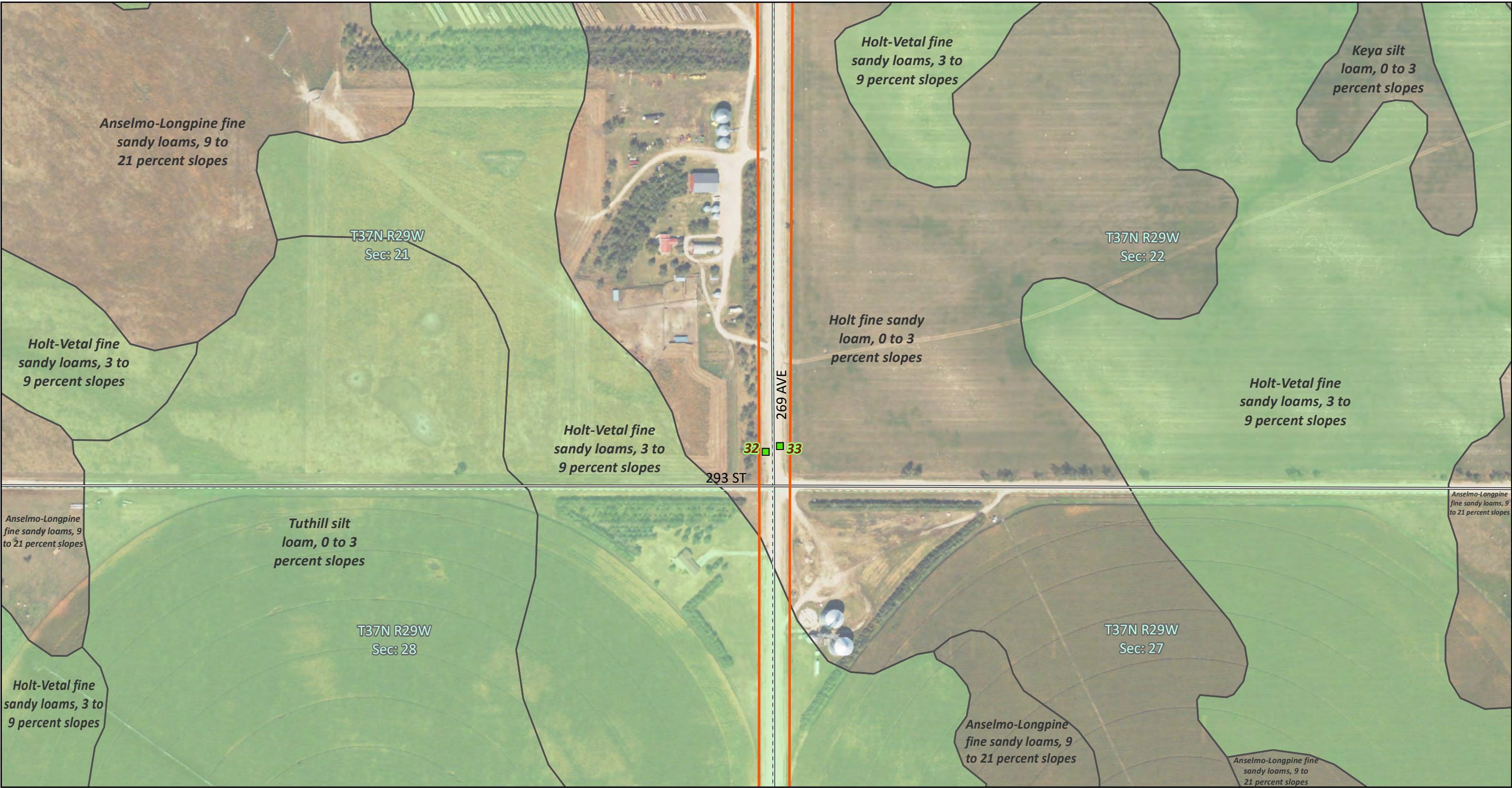


Photo Point

Local Roads

Study Area

Soil Hydric Rating

Predominantly nonhydric (1 to 32%)

Nonhydric (0%)

* Legend only shows items in vicinity of project/map view

Aerial Photograph Map

Alternate Route Fiber

Wetland Delineation

Todd County, South Dakota

0200400800

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jeffprice

Date:

7/29/2024

Project #:

2311-00205

Two Strike

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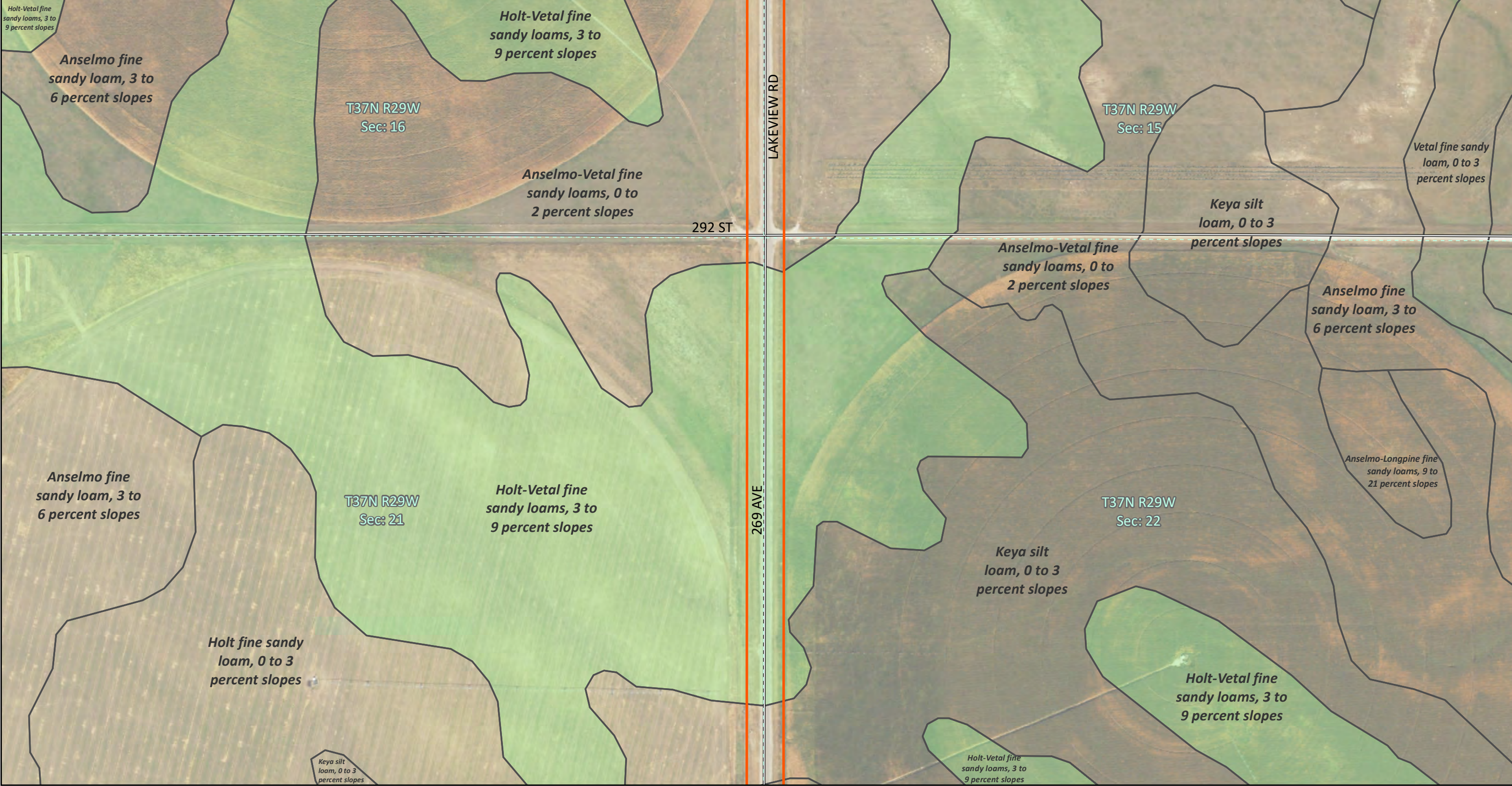
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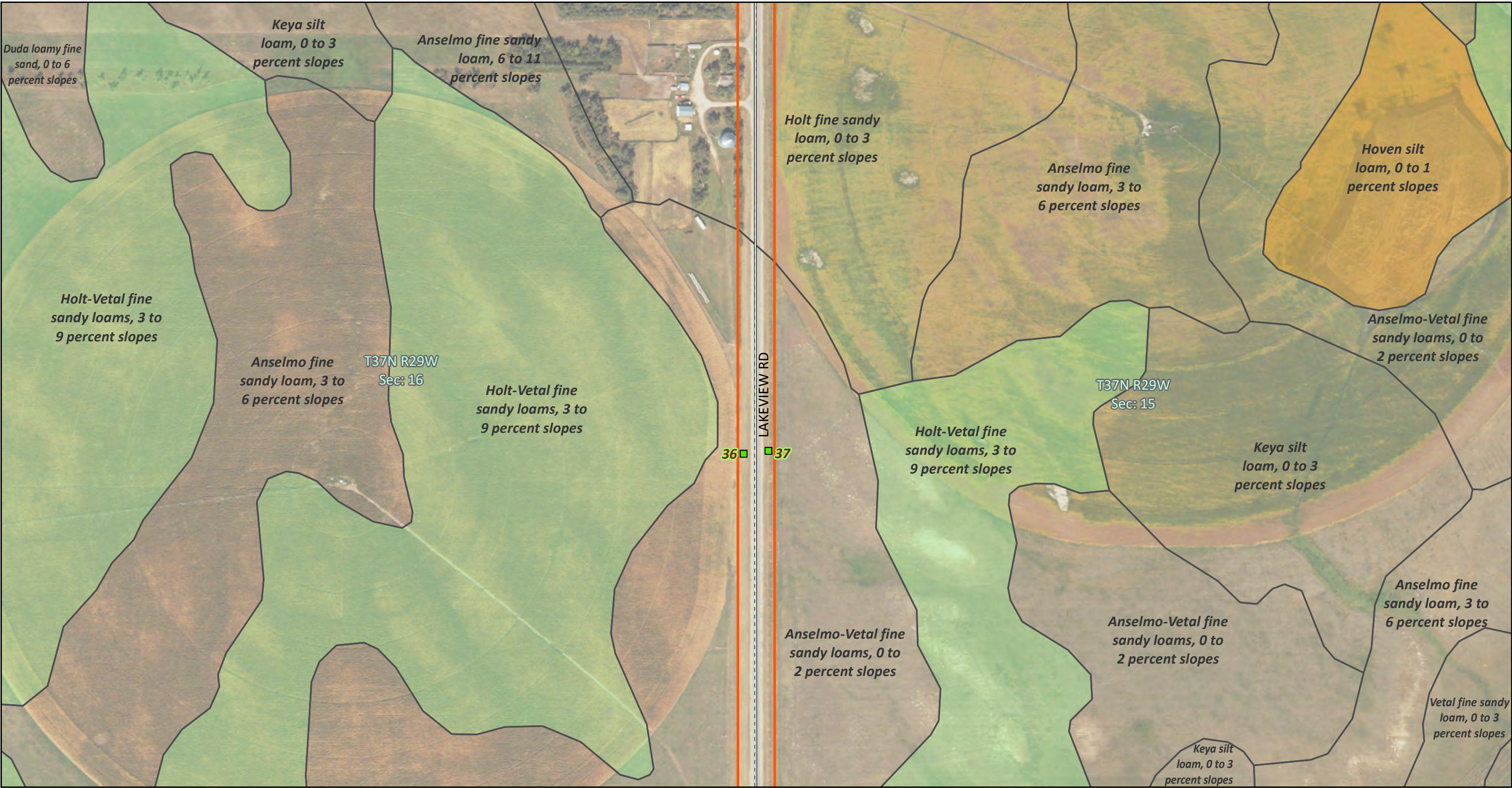
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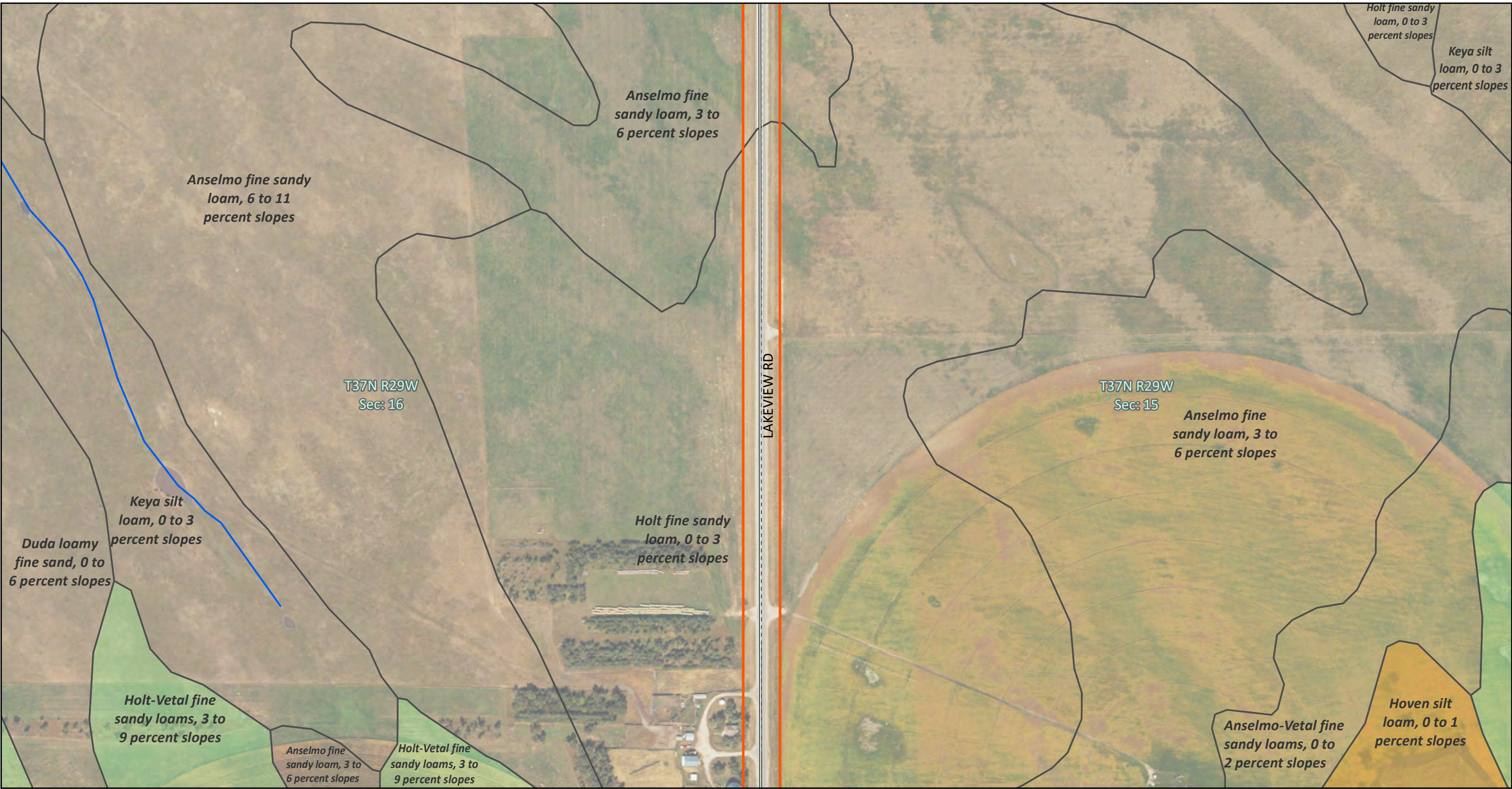
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			Date: 7/29/2024			
			Project #: 2311-00205			



<div><div><div>■ Photo Point</div><div>— Local Roads</div><div>▭ Study Area</div></div><div><div>Soil Hydric Rating</div><div><div>■ Predominantly Hydric (66 to 99%)</div><div>■ Predominantly nonhydric (1 to 32%)</div><div>■ Nonhydric (0%)</div></div></div></div> <div><div>* Legend only shows items in vicinity of project/map view</div></div>	<div>Aerial Photograph Map</div> <div>Alternate Route Fiber Wetland Delineation Todd County, South Dakota</div> <div><div>0200400800</div><div>Feet</div></div>	<div><div><div><div>N</div><div>W</div><div>E</div><div>S</div></div><div><div>KLJ</div><div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div></div><div>Created by: jeffprice</div><div>Date: 7/29/2024</div><div>Project #: 2311-00205</div></div>	<div><div><div>Rosebud</div><div>Two Strike</div><div>Rosebud</div><div>Indian Reservation</div></div><div><div>48</div><div>47</div><div>46</div><div>45</div><div>44</div><div>43</div><div>42</div><div>41</div><div>40</div><div>39</div><div>38</div><div>37</div><div>36</div><div>35</div></div><div>23</div><div>22</div><div>21</div></div>
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Revision #: 0

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NHD Flowline

Local Roads

Study Area

Soil Hydric Rating

Predominantly Hydric (66 to 99%)

Predominantly nonhydric (1 to 32%)

Nonhydric (0%)

* Legend only shows items in vicinity of project/map view

Aerial Photograph Map

Alternate Route Fiber

Wetland Delineation

Todd County, South Dakota

0200400800

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Rosebud

Two Strike

Indian Reservation

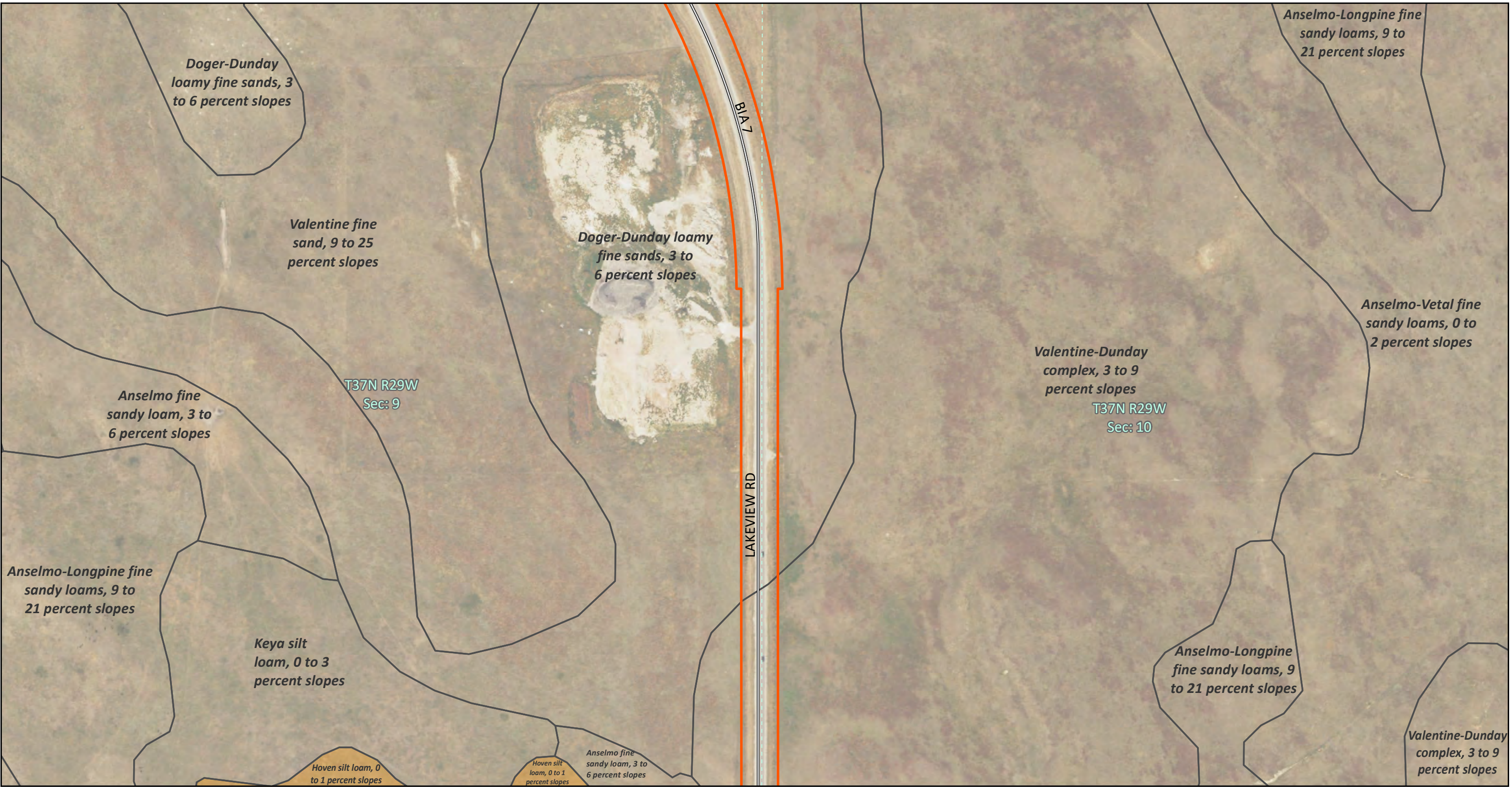
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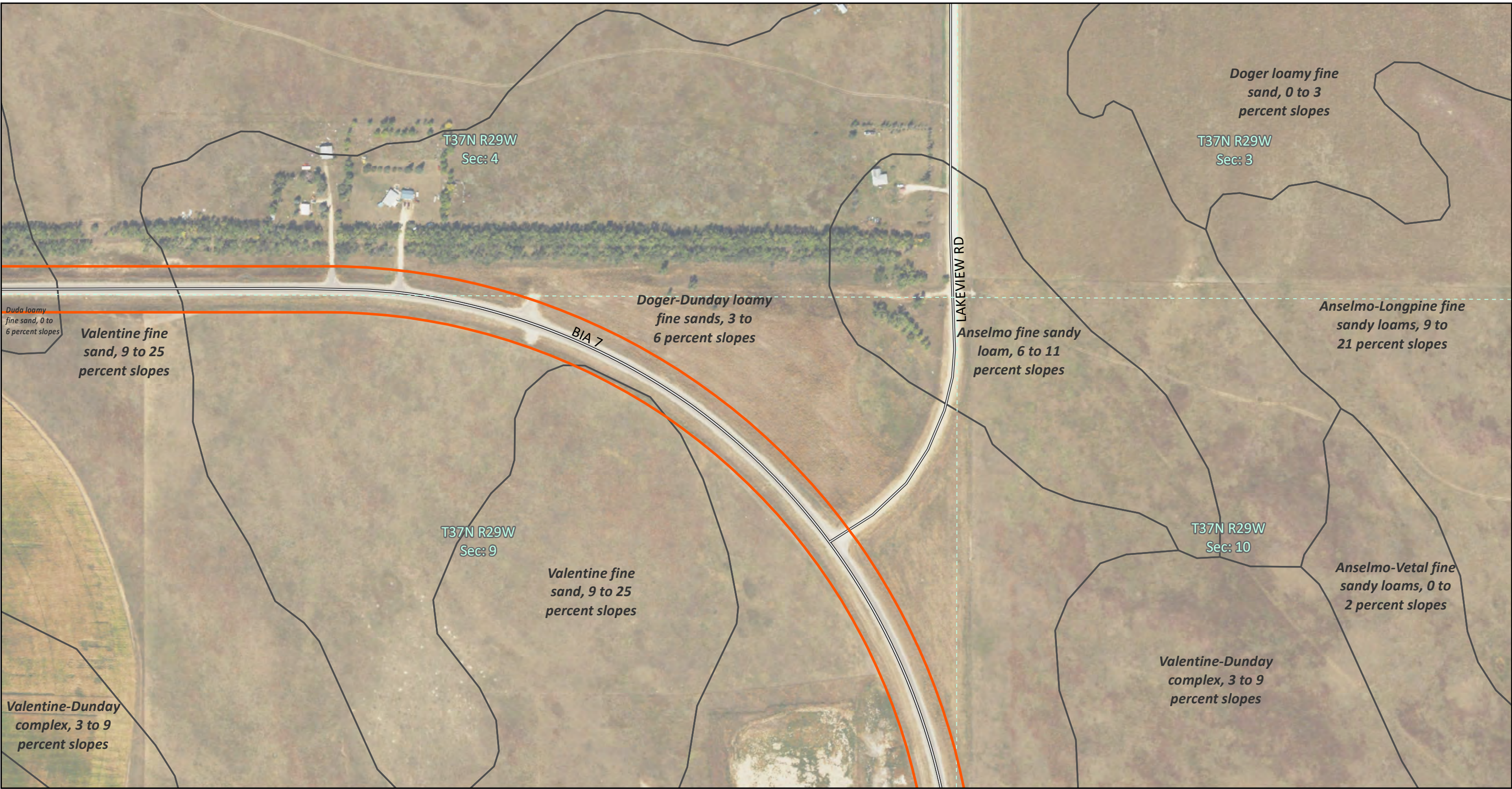
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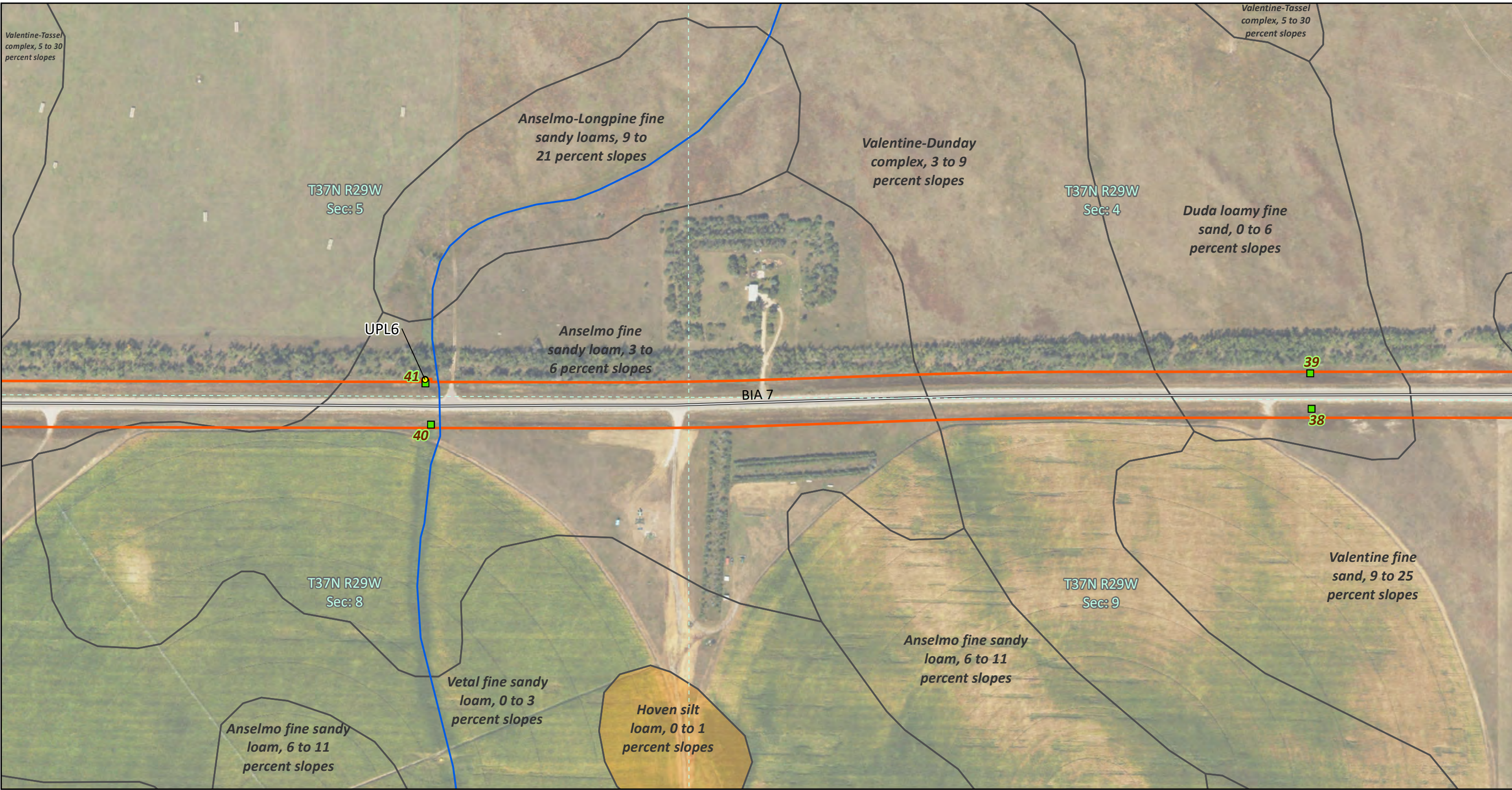
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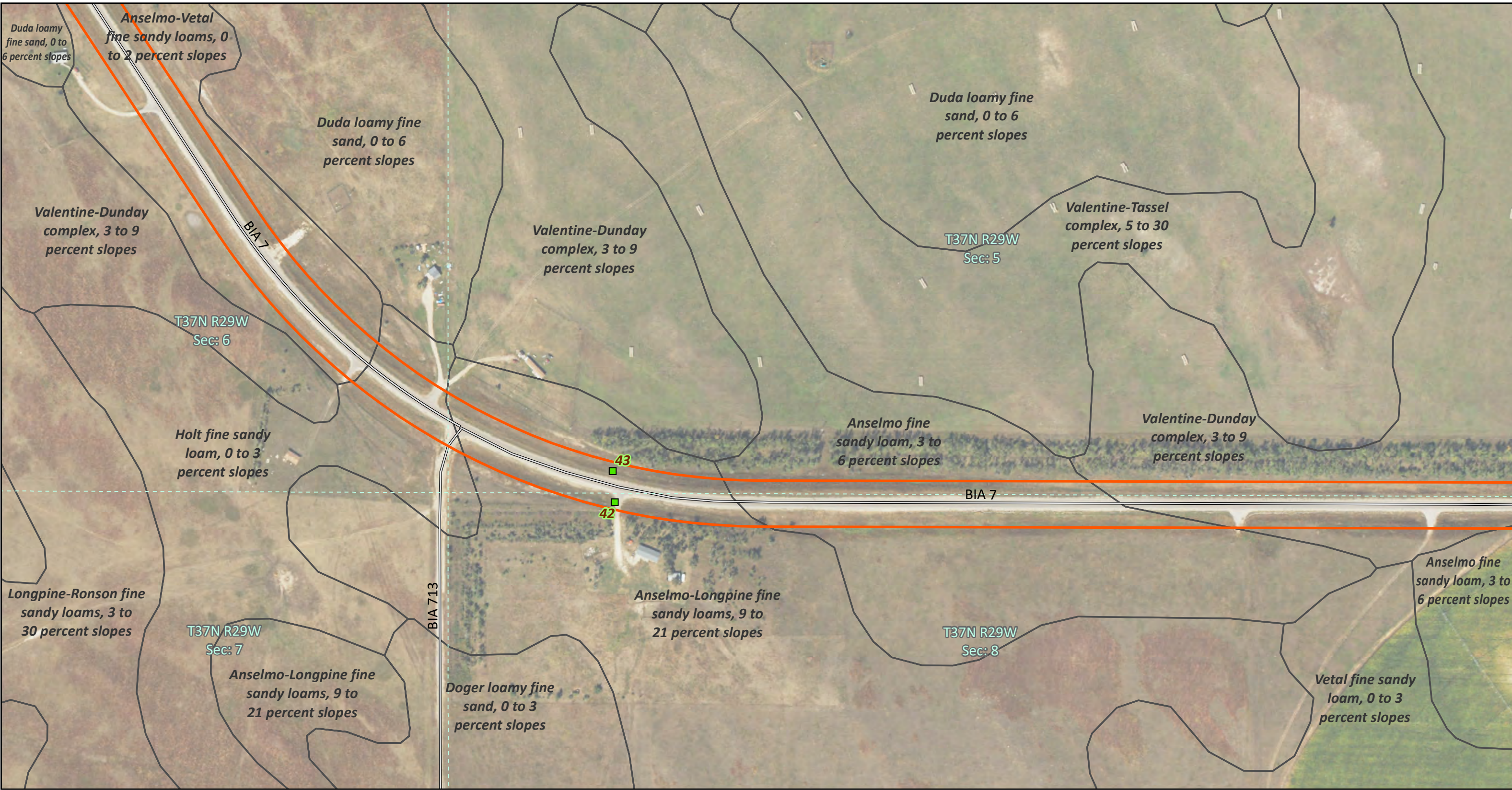
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	<div>0200400800</div> <div>Feet</div>		Date: 7/29/2024			
			Project #: 2311-00205			
			Revision #: 0		Page 46 of 55	



<div>Local Roads</div> <div>Study Area</div> <div>Soil Hydric Rating</div> <div>Nonhydric (0%)</div> <div>* Legend only shows items in vicinity of project/map view</div>	Aerial Photograph Map		<div>North Arrow</div>		<div>Regional Map</div>	
	<div>Alternate Route Fiber Wetland Delineation</div> <div>Todd County, South Dakota</div> <div>0 200 400 800 Feet</div>		<div>KLJ</div> <div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div>			
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			Project #: 2311-00205			
Revision #: 0		Page 47 of 55				

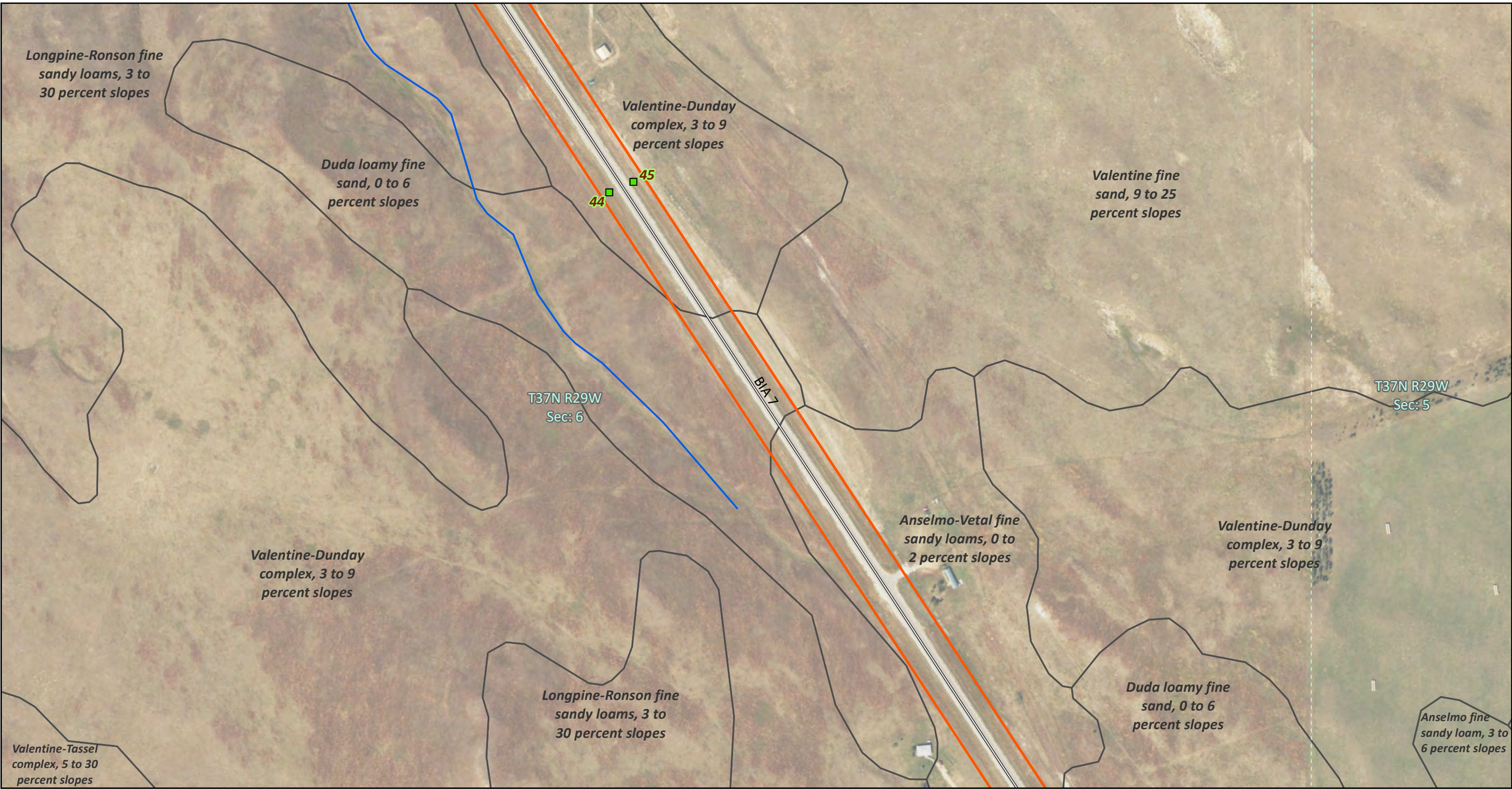


<div><div><div>● Upland Test Hole</div><div>■ Photo Point</div><div>— NHD Flowline</div><div>== Local Roads</div><div>▭ Study Area</div></div><div><div>Soil Hydric Rating</div><div><div>■ Predominantly Hydric (66 to 99%)</div><div>□ Nonhydric (0%)</div></div></div></div> <div><div>Aerial Photograph Map</div><div>Alternate Route Fiber Wetland Delineation</div><div>Todd County, South Dakota</div><div><div>0200400800</div><div>Feet</div></div></div> <div><div><div><div><div>W</div><div>N</div><div>E</div><div>S</div></div><div><div>KLJ</div><div>18 E Main St, Suite 229</div><div>Rapid City, SD</div><div>kljeng.com</div></div></div><div>Created by: jeffprice</div><div>Date: 7/29/2024</div><div>Project #: 2311-00205</div></div><div><div><div><div>Rosebud</div><div>Two Strike</div><div>St Francis</div></div><div><div>55</div><div>54</div><div>53</div><div>52</div><div>51</div><div>50</div><div>49</div><div>48</div><div>47</div><div>46</div><div>45</div><div>44</div><div>43</div><div>42</div><div>41</div><div>40</div><div>39</div></div></div><div>Revision #: 0</div><div>Page 48 of 55</div></div></div> <div><div>K:\Projects\Tribal\RosebudSioux\2311-00815_AlternateRouteFiber\GIS\Environmental\2311_00815_RosebudSioux_v2_AquaRes_2AerialPhotograph.mxd</div></div>

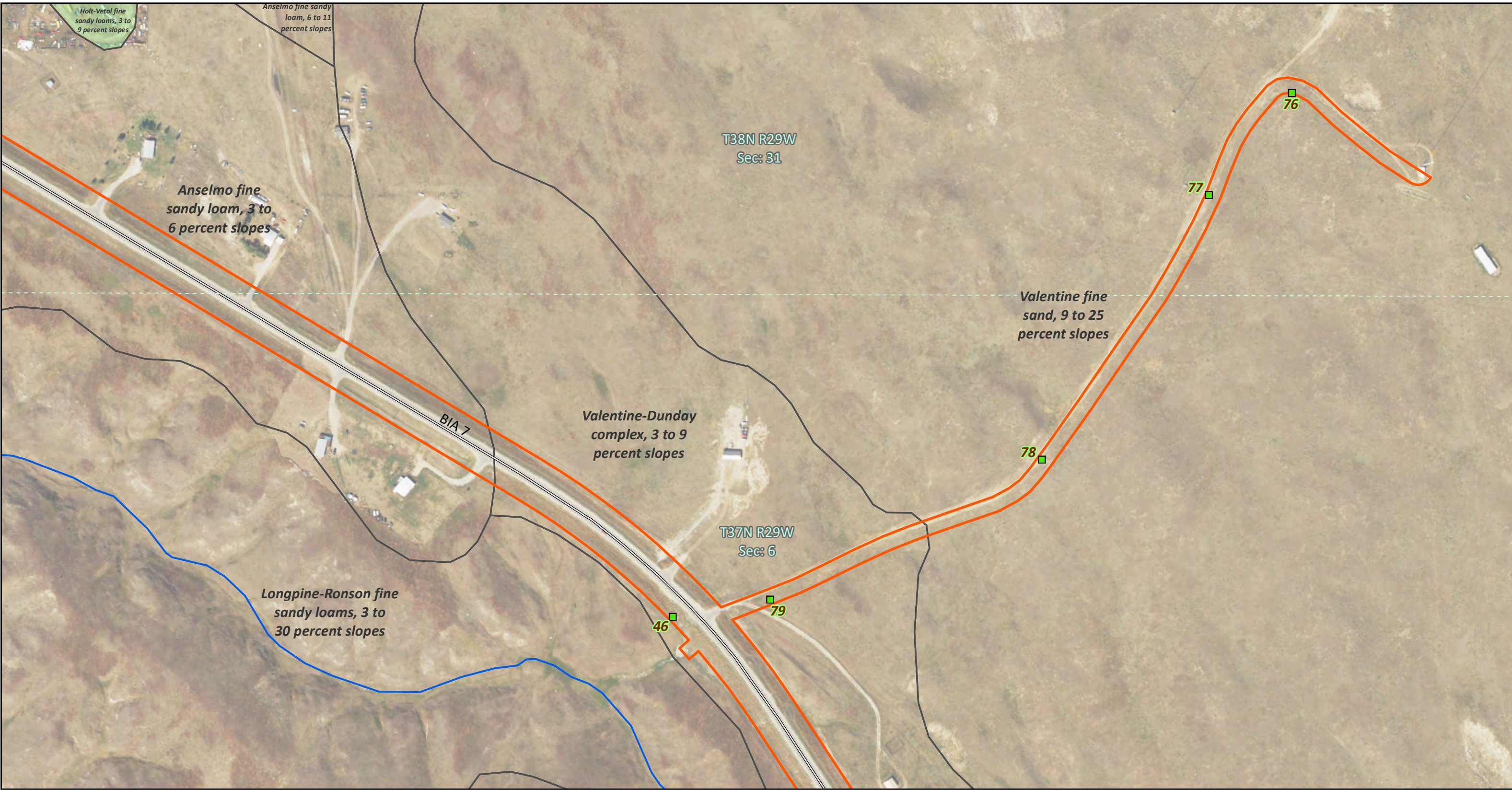


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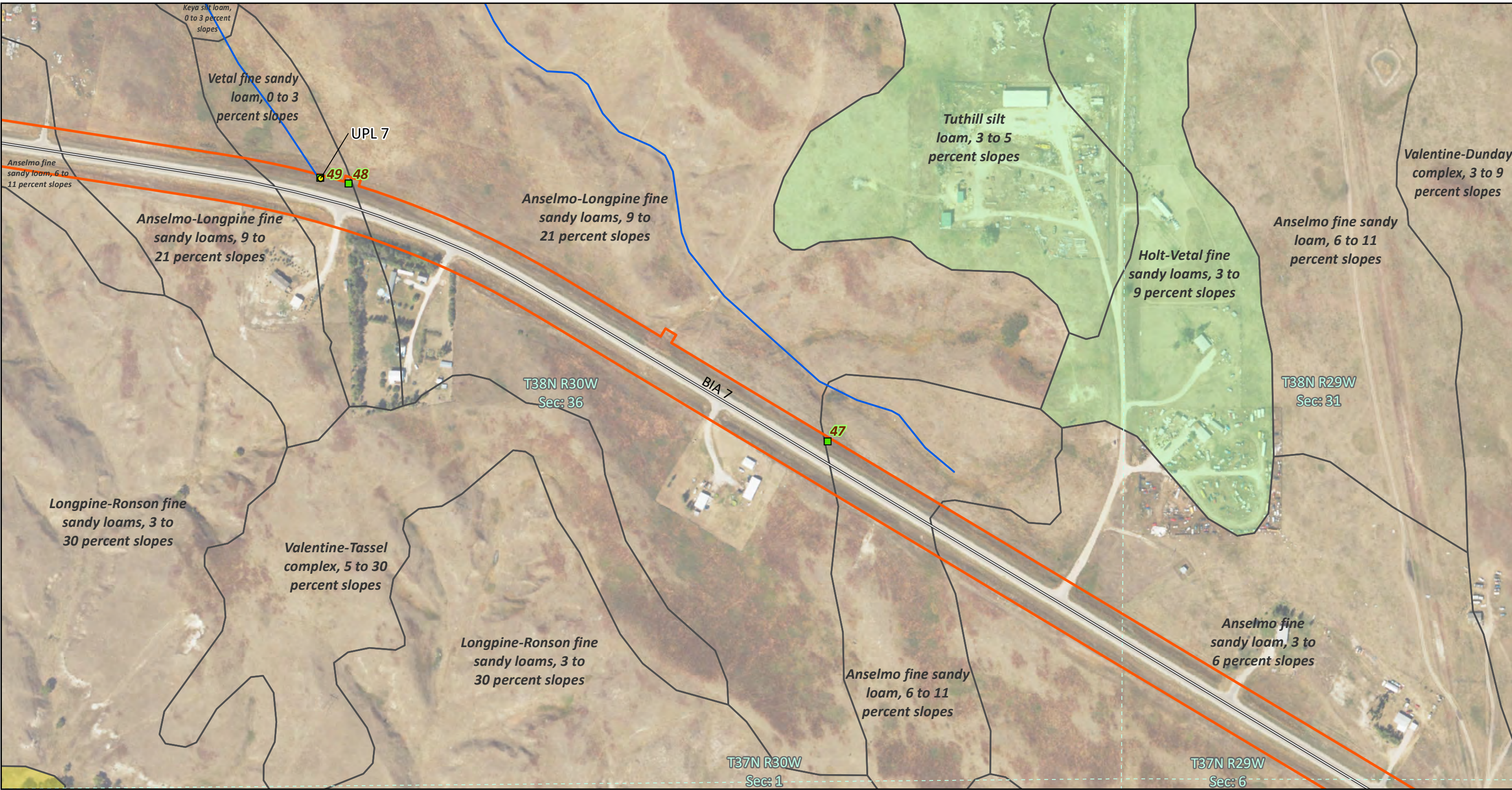


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			Date: 7/29/2024			
			Project #: 2311-00205			
Revision #: 0		Page 50 of 55				



<div><div><div><div><div><div></div></div><div>Photo Point</div></div><div><div><div></div></div><div>NHD Flowline</div></div><div><div><div></div></div><div>Local Roads</div></div><div><div><div></div></div><div>Study Area</div></div></div><div><div><div>Soil Hydric Rating</div><div><div><div></div></div><div>Predominantly nonhydric (1 to 32%)</div></div><div><div><div></div></div><div>Nonhydric (0%)</div></div></div><div><div>* Legend only shows items in vicinity of project/map view</div></div></div></div></div>	<div>Aerial Photograph Map</div> <div><div>Alternate Route Fiber</div><div>Wetland Delineation</div><div>Todd County, South Dakota</div></div> <div><div>0200400800</div><div></div><div>Feet</div></div>	<div><div><div><div><div></div><div>N</div><div>W</div><div>E</div><div>S</div></div></div><div><div><div><div></div><div>KLJ</div></div><div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div></div></div><div><div>Created by:</div><div>jeffprice</div></div><div><div>Date:</div><div>7/29/2024</div></div><div><div>Project #:</div><div>2311-00205</div></div></div>	<div><div><div><div><div></div><div>Rosebud</div></div><div><div><div></div><div>Two Strike</div></div><div><div><div></div><div>55</div><div>54</div><div>53</div><div>52</div><div>51</div><div>50</div><div>49</div><div>48</div><div>47</div><div>46</div><div>45</div><div>44</div><div>43</div><div>42</div><div>41</div></div></div></div><div>Rosebud Indian Reservation</div></div></div><div><div>Revision #:</div><div>0</div></div><div><div>Page 51 of 55</div></div></div>
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Upland Test Hole

Photo Point

NHD Flowline

Local Roads

Study Area

Soil Hydric Rating

Partially Hydric (33 to 65%)

Predominantly nonhydric (1 to 32%)

Nonhydric (0%)

* Legend only shows items in vicinity of project/map view

Aerial Photograph Map

Alternate Route Fiber

Wetland Delineation

Todd County, South Dakota

0200400800

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7/29/2024

Project #:

2311-00205

Rosebud

Two Strike

Rosebud Indian Reservation

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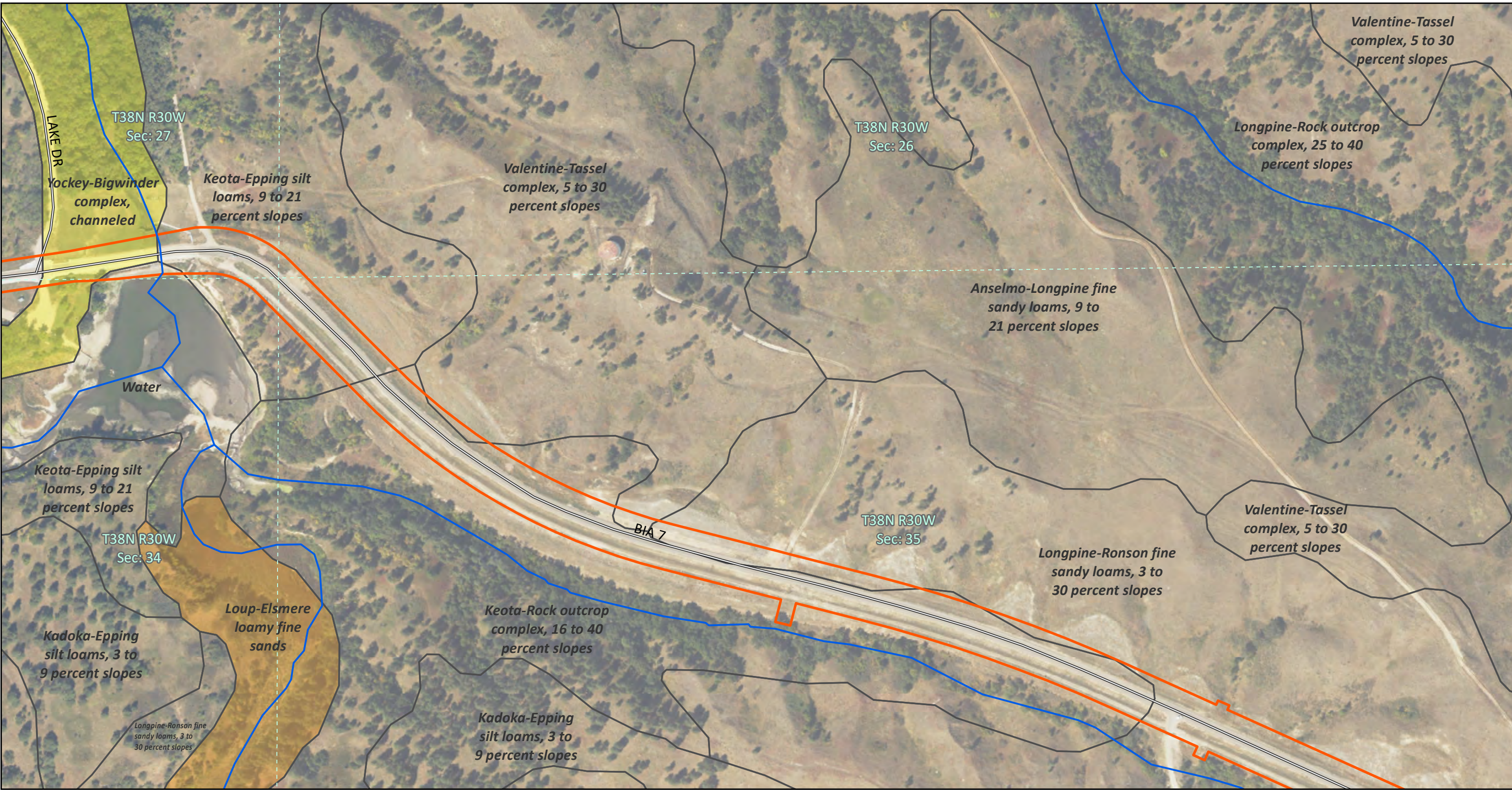
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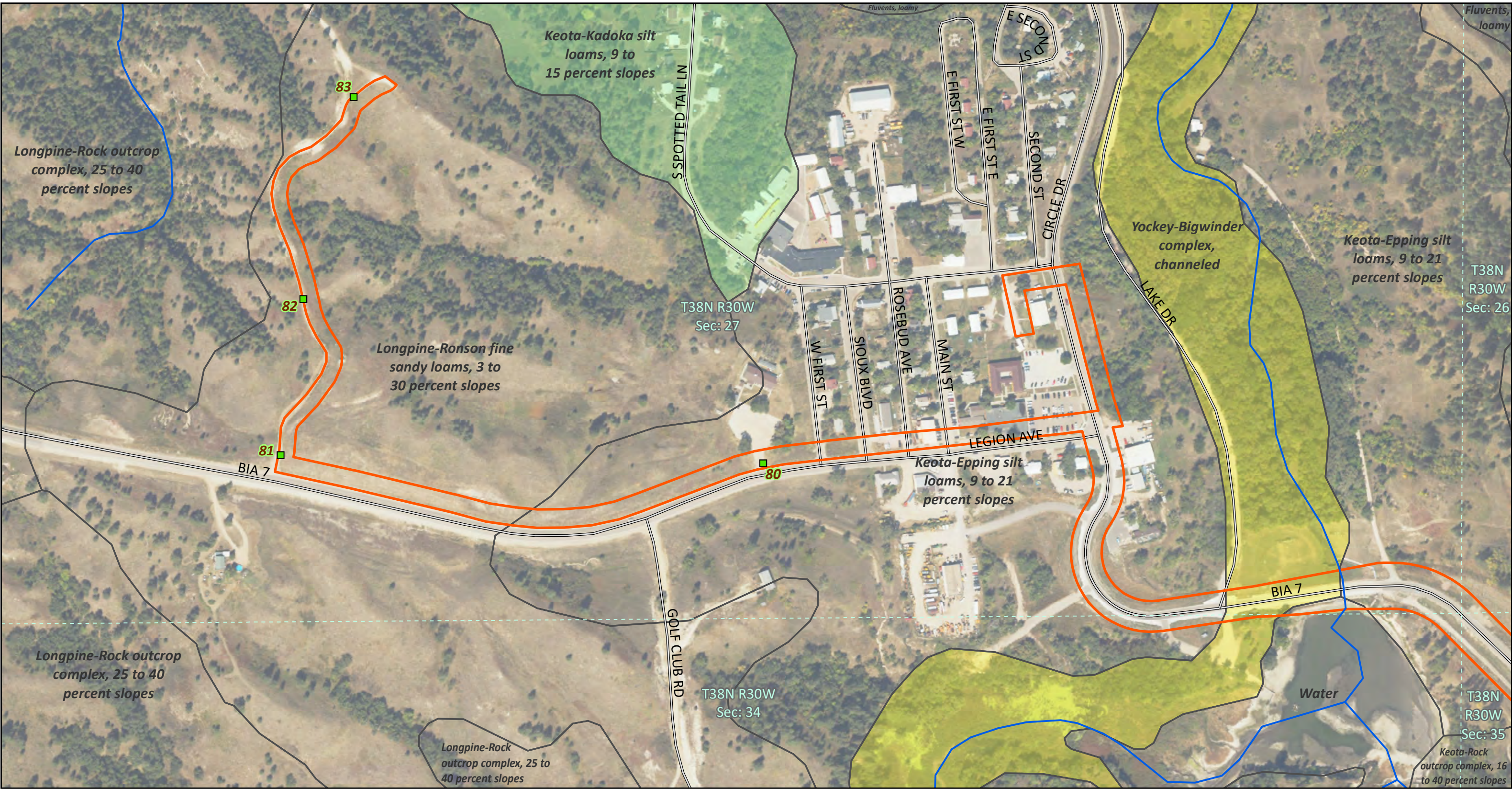
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<div><div>NHD Flowline</div><div>Local Roads</div><div>Study Area</div><div>Soil Hydric Rating</div><div>Predominantly Hydric (66 to 99%)</div></div> <div><div>Partially Hydric (33 to 65%)</div><div>Nonhydric (0%)</div></div> <div><div>* Legend only shows items in vicinity of project/map view</div></div>	Aerial Photograph Map		<div><div><div><div></div><div>N</div><div>W</div><div>E</div><div>S</div></div><div><div>KLJ</div><div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div></div></div>		<div><div><div><div>Todd County</div><div>Rosebud</div><div>Two Strike</div><div>Rosebud Indian Reservation</div></div><div><div>55</div><div>54</div><div>53</div><div>52</div><div>51</div><div>50</div><div>49</div><div>48</div><div>47</div><div>46</div><div>45</div><div>44</div></div></div></div>	
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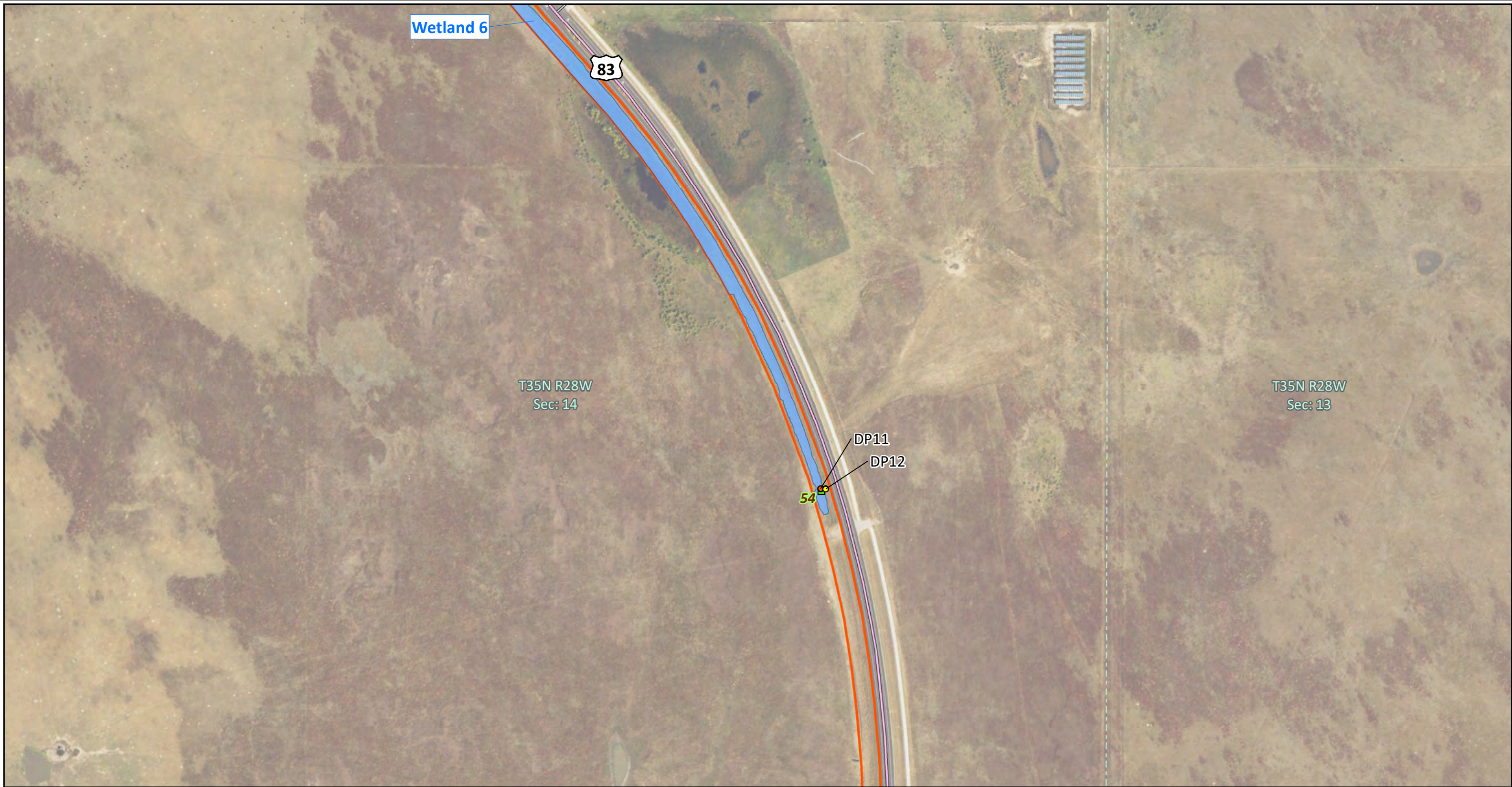


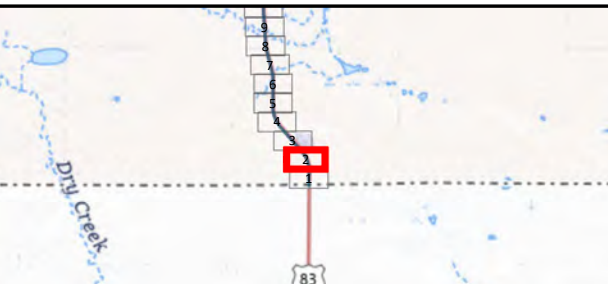
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			Project #: 2311-00205			
					Revision #: 0	Page 1 of 55

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<div><div><div><div><div><div></div><div>Upland Test Hole</div></div><div><div></div><div>Wetland Test Hole</div></div><div><div></div><div>Photo Point</div></div><div><div></div><div>US Highway</div></div><div><div></div><div>Local Roads</div></div></div><div><div><div></div><div>Study Area</div></div><div><div></div><div>Field Delineated Wetland</div></div></div></div><div><div>* Legend only shows items in vicinity of project/map view</div></div></div></div>	Water/Wetland Delineation		<div><div><div><div><div></div><div>N</div></div><div><div></div><div>E</div></div><div><div></div><div>S</div></div><div><div></div><div>W</div></div></div><div><div><div><div></div><div>KLJ</div><div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div><div><div>Created by: jeffprice</div><div>Date: 7/30/2024</div><div>Project #: 2311-00205</div></div></div></div></div></div>			
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US Highway

Study Area

* Legend only shows items in vicinity of project/map view

Water/Wetland Delineation

Alternate Route Fiber

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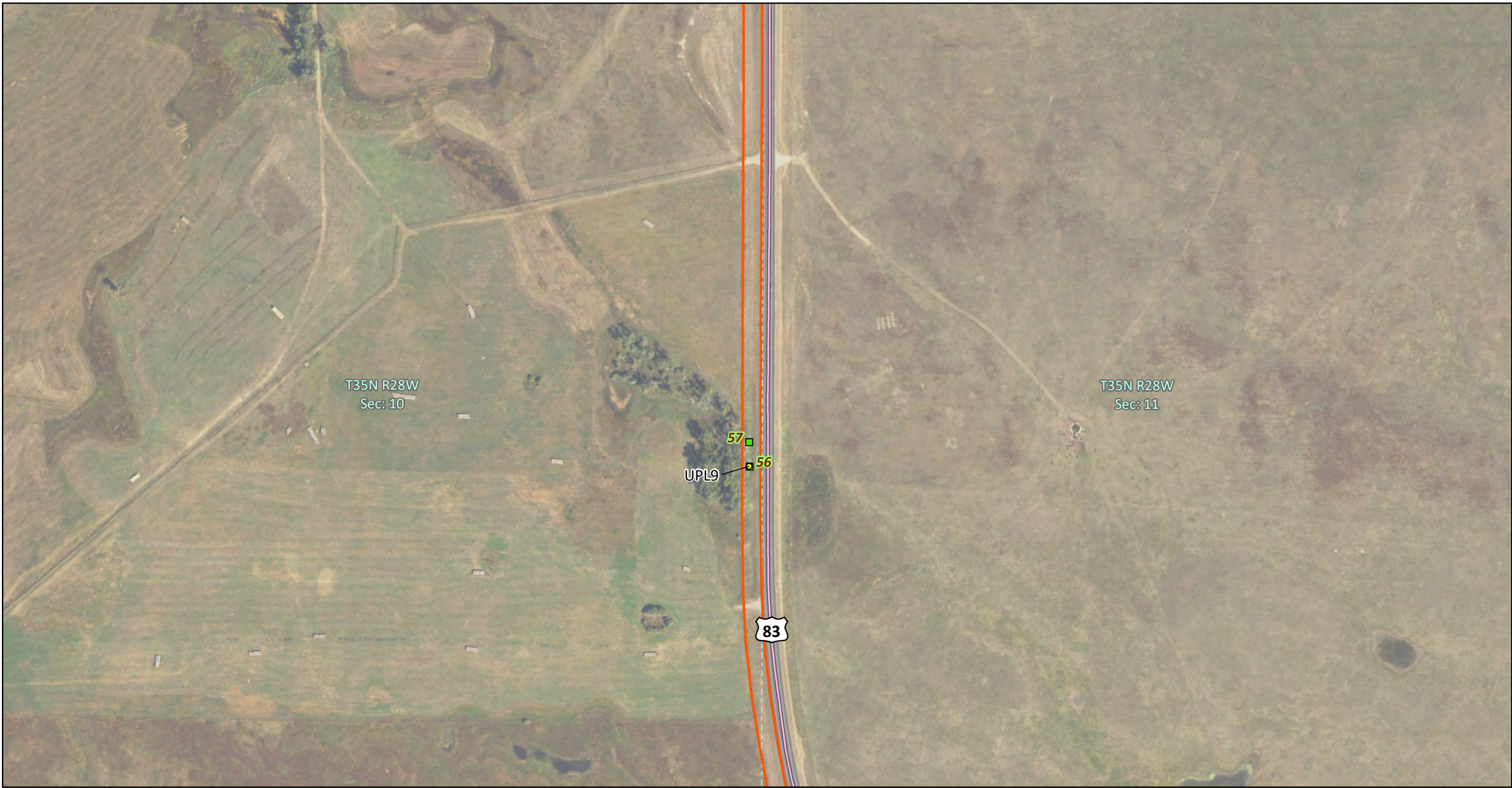
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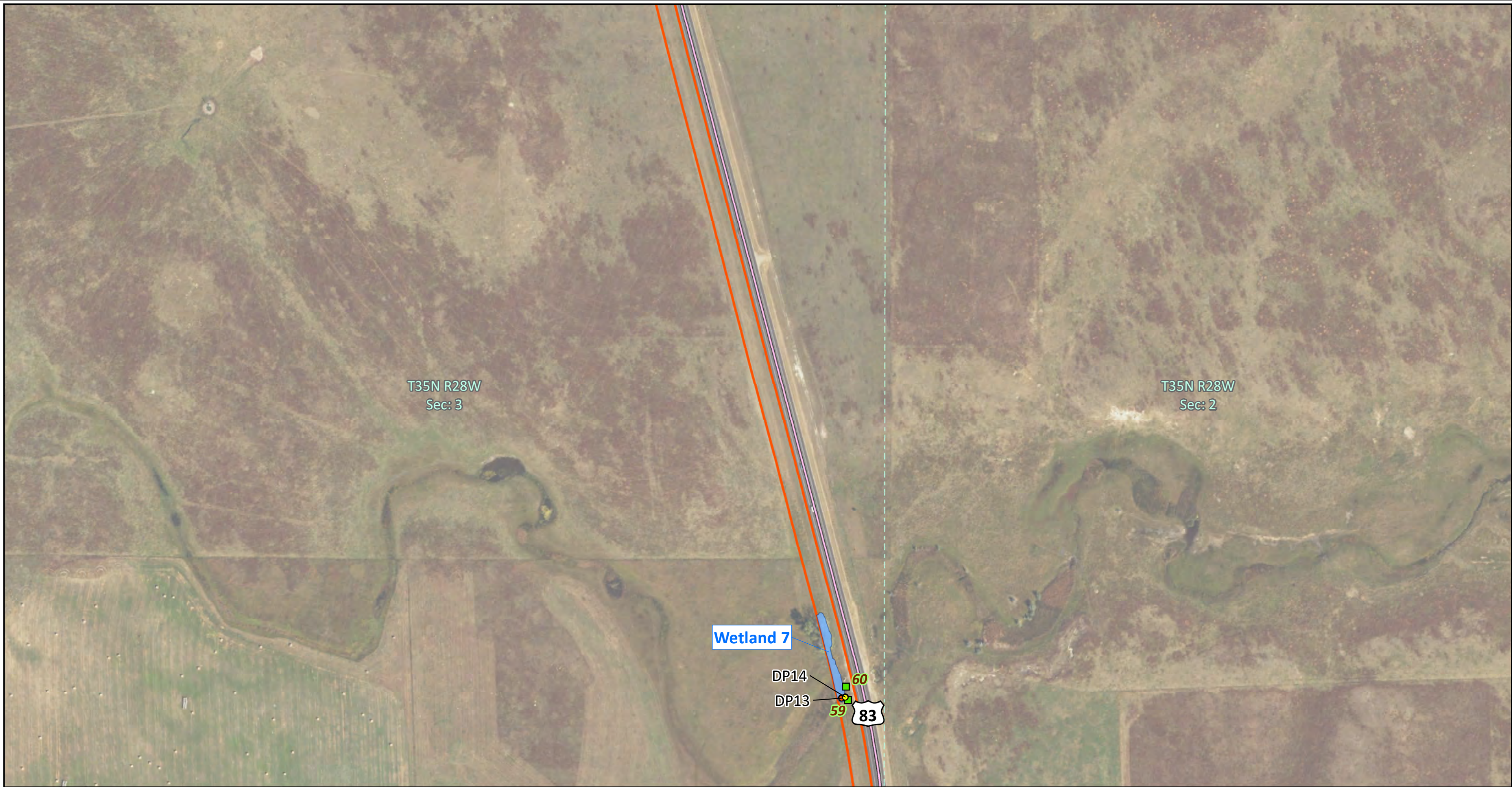
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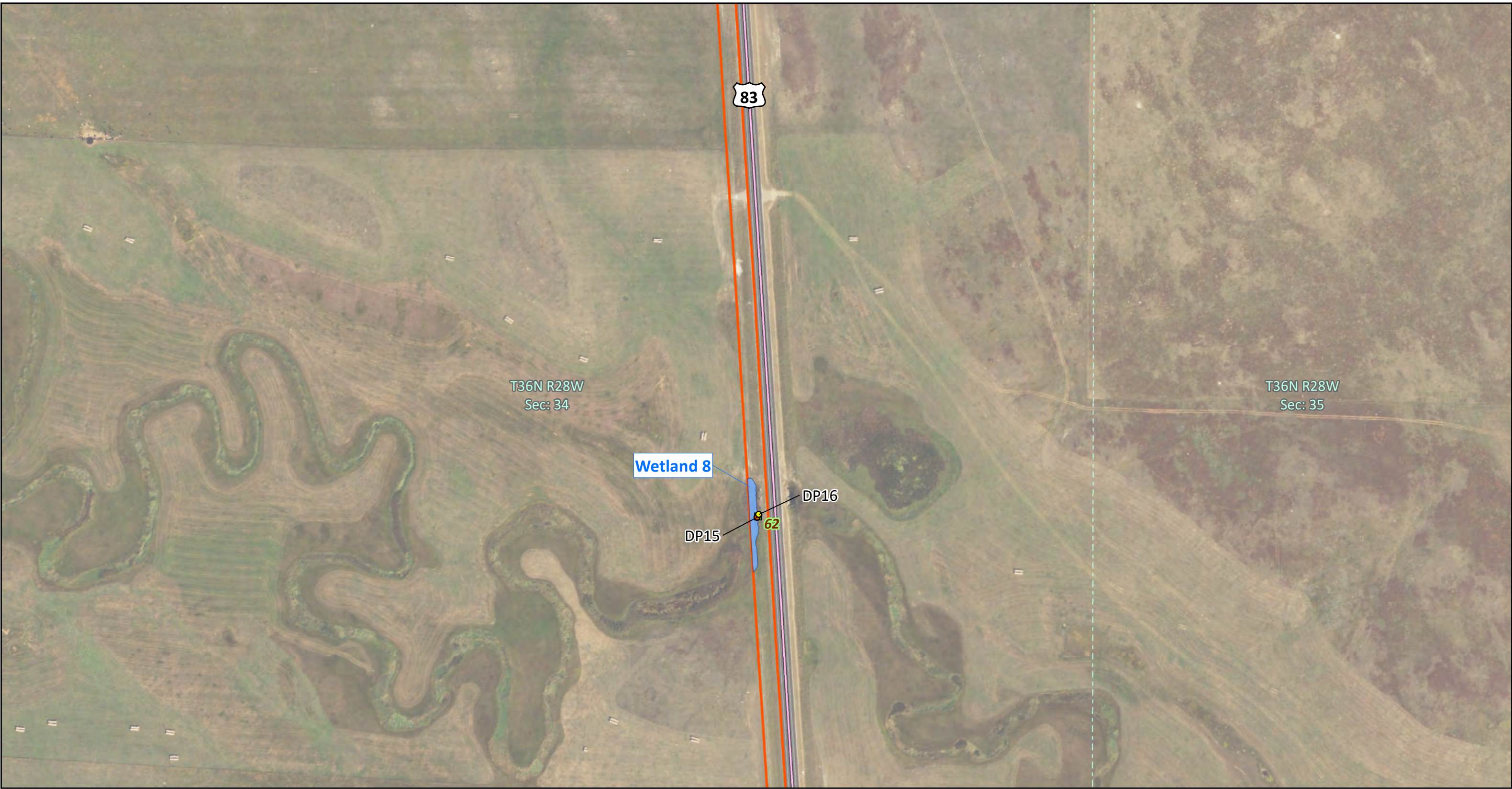
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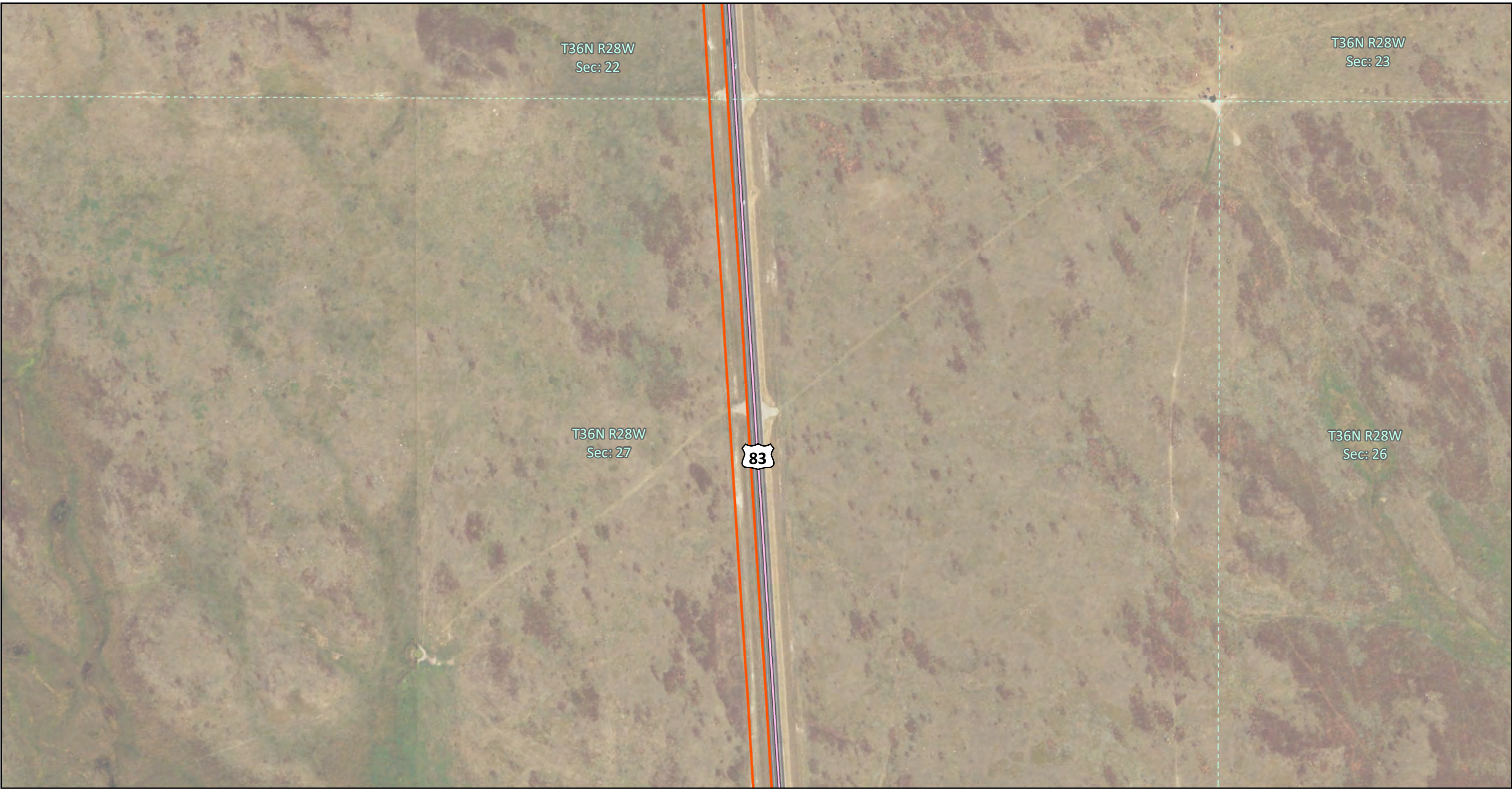
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US Highway

Study Area

* Legend only shows items in vicinity of project/map view

Water/Wetland Delineation

Alternate Route Fiber
Wetland Delineation
Todd County, South Dakota

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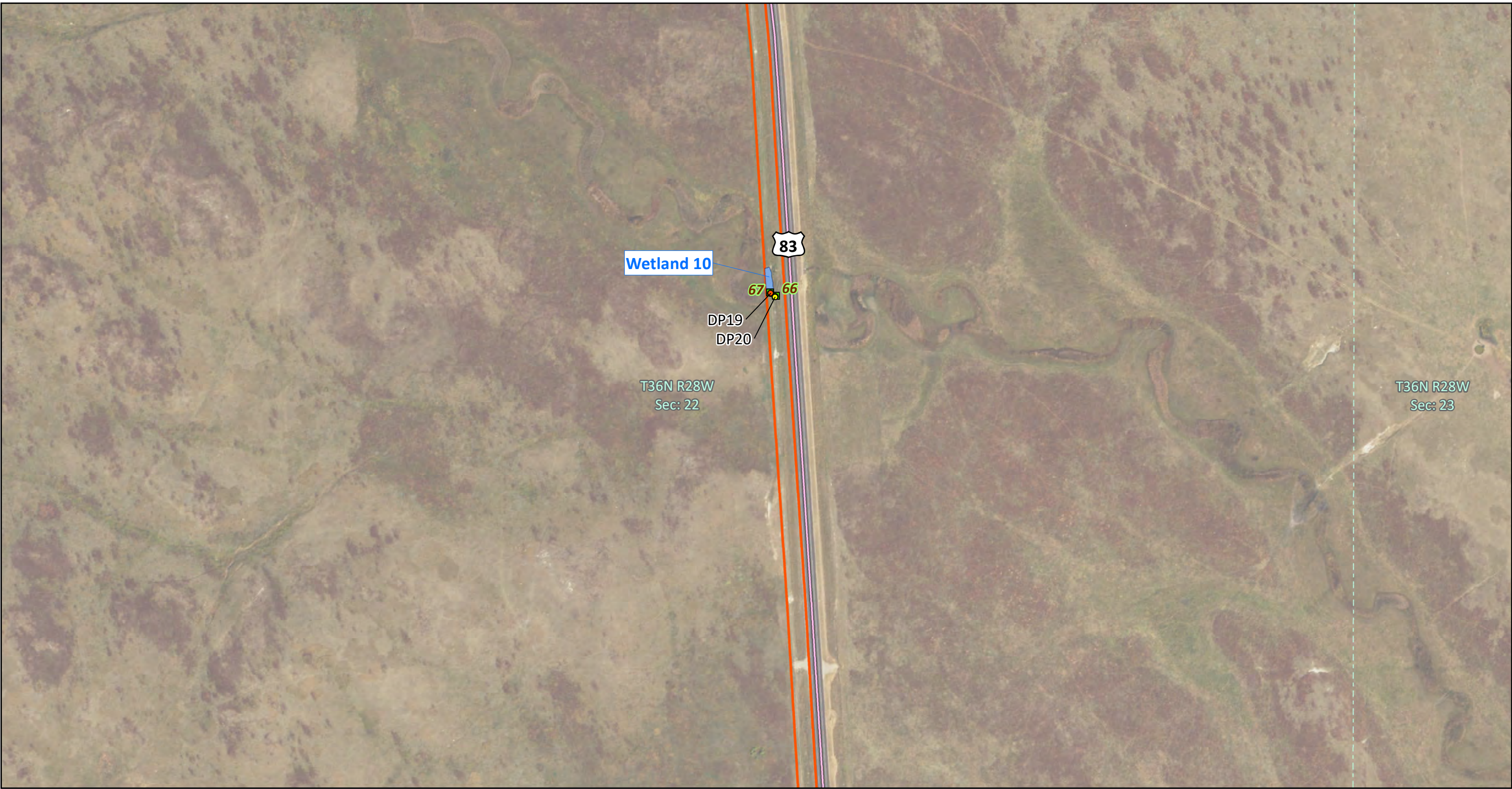
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US Highway

Study Area

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Water/Wetland Delineation

Alternate Route Fiber

Wetland Delineation

Todd County, South Dakota

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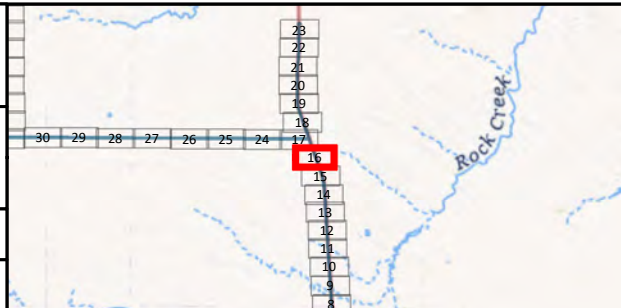
Rock Creek

Revision #: 0



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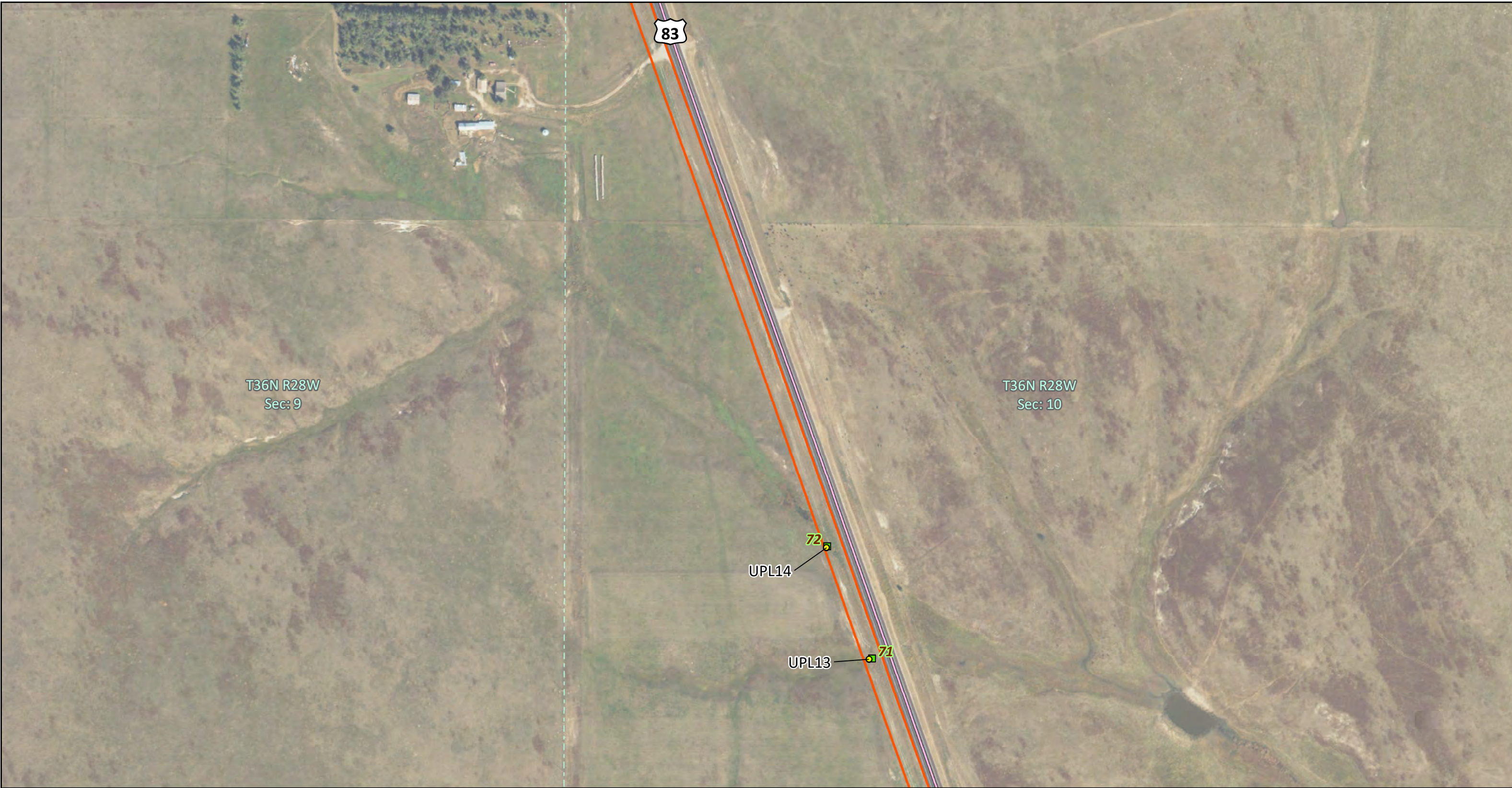




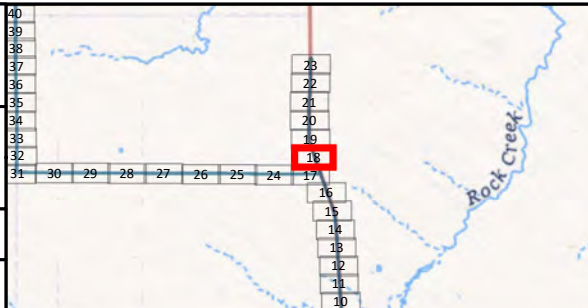
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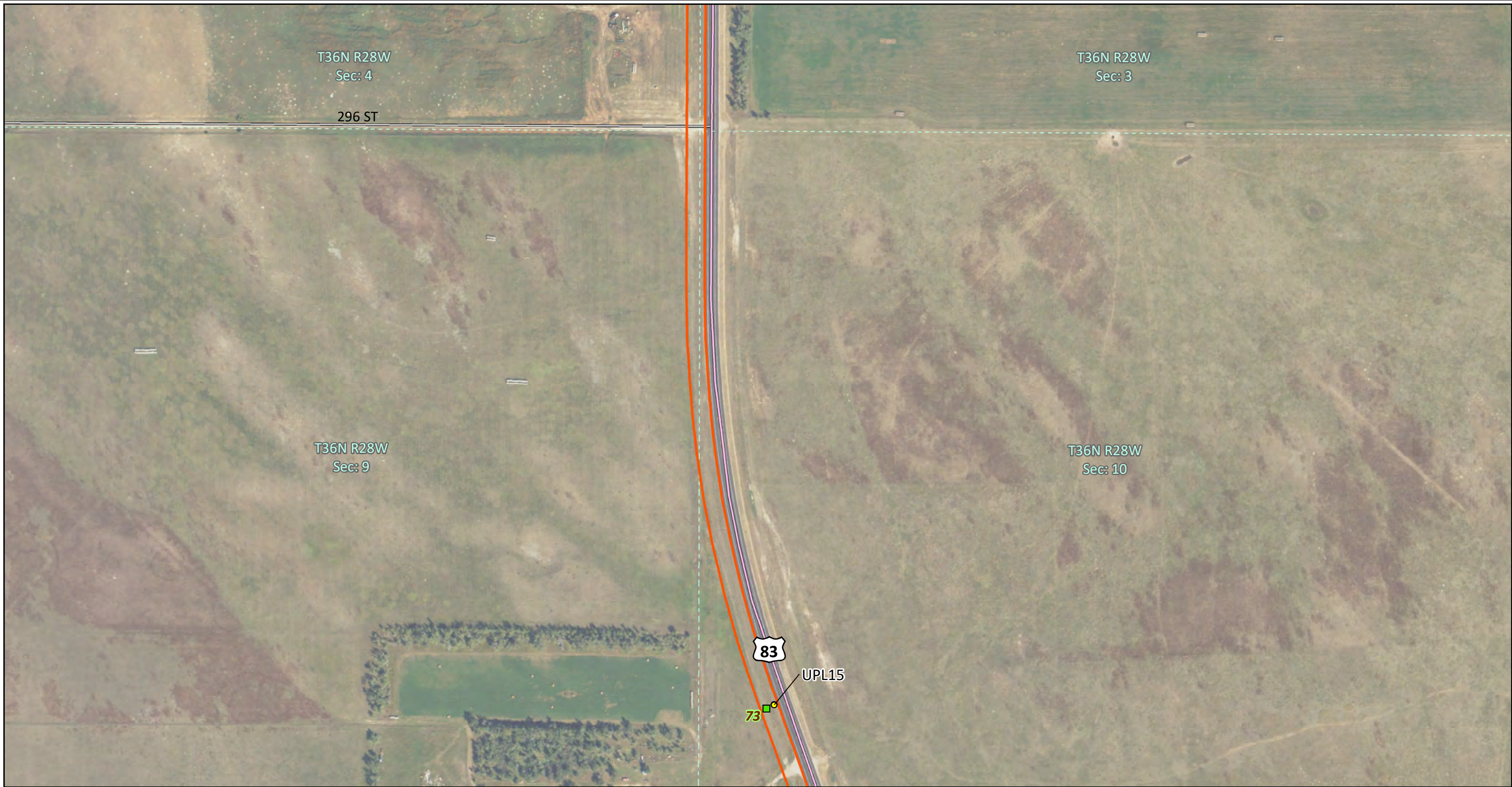
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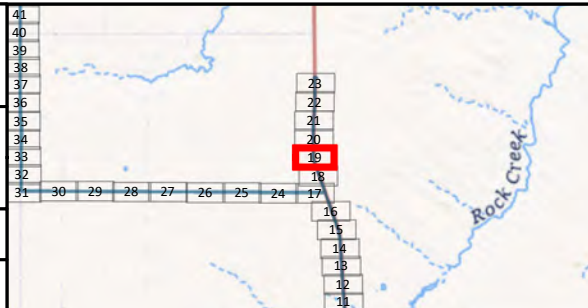
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US Highway

Study Area

* Legend only shows items in vicinity of project/map view

Water/Wetland Delineation

Alternate Route Fiber
Wetland Delineation
Todd County, South Dakota

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Rock Creek

Revision #: 0


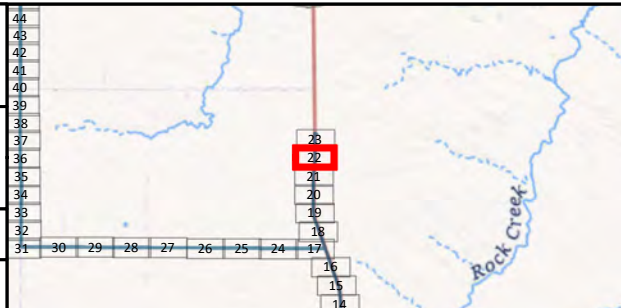

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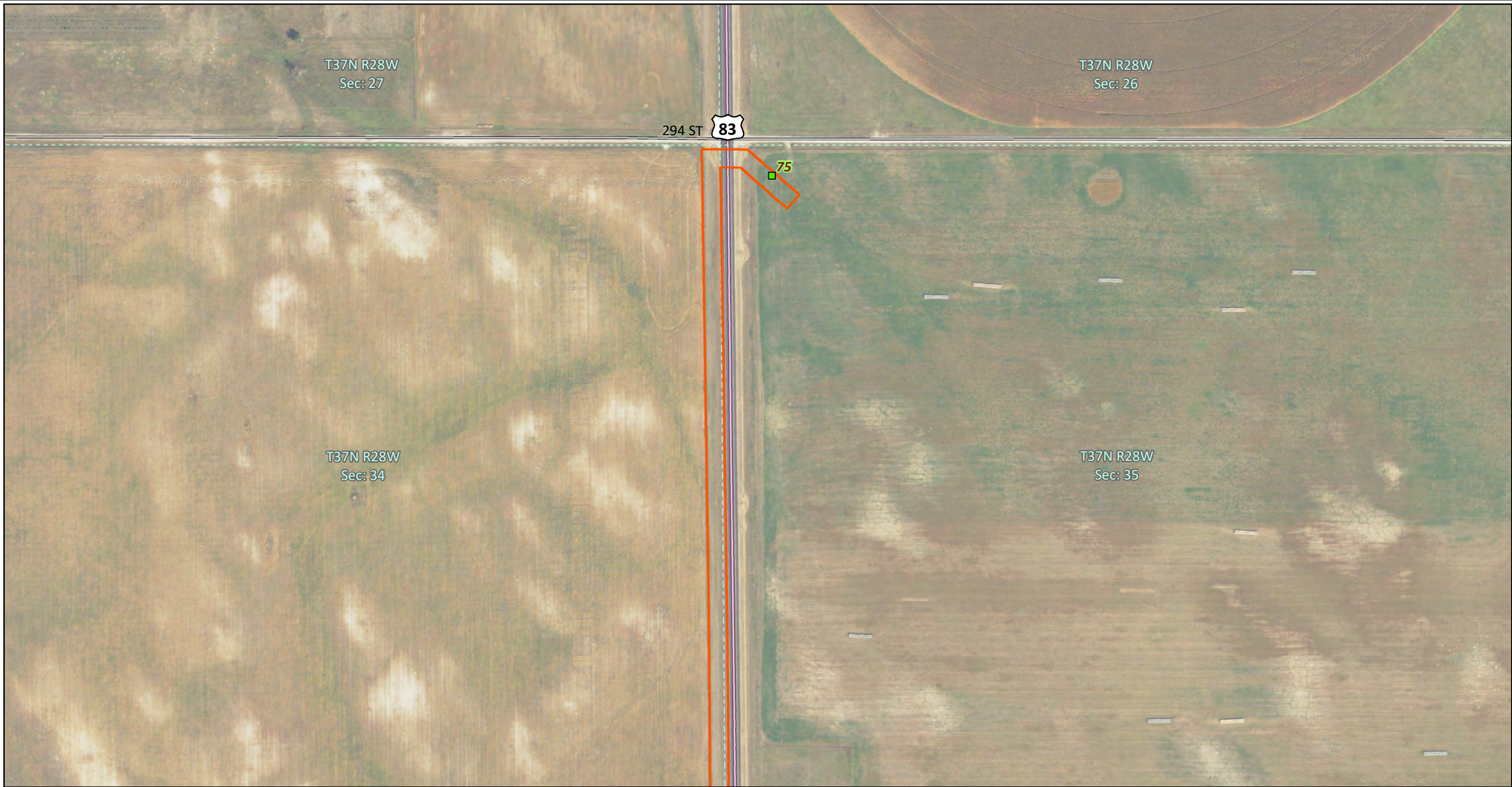


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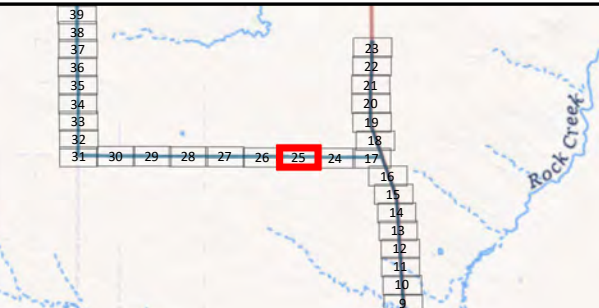


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	Alternate Route Fiber Wetland Delineation Todd County, South Dakota		Revision #: 0	
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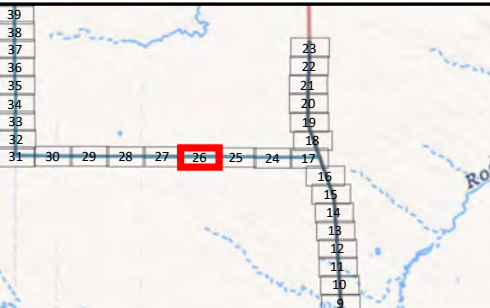


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			Project #: 2311-00205				Page 25 of 55	
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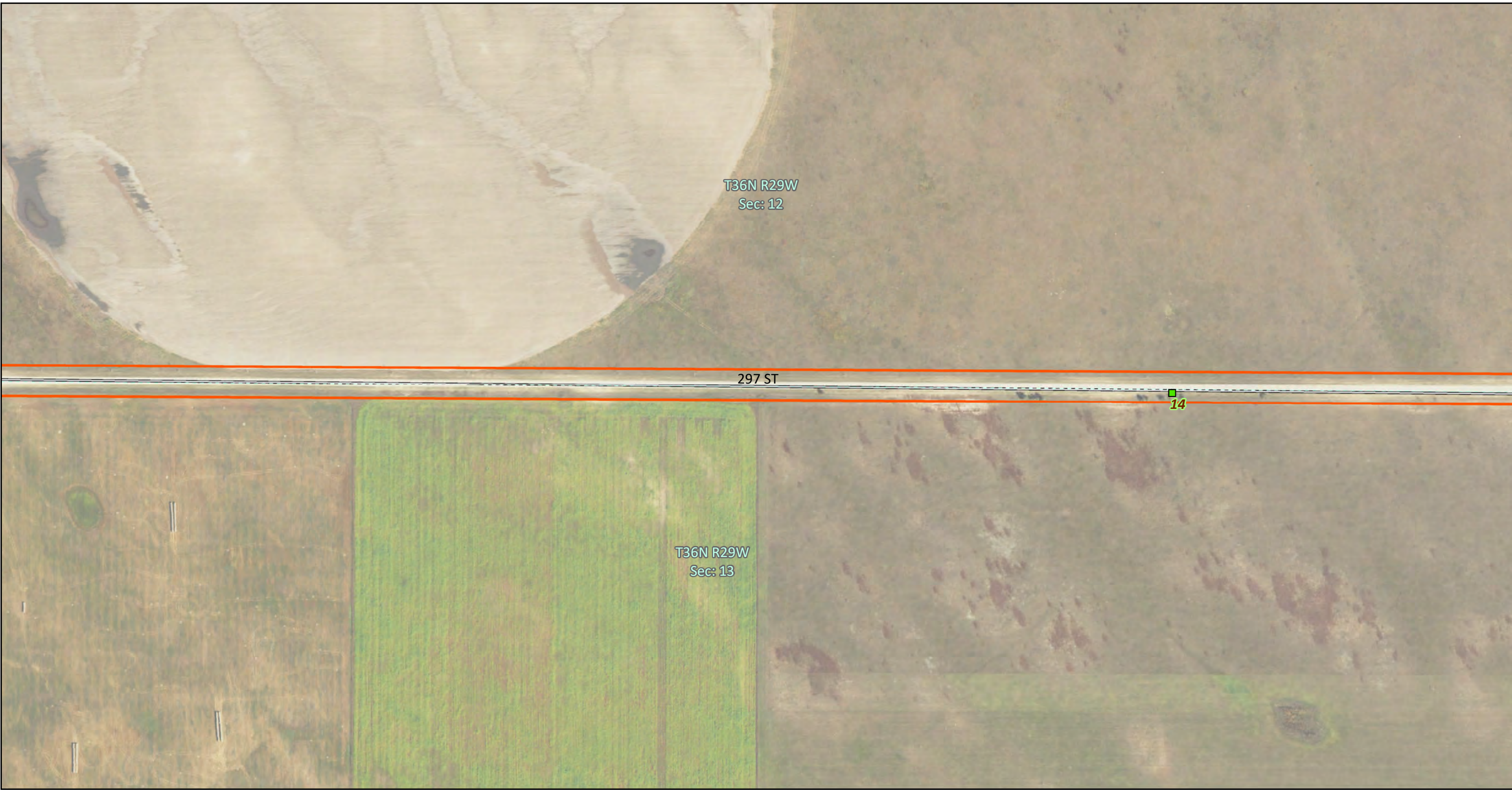


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* Legend only shows items in vicinity of project/map view

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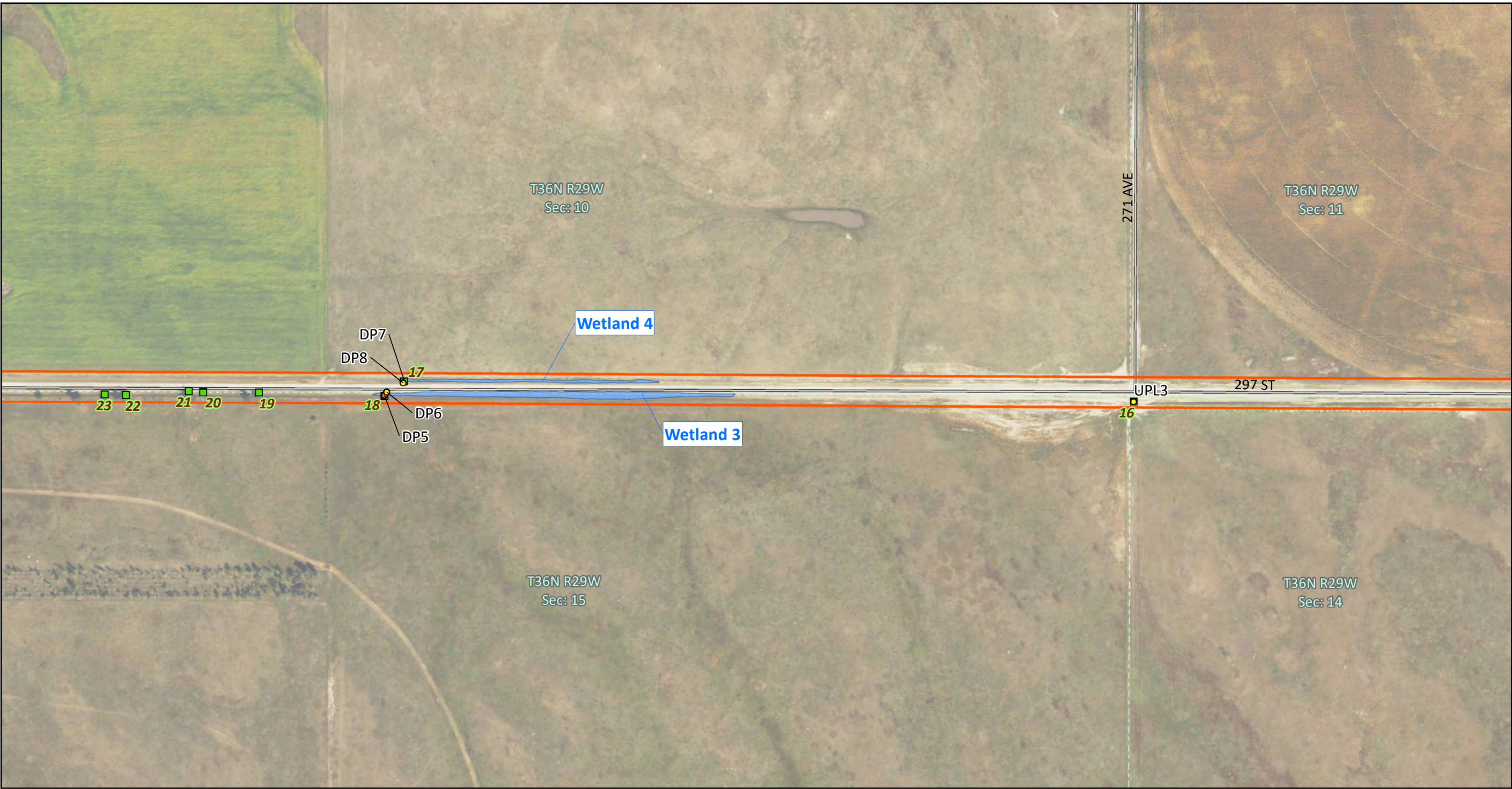
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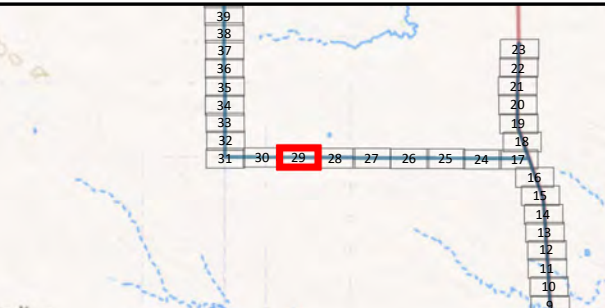

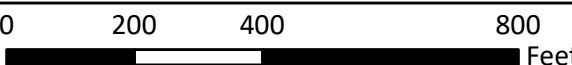
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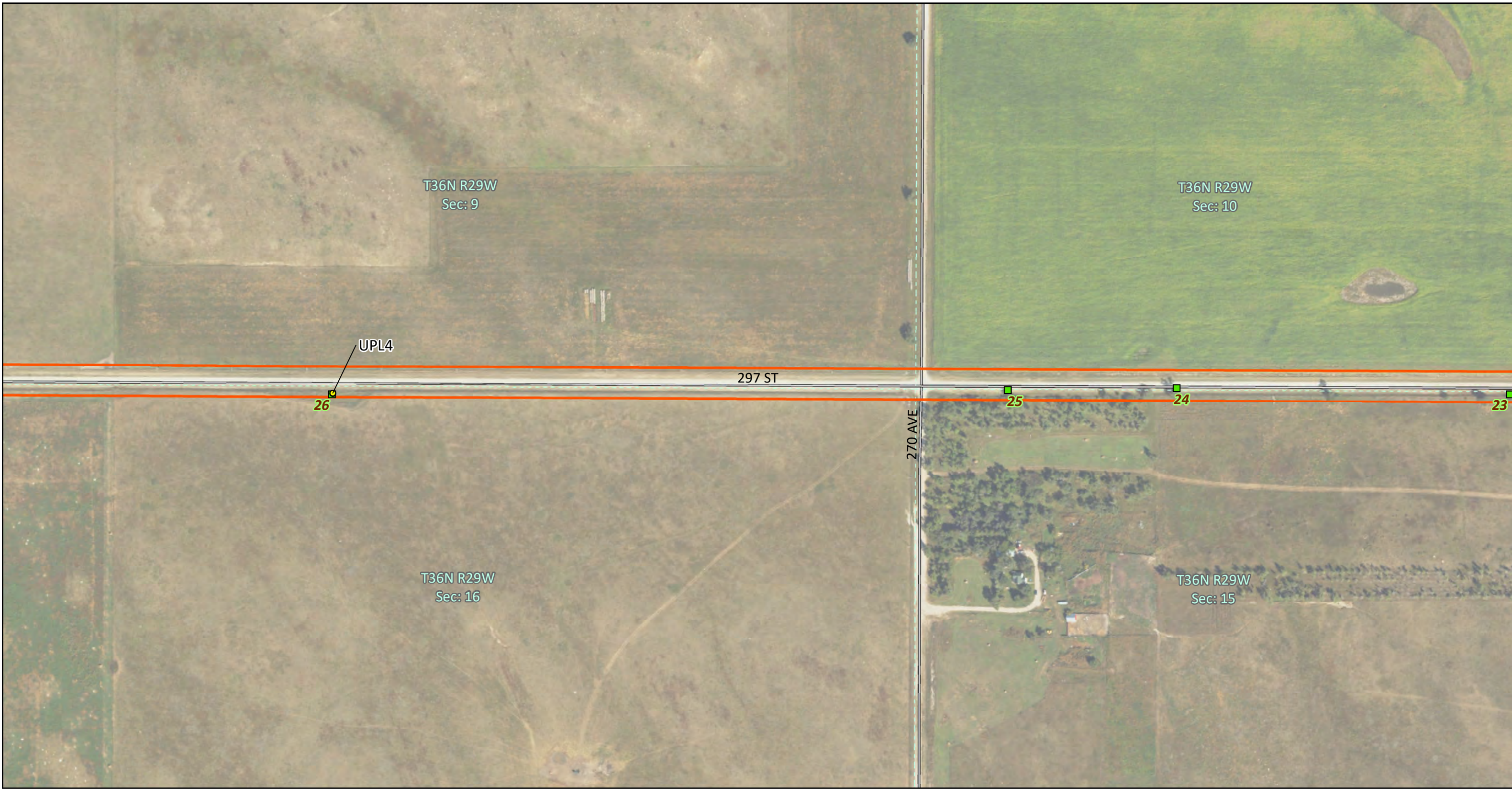
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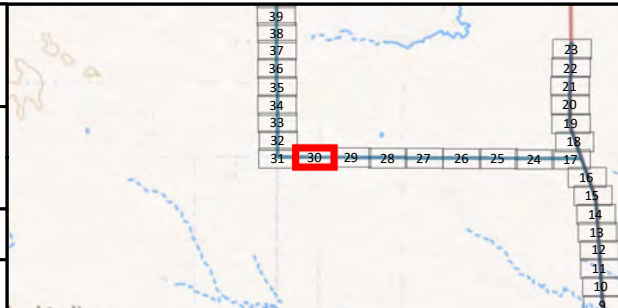
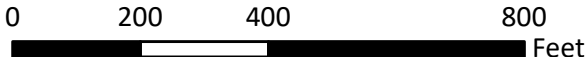


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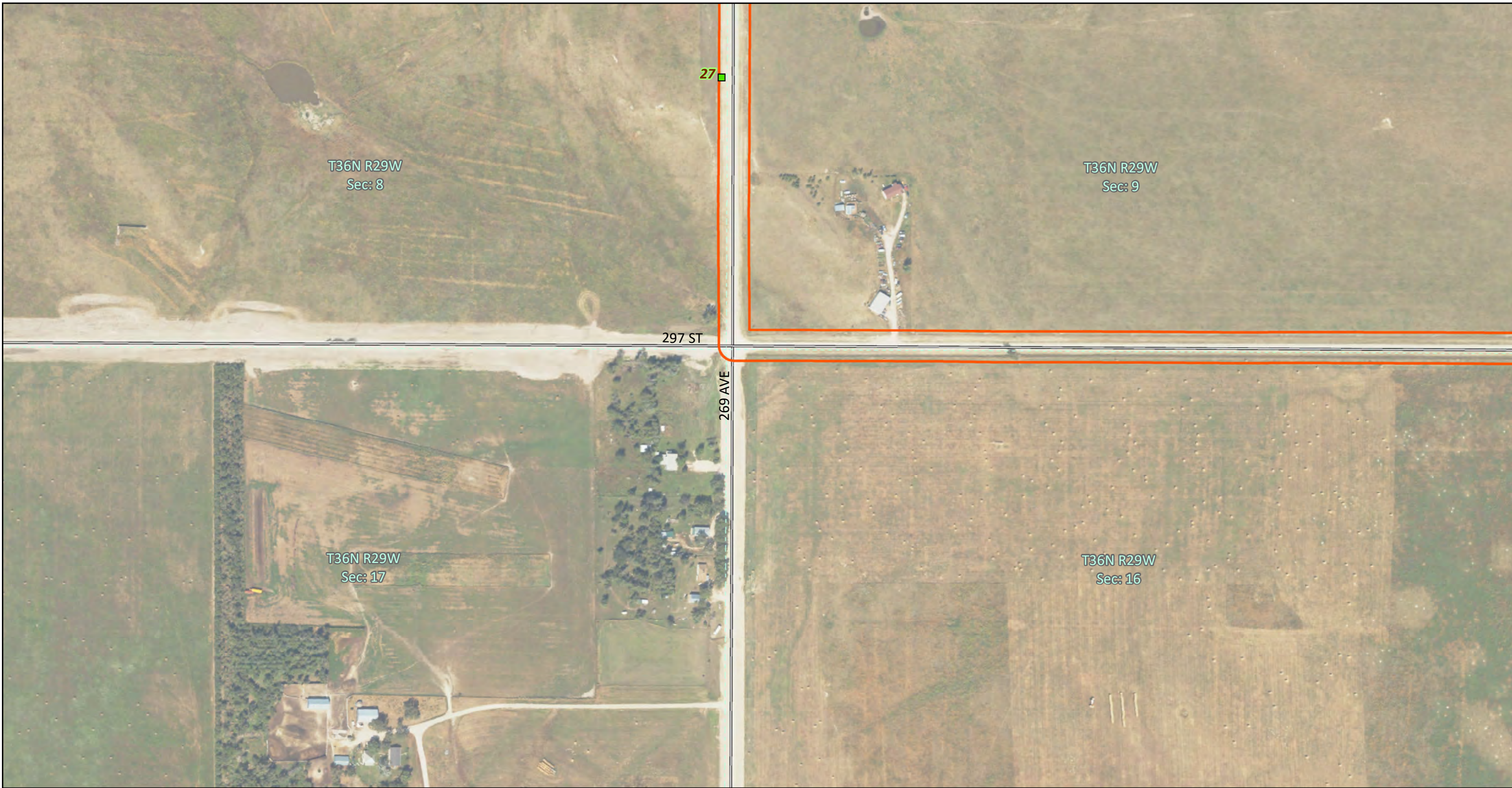


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	Alternate Route Fiber Wetland Delineation Todd County, South Dakota				
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■ Photo Point

— Local Roads

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* Legend only shows items in vicinity of project/map view

Water/Wetland Delineation

Alternate Route Fiber

Wetland Delineation

Todd County, South Dakota

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<div><div>■ Photo Point</div><div>— Local Roads</div><div>▭ Study Area</div></div> <div>* Legend only shows items in vicinity of project/map view</div>	Water/Wetland Delineation	<div><div><div><div><div></div><div></div><div></div></div><div>KLJ</div><div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div><div>Created by: jeffprice</div><div>Date: 7/30/2024</div><div>Project #: 2311-00205</div></div></div>		<div><div><div>40 39 38 37 36 35 34 33 32 31</div><div>23 22 21 20 19 18 17</div></div><div><div>31</div><div>30</div><div>29</div><div>28</div><div>27</div><div>26</div><div>25</div><div>24</div><div>23</div><div>22</div><div>21</div><div>20</div><div>19</div><div>18</div><div>17</div></div></div>	
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— Local Roads

▭ Study Area

* Legend only shows items in vicinity of project/map view

Water/Wetland Delineation

Alternate Route Fiber

Wetland Delineation

Todd County, South Dakota

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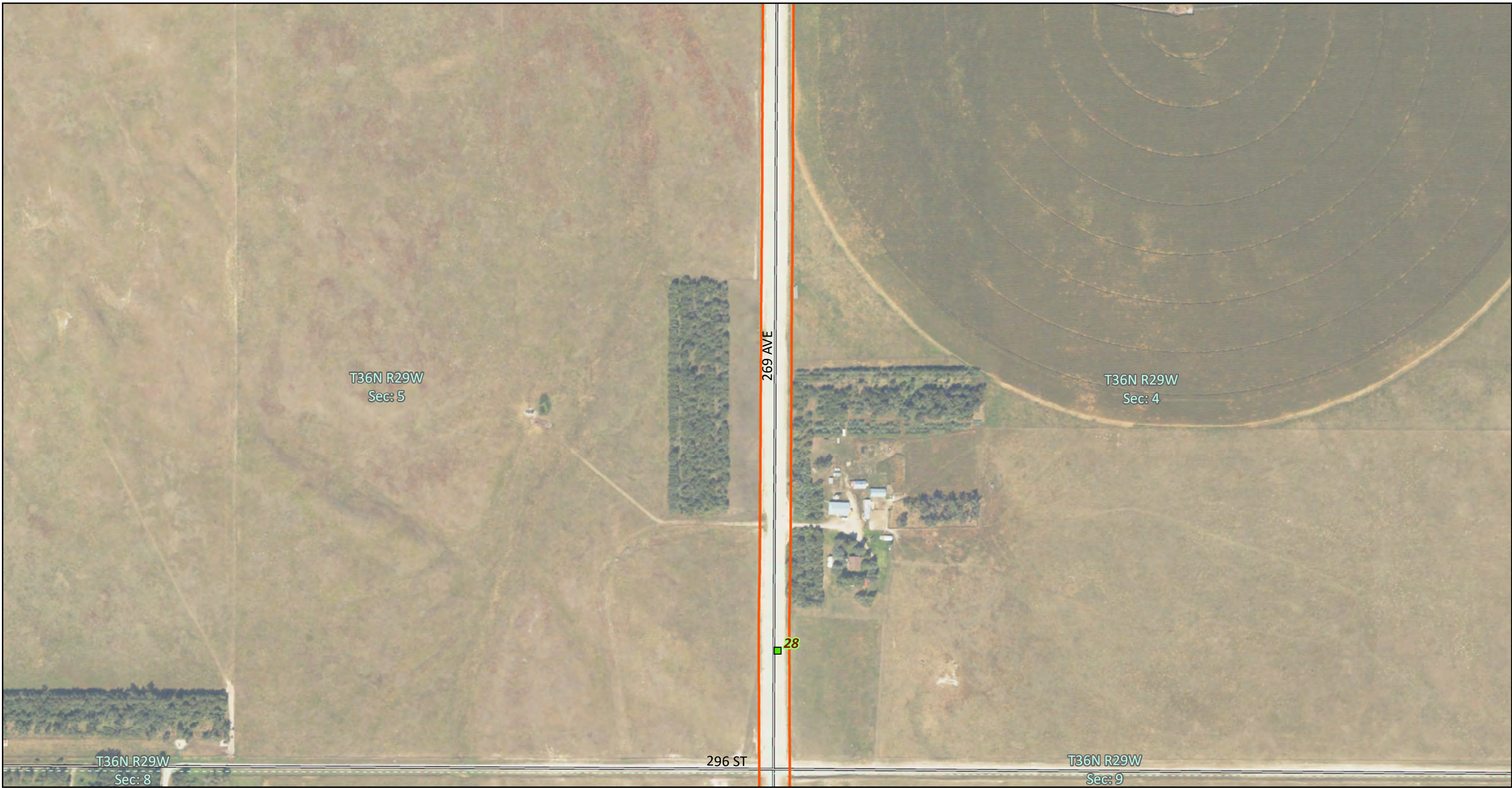
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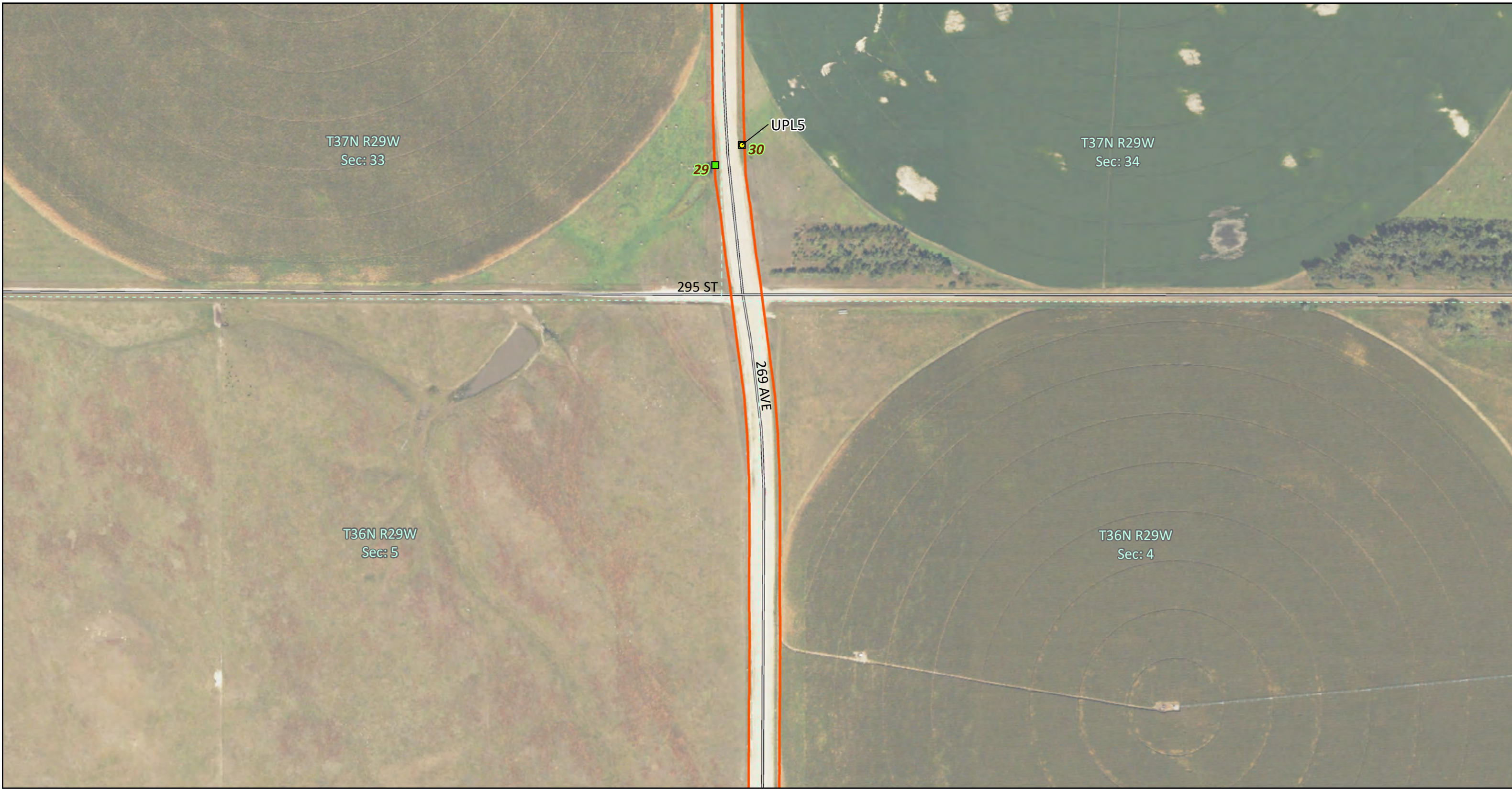
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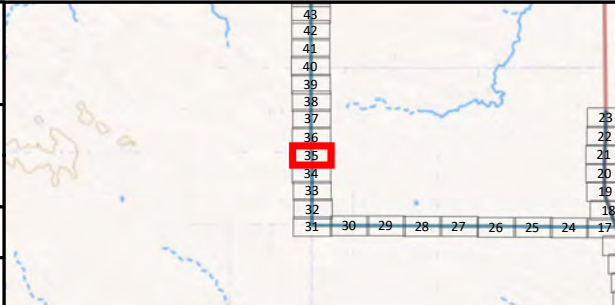
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— Local Roads
Study Area

* Legend only shows items in vicinity of project/map view

Water/Wetland Delineation

**Alternate Route Fiber
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Todd County, South Dakota**

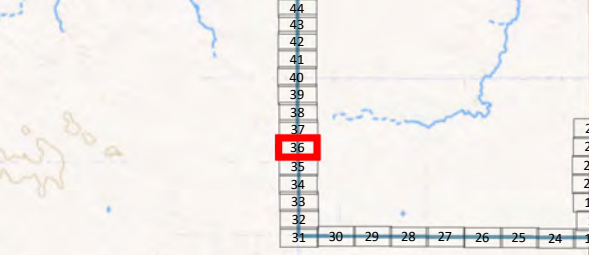
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— Local Roads
Study Area

* Legend only shows items in vicinity of project/map view

Water/Wetland Delineation

**Alternate Route Fiber
Wetland Delineation
Todd County, South Dakota**

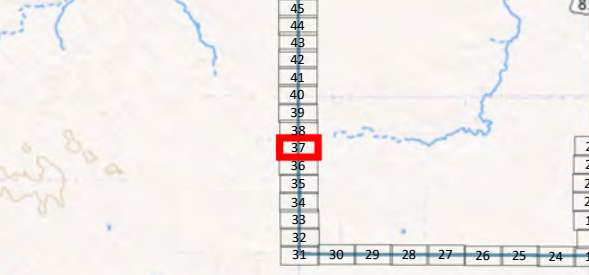
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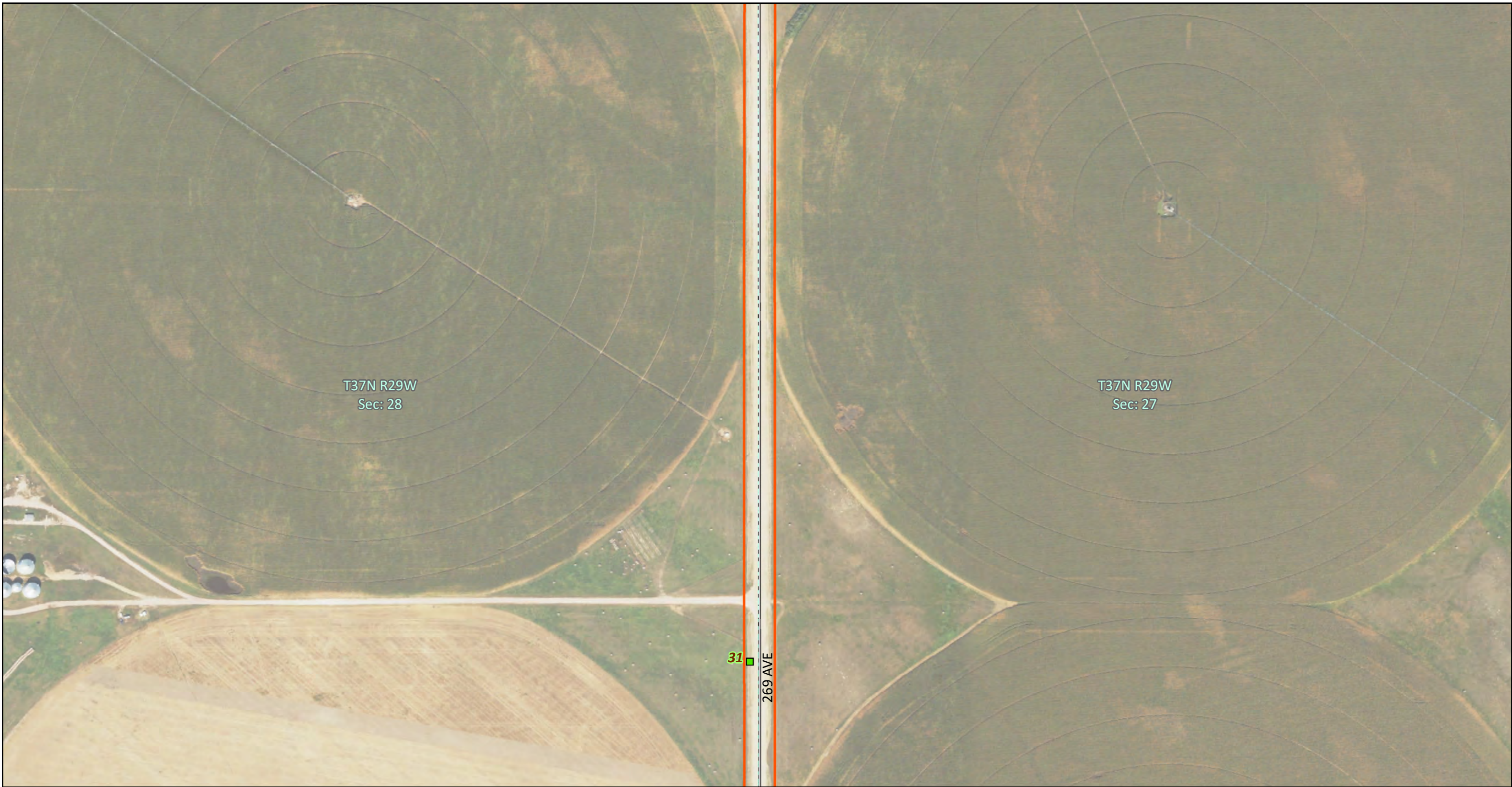


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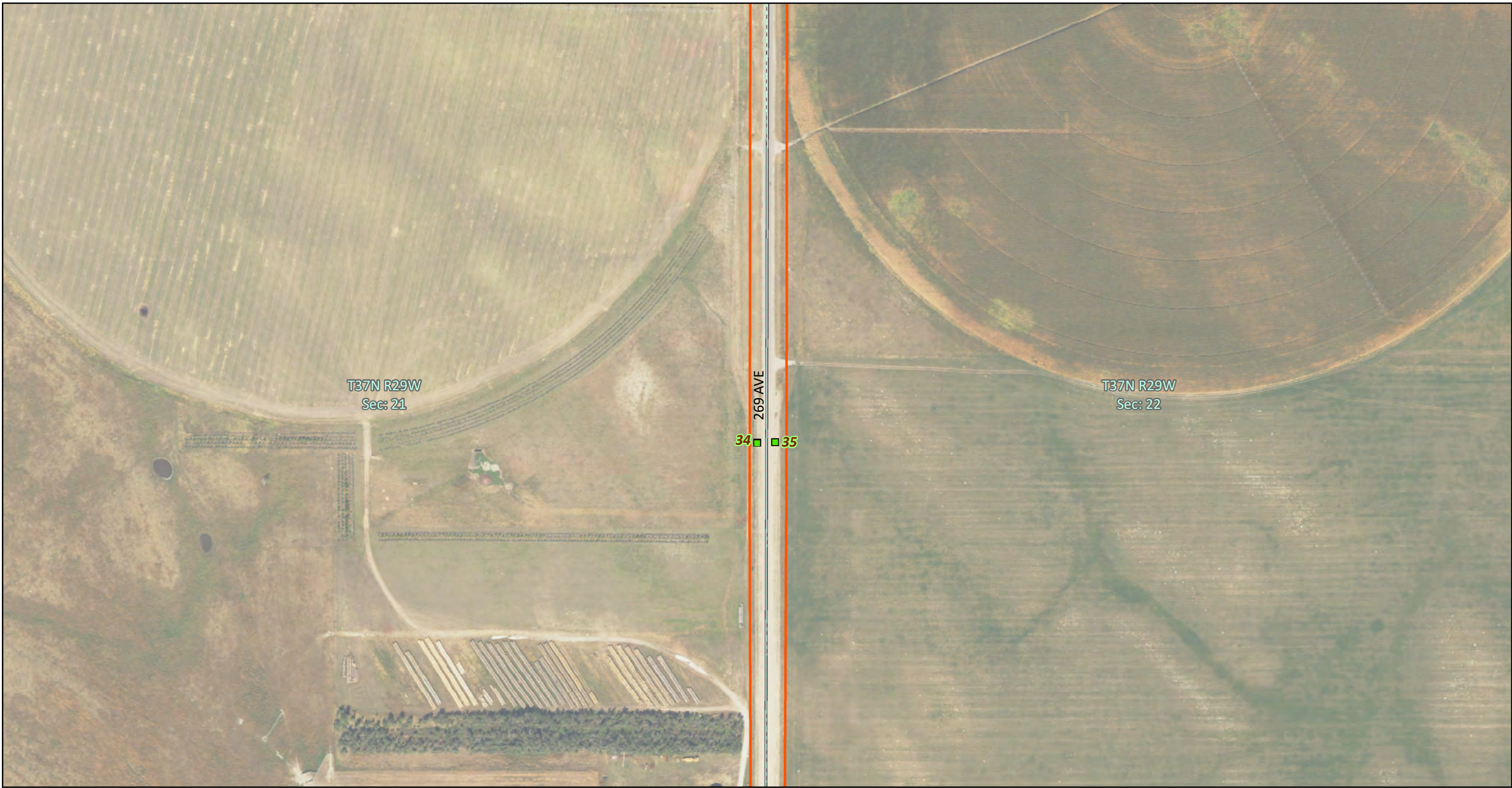
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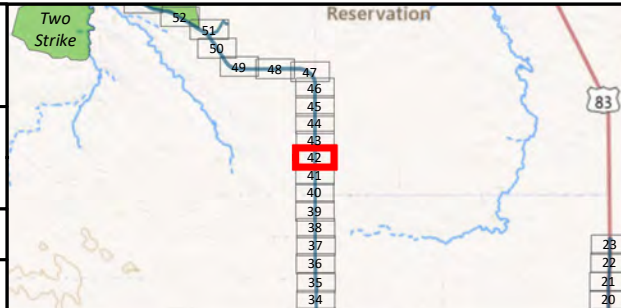
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Todd County, South Dakota**

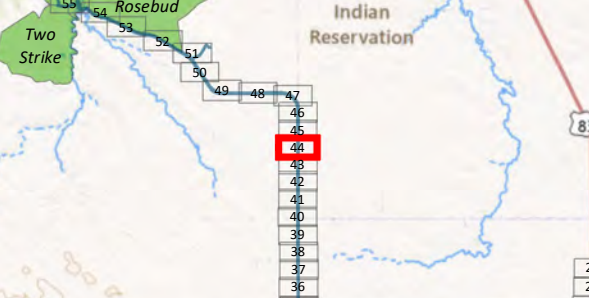
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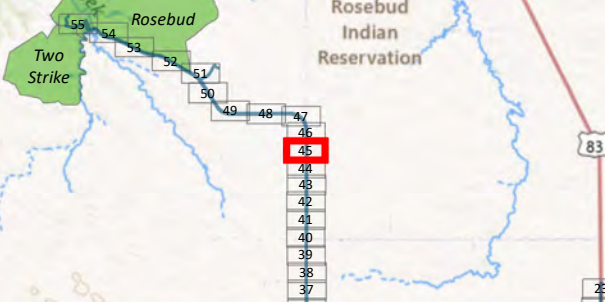
Project #: 2311-00205

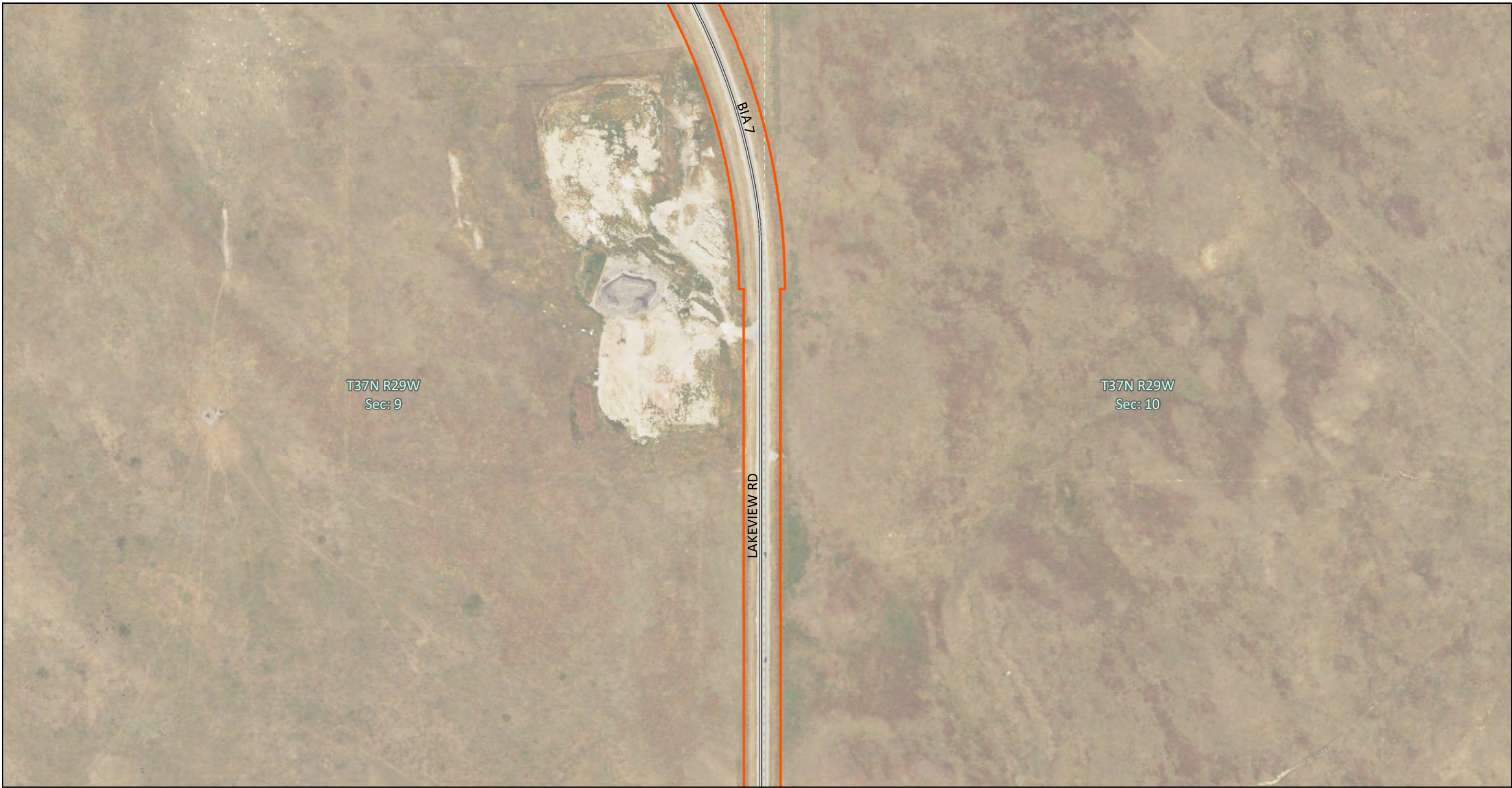


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<div>— Local Roads</div> <div>Study Area</div> <div>* Legend only shows items in vicinity of project/map view</div>	Water/Wetland Delineation	<div><div><div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div><div>Created by: jeffprice</div><div>Date: 7/30/2024</div><div>Project #: 2311-00205</div></div>		Revision #: 0	Page 45 of 55	
	<div>Alternate Route Fiber Wetland Delineation Todd County, South Dakota</div>					
	<div>0200400800</div> <div>Feet</div>					
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— Local Roads

▭ Study Area

* Legend only shows items in vicinity of project/map view

Water/Wetland Delineation


Alternate Route Fiber

Wetland Delineation

Todd County, South Dakota

0200400800

Feet

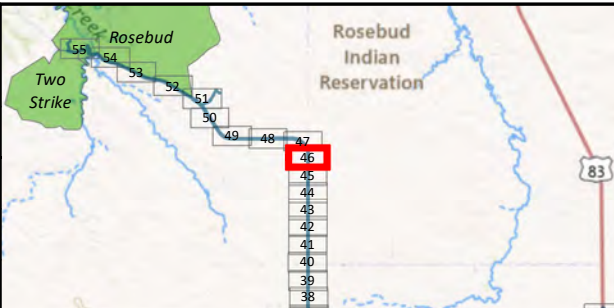


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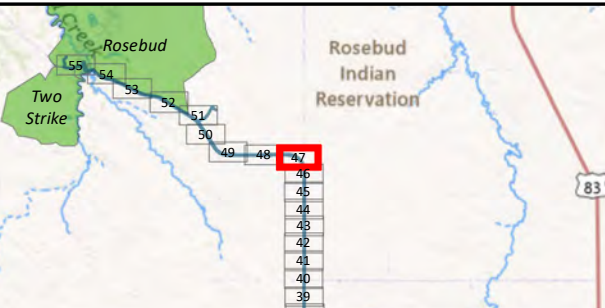
Project #: 2311-00205



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<div>— Local Roads</div> <div>▭ Study Area</div> <div>* Legend only shows items in vicinity of project/map view</div>	Water/Wetland Delineation	<div><div> 18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div>		
	Alternate Route Fiber Wetland Delineation Todd County, South Dakota			
	0 200 400 800 Feet	Created by: jeffprice	Revision #: 0	
		Date: 7/30/2024		
		Project #: 2311-00205		



<div><div><div>● Upland Test Hole</div><div>■ Photo Point</div><div>— Local Roads</div><div>▭ Study Area</div></div><div>* Legend only shows items in vicinity of project/map view</div></div>	Water/Wetland Delineation		<div><div><div><div><div></div><div></div><div></div><div></div></div><div>W</div><div>N</div><div>E</div><div>S</div></div><div><div><div><div></div><div></div><div></div></div><div>KLJ</div><div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div></div><div>Created by: jeffprice</div></div></div>		<div><div><div><div><div></div><div></div><div></div><div></div></div><div>Two Strike</div><div>Rosebud</div><div>St Francis</div></div><div><div><div><div></div><div></div><div></div><div></div></div><div>48</div><div>47</div><div>46</div><div>45</div><div>44</div><div>43</div><div>42</div><div>41</div><div>40</div><div>39</div></div><div>Rosebud Indian Reservation</div></div></div></div>	
	<div><div><div><div></div><div></div><div></div><div></div></div><div>Alternate Route Fiber</div><div>Wetland Delineation</div><div>Todd County, South Dakota</div></div></div>					
	<div><div><div><div></div><div></div><div></div><div></div></div><div>0</div><div>200</div><div>400</div><div>800</div></div><div>Feet</div></div>		Project #: 2311-00205		Revision #: 0	
					Page 48 of 55	
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<div><div><div>■ Photo Point</div><div>— Local Roads</div><div>▭ Study Area</div></div><div>* Legend only shows items in vicinity of project/map view</div></div>	Water/Wetland Delineation		<div><div><div><div><div>N</div><div>W</div><div>E</div><div>S</div></div><div><div>KLJ</div><div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div></div><div>Created by: jeffprice</div><div>Date: 7/30/2024</div><div>Project #: 2311-00205</div></div></div>		<div><div><div><div><div>Rosebud</div><div>Two Strike</div></div><div><div><div>55</div><div>54</div><div>53</div><div>52</div><div>51</div><div>50</div><div>49</div><div>48</div><div>47</div><div>46</div><div>45</div><div>44</div><div>43</div><div>42</div><div>41</div><div>40</div><div>39</div></div></div><div>St Francis</div></div><div>Rosebud Indian Reservation</div></div></div>	
	<div><div><div>Alternate Route Fiber</div><div>Wetland Delineation</div><div>Todd County, South Dakota</div></div></div>					
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<div><div><div>■ Photo Point</div><div>— Local Roads</div><div>▭ Study Area</div></div><div>* Legend only shows items in vicinity of project/map view</div></div>	Water/Wetland Delineation		<div><div><div><div><div></div><div></div><div></div></div><div>W</div><div>N</div><div>E</div><div>S</div></div><div><div><div><div></div><div></div><div></div></div><div>KLJ</div><div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div><div>Created by: jeffprice</div><div>Date: 7/30/2024</div><div>Project #: 2311-00205</div></div></div></div>			
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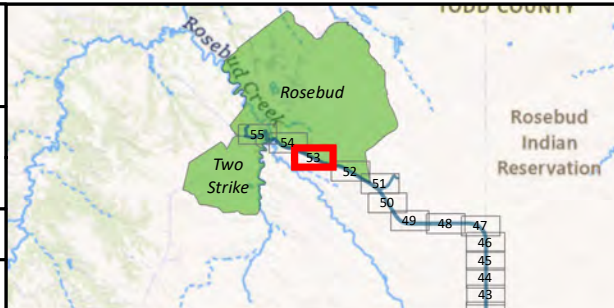
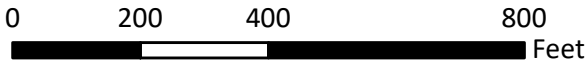
<div><div><div>■ Photo Point</div><div>— Local Roads</div><div>▭ Study Area</div></div><div>* Legend only shows items in vicinity of project/map view</div></div>	Water/Wetland Delineation		<div><div><div><div><div>N</div><div>W</div><div>E</div><div>S</div></div><div><div><div>KLJ</div><div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div><div>Created by: jeffprice</div><div>Date: 7/30/2024</div><div>Project #: 2311-00205</div></div></div><div><div><div>Rosebud</div><div>Two Strike</div><div>Rosebud Indian Reservation</div></div><div><div>55</div><div>54</div><div>53</div><div>52</div><div>51</div><div>50</div><div>49</div><div>48</div><div>47</div><div>46</div><div>45</div><div>44</div><div>43</div><div>42</div><div>41</div></div></div></div></div>	
	Alternate Route Fiber Wetland Delineation Todd County, South Dakota			
	<div><div>0200400800</div><div>Feet</div></div>		Revision #: 0	
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<div><div><div></div><div>Upland Test Hole</div></div><div><div></div><div>Photo Point</div></div><div><div></div><div>Local Roads</div></div><div><div></div><div>Study Area</div></div></div> <div><div>* Legend only shows items in vicinity of project/map view</div></div>	<div>Water/Wetland Delineation</div> <div><div>Alternate Route Fiber</div><div>Wetland Delineation</div><div>Todd County, South Dakota</div></div> <div><div>0200400800</div><div>Feet</div></div>	<div><div><div><div>N</div><div>W</div><div>E</div><div>S</div></div><div><div>KLJ</div><div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div></div><div><div>Created by:</div><div>jeffprice</div></div><div><div>Date:</div><div>7/30/2024</div></div><div><div>Project #:</div><div>2311-00205</div></div></div>	<div><div><div><div>Rosebud</div><div>Two Strike</div></div><div><div>55</div><div>54</div><div>53</div><div>52</div><div>51</div><div>50</div><div>49</div><div>48</div><div>47</div><div>46</div><div>45</div><div>44</div><div>43</div><div>42</div></div></div><div><div>Rosebud Indian Reservation</div></div></div> <div><div>Revision #:</div><div>0</div></div> <div><div>Page 52 of 55</div></div>	
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<ul style="list-style-type: none">Upland Test HolePhoto PointLocal RoadsStudy Area <p>* Legend only shows items in vicinity of project/map view</p>	Water/Wetland Delineation				
	Alternate Route Fiber Wetland Delineation Todd County, South Dakota				
			18 E Main St, Suite 229 Rapid City, SD kljeng.com		
			Created by: jeffprice		
			Date: 7/30/2024		
		Project #: 2311-00205		Revision #: 0	
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— Local Roads

Study Area

* Legend only shows items in vicinity of project/map view

Water/Wetland Delineation

Alternate Route Fiber
Wetland Delineation
Todd County, South Dakota

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Project #: 2311-00205

Todd County

Rosebud Indian Reservation

Rosebud

Two Strike

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<div><div><div></div><div>Photo Point</div></div><div><div></div><div>Local Roads</div></div><div><div></div><div>Study Area</div></div></div> <div><div>* Legend only shows items in vicinity of project/map view</div></div>	<div>Water/Wetland Delineation</div> <div><div>Alternate Route Fiber</div><div>Wetland Delineation</div><div>Todd County, South Dakota</div></div> <div><div>0200400800</div><div></div><div>Feet</div></div>	<div><div><div><div></div><div>N</div></div><div><div></div><div>W</div></div><div><div></div><div>E</div></div><div><div></div><div>S</div></div></div><div><div><div><div></div><div>KLJ</div></div><div>18 E Main St, Suite 229 Rapid City, SD kljeng.com</div></div><div><div>Created by: jeffprice</div><div>Date: 7/30/2024</div><div>Project #: 2311-00205</div></div></div></div>	<div><div><div><div></div><div>Todd County</div></div><div><div></div><div>Rosebud</div></div><div><div></div><div>Two Strike</div></div></div><div><div>Revision #: 0</div><div>Page 55 of 55</div></div></div>
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Appendix A. Site Photographs




Photograph #1	Photo Point 1, general site photo facing west	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	



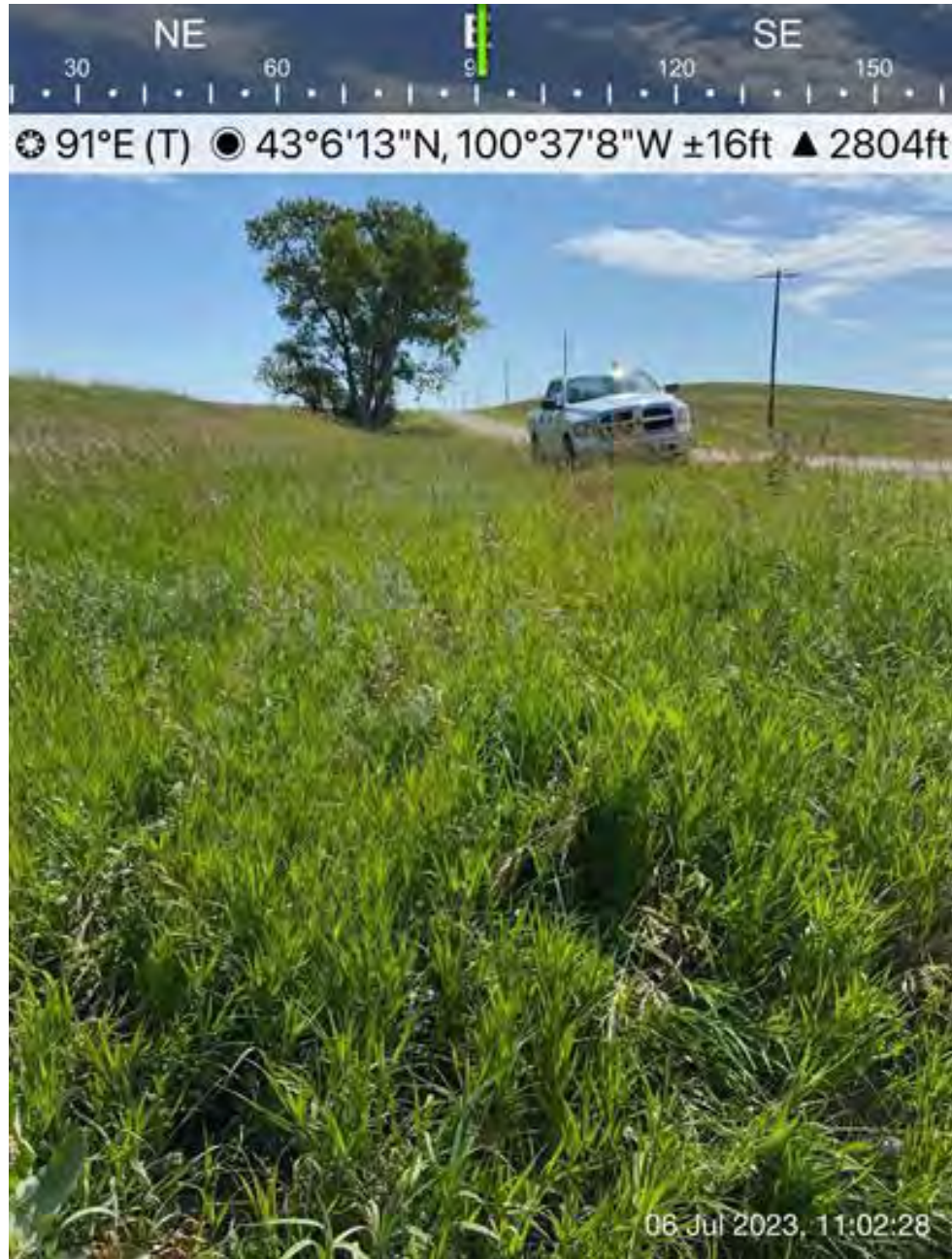
Photograph #2	Photo Point 2, general site photo facing east	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	


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Photograph #3	Photo Point 2, general site photo facing west	
Date Taken:	6 July 2023	
Aquatic Resource:	N/A	

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Photograph #4	Photo Point 3, facing east showing Upland 1	
Date Taken:	6 July 2023	
Aquatic Resource:	N/A	

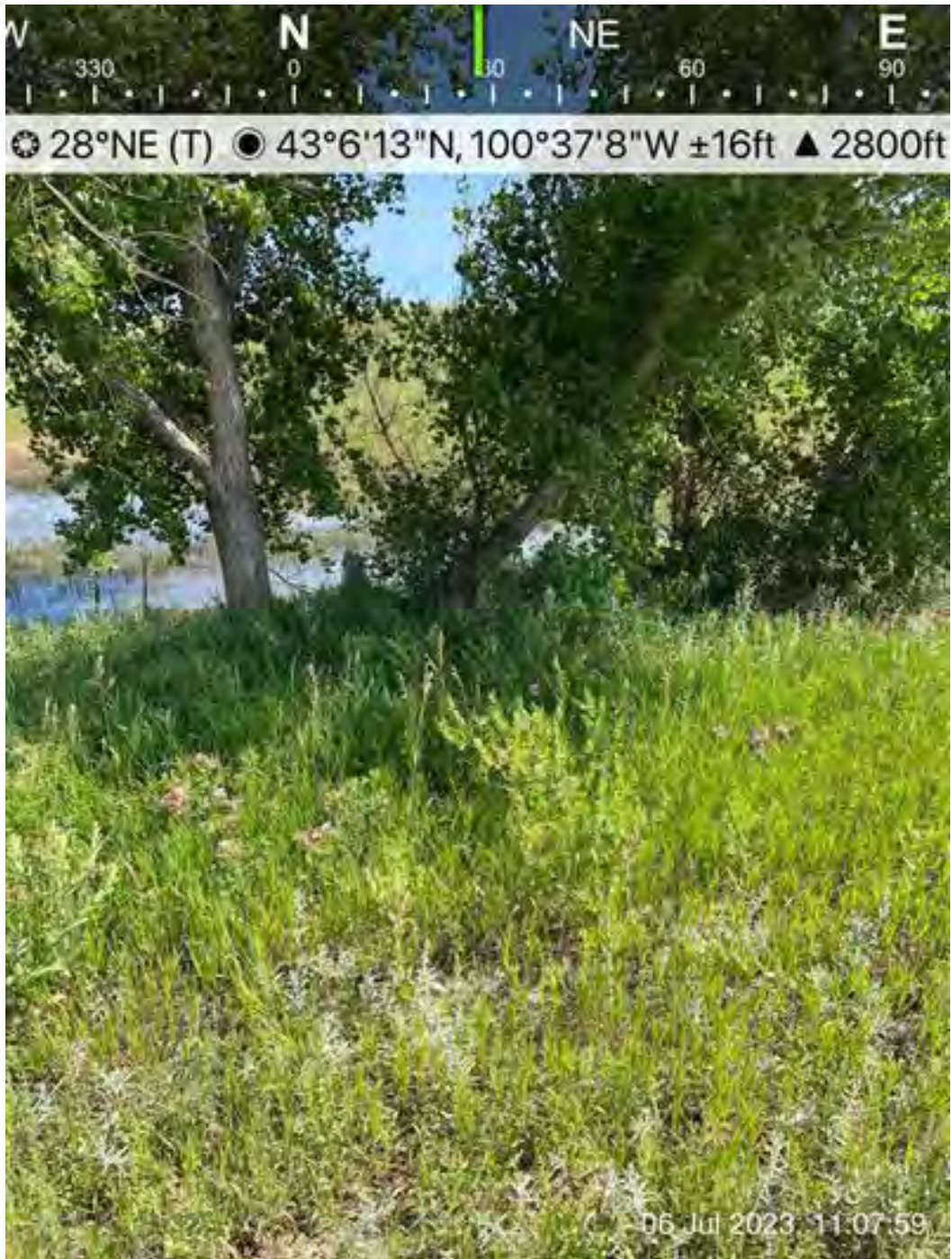



Photograph #5	Photo Point 3, facing west into Upland 1	
Date Taken:	6 July 2023	
Aquatic Resource:	N/A	



Photograph #6	Photo Point 4, facing east into study area, showing upland vegetation	
Date Taken:	6 July 2023	
Aquatic Resource:	N/A	


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Photograph #7	Photo Point 4, facing north/northeast	
Date Taken:	6 July 2023	
Aquatic Resource:	N/A	


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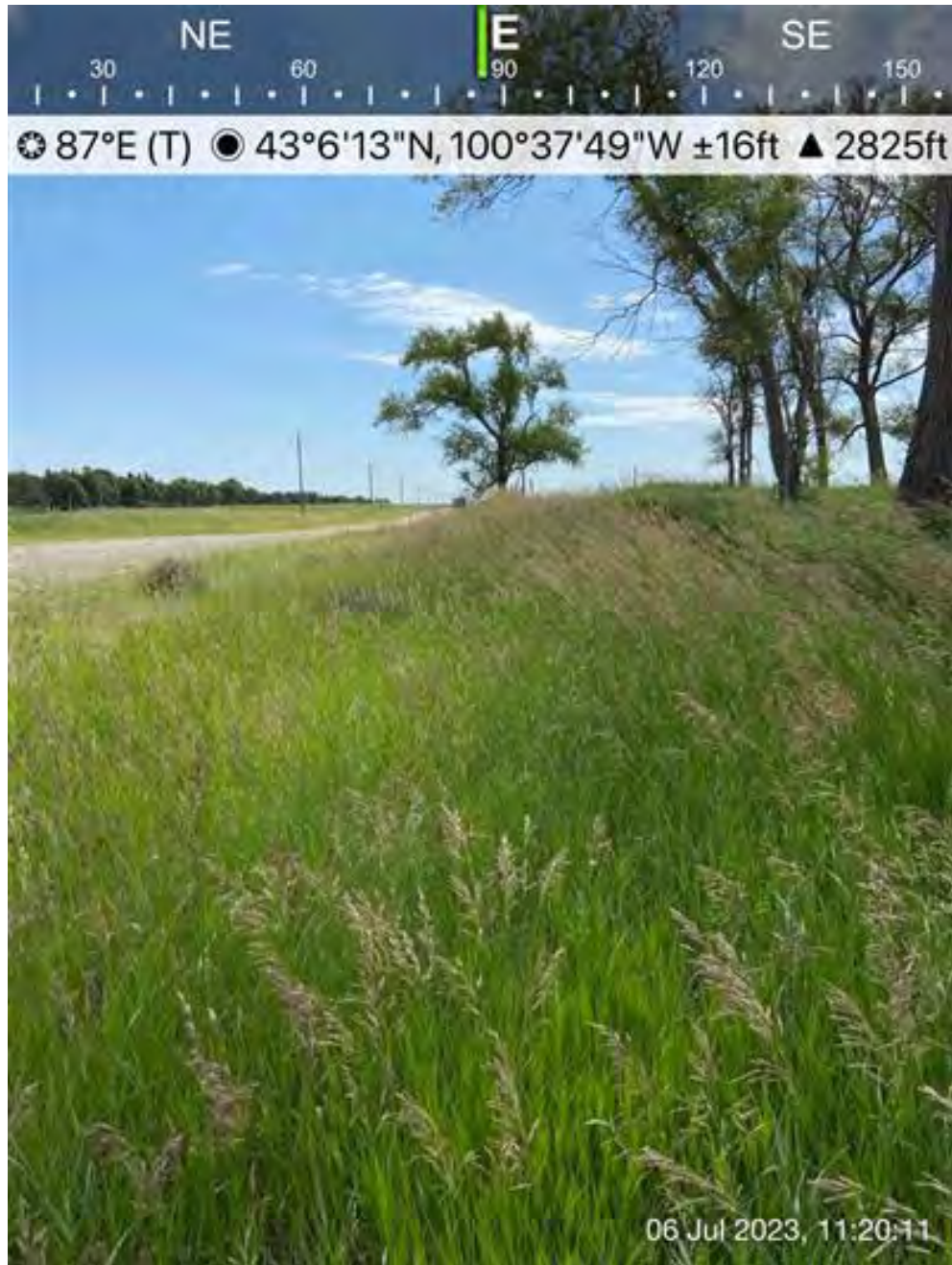
Photograph #8	Photo Point 5, facing north, showing lack of bat habitat	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	


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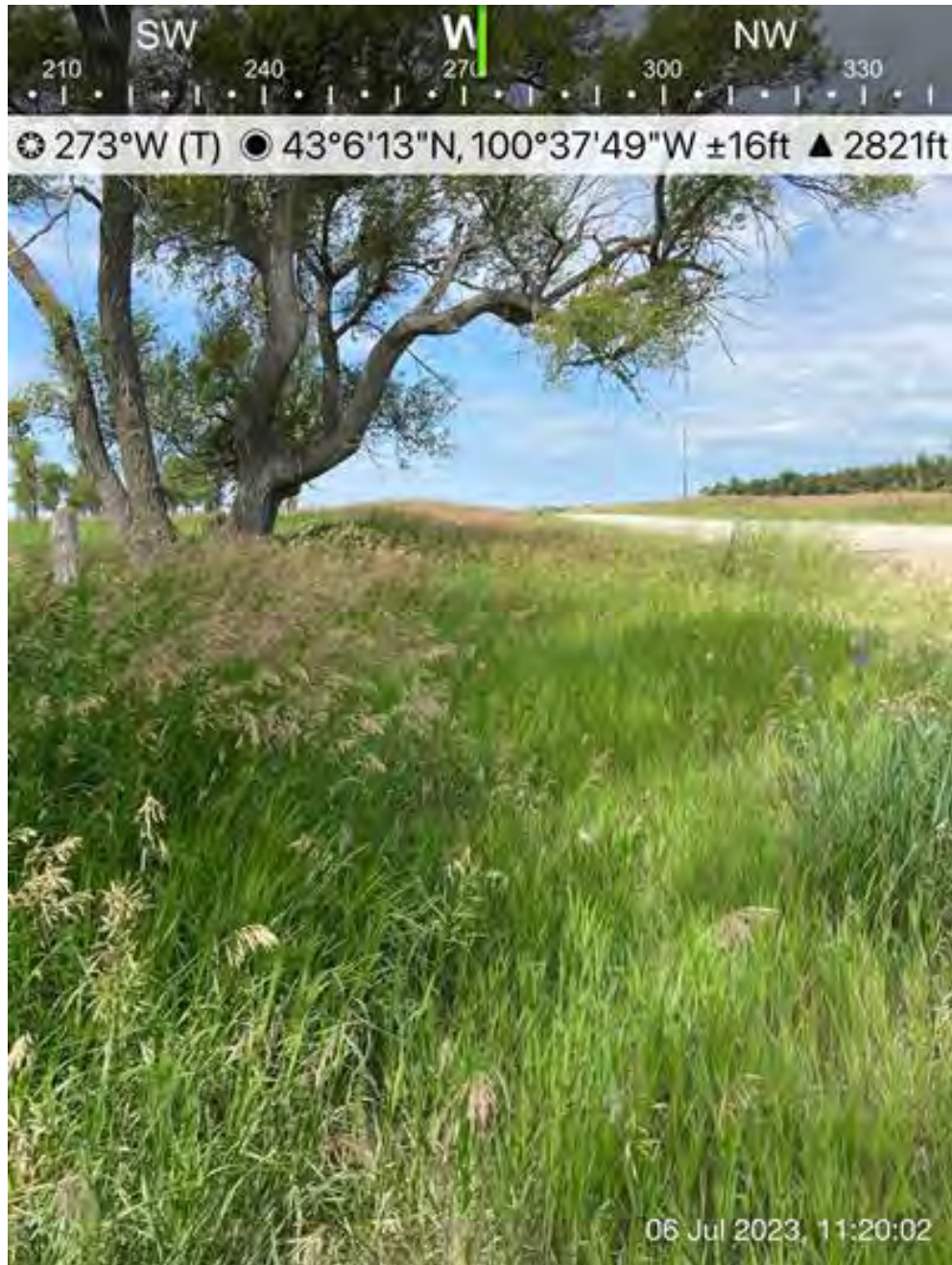



Photograph #9	Photo Point 6, facing south/southwest, showing lack of bat habitat	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	

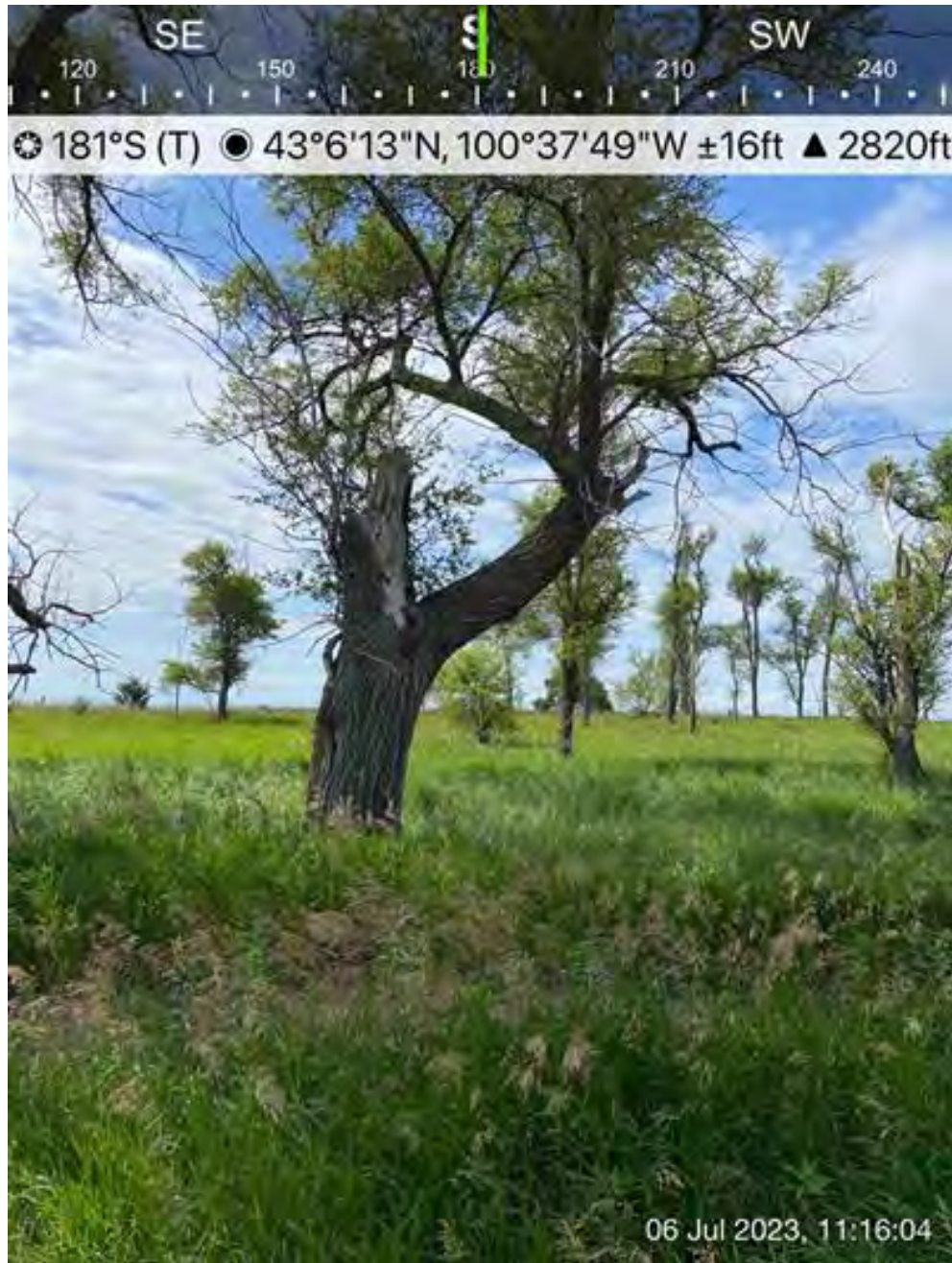
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Photograph #10	Photo Point 7, general site photo facing east	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	




Photograph #11	Photo Point 8, general site photo facing west	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	

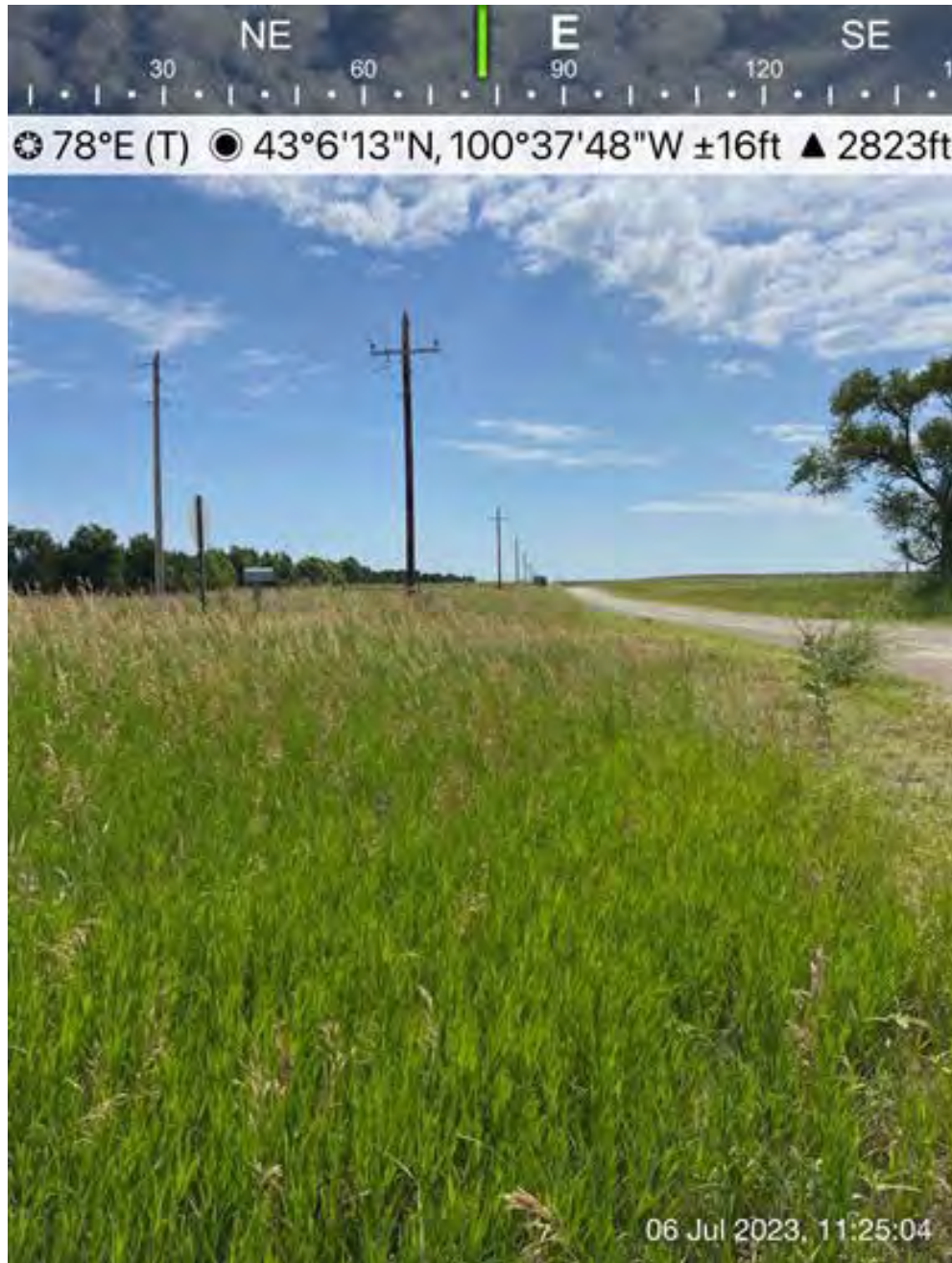



Photograph #12	Photo Point 9, facing south, showing possible bat roost or maternity habitat in study area	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	



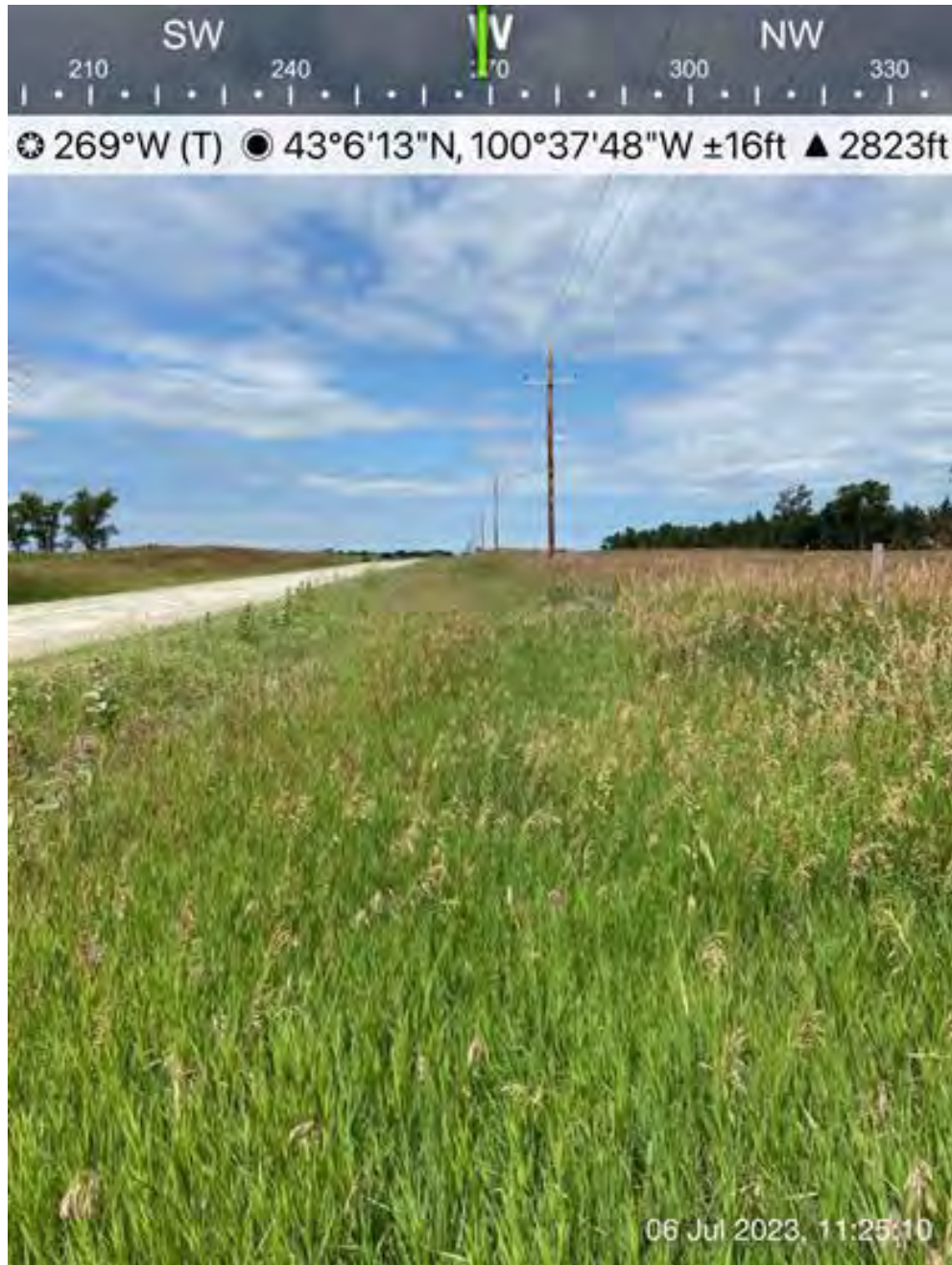
Photograph #13	Photo Point 9, facing south, showing possible bat roost or maternity habitat in study area	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	


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Photograph #34	Photo Point 10, general site photo facing east/northeast	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	

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Photograph #45	Photo Point 10, general site photo facing west	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	



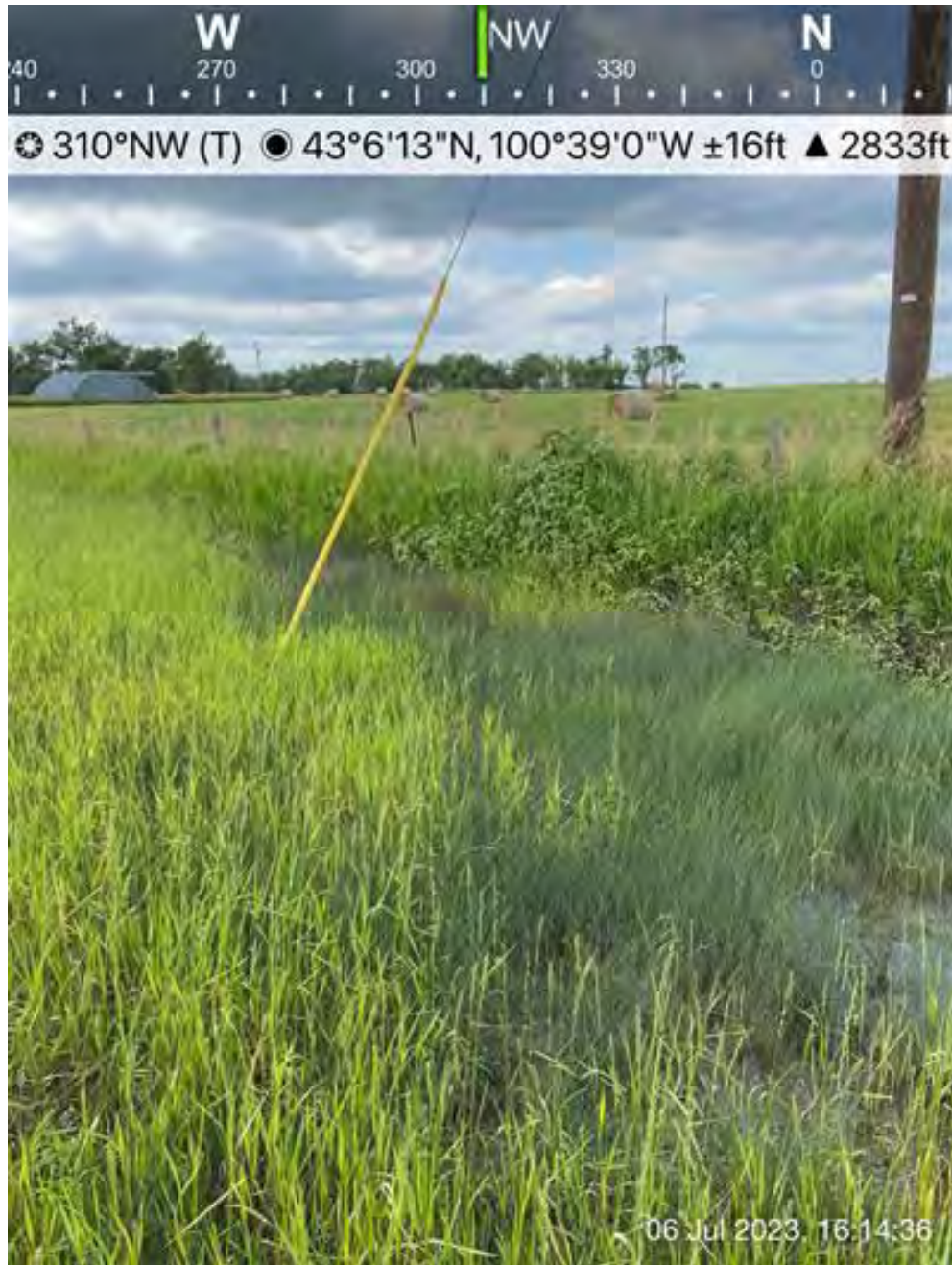
Photograph #56	Photo Point 11, facing east into Wetland 1	
Date Taken:	6 July 2023	
Aquatic Resource:	Wetland 1	


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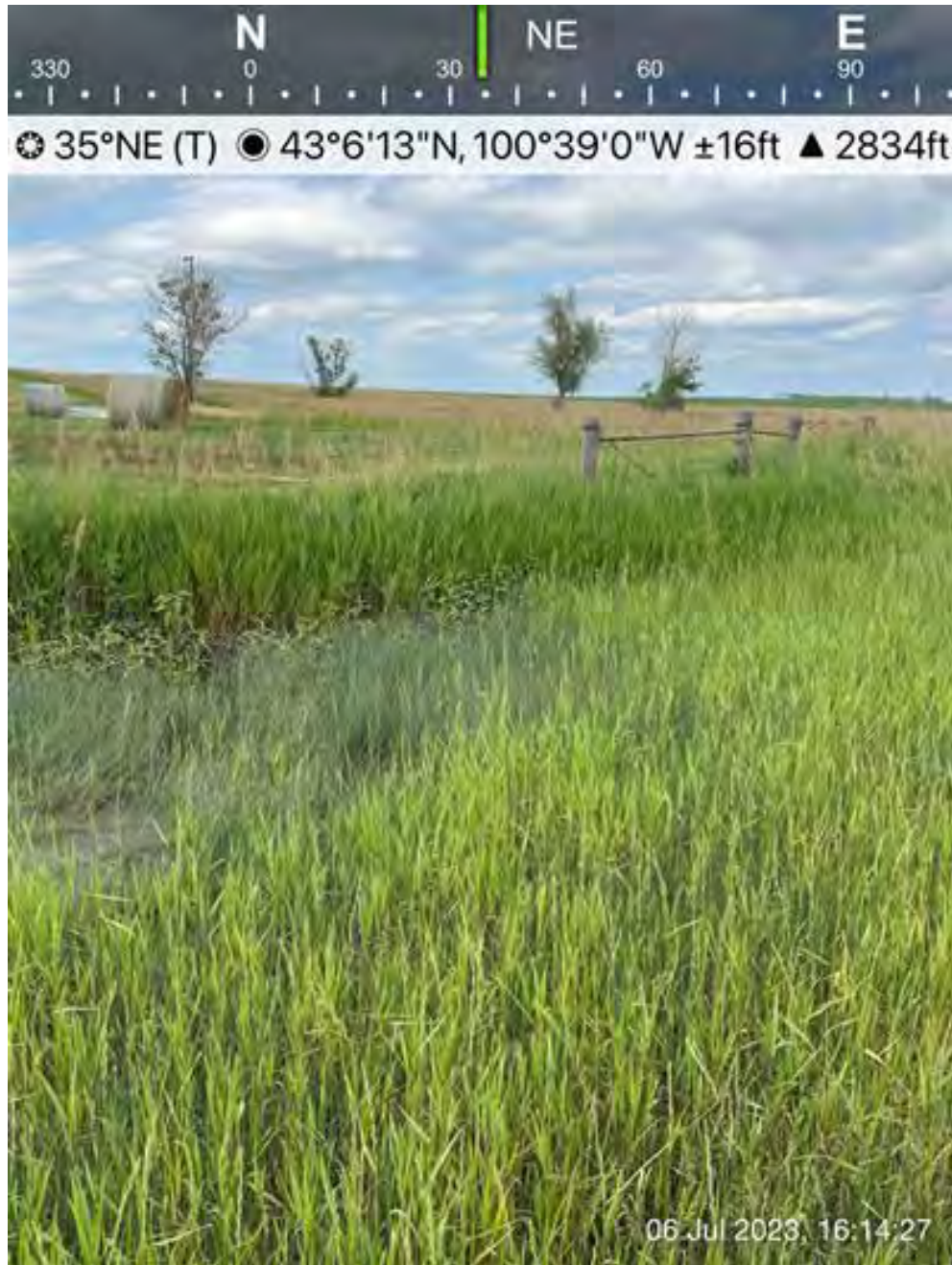



Photograph #67	Photo Point 12, facing west into Wetland 2	
Date Taken:	6 July 2023	
Aquatic Resource:	Wetland 2	

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Photograph #78	Photo Point 13, facing northwest into Wetland 5	
Date Taken:	6 July 2023	
Aquatic Resource:	Wetland 5	



Photograph #89	Photo Point 13, facing north/northeast into Wetland 5	
Date Taken:	6 July 2023	
Aquatic Resource:	Wetland 5	


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Photograph #20	Photo Point 14, general site photo facing east	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	


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Photograph #21	Photo Point 14, general site photo facing west	
Date Taken:	6 July 2023	
Aquatic Resource:	Wetland 3	

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Photograph #22	Photo Point 15, general site photo facing east	
Date Taken:	6 July 2023	
Aquatic Resource:	N/A	




Photograph #23	Photo Point 16, facing west into Upland 3	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	



Photograph #24	Photo Point 16, facing east into Upland 3	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	


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Photograph #25	Photo Point 17, facing east into Wetland 4	
Date Taken:	6 July 2023	
Aquatic Resource:	Wetland 4	


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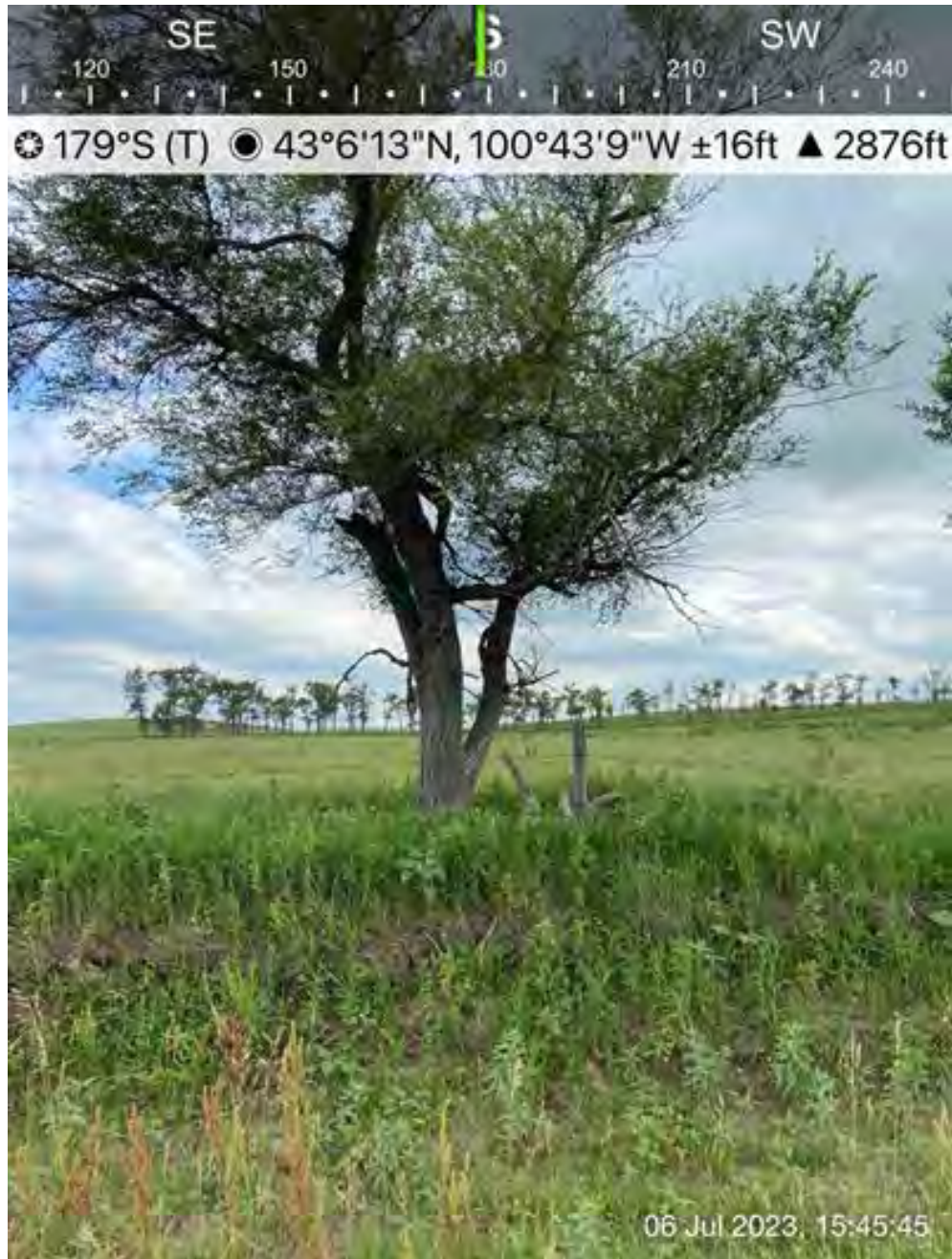



Photograph #26	Photo Point 18, facing east into Wetland 3	
Date Taken:	6 July 2023	
Aquatic Resource:	N/A	

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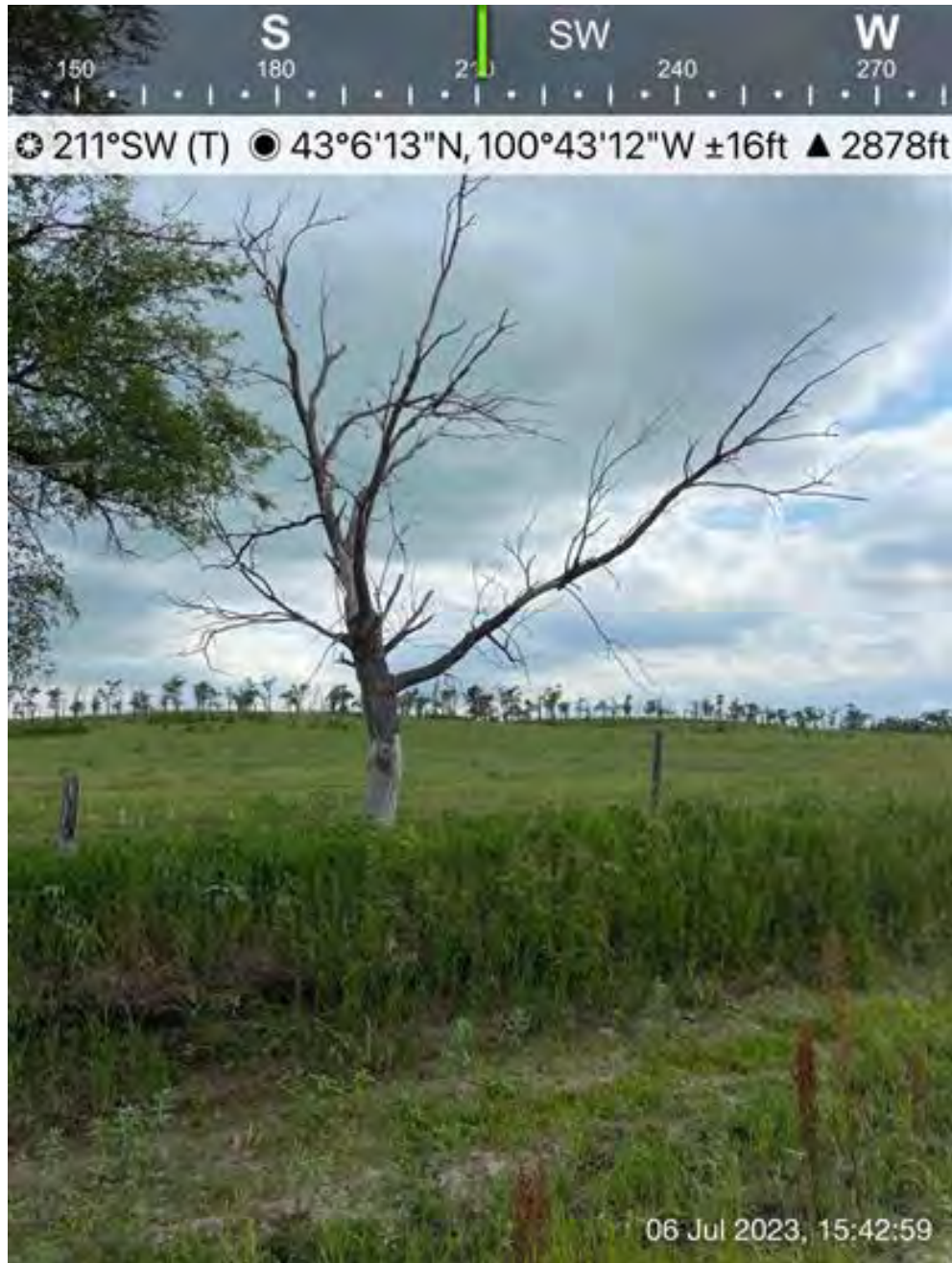
Photograph #27	Photo Point 18, facing west into Wetland 3	
Date Taken:	6 July 2023	
Aquatic Resource:	Wetland 3	




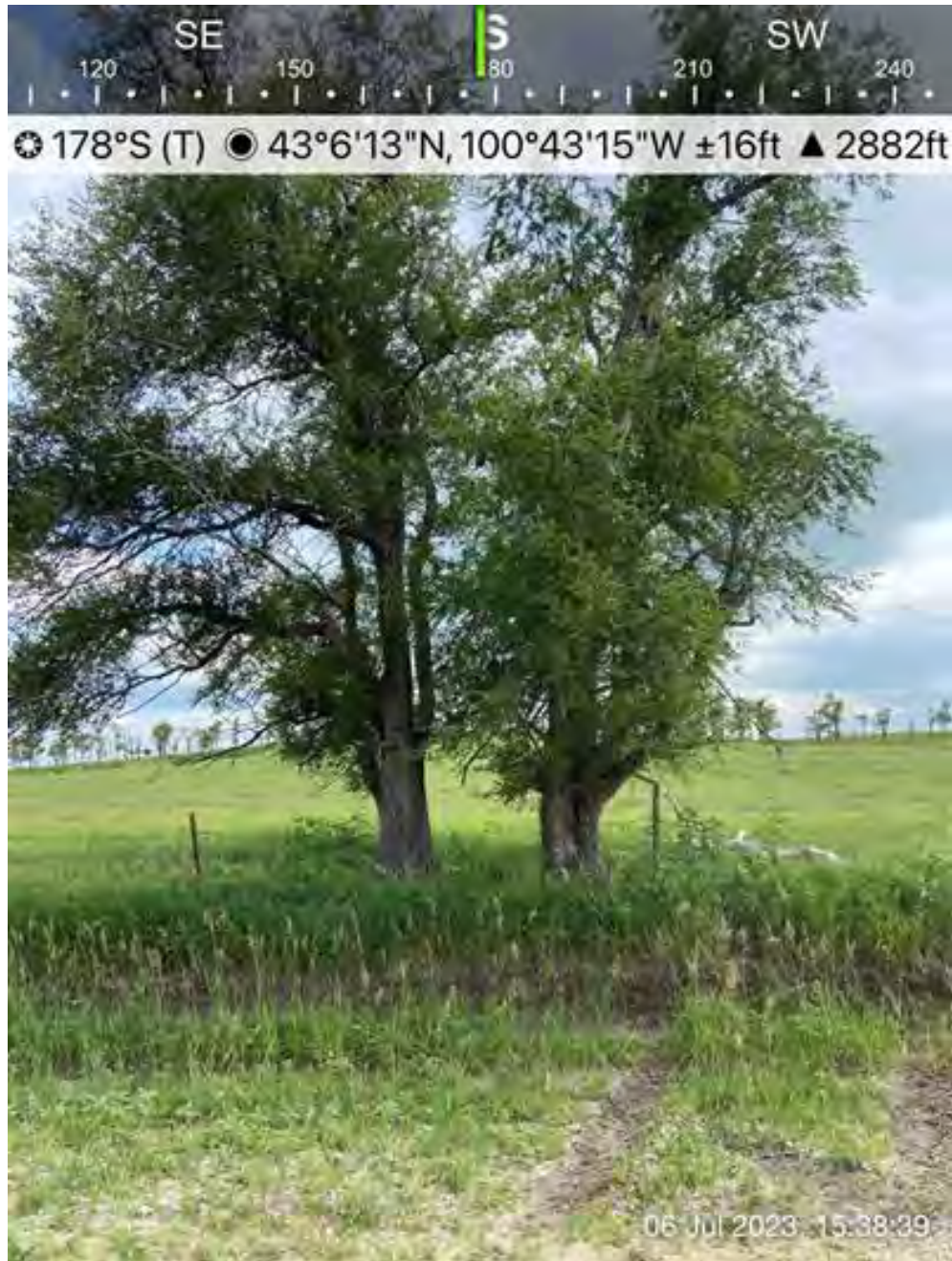
Photograph #28	Photo Point 19, facing west showing possible bat roost or maternity habitat adjacent to study area	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	




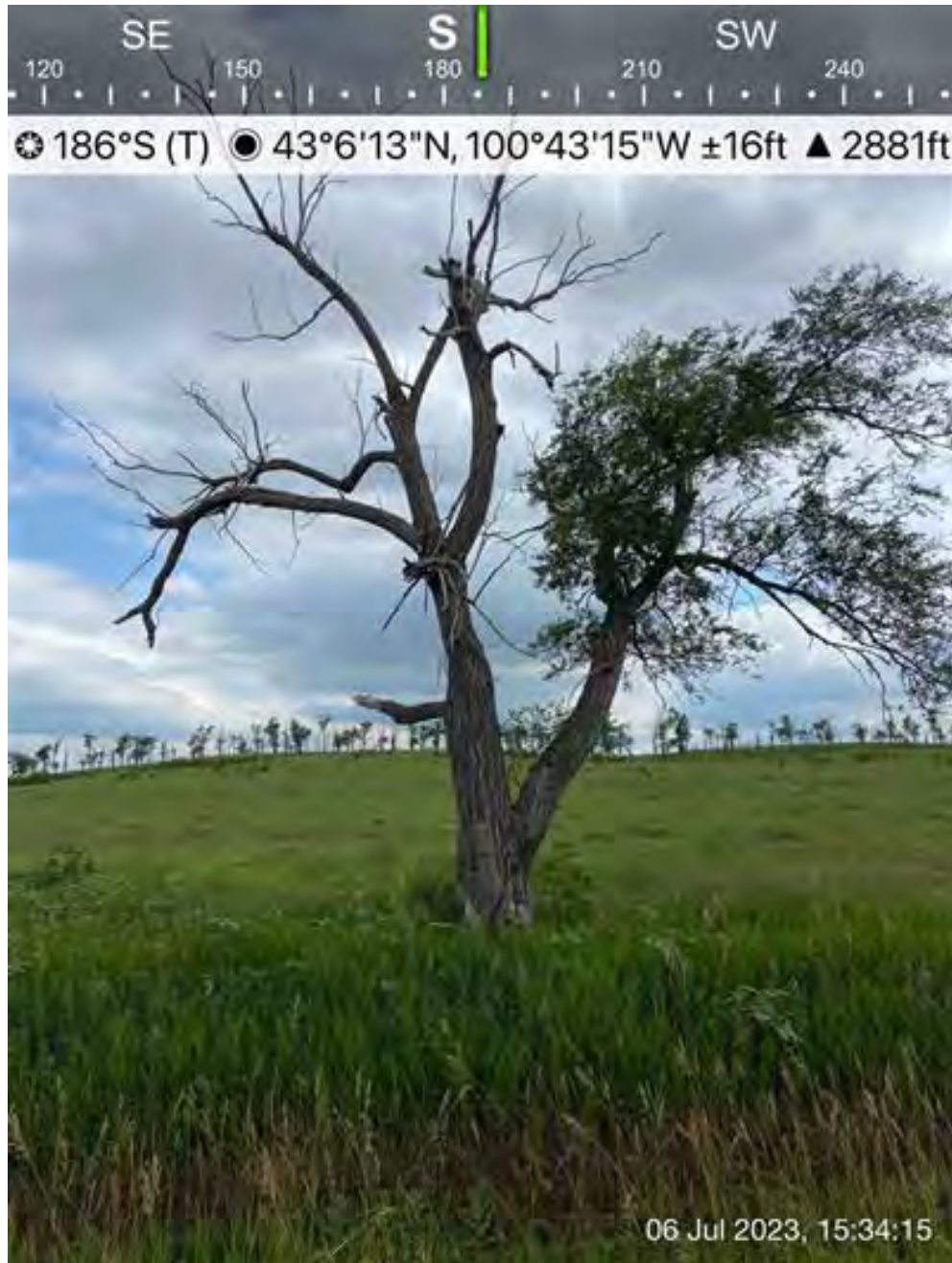
Photograph #29	Photo Point 20, facing south showing possible bat roost or maternity habitat adjacent to study area	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	




Photograph #30	Photo Point 21, facing south/southwest showing possible bat roost or maternity habitat adjacent to study area	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	




Photograph #31	Photo Point 22, facing south showing possible bat roost or maternity habitat adjacent to study area	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	




Photograph #32	Photo Point 23, facing south showing possible bat roost or maternity habitat adjacent to study area	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	




Photograph #33	Photo Point 24, facing south showing possible bat roost or maternity habitat adjacent to study area	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	



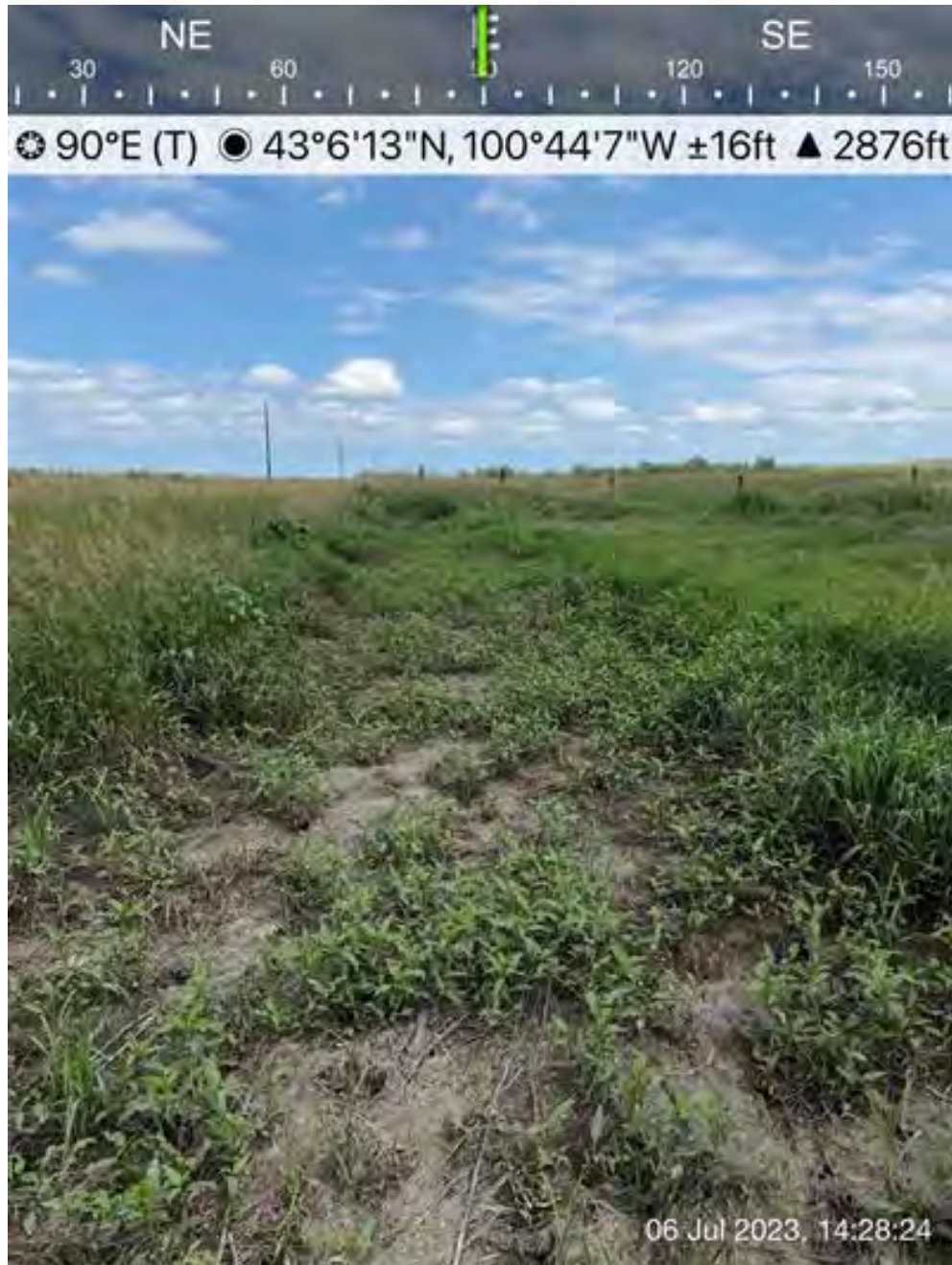
Photograph #34	Photo Point 25, facing south showing possible bat roost or maternity habitat adjacent to study area	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	


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Photograph #35	Photo Point 26, facing west into Upland 4	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	


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Photograph #36	Photo Point 26, facing east into Upland 4	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	


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Photograph #38	Photo Point 27, general site photo facing south	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	

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Project # 2311-00815




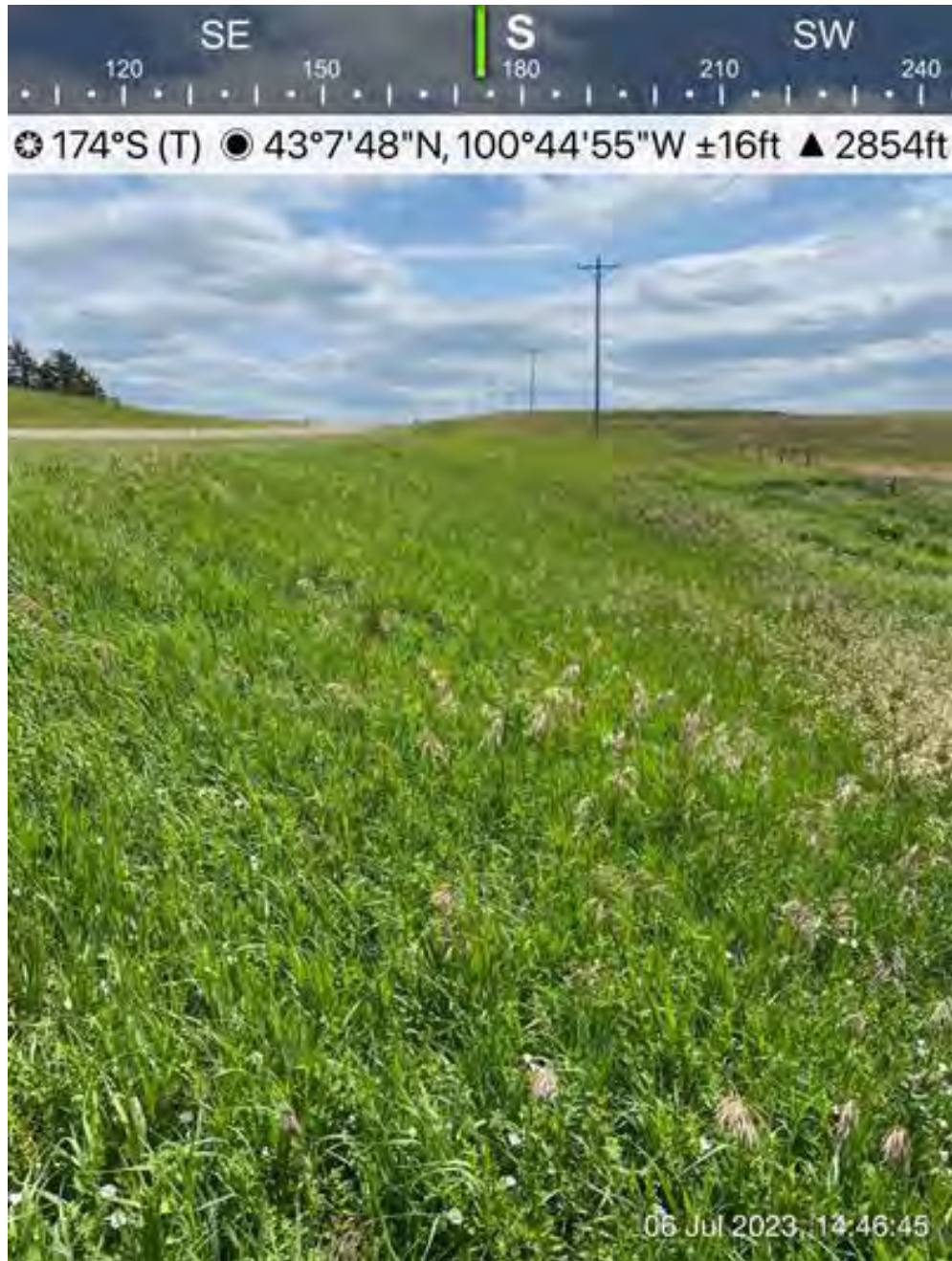
Photograph #39	Photo Point 27, general site photo facing north	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	




Photograph #40	Photo Point 28, general site photo facing north, active construction occurring within study area	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	




Photograph #41	Photo Point 28, general site photo facing south, active construction occurring within study area	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	




Photograph #42	Photo Point 29, general site photo facing south into study area, showing all upland vegetation species	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	



Photograph #43	Photo Point 30, facing east into Upland 5	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	


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Photograph #44	Photo Point 30, facing north into Upland 5	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	

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Photograph #45	Photo Point 31, general site photo facing northeast	
Date Taken:	6 July 2023	
Aquatic Resource:	n/a	




Photograph #46	Photo Point 32, general site photo facing north	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	

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Photograph #47	Photo Point 33, general site photo facing south	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	



Photograph #48	Photo Point 34, general site photo facing north	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	


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Photograph #49	Photo Point 35, general site photo facing north	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	


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Project # 2311-00815



Photograph #50	Photo Point 36, general site photo facing south	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	


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Project # 2311-00815



Photograph #51	Photo Point 37, general site photo facing south	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	


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Project # 2311-00815




Photograph #52	Photo Point 38, general site photo facing north	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	

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Project # 2311-00815




Photograph #53	Photo Point 39, general site photo facing west	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	




Photograph #54	Photo Point 40, general site photo facing east	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	



Photograph #55	Photo Point 41, site photo facing south, showing UPL 6	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	


Telecommunications Installation Photolog
Project # 2311-00815



Photograph #56	Photo Point 42, general site photo facing west	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	


Telecommunications Installation Photolog
Project # 2311-00815



Photograph #57	Photo Point 43, general site photo facing east	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	


Telecommunications Installation Photolog
Project # 2311-00815



Photograph #58	Photo Point 44, general site photo facing south/southeast	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	


Telecommunications Installation Photolog
Project # 2311-00815



Photograph #59	Photo Point 45, general site photo facing northwest/north	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	


Telecommunications Installation Photolog
Project # 2311-00815



Photograph #60	Photo Point 46, general site photo facing northwest	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	


Telecommunications Installation Photolog
Project # 2311-00815




Photograph #61	Photo Point 47, general site photo facing northwest	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	

Telecommunications Installation Photolog
Project # 2311-00815




Photograph #62	Photo Point 48, general site photo facing north	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	



Photograph #63	Photo Point 49, site photo facing north, showing UPL 7	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	


Telecommunications Installation Photolog
Project # 2311-00815



Photograph #64	Photo Point 50, general site photo facing south/southwest	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	


Telecommunications Installation Photolog
Project # 2311-00815



Photograph #65	Photo Point 51, site photo facing west/northwest, showing UPL 8	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	

Telecommunications Installation Photolog
Project # 2311-00815



Photograph #66	Photo Point 52, general site photo facing northwest	
Date Taken:	28 May 2024	
Aquatic Resource:	n/a	

Appendix B. Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: DP1
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 17, T36N, R28W
 Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): concave Slope (%): n/a
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.1037401 Long: -100.6401681 Datum: NAD83
 Soil Map Unit Name: Keya silt loam, 0 to 3% slopes NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>45</u></td> <td>x 1 = <u>45</u></td> </tr> <tr> <td>FACW species <u>45</u></td> <td>x 2 = <u>90</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>175</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.75</u>	Total % Cover of:	Multiply by:	OBL species <u>45</u>	x 1 = <u>45</u>	FACW species <u>45</u>	x 2 = <u>90</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>175</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>45</u>	x 1 = <u>45</u>																	
FACW species <u>45</u>	x 2 = <u>90</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>10</u>	x 4 = <u>40</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>100</u> (A)	<u>175</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Eleocharis erythropoda</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>															
2. <u>Carex vulpinoidea</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>															
3. <u>Marsilea vestita</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>															
4. <u>Hordeum jubatum</u>	<u>15</u>	<u>N</u>	<u>FACW</u>															
5. <u>Erigeron canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
6. <u>Ambrosia artemisiifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
7. <u>Persicaria bicornis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks:																		

SOIL

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/1	100					Sand Clay	Damp
9-20	10YR 4/1	98	10YR 4/6	2	C	PL	Sand Clay	Damp

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- (where tilled)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1

Water Table Present? Yes ☒ No ☐ Depth (inches): 6

Saturation Present? Yes ☒ No ☐ Depth (inches): 5

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: DP2
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 17, T36N, R28W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 1
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.1037698 Long: -100.6401508 Datum: NAD83
 Soil Map Unit Name: Keya silt loam, 0 to 3% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = <u>0</u> FACW species _____ x 2 = <u>0</u> FAC species _____ x 3 = <u>0</u> FACU species <u>25</u> x 4 = <u>100</u> UPL species <u>45</u> x 5 = <u>225</u> Column Totals: <u>70</u> (A) <u>325</u> (B) Prevalence Index = B/A = <u>4.6428571428:</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Bromus inermis</u>	<u>25</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Ambrosia artemisiifolia</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Psoralea tenuiflorum</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>	
4. <u>Helianthus annuus</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>70</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>40</u>				
Remarks:				

SOIL

Sampling Point: DP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 5/2	100					Sandy	
1-4	10YR 2/1	100					Sand Clay	
4-14	2.5Y 5/3	60					Sand Clay	
4-14	10YR 2/1	40					Sand Clay	
14-22	10YR 2/2	100					Sand Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 72 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| (where tilled) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: DP3
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 17, T36N, R28W
 Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): Concave Slope (%): n/a
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.1037641 Long: -100.6471103 Datum: NAD83
 Soil Map Unit Name: Holt-Vetal fine sandy loams, 3 to 9% slopes NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>70</u> x 1 = <u>70</u> FACW species _____ x 2 = <u>0</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species _____ x 4 = <u>0</u> UPL species _____ x 5 = <u>0</u> Column Totals: <u>75</u> (A) <u>85</u> (B) Prevalence Index = B/A = <u>1.133333333</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Eleocharis erythropoda</u>	<u>35</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Marsilea vestita</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Hordeum jubatum</u>	<u>10</u>	<u>No</u>	<u>OBL</u>	
4. <u>Erigeron canadensis</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
<u>75</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>25</u>				
Remarks:				

SOIL

Sampling Point: DP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 2/1	100					Sand Clay	Damp
5-10	10YR 3/2	100					Sand Clay	Damp
10-20	2.5YR 4/2	98	10YR 5/6	2	C	PL	Sand Clay	Damp

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 72 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| (where tilled) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1
Water Table Present? Yes ☒ No ☐ Depth (inches): 5
Saturation Present? Yes ☒ No ☐ Depth (inches): 4
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: DP4
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 17, T36N, R28W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 1
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.1037750 Long: -100.6471216 Datum: NAD83
 Soil Map Unit Name: Holt-Vetal fine sandy loams, 3 to 9% slopes NWI classification: n/a

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

Tree Stratum (Plot size: 30)		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
		0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)				
1.				
2.				
3.				
4.				
5.				
		0	= Total Cover	
Herb Stratum (Plot size: 5)				
1.	<i>Bromus inermis</i>	35	Yes	UPL
2.	<i>Ambrosia artemisiifolia</i>	20	Yes	FACU
3.	<i>Convolvulus arvensis</i>	15	No	FAC
4.	<i>Hordeum jubatum</i>	10	No	FACW
5.	<i>Erigeron canadensis</i>	5	No	FAC
6.				
7.				
8.				
9.				
10.				
		85	= Total Cover	
Woody Vine Stratum (Plot size: 30)				
1.				
2.				
		0	= Total Cover	
% Bare Ground in Herb Stratum		15		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 10	x 2 = 20
FAC species 20	x 3 = 60
FACU species 20	x 4 = 80
UPL species 35	x 5 = 175
Column Totals: 85 (A)	335 (B)

Prevalence Index = B/A = 3.9411764705

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL

Sampling Point: DP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/1	100					Sand Clay	
3-21	10YR 3/1	50					Clay Sand	
3-21	2.5Y 5/2	50					Clay Sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 72 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| (where tilled) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: DP5
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 15, T36N, R29W
 Landform (hillslope, terrace, etc.): Ditch/drainage Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.1037885 Long: -100.7176763 Datum: NAD83
 Soil Map Unit Name: Vetal fine sandy loam NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>30</u> (A)</td> <td><u>85</u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species _____	x 3 = <u>0</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>30</u> (A)	<u>85</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>20</u>	x 2 = <u>40</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species <u>5</u>	x 4 = <u>20</u>																	
UPL species <u>5</u>	x 5 = <u>25</u>																	
Column Totals: <u>30</u> (A)	<u>85</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Carex vulpinoidea</u>	<u>20</u>	Yes	FACW															
2. <u>Polygonum aviculare</u>	<u>5</u>	No	FACU															
3. <u>Bromus inermis</u>	<u>5</u>	No	UPL															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>30</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>70</u>																		

Hydrophytic Vegetation Indicators:
☒ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index is ≤3.0¹
☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SOIL

Sampling Point: DP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					Sand Clay	
4-17	10YR 2/2	98	7.5YR 4/4	2	C	PL/M	Sand Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- (where tilled)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1

Water Table Present? Yes ☒ No ☐ Depth (inches): 6

Saturation Present? Yes ☒ No ☐ Depth (inches): 4

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: DP6
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 15, T36N, R29W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 1
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.1038219 Long: -100.7176488 Datum: NAD83
 Soil Map Unit Name: Vetal fine sandy loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>40</u></td> <td>x 4 = <u>160</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>40</u> (A)</td> <td><u>160</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>40</u>	x 4 = <u>160</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>40</u> (A)	<u>160</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>40</u>	x 4 = <u>160</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>40</u> (A)	<u>160</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u>Polygonum aviculare</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Helianthus annuus</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Trifolium repens</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
4. <u>Ambrosia artemisiifolia</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>40</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>)				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>60</u>																		
Remarks:																		

SOIL

Sampling Point: DP6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-22	10YR 3/3	100					Sand Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 72 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| (where tilled) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: DP7
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 10, T36N, R29W
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.1039227 Long: -100.7174356 Datum: NAD83
 Soil Map Unit Name: Vetal fine sandy loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>21</u></td> <td>x 4 = <u>84</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>51</u> (A)</td> <td><u>144</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.8235294117</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>21</u>	x 4 = <u>84</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>51</u> (A)	<u>144</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>30</u>	x 2 = <u>60</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>21</u>	x 4 = <u>84</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>51</u> (A)	<u>144</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Carex vulpinoidea</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>															
2. <u>Polygonum aviculare</u>	<u>8</u>	<u>No</u>	<u>FACU</u>															
3. <u>Erigeron canadensis</u>	<u>8</u>	<u>No</u>	<u>FACU</u>															
4. <u>Helianthus annuus</u>	<u>5</u>	<u>No</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>51</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>49</u>																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks:																		

SOIL

Sampling Point: DP7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					Sand Clay	
4-20	10YR 2/2	98	7.5YR 4/4	2	C	M	Sand Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input checked="" type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 72 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| (where tilled) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? Yes ☐ No ☒ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface water was observed to be pooled several feet away from the soil pit.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: DP8
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 10, T36N, R29W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 1
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.1039022 Long: -100.7174473 Datum: NAD83
 Soil Map Unit Name: Vetal fine sandy loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>80</u> (A)</td> <td><u>340</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.25</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>80</u> (A)	<u>340</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>60</u>	x 4 = <u>240</u>																	
UPL species <u>20</u>	x 5 = <u>100</u>																	
Column Totals: <u>80</u> (A)	<u>340</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u>Helianthus annuus</u>	<u>35</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Chenopodium album</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Bromus inermis</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>80</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>)				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>20</u>																		
Remarks:																		

SOIL

Sampling Point: DP8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					Sand Clay	
4-22	10YR 3/3	100					Sand Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 72 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| (where tilled) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: DP9
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 7, T36N, R28W
 Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.1038843 Long: -100.6501377 Datum: NAD83
 Soil Map Unit Name: Holt fine sandy loam, 0 to 3% slopes NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>45</u></td> <td>x 1 = <u>45</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>30</u></td> <td>x 5 = <u>150</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>255</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.55</u>	Total % Cover of:	Multiply by:	OBL species <u>45</u>	x 1 = <u>45</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>30</u>	x 5 = <u>150</u>	Column Totals: <u>100</u> (A)	<u>255</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>45</u>	x 1 = <u>45</u>																	
FACW species <u>20</u>	x 2 = <u>40</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>5</u>	x 4 = <u>20</u>																	
UPL species <u>30</u>	x 5 = <u>150</u>																	
Column Totals: <u>100</u> (A)	<u>255</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Eleocharis erythropoda</u>	<u>45</u>	<u>Yes</u>	<u>OBL</u>															
2. <u>Bromus inermis</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>															
3. <u>Carex molesta</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>															
4. <u>Erigeron canadensis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks:																		

SOIL

Sampling Point: DP9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 5/3	100					Sand Clay	
5-15	10YR 4/2	98	10YR 4/6	2	C	PL	Sand Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- (where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☒ No ☐ Depth (inches): 10

Saturation Present? Yes ☒ No ☐ Depth (inches): 9

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: DP10
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 7, T36N, R28W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 1
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.1038758 Long: -100.6500267 Datum: NAD83
 Soil Map Unit Name: Holt fine sandy loam, 0 to 3% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>55</u> (A)</td> <td><u>240</u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>55</u> (A)	<u>240</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>35</u>	x 4 = <u>140</u>																	
UPL species <u>20</u>	x 5 = <u>100</u>																	
Column Totals: <u>55</u> (A)	<u>240</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____																		
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>) 1. <u>Bromus inermis</u> 20 Yes UPL 2. <u>Ambrosia artemisiifolia</u> 15 Yes FACU 3. <u>Helianthus annuus</u> 10 No FACU 4. <u>Thlaspi arvense</u> 10 No FACU 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____																		
<u>55</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>) 1. _____ 2. _____																		
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>45</u> Remarks: Remainder of ground is bare soil																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		

SOIL

Sampling Point: DP10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	5Y 5/4	100					Sandy	
1-22	10YR 3/3	100					Sand Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 72 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| (where tilled) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): 1

Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: DP 11
 Investigator(s): Vincent Popyk Section, Township, Range: sec 14 T035N R028W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.006705 Long: -100.574128 Datum: WGS84
 Soil Map Unit Name: Holt fine sandy loam, 0 to 3 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>40.00</u> x 1 = <u>40.00</u> FACW species <u>55.00</u> x 2 = <u>110.00</u> FAC species <u>5.00</u> x 3 = <u>15.00</u> FACU species <u>0.00</u> x 4 = <u>0.00</u> UPL species <u>0.00</u> x 5 = <u>0.00</u> Column Totals: <u>100.00</u> (A) <u>165.00</u> (B) Prevalence Index = B/A = <u>1.65</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Calamagrostis canadensis</u>	<u>45</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Eleocharis palustris</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Typha angustifolia</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
4. <u>Equisetum hyemale</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. <u>Hordeum jubatum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6. <u>Panicum virgatum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
<u>100.0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks:				

SOIL

Sampling Point: DP 11**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/2	100					FSL	
6-22	10YR 5/1	100					FS	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☒ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
- (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
 (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:
soil is wet to touch

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☒ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☒ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): n/a
 Water Table Present? Yes ☒ No ☐ Depth (inches): 12
 Saturation Present? Yes ☒ No ☐ Depth (inches): 10
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: DP 12
 Investigator(s): Vincent Popyk Section, Township, Range: sec 14 T035N R028W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.006690 Long: -100.574078 Datum: WGS84
 Soil Map Unit Name: Holt fine sandy loam, 0 to 3 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>10.00</u> x 2 = <u>20.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>15.00</u> x 4 = <u>60.00</u> UPL species <u>50.00</u> x 5 = <u>250.00</u> Column Totals: <u>75.00</u> (A) <u>330.00</u> (B) Prevalence Index = B/A = <u>4.4</u>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
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<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation

SOIL

Sampling Point: DP 12**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR	4/4	100				SIL	Small rocks mixed throughout soil

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
- (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
 (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):Type: small rockDepth (inches): 4Hydric Soil Present? Yes ☐ No ☒

Remarks:
restrictive layer present at 4 inches below, adjacent to roadway

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): n/a
 Water Table Present? Yes ☒ No ☐ Depth (inches): n/a
 Saturation Present? Yes ☒ No ☐ Depth (inches): n/a
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No significant hydrological indicators present

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: DP 13
 Investigator(s): Vincent Popyk Section, Township, Range: sec 03 T035N R028W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.037354 Long: -100.590967 Datum: WGS84
 Soil Map Unit Name: Loup-Elsmere loamy fine sands NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>60.00</u> x 1 = <u>60.00</u> FACW species <u>20.00</u> x 2 = <u>40.00</u> FAC species <u>20.00</u> x 3 = <u>60.00</u> FACU species <u>0.00</u> x 4 = <u>0.00</u> UPL species <u>0.00</u> x 5 = <u>0.00</u> Column Totals: <u>100.00</u> (A) <u>160.00</u> (B) Prevalence Index = B/A = <u>1.6</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Typha angustifolia</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Carex praeegracilis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Panicum virgatum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Eleocharis palustris</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
5. <u>Schoenoplectus acutus</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>100.0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				

Remarks:

SOIL

Sampling Point: DP 13**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/1	100					FSL	
6-13	10YR 2/1	96	7.5YR 4/6	4	C	M/PL	FSL	
13-21	10YR 5/1	100					SICL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1) ☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2) ☐ Sandy Redox (S5)
☐ Black Histic (A3) ☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1)
☐ Stratified Layers (A5) (LRR F) ☐ Loamy Gleyed Matrix (F2)
☐ 1 cm Muck (A9) (LRR F, G, H) ☐ Depleted Matrix (F3)
☐ Depleted Below Dark Surface (A11) ☒ Redox Dark Surface (F6)
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7)
☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) ☐ High Plains Depressions (F16)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
(LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1) ☐ Salt Crust (B11)
☐ High Water Table (A2) ☐ Aquatic Invertebrates (B13)
☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1)
☐ Water Marks (B1) ☐ Dry-Season Water Table (C2)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3) **(where not tilled)**
☐ Algal Mat or Crust (B4) ☐ Presence of Reduced Iron (C4)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)
☐ Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
☐ Crayfish Burrows (C8)
☒ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:Surface Water Present? Yes ☒ No ☐ Depth (inches): n/aWater Table Present? Yes ☒ No ☐ Depth (inches): n/aSaturation Present? Yes ☒ No ☐ Depth (inches): n/a
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: DP 14
 Investigator(s): Vincent Popyk Section, Township, Range: sec 03 T035N R028W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 3-7
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.037345 Long: -100.590788 Datum: WGS84
 Soil Map Unit Name: Loup-Elsmere loamy fine sands NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.33</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>0.00</u> x 2 = <u>0.00</u> FAC species <u>20.00</u> x 3 = <u>60.00</u> FACU species <u>30.00</u> x 4 = <u>120.00</u> UPL species <u>30.00</u> x 5 = <u>150.00</u> Column Totals: <u>80.00</u> (A) <u>330.00</u> (B) Prevalence Index = B/A = <u>4.12</u>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
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SOIL

Sampling Point: DP 14

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	(where tilled)	
<input type="checkbox"/> Drift Deposits (B3)	(where not tilled)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	
Field Observations:		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>		
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>		
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: No hydrological indicators present			

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: DP 15
 Investigator(s): Vincent Popyk Section, Township, Range: sec 34 T036N R028W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.052024 Long: -100.594632 Datum: WGS84
 Soil Map Unit Name: Loup-Elsmere loamy fine sands NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>55.00</u> x 1 = <u>55.00</u> FACW species <u>35.00</u> x 2 = <u>70.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>0.00</u> x 4 = <u>0.00</u> UPL species <u>0.00</u> x 5 = <u>0.00</u> Column Totals: <u>90.00</u> (A) <u>125.00</u> (B) Prevalence Index = B/A = <u>1.39</u>
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SOIL

Sampling Point: DP 15**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix			Redox Features				Texture	Remarks	
	Color (moist)		%	Color (moist)		%	Type ¹			Loc ²
0-12	10YR	2/2	98	7.5YR	4/6	2	C	M/PL	SIL	
12-17	5G	5/1	100						CL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☒ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
- (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
 (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☒ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:Surface Water Present? Yes ☒ No ☐ Depth (inches): n/aWater Table Present? Yes ☒ No ☐ Depth (inches): n/aSaturation Present? Yes ☒ No ☐ Depth (inches): 7
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: DP 16
 Investigator(s): Vincent Popyk Section, Township, Range: sec 34 T036N R028W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 3-7
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.052074 Long: -100.594571 Datum: WGS84
 Soil Map Unit Name: Loup-Elsmere loamy fine sands NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>25.00</u> x 2 = <u>50.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>55.00</u> x 4 = <u>220.00</u> UPL species <u>0.00</u> x 5 = <u>0.00</u> Column Totals: <u>80.00</u> (A) <u>270.00</u> (B) Prevalence Index = B/A = <u>3.38</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Phleum pratense</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Carex praeegracilis</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Convolvulus arvensis</u>	<u>15</u>	<u>Y</u>	_____	
4. <u>Polygonum aviculare</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
5. <u>Solidago canadensis</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
6. <u>Calamagrostis canadensis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
<u>95.0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>5</u>				
Remarks: Remainder of ground cover in herb stratum is made up of bare ground				

SOIL

Sampling Point: DP 16**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR	3/3					FSL	test point take near roadside

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**Type: small rockDepth (inches): 6Hydric Soil Present? Yes ☐ No ☒

Remarks:

No hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): n/a

Water Table Present? Yes ☒ No ☐ Depth (inches): n/a

Saturation Present? Yes ☒ No ☐ Depth (inches): n/a
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

no hydrological indicators present

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: DP 17
 Investigator(s): Vincent Popyk Section, Township, Range: sec 27 T036N R028W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.066023 Long: -100.595867 Datum: WGS84
 Soil Map Unit Name: Loup-Elsmere loamy fine sands NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15</u>)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>55.00</u> x 1 = <u>55.00</u> FACW species <u>35.00</u> x 2 = <u>70.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>0.00</u> x 4 = <u>0.00</u> UPL species <u>0.00</u> x 5 = <u>0.00</u> Column Totals: <u>90.00</u> (A) <u>125.00</u> (B) Prevalence Index = B/A = <u>1.39</u>
1. _____				
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Eleocharis palustris</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Calamagrostis canadensis</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Carex praegracilis</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Schoenoplectus acutus</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>	
5. <u>Mentha arvensis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6. _____				
7. _____				
8. _____				
9. _____				
<u>90.0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____				
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>5</u>				
Remarks: Remainder of ground cover in herb stratum is made up of bare ground				

SOIL

Sampling Point: DP 17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix			Redox Features					Texture	Remarks
	Color (moist)		%	Color (moist)		%	Type ¹	Loc ²		
0-2	10YR	3/2	100						SICL	
2-16	10YR	4/1	98	7.5YR	4/6	2	C	M/PL	SICL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- (where tilled)**
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): n/a
Water Table Present? Yes ☒ No ☐ Depth (inches): n/a
Saturation Present? Yes ☒ No ☐ Depth (inches): 9
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: DP 18
 Investigator(s): Vincent Popyk Section, Township, Range: sec 27 T036N R028W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.066060 Long: -100.595894 Datum: WGS84
 Soil Map Unit Name: None NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>30.00</u> x 2 = <u>60.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>45.00</u> x 4 = <u>180.00</u> UPL species <u>15.00</u> x 5 = <u>75.00</u> Column Totals: <u>90.00</u> (A) <u>315.00</u> (B) Prevalence Index = B/A = <u>3.5</u>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
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<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
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<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u>				

SOIL

Sampling Point: DP 18**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	10YR 4/3	100					SIL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
- (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
 (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):Type: small rocksDepth (inches): 11Hydric Soil Present? Yes ☐ No ☒

Remarks:

No hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): n/a
 Water Table Present? Yes ☒ No ☐ Depth (inches): n/a
 Saturation Present? Yes ☒ No ☐ Depth (inches): n/a
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No significant hydrological indicators present

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: DP 19
 Investigator(s): Vincent Popyk Section, Township, Range: sec 22 T036N R028W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.085389 Long: -100.597624 Datum: WGS84
 Soil Map Unit Name: Loup-Elsmere loamy fine sands NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>85.00</u> x 1 = <u>85.00</u> FACW species <u>15.00</u> x 2 = <u>30.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>0.00</u> x 4 = <u>0.00</u> UPL species <u>0.00</u> x 5 = <u>0.00</u> Column Totals: <u>100.00</u> (A) <u>115.00</u> (B) Prevalence Index = B/A = <u>1.15</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Eleocharis palustris</u>	<u>70</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Calamagrostis canadensis</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
3. <u>Typha angustifolia</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>100.0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				Remarks:
% Bare Ground in Herb Stratum <u>0</u>				

SOIL

Sampling Point: DP 19

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	(where tilled)	
<input type="checkbox"/> Drift Deposits (B3)	(where not tilled)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	
Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>		
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u>		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: DP 20
 Investigator(s): Vincent Popyk Section, Township, Range: sec 22 T036N R028W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.085380 Long: -100.597565 Datum: WGS84
 Soil Map Unit Name: Loup-Elsmere loamy fine sands NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>10.00</u> x 2 = <u>20.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>45.00</u> x 4 = <u>180.00</u> UPL species <u>45.00</u> x 5 = <u>225.00</u> Column Totals: <u>100.00</u> (A) <u>425.00</u> (B) Prevalence Index = B/A = <u>4.25</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Bromus inermis</u>	<u>45</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Melilotus officinalis</u>	<u>45</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Calamagrostis canadensis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>100.0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				Remarks:
% Bare Ground in Herb Stratum <u>0</u>				

SOIL

Sampling Point: DP 20**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	10YR	3/3	100				SIL	small rock mixed throughout

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
- (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
 (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):Type: rockDepth (inches): 11Hydric Soil Present? Yes ☐ No ☒

Remarks:
No hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): n/a
 Water Table Present? Yes ☒ No ☐ Depth (inches): n/a
 Saturation Present? Yes ☒ No ☐ Depth (inches): n/a
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
no hydrological indicators present

Waters of the US Information

Stream/Waterbody Name (if known): Rosebud Lake

Waterbody ID #: OW1

Associated Wetland #: N/a

Date: 05/28/24		Project Name & No.: Alternate Route Fiber			Reference pt.:	
Investigators: Vincent Popyk			State/County: Todd/SD		Quad Name: Rosebud	
PHYSICAL ATTRIBUTES						
Waterbody Type	Lake <input checked="" type="checkbox"/>	Pond <input type="checkbox"/>	Borrow Pit <input type="checkbox"/>	River <input type="checkbox"/>	Stream <input type="checkbox"/>	Other: <input type="text"/>
Subsurface Flow?	Yes <input type="checkbox"/>		No <input type="checkbox"/>		Unknown <input checked="" type="checkbox"/>	
Flow type	Perennial (Flows year round) <input checked="" type="checkbox"/>			Intermittent (Flows <3 months) <input type="checkbox"/>		
	Seasonal (Continuous flow ≥ 3 months) <input type="checkbox"/>			Ephemeral (Flows only in response to rainfall) <input type="checkbox"/>		
Stream Width @ OHWM (ft.)	0 - 1 <input type="checkbox"/>	1 - 3 <input type="checkbox"/>	3 - 6 <input type="checkbox"/>	6 - 9 <input type="checkbox"/>	9+ <input checked="" type="checkbox"/>	
Water Depth - Current (ft.)	0 - 1 <input type="checkbox"/>	1 - 3 <input type="checkbox"/>	3 - 6 <input type="checkbox"/>	6 - 9 <input type="checkbox"/>	9+ <input checked="" type="checkbox"/>	
OHWM Indicator (check all applicable)	Natural Line Impress on bank <input checked="" type="checkbox"/> Sediment Sorting <input type="checkbox"/> Shelving <input type="checkbox"/> Litter disturbed or washed away <input type="checkbox"/> Changes in character of soil <input type="checkbox"/> Scour <input type="checkbox"/> Destruction of terrestrial vegetation <input type="checkbox"/> Deposition <input type="checkbox"/> Presence of litter or debris <input checked="" type="checkbox"/> Multiple observed flow events <input type="checkbox"/> Wracking <input type="checkbox"/> Bed and bank <input checked="" type="checkbox"/> Vegetation matted down, bent or absent <input checked="" type="checkbox"/> Water staining <input type="checkbox"/> Change in plant community <input type="checkbox"/>					
Channel Height (ft.) <small>(OHWM to channel bottom looking downstream)</small>	Left:		0 - 2 <input type="checkbox"/>	2 - 4 <input checked="" type="checkbox"/>	4+ <input type="checkbox"/>	
	Right:		0 - 2 <input type="checkbox"/>	2 - 4 <input checked="" type="checkbox"/>	4+ <input type="checkbox"/>	
QUALITATIVE ATTRIBUTES						
Stream Substrate %	Silts _____ Cobbles _____ Bedrock _____ Sands 80 _____ Gravel _____ Concrete _____ Muck _____ Vegetation 20 _____ Other - Explain: _____					
Aquatic Habitats	Sand Bar <input type="checkbox"/> Gravel Riffles <input type="checkbox"/> In-stream emergent plants <input checked="" type="checkbox"/> Gravel Bar <input type="checkbox"/> Deep Pools <input checked="" type="checkbox"/> In-stream submerged plants <input checked="" type="checkbox"/> Mud Bar <input type="checkbox"/> Bank root systems <input type="checkbox"/> Undercut Banks <input type="checkbox"/> Overhanging trees/shrubs <input type="checkbox"/> Fringing Wetlands <input type="checkbox"/>					
Stream is:	Natural <input type="checkbox"/> Artificial (Man-Made) <input type="checkbox"/> Manipulated <input type="checkbox"/> Dammed Lake <input checked="" type="checkbox"/>					
LAKES AND OTHER DEEPWATER HABITAT						
Shoreline Type:	Silts <input type="checkbox"/> Cobbles <input type="checkbox"/> Bedrock <input type="checkbox"/> Concrete <input type="checkbox"/> Muck <input type="checkbox"/> Vegetation <input checked="" type="checkbox"/>					
Other (explain): Vegetation and Sand Shoreline						

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL1
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 15, T36N, R28W
 Landform (hillslope, terrace, etc.): Upland Swale Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): LRR G, MLRA 70A Lat: 43.1036510 Long: -100.6048963 Datum: NAD83
 Soil Map Unit Name: Holt-Vetal fine sandy loams, 3 to 9% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>80</u></td> <td>x 4 = <u>320</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>80</u> (A)</td> <td><u>320</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>80</u>	x 4 = <u>320</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>80</u> (A)	<u>320</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>80</u>	x 4 = <u>320</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>80</u> (A)	<u>320</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____																		
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>) 1. <u>Helianthus annuus</u> 2. <u>Bromus japonicus</u> 3. <u>Hordeum jubatum</u> 4. <u>Ambrosia artemisiifolia</u> 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____																		
<u>80</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>) 1. _____ 2. _____																		
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>20</u>																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		
Remarks: Remaining ground cover from dead plant litter																		

SOIL

Sampling Point: UPL1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL2
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 9, T36N, R28W
 Landform (hillslope, terrace, etc.): Upland Swale Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): LRR G, MLRA 70A Lat: 43.103842 Long: -100.618876 Datum: NAD83
 Soil Map Unit Name: Anselmo-Longpine fine sandy loams, 9 to 21% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>32</u></td> <td>x 4 = <u>128</u></td> </tr> <tr> <td>UPL species <u>27</u></td> <td>x 5 = <u>135</u></td> </tr> <tr> <td>Column Totals: <u>64</u> (A)</td> <td><u>278</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.34375</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>32</u>	x 4 = <u>128</u>	UPL species <u>27</u>	x 5 = <u>135</u>	Column Totals: <u>64</u> (A)	<u>278</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>5</u>	x 3 = <u>15</u>																	
FACU species <u>32</u>	x 4 = <u>128</u>																	
UPL species <u>27</u>	x 5 = <u>135</u>																	
Column Totals: <u>64</u> (A)	<u>278</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____																		
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>) 1. <u>Bromus inermis</u> 22 Yes UPL 2. <u>Poa pratensis</u> 22 Yes FACU 3. <u>Thlaspi arvense</u> 10 No FACU 4. <u>Convolvulus arvensis</u> 10 No FAC 5. <u>Helianthus petiolaris</u> 5 No UPL 6. _____ 7. _____ 8. _____ 9. _____ 10. _____																		
<u>69</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>) 1. _____ 2. _____																		
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>31</u>																		
Remarks:																		

SOIL

Sampling Point: UPL2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
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Remarks:

Soil was damp but had no evidence of redox

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☒ No ☐ Depth (inches): 12

Saturation Present? Yes ☒ No ☐ Depth (inches): 10

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL3
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 14, T36, R29W
 Landform (hillslope, terrace, etc.): Upland Swale Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.103765 Long: -100.708516 Datum: NAD83
 Soil Map Unit Name: Ronson-Anselmo fine sandy loams, 3-5% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>10</u> (A)</td> <td><u>40</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>10</u> (A)	<u>40</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>10</u>	x 4 = <u>40</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>10</u> (A)	<u>40</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Helianthus annuus</u>	<u>5</u>	Yes	FACU															
2. <u>Polygonum aviculare</u>	<u>5</u>	Yes	FACU															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>10</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>90</u>																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		
Remarks: Remainder of ground is bare ground with no vegetation																		

SOIL

Sampling Point: UPL3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
----------------------	-----	--------------------------	----	-------------------------------------

Remarks:

Soil was damp but had no evidence of redox

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input checked="" type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: <u>Telecommunications Installation</u>	City/County: <u>Olsonville, Todd Co.</u>	Sampling Date: <u>7/6/23</u>
Applicant/Owner: <u>Rosebud Sioux Tribe</u>	State: <u>SD</u>	Sampling Point: <u>UPL4</u>
Investigator(s): <u>Vincent Popyk</u>	Section, Township, Range: <u>Sec 16, T36N, R29W</u>	
Landform (hillslope, terrace, etc.): <u>Upland Swale</u>	Local relief (concave, convex, none): <u>concave</u>	Slope (%): <u>n/a</u>
Subregion (LRR): <u>LRR G, MLRA 66</u>	Lat: <u>43.1037470</u>	Long: <u>-100.7354885</u>
Soil Map Unit Name: <u>Vetal fine sandy loam</u>		NWI classification: <u>n/a</u>

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: According to the NRCS Rainfall Documentation worksheet and utilizing precipitation data from NOAA the prior 3 month period was wetter than normal.					

Tree Stratum (Plot size: 30)		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
		0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		0	= Total Cover	
Herb Stratum (Plot size: 5)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Persicaria bicornis</i>	20	Yes	FACW
2.	<i>Bromus inermis</i>	10	Yes	UPL
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		30	= Total Cover	
Woody Vine Stratum (Plot size: 30)		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
		0	= Total Cover	
% Bare Ground in Herb Stratum		70		
Remarks:				
Remainder of ground is bare ground with no vegetation				

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 20	x 2 = 40
FAC species 0	x 3 = 0
FACU species	x 4 = 0
UPL species 10	x 5 = 50
Column Totals: 30	(A) 90 (B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

SOIL

Sampling Point: UPL4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 2/1	100					Clay	Damp
18-22	10YR 3/2	100					Clay	Damp

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 72 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input checked="" type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| (where tilled) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Installation City/County: Olsonville, Todd Co. Sampling Date: 7/6/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL5
 Investigator(s): Vincent Popyk Section, Township, Range: Sec34, T37N, R29W
 Landform (hillslope, terrace, etc.): Upland Swale Local relief (concave, convex, none): concave Slope (%): n/a
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.1301877 Long: -100.7483708 Datum: NAD83
 Soil Map Unit Name: Anselmo-Longpine fine sandy loams, 9 to 21% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>35</u> (A)</td> <td><u>155</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.4285714285</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>35</u> (A)	<u>155</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>5</u>	x 3 = <u>15</u>																	
FACU species <u>10</u>	x 4 = <u>40</u>																	
UPL species <u>20</u>	x 5 = <u>100</u>																	
Column Totals: <u>35</u> (A)	<u>155</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Bromus inermis</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>															
2. <u>Chenopodium album</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Euphorbia esula</u>	<u>5</u>	<u>No</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>35</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>70</u>																		
Remarks: Remainder of ground is covered by dead vegetation matter																		

SOIL

Sampling Point: UPL5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Alternate Route Fiber City/County: Todd County Sampling Date: 2024-05-28
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: UPL6
 Investigator(s): Vince Popyk Section, Township, Range: sec 08 T037N R029W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.201366 Long: -100.772126 Datum: WGS84
 Soil Map Unit Name: Vetal fine sandy loam, 0 to 3 percent slopes NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>0.00</u> x 2 = <u>0.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>100.00</u> x 4 = <u>400.00</u> UPL species <u>0.00</u> x 5 = <u>0.00</u> Column Totals: <u>100.00</u> (A) <u>400.00</u> (B) Prevalence Index = B/A = <u>4.0</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>) 1. <u>Prunus virginiana</u> <u>10</u> <u>Y</u> <u>FACU</u> 2. _____ 3. _____ 4. _____ 5. _____				
<u>10.0</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>) 1. <u>Ambrosia artemisiifolia</u> <u>40</u> <u>Y</u> <u>FACU</u> 2. <u>Polygonum aviculare</u> <u>40</u> <u>Y</u> <u>FACU</u> 3. <u>Cirsium arvense</u> <u>10</u> <u>N</u> <u>FACU</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____				
<u>90.0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>) 1. _____ 2. _____ _____ = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
% Bare Ground in Herb Stratum _____ _____ = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>				
Remarks: Remainder of bare ground covered by dead veg and bare soil				

SOIL

Sampling Point: UPL6**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100					FSL	
2-6	10YR 3/3	100					FSL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
- (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
 (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):Type: Appears to be wire fencingDepth (inches): 6Hydric Soil Present? Yes ☐ No ☒

Remarks:

No indicators present

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

- Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Alternate Route Fiber City/County: Todd County Sampling Date: 2024-05-28
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: UPL7
 Investigator(s): Vince Popyk Section, Township, Range: sec 36 T038N R030W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 3-7
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.221020 Long: -100.818365 Datum: WGS84
 Soil Map Unit Name: Anselmo-Longpine fine sandy loams, 9 to 21 percent slopes NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>0.00</u> x 2 = <u>0.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>25.00</u> x 4 = <u>100.00</u> UPL species <u>70.00</u> x 5 = <u>350.00</u> Column Totals: <u>95.00</u> (A) <u>450.00</u> (B) Prevalence Index = B/A = <u>4.74</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Bromus inermis</u>	<u>70</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Erigeron canadensis</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
3. <u>Taraxacum officinale</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>95.0</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
% Bare Ground in Herb Stratum _____				
Remarks: <u>Remainder of bare ground covered by bare soil</u>				

SOIL

Sampling Point: UPL7**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 3/3	100					FSL	
14-24	10YR 3/3	90					FSL	Mixed soils
	2.5Y 4/3	10					FSL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (**LRR F**)
☐ 1 cm Muck (A9) (**LRR F, G, H**)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
☐ Dark Surface (S7) (**LRR G**)
☐ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

No indicators present

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:Surface Water Present? Yes _____ No ☒ Depth (inches): _____Water Table Present? Yes _____ No ☒ Depth (inches): _____Saturation Present? Yes _____ No ☒ Depth (inches): _____
(includes capillary fringe)**Wetland Hydrology Present?** Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators present

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Alternate Route Fiber City/County: Todd County Sampling Date: 2024-05-28
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: UPL8
 Investigator(s): Vince Popyk Section, Township, Range: sec 35 T038N R030W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.224727 Long: -100.833983 Datum: WGS84
 Soil Map Unit Name: Longpine-Ronson fine sandy loams, 3 to 30 percent slopes NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>0.00</u> x 2 = <u>0.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>45.00</u> x 4 = <u>180.00</u> UPL species <u>10.00</u> x 5 = <u>50.00</u> Column Totals: <u>55.00</u> (A) <u>230.00</u> (B) Prevalence Index = B/A = <u>4.18</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Melilotus officinalis</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Ambrosia artemisiifolia</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Bromus inermis</u>	<u>10</u>	<u>N</u>	<u>UPL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>55.0</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
% Bare Ground in Herb Stratum _____				
Remarks: <u>Remainder of bare ground is exposed soil</u>				

SOIL

Sampling Point: UPL8**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-24	2.5Y	5/3	100				FS	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (**LRR F**)
☐ 1 cm Muck (A9) (**LRR F, G, H**)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
☐ Dark Surface (S7) (**LRR G**)
☐ High Plains Depressions (F16)
☐ (**LRR H outside of MLRA 72 & 73**)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

No indicators present

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:Surface Water Present? Yes _____ No ☒ Depth (inches): _____Water Table Present? Yes _____ No ☒ Depth (inches): _____Saturation Present? Yes _____ No ☒ Depth (inches): _____
(includes capillary fringe)**Wetland Hydrology Present?** Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators present

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: UPL 9
 Investigator(s): Vincent Popyk Section, Township, Range: sec 10 T035N R028W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.026338 Long: -100.590535 Datum: WGS84
 Soil Map Unit Name: Elsmere loamy fine sand, 0 to 3 percent slopes NWI classification: R4SBC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1. <u>Salix exigua</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>10.0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>100.00</u> x 2 = <u>200.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>0.00</u> x 4 = <u>0.00</u> UPL species <u>0.00</u> x 5 = <u>0.00</u> Column Totals: <u>100.00</u> (A) <u>200.00</u> (B) Prevalence Index = B/A = <u>2.0</u>
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Phalaris arundinacea</u>	<u>90</u>	<u>Y</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>90.0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>10</u>				
Remarks: Remainder of ground cover in herb stratum is made up of bare ground and dead vegetation				

SOIL

Sampling Point: UPL 9

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where not tilled) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: No hydrological indicators present		

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: UPL 10
 Investigator(s): Vincent Popyk Section, Township, Range: sec 27 T036N R028W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.062024 Long: -100.595427 Datum: WGS84
 Soil Map Unit Name: Ronson-Anselmo fine sandy loams, 3 to 5 percent slopes NWI classification: R4SBC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.33</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: <u>15</u>) <u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>15.00</u> x 2 = <u>30.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>40.00</u> x 4 = <u>160.00</u> UPL species <u>25.00</u> x 5 = <u>125.00</u> Column Totals: <u>80.00</u> (A) <u>315.00</u> (B) Prevalence Index = B/A = <u>3.94</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Herb Stratum (Plot size: <u>5</u>) <u>0</u> = Total Cover				
1. <u>Bromus inermis</u>	<u>25</u>	<u>Y</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Calamagrostis canadensis</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Helianthus maximiliani</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Ambrosia artemisiifolia</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. <u>Andropogon gerardii</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
6. <u>Rosa arkansana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>30</u>) <u>80.0</u> = Total Cover				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum <u>20</u> <u>0</u> = Total Cover				
Remarks: Remainder of ground cover in herb stratum is made up of bare ground				

SOIL

Sampling Point: UPL 10**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/4	100					SIL	filled with small rock next to road

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
- (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
 (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):Type: rocksDepth (inches): 9Hydric Soil Present? Yes _____ No ☒

Remarks:

No hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:Surface Water Present? Yes ☒ No _____ Depth (inches): n/aWater Table Present? Yes ☒ No _____ Depth (inches): n/aSaturation Present? Yes ☒ No _____ Depth (inches): n/a
(includes capillary fringe)Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No significant hydrological indicators present

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: UPL 11
 Investigator(s): Vincent Popyk Section, Township, Range: sec 15 T036N R028W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.100104 Long: -100.603233 Datum: WGS84
 Soil Map Unit Name: Holt-Vetal fine sandy loams, 3 to 9 percent slopes NWI classification: R4SBC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>20.00</u> x 2 = <u>40.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>45.00</u> x 4 = <u>180.00</u> UPL species <u>20.00</u> x 5 = <u>100.00</u> Column Totals: <u>85.00</u> (A) <u>320.00</u> (B) Prevalence Index = B/A = <u>3.76</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Bromus inermis</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Calamagrostis canadensis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Ambrosia artemisiifolia</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Bromus japonicus</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
5. <u>Helianthus maximiliani</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>85.0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

SOIL

Sampling Point: UPL 11

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	(where tilled)
<input type="checkbox"/> Drift Deposits (B3)	(where not tilled)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)
Field Observations:		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>n/a</u>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>n/a</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (includes capillary fringe)	Depth (inches): <u>n/a</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: No significant hydrological indicators present		

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: UPL 12
 Investigator(s): Vincent Popyk Section, Township, Range: sec 15 T036N R028W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.103418 Long: -100.604833 Datum: WGS84
 Soil Map Unit Name: Holt-Vetal fine sandy loams, 3 to 9 percent slopes NWI classification: R4SBC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>20.00</u> x 2 = <u>40.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>40.00</u> x 4 = <u>160.00</u> UPL species <u>40.00</u> x 5 = <u>200.00</u> Column Totals: <u>100.00</u> (A) <u>400.00</u> (B) Prevalence Index = B/A = <u>4.0</u>
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<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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SOIL

Sampling Point: UPL 12

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	(where tilled)	
<input type="checkbox"/> Drift Deposits (B3)	(where not tilled)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	
Field Observations:		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>		
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>		
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: No significant hydrological indicators present			

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: UPL 13
 Investigator(s): Vincent Popyk Section, Township, Range: sec 10 T036N R028W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.107081 Long: -100.606650 Datum: WGS84
 Soil Map Unit Name: Anselmo-Longpine fine sandy loams, 9 to 21 percent slopes NWI classification: R4SBC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>0.00</u> x 2 = <u>0.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>80.00</u> x 4 = <u>320.00</u> UPL species <u>0.00</u> x 5 = <u>0.00</u> Column Totals: <u>80.00</u> (A) <u>320.00</u> (B) Prevalence Index = B/A = <u>4.0</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Ambrosia artemisiifolia</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Bromus japonicus</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Helianthus maximiliani</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Melilotus officinalis</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>80.0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>20</u>				
Remarks: Remainder of ground cover in herb stratum is bare ground				

SOIL

Sampling Point: UPL 13**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 5/3	100					SIL	dry earth, could not dig

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
- (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
 (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):Type: compact earthDepth (inches): 9Hydric Soil Present? Yes ☐ No ☒

Remarks:

No hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:Surface Water Present? Yes ☒ No ☐ Depth (inches): n/aWater Table Present? Yes ☒ No ☐ Depth (inches): n/aSaturation Present? Yes ☒ No ☐ Depth (inches): n/a
(includes capillary fringe)Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No significant indicators of hydrology present

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: UPL 14
 Investigator(s): Vincent Popyk Section, Township, Range: sec 10 T036N R028W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.108132 Long: -100.607186 Datum: WGS84
 Soil Map Unit Name: Anselmo-Longpine fine sandy loams, 9 to 21 percent slopes NWI classification: PEM1A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>20.00</u> x 1 = <u>20.00</u> FACW species <u>0.00</u> x 2 = <u>0.00</u> FAC species <u>20.00</u> x 3 = <u>60.00</u> FACU species <u>0.00</u> x 4 = <u>0.00</u> UPL species <u>0.00</u> x 5 = <u>0.00</u> Column Totals: <u>40.00</u> (A) <u>80.00</u> (B) Prevalence Index = B/A = <u>2.0</u>
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<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)
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<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> =				

SOIL

Sampling Point: UPL 14

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	(where tilled)	
<input type="checkbox"/> Drift Deposits (B3)	(where not tilled)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	
Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>			
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>			
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>			
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: UPL15
 Investigator(s): Vincent Popyk Section, Township, Range: sec 10 T036N R028W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.113025 Long: -100.609482 Datum: WGS84
 Soil Map Unit Name: Holt-Vetal fine sandy loams, 3 to 9 percent slopes NWI classification: R4SBC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>0.00</u> x 2 = <u>0.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>60.00</u> x 4 = <u>240.00</u> UPL species <u>15.00</u> x 5 = <u>75.00</u> Column Totals: <u>75.00</u> (A) <u>315.00</u> (B) Prevalence Index = B/A = <u>4.2</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Andropogon gerardii</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Bromus inermis</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	
3. <u>Bromus japonicus</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Pascopyrum smithii</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
5. <u>Solidago canadensis</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>75.0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
% Bare Ground in Herb Stratum <u>25</u>				
Remarks: Remainder of herb cover is made up of bare ground and dead vegetation				

SOIL

Sampling Point: UPL15**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 5/3	100					SIL	Small rocks mixed throughout soil

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
- (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
 (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):Type: dry compact earthDepth (inches): 6Hydric Soil Present? Yes ☐ No ☒

Remarks:

No hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

- Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No significant hydrological indicators present

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Intsallation City/County: Todd County Sampling Date: 2024-07-22
 Applicant/Owner: Rosebud Sioux Tribe State: South Dakota Sampling Point: UPL 16
 Investigator(s): Vincent Popyk Section, Township, Range: sec 34 T037N R028W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): LRR G, MLRA 66 Lat: 43.134164 Long: -100.609989 Datum: WGS84
 Soil Map Unit Name: Keya silt loam, 0 to 3 percent slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>0.00</u> x 2 = <u>0.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>25.00</u> x 4 = <u>100.00</u> UPL species <u>40.00</u> x 5 = <u>200.00</u> Column Totals: <u>65.00</u> (A) <u>300.00</u> (B) Prevalence Index = B/A = <u>4.62</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Bromus inermis</u>	<u>30</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Melilotus officinalis</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Tragopogon dubius</u>	<u>15</u>			
4. <u>Abutilon theophrasti</u>	<u>10</u>	<u>N</u>	<u>UPL</u>	
5. <u>Ambrosia artemisiifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>80.0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____				
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>20</u>				
Remarks: Remainder of herb cover is made up of bare ground and dead vegetation				

SOIL

Sampling Point: UPL 16

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	(where tilled)	
<input type="checkbox"/> Drift Deposits (B3)	(where not tilled)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	
Field Observations:		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>			
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>			
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>n/a</u>	(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DELINEATION REPORT

**Broadband Towers Installation
Todd & Mellette Counties, South Dakota**

Consultant Project Number: 2311-00205



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Appendix A Site Photographs

Appendix B Wetland Determination Data Forms

1.0 Introduction

1.1 Project Location

The project area is comprised of 18 different sub-projects located in Todd and Mellette counties in South Dakota, specifically on the Rosebud Indian Reservation or Rosebud Sioux Tribal Trust Land. Each sub-project area is circular in nature and has an approximate diameter of 400ft. The approximate area of each sub-project area is approximately 2.89 acres in size. The project area is distributed across approximately 44 miles from east to west and approximately 37 miles from south to north. The project area is located in the following settings: agriculture fields, forested areas, and undeveloped municipal land. Land use surrounding and interspersed within the sub-project areas consists primarily of hay land, managed pastures, and open range land. Residential areas are concentrated primarily near and within the local communities that are within the described boundary of the overall project area. Local communities in and around the project area consists of Rosebud, St Francis, Spring Creek, Soldier Creek, Mission, White Horse, Lakeview, Hidden Timber, Littleburg, and Two Strike. Please refer to **Figure 1: Project Location Map**.

1.2 Purpose and Need

Historically, there has been a lack of development of infrastructure in Native American communities and this project would work towards providing much needed equity to the local communities. The purpose of this project is to construct a total of 15 wireless LTE devices that will be attached to newly built broadband towers as well as upgrading three already in place radio/wireless towers. These towers would provide an internet connection to initially 1,500 underserved Native American households, with the capacity to provide internet services to additional homes in the area as populations grow.

2.0 Survey Methodology

The sub-project areas were delineated on October 16th, 17th, and 18th 2023, by a qualified wetland scientist, Vincent Popyk of KLJ. The delineation was conducted following procedures outlined in U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual and the Great Plains regional supplement (*Corps of Engineers Wetlands Delineation Manual 1987*) (*Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (version 2.0) 2010*). Equipment used in the survey consisted of standard field tools (measuring tape, long bladed shovel, and stake markers) and a handheld GPS unit (Trimble GEO XT R1). The GPS unit is functionally accurate down to the submeter. Prior to surveying the overall project area, the National Wetlands Inventory (NWI) and satellite imagery via Google Earth was referenced to identify potential wetlands. Field data was collected by digging test holes at sampling sites followed by an in the field analysis to determine wetland status. Wetland status was then determined via soil, vegetation, and geographic features characteristic to wetlands as outlined in the USACE manual (*Corps of Engineers Wetlands Delineation Manual 1987*). When present, Other Waters of the US (OWUS) were identified and delineated utilizing ordinary high-water mark and the presence or absence of organic litter/debris, wracking, and a bed and/or bank.

2.1 Hydrology

Indicators of wetland hydrology consist of vegetation cues, soil characteristics, and geographic features like drainage patterns or highwater marks.

Definition: Fourteen or more consecutive days of flooding, ponding, or water table within 12 inches of the surface during the growing season at a minimum frequency of 5 out of 10 years (50 percent).

Method: Wetland hydrology was determined by observing the presence of primary and/or secondary indicators listed on the USACE data form. If one primary indicator or two secondary indicators were present, the wetland hydrology parameter was met.

Antecedent Precipitation: Due to the fact that multiple sites were surveyed the most centrally located National Weather Service (NWS) station (with accurate data) to all of the project areas was selected to determine antecedent precipitation. The nearest NWS station, MISSION 14 S is just south Olsonville, SD, approximately 14 miles southeast from the center of the general project area. The NWS MISSION 14 S Station reported 4.15 inches of precipitation for the month of October. This is 2.67 inches above the average of 1.48 inches for October. This is considered wetter than normal precipitation conditions for the month of October, and, according to the **Table 1: Antecedent Precipitation** below, the project area has experienced wetter than normal conditions in the past 6 months. Therefore, the wetter than normal precipitation prior to the survey likely contributed to the type of dominance and hydrologic support of some vegetation species observed during the field investigation.

Table 1: Antecedent Precipitation

YEAR	MONTH	30% CHANCE PRECIP LESS THAN (INCHES)	30% CHANCE PRECIP MORE THAN (INCHES)	2023 RAINFALL (INCHES)	CONDITION (DRY, WET, NORMAL)	CONDITION VALUE ¹	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
2023	September	0.90	2.12	4.18	W	3	6	18
2023	August	1.46	2.72	3.55	W	3	5	15
2023	July	1.91	3.75	5.96	W	3	4	12
2023	June	2.07	4.15	5.68	W	3	3	6
2023	May	2.21	4.36	5.18	W	3	2	6
2023	April	1.36	2.80	1.04	D	1	1	1
Total ²								58

2.2 Soils

¹ Condition Values range from 1 (dry), 2 (normal), and 3 (wet).

² Total value ranges are Drier than normal (6-9), Normal (10-14), and Wetter than normal (15-18).

Definition: Soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper 12 inches.

Method: Soils colors were characterized using a Munsell soil color book and the texture determined by the NRCS Guide to Texture by Feel (NRCS, 1979). If one or more of the hydric soil indicators on the USACE data forms were identified, the soil was hydric. Please refer to **Table 2: Dominant Soils Within Project area** that notes the dominant soils within the overall project area (Web Soil Survey).

Typical hydric soil indicators used to identify wetlands include the presence of muck, signs of redox, dark surfaces, and striped matrices. There were no indicators of hydric soils observed within the project area. The overall project area is located within the Subhumid Pierre Shale Plains and the Keya Paha Tablelands, as identified the United States Geological Survey (USGS). The landscape of sub-project areas located in the Subhumid Pierre Sale Plains is characterized by a landscape comprised of unglaciated, undulating plains with incised steep walled creek channels. Primary geological characteristics in this region are dominated solely by the presence of Cretaceous Pierre Shale. Geology of the region gives way to dominant soil orders like Mollisols, Inceptisols, Entisols, and Vertisols. The landscape of sub-project areas located in the Keya Paha Tablelands is characterized by unglaciated, level to rolling sand plains with dissected stream channels occurring throughout the ecoregion. Geological characteristics in this region are represented exclusively by eolian and alluvial sand and silt over Miocene sandstone. Geology of the region give way to dominant soil orders like Mollisols and Entisols.

MAP UNIT NAME	MAP UNIT SYMBOL	APPROXIMATE AREA (ACREAGE)	SLOPE (PERCENT)	HYDRIC SOIL (Y/N)	ASSOCIATED DATA POINTS
Duroc and Kadoka silt loams, 2-5% slopes	DvB	0.7	2-5	N	n/a
Epping-Huggins silt loams, 5-15% slopes	EhD	0.3	5-15	N	n/a
Huggins-Kadoka silt loams, 2-5% slopes	HuB	0.2	2-5	N	n/a
Manter-Anselmo fine sandy loams, 9-15% slopes	MaD	1.4	9-15	N	n/a
Okaton-Lakoma silty clays, 15-40% slopes	ObE	1.5	15-40	N	UPL2
Reliance silty clay loam, 3-6% slopes	RIB	1.5	3-6	N	UPL3
Reliance silty clay loam, 6-9% slopes	RIC	0.0	6-9	N	n/a
Wortman-Wanblee silt loams, 0-6% slopes	Ww	1.7	0-6	N	UPL1
Anselmo-Longpine fine sandy loams, 9-21% slopes	AtE	2.3	9-21	N	UPL4
Anselmo-Vetal fine sandy loams, 2-6% slopes	AvB	0.0	2-6	N	n/a
Holt-Vetal fine sandy loams 3-9% slopes	HIC	8.9	3-9	N	UPL12, UPL13, UPL14
Huggins-Kadoka silt loams, 2-9% slopes	HwB	0.5	2-9	N	n/a
Kadoka-Epping silt loams, 3-9% slopes	KbC	1.0	3-9	N	n/a
Keota-Epping silt loams, 9-21% slopes	KhE	3.1	9-21	N	UPL6, UPL15
Keota-Kadoka silt loams, 9-15% slopes	KkD	1.6	9-15	N	n/a
Keota-Rock outcrop complex, 16-40% slopes	KrF	2.8	16-40	N	UPL8
Fluvents, loamy	La	0.4	-	N	n/a
McKelvie-Peji-Blula complex, 25-80% slopes	MaHG	0.3	25-80	N	n/a
Rosebud and Canyon soils, 9-21% slopes	RcE	1.2	9-21	N	UPL7
Richfield-Dawes silt loams, 0-2% slopes	RdA	4.0	0-2	N	UPL5
Richfield-Tuthill silt loams 2-9% slopes	RhB	2.4	2-9	N	n/a
Yockey-Bigwinder complex, channeled	Sd	0.1	-	N	n/a
Valentine fine sand, rolling, 9-60% slopes	T151G	2.0	9-60	N	n/a
Valentine fine sand, rolling, 9-24% slopes	T153E	2.9	9-24	N	UPL10

Valentine-Els complex, 0-9% slopes	T158c	0.5	0-9	N	n/a
Valentine-Tryon fine sands, 0-24% slopes	T163E	0.4	0-24	N	UPL11
Longpine-Rock outcrop complex, 25-40% slopes	TcF	0.5	25-40	N	n/a
Longpine-Ronson fine sandy loams, 3-30% slopes	TfE	2.9	3-20	N	n/a
Valentinte fine sand, 9-25% slopes	VaE	2.9	9-25	N	n/a
Valentine-Dunday complex, 3-9% slopes	VdC	2.6	3-9	N	UPL9

Table 2: Dominant Soils within Project area

2.3 Vegetation

Definition: The prevalence of plant species that are adapted to life in saturated soil conditions.

Method: To determine if vegetation was hydrophytic, the scientific name, wetland indicator status and determination of dominance for the plant species in each stratum at each sample point were recorded on USACE wetland determination data forms. Dominance refers to the spatial extent of a species that is directly observed in the field; it is calculated by identifying the species that individually or collectively account for at least 50 percent of the total coverage of vegetation in each stratum, as well as any other species that, by itself, accounts for at least 20 percent of the total for the stratum. The hydrophytic vegetation parameter was met if the vegetation passed the rapid test, dominance test or prevalence index. If problematic vegetation occurred at a sample point, detailed observations were documented.

Primary natural vegetation found in the Subhumid Pierre Shale ecoregion consists of wheat grasses, gramma grasses, needle grass, porcupine grasses, and needle-and-thread grass. Land use in this area is dominated by cattle grazing, rangeland, and dryland farming of crops like winter wheat and alfalfa. Primary natural vegetation found in the Keya Paha Tablelands consists of gramma grasses, little blue stem, and needle-and-thread grass. Land use in this area is dominated by dryland farming in northern areas for crops like alfalfa or winter wheat and in the irrigated south, farming for sugar beets. Mixed prairie rangeland makes up the majority of non-agricultural lands in this region.

Of the vegetation surveyed within the overall project area, there were no identified wetland species. Wetland species are considered to be Facultative Wetland (FACW) and Obligate (OBL). All vegetation species observed within the project areas were classified as Upland (UPL), Facultative Upland (FACU), and Facultative (FAC). Wetland classification of each species is determined by information provided by the United States Department of Agriculture (USDA

Plant Database, 2023). See **Table 3: Plant Species List** in the table section for a complete list of identified plant species at the sample pits.

2.4 FQI

A Floristic Quality Assessment (FQA) was utilized to assess the floristic integrity of wetlands delineated within a project area. The FQA can be used to facilitate comparisons among different sites, to provide long-term monitoring of natural area quality, and to evaluate habitat management and restoration efforts. A FQA is completed by calculating the Floristic Quality Index (FQI) for each wetland. Coefficients of conservatism (C-values ranging from 0-10) are provided for each plant species based on the USGS Floristic Quality Assessment for Plant Communities of North Dakota, South Dakota (excluding the Back Hills), and Adjacent Grasslands guidance.

The FQI is calculated by multiplying the mean C-values (\bar{C}) by the square root of the number of native species present (N). The index is used to discriminate areas with similar average C-values but differ in the number of native species present. Typically, FQI values for wetlands range from 0 to 25+. Please refer to the formula below.

$$FQI = \bar{C} \sqrt{N}$$

3.0 Delineation Results

The wetland field delineation was conducted from October 16th to 18th, 2023, by Vincent Popyk of KLJ. A total of 15 soil test pits were dug at locations within the overall project area. Soil pits were not dug at all 18 project locations due to three of the project areas already having infrastructure (radio and satellite towers) in place; meaning that new groundbreaking activities will not have to be conducted at these sites. There were no NWI layers present within the project areas. A NWI layer indicates where a wetland may be present based on past survey data and known soil information of the area. As a result of no NWI layers present, test pits were dug in locations where geography would suggest a wetland could be present. Typical geography that would suggest the presence of a wetland is comprised of low-lying areas such as drainage ditches, naturally occurring basins, and other concave landform features. Vegetation was not used to identify where a wetland could have occurred due to all the vegetation species in the project area being classified as upland or facultative upland species. Utilizing hydrological, soil, and vegetation indicators no wetlands were identified at the test pit locations. As a result of finding no wetlands in the project areas, there was no need to conduct a Floristic Quality Assessment.

4.0 Wetland Delineation Conclusion

Based on the desktop review and field delineation, there were no wetlands found within the project area. No impacts to aquatic resources are anticipated as long as development remains within the project area boundary found in the attached maps and accompanying geographic information system (GIS) spatial files.

5.0 Threatened or Endangered Species

In Todd and Mellette Counties, South Dakota the US Fish & Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) online database identified seven federally listed threatened, endangered, candidate, or proposed endangered species within the project area. Please refer to **Table 3: Summary of ESA Listed Species in Todd & Mellette Counties, South Dakota** for a summary of species information and potential incidental take determinations. During the field aquatic resource delineation, the project area was also surveyed for the presence of threatened, endangered, proposed, or candidate species. No federally listed species were observed during the field survey.

The project area was evaluated to determine potential occurrences of federally listed threatened, endangered, proposed, and candidate species under Section 4 of the Endangered Species Act (ESA), as amended (16 United States Code (USC) 1531 et seq.). Section 9 of the ESA prohibits the “take” of species listed by USFWS as threatened or endangered. Take is defined as follows: “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct.” In recognition that take cannot always be avoided, Section 10(a) of the ESA includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Section 10(a)(1)(B) permits (Incidental Take Permits) may be issued if take is incidental and does not jeopardize the survival and recovery of the species.

Table 3: Summary of ESA Listed Species in Todd & Mellette Counties, South Dakota

Species	Guidance	Status	Observed in Project area	Effect Determination
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Potential incidental take if impacts to structures and trees during the summer maternity season (April 1st through September 30th). Per the 4(d) rule, incidental take is not prohibited outside of the White-nose Syndrome Zone (WNS Zone). USFWS coordination is required if there is potential for incidental take.	Endangered	No	May affect not likely to adversely affect
Tricolored Bat (<i>Perimyotis subflavus</i>)	Potential incidental take if impacts to structures and trees during the summer maternity season (April 1st through September 30th). Per the 4(d) rule, incidental take is not prohibited outside of the White-nose Syndrome Zone (WNS Zone). USFWS coordination is required if there is potential for incidental take.	Proposed Endangered	No	May affect not likely to adversely affect
Rufa Red Knot (<i>Calidris canutus rufa</i>)	Incidental take is unlikely as there is a lack of suitable habitat for the Rufa Red Knot within the project area	Threatened	No	No effect

Whooping Crane (<i>Grus americana</i>)	Incidental take is unlikely as there is a lack of suitable habitat for the whooping crane within the project area	Endangered	No	No effect
American Burying Beetle (<i>Nicrophorus americanus</i>)	Incidental take is unlikely as there is a lack of suitable habitat for the American burying beetle within the project area	Threatened	No	No effect
Monarch Butterfly (<i>Danus plexippus</i>)	Incidental take is unlikely as there is a lack of suitable habitat for the monarch butterfly within the project area	Candidate	No	No effect
Western Prairie Fringed Orchid (<i>Platanthera praeclara</i>)	Incidental take is unlikely as there is a lack of suitable habitat for the western prairie fringed orchid within the project area	Threatened	No	No effect

5.1 Listed Species

According to the USFWS, an endangered species is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future. A proposed species is one that is officially proposed in the Federal Register to be listed under Section 4 of the ESA. The USFWS has one year after a species is proposed for listing under the ESA to make a final determination whether to list a species as threatened or endangered. A candidate species is a plant or animal for which the USFWS has sufficient information on its biological status and threats to propose it as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. While candidate species are not legally protected under the ESA, it is within the spirit of the ESA to consider said species as having significant value and worth protecting.

Occurring in Todd and Mellette Counties, South Dakota, the USFWS has listed the Whooping Crane (*Grus americana*) and the northern long-eared bat (*Myotis septentrionalis*), the Rufa Red Knot (*Calidris canutus rufa*), the American burying beetle (*Nicrophorus americanus*), and the western prairie fringed orchid (*Platanthera praeclara*) as threatened species. The USFWS has also listed the tricolored bat (*Perimyotis subflavus*) as proposed endangered and the monarch butterfly (*Danus plexippus*) as a candidate species.

5.1.1 Threatened Species

Rufa Red Knot (*Calidris canutus rufa*)

The Rufa Red Knot (also referred to as just the “Red Knot”) is a threatened migratory shore bird species that makes winter migrations to North and South America (coastal areas in Argentina, Chile, Northeastern coast of South America, Texas to Mississippi) from breeding grounds in the Canadian Arctic (USFWS, 2020). The Red Knot has been documented throughout South Dakota, Wisconsin, Minnesota, Michigan, and portions of North Dakota for spring and fall stopovers during migration (USFWS, 2014). The primary cause for listing the Red Knot as threatened is because of the market hunting in the later 1800’s that killed large numbers of Knots. In addition to over harvesting the bird, a dwindling food supply in the wintering grounds is also suspected to have influenced declining

populations. The species nests in the high arctic during the summer months (June and July). The Red Knot prefers coastal marine and estuarine habitats with large areas of exposed intertidal sediment, this kind of environment provides a reliable source of food and protection for the bird (USFWS, 2014). The Red Knot would most likely be found in the spring or early fall in South Dakota along the Missouri River and inland saline lakes as stopover points (USFWS, 2014).

No critical habitat has been designated for the Red Knot in South Dakota. Due to the lack of wetlands and no permanent bodies of water within the project area, the proposed project will have **no effect** on the species.

American Burying Beetle (*Nicrophorus americanus*)

The American burying beetle is the largest carrion consuming beetle in North America. Sexually mature members of the species are typically 1 to 2 inches long. The beetle species is known to hide under vegetation, leaf litter, and other similar objects during the daytime staying inactive for most of the day. Typical habitat for the beetle can consist of leafy litter in forests, shrubland, and grasslands (*American Burying Beetle*, USFWS 2023). They are nocturnal species, seeking out carrion when night falls. Their native range is most of temperate eastern North America, with the Dakotas being the furthest west distribution. They have been extirpated from most of their home range being now found in isolated pockets in Arkansas, Kansas, Oklahoma, Nebraska, South Dakota, Texas, Rhode Island, Massachusetts, and Ohio. Locally, they are known to occur in south central South Dakota but there has not been documented evidence of their presence for some time. Like most endangered and threatened species, the greatest threats to the beetle are habitat loss and fragmentation because of human development.

There were no observed American burying beetles during the field survey. The potential of suitable habitat being present in the project area is unlikely, as at the time of the field survey no carrion was observed within the project areas and the majority of the project area had established living vegetation with very little dead vegetation matter being present. Due to the lack of potential habitat described above it is unlikely that the beetle will be present, therefore the proposed project will have **no effect** on the species.

Western Prairie Fringed Orchid (*Platanthera praeclara*)

The western prairie fringed orchid is one of the many endangered orchid species found in North America. The preferred habitat type for this species is moist tall-grass prairies. Historically, the orchid was found from southern Canada down to Oklahoma. It is believed to be extirpated from Oklahoma and South Dakota (USFWS 2023b). The largest populations of the orchid are found in North Dakota, Minnesota, and Manitoba, Canada. Like most other prairie species, the western orchid faces threats from remnant prairie conversion to agricultural land, use of herbicides and pesticides, fire suppression, invasive species, and encroachment by woody species which drastically alter the habitat. Seed germination and proper plant growth depend on a symbiotic relationship between the plants' reduced root systems and a soil-inhibiting fungus for proper water uptake and nutrition (USFWS 2023b).

The entire project area is made up of upland landscapes with upland vegetation species and little or no representation from wetland vegetation species. Due to lack of suitable habitat and no western prairie

fringed orchids observed during the survey, the proposed project is anticipated to have **no effect** on the western prairie fringed orchid.

The majority of the project area has been impacted through roadway development and maintenance activities and the conversion of native grasslands to non-native dominated grass species like smooth brome (*Bromus inermis*). No western prairie fringed orchids were observed within the project area and construction activities would be temporary and take place primarily in frequently disturbed areas. Therefore, the proposed project will have **no effect** on the western prairie fringed orchid.

5.1.2 Endangered Species

Whooping Crane (*Grus Americana*)

The Whooping Crane is the tallest and one of two native crane species to North America (USFWS, 2016d). The species is currently listed as endangered under the ESA (USFWS, 2016d). Currently the only self-sustaining wild population of Whooping Cranes migrates between Texas and central Canada occasionally stopping in the central plain states during the migration. When Whooping Cranes are documented in South Dakota it is in the central portions of the state usually seen migrating with Sandhill Cranes during the middle of spring and fall (Stukel, 2020). Historical breeding range for the Whooping Crane extends from Illinois to northwest North Dakota and into the Northwest Territories in Canada (BIA, 2014). Migration stopover habitat for the Whooping Crane consists of palustrine wetlands for roosting and croplands for feeding. Current threats to the whooping crane include human disturbance, habitat loss and degradation, and power lines.

There were no observed Whooping Cranes during the field survey. The potential of suitable habitat being present in the project area is unlikely, as the project area is comprised primarily of pasture and hay lands, with little to no active cropland adjacent to the project area. Due to the lack of potential habitat occurring in the project area it is unlikely that whooping cranes will be present, and the proposed project will have **no effect** on the species.

Northern Long-eared Bat (*Myotis septentrionalis*)

The northern long-eared bat (NLEB) is a wide-ranging bat species historically found in 37 states in the continental United States. NLEB are dispersed across the Midwest (as far south as Louisiana) and eastern (as far east as Maine) parts of the country (USFWS, 2023d). While the species still exists in much of its' historical range, the species has experienced steep declines in overall population numbers, primarily due to White Nose Syndrome (WNS), habitat loss, and effects to its' food base as a result of climate change (USFWS, 2023d). During the non-hibernation months of the year NLEB will typically roost underneath exfoliating tree bark, in cavities or crevices or cracks found in living and dead trees, and less commonly in barns and sheds. During the hibernating months NLEB will roost in caves and abandoned mines.

No NLEB were observed during the field survey; however, trees were visually inspected that occurred within and immediately adjacent the project area. Potential habitat occurred as large trees with either crevice, snags, or exfoliating bark. All potential roost habitat occurred outside of the project area boundaries. If tree removal is required, it is recommended that removal be conducted prior to April 1st or after September 30th to avoid impacts to the NLEB. Should tree removal be required during the

spring staging, fall swarming, or summer maternity seasons, KLJ recommends additional consultation with the Rosebud Sioux Tribe Biologist to determine potential impacts to the NLEB. If Tribal biologists recommend further consultation, then consultation with the USFWS would occur to evaluate further impacts to the species. Construction activities may also affect the NLEB with increased noise, construction activities, and the generation of dust. Therefore, the proposed project **may affect, but is not likely adversely affect** the NLEB because the disturbance will be considered temporary in nature, and construction will likely not result in the removal of trees as any potential roost tree occurred immediately outside of the project area.

5.1.3 Other Listed Species

Tricolored Bat (*Perimyotis subflavus*)

The tricolored bat is one of the smallest bat species found in North America. The current range of the species is in eastern and central United States, portions of southern Canada, and Mexico. While the species still exists in much of its' historical range, tricolored bat has experienced steep declines in overall population (USFWS, 2023c). During the non-hibernating months of spring, summer, and fall; the tricolored bat will usually roost among live and dead leaf clusters of deciduous trees. Where deciduous trees are not present, tricolored bats have been documented roosting among the needles of pine trees and in eastern red cedar (USFWS, 2023c). During hibernation the species will hibernate in caves and mines, and, where warm enough in the south the tricolored bat will hibernate in road associated culverts. Like a number of other bat species, the greatest threat facing the tricolored bat is WNS. WNS is a fungal disease that will grow on the bat during hibernation eventually killing the infected individual (USFWS, 2023c).

During the field survey there were no tricolored bats observed, however, there were multiple trees immediately outside of the project area that could be potential roosting sites during the non-hibernation season. Identified potential roost trees had crevices, exfoliating bark, and snags that could all be utilized as roost habitat. If tree removal is required, it is recommended that removal be conducted prior to April 1 or after September 30 to avoid impacts to the species. If it is determined that tree removal is necessary during the spring staging, fall swarming, or summer maternity seasons, KLJ recommends additional consultation with the Rosebud Sioux Tribe Biologist to determine potential impacts to the tricolored bat. If the Tribal biologist recommends further consultation, then consultation with the USFWS would occur to evaluate further impacts to the species. Construction activities may also disrupt the tricolored bat due to increased noise levels, general construction activities, and generation of dust. Therefore, the proposed project **may affect, but is not likely to adversely affect** the tricolored bat because the disturbance due to construction activities will be temporary in nature and construction will likely not result in the removal of trees as any potential roost tree occurred immediately outside of the project area.

Monarch Butterfly (*Danus plexippus*)

The monarch butterfly is a small butterfly that is currently listed as a candidate species under the ESA as of December 17, 2020, due to habitat loss and degradation (USFWS 2020b). The monarch relies on grasslands that have healthy populations of milkweed (*Asclepias spp.*) which are an obligate host plant for monarch larvae (USFWS 2020b). The current range of the monarch is the entire continental United States, southern Canada, all of Central America, and the northern most boundaries

of South America (USFWS 2020b). Monarch populations found in temperate climates (in the northern and Midwest regions of the U.S) will embark on annual migrations to Central and South America wintering sites. The monarch butterfly is typically not found in the temperate regions of the United States from September through March, during which it will migrate to Central America for the winter and then return in the spring. Monarch larvae will feed exclusively on milkweed until they pupate and emerge as a butterfly at which point adult monarchs will feed on a wide variety of nectar bearing flowers (U.S Forest Service, 2022).

There were no observed monarch butterflies during the field survey. The potential of suitable habitat being present in the project area is unlikely, as there was no observed living milkweed plants and limited flowering plants observed during the field survey. Due to the lack of potential habitat and availability of nectar producing plants it is unlikely that monarch butterflies will be present, therefore the proposed project will have ***no effect*** on the species.

5.2 Conclusion

The proposed project consists of installing a total of 17 broadband towers and upgrading two already existing radio/wireless towers followed by returning the project area back to pre-disturbance conditions upon completion of tower installation and upgrades. Habitat types within the project area include non-native grasslands, native grasslands, and limited forested areas. Immediately adjacent to the project area are non-native and native grasslands used for pastureland and hay fields in addition to forested areas in drainages.

Due to factors including project area locations, surrounding habitat types, lack of preferred or suitable habitat, no known populations, and planned disturbance being temporary in nature, the proposed project is not anticipated to impact the endangered Whooping Crane or NLEB, the threatened Rufa Red Knot, American burying beetle, and the western prairie fringed orchid. There is no anticipated impact to the candidate species the monarch butterfly.

Due to the presence of potential habitat adjacent to the project area, the proposed project may affect, but is not likely to adversely affect the endangered NLEB and the proposed endangered tricolored bat. Trees are present immediately adjacent to the project area locations and appear to display some characteristics (cracks, crevices, snags, and exfoliating bark) that could be suitable habitat. Since the project plans to avoid the removal of trees, the impact to the NLEB and the tricolored bat would be considered temporary in nature and would not impact the continued existence of either species.

If any federally listed species are observed in the project area or the near vicinity during construction activities, KLJ recommends construction activities be halted and the Tribes' wildlife biologist be consulted on how to proceed.

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7.0 Delineators Credentials

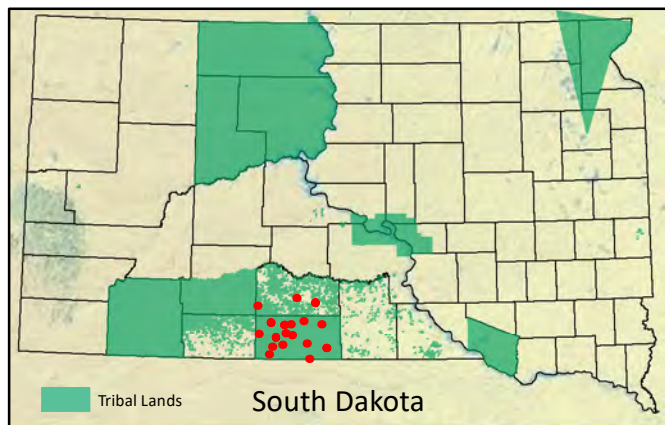
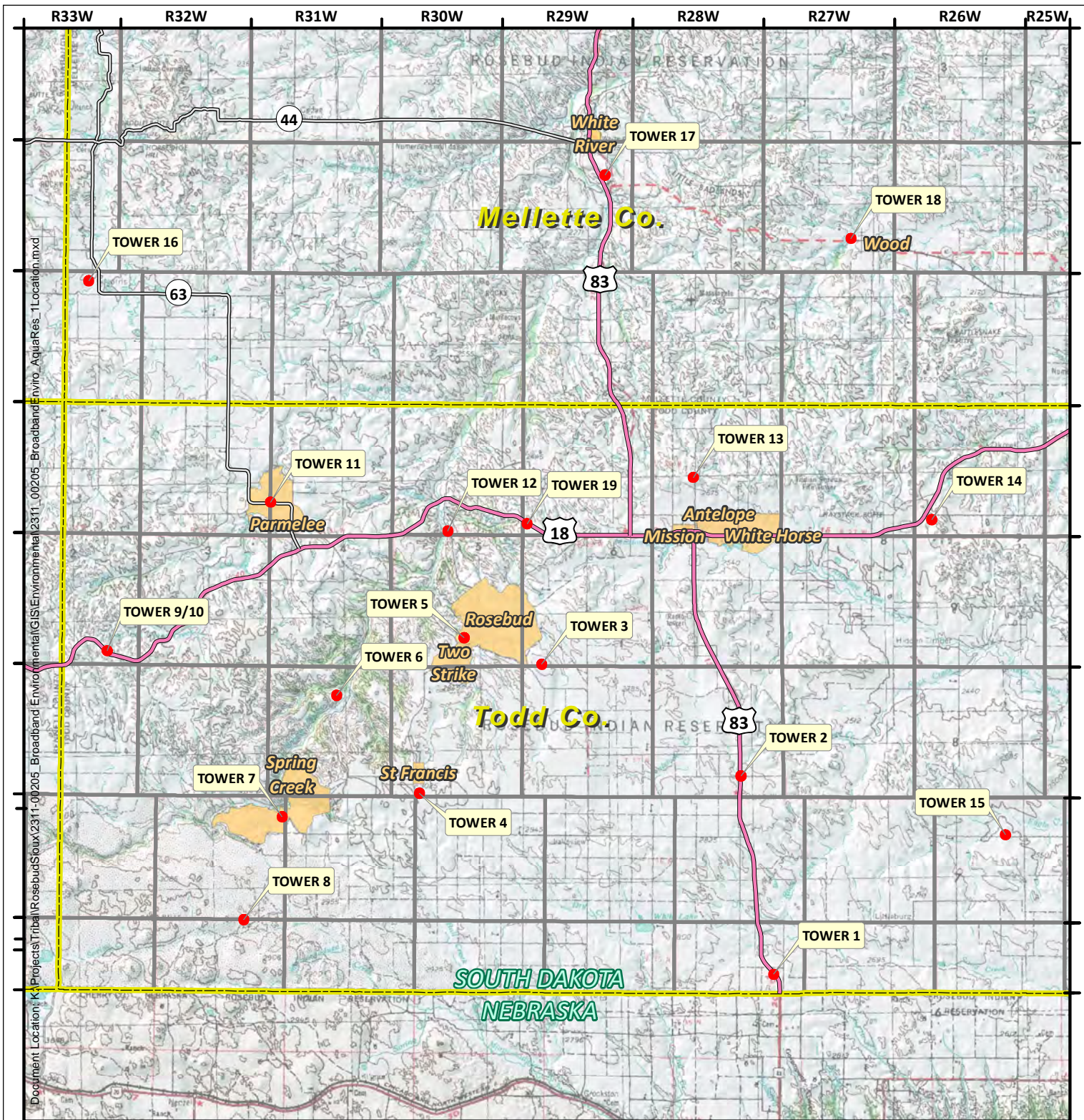
VINCENT POPYK	
EDUCATION:	<ul style="list-style-type: none">› Eastern Michigan University- MS Ecology, Evolution, and Organismal Biology› Madonna University – BS Biology
TRAINING:	<ul style="list-style-type: none">› Wetland Training Institute, Inc. – 40-hour Army Corps of Engineers Wetland Delineation Training Program

Tables

Plant list

Common Name	Scientific Name	Wetland indicator Status
Smooth Brome	<i>Bromus inermis</i>	UPL
Field Bindweed	<i>Convolvulus arvensis</i>	FAC
Buffalo Grass	<i>Bouteloua dactyloides</i>	FACU
Prairie Cordgrass	<i>Spartina pectinata</i>	FACW
Choke Cherry	<i>Prunus virginana</i>	FACU
White Sagebrush	<i>Artemisia ludoviciana</i>	UPL
Fragrant Sumac	<i>Rhus aromatica</i>	UPL
False Bonset	<i>Brickellia eupatorioides</i>	FAC
Tall Fescue	<i>Schedonorus arundinaceus</i>	FACU
Green Needle Grass	<i>Nassella viridula</i>	FAC
Big Blue Stem	<i>Andropogon gerardii</i>	FACU
Crested Wheat Grass	<i>Agropyron cristatum</i>	FAC
Stiff Leaved Goldenrod	<i>Solidago rigida</i>	FACU
Western Snowberry	<i>Symphoricarpos occidentalis</i>	FACU
Intermedeate Wheatgrass	<i>Thinopyrum intermedium</i>	FACU
Blue Gramma	<i>Bouteloua gracilis</i>	FAC
Yellow Sweet Clover	<i>Melilotus officinalis</i>	FACU
Prairie Rose	<i>Rosa arkansana</i>	FACU
Switch Grass	<i>Panicum virgatum</i>	FAC
Lead Plant	<i>Amorpha canescens</i>	FAC
Grass Leaved Goldenrod	<i>Euthamia graminifolia</i>	FACW
Prairie Sunflower	<i>Helianthus petolaris</i>	FAC
Buffalo Bur	<i>Solanum rostratum</i>	FAC
Leadplant	<i>Sporobolus heterolepis</i>	UPL
Horay Puccon	<i>Lithospermum canescens</i>	FAC
Alfalfa	<i>Medicago sativa</i>	FAC

Figures



Project Location Map **Broadband Towers Installation** **Wetland Delineation** **Todd & Mellette Counties, South Dakota**

- Project Location
- Incorporated City Boundary










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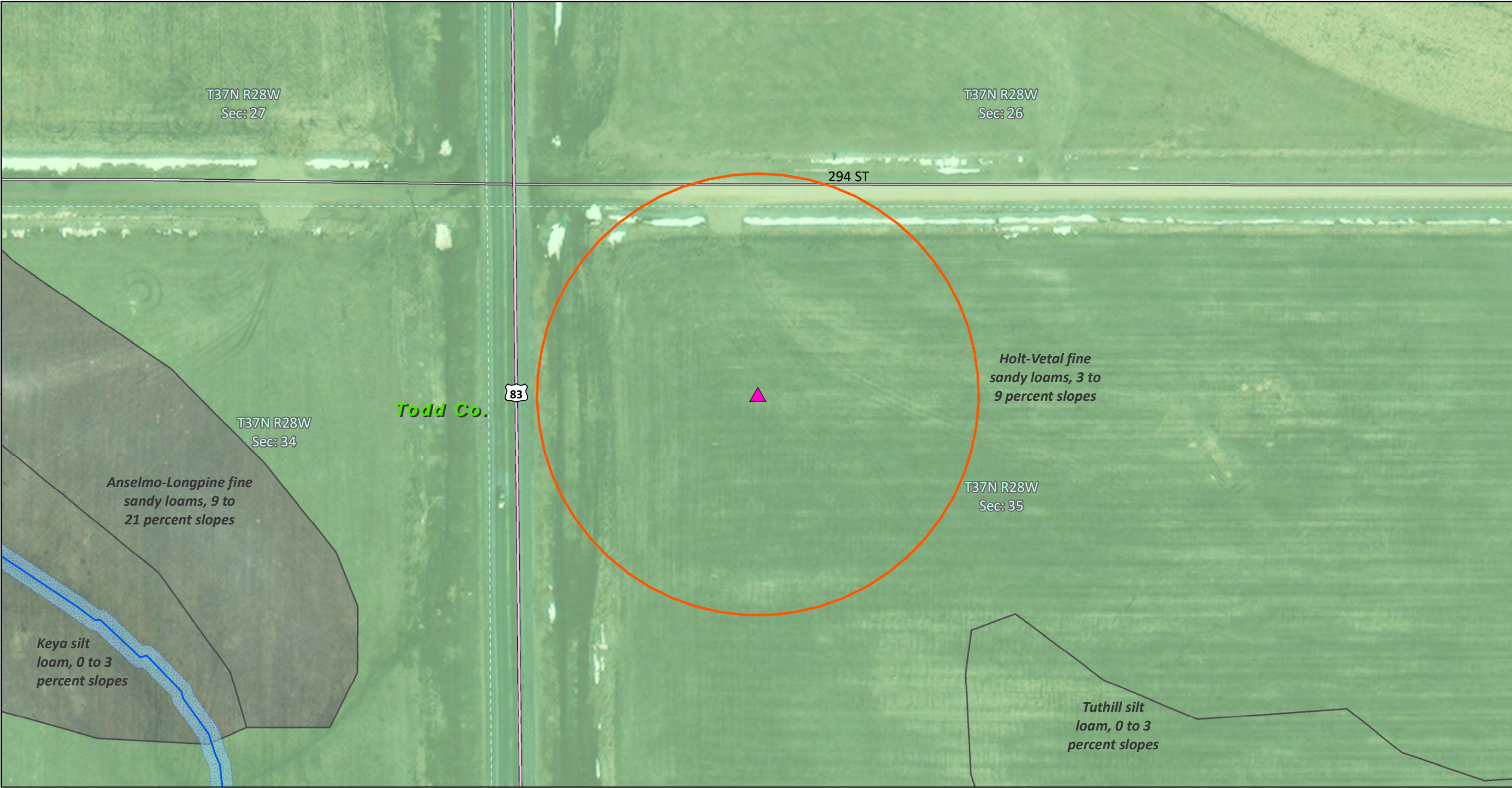
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KLJ Project Number: 2311-00205
 Date Created: 11/15/2023 | Created By: JDP



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				Project #: 2311-00205		
				Revision #: 0	Page 1 of 18	



<div><div><div><div><div><div></div><div>TOWER 2</div></div><div><div><div></div><div>Study Area</div></div><div><div><div></div><div>NHD Flowline</div></div><div><div><div></div><div>USFWS NWI Wetlands</div></div><div><div><div></div><div>US Highway</div></div></div><div><div><div></div><div>Local Roads</div></div><div><div><div></div><div>Soil Hydric Rating</div></div><div><div><div></div><div>Predominantly nonhydryc (1 to 32%)</div></div><div><div><div></div><div>Nonhydryc (0%)</div></div></div></div><div><div>* Legend only shows items in vicinity of project/map view</div></div></div></div></div></div></div></div></div></div></div>	<div>Aerial Photograph Map</div> <div><div>Broadband Towers Installation</div><div>Wetland Delineation</div><div>Todd & Mellette Counties, South Dakota</div></div> <div><div>050100200</div><div>Feet</div></div>		<div><div><div><div><div></div><div>N</div><div>W</div><div>E</div><div>S</div></div><div><div>KLJ</div><div>330 Knollwood Drive Rapid City, SD kljeng.com</div></div></div><div>Created by: jeffprice</div><div>Date: 11/15/2023</div><div>Project #: 2311-00205</div></div><div><div><div><div><div></div><div>TOWER 2</div></div><div>Todd County</div></div></div><div>Revision #: 0</div><div>Page 2 of 18</div></div></div>	
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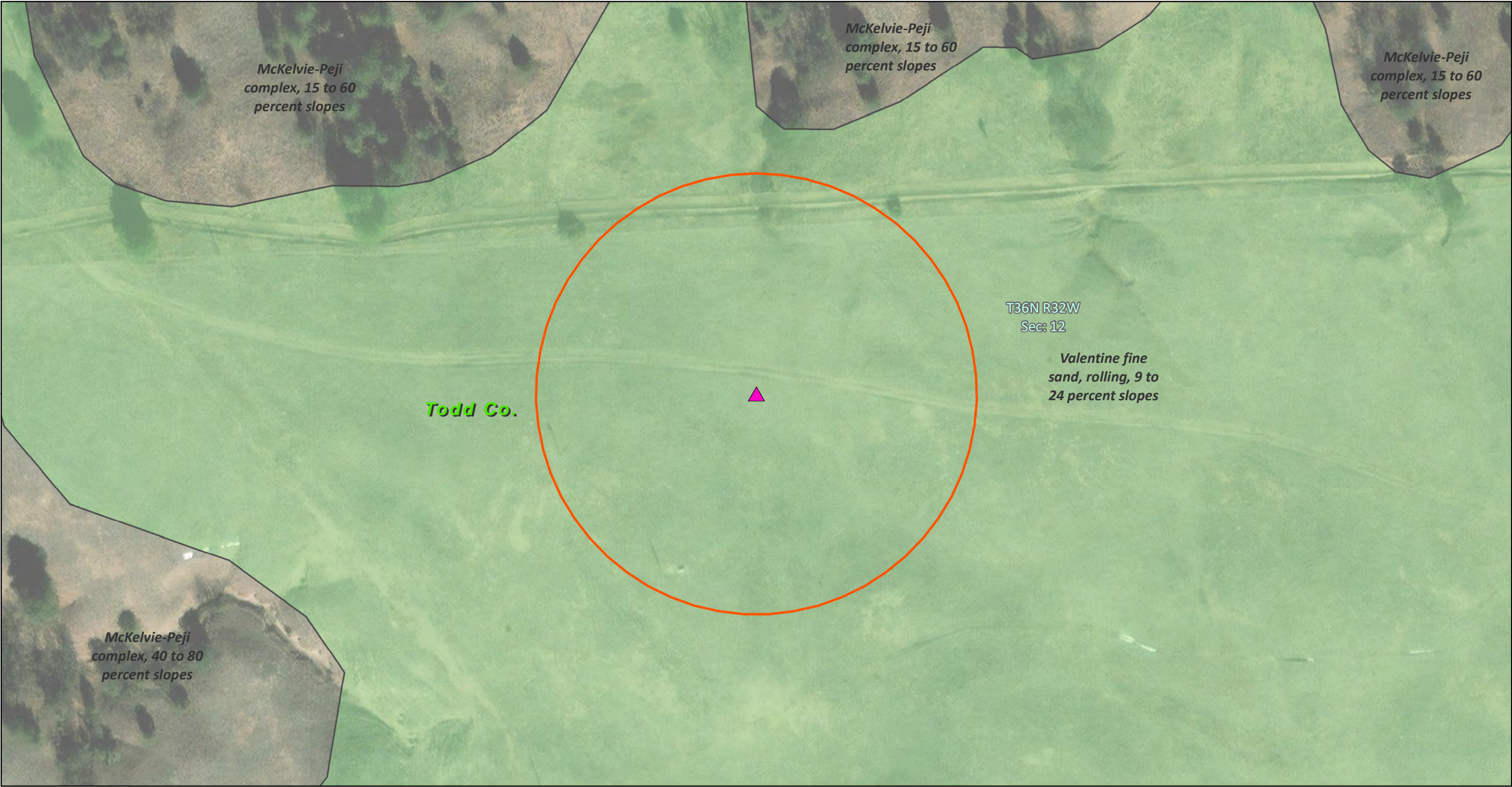
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			Project #: 2311-00205			
					Revision #: 0	Page 4 of 18



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R32W
Sec: 34

T35N
R32W
Sec: 3

T36N R32W
Sec: 35




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Todd Co.

*Valentine-Els
complex, 0 to 9
percent slopes*

*Valentine fine sand,
rolling and hilly, 9
to 60 percent slopes*

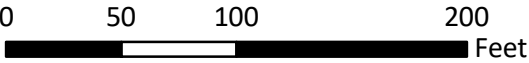
*Valentine-Tryon
fine sands, 0 to
24 percent slopes*

-  TOWER 8
-  Study Area
- Soil Hydric Rating**
-  Predominantly nonhydryc (1 to 32%)

* Legend only shows items in vicinity of project/map view

Aerial Photograph Map

**Broadband Towers Installation
Wetland Delineation
Todd & Mellette Counties, South Dakota**



 330 Knollwood Drive
Rapid City, SD
kljeng.com

Created by: jeffprice

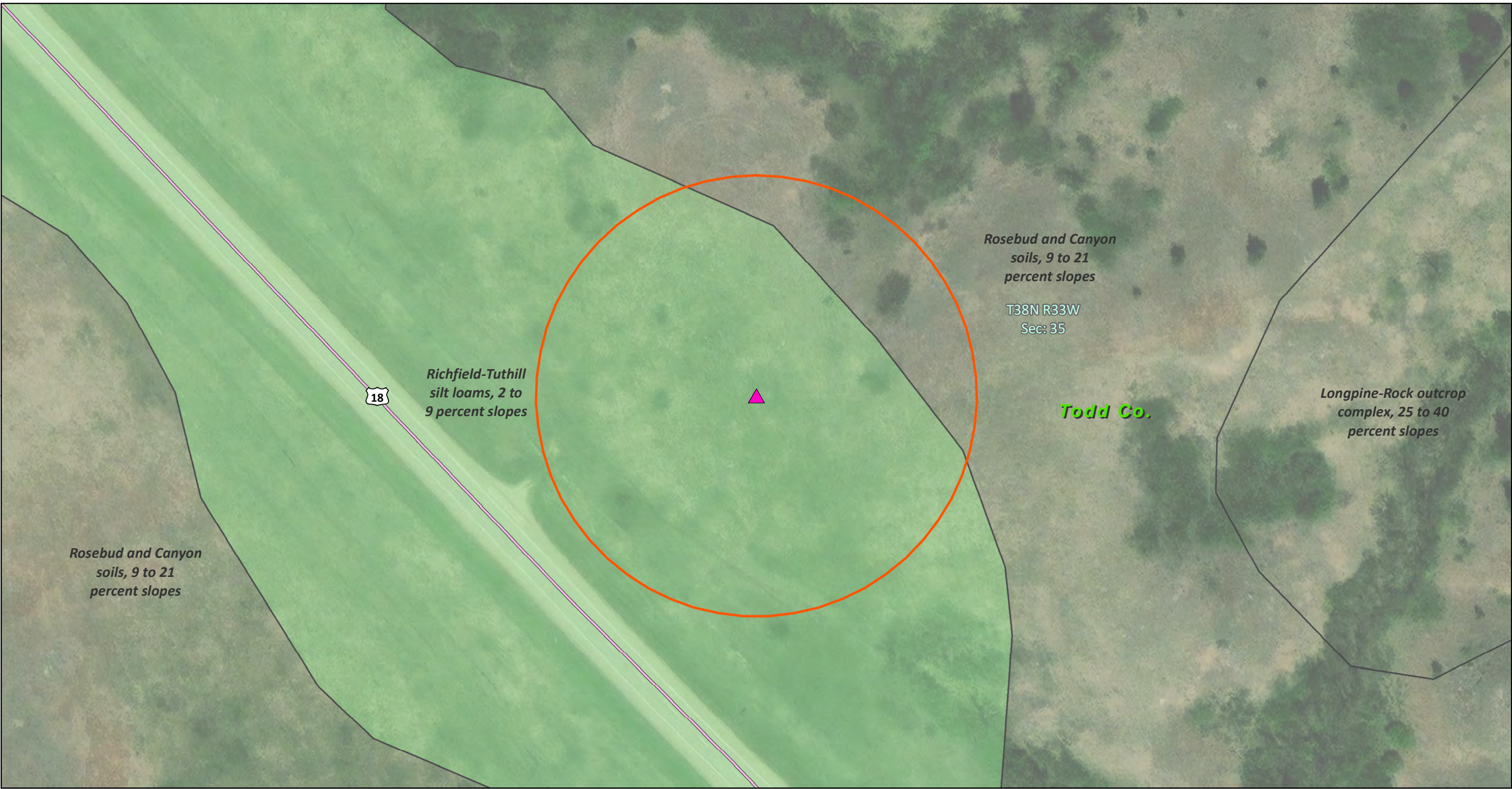
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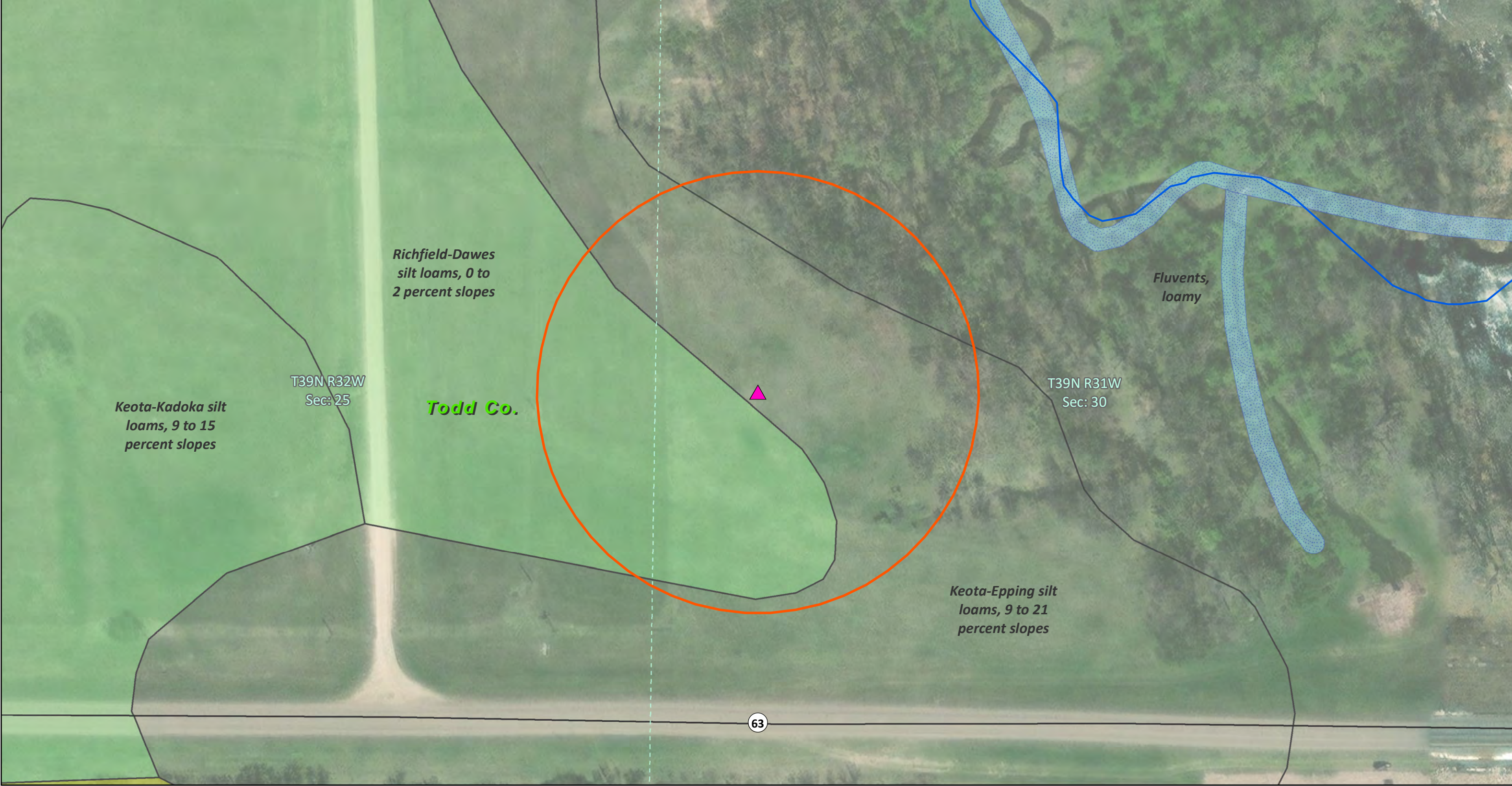


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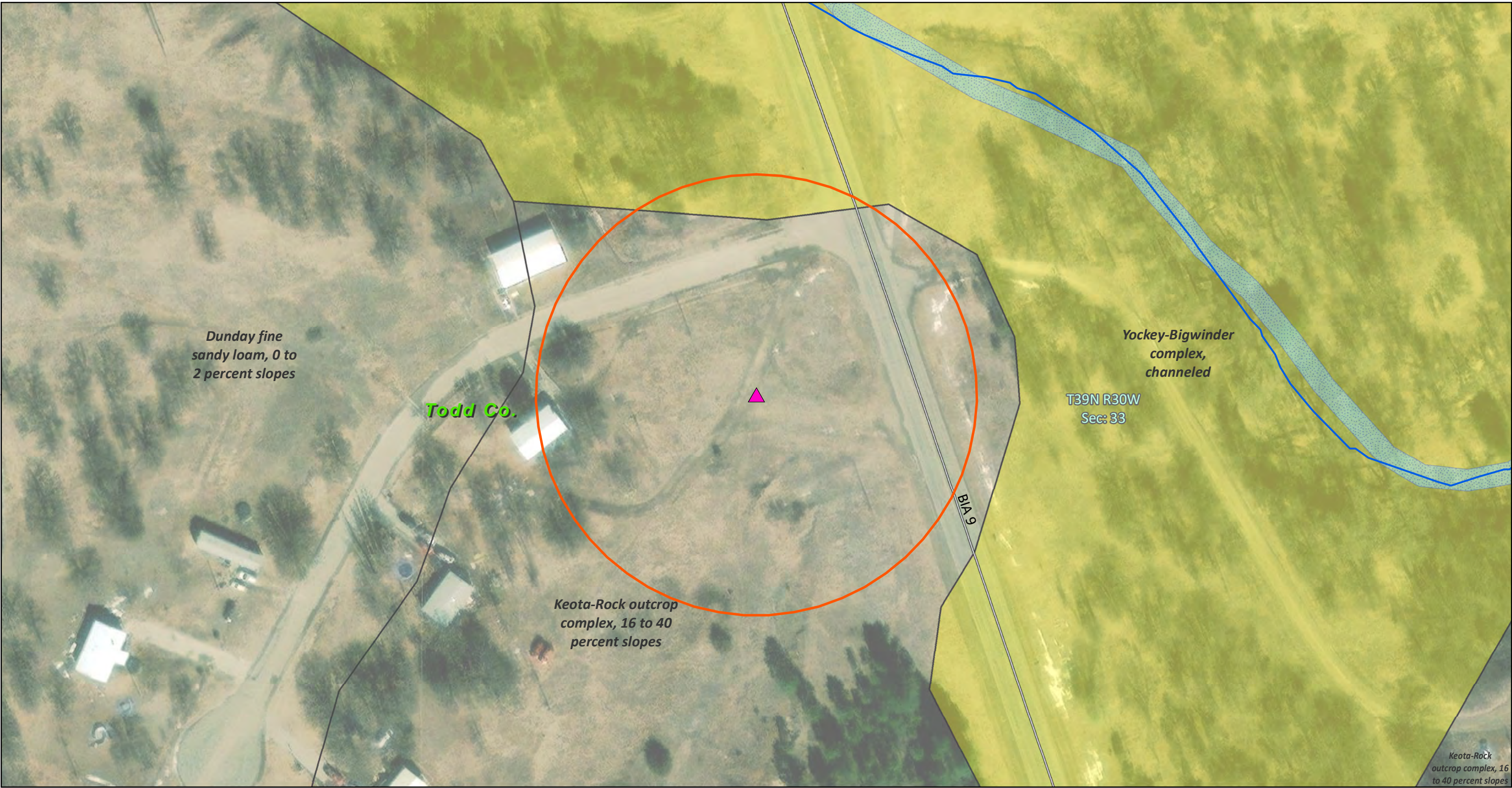


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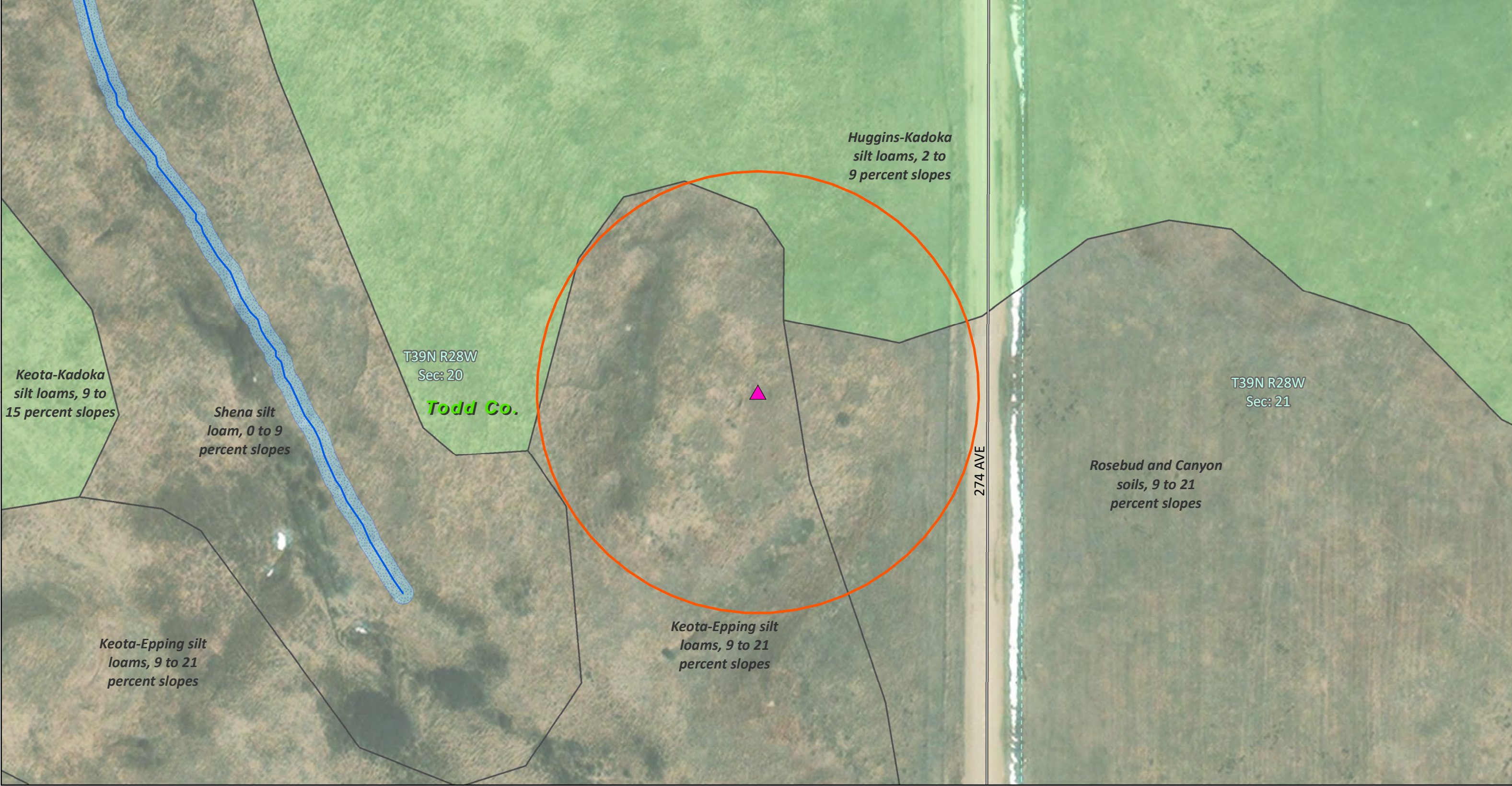


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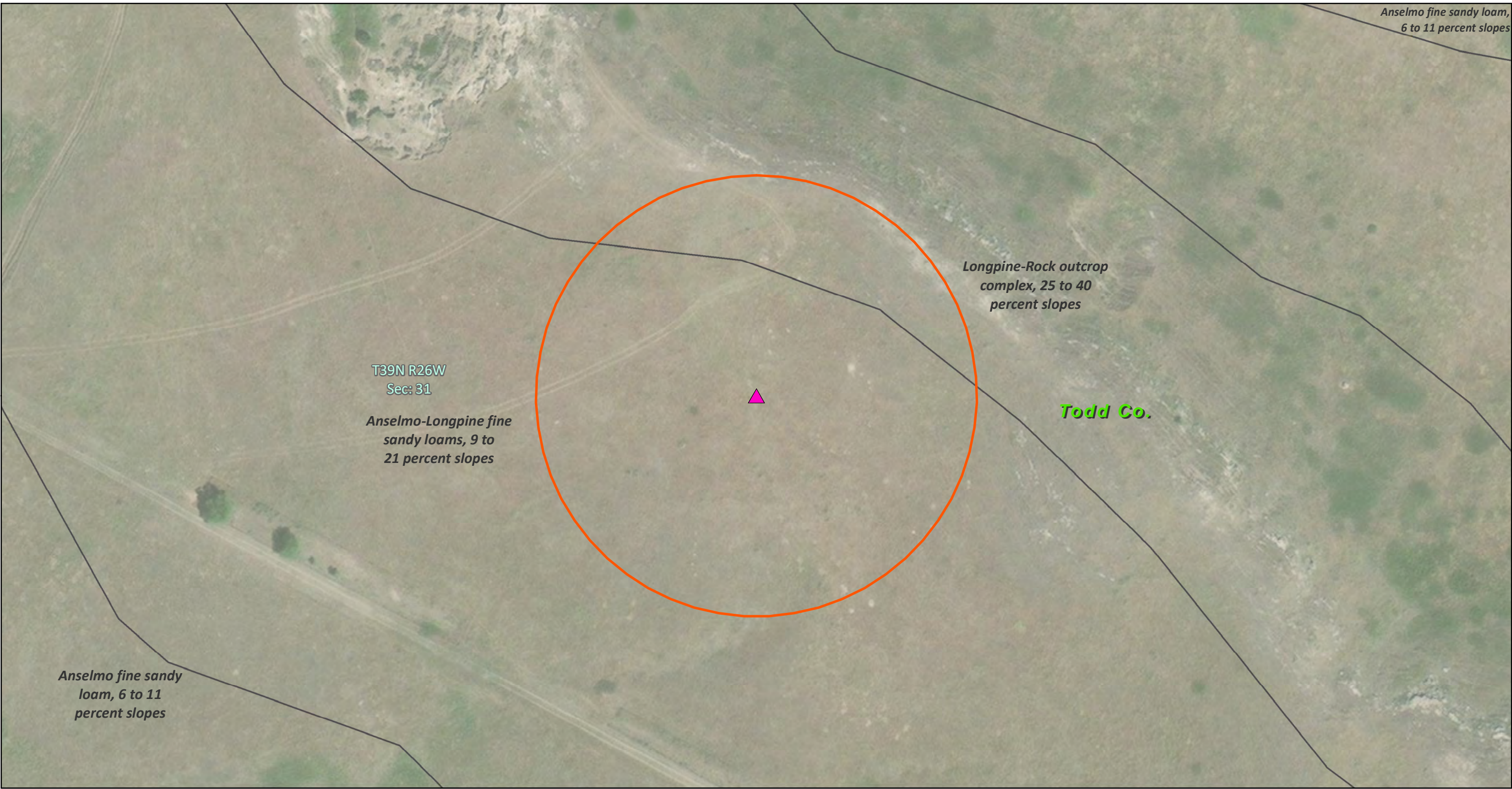


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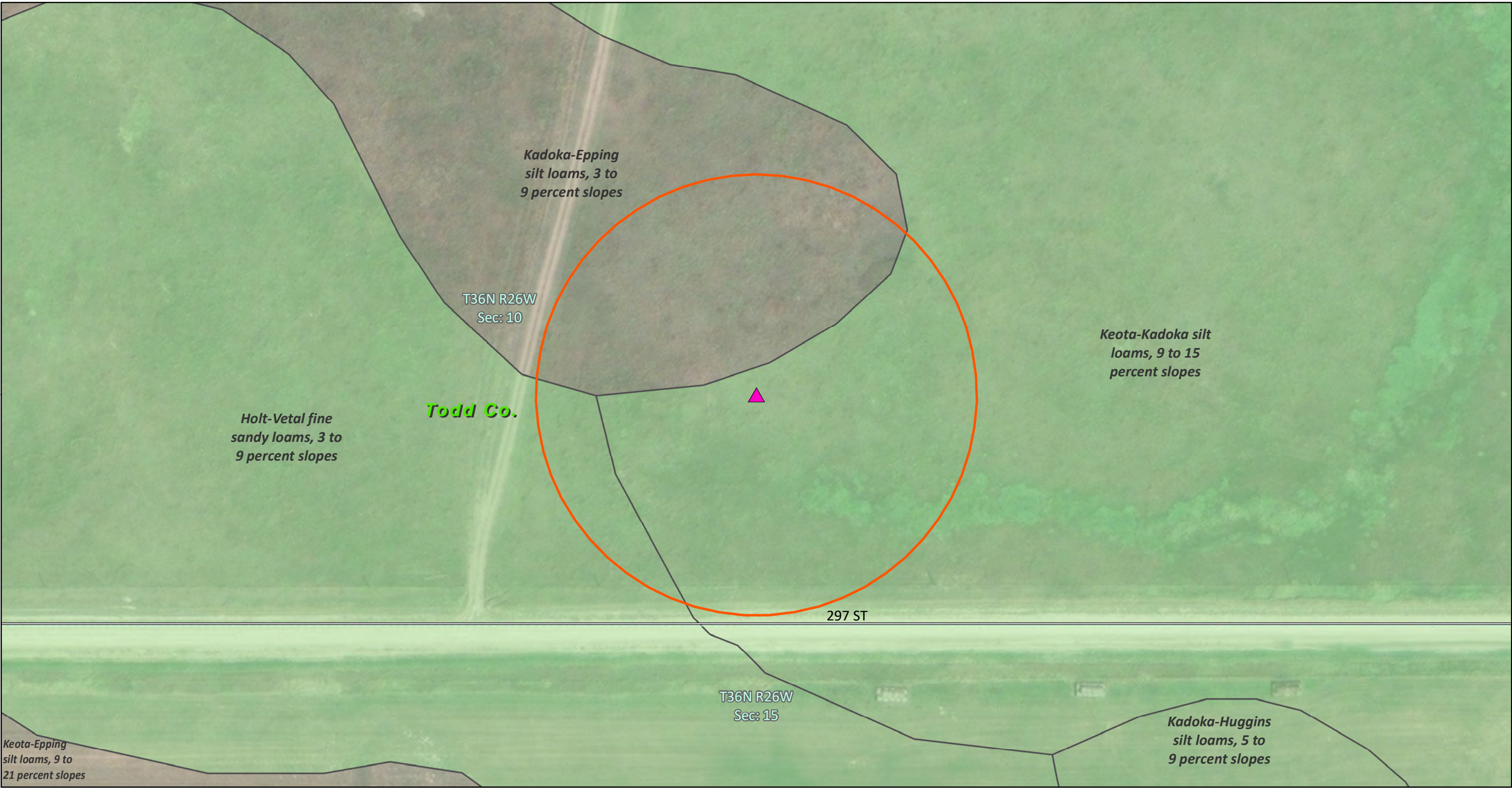


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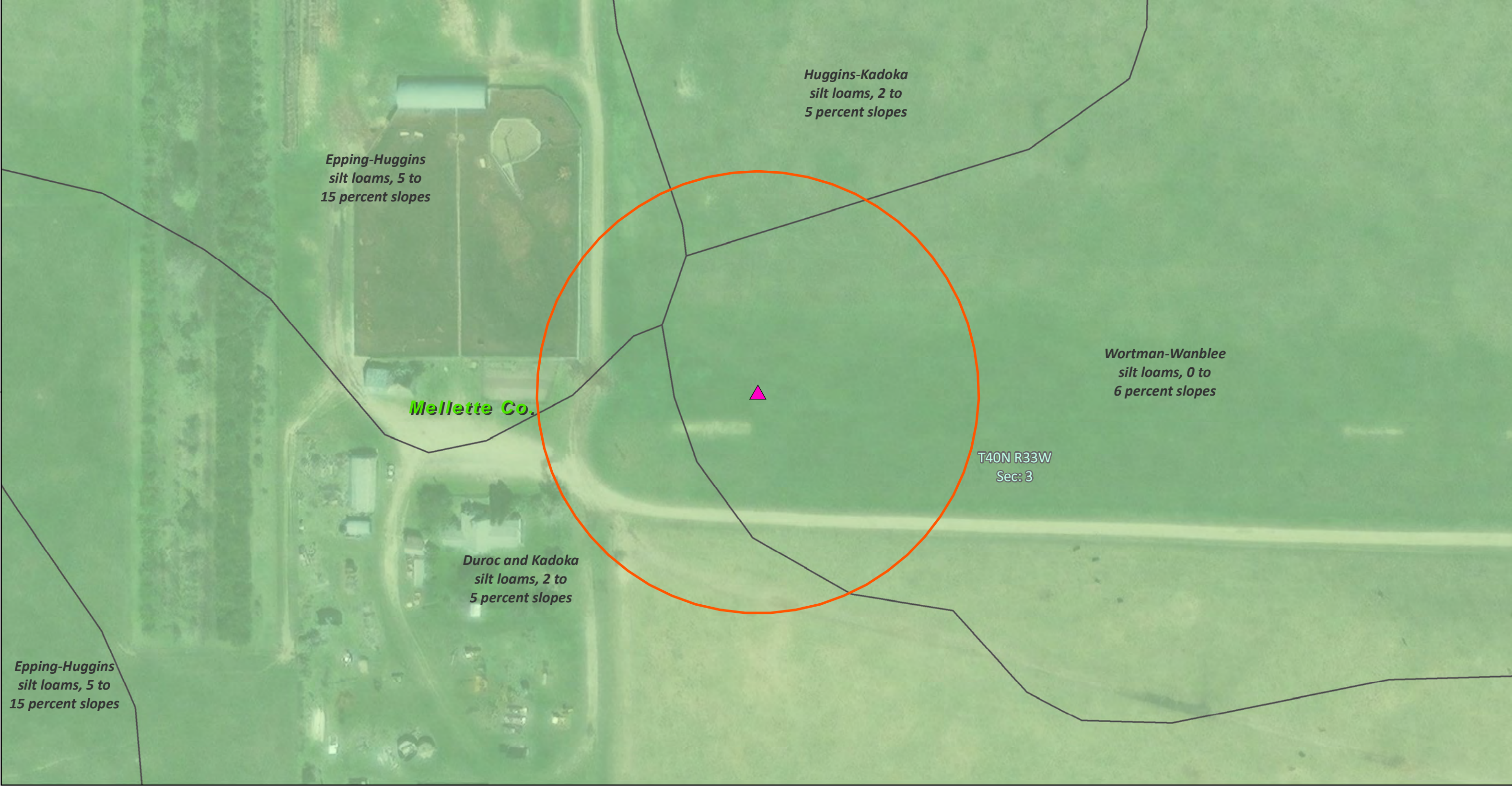
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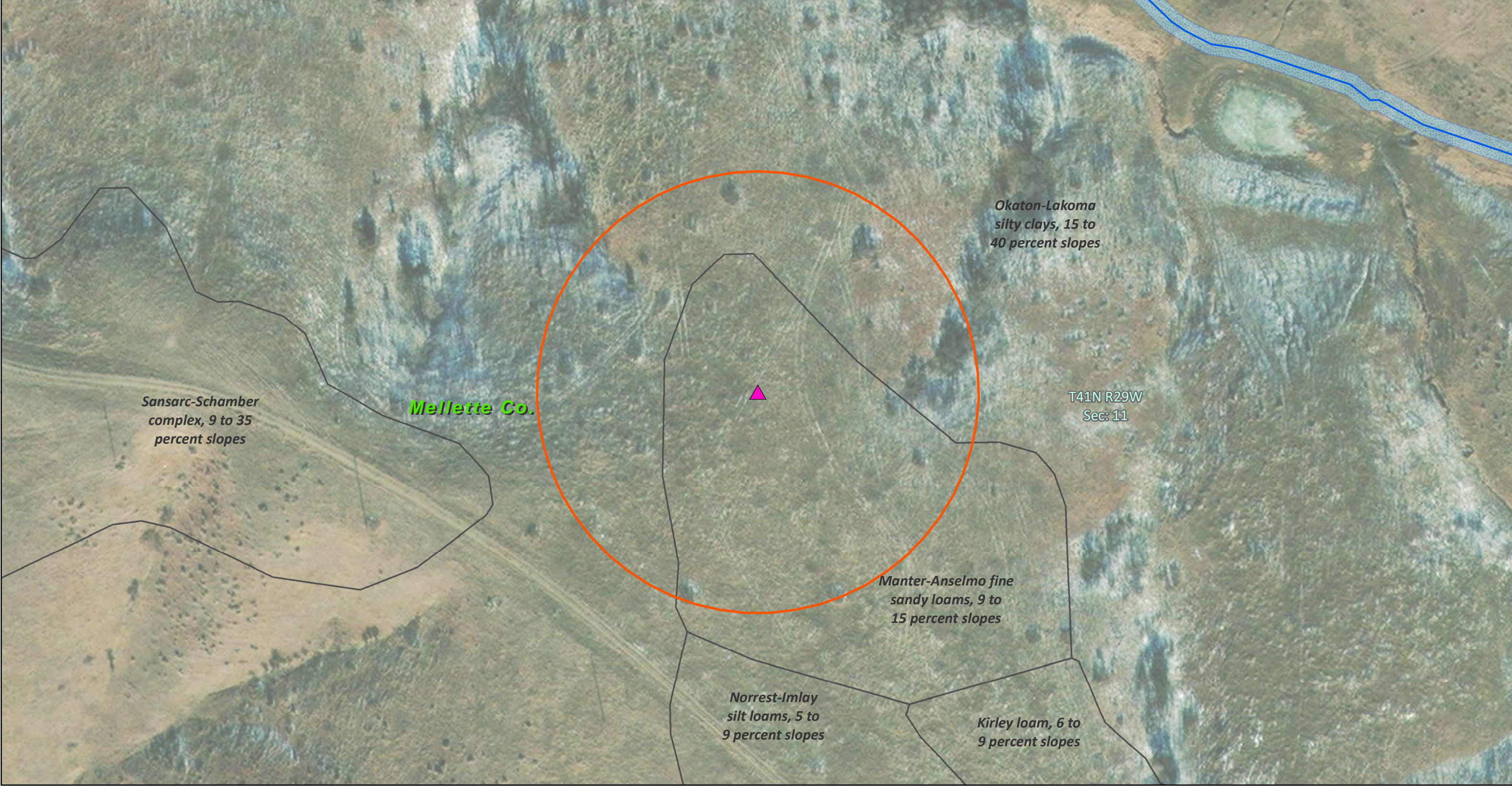
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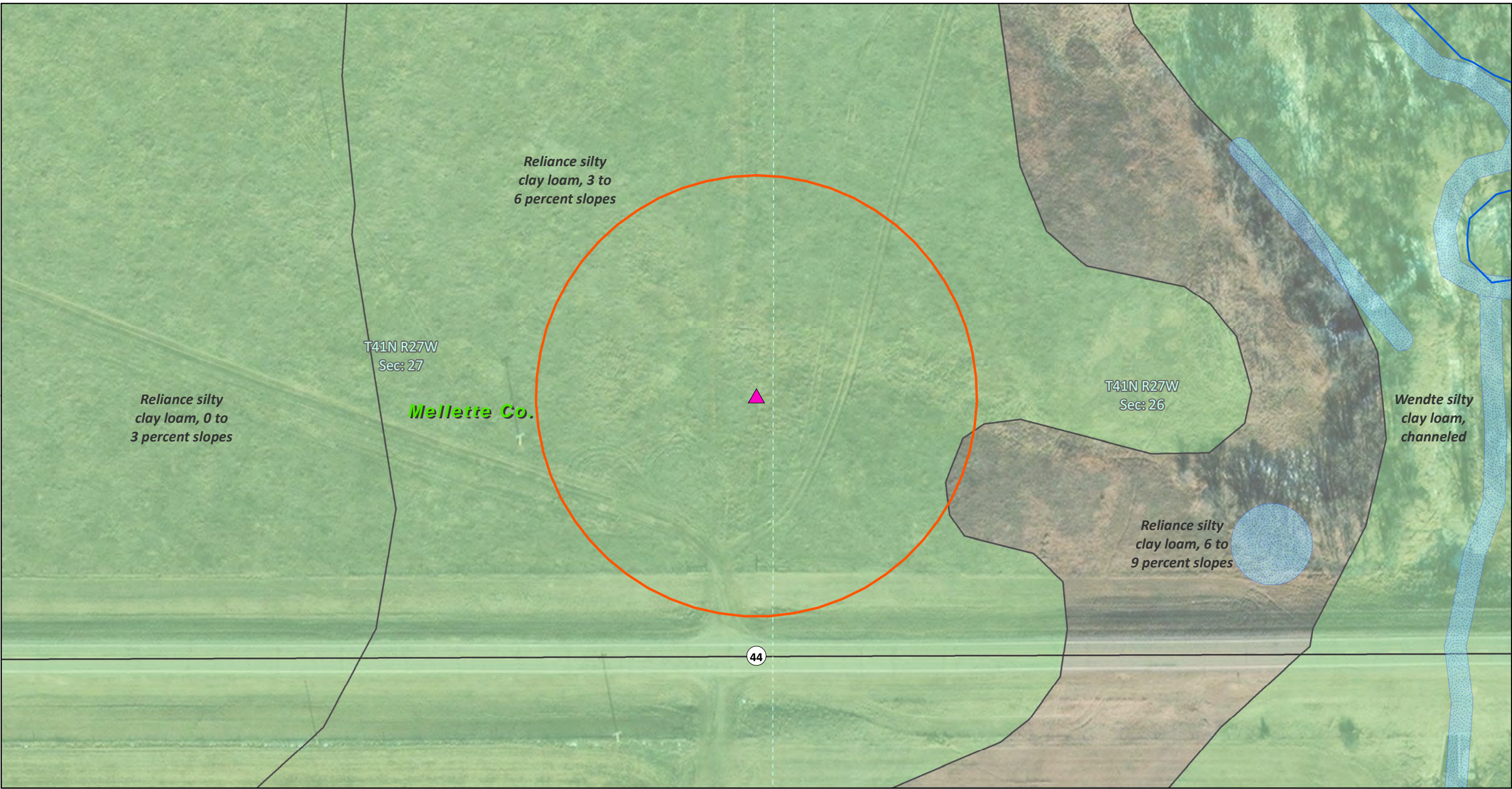
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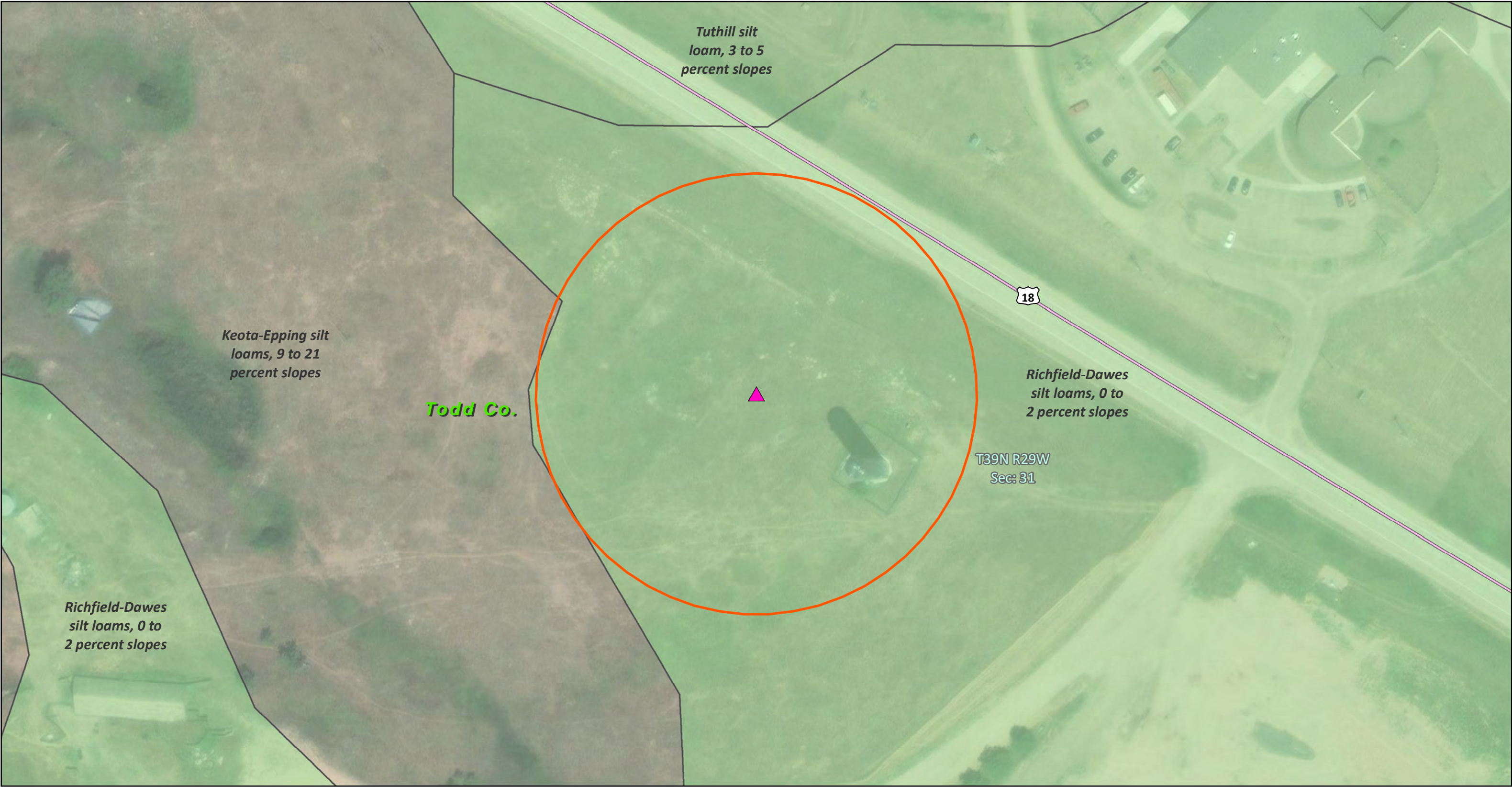
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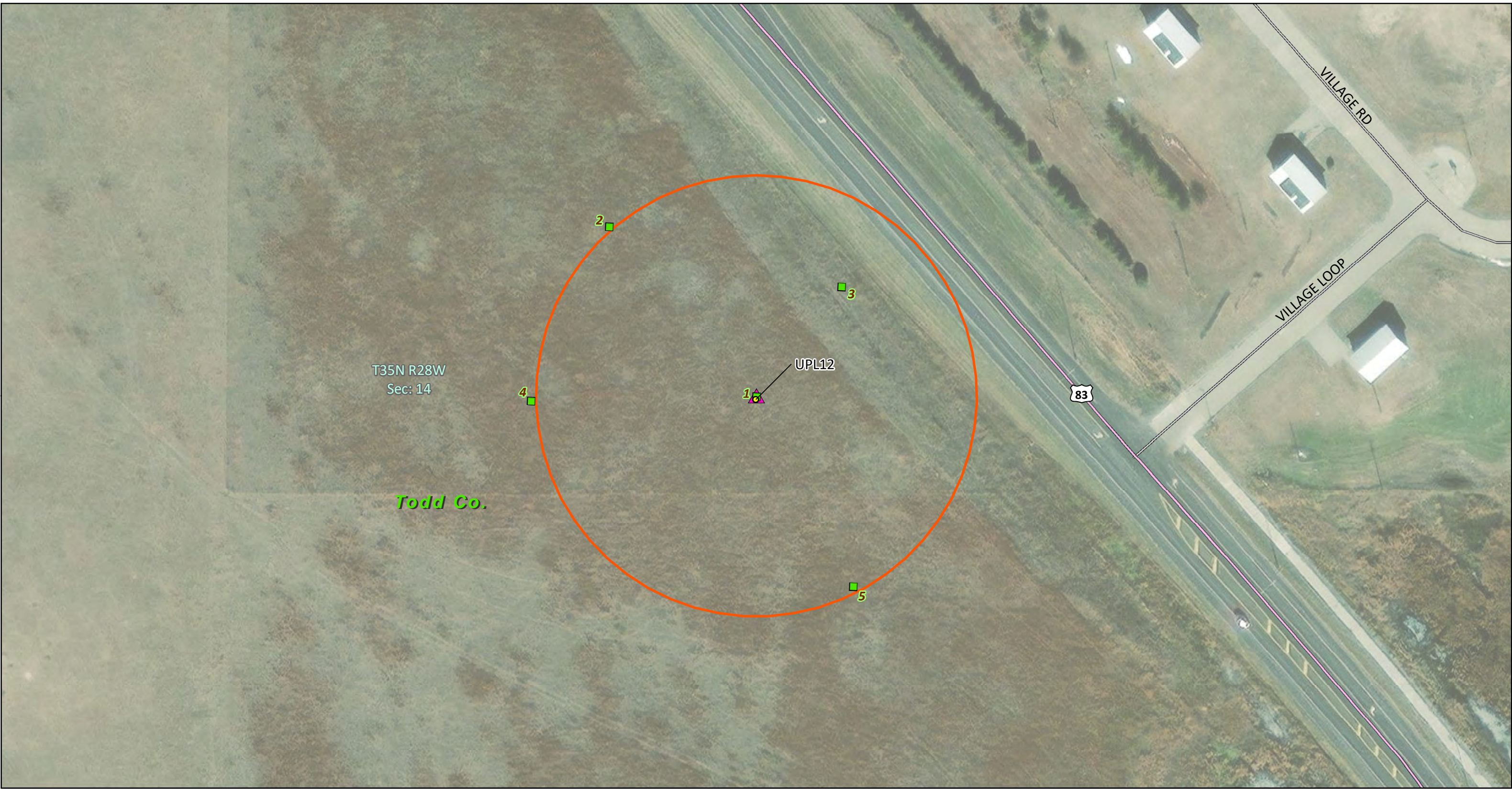
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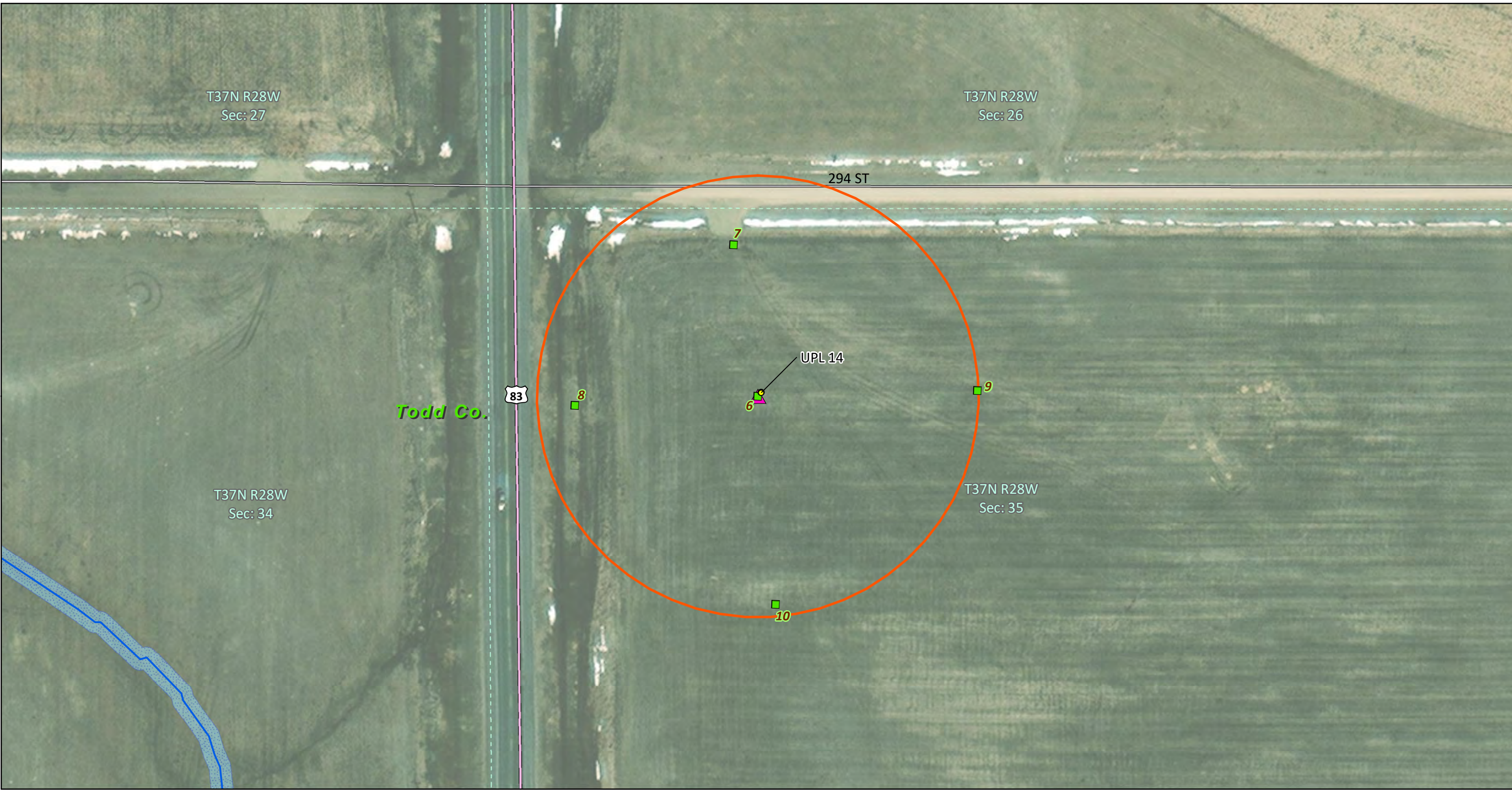


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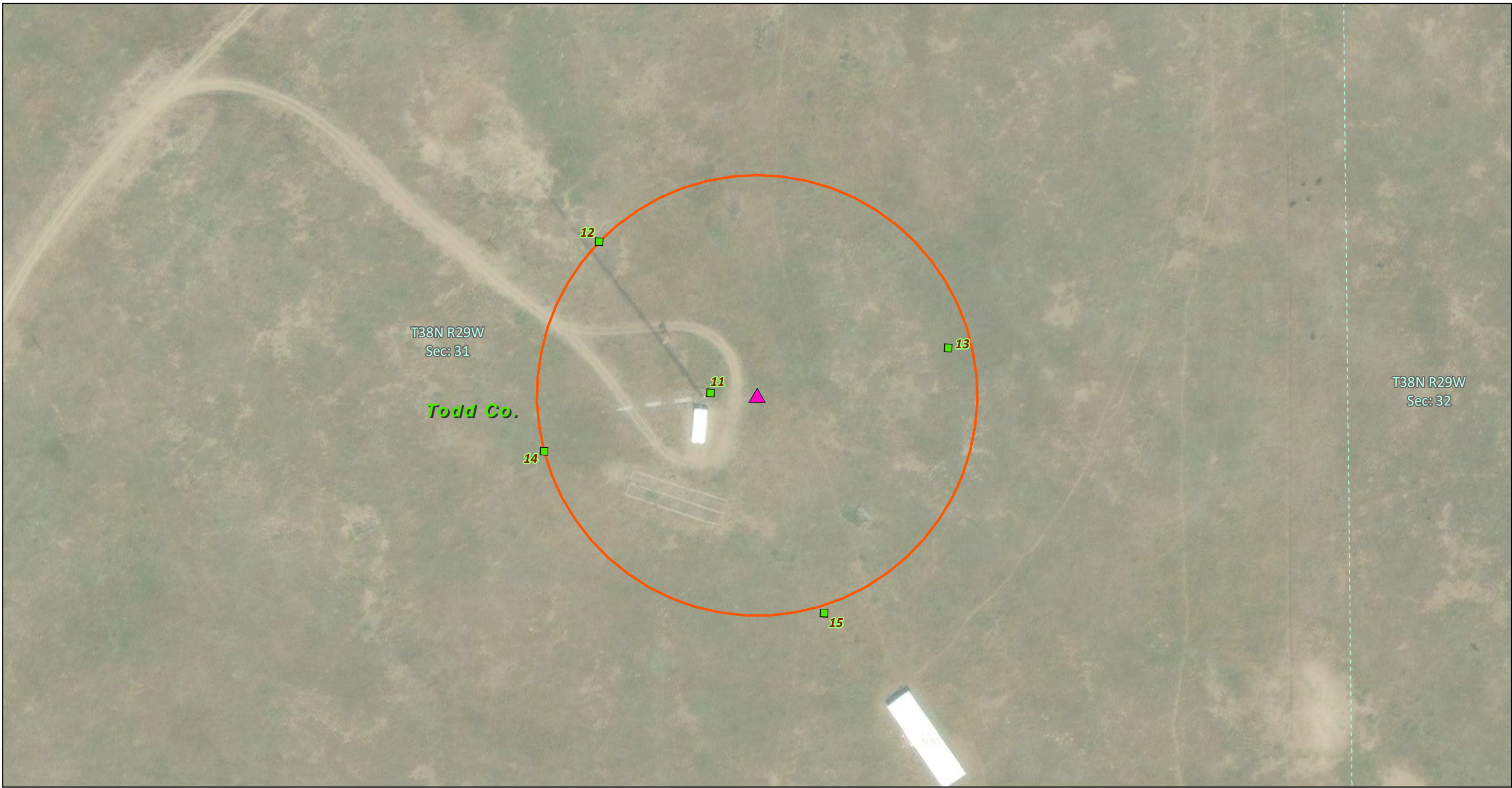


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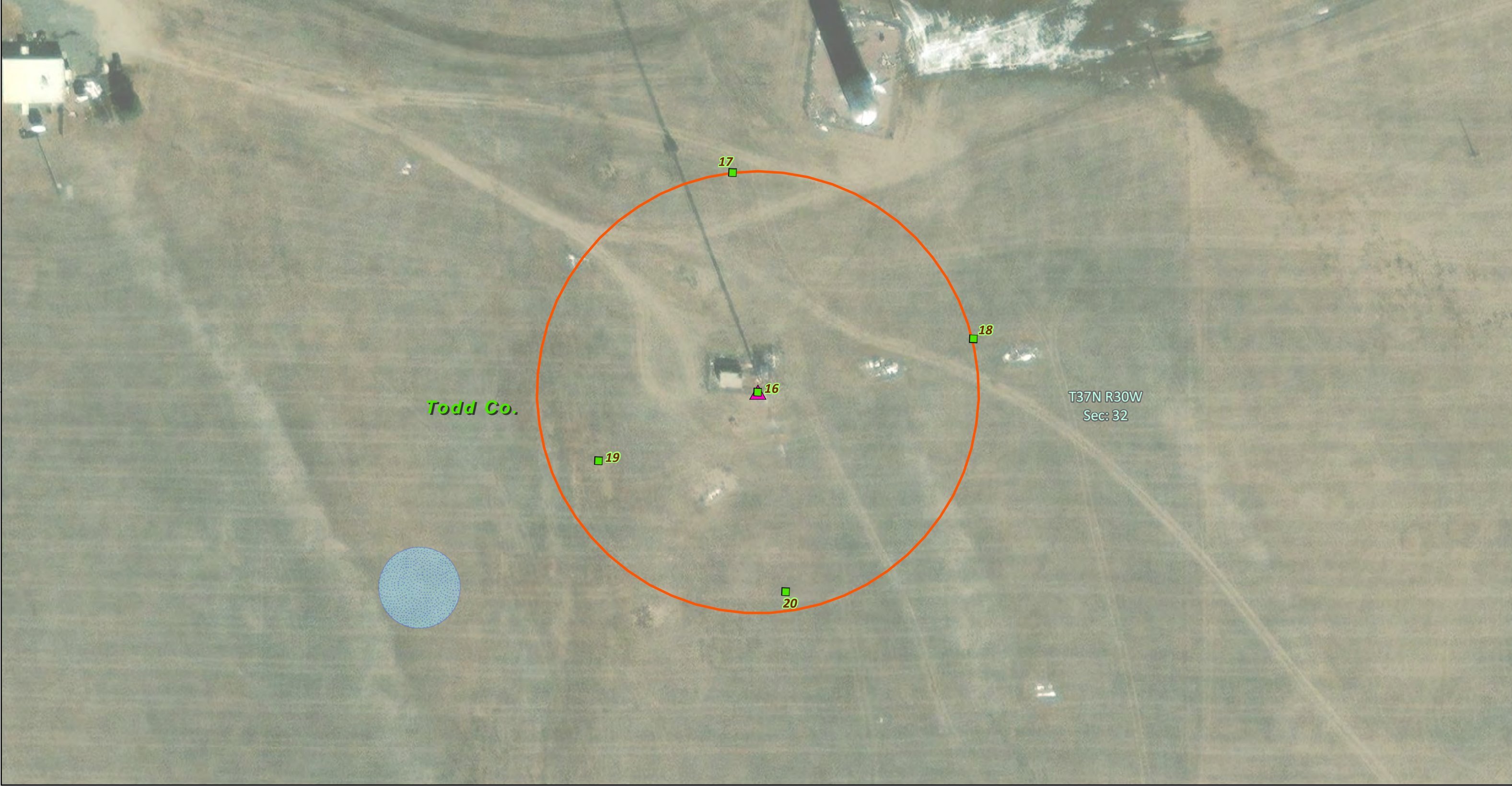
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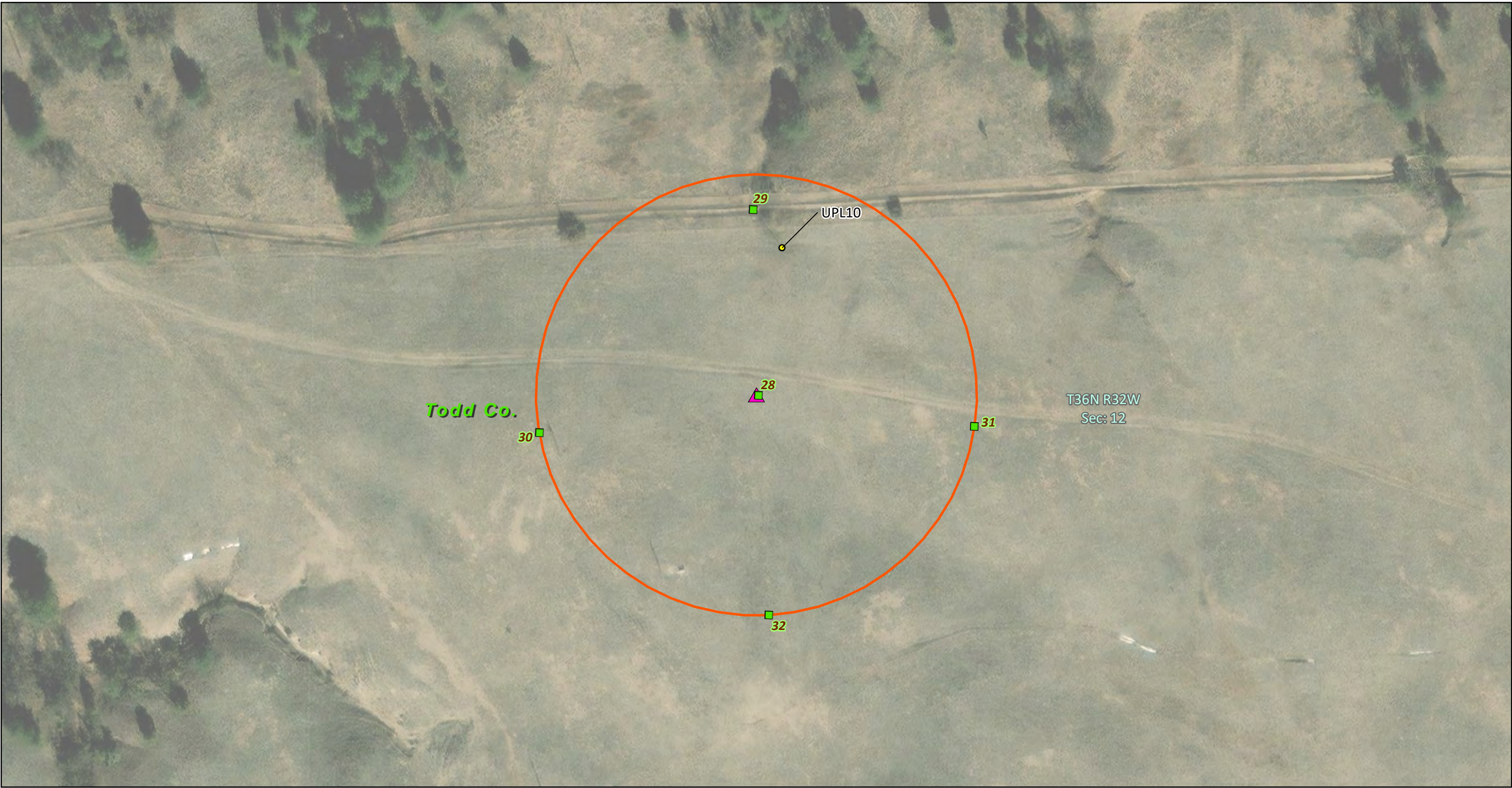


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		Revision #: 0		Page 5 of 18	

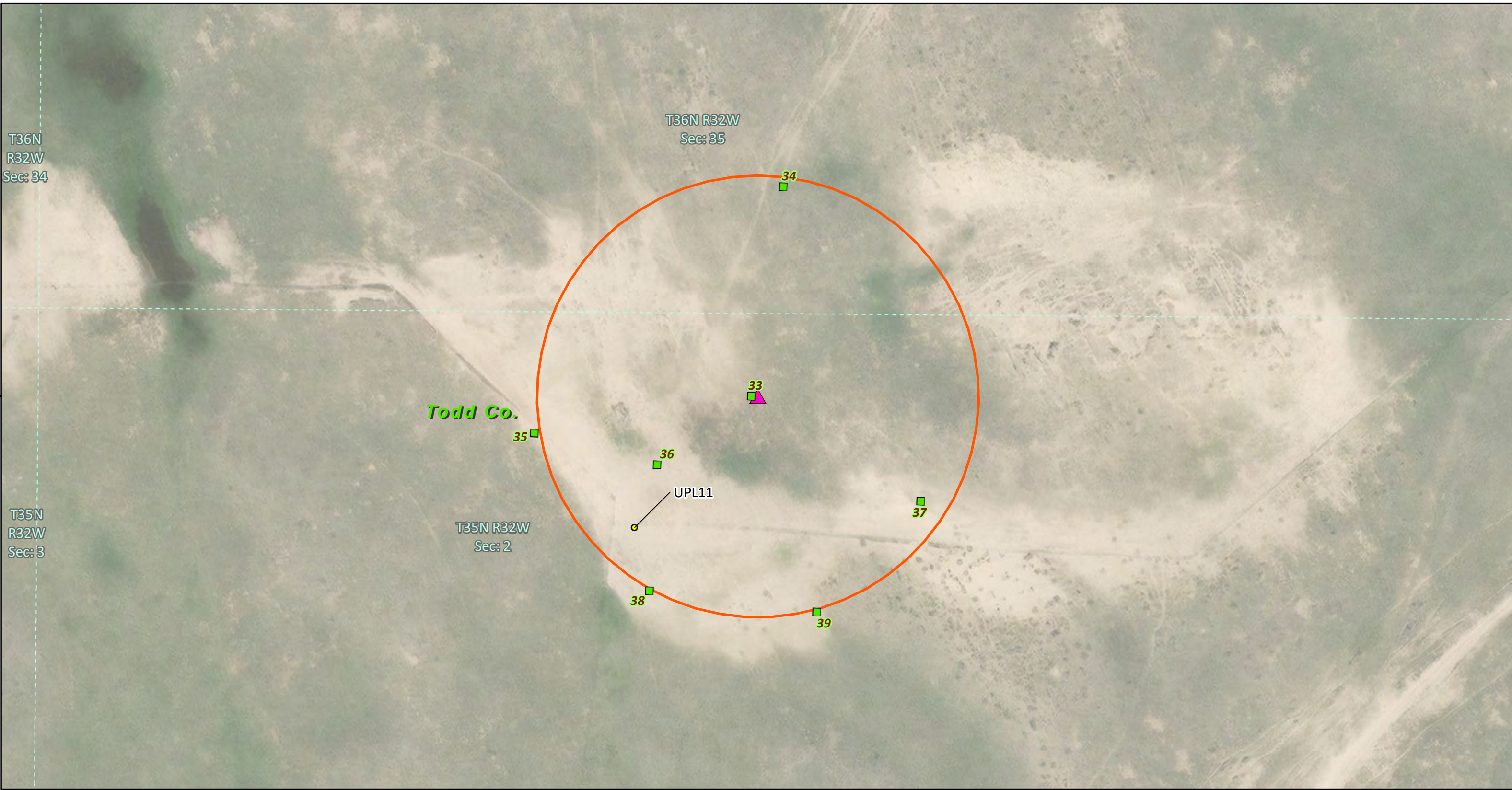
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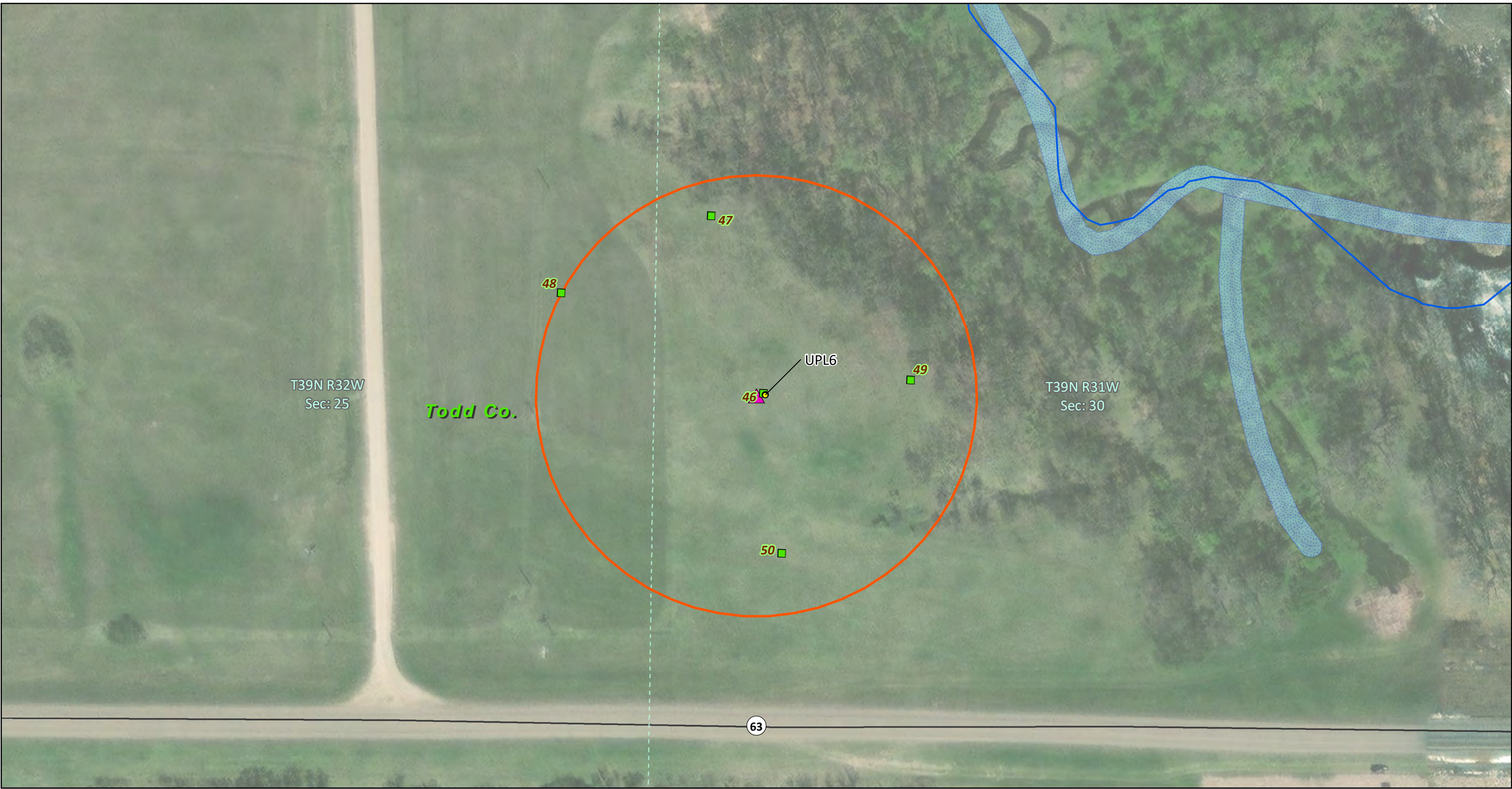


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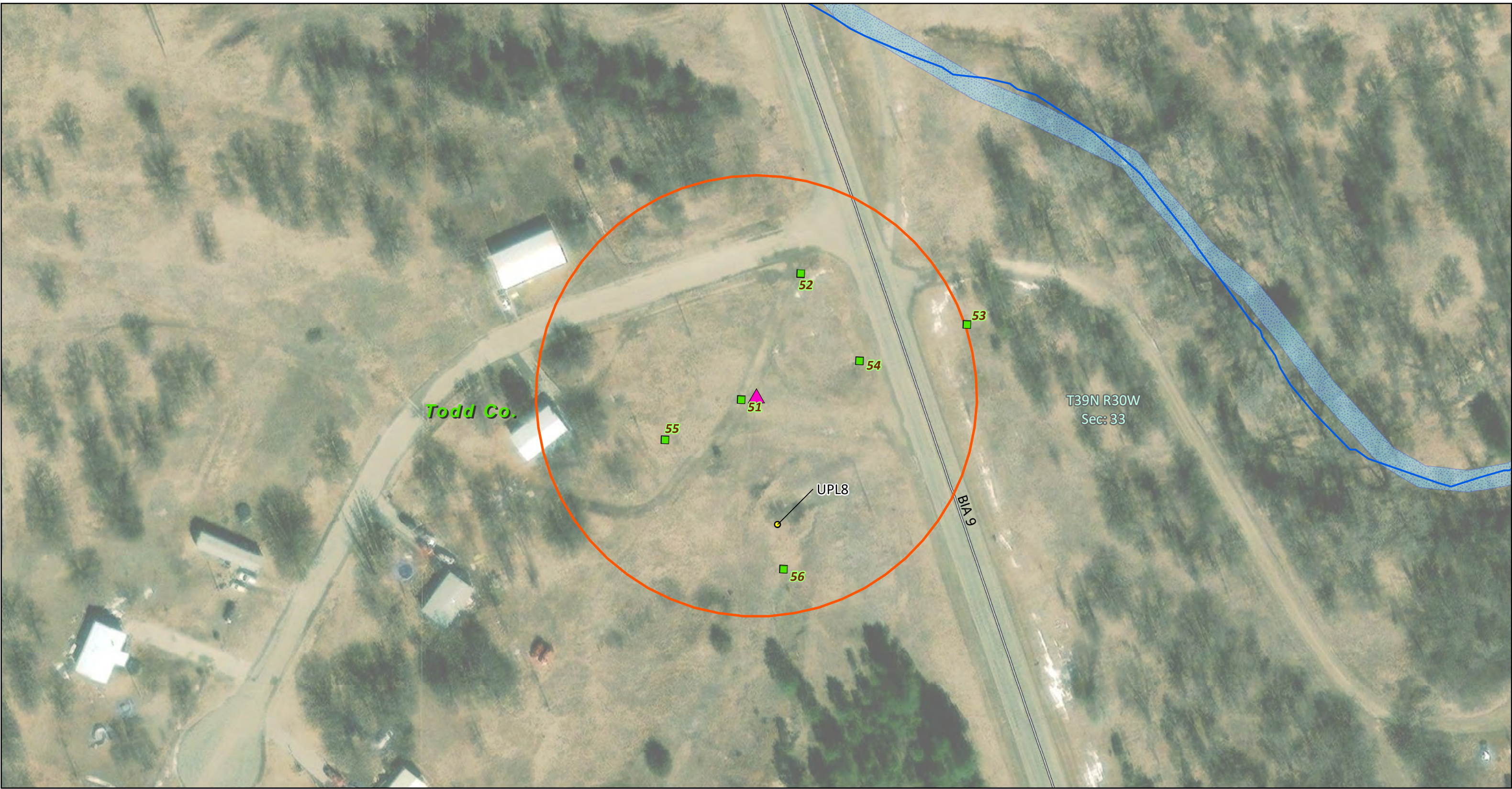
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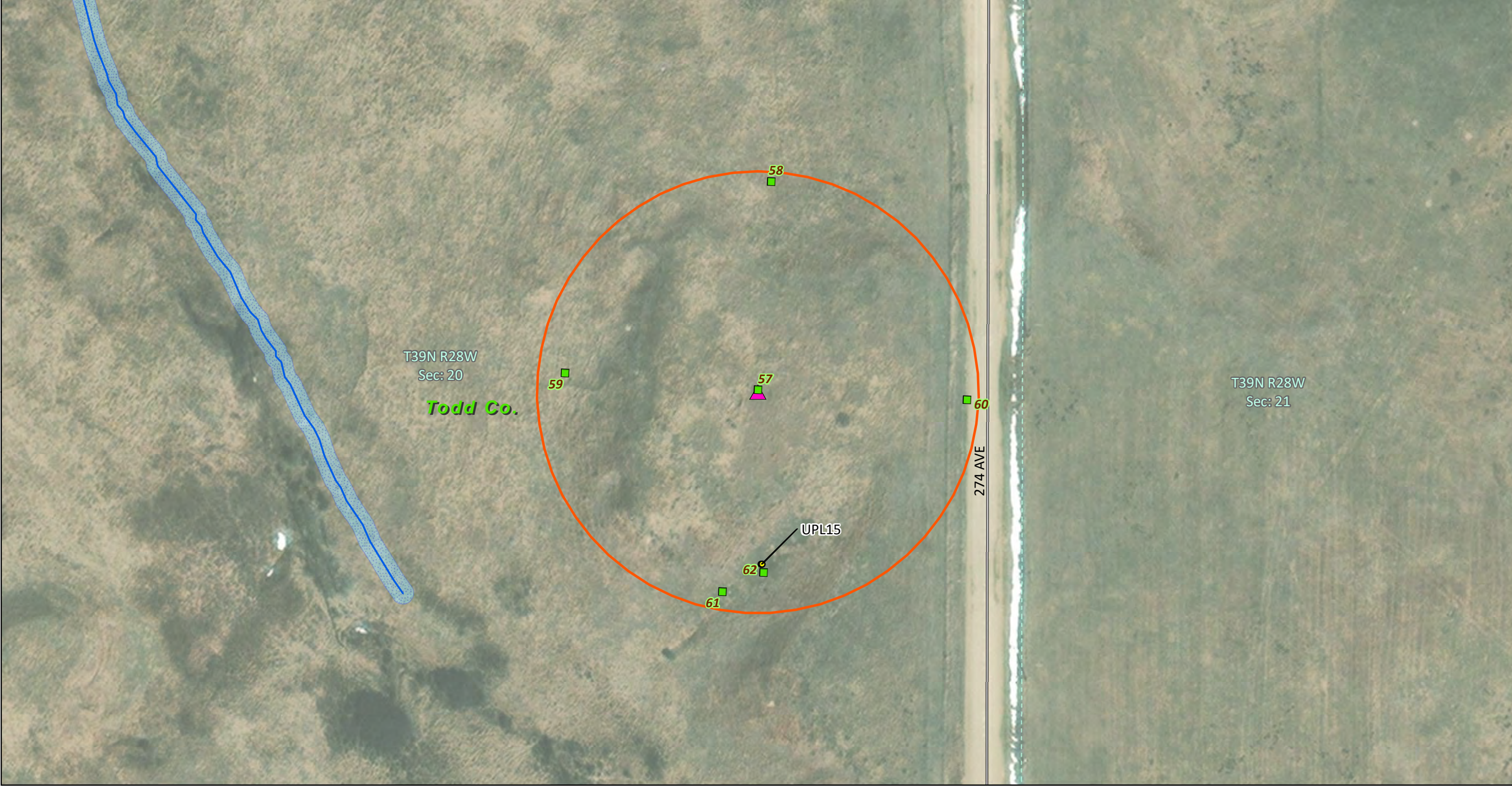
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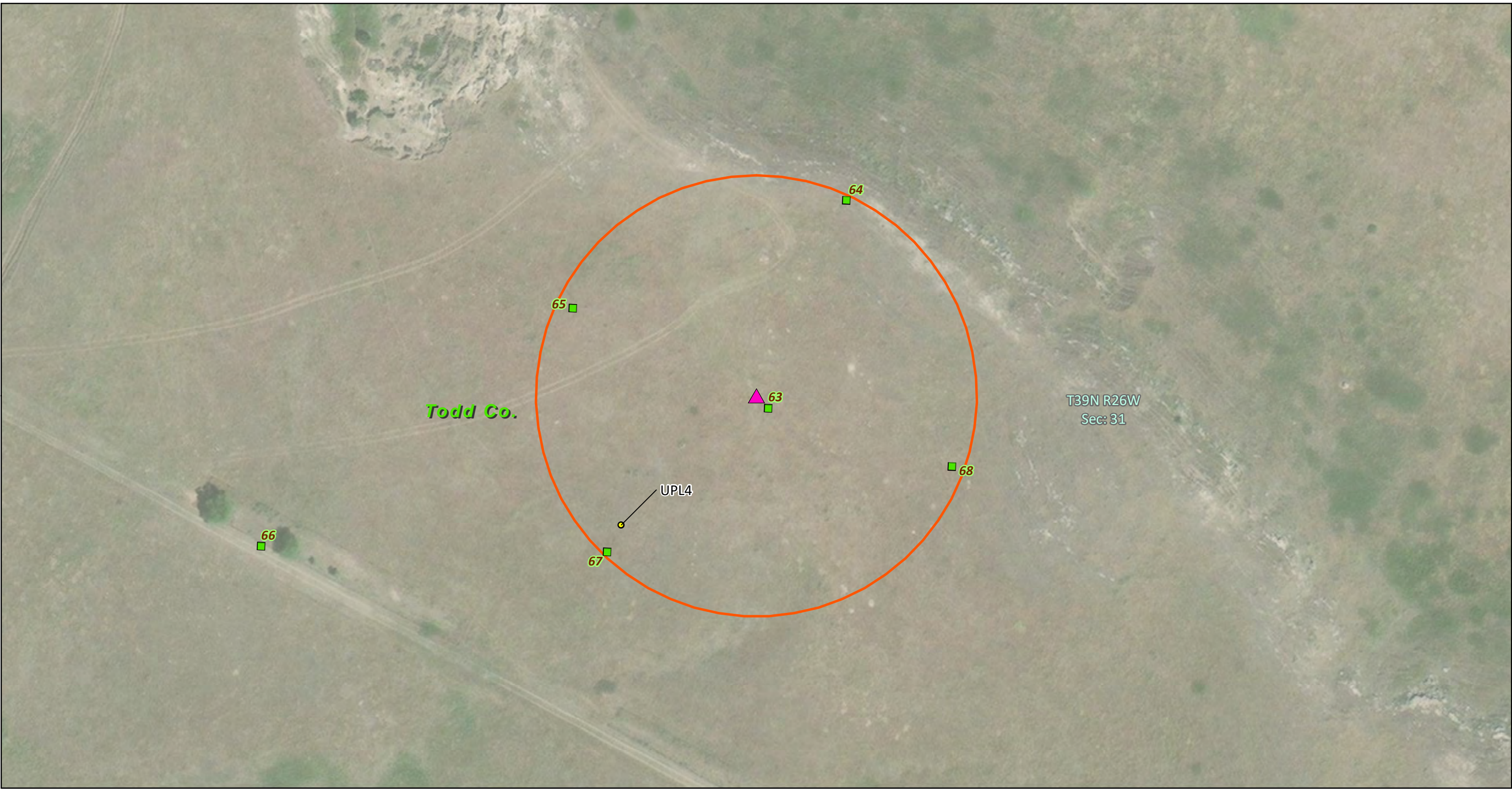
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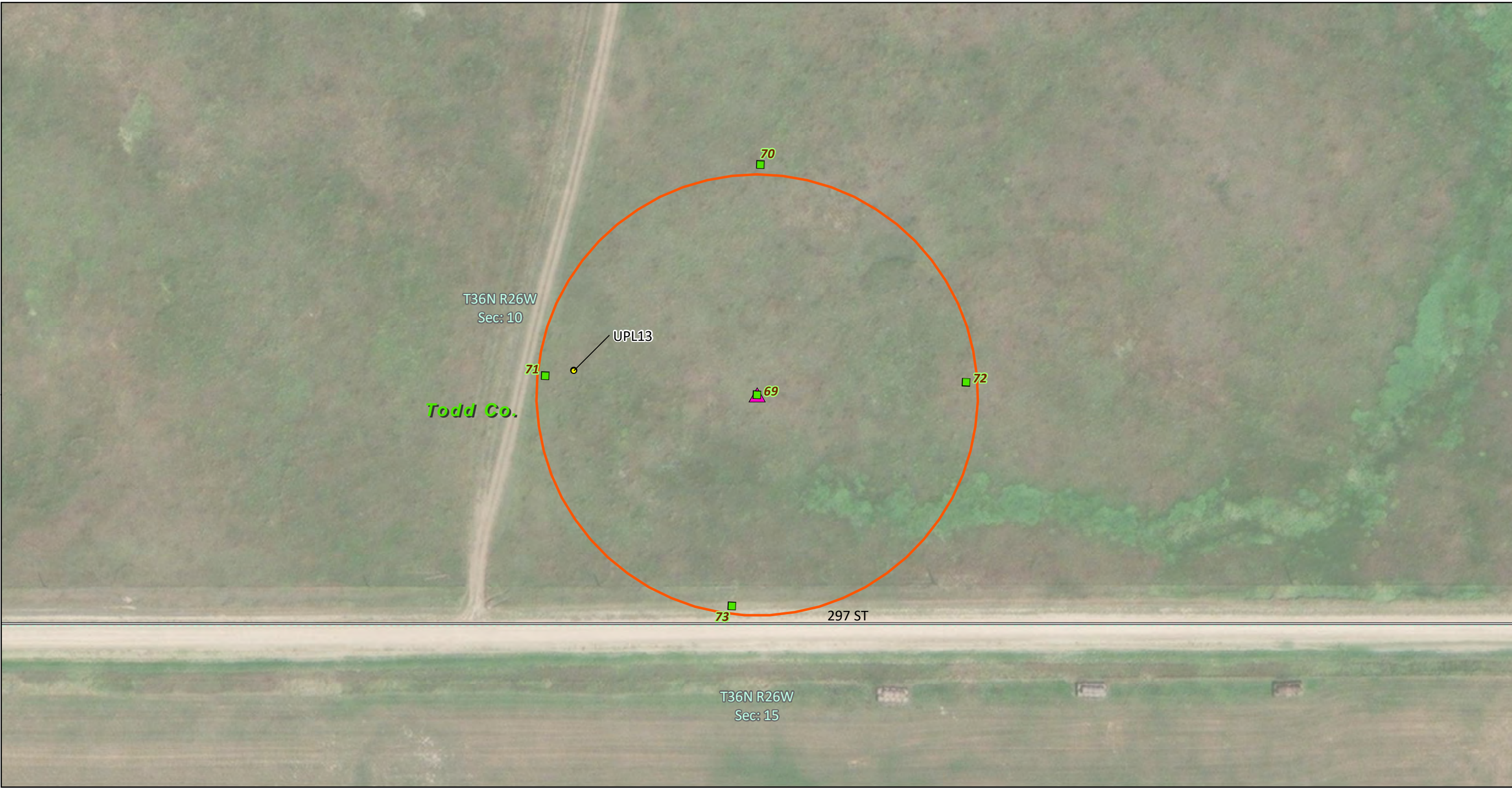
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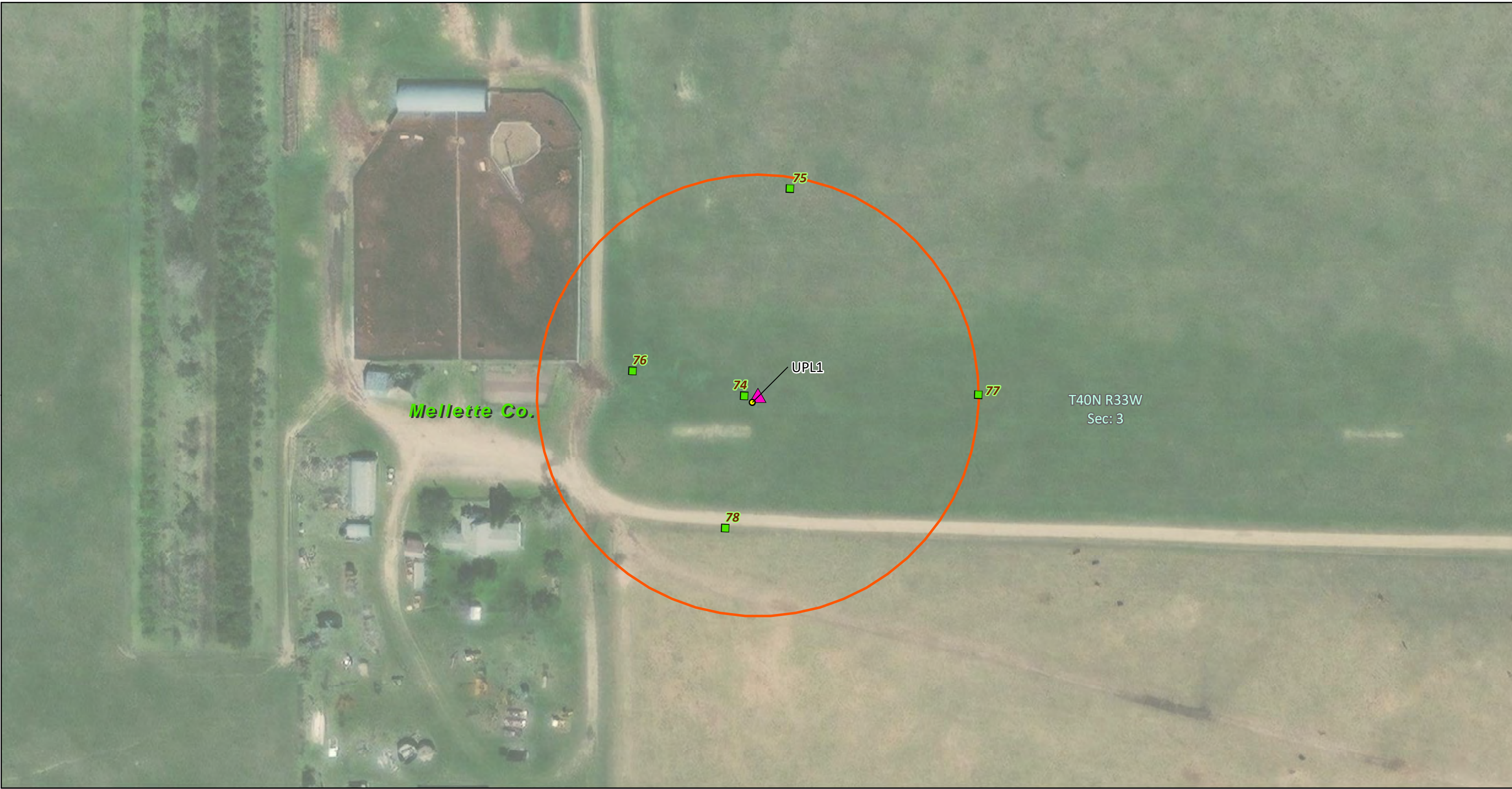


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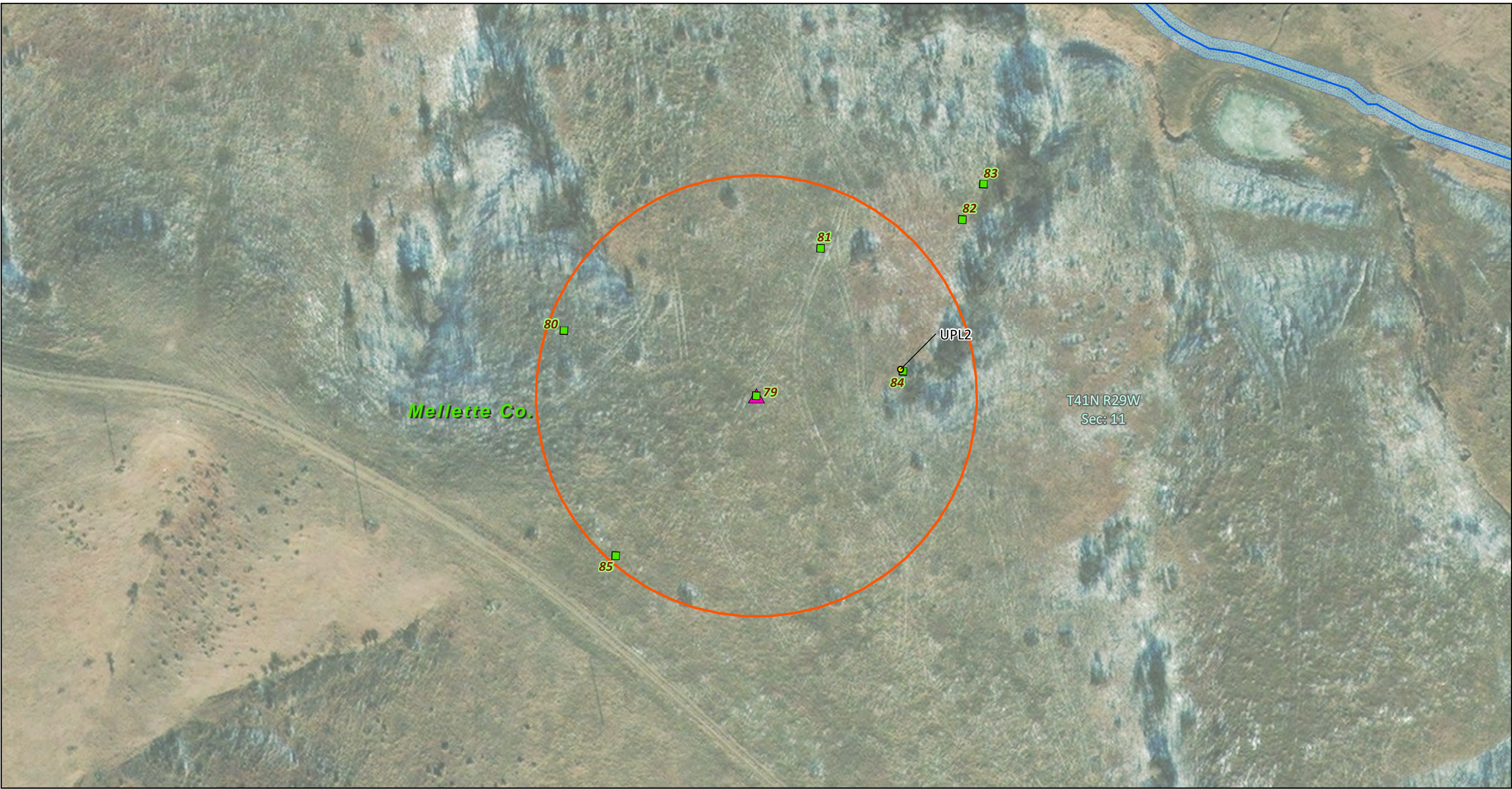


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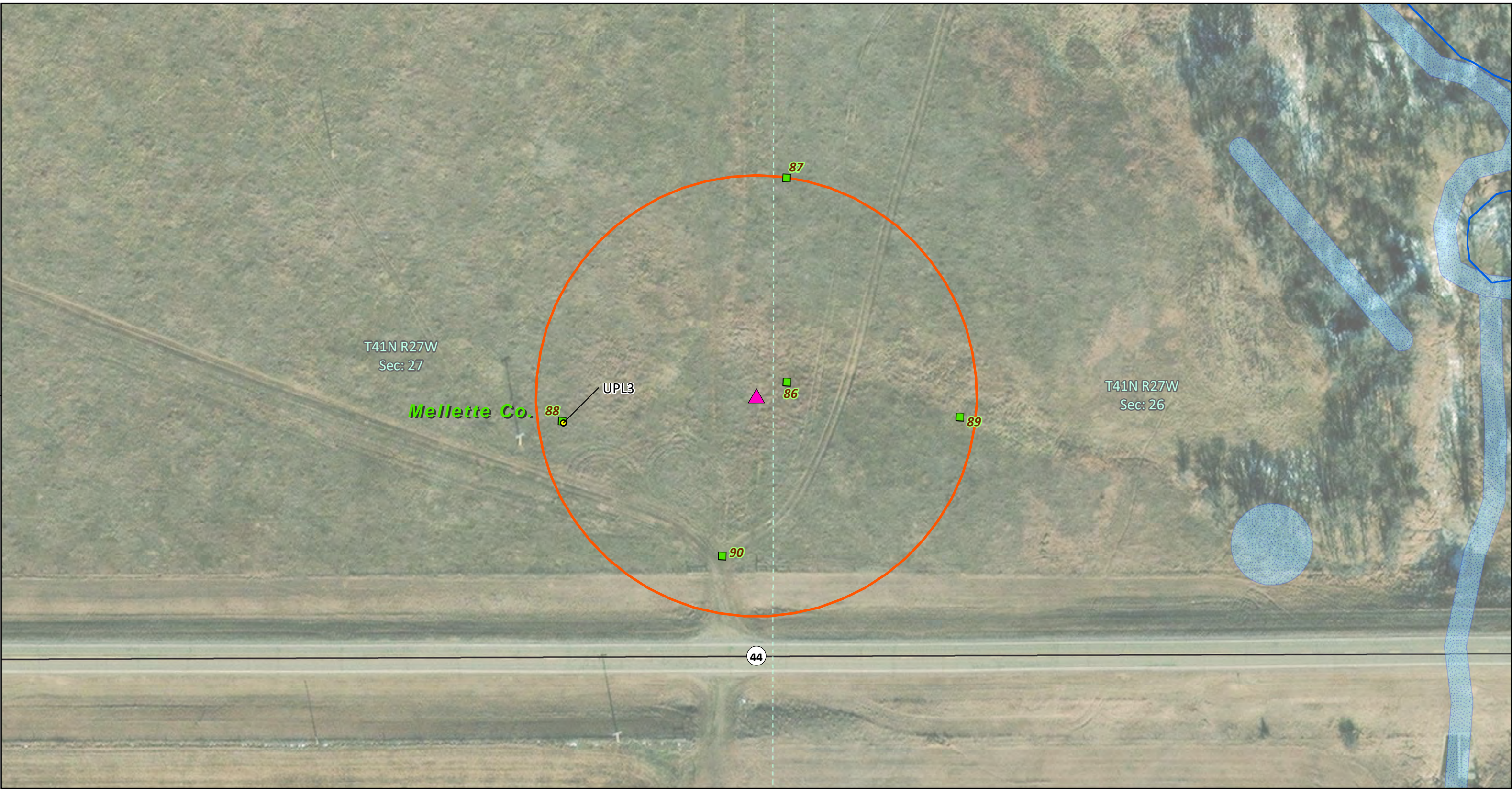


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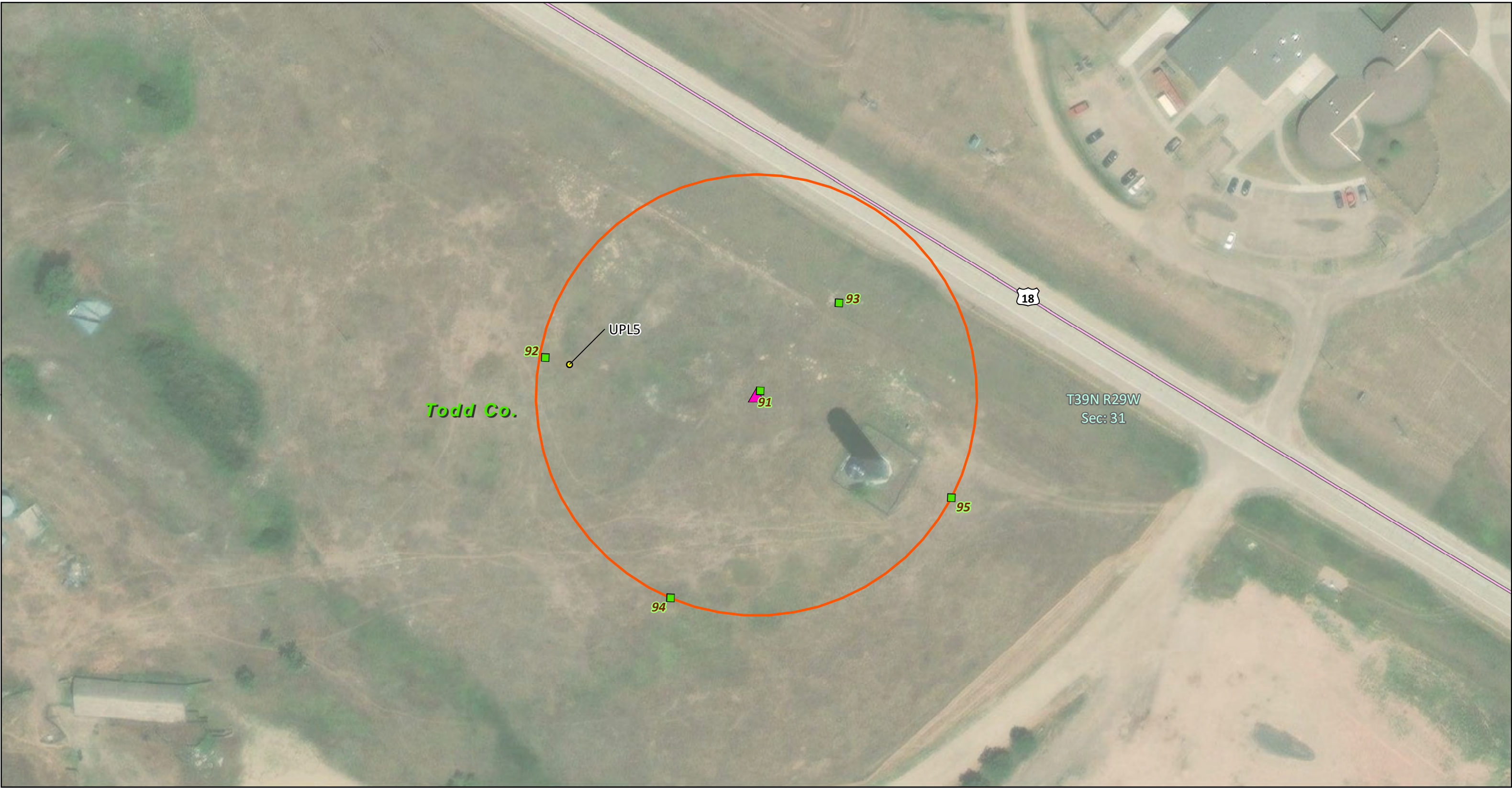


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		Project #: 2311-00205		
				Revision #: 0

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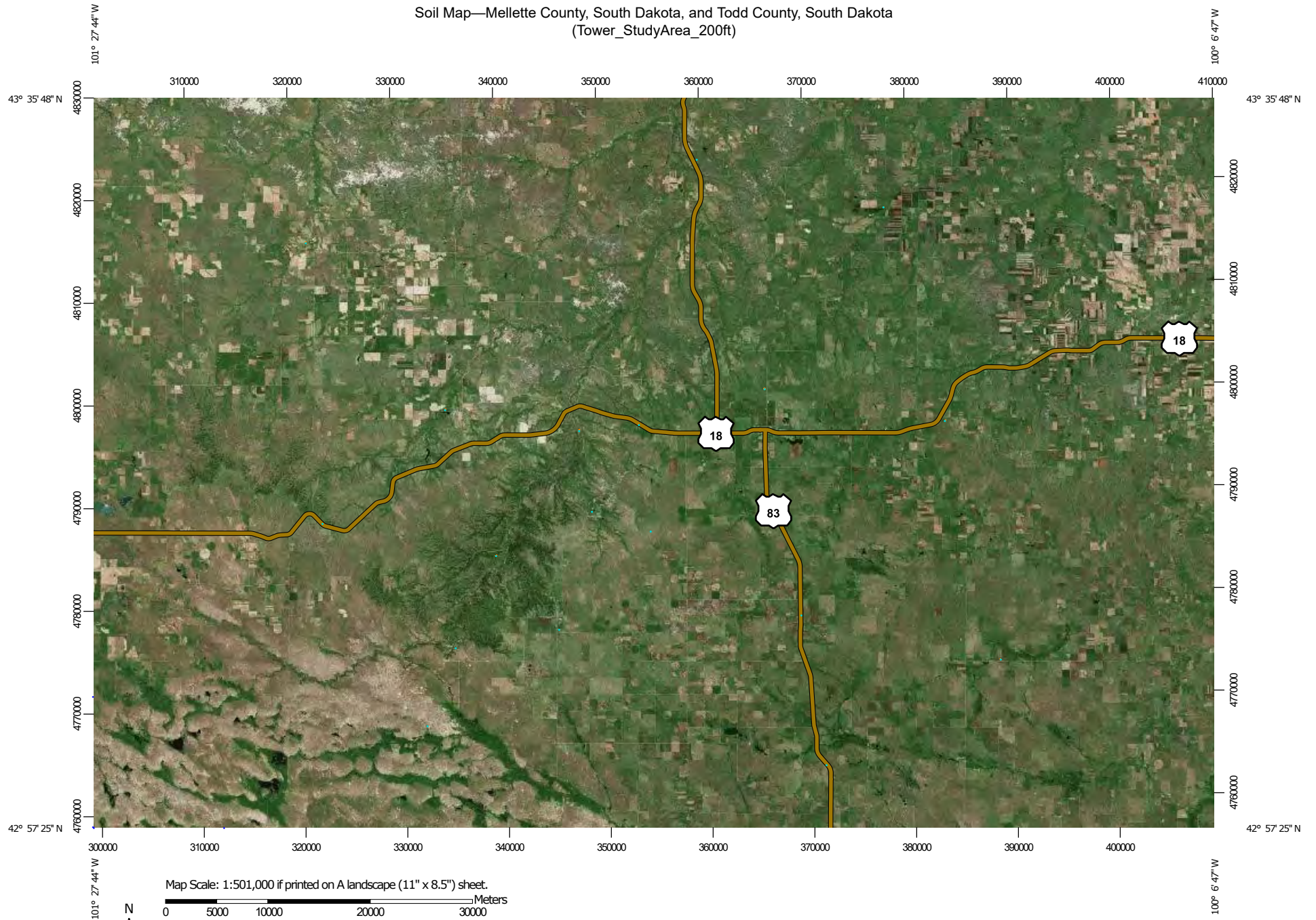


<div><div><div>▲ TOWER 18</div><div>Study Area</div><div>● Upland Test Hole</div><div>■ Photo Point</div><div>— NHD Flowline</div></div><div><div>USFWS NWI Wetlands</div><div>State Highway</div></div></div> <div><div><div>Water/Wetland Delineation</div><div>Broadband Towers Installation</div><div>Wetland Delineation</div><div>Todd & Mellette Counties, South Dakota</div></div><div><div>050100200</div><div>Feet</div></div></div> <div><div><div><div><div><div></div><div>N</div><div>W</div><div>E</div><div>S</div></div><div><div>KLJ</div><div>330 Knollwood Drive</div><div>Rapid City, SD</div><div>kljeng.com</div></div></div><div><div>Created by: jeffprice</div><div>Date: 11/20/2023</div><div>Project #: 2311-00205</div></div></div><div><div><div><div><div><div></div><div>SD Highway 44</div><div>Mellette County</div><div>Wooded</div><div>TOWER 18</div><div>SD Highway</div></div></div></div></div><div><div>Revision #: 0</div><div>Page 17 of 18</div></div></div></div></div>
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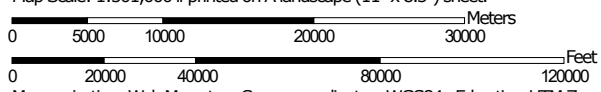


<div><div><div>▲ TOWER 19</div><div>Study Area</div><div>● Upland Test Hole</div><div>■ Photo Point</div><div>— US Highway</div></div><div>* Legend only shows items in vicinity of project/map view</div></div>	Water/Wetland Delineation		<div><div><div><div></div><div></div><div></div></div><div>WSE</div><div>NS</div></div><div><div>KLJ</div><div>330 Knollwood Drive Rapid City, SD kljeng.com</div></div></div>		<div><div><div>Todd County</div><div>Highway 18</div><div>TOWER 12</div><div>TOWER 19</div><div>Rosebud</div><div>Antelope Mission</div></div></div>		
	<div><div>Broadband Towers Installation</div><div>Wetland Delineation</div><div>Todd & Mellette Counties, South Dakota</div></div>		Created by: jeffprice				
	<div><div>050100200</div><div>Feet</div></div>		Date: 11/20/2023				
			Project #: 2311-00205				
					Revision #: 0		Page 18 of 18

Soil Map—Mellette County, South Dakota, and Todd County, South Dakota
(Tower_StudyArea_200ft)



Map Scale: 1:501,000 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

11/16/2023
Page 1 of 4

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:20,000 to 1:31,700.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Mellette County, South Dakota

Survey Area Data: Version 22, Sep 13, 2023

Soil Survey Area: Todd County, South Dakota

Survey Area Data: Version 24, Sep 13, 2023

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend


Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DvB	Duroc and Kadoka silt loams, 2 to 5 percent slopes	0.7	1.4%
EhD	Epping-Huggins silt loams, 5 to 15 percent slopes	0.3	0.6%
HuB	Huggins-Kadoka silt loams, 2 to 5 percent slopes	0.2	0.3%
MaD	Manter-Anselmo fine sandy loams, 9 to 15 percent slopes	1.4	2.7%
ObE	Okaton-Lakoma silty clays, 15 to 40 percent slopes	1.5	2.9%
RIB	Reliance silty clay loam, 3 to 6 percent slopes	2.9	5.5%
RIC	Reliance silty clay loam, 6 to 9 percent slopes	0.0	0.0%
Ww	Wortman-Wanblee silt loams, 0 to 6 percent slopes	1.7	3.2%
Subtotals for Soil Survey Area		8.6	16.7%
Totals for Area of Interest		51.8	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AtE	Anselmo-Longpine fine sandy loams, 9 to 21 percent slopes	2.3	4.5%
AvB	Anselmo-Vetal fine sandy loams, 2 to 6 percent slopes	0.0	0.0%
HIC	Holt-Vetal fine sandy loams, 3 to 9 percent slopes	8.9	17.1%
HwB	Huggins-Kadoka silt loams, 2 to 9 percent slopes	0.5	0.9%
KbC	Kadoka-Epping silt loams, 3 to 9 percent slopes	1.0	2.0%
KhE	Keota-Epping silt loams, 9 to 21 percent slopes	3.1	5.9%
KkD	Keota-Kadoka silt loams, 9 to 15 percent slopes	1.6	3.1%
KrF	Keota-Rock outcrop complex, 16 to 40 percent slopes	2.8	5.3%
La	Fluvents, loamy	0.4	0.7%
MaHG	McKelvie-Peji-Blula complex, 25 to 80 percent slopes	0.3	0.6%
RcE	Rosebud and Canyon soils, 9 to 21 percent slopes	1.2	2.3%


Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
RdA	Richfield-Dawes silt loams, 0 to 2 percent slopes	4.0	7.8%
RhB	Richfield-Tuthill silt loams, 2 to 9 percent slopes	2.4	4.6%
Sd	Yockey-Bigwinder complex, channeled	0.1	0.2%
T151G	Valentine fine sand, rolling and hilly, 9 to 60 percent slopes	2.0	3.9%
T153E	Valentine fine sand, rolling, 9 to 24 percent slopes	2.9	5.6%
T158C	Valentine-Els complex, 0 to 9 percent slopes	0.5	1.0%
T163E	Valentine-Tryon fine sands, 0 to 24 percent slopes	0.3	0.6%
TcF	Longpine-Rock outcrop complex, 25 to 40 percent slopes	0.5	1.1%
TfE	Longpine-Ronson fine sandy loams, 3 to 30 percent slopes	2.9	5.6%
VaE	Valentine fine sand, 9 to 25 percent slopes	2.9	5.6%
VdC	Valentine-Dunday complex, 3 to 9 percent slopes	2.6	5.0%
Subtotals for Soil Survey Area		43.2	83.3%
Totals for Area of Interest		51.8	100.0%

Appendix A: Site Photographs




Photograph #1	Photo Point 1, taken in center of Tower 1 study area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #2	Photo Point 2, taken from northern boundary of Tower 1, looking into the project area	
Date Taken:	19 October 2023	
Aquatic Resource:	N/A	




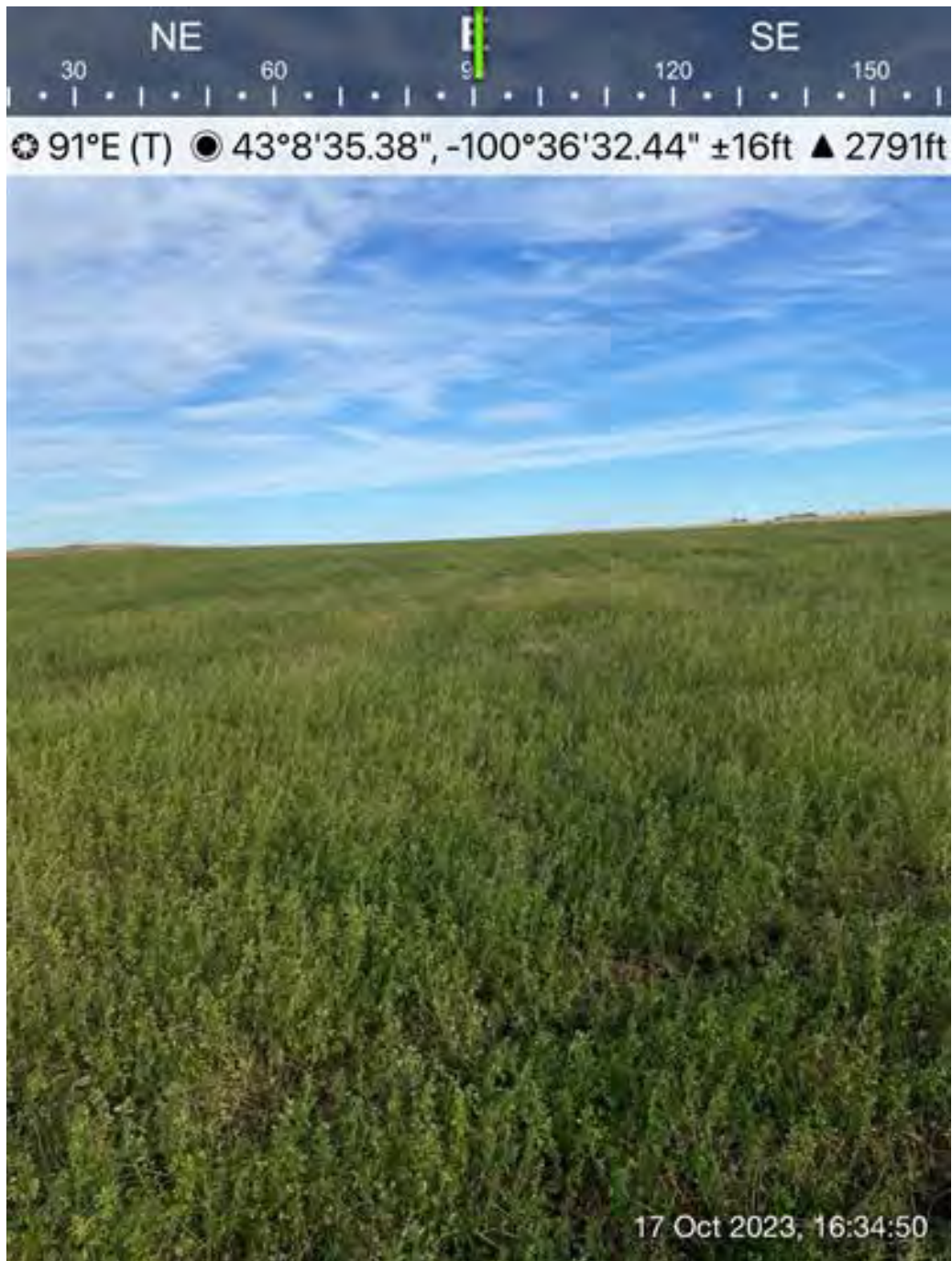
Photograph #3	Photo Point 3, taken from eastern boundary of Tower 1, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #4	Photo Point 4, taken from western boundary of Tower 1, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #5	Photo Point 5, taken from southern boundary of Tower 1, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #6	Photo Point 6, taken from center of Tower 2, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #7	Photo Point 7, taken from northern boundary of Tower 2, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #8	Photo Point 8, taken from western boundary of Tower 2, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #9	Photo Point 9, taken from eastern boundary of Tower 2, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #10	Photo Point 10, taken from southern boundary of Tower 2, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #11	Photo Point 11, taken from center of Tower 3, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #12	Photo Point 12, taken from northwestern boundary of Tower 3, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #33	Photo Point 13, taken from eastern boundary of Tower 3, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #44	Photo Point 14, taken from western boundary of Tower 3, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #55	Photo Point 15, taken from southern boundary of Tower 3, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #66	Photo Point 16, taken from center of Tower 4, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #77	Photo Point 17, taken from northern boundary of Tower 4, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




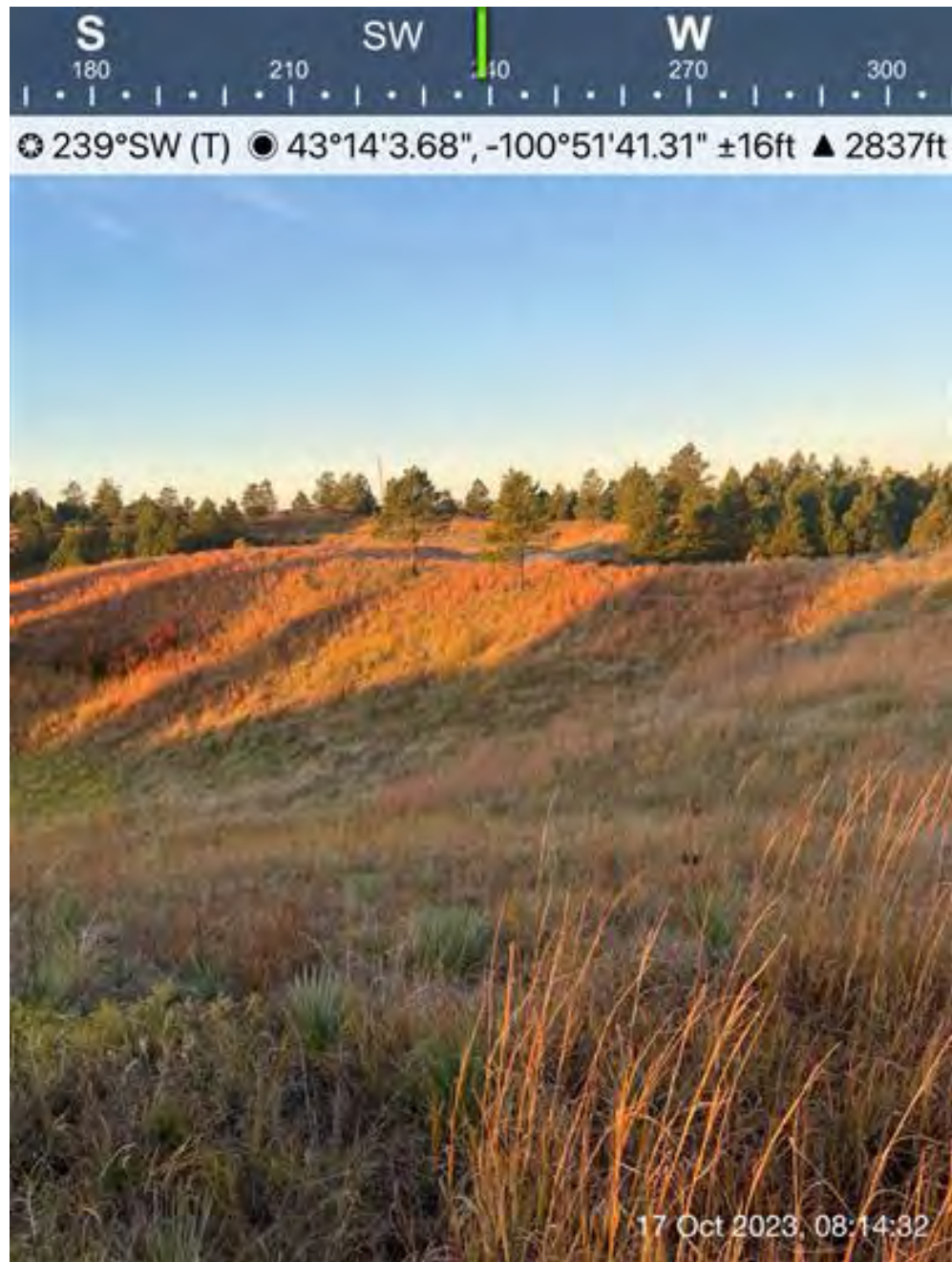
Photograph #88	Photo Point 18, taken from eastern boundary of Tower 4, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #99	Photo Point 19, taken from western boundary of Tower 4, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #20	Photo Point 20, taken from southern boundary of Tower 4, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




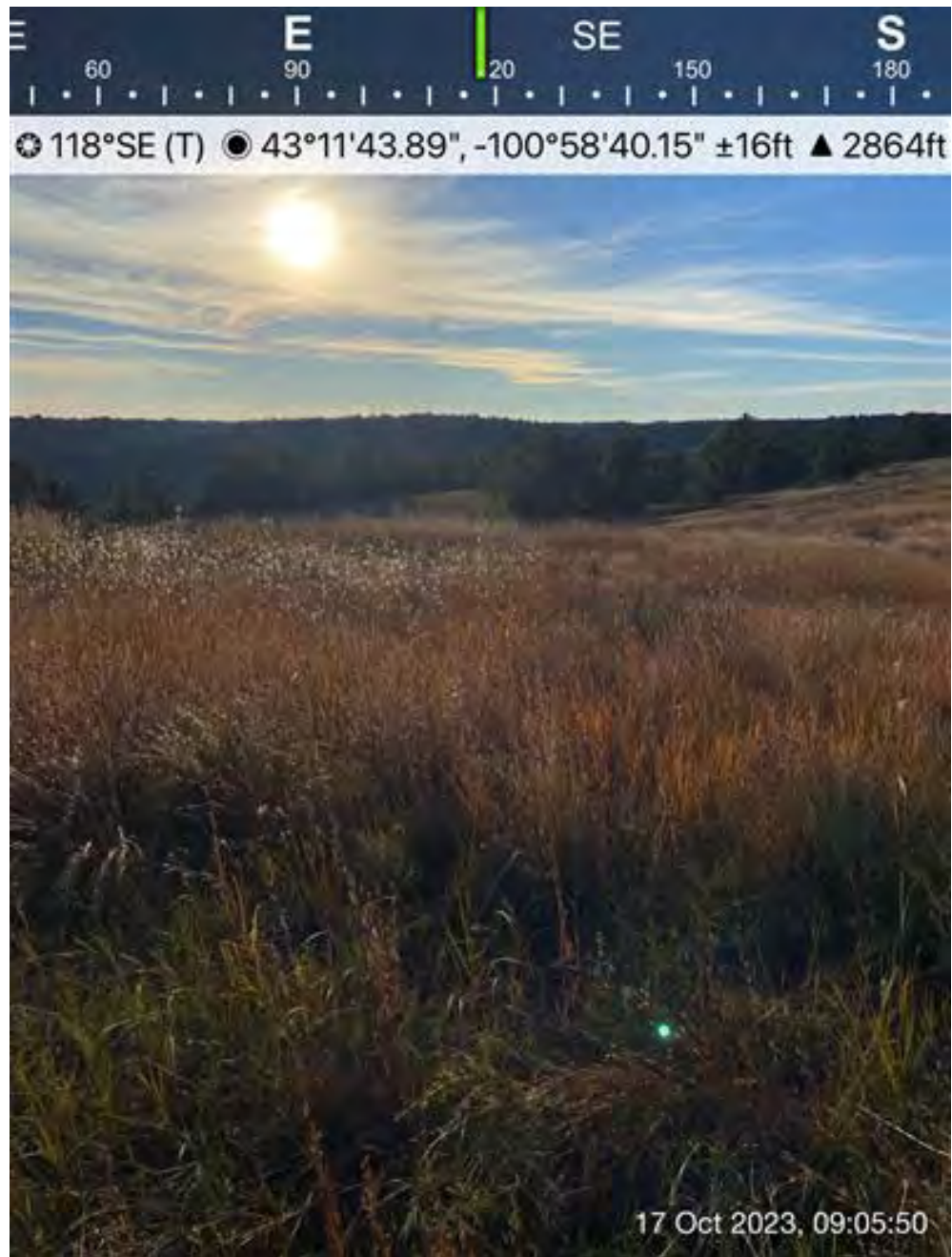
Photograph #21	Photo Point 21, taken from center of Tower 5, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #22	Photo Point 22, taken in the western half of the Tower 5 boundary, showing rooted Russian thistle	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




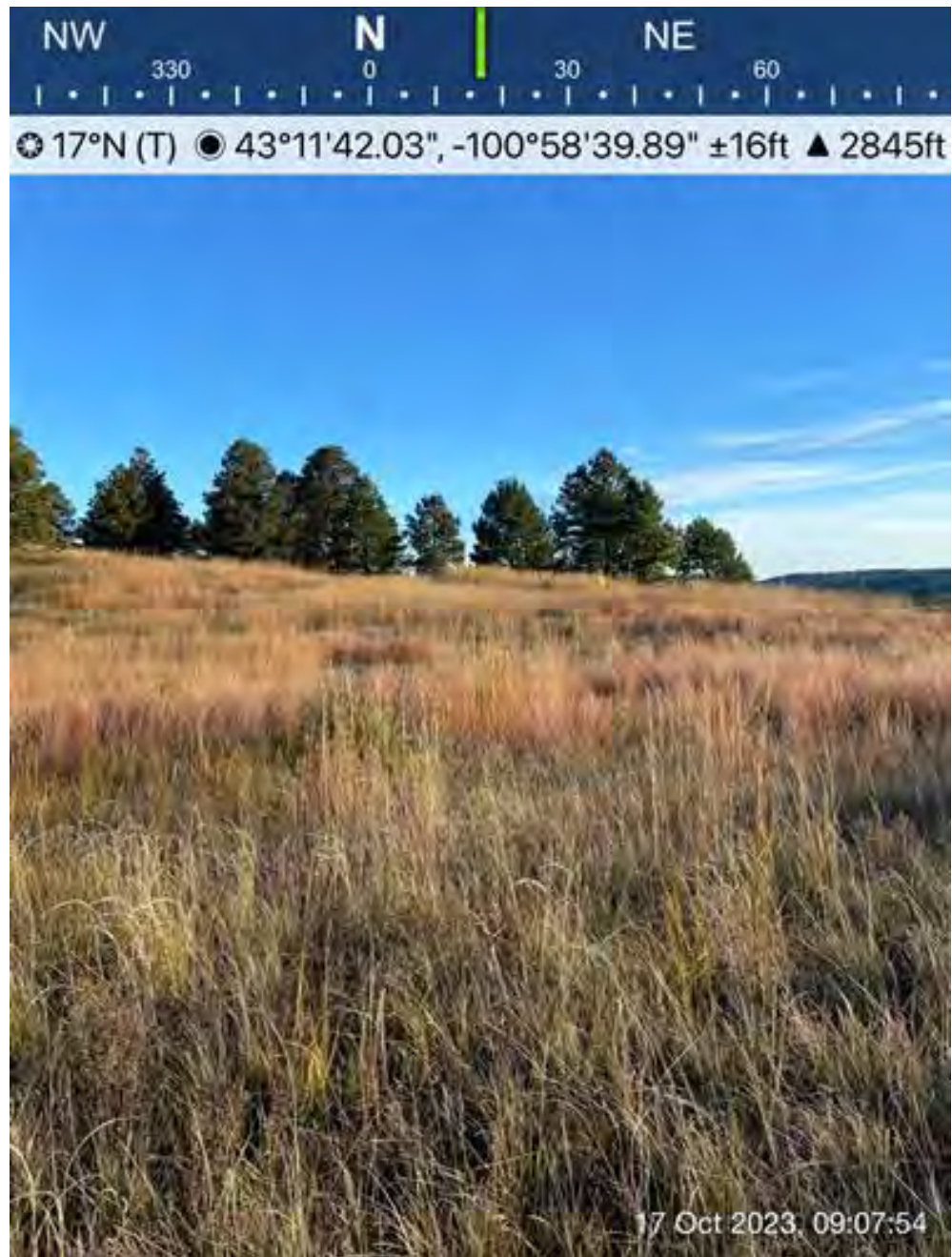
Photograph #23	Photo Point 23, taken from center of Tower 6, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #24	Photo Point 24, taken from northwestern boundary of Tower 6, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #25	Photo Point 25, taken from northeastern boundary of Tower 6, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #26	Photo Point 26, taken from southwestern boundary of Tower 6, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #27	Photo Point 27, taken from southeastern boundary of Tower 6, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #28	Photo Point 28, taken from center of Tower 7, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #29	Photo Point 29, taken from northern boundary of Tower 7, looking into the project area	
Date Taken:	25 May 2023	
Aquatic Resource:	N/A	




Photograph #30	Photo Point 30, taken from western boundary of Tower 7, looking into the project area	
Date Taken:	20 October 2023	
Aquatic Resource:	N/A	




Photograph #31	Photo Point 31, taken from eastern boundary of Tower 7, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #32	Photo Point 32, taken from southern boundary of Tower 7, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




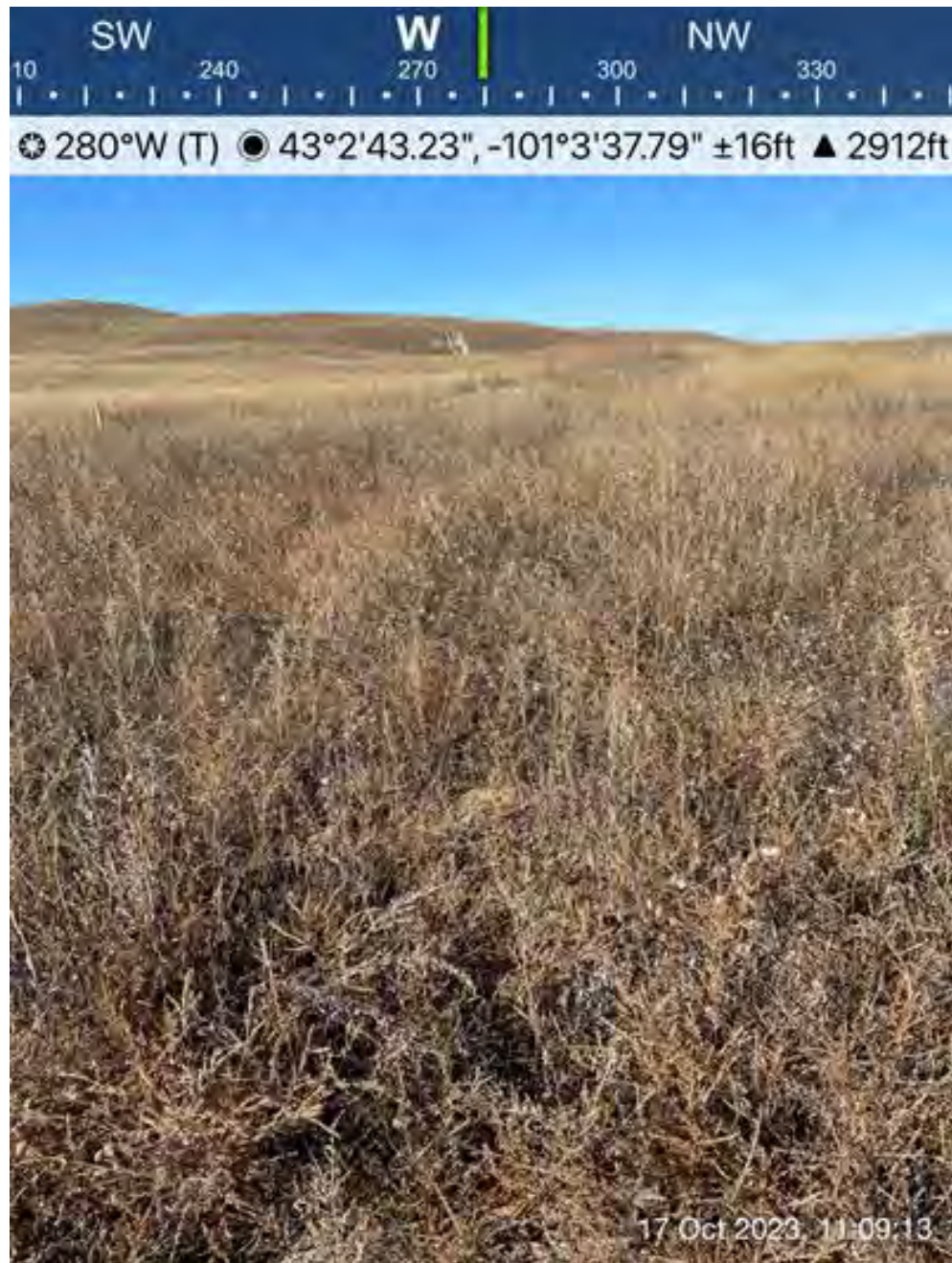
Photograph #33	Photo Point 33, taken from center of Tower 8, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #34	Photo Point 34, taken from northern boundary of Tower 8, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #35	Photo Point 35, taken from western boundary of Tower 8, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #36	Photo Point 36, taken in western half of Tower 8 boundary, showing rooted Russian thistle	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




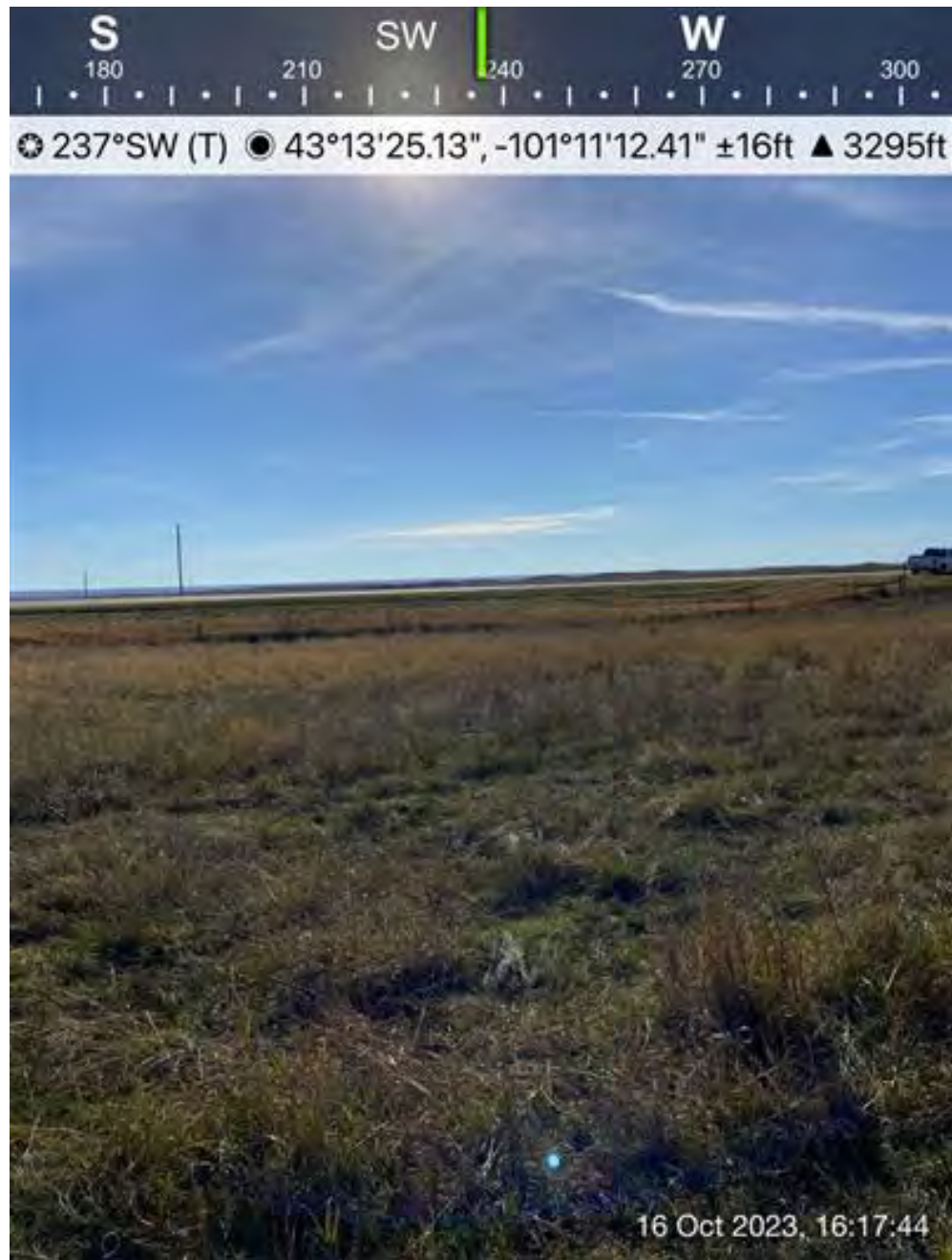
Photograph #37	Photo Point 37, taken from southeastern boundary of Tower 8, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #38	Photo Point 38, taken in western half of Tower 8 boundary, showing rooted Russian thistle	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #39	Photo Point 39, taken in southern boundary of Tower 8 looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #40	Photo Point 40, taken from center of Tower 9/10, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #41	Photo Point 41, taken from northern boundary of Tower 9/10, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #42	Photo Point 42, taken from eastern boundary of Tower 9/10, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #43	Photo Point 43, taken from western boundary of Tower 9/10, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #44	Photo Point 44, taken from southeastern boundary of Tower 9/10, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




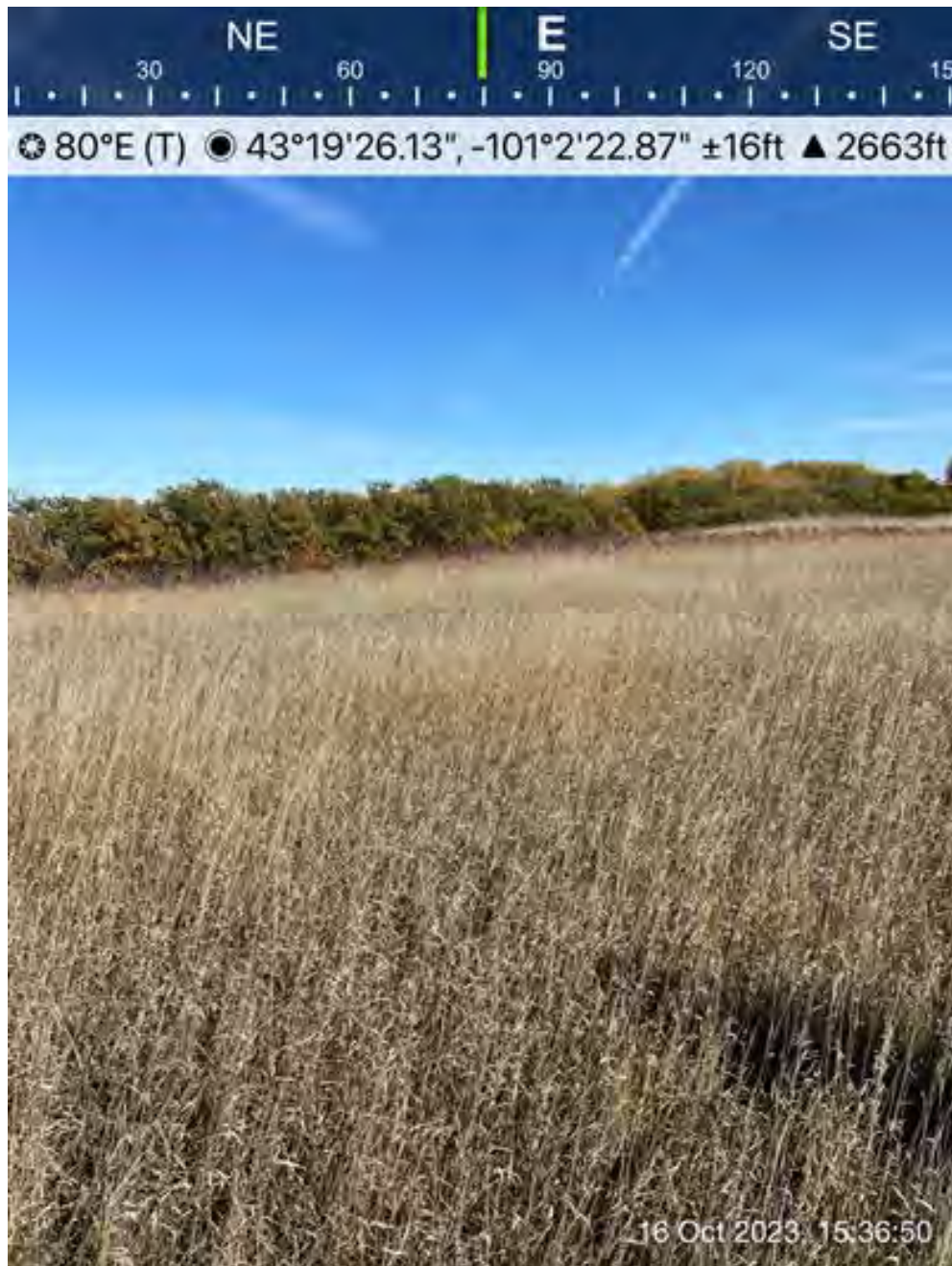
Photograph #45	Photo Point 45, taken south of the southern boundary of Tower 9/10, showing possible bat roost habitat	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #46	Photo Point 46, taken from center of Tower 11, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #47	Photo Point 47, taken from northern boundary of Tower 11, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #48	Photo Point 48, taken from northwestern boundary of Tower 11, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #49	Photo Point 49, taken from eastern boundary of Tower 11, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




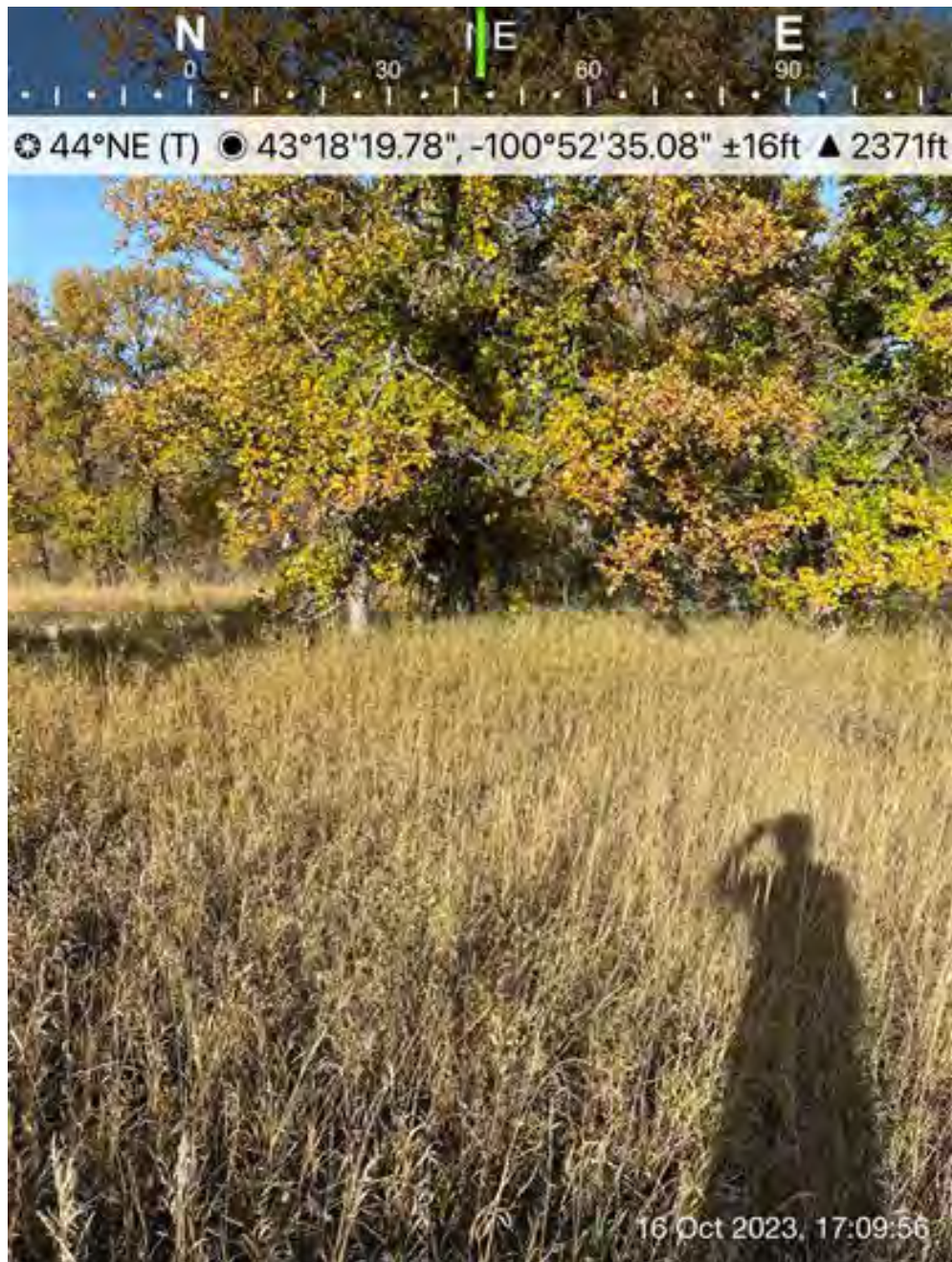
Photograph #50	Photo Point 50, taken from southern boundary of Tower 11, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #51	Photo Point 51, taken from center of Tower 12, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #52	Photo Point 52, taken from northeastern boundary of Tower 12, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #53	Photo Point 53, taken from eastern boundary of Tower 12, showing possible bat roost habitat outside of the tower boundary		
Date Taken:	16 October 2023		
Aquatic Resource:	N/A		




Photograph #54	Photo Point 54, taken near western boundary of Tower 12, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #55	Photo Point 55, taken near western boundary of Tower 12, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #56	Photo Point 56, Taken near southern boundary of Tower 12, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #57	Photo Point 57, taken from center of Tower 13, looking into the project area	
Date Taken:	18 October 2023	
Aquatic Resource:	N/A	




Photograph #58	Photo Point 58, taken near northern boundary of Tower 13, looking into the project area	
Date Taken:	18 October 2023	
Aquatic Resource:	N/A	




Photograph #59	Photo Point 59, taken near western boundary of Tower 13, looking into the project area	
Date Taken:	18 October 2023	
Aquatic Resource:	N/A	




Photograph #60	Photo Point 60, taken near eastern boundary of Tower 13, looking into the project area	
Date Taken:	18 October 2023	
Aquatic Resource:	N/A	




Photograph #61	Photo Point 61, taken near southern boundary of Tower 13, looking into the project area	
Date Taken:	18 October 2023	
Aquatic Resource:	N/A	




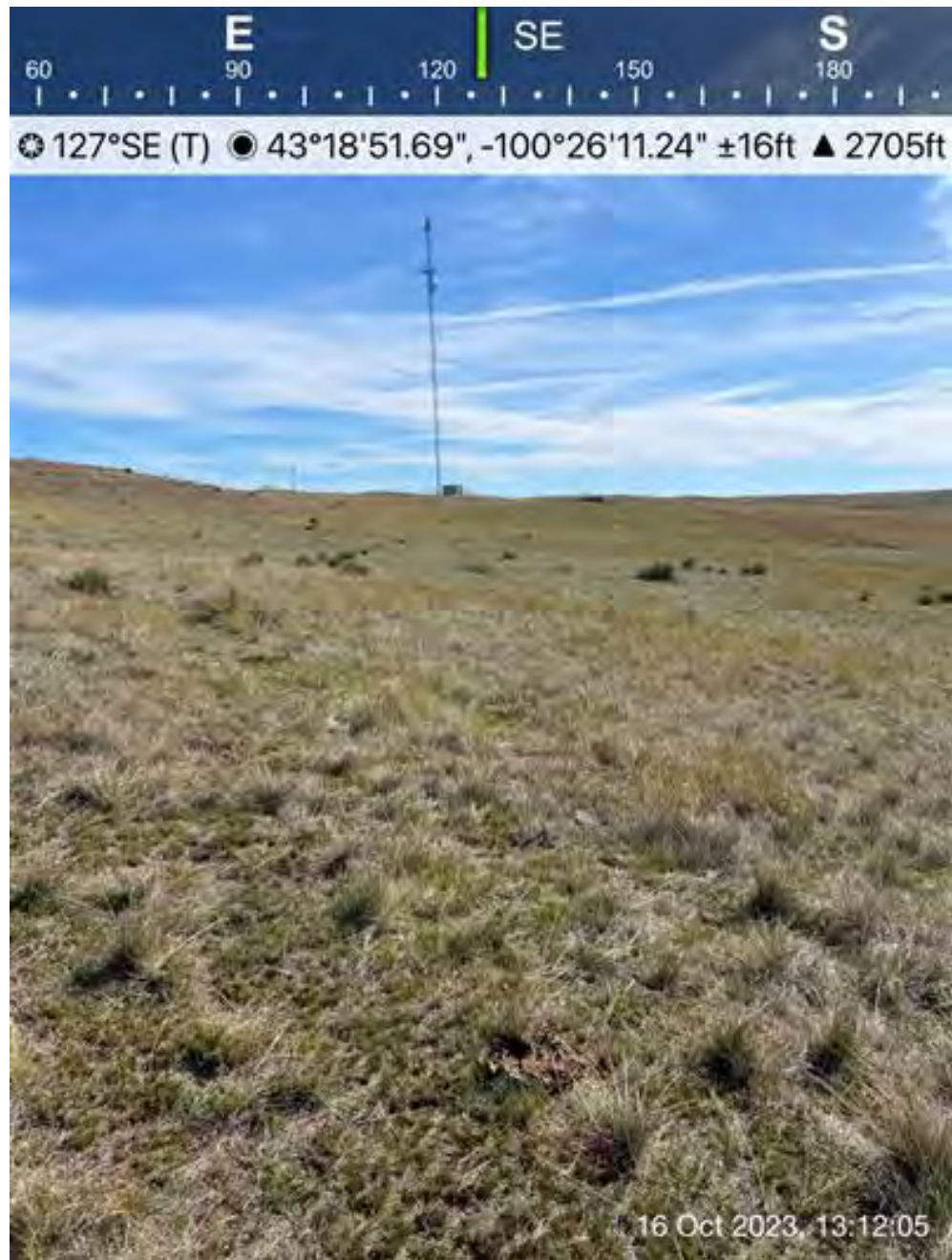
Photograph #62	Photo Point 62, taken near southern boundary of Tower 13, showing Upland 15	
Date Taken:	18 October 2023	
Aquatic Resource:	N/A	




Photograph #63	Photo Point 63, taken from center of Tower 14, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #64	Photo Point 64, taken near eastern boundary of Tower 14, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #65	Photo Point 65, taken near northern boundary of Tower 14, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #66	Photo Point 66, taken northwest outside of Tower 14 boundary showing possible bat roost habitat	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #67	Photo Point 67, taken near western boundary of Tower 14, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #68	Photo Point 68, taken near southeastern boundary of Tower 14, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #69	Photo Point 69, taken from center of Tower 15, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #70	Photo Point 70, taken near northern boundary of Tower 15, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #71	Photo Point 71, taken near western boundary of Tower 15, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #72	Photo Point 72, taken near eastern boundary of Tower 15, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #73	Photo Point 73, taken near southern boundary of Tower 15, looking into the project area	
Date Taken:	17 October 2023	
Aquatic Resource:	N/A	




Photograph #74	Photo Point 74, taken from center of Tower 16, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




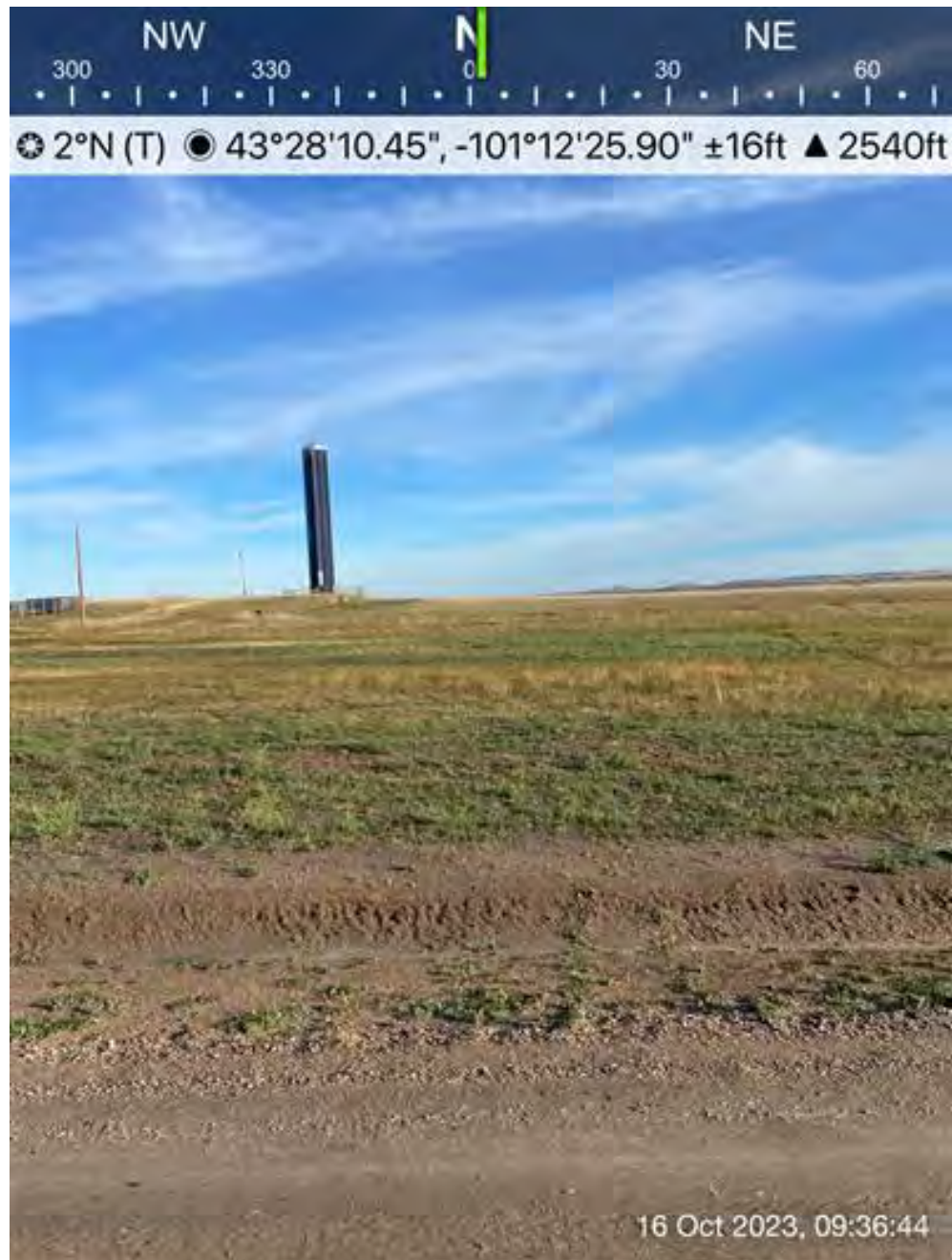
Photograph #75	Photo Point 75, taken near northern boundary of Tower 16, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #76	Photo Point 76, taken near western boundary of Tower 16, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #77	Photo Point 77, taken near eastern boundary of Tower 16, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #78	Photo Point 78, taken near southern boundary of Tower 16, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




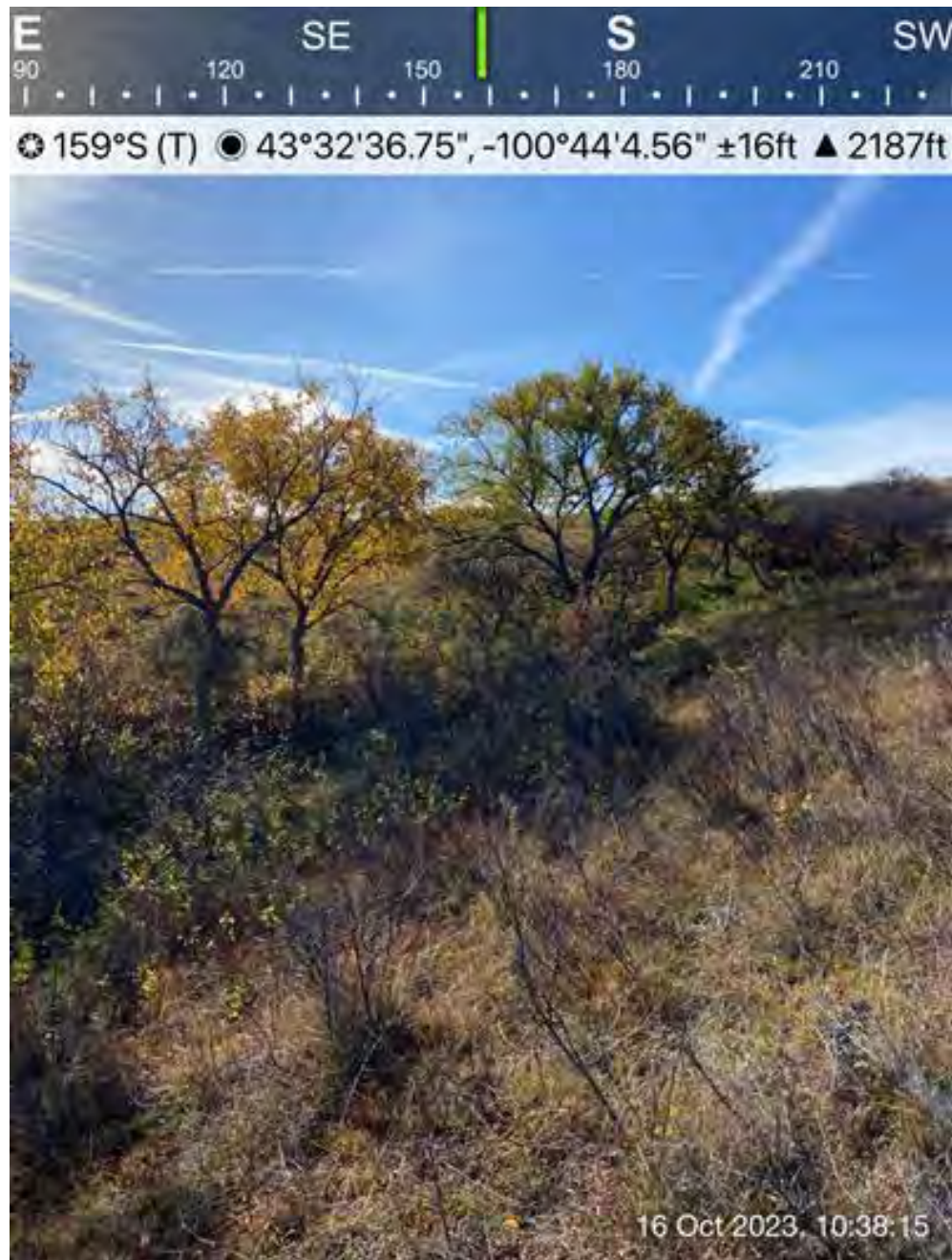
Photograph #79	Photo Point 79, taken from center of Tower 17, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #80	Photo Point 80, taken near northwestern boundary of Tower 17, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




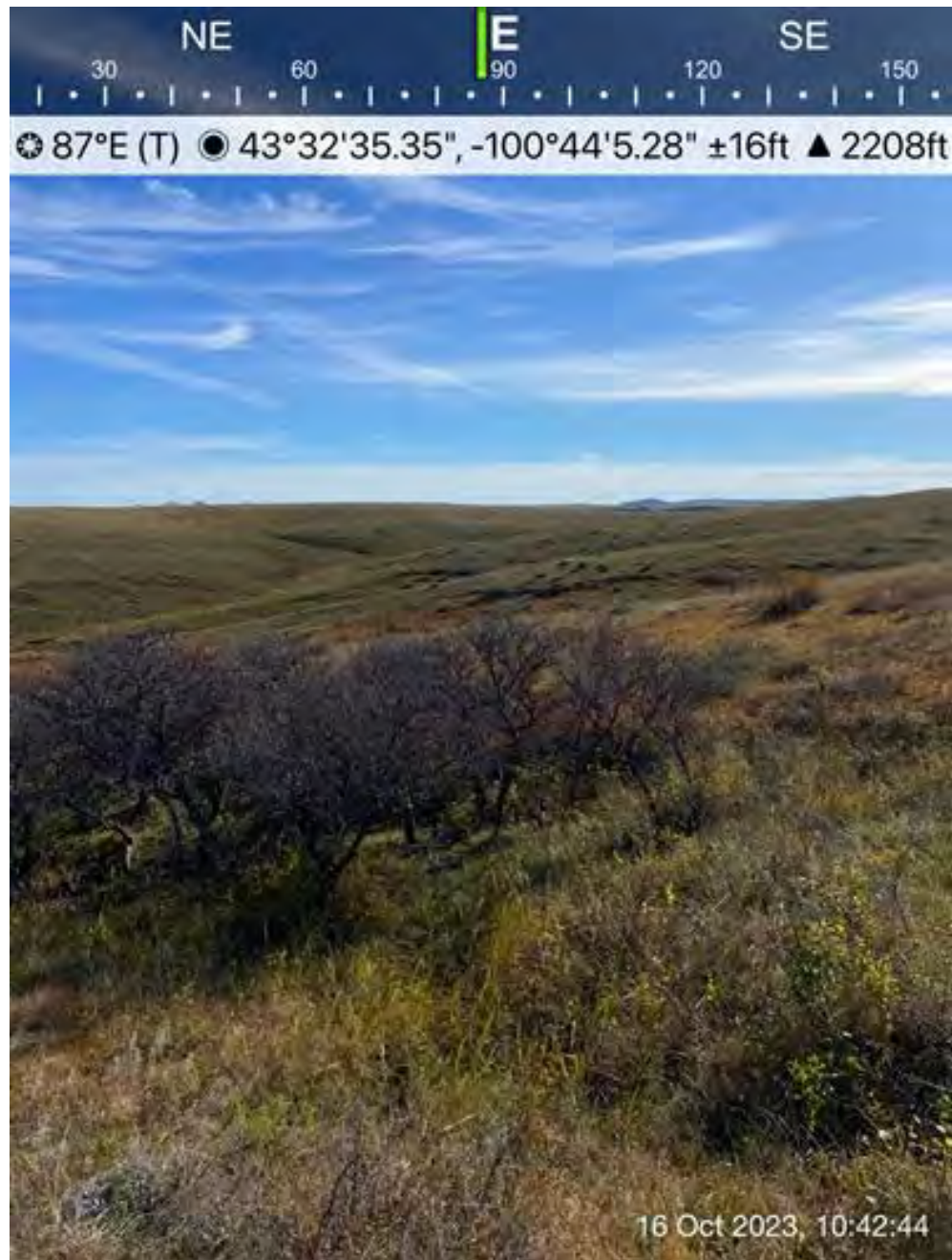
Photograph #81	Photo Point 81, taken near northeastern boundary of Tower 17, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #82	Photo Point 82, taken northeastern of the Tower 17 boundary, showing possible bat roost habitat	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




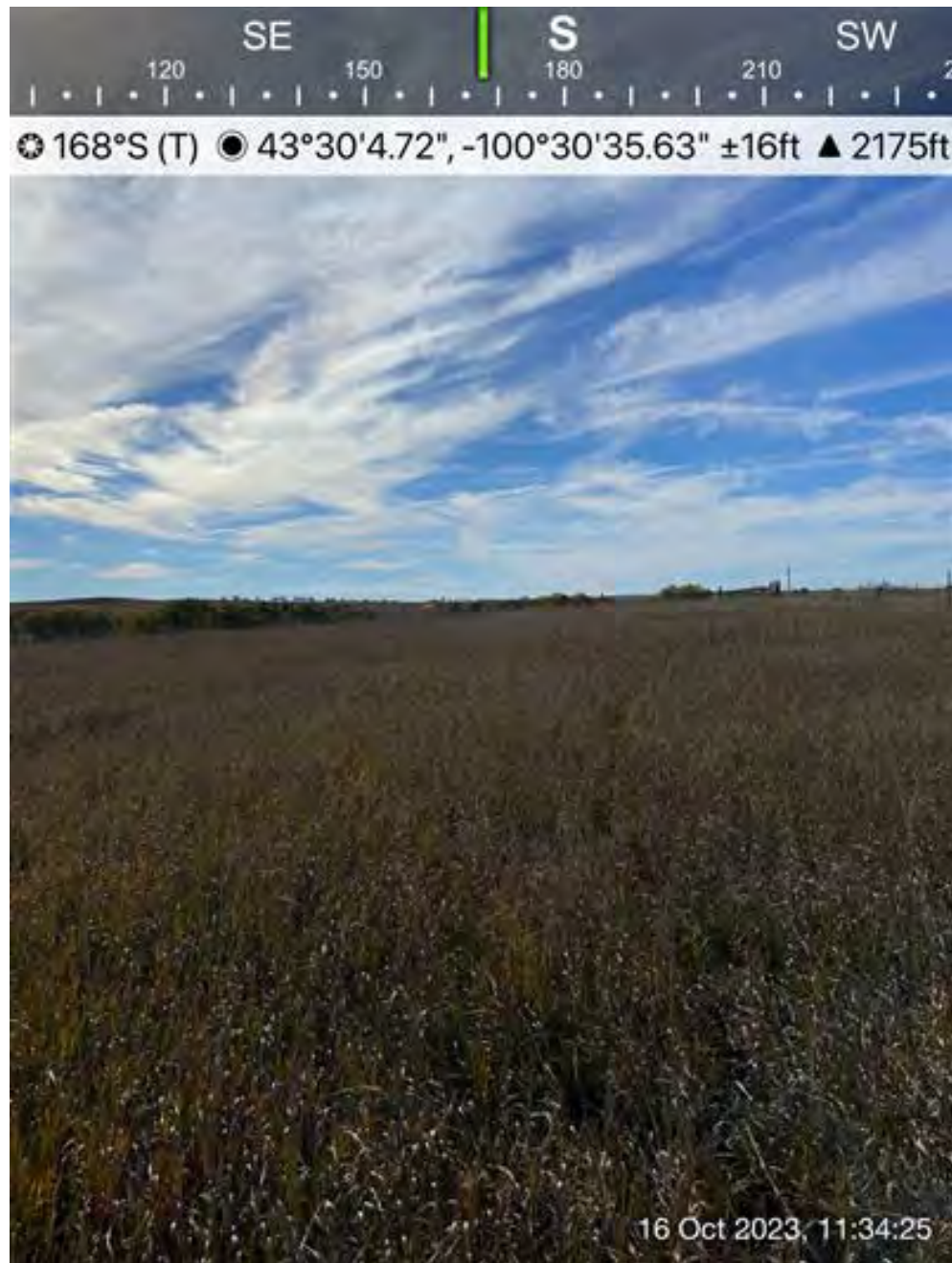
Photograph #83	Photo Point 83, taken northeast just outside of the Tower 17 boundary, showing possible bat roost habitat	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #84	Photo Point 84, taken near eastern boundary of Tower 17, looking into the project area, showing Upland 2	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #85	Photo Point 85, taken near southwestern boundary of Tower 17, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #86	Photo Point 86, taken from center of Tower 18, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #87	Photo Point 87, taken near northern boundary of Tower 18, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #88	Photo Point 88, taken near western boundary of Tower 18, looking into the project area, and showing Upland 3	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #89	Photo Point 89, taken near eastern boundary of Tower 18, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #90	Photo Point 90, taken near southern boundary of Tower 18, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #91	Photo Point 91, taken from center of Tower 19, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #92	Photo Point 92, taken near western boundary of Tower 19, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	




Photograph #93	Photo Point 93, taken near northeastern boundary of Tower 19, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	



Photograph #94	Photo Point 94, taken near southwestern boundary of Tower 19, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	



Photograph #95	Photo Point 95, taken near southeastern boundary of Tower 19, looking into the project area	
Date Taken:	16 October 2023	
Aquatic Resource:	N/A	

Appendix B:

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Mellette Co. Sampling Date: 10/16/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL1
 Investigator(s): Vincent Popk Section, Township, Range: Sec 3, T40N, R33W
 Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): LRR G, 43i Keya Paha Tablelands Lat: 43.46988 Long: -101.20711 Datum: NAD83
 Soil Map Unit Name: Wortman-Wanblee silt loams, 0-6% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Appears to be managed pasture lands, no trees within survey area					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>n/a</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>80</u></td> <td>x 5 = <u>400</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>450</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.7368421052</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>80</u>	x 5 = <u>400</u>	Column Totals: <u>95</u> (A)	<u>450</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>10</u>	x 3 = <u>30</u>																	
FACU species <u>5</u>	x 4 = <u>20</u>																	
UPL species <u>80</u>	x 5 = <u>400</u>																	
Column Totals: <u>95</u> (A)	<u>450</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Bromus inermis</u>	<u>80</u>	<u>Y</u>	<u>UPL</u>															
2. <u>Convolvulus arvensis</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
3. <u>Bouteloua dactyloides</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>95</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>5</u>																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		
Remarks:																		

SOIL

Sampling Point: UPL1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Mellette Co. Sampling Date: 10/16/21
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL2
 Investigator(s): Vincent Popk Section, Township, Range: Sec 11, T41N, R29W
 Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): LRR G, 43f Subhumid Pierre Shale Pl Lat: 43.54316 Long: -100.734805 Datum: NAD 83
 Soil Map Unit Name: Okaton-Lakoma silty clays, 15-40% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>40</u></td> <td>x 1 = <u>40</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>260</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.6</u>	Total % Cover of:	Multiply by:	OBL species <u>40</u>	x 1 = <u>40</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>100</u> (A)	<u>260</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>40</u>	x 1 = <u>40</u>																	
FACW species <u>20</u>	x 2 = <u>40</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>20</u>	x 4 = <u>80</u>																	
UPL species <u>20</u>	x 5 = <u>100</u>																	
Column Totals: <u>100</u> (A)	<u>260</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Bromus inermis</u>	<u>40</u>	<u>Y</u>	<u>UPL</u>															
2. <u>Spartina pectinata</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>															
3. <u>Prunus virginiana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
4. <u>Artemisia ludoviciana</u>	<u>10</u>	<u>N</u>	<u>UPL</u>															
5. <u>Rhus aromatica</u>	<u>10</u>	<u>N</u>	<u>UPL</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: Top 3 species overall; 1.) smooth brome, 2.) intermediate wheat grass, 3.) Fescue (Idaho)																		

SOIL

Sampling Point: UPL2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
----------------------	-----	--------------------------	----	-------------------------------------

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Mellete Co. Sampling Date: 10/16/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL3
 Investigator(s): Vincent Popk Section, Township, Range: Sec 27, T41N, R27W
 Landform (hillslope, terrace, etc.): field Local relief (concave, convex, none): none Slope (%): n/a
 Subregion (LRR): LRR G 43f Subhumid Pierre Shale Pl Lat: 43.50124 Long: -100.51066 Datum: NAD83
 Soil Map Unit Name: Reliance silty clay loams, 3-6% NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Appears to be in a managed pasture land					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>n/a</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>90</u></td> <td>x 5 = <u>450</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>485</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.85</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>90</u>	x 5 = <u>450</u>	Column Totals: <u>100</u> (A)	<u>485</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>5</u>	x 3 = <u>15</u>																	
FACU species <u>5</u>	x 4 = <u>20</u>																	
UPL species <u>90</u>	x 5 = <u>450</u>																	
Column Totals: <u>100</u> (A)	<u>485</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Bromus inermis</u>	<u>90</u>	<u>Y</u>	<u>UPL</u>															
2. <u>Brickellia eupatorioides</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
3. <u>Schedonorus arundinaceus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum _____																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		
Remarks: Top three species in survey area reflect top 3 veg in the herb stratum																		

SOIL

Sampling Point: UPL3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
----------------------	-----	--------------------------	----	-------------------------------------

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Todd Co. Sampling Date: 10/16/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL4
 Investigator(s): Vincent Popk Section, Township, Range: Sec 31, T39N, R26W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 2
 Subregion (LRR): LRR G, 43i Keya Paha Tablelands Lat: 43.31382 Long: -100.43627 Datum: NAD83
 Soil Map Unit Name: Anselmo-Longpine fine sandy loams, 9-21% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Appears to be in a managed pasture land					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>90</u></td> <td>x 3 = <u>270</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>315</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.15</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>90</u>	x 3 = <u>270</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>100</u> (A)	<u>315</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>90</u>	x 3 = <u>270</u>																	
FACU species <u>5</u>	x 4 = <u>20</u>																	
UPL species <u>5</u>	x 5 = <u>25</u>																	
Column Totals: <u>100</u> (A)	<u>315</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Nassella viridula</u>	<u>90</u>	<u>Y</u>	<u>FAC</u>															
2. <u>Andropogon gerardii</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
3. <u>Bromus inermis</u>	<u>5</u>	<u>N</u>	<u>UPL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: Top three veg species in project area reflect the top 3 species present in the herb stratum																		

SOIL

Sampling Point: UPL4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Todd Co. Sampling Date: 10/16/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL5
 Investigator(s): Vincent Popk Section, Township, Range: Sec 31, T39N, R29W
 Landform (hillslope, terrace, etc.): basin Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): LRR G, 43i Keya Paha Tablelands Lat: 43.31058 Long: -100.80561 Datum: NAD83
 Soil Map Unit Name: Richfield-Dawes silt loams, 0-2% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Appears to be in a managed pasture land					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>40</u></td> <td>x 5 = <u>200</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>400</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>40</u>	x 5 = <u>200</u>	Column Totals: <u>100</u> (A)	<u>400</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>40</u>	x 3 = <u>120</u>																	
FACU species <u>20</u>	x 4 = <u>80</u>																	
UPL species <u>40</u>	x 5 = <u>200</u>																	
Column Totals: <u>100</u> (A)	<u>400</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Agropyron cristatum</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>															
2. <u>Bromus inermis</u>	<u>40</u>	<u>Y</u>	<u>UPL</u>															
3. <u>Solidago rigida</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		
Remarks: Top three overall veg species, 1.) Crested wheatgrass, 2.) Smooth brome, 3.) mix of stiff goldenrod, plains sunflower, and hoary vervain																		

SOIL

Sampling Point: UPL5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/2	100					SCL	Damp
2-19	10YR 5/4	100					SCL	Damp

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 72 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| (where tilled) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Todd Co. Sampling Date: 10/16/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL6
 Investigator(s): Vincent Popk Section, Township, Range: Sec 30, T39N, R31W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): n/a
 Subregion (LRR): LRR G, 43i Keya Paha Tablelands Lat: 43.32367 Long: -101.03897 Datum: NAD83
 Soil Map Unit Name: Keota-Epping silt loams, 9-21% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>n/a</u> (A/B)	
4. _____	_____	_____	_____		
<u>0</u> = Total Cover					
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____	
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4. _____	_____	_____	_____	FAC species <u>0</u> x 3 = <u>0</u>	
5. _____	_____	_____	_____	FACU species <u>0</u> x 4 = <u>0</u>	
<u>0</u> = Total Cover				UPL species <u>100</u> x 5 = <u>500</u>	
				Column Totals: <u>100</u> (A) <u>500</u> (B)	
				Prevalence Index = B/A = <u>5</u>	
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <u>Bromus inermis</u>	<u>100</u>	<u>Y</u>	<u>UPL</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
2. _____	_____	_____	_____	<input type="checkbox"/> 2 - Dominance Test is >50%	
3. _____	_____	_____	_____	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹	
4. _____	_____	_____	_____	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
<u>100</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____		
<u>0</u> = Total Cover					
% Bare Ground in Herb Stratum <u>0</u>					

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:
Top three overall veg species in project area 1.) Smooth brome, 2.) Smooth sumac, 3.) Western snowberry

SOIL

Sampling Point: UPL6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	7.5YR 2.5/2	50					SiCL	Mixed soils
	10YR 4/4	50					SiCL	Mixed soils

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |

Indicators for Problematic Hydric Soils³:

- ☐
- 1 cm Muck (A9) (LRR I, J)
-
- ☐
- Coast Prairie Redox (A16) (LRR F, G, H)
-
- ☐
- Dark Surface (S7) (LRR G)
-
- ☐
- High Plains Depressions (F16)
-
- (LRR H outside of MLRA 72 & 73)**
-
- ☐
- Reduced Vertic (F18)
-
- ☐
- Red Parent Material (TF2)
-
- ☐
- Very Shallow Dark Surface (TF12)
-
- ☐
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐
- Surface Soil Cracks (B6)
-
- ☐
- Sparsely Vegetated Concave Surface (B8)
-
- ☐
- Drainage Patterns (B10)
-
- ☐
- Oxidized Rhizospheres on Living Roots (C3)
-
- (where tilled)**
-
- ☐
- Crayfish Burrows (C8)
-
- ☐
- Saturation Visible on Aerial Imagery (C9)
-
- ☐
- Geomorphic Position (D2)
-
- ☐
- FAC-Neutral Test (D5)
-
- ☐
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Todd Co. Sampling Date: 10/16/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL7
 Investigator(s): Vincent Popk Section, Township, Range: Sec 35, T38N, R33W
 Landform (hillslope, terrace, etc.): swale/hillslope Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): LRR G, 43i Keya Paha Tablelands Lat: 43.22387 Long: -101.18634 Datum: NAD83
 Soil Map Unit Name: Rosebud and Canyon soils, 9-21% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>) <div> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ </div>				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>60</u></td> <td>x 3 = <u>180</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>30</u></td> <td>x 5 = <u>150</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>370</u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>60</u>	x 3 = <u>180</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>30</u>	x 5 = <u>150</u>	Column Totals: <u>100</u> (A)	<u>370</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>60</u>	x 3 = <u>180</u>																	
FACU species <u>10</u>	x 4 = <u>40</u>																	
UPL species <u>30</u>	x 5 = <u>150</u>																	
Column Totals: <u>100</u> (A)	<u>370</u> (B)																	
<u>Herb Stratum</u> (Plot size: <u>5'</u>) <div> 1. <u>Nassella viridula</u> 2. <u>Bromus inermis</u> 3. <u>Symphoricarpos occidentalis</u> 4. <u>Thinopyrum intermedium</u> 5. <u>Bouteloua gracilis</u> 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ </div>				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
<div> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ </div>																		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) <div> 1. _____ 2. _____ </div>																		
<div> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ </div>																		
% Bare Ground in Herb Stratum <u>0</u>																		
0 = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>														
Remarks: Top three overall veg species in project area 1.) Intermediate wheat grass, 2.) Green needle grass, 3.) Smooth brome																		

SOIL

Sampling Point: UPL7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
----------------------	-----	--------------------------	----	-------------------------------------

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Todd Co. Sampling Date: 10/16/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL8
 Investigator(s): Vincent Popk Section, Township, Range: Sec 33, T39W, R30W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): n/a
 Subregion (LRR): LRR G, 43i Keya Paha Tablelands Lat: 43.30499 Long: -100.87703 Datum: NAD83
 Soil Map Unit Name: Keota-Rock outcrop complex, 16-40% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>n/a</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>95</u></td> <td>x 4 = <u>380</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>405</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.05</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>95</u>	x 4 = <u>380</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>100</u> (A)	<u>405</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>95</u>	x 4 = <u>380</u>																	
UPL species <u>5</u>	x 5 = <u>25</u>																	
Column Totals: <u>100</u> (A)	<u>405</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Schedonorus arundinaceus</u>	<u>70</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Melilotus officinalis</u>	<u>15</u>	<u>N</u>	<u>FACU</u>															
3. <u>Rosa arkansana</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
4. <u>Artemisia ludovicana</u>	<u>5</u>	<u>N</u>	<u>UPL</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		
Remarks: Top 3 veg species: 1.) Tall fescue, 2.) Smooth brome, 3.) Sweet yellow clover																		

SOIL

Sampling Point: UPL8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/3	100					CSL	wet to touch
12-18	2.5Y 5/3	100					CSL	wet to touch

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- (where tilled)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Todd Co. Sampling Date: 10/17/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL9
 Investigator(s): Vincent Popk Section, Township, Range: Sec 10, T37N, R31W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): n/a
 Subregion (LRR): LRR G, 43i Keya Paha Tablelands Lat: 43.19538 Long: -100.97736 Datum: NAD83
 Soil Map Unit Name: Valentine-Dunday complex, 3-9% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)	
4. _____	_____	_____	_____		
			<u>0</u> = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____	
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4. _____	_____	_____	_____	FAC species <u>35</u> x 3 = <u>105</u>	
5. _____	_____	_____	_____	FACU species <u>55</u> x 4 = <u>220</u>	
			<u>0</u> = Total Cover	UPL species <u>10</u> x 5 = <u>50</u>	
Herb Stratum (Plot size: <u>5'</u>)				Column Totals: <u>100</u> (A) <u>375</u> (B)	
1. <u>Andropogon gerardii</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	Prevalence Index = B/A = <u>3.75</u>	
2. <u>Panicum virgatum</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
3. <u>Schizachyrium scoparium</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
4. <u>Artemisia ludoviciana</u>	<u>10</u>	<u>N</u>	<u>UPL</u>	<input type="checkbox"/> 2 - Dominance Test is >50%	
5. <u>Schedonorus arundinaceus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹	
6. <u>Amorpha canescens</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
7. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
8. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
9. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
10. _____	_____	_____	_____		
			<u>100</u> = Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u>)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
			<u>0</u> = Total Cover		
% Bare Ground in Herb Stratum <u>0</u>					
Remarks:					
Top 3 veg species in study area reflect the top 3 vegetation species in the herb stratum					

SOIL

Sampling Point: UPL9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
----------------------	-----	--------------------------	----	-------------------------------------

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Todd Co. Sampling Date: 10/17/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL10
 Investigator(s): Vincent Popk Section, Township, Range: Sec 12, T36N, R32W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): LRR G, 43i Keya Paha Tablelands Lat: 43.11451 Long: -101.02602 Datum: NAD83
 Soil Map Unit Name: Valentine fine sand, rolling, 9-24% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)	
4. _____	_____	_____	_____		
<u>0</u> = Total Cover					
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____	
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4. _____	_____	_____	_____	FAC species <u>35</u> x 3 = <u>105</u>	
5. _____	_____	_____	_____	FACU species <u>50</u> x 4 = <u>200</u>	
<u>0</u> = Total Cover				UPL species <u>15</u> x 5 = <u>75</u>	
Herb Stratum (Plot size: <u>5'</u>)				Column Totals: <u>100</u> (A) <u>380</u> (B)	
1. <u>Andropogon gerardii</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	Prevalence Index = B/A = <u>3.8</u>	
2. <u>Panicum virgatum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>		
3. <u>Bouteloua gracilis</u>	<u>15</u>	<u>N</u>	<u>FAC</u>		
4. <u>Bromus inermis</u>	<u>15</u>	<u>N</u>	<u>UPL</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
<u>100</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u>)				Hydrophytic Vegetation Indicators:	
1. _____	_____	_____	_____	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
2. _____	_____	_____	_____	<input type="checkbox"/> 2 - Dominance Test is >50%	
<u>0</u> = Total Cover				<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹	
% Bare Ground in Herb Stratum <u>0</u>				<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
Remarks:				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
Top 3 overall vegetation species in survey area, 1.) Big blue stem, 2.) Panic grass, 3.) Blue gramma				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

SOIL

Sampling Point: UPL9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
----------------------	-----	--------------------------	----	-------------------------------------

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Todd Co. Sampling Date: 10/17/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL11
 Investigator(s): Vincent Popk Section, Township, Range: Sec 02, T35N, R32W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): n/a
 Subregion (LRR): LRR G, 44a Sand Hills Lat: 43.04518 Long: -101.06056 Datum: NAD83
 Soil Map Unit Name: Valentine-Tryon fine sands, 0-24% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. _____																		
2. _____																		
3. _____																		
4. _____																		
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>15</u></td> <td>x 4 = <u>60</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>310</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.1</u>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>15</u>	x 4 = <u>60</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>100</u> (A)	<u>310</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>5</u>	x 1 = <u>5</u>																	
FACW species <u>25</u>	x 2 = <u>50</u>																	
FAC species <u>40</u>	x 3 = <u>120</u>																	
FACU species <u>15</u>	x 4 = <u>60</u>																	
UPL species <u>15</u>	x 5 = <u>75</u>																	
Column Totals: <u>100</u> (A)	<u>310</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____																		
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>) 1. <u>Euthamia graminifolia</u> <u>25</u> Y FACW 2. <u>Helianthus petolaris</u> <u>20</u> Y FAC 3. <u>Solanum rostratum</u> <u>20</u> Y FAC 4. <u>Sporobolus heterolepis</u> <u>15</u> N UPL 5. <u>Elymus canadensis</u> <u>15</u> N FACU 6. <u>Juncus effusus</u> <u>5</u> N OBL 7. _____ 8. _____ 9. _____ 10. _____																		
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>) 1. _____ 2. _____																		
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		
Remarks: Top 3 vegetation species in survey area: 1.) Plains sunflower, 2.) Prairie drop seed, 3.) Wild rye (Canada)																		

SOIL

Sampling Point: UPL11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Todd Co. Sampling Date: 10/17/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL12
 Investigator(s): Vincent Popk Section, Township, Range: Sec 14, T35N, R28W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): n/a
 Subregion (LRR): LRR G, 43i Keya Paha Tablelands Lat: 43.01110 Long: -100.57867 Datum: NAD83
 Soil Map Unit Name: Holt-Vetal fine sandy loams, 3-9% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>n/a</u> (A/B)														
1. _____																		
2. _____																		
3. _____																		
4. _____																		
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>90</u></td> <td>x 4 = <u>360</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>410</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.1</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>90</u>	x 4 = <u>360</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>100</u> (A)	<u>410</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>90</u>	x 4 = <u>360</u>																	
UPL species <u>10</u>	x 5 = <u>50</u>																	
Column Totals: <u>100</u> (A)	<u>410</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. _____																		
2. _____																		
3. _____																		
4. _____																		
5. _____																		
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Schizachyrium scoparium</u>	<u>90</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Artemisia ludoviciana</u>	<u>5</u>	<u>N</u>	<u>UPL</u>															
3. <u>Bromus inermis</u>	<u>5</u>	<u>N</u>	<u>UPL</u>															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. _____																		
2. _____																		
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Remarks:																		
Top 3 vegetation species 1.) Little blue stem, 2.) White sagebrush, 3.) Smooth brome																		

SOIL

Sampling Point: UPL11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Todd Co. Sampling Date: 10/17/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL13
 Investigator(s): Vincent Popk Section, Township, Range: Sec 10, T36N, R26W
 Landform (hillslope, terrace, etc.): field Local relief (concave, convex, none): none Slope (%): n/a
 Subregion (LRR): LRR G, 43i Keya Paha Tablelands Lat: 43.10440 Long: -100.36902 Datum: NAD83
 Soil Map Unit Name: Keota-Kadoka silt loams, 9-15% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>n/a</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>3</u></td> <td>x 3 = <u>9</u></td> </tr> <tr> <td>FACU species <u>7</u></td> <td>x 4 = <u>28</u></td> </tr> <tr> <td>UPL species <u>90</u></td> <td>x 5 = <u>450</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>487</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.87</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>3</u>	x 3 = <u>9</u>	FACU species <u>7</u>	x 4 = <u>28</u>	UPL species <u>90</u>	x 5 = <u>450</u>	Column Totals: <u>100</u> (A)	<u>487</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>3</u>	x 3 = <u>9</u>																	
FACU species <u>7</u>	x 4 = <u>28</u>																	
UPL species <u>90</u>	x 5 = <u>450</u>																	
Column Totals: <u>100</u> (A)	<u>487</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Bromus inermis</u>	<u>90</u>	<u>Y</u>	<u>UPL</u>															
2. <u>Melilotus officinalis</u>	<u>7</u>	<u>N</u>	<u>FACU</u>															
3. <u>Lithospermum canescens</u>	<u>3</u>	<u>N</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		
Remarks: Top 3 vegetation species in survey area match top 3 species in herb stratum																		

SOIL

Sampling Point: UPL13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Living roots mixed in throughout soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Todd Co. Sampling Date: 10/17/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL14
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 35, 37N, R28W
 Landform (hillslope, terrace, etc.): field Local relief (concave, convex, none): none Slope (%): n/a
 Subregion (LRR): LRR G, 43i Keya Paha Tablelands Lat: 43.14315 Long: -100.60899 Datum: NAD 83
 Soil Map Unit Name: Holt-Vetal fine sandy loams, 3-9% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Data point taken in alfalfa field					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>n/a</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
0 = Total Cover				Total % Cover of: _____ Multiply by: _____	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				OBL species <u>0</u> x 1 = <u>0</u>	
1. _____	_____	_____	_____	FACW species _____ x 2 = <u>0</u>	
2. _____	_____	_____	_____	FAC species <u>0</u> x 3 = <u>0</u>	
3. _____	_____	_____	_____	FACU species <u>0</u> x 4 = <u>0</u>	
4. _____	_____	_____	_____	UPL species <u>100</u> x 5 = <u>500</u>	
5. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>500</u> (B)	
0 = Total Cover				Prevalence Index = B/A = <u>5</u>	
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators:	
1. <u>Medicago sativa</u>	<u>100</u>	<u>Y</u>	<u>UPL</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
2. _____	_____	_____	_____	<input type="checkbox"/> 2 - Dominance Test is >50%	
3. _____	_____	_____	_____	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹	
4. _____	_____	_____	_____	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
6. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
7. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
100 = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u>)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0 = Total Cover					
% Bare Ground in Herb Stratum _____					
Remarks: Dominant vegetation in survey area is exclusively alfalfa					

SOIL

Sampling Point: UPL14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16)
(**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
----------------------	-----	--------------------------	----	-------------------------------------

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
(where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Telecommunications Tower Installation City/County: Rosebud/Todd Co. Sampling Date: 10/18/23
 Applicant/Owner: Rosebud Sioux Tribe State: SD Sampling Point: UPL15
 Investigator(s): Vincent Popyk Section, Township, Range: Sec 20, T39N, R28W
 Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): n/a
 Subregion (LRR): LRR G, 43I Key Paha Table Lands Lat: 43.34149 Long: -100.65335 Datum: NAD 83
 Soil Map Unit Name: Keota-Epping silt loams, 9-21% slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>n/a</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>40</u></td> <td>x 5 = <u>200</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>440</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.4</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>40</u>	x 5 = <u>200</u>	Column Totals: <u>100</u> (A)	<u>440</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>60</u>	x 4 = <u>240</u>																	
UPL species <u>40</u>	x 5 = <u>200</u>																	
Column Totals: <u>100</u> (A)	<u>440</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Schizachyrium scoparium</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Artemisia ludoviciana</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>															
3. <u>Symphoricarpos occidentalis</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
% Bare Ground in Herb Stratum _____																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		
Remarks: Top 3 vegetation species within survey area: 1.) Smooth brome, 2.) Little bluestem, 3.) Yucca																		

SOIL

Sampling Point: UPL15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 2/1	100					SiCL	Dark & moist

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) |

Indicators for Problematic Hydric Soils³:

- ☐
- 1 cm Muck (A9) (LRR I, J)
-
- ☐
- Coast Prairie Redox (A16) (LRR F, G, H)
-
- ☐
- Dark Surface (S7) (LRR G)
-
- ☐
- High Plains Depressions (F16)
-
- (LRR H outside of MLRA 72 & 73)
-
- ☐
- Reduced Vertic (F18)
-
- ☐
- Red Parent Material (TF2)
-
- ☐
- Very Shallow Dark Surface (TF12)
-
- ☐
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐
- Surface Soil Cracks (B6)
-
- ☐
- Sparsely Vegetated Concave Surface (B8)
-
- ☐
- Drainage Patterns (B10)
-
- ☐
- Oxidized Rhizospheres on Living Roots (C3)
-
- (where tilled)
-
- ☐
- Crayfish Burrows (C8)
-
- ☐
- Saturation Visible on Aerial Imagery (C9)
-
- ☒
- Geomorphic Position (D2)
-
- ☐
- FAC-Neutral Test (D5)
-
- ☐
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix B – USFWS Section 7 Compliance



United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408
Phone: (605) 224-8693 Fax: (605) 224-1416



In Reply Refer To:
Project code: 2024-0044480
Project Name: Full Rosebud fiber optic cable

March 04, 2024

Federal Nexus: yes
Federal Action Agency (if applicable): National Telecommunications and Information Administration

Subject: Technical assistance for 'Full Rosebud fiber optic cable'

Dear Vincent Popyk:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on March 04, 2024, for 'Full Rosebud fiber optic cable' (here forward, Project). This project has been assigned Project Code 2024-0044480 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project is not reasonably certain to cause incidental take of the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- American Burying Beetle *Nicrophorus americanus* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate
- Rufa Red Knot *Calidris canutus rufa* Threatened
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- Western Prairie Fringed Orchid *Platanthera praeclara* Threatened
- Whooping Crane *Grus americana* Endangered

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Step

Consultation with the Service is necessary. The project has a federal nexus (e.g., Federal funds, permit, etc.), but you are not the federal action agency or its designated (in writing) non-federal representative. Therefore, the ESA consultation status is incomplete and no project activities should occur until consultation between the Service and the Federal action agency (or designated non-federal representative), is completed.

As the federal agency or designated non-federal representative deems appropriate, they should submit their determination of effects to the Service by doing the following.

1. Log into IPaC using an agency email account and click on My Projects, click "Search by record locator" to find this Project using **134-139572394**. (Alternatively, the originator of the project in IPaC can add the agency representative to the project by using the Add Member button on the project home page.)
2. Review the answers to the Northern Long-eared Bat Range-wide Determination Key to ensure that they are accurate.
3. Click on Review/Finalize to convert the 'not likely to adversely affect' consistency letter to a concurrence letter. Download the concurrence letter for your files if needed.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the

Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the South Dakota Ecological Services Field Office and reference Project Code 2024-0044480 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Full Rosebud fiber optic cable

2. Description

The following description was provided for the project 'Full Rosebud fiber optic cable':

Installation of fiber optic cable in the Rosebud Sioux Tribe reservation located in South Dakota. The project will install approximately 20 miles of fiber optic cable in an already established road ROW.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.1676015,-100.7488365,102298,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

6. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

No

8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

No

9. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the [effects of any activities](#) that would not occur but for the proposed action.

If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of [Effects of the Action](#) can be found here: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

10. [Semantic] Is the action area located within 0.5 miles of a known northern long-eared bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

11. Does the action area contain any caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating northern long-eared bats?

No

12. Does the action area contain or occur within 0.5 miles of (1) talus or (2) anthropogenic or naturally formed rock crevices in rocky outcrops, rock faces or cliffs?

No

13. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?

(If unsure, answer "Yes.")

Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥ 3 inches (12.7 centimeter) dbh), answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

14. Will the action cause effects to a bridge?

No

15. Will the action result in effects to a culvert or tunnel?

No

16. Does the action include the intentional exclusion of northern long-eared bats from a building or structure?

Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local U.S. Fish and Wildlife Services Ecological Services Field Office to help assess whether northern long-eared bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures

No

17. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats**?

No

18. Will the action directly or indirectly cause construction of one or more new roads that are open to the public?

Note: The answer may be yes when a publicly accessible road either (1) is constructed as part of the proposed action or (2) would not occur but for the proposed action (i.e., the road construction is facilitated by the proposed action but is not an explicit component of the project).

No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic on one or more existing roads?

Note: For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

Yes

20. Will the increased vehicle traffic occur on any road that lies between any two areas of contiguous forest that are each greater than or equal to 10 acres in extent and are separated by less than 1,000 feet? Northern long-eared bats may cross a road by flying between forest patches that are up to 1,000 feet apart.

Note: "Contiguous forest" of 10 acres or more may include areas where multiple forest patches are separated by less than 1,000 feet of non-forested area if the forested patches, added together, comprise at least 10 acres.

No

21. Will the proposed action involve the creation of a new water-borne contaminant source (e.g., leachate pond pits containing chemicals that are not NSF/ANSI 60 compliant)?

No

22. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

No

23. Will the action include drilling or blasting?

No

24. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

No

25. Will the proposed action involve the use of herbicide or other pesticides (e.g., fungicides, insecticides, or rodenticides)?

No

26. Will the action include or cause activities that are reasonably certain to cause chronic nighttime noise in suitable summer habitat for the northern long-eared bat? Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time.

Note: Additional information defining suitable summer habitat for the northern long-eared bat can be found at:

<https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

27. Does the action include, or is it reasonably certain to cause, the use of artificial lighting within 1000 feet of suitable northern long-eared bat roosting habitat?

Note: Additional information defining suitable roosting habitat for the northern long-eared bat can be found at:

<https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

28. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

No

29. Will the action result in the use of prescribed fire?

No

30. Will the action cause noises that are louder than ambient baseline noises within the action area?

Yes

31. Will the action cause noises during the active season in suitable summer habitat that are louder than anthropogenic noises to which the affected habitat is currently exposed?

Answer 'no' if the noises will occur only during the inactive period.

Note: Inactive Season dates for areas within a spring staging/fall swarming area can be found here: [https://](https://www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas)

www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas.

Note: Additional information defining suitable summer habitat for the northern long-eared bat can be found at:

<https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

0

Will all potential northern long-eared bat (NLEB) roost trees (trees ≥ 3 inches diameter at breast height, dbh) be cut, knocked, or brought down from any portion of the action area greater than or equal to 0.1 acre? If all NLEB roost trees will be removed from multiple areas, select 'Yes' if the cumulative extent of those areas meets or exceeds 0.1 acre.

No

Enter the extent of the action area (in acres) from which all potential NLEB roost trees will be removed. If all NLEB roost trees will be removed from multiple areas, entire the total extent of those areas. Round up to the nearest tenth of an acre.

0

For the area from which all potential northern long-eared bat (NLEB) roost trees will be removed, on how many acres (round to the nearest tenth of an acre) will trees be allowed to regrow? Enter '0' if the entire area from which all potential NLEB roost trees are removed will be developed or otherwise converted to non-forest for the foreseeable future.

0

Will any snags (standing dead trees) ≥ 3 inches dbh be left standing in the area(s) in which all northern long-eared bat roost trees will be cut, knocked down, or otherwise brought down?

No

Will all project activities be completed by April 1, 2024?

No

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Vincent Popyk
Address: 330 Knollwood Dr
City: Rapid City
State: SD
Zip: 57701
Email: vincepopyk@gmail.com
Phone: 6056003851

LEAD AGENCY CONTACT INFORMATION

Lead Agency: National Telecommunications and Information Administration



United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408
Phone: (605) 224-8693 Fax: (605) 224-1416



In Reply Refer To:
Project code: 2024-0044456
Project Name: Broadband Towers

March 07, 2024

Federal Nexus: yes
Federal Action Agency (if applicable): National Telecommunications and Information Administration

Subject: Technical assistance for 'Broadband Towers'

Dear Vincent Popyk:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on March 07, 2024, for 'Broadband Towers' (here forward, Project). This project has been assigned Project Code 2024-0044456 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project is not reasonably certain to cause incidental take of the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- American Burying Beetle *Nicrophorus americanus* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate
- Rufa Red Knot *Calidris canutus rufa* Threatened
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- Western Prairie Fringed Orchid *Platanthera praeclara* Threatened
- Whooping Crane *Grus americana* Endangered

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Step

Consultation with the Service is necessary. The project has a federal nexus (e.g., Federal funds, permit, etc.), but you are not the federal action agency or its designated (in writing) non-federal representative. Therefore, the ESA consultation status is incomplete and no project activities should occur until consultation between the Service and the Federal action agency (or designated non-federal representative), is completed.

As the federal agency or designated non-federal representative deems appropriate, they should submit their determination of effects to the Service by doing the following.

1. Log into IPaC using an agency email account and click on My Projects, click "Search by record locator" to find this Project using **539-138044428**. (Alternatively, the originator of the project in IPaC can add the agency representative to the project by using the Add Member button on the project home page.)
2. Review the answers to the Northern Long-eared Bat Range-wide Determination Key to ensure that they are accurate.
3. Click on Review/Finalize to convert the 'not likely to adversely affect' consistency letter to a concurrence letter. Download the concurrence letter for your files if needed.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the

Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the South Dakota Ecological Services Field Office and reference Project Code 2024-0044456 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

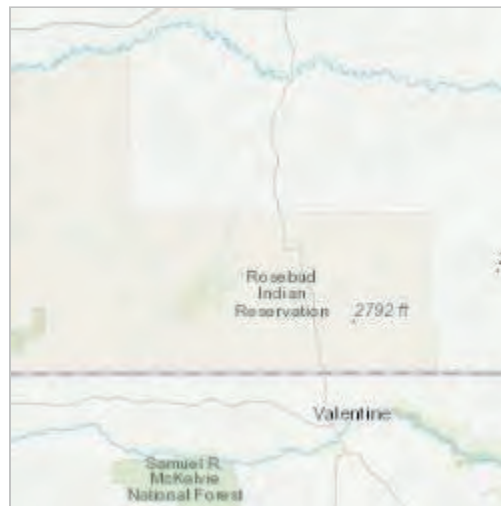
Broadband Towers

2. Description

The following description was provided for the project 'Broadband Towers':

Construction of 17 broadband towers across the Rosebud Sioux Reservation located in South Dakota. Purpose of project is to expand high speed internet services to underserved communities.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.543092650000006,-100.73528851130192,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

6. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

No

8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

No

9. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the [effects of any activities](#) that would not occur but for the proposed action.

If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of [Effects of the Action](#) can be found here: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

10. [Semantic] Is the action area located within 0.5 miles of a known northern long-eared bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

11. Does the action area contain any caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating northern long-eared bats?

No

12. Does the action area contain or occur within 0.5 miles of (1) talus or (2) anthropogenic or naturally formed rock crevices in rocky outcrops, rock faces or cliffs?

No

13. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?

(If unsure, answer "Yes.")

Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥ 3 inches (12.7 centimeter) dbh), answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

14. Will the action cause effects to a bridge?

No

15. Will the action result in effects to a culvert or tunnel?

No

16. Does the action include the intentional exclusion of northern long-eared bats from a building or structure?

Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local U.S. Fish and Wildlife Services Ecological Services Field Office to help assess whether northern long-eared bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures

No

17. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats**?

No

18. Will the action directly or indirectly cause construction of one or more new roads that are open to the public?

Note: The answer may be yes when a publicly accessible road either (1) is constructed as part of the proposed action or (2) would not occur but for the proposed action (i.e., the road construction is facilitated by the proposed action but is not an explicit component of the project).

No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic on one or more existing roads?

Note: For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

Yes

20. Will the increased vehicle traffic occur on any road that lies between any two areas of contiguous forest that are each greater than or equal to 10 acres in extent and are separated by less than 1,000 feet? Northern long-eared bats may cross a road by flying between forest patches that are up to 1,000 feet apart.

Note: "Contiguous forest" of 10 acres or more may include areas where multiple forest patches are separated by less than 1,000 feet of non-forested area if the forested patches, added together, comprise at least 10 acres.

No

21. Will the proposed action involve the creation of a new water-borne contaminant source (e.g., leachate pond pits containing chemicals that are not NSF/ANSI 60 compliant)?

No

22. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

No

23. Will the action include drilling or blasting?

Yes

24. Will the drilling or blasting affect known or potentially suitable hibernacula, summer habitat, or active year-round habitat (where applicable) for the northern long-eared bat?

Note: In addition to direct impacts to hibernacula, consider impacts to hydrology or air flow that may impact the suitability of hibernacula. Additional information defining suitable summer habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

25. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

No

26. Will the proposed action involve the use of herbicides or pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

No

27. Will the action include or cause activities that are reasonably certain to cause chronic nighttime noise in suitable summer habitat for the northern long-eared bat? Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time.

Note: Additional information defining suitable summer habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

28. Does the action include, or is it reasonably certain to cause, the use of artificial lighting within 1000 feet of suitable northern long-eared bat roosting habitat?

Note: Additional information defining suitable roosting habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

29. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

No

30. Will the action result in the use of prescribed fire?

No

31. Will the action cause noises that are louder than ambient baseline noises within the action area?

Yes

32. Will the action cause noises during the active season in suitable summer habitat that are louder than anthropogenic noises to which the affected habitat is currently exposed? Answer 'no' if the noises will occur only during the inactive period.

Note: Inactive Season dates for areas within a spring staging/fall swarming area can be found here: <https://www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas>.

Note: Additional information defining suitable summer habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

0

Will all potential northern long-eared bat (NLEB) roost trees (trees ≥ 3 inches diameter at breast height, dbh) be cut, knocked, or brought down from any portion of the action area greater than or equal to 0.1 acre? If all NLEB roost trees will be removed from multiple areas, select 'Yes' if the cumulative extent of those areas meets or exceeds 0.1 acre.

No

Enter the extent of the action area (in acres) from which all potential NLEB roost trees will be removed. If all NLEB roost trees will be removed from multiple areas, entire the total extent of those areas. Round up to the nearest tenth of an acre.

0

For the area from which all potential northern long-eared bat (NLEB) roost trees will be removed, on how many acres (round to the nearest tenth of an acre) will trees be allowed to regrow? Enter '0' if the entire area from which all potential NLEB roost trees are removed will be developed or otherwise converted to non-forest for the foreseeable future.

0

Will any snags (standing dead trees) ≥ 3 inches dbh be left standing in the area(s) in which all northern long-eared bat roost trees will be cut, knocked down, or otherwise brought down?

No

Will all project activities be completed by April 1, 2024?

No

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Vincent Popyk
Address: 330 Knollwood Dr
City: Rapid City
State: SD
Zip: 57701
Email: vincepopyk@gmail.com
Phone: 6056003851

LEAD AGENCY CONTACT INFORMATION

Lead Agency: National Telecommunications and Information Administration



United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408
Phone: (605) 224-8693 Fax: (605) 224-1416



In Reply Refer To:

11/19/2024 22:43:11 UTC

Project Code: 2025-0021844

Project Name: Rosebud Broadband Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/media/endangered-species-consultation-handbook>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/law/bald-and-golden-eagle-protection-act>, <https://www.fws.gov/media/endangered-species-act-1>, and/or <https://www.fws.gov/law/migratory-bird-treaty-act-1918>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/law/migratory-birds>

Please be aware that bald and golden eagles are protected under the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712, as amended), as well as the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may benefit from the development of an Eagle Conservation Plan (ECP), see guidance at this website (<https://www.fws.gov/node/266177>). An ECP can assist developers in achieving compliance with regulatory requirements, help avoid "take" of eagles at project sites, and provide biological support for eagle permit applications. Additionally, we recommend wind energy

developments adhere to our Land-based Wind Energy Guidelines for minimizing impacts to migratory birds and bats.

We have recently updated our guidelines for minimizing impacts to migratory birds at projects that have communication towers (including meteorological, cellular, digital television, radio, and emergency broadcast towers). These guidelines can be found at:

<https://www.fws.gov/story/incidental-take-beneficial-practices-communication-towers>

<http://www.towerkill.com>

According to National Wetlands Inventory maps, (available online at <https://www.fws.gov/library/collections/national-wetland-inventory>) wetlands exist adjacent to the proposed construction corridor. If a project may impact wetlands or other important fish and wildlife habitats, the U.S. Fish and Wildlife Service (Service), in accordance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347) and other environmental laws and rules, recommends complete avoidance of these areas, if possible. If this is not possible, attempts should be made to minimize adverse impacts. Finally if adverse impacts are unavoidable, measures should be undertaken to replace the impacted areas. Alternatives should be examined and the least damaging practical alternative selected. If wetland impacts are unavoidable, a mitigation plan addressing the number and types of wetland acres to be impacted, and the methods of replacement should be prepared and submitted to the resource agencies for review.

Please check with your local wetland management district to determine whether Service interest lands exist at the proposed project site, the exact locations of these properties, and any additional restrictions that may apply regarding these sites. The Offices are listed below. If you are not sure which office to contact, we can help you make that decision.

U.S. Fish and Wildlife Service, Huron Wetland Management District, Federal Building, Room 309, 200 4th Street SW, Huron, SD 57350; telephone (605) 352-5894. Counties in the Huron WMD: Beadle, Buffalo, Hand, Hughes, Hyde, Jerauld, Sanborn, Sully.

U.S. Fish and Wildlife Service, Lake Andes Wetland Management District, P O Box 18, Pickstown, South Dakota, 57367; telephone (605) 487-7603. Counties in the Lake Andes WMD: Aurora, Brule, Charles Mix, Davison, Douglas.

U.S. Fish and Wildlife Service, Madison Wetland Management District, P.O. Box 48, Madison, South Dakota, 57042, telephone (605) 256-2974. Counties in the Madison WMD: Bon Homme, Brookings, Clay, Deuel, Hamlin, Hanson, Hutchinson, Kingsbury, Lake, Lincoln, McCook, Miner, Minnehaha, Moody, Turner, Union, Yankton.

U.S. Fish and Wildlife Service, Sand Lake Wetland Management District, 39650 Sand Lake Drive, Columbia, South Dakota, 57433; telephone (605) 885-6320. Counties in the Sand Lake WMD: Brown, Campbell, Edmunds, Faulk, McPherson, Potter, Spink, Walworth.

U.S. Fish and Wildlife Service, Waubay Wetland Management District, 44401 134A Street, Waubay, South Dakota, 57273; telephone (605) 947-4521. Counties in the Waubay WMD: Clark, Codington, Day,

Grant, Marshall, Roberts.

You are welcome to visit our website (<https://www.fws.gov/office/southdakota-ecological-services>) or to contact our office/staff at the address or phone number above for more information.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

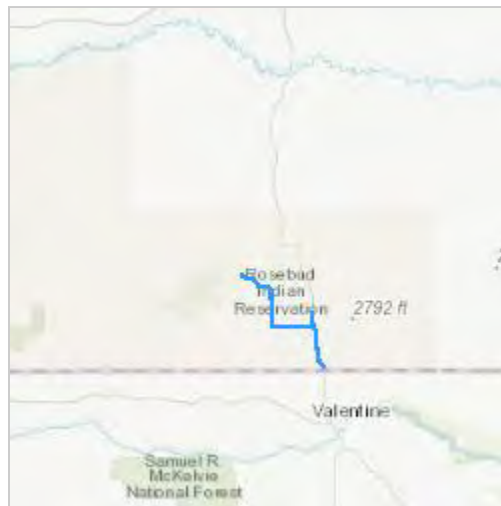
South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408
(605) 224-8693

PROJECT SUMMARY

Project Code: 2025-0021844
Project Name: Rosebud Broadband Project
Project Type: Distribution Line - Maintenance/Modification - Below Ground
Project Description: Installation of fiber optic cable in Rosebud Sioux Tribe reservation located in South Dakota.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.543092650000006,-100.73528851130192,14z>



Counties: Nebraska and South Dakota

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

BIRDS

NAME	STATUS
Rufa Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane <i>Grus americana</i> Population: Wherever found, except where listed as an experimental population There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

INSECTS

NAME	STATUS
American Burying Beetle <i>Nicrophorus americanus</i> Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/66	Threatened
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Western Regal Fritillary <i>Argynnis idalia occidentalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Western Prairie Fringed Orchid <i>Platanthera praeclara</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1669	Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

-
1. The [Bald and Golden Eagle Protection Act](#) of 1940.
 2. The [Migratory Birds Treaty Act](#) of 1918.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

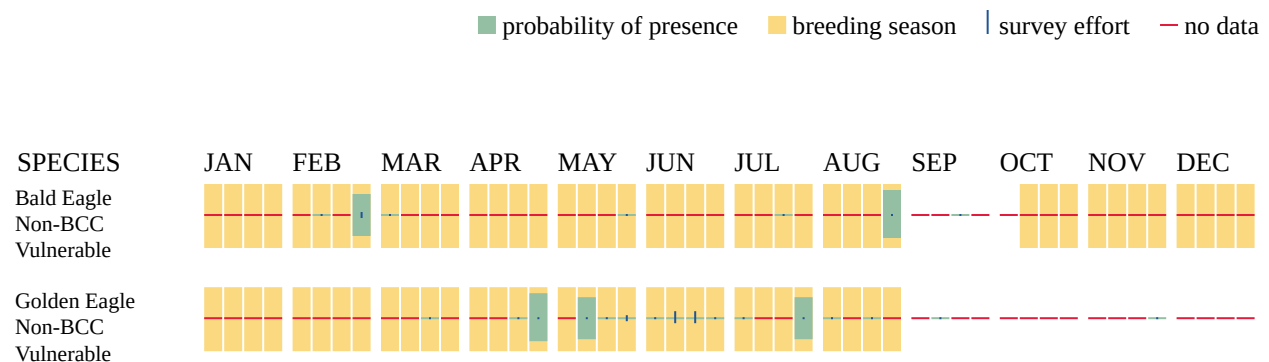
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454	Breeds May 20 to Jul 31
Chestnut-collared Longspur <i>Calcarius ornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9437	Breeds May 1 to Aug 10
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

NAME	BREEDING SEASON
Grasshopper Sparrow <i>Ammodramus savannarum perpallidus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329	Breeds Jun 1 to Aug 20
Lark Bunting <i>Calamospiza melanocorys</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9451	Breeds May 10 to Aug 15
Northern Harrier <i>Circus hudsonius</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Pectoral Sandpiper <i>Calidris melanotos</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Prairie Falcon <i>Falco mexicanus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4736	Breeds Mar 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10669	Breeds Apr 20 to Aug 5

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



BCC Rangewide
(CON)

Willet
BCC Rangewide
(CON)



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER POND

- PABFh

FRESHWATER EMERGENT WETLAND

- PEM1A
- PEM1C

RIVERINE

- R4SBC

IPAC USER CONTACT INFORMATION

Agency: Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota
Name: Jessica Callahan
Address: 2611 Gabel Road
City: Billings
State: MT
Zip: 59102
Email: jessica.callahan@kljeng.com
Phone: 4062472904

LEAD AGENCY CONTACT INFORMATION

Lead Agency: National Telecommunications and Information Administration



United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408
Phone: (605) 224-8693 Fax: (605) 224-1416



In Reply Refer To:
Project code: 2025-0021844
Project Name: Rosebud Broadband Project

11/19/2024 22:50:38 UTC

Federal Nexus: yes
Federal Action Agency (if applicable): National Telecommunications and Information Administration

Subject: Technical assistance for 'Rosebud Broadband Project'

Dear Jessica Callahan:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on November 19, 2024, for 'Rosebud Broadband Project' (here forward, Project). This project has been assigned Project Code 2025-0021844 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project. **Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (Dkey), invalidates this letter.**

Determination for the Northern Long-Eared Bat and Tricolored Bat

Based on your IPaC submission and a standing analysis completed by the Service, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Endangered	May affect

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- American Burying Beetle *Nicrophorus americanus* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate
- Rufa Red Knot *Calidris canutus rufa* Threatened
- Western Prairie Fringed Orchid *Platanthera praeclara* Threatened
- Western Regal Fritillary *Argynnis idalia occidentalis* Proposed Threatened
- Whooping Crane *Grus americana* Endangered

You may coordinate with our Office to determine whether the Action may cause prohibited take of the species listed above.

Conclusion

Consultation with the Service is not complete. Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of “May Affect.” A “May Affect” determination in this key indicates that the project, as entered, is not consistent with the questions in the key. Not all projects that reach a “May Affect” determination are anticipated to result in adverse impacts to listed species. These projects may result in a “No Effect”, “May Affect, Not Likely to Adversely Affect”, or “May Affect, Likely to Adversely Affect” determination depending on the details of the project. Please contact our South Dakota Ecological Services Field Office to discuss methods to avoid or minimize potential adverse effects to those species or designated critical habitats.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

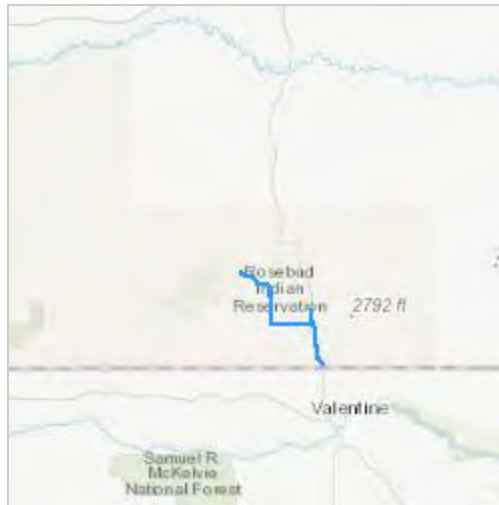
Rosebud Broadband Project

2. Description

The following description was provided for the project 'Rosebud Broadband Project':

Installation of fiber optic cable in Rosebud Sioux Tribe reservation located in South Dakota.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.543092650000006,-100.73528851130192,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect” for a least one species covered by this determination key.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. Is the action area wholly within Zone 2 of the year-round active area for northern long-eared bat and/or tricolored bat?

Automatically answered

No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

Automatically answered

No

4. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

Yes

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

No

10. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

11. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

No

12. Does the action area contain (1) talus or (2) anthropogenic or naturally formed rock shelters or crevices in rocky outcrops, rock faces or cliffs?

No

13. Will the action cause effects to a bridge?

Note: Covered bridges should be considered as bridges in this question.

No

14. Will the action result in effects to a culvert or tunnel at any time of year?

No

15. Are trees present within 1000 feet of the action area?

Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

16. Does the action include the intentional exclusion of bats from a building or structure?

Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

No

17. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats**?

No

18. Will the action cause construction of one or more new roads open to the public?

For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic permanently or temporarily on one or more existing roads?

Note: For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

Yes

20. Will the increased vehicle traffic occur on any road that lies between any two areas of contiguous forest that are each greater than or equal to 10 acres in extent and are separated by less than 1,000 feet? Bats may cross a road by flying between forest patches that are up to 1,000 feet apart.

Note: "Contiguous forest" of 10 acres or more may include areas where multiple forest patches are separated by less than 1,000 feet of non-forested area if the forested patches, added together, comprise at least 10 acres.

Yes

21. For every 1,000 feet of road where increased traffic is expected, will there be at least one place where bats could cross the road corridor by flying less than 33 feet (10 meters) between trees whose tops are at least 66 feet (20 meters) higher than the road surface?

No

22. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

Note: For information regarding NSF/ANSI 60 please visit <https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects>

No

23. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

No

24. Will the action include drilling or blasting?

No

25. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

No

26. Will the proposed action involve the use of herbicides or other pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

No

27. Will the action include or cause activities that are reasonably certain to cause chronic or intense nighttime noise (above current levels of ambient noise in the area) in suitable summer habitat for the northern long-eared bat or tricolored bat during the active season?

Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time. Sources of chronic or intense noise that could cause adverse effects to bats may include, but are not limited to: road traffic; trains; aircraft; industrial activities; gas compressor stations; loud music; crowds; oil and gas extraction; construction; and mining.

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

No

28. Does the action include, or is it reasonably certain to cause, the use of permanent or temporary artificial lighting within 1000 feet of suitable northern long-eared bat or tricolored bat roosting habitat?

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

No

29. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

No

30. Will the proposed action result in the use of prescribed fire?

Note: If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

No

31. Does the action area intersect the northern long-eared bat species list area?

Automatically answered

Yes

32. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

Automatically answered

No

33. [Semantic] Is the action area located within 150 feet of a documented northern long-eared bat roost site?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

34. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?

If unsure, answer "Yes."

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

35. Has a presence/probable absence summer bat survey targeting the northern long-eared bat following the Service's [Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines](#) been conducted within the project area?

No

36. Do you have any documents that you want to include with this submission?

No

PROJECT QUESTIONNAIRE

IPAC USER CONTACT INFORMATION

Agency: Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota

Name: Jessica Callahan

Address: 2611 Gabel Road

City: Billings

State: MT

Zip: 59102

Email: jessica.callahan@kljeng.com

Phone: 4062472904

LEAD AGENCY CONTACT INFORMATION

Lead Agency: National Telecommunications and Information Administration



United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408
Phone: (605) 224-8693 Fax: (605) 224-1416



In Reply Refer To:

11/19/2024 22:52:09 UTC

Project code: 2025-0021844

Project Name: Rosebud Broadband Project

Subject: Consistency letter for 'Rosebud Broadband Project' project for a No Effect determination for the American burying beetle

Dear Jessica Callahan:

The U.S. Fish and Wildlife Service (Service) received on **November 19, 2024** your effect determination(s) for the 'Rosebud Broadband Project' (the Action) using the American burying beetle (*Nicrophorus americanus*) determination key within the Information for Planning and Consultation (IPaC) system.

The Service developed this system in accordance with the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.)

Based on your consideration of the Action and the assistance in the Service's American burying beetle determination key, you have determined that your proposed action will have No Effect on the American burying beetle.

Your agency has met consultation requirements for these species by informing the Service of your "no effect" determination. No further consultation for this project is required for the American burying beetle. This consistency letter confirms you may rely on effect determinations you reached by considering the American burying beetle DKey to satisfy agency consultation requirements under Section 7(a) (2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.; ESA).

Coordination with your local Ecological Services Office is complete for the American burying beetle. If your project may affect additional listed species, please contact your local Ecological Services Field Office for assistance with those species. Thank you for considering Federally-listed species during your project planning.

This letter covers only the American burying beetle. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Monarch Butterfly *Danaus plexippus* Candidate
- Northern Long-eared Bat *Myotis septentrionalis* Endangered

- Rufa Red Knot *Calidris canutus rufa* Threatened
- Western Prairie Fringed Orchid *Platanthera praeclara* Threatened
- Western Regal Fritillary *Argynnis idalia occidentalis* Proposed Threatened
- Whooping Crane *Grus americana* Endangered

If your project may affect additional listed species, you must evaluate additional DKeys for other species, or submit a request for consultation for the additional species to your local Ecological Services Field Office.

The Service recommends that your agency contact the Service or re-evaluate the project in IPaC if: 1) the scope or location of the proposed project is changed significantly, 2) new information reveals that the action may affect listed species or designated critical habitat; 3) the action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed or critical habitat designated. If any of the above conditions occurs, additional consultation should take place before project changes are final or resources committed.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

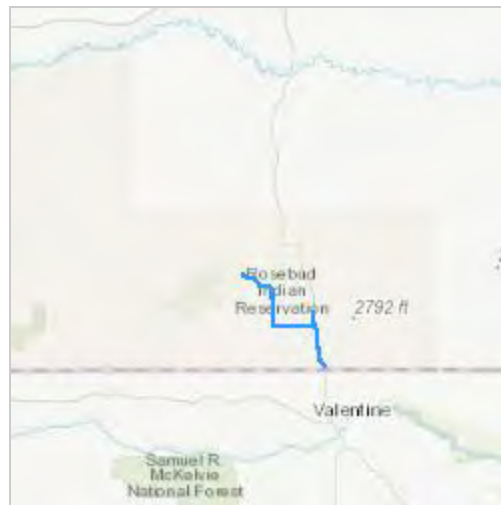
Rosebud Broadband Project

2. Description

The following description was provided for the project 'Rosebud Broadband Project':

Installation of fiber optic cable in Rosebud Sioux Tribe reservation located in South Dakota.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.543092650000006,-100.73528851130192,14z>



QUALIFICATION INTERVIEW

1. Is the action authorized, funded, or being carried out by a Federal agency?

Yes

2. Have you determined that the proposed action will have “no effect” on the American burying beetle? (If you are unsure select "No")

Yes

PROJECT QUESTIONNAIRE

Please select the activity that best matches your proposed action.

11. Soil disturbance related to communication infrastructure construction and maintenance

If you chose 13 above, please describe below. If you did not choose 13 above, please type "0".

0

IPAC USER CONTACT INFORMATION

Agency: Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota

Name: Jessica Callahan

Address: 2611 Gabel Road

City: Billings

State: MT

Zip: 59102

Email: jessica.callahan@kljeng.com

Phone: 4062472904

LEAD AGENCY CONTACT INFORMATION

Lead Agency: National Telecommunications and Information Administration



18 East Main Street, Suite 229

Rapid City, SD 57701

KLJENG.COM

Memorandum

Date: 7/24/2024
To: Daniel H. Kim Ph.D
Copy to:
From: KLJ: Vincent Popyk, Environmental Specialist
RE: US Fish & Wild Service Project Consultation

The purpose of this memo is to formally request project consultation from the US Fish & Wild Service (USFWS) as it pertains to a telecommunications infrastructure project that will occur in two phases on the Rosebud Sioux Reservation.

The project in question consists of two phases; installation of fiber optic cable for approximately 30 miles in Todd County, South Dakota, the upgrade of two existing radio towers to function dually as broadband towers, and the construction of broadband towers in Todd and Mellette Counties, South Dakota. Fiber optic cable will be routed west from the intersection of US Highway 83 and 297th Street and continue until reaching the intersection of 297th Street and Lakeview Road at which point it will continue north until reaching BIA Highway 5 and continue west on BIA Highway 7 to the west of Rosebud, South Dakota for approximately 0.5 miles at which point it will be routed north following an existing two-track road for 0.3 miles before reaching the end destination. Fiber optic cable will also be installed on the western side of US Highway 83 (starting at the Nebraska/South Dakota border) traveling north approximately 10.5 miles at which the cable will be routed east where it will terminate in a planted agricultural field. Broadband tower locations are in largely rural areas that primarily treeless. Broadband towers will be constructed on Tribal land. Section 7 consultation with USFWS is required as the project is funded by the Broadband Infrastructure Program through the National Telecommunications and Information Administration.

Project Phase	Section	Township	Range
Broadband Tower Construction	02, 03, 10, 11, 12, 14, 20, 27, 30, 31, 33, 35	35N, 36N, 37N, 38N, 39N, 40N, 41N	26W, 27W, 28W, 29W, 30W, 31W, 32W, 33W
Fiber Optic Cable Installation	03, 04, 07, 09, 10, 11, 14, 15, 16, 17, 22, 23, 27, 31, 34, 35	35N, 36N, 37N, 38N	28W, 29W, 30W

It is anticipated that fiber optic cable will be installed using the trenchless plow method which minimizes ground disturbance. In locations where the route of the cable passes through driveways, roads, and other hard surfaces horizontal direction drilling or pneumatic missile installation will be used. Other equipment likely needed includes the skid-steers, general ground moving hand tools, and possibly a backhoe. The fiber optic cable is not expected to have a permanent footprint due to it being buried.



Installation of broadband towers will require the use of similar (with some additional equipment) heavy construction equipment used to install the fiber optic cable. Additional equipment will likely include cranes, bucket trucks, drill truck (air rotary rig), and a heavy-duty transport truck. Of the broadband towers, Towers 6, 7, and 12 are expected to be 220 feet in height with the remaining towers varying in height under 200 feet. Each new broadband tower is expected to have a maximum permanent footprint of 25 square feet, this includes any necessary fencing or grading at the tower base.

As a part of the project, the USFWS Information for Planning and Consultation (IPaC) tool was consulted. The IPaC generated consistency letters of “May affect, but not likely to adversely affect” the northern long-eared bat (NLEB). No tree removal is planned as part of the project; and no NLEB were observed in the project area during field surveys completed in. Field surveys were conducted on July 6th, 2023, October 16th- October 18th, 2023, and July 24th, 2204. Field surveys involved the identification trees that were greater than 3in in DBH (diameter at breast height) that also showed signs of cracks, crevices, and sloughing bark that function as possible roost habitat. Based on the factors indicated above and observations made in the field, KLJ believes a “May affect, not likely to adversely affect” is the correct determination for the NLEB on this project.

Please refer to the attached **Maps** for the locations of the fiber optic route and the broadband tower locations.

Please refer to the attached Maps for a visual overview of the project site. If any questions comments arise regarding the memo please contact Vincent Popyk at (605) 600-3851 or email at vince.popyk@kljeng.com.

Thank you.

Attachments

Overall Project Location Map

Fiber Optic Cable Route Location Map

Aquatic Resources Delineation Map

IPaC Consistency Letter



United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408
Phone: (605) 224-8693 Fax: (605) 224-1416



In Reply Refer To:
Project code: 2024-0044480
Project Name: Full Rosebud fiber optic cable

March 04, 2024

Federal Nexus: yes
Federal Action Agency (if applicable): National Telecommunications and Information Administration

Subject: Technical assistance for 'Full Rosebud fiber optic cable'

Dear Vincent Popyk:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on March 04, 2024, for 'Full Rosebud fiber optic cable' (here forward, Project). This project has been assigned Project Code 2024-0044480 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project is not reasonably certain to cause incidental take of the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- American Burying Beetle *Nicrophorus americanus* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate
- Rufa Red Knot *Calidris canutus rufa* Threatened
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- Western Prairie Fringed Orchid *Platanthera praeclara* Threatened
- Whooping Crane *Grus americana* Endangered

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Step

Consultation with the Service is necessary. The project has a federal nexus (e.g., Federal funds, permit, etc.), but you are not the federal action agency or its designated (in writing) non-federal representative. Therefore, the ESA consultation status is incomplete and no project activities should occur until consultation between the Service and the Federal action agency (or designated non-federal representative), is completed.

As the federal agency or designated non-federal representative deems appropriate, they should submit their determination of effects to the Service by doing the following.

1. Log into IPaC using an agency email account and click on My Projects, click "Search by record locator" to find this Project using **134-139572394**. (Alternatively, the originator of the project in IPaC can add the agency representative to the project by using the Add Member button on the project home page.)
2. Review the answers to the Northern Long-eared Bat Range-wide Determination Key to ensure that they are accurate.
3. Click on Review/Finalize to convert the 'not likely to adversely affect' consistency letter to a concurrence letter. Download the concurrence letter for your files if needed.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the

Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the South Dakota Ecological Services Field Office and reference Project Code 2024-0044480 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Full Rosebud fiber optic cable

2. Description

The following description was provided for the project 'Full Rosebud fiber optic cable':

Installation of fiber optic cable in the Rosebud Sioux Tribe reservation located in South Dakota. The project will install approximately 20 miles of fiber optic cable in an already established road ROW.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.1676015,-100.74883659102298,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

6. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

No

8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

No

9. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the [effects of any activities](#) that would not occur but for the proposed action.

If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of [Effects of the Action](#) can be found here: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

10. [Semantic] Is the action area located within 0.5 miles of a known northern long-eared bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

11. Does the action area contain any caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating northern long-eared bats?

No

12. Does the action area contain or occur within 0.5 miles of (1) talus or (2) anthropogenic or naturally formed rock crevices in rocky outcrops, rock faces or cliffs?

No

13. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?

(If unsure, answer "Yes.")

Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥ 3 inches (12.7 centimeter) dbh), answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

14. Will the action cause effects to a bridge?

No

15. Will the action result in effects to a culvert or tunnel?

No

16. Does the action include the intentional exclusion of northern long-eared bats from a building or structure?

Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local U.S. Fish and Wildlife Services Ecological Services Field Office to help assess whether northern long-eared bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures

No

17. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats?**

No

18. Will the action directly or indirectly cause construction of one or more new roads that are open to the public?

Note: The answer may be yes when a publicly accessible road either (1) is constructed as part of the proposed action or (2) would not occur but for the proposed action (i.e., the road construction is facilitated by the proposed action but is not an explicit component of the project).

No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic on one or more existing roads?

Note: For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

Yes

20. Will the increased vehicle traffic occur on any road that lies between any two areas of contiguous forest that are each greater than or equal to 10 acres in extent and are separated by less than 1,000 feet? Northern long-eared bats may cross a road by flying between forest patches that are up to 1,000 feet apart.

Note: "Contiguous forest" of 10 acres or more may include areas where multiple forest patches are separated by less than 1,000 feet of non-forested area if the forested patches, added together, comprise at least 10 acres.

No

21. Will the proposed action involve the creation of a new water-borne contaminant source (e.g., leachate pond pits containing chemicals that are not NSF/ANSI 60 compliant)?

No

22. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

No

23. Will the action include drilling or blasting?

No

24. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

No

25. Will the proposed action involve the use of herbicide or other pesticides (e.g., fungicides, insecticides, or rodenticides)?

No

26. Will the action include or cause activities that are reasonably certain to cause chronic nighttime noise in suitable summer habitat for the northern long-eared bat? Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time.

Note: Additional information defining suitable summer habitat for the northern long-eared bat can be found at:

<https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

27. Does the action include, or is it reasonably certain to cause, the use of artificial lighting within 1000 feet of suitable northern long-eared bat roosting habitat?

Note: Additional information defining suitable roosting habitat for the northern long-eared bat can be found at:

<https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

28. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

No

29. Will the action result in the use of prescribed fire?

No

30. Will the action cause noises that are louder than ambient baseline noises within the action area?

Yes

31. Will the action cause noises during the active season in suitable summer habitat that are louder than anthropogenic noises to which the affected habitat is currently exposed?

Answer 'no' if the noises will occur only during the inactive period.

Note: Inactive Season dates for areas within a spring staging/fall swarming area can be found here: [https://](https://www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas)

www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas.

Note: Additional information defining suitable summer habitat for the northern long-eared bat can be found at:

<https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

0

Will all potential northern long-eared bat (NLEB) roost trees (trees ≥ 3 inches diameter at breast height, dbh) be cut, knocked, or brought down from any portion of the action area greater than or equal to 0.1 acre? If all NLEB roost trees will be removed from multiple areas, select 'Yes' if the cumulative extent of those areas meets or exceeds 0.1 acre.

No

Enter the extent of the action area (in acres) from which all potential NLEB roost trees will be removed. If all NLEB roost trees will be removed from multiple areas, entire the total extent of those areas. Round up to the nearest tenth of an acre.

0

For the area from which all potential northern long-eared bat (NLEB) roost trees will be removed, on how many acres (round to the nearest tenth of an acre) will trees be allowed to regrow? Enter '0' if the entire area from which all potential NLEB roost trees are removed will be developed or otherwise converted to non-forest for the foreseeable future.

0

Will any snags (standing dead trees) ≥ 3 inches dbh be left standing in the area(s) in which all northern long-eared bat roost trees will be cut, knocked down, or otherwise brought down?

No

Will all project activities be completed by April 1, 2024?

No

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Vincent Popyk
Address: 330 Knollwood Dr
City: Rapid City
State: SD
Zip: 57701
Email: vincepopyk@gmail.com
Phone: 6056003851

LEAD AGENCY CONTACT INFORMATION

Lead Agency: National Telecommunications and Information Administration



United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408
Phone: (605) 224-8693 Fax: (605) 224-1416



In Reply Refer To:
Project code: 2024-0044456
Project Name: Broadband Towers

March 07, 2024

Federal Nexus: yes
Federal Action Agency (if applicable): National Telecommunications and Information Administration

Subject: Technical assistance for 'Broadband Towers'

Dear Vincent Popyk:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on March 07, 2024, for 'Broadband Towers' (here forward, Project). This project has been assigned Project Code 2024-0044456 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project is not reasonably certain to cause incidental take of the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- American Burying Beetle *Nicrophorus americanus* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate
- Rufa Red Knot *Calidris canutus rufa* Threatened
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- Western Prairie Fringed Orchid *Platanthera praeclara* Threatened
- Whooping Crane *Grus americana* Endangered

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Step

Consultation with the Service is necessary. The project has a federal nexus (e.g., Federal funds, permit, etc.), but you are not the federal action agency or its designated (in writing) non-federal representative. Therefore, the ESA consultation status is incomplete and no project activities should occur until consultation between the Service and the Federal action agency (or designated non-federal representative), is completed.

As the federal agency or designated non-federal representative deems appropriate, they should submit their determination of effects to the Service by doing the following.

1. Log into IPaC using an agency email account and click on My Projects, click "Search by record locator" to find this Project using **539-138044428**. (Alternatively, the originator of the project in IPaC can add the agency representative to the project by using the Add Member button on the project home page.)
2. Review the answers to the Northern Long-eared Bat Range-wide Determination Key to ensure that they are accurate.
3. Click on Review/Finalize to convert the 'not likely to adversely affect' consistency letter to a concurrence letter. Download the concurrence letter for your files if needed.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the

Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the South Dakota Ecological Services Field Office and reference Project Code 2024-0044456 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Broadband Towers

2. Description

The following description was provided for the project 'Broadband Towers':

Construction of 17 broadband towers across the Rosebud Sioux Reservation located in South Dakota. Purpose of project is to expand high speed internet services to underserved communities.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.543092650000006,-100.73528851130192,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

6. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

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8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

No

9. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the [effects of any activities](#) that would not occur but for the proposed action.

If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

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No

10. [Semantic] Is the action area located within 0.5 miles of a known northern long-eared bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

11. Does the action area contain any caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating northern long-eared bats?

No

12. Does the action area contain or occur within 0.5 miles of (1) talus or (2) anthropogenic or naturally formed rock crevices in rocky outcrops, rock faces or cliffs?

No

13. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?

(If unsure, answer "Yes.")

Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥ 3 inches (12.7 centimeter) dbh), answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

14. Will the action cause effects to a bridge?

No

15. Will the action result in effects to a culvert or tunnel?

No

16. Does the action include the intentional exclusion of northern long-eared bats from a building or structure?

Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local U.S. Fish and Wildlife Services Ecological Services Field Office to help assess whether northern long-eared bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures

No

17. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats**?

No

18. Will the action directly or indirectly cause construction of one or more new roads that are open to the public?

Note: The answer may be yes when a publicly accessible road either (1) is constructed as part of the proposed action or (2) would not occur but for the proposed action (i.e., the road construction is facilitated by the proposed action but is not an explicit component of the project).

No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic on one or more existing roads?

Note: For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

Yes

20. Will the increased vehicle traffic occur on any road that lies between any two areas of contiguous forest that are each greater than or equal to 10 acres in extent and are separated by less than 1,000 feet? Northern long-eared bats may cross a road by flying between forest patches that are up to 1,000 feet apart.

Note: "Contiguous forest" of 10 acres or more may include areas where multiple forest patches are separated by less than 1,000 feet of non-forested area if the forested patches, added together, comprise at least 10 acres.

No

21. Will the proposed action involve the creation of a new water-borne contaminant source (e.g., leachate pond pits containing chemicals that are not NSF/ANSI 60 compliant)?

No

22. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

No

23. Will the action include drilling or blasting?

Yes

24. Will the drilling or blasting affect known or potentially suitable hibernacula, summer habitat, or active year-round habitat (where applicable) for the northern long-eared bat?

Note: In addition to direct impacts to hibernacula, consider impacts to hydrology or air flow that may impact the suitability of hibernacula. Additional information defining suitable summer habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

25. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

No

26. Will the proposed action involve the use of herbicides or pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

No

27. Will the action include or cause activities that are reasonably certain to cause chronic nighttime noise in suitable summer habitat for the northern long-eared bat? Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time.

Note: Additional information defining suitable summer habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

28. Does the action include, or is it reasonably certain to cause, the use of artificial lighting within 1000 feet of suitable northern long-eared bat roosting habitat?

Note: Additional information defining suitable roosting habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

29. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

No

30. Will the action result in the use of prescribed fire?

No

31. Will the action cause noises that are louder than ambient baseline noises within the action area?

Yes

32. Will the action cause noises during the active season in suitable summer habitat that are louder than anthropogenic noises to which the affected habitat is currently exposed? Answer 'no' if the noises will occur only during the inactive period.

Note: Inactive Season dates for areas within a spring staging/fall swarming area can be found here: <https://www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas>.

Note: Additional information defining suitable summer habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

0

Will all potential northern long-eared bat (NLEB) roost trees (trees ≥ 3 inches diameter at breast height, dbh) be cut, knocked, or brought down from any portion of the action area greater than or equal to 0.1 acre? If all NLEB roost trees will be removed from multiple areas, select 'Yes' if the cumulative extent of those areas meets or exceeds 0.1 acre.

No

Enter the extent of the action area (in acres) from which all potential NLEB roost trees will be removed. If all NLEB roost trees will be removed from multiple areas, entire the total extent of those areas. Round up to the nearest tenth of an acre.

0

For the area from which all potential northern long-eared bat (NLEB) roost trees will be removed, on how many acres (round to the nearest tenth of an acre) will trees be allowed to regrow? Enter '0' if the entire area from which all potential NLEB roost trees are removed will be developed or otherwise converted to non-forest for the foreseeable future.

0

Will any snags (standing dead trees) ≥ 3 inches dbh be left standing in the area(s) in which all northern long-eared bat roost trees will be cut, knocked down, or otherwise brought down?

No

Will all project activities be completed by April 1, 2024?

No

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Vincent Popyk
Address: 330 Knollwood Dr
City: Rapid City
State: SD
Zip: 57701
Email: vincepopyk@gmail.com
Phone: 6056003851

LEAD AGENCY CONTACT INFORMATION

Lead Agency: National Telecommunications and Information Administration



United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408
Phone: (605) 224-8693 Fax: (605) 224-1416



In Reply Refer To:

07/24/2024 15:02:49 UTC

Project code: 2024-0120710

Project Name: Rosebud Fiber Optic Cable

Subject: Consistency letter for 'Rosebud Fiber Optic Cable' project for a No Effect determination for the American burying beetle

Dear Vincent Popyk:

The U.S. Fish and Wildlife Service (Service) received on **July 24, 2024** your effect determination(s) for the 'Rosebud Fiber Optic Cable' (the Action) using the American burying beetle (*Nicrophorus americanus*) determination key within the Information for Planning and Consultation (IPaC) system.

The Service developed this system in accordance with the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.)

Based on your consideration of the Action and the assistance in the Service's American burying beetle determination key, you have determined that your proposed action will have No Effect on the American burying beetle.

Your agency has met consultation requirements for these species by informing the Service of your "no effect" determination. No further consultation for this project is required for the American burying beetle. This consistency letter confirms you may rely on effect determinations you reached by considering the American burying beetle DKey to satisfy agency consultation requirements under Section 7(a) (2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.; ESA).

Coordination with your local Ecological Services Office is complete for the American burying beetle. If your project may affect additional listed species, please contact your local Ecological Services Field Office for assistance with those species. Thank you for considering Federally-listed species during your project planning.

This letter covers only the American burying beetle. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Monarch Butterfly *Danaus plexippus* Candidate
- Northern Long-eared Bat *Myotis septentrionalis* Endangered

- Rufa Red Knot *Calidris canutus rufa* Threatened
- Western Prairie Fringed Orchid *Platanthera praeclara* Threatened
- Whooping Crane *Grus americana* Endangered

If your project may affect additional listed species, you must evaluate additional DKeys for other species, or submit a request for consultation for the additional species to your local Ecological Services Field Office.

The Service recommends that your agency contact the Service or re-evaluate the project in IPaC if: 1) the scope or location of the proposed project is changed significantly, 2) new information reveals that the action may affect listed species or designated critical habitat; 3) the action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed or critical habitat designated. If any of the above conditions occurs, additional consultation should take place before project changes are final or resources committed.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

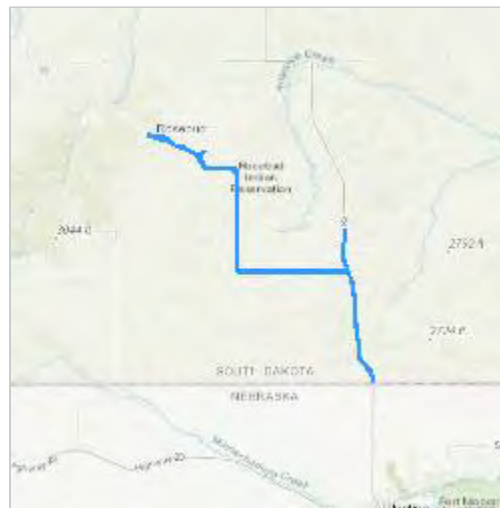
Rosebud Fiber Optic Cable

2. Description

The following description was provided for the project 'Rosebud Fiber Optic Cable':

Installation of fiber optic cable in the Rosebud Sioux Tribe reservation located in South Dakota. The project will install approximately 30 miles of fiber optic cable in an already established road ROW.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.1165719,-100.74806206510571,14z>



QUALIFICATION INTERVIEW

1. Is the action authorized, funded, or being carried out by a Federal agency?

Yes

2. Have you determined that the proposed action will have “no effect” on the American burying beetle? (If you are unsure select "No")

Yes

PROJECT QUESTIONNAIRE

Please select the activity that best matches your proposed action.

11. Soil disturbance related to communication infrastructure construction and maintenance

If you chose 13 above, please describe below. If you did not choose 13 above, please type "0".

0

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Vincent Popyk
Address: 18 East Main Street Suite 229
City: Rapid City
State: SD
Zip: 57701
Email: vince.popyk@kljeng.com
Phone: 6056003851

LEAD AGENCY CONTACT INFORMATION

Lead Agency: National Telecommunications and Information Administration



United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408
Phone: (605) 224-8693 Fax: (605) 224-1416



In Reply Refer To:
Project code: 2024-0120710
Project Name: Rosebud Fiber Optic Cable

07/24/2024 15:12:48 UTC

Federal Nexus: yes
Federal Action Agency (if applicable): National Telecommunications and Information Administration

Subject: Technical assistance for 'Rosebud Fiber Optic Cable'

Dear Vincent Popyk:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 24, 2024, for 'Rosebud Fiber Optic Cable' (here forward, Project). This project has been assigned Project Code 2024-0120710 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project is not reasonably certain to cause incidental take of the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- American Burying Beetle *Nicrophorus americanus* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate
- Rufa Red Knot *Calidris canutus rufa* Threatened
- Western Prairie Fringed Orchid *Platanthera praeclara* Threatened
- Whooping Crane *Grus americana* Endangered

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Step

Consultation with the Service is necessary. The project has a federal nexus (e.g., Federal funds, permit, etc.), but you are not the federal action agency or its designated (in writing) non-federal representative. Therefore, the ESA consultation status is incomplete and no project activities should occur until consultation between the Service and the Federal action agency (or designated non-federal representative), is completed.

As the federal agency or designated non-federal representative deems appropriate, they should submit their determination of effects to the Service by doing the following.

1. Log into IPaC using an agency email account and click on My Projects, click "Search by record locator" to find this Project using **476-146854231**. (Alternatively, the originator of the project in IPaC can add the agency representative to the project by using the Add Member button on the project home page.)
2. Review the answers to the Northern Long-eared Bat Range-wide Determination Key to ensure that they are accurate.
3. Click on Review/Finalize to convert the 'not likely to adversely affect' consistency letter to a concurrence letter. Download the concurrence letter for your files if needed.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the South Dakota Ecological Services Field Office and reference Project Code 2024-0120710 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

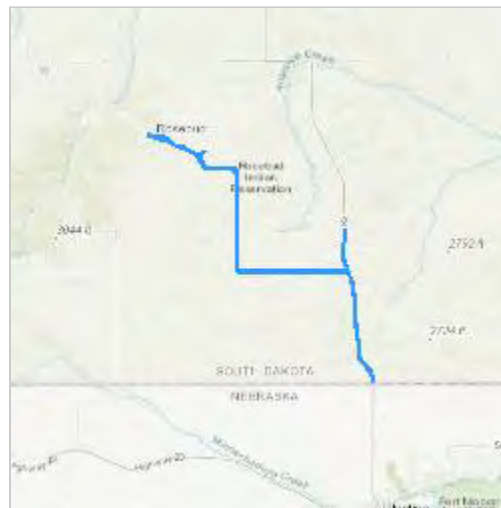
Rosebud Fiber Optic Cable

2. Description

The following description was provided for the project 'Rosebud Fiber Optic Cable':

Installation of fiber optic cable in the Rosebud Sioux Tribe reservation located in South Dakota. The project will install approximately 30 miles of fiber optic cable in an already established road ROW.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.1165719,-100.74806206510571,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

6. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

No

8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

No

9. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the [effects of any activities](#) that would not occur but for the proposed action.

If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of [Effects of the Action](#) can be found here: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

10. [Semantic] Is the action area located within 0.5 miles of a known northern long-eared bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

11. Does the action area contain any caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating northern long-eared bats?

No

12. Does the action area contain or occur within 0.5 miles of (1) talus or (2) anthropogenic or naturally formed rock crevices in rocky outcrops, rock faces or cliffs?

No

13. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?

(If unsure, answer "Yes.")

Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥ 3 inches (12.7 centimeter) dbh), answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

14. Will the action cause effects to a bridge?

No

15. Will the action result in effects to a culvert or tunnel?

No

16. Does the action include the intentional exclusion of northern long-eared bats from a building or structure?

Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local U.S. Fish and Wildlife Services Ecological Services Field Office to help assess whether northern long-eared bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures

No

17. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats**?

No

18. Will the action directly or indirectly cause construction of one or more new roads that are open to the public?

Note: The answer may be yes when a publicly accessible road either (1) is constructed as part of the proposed action or (2) would not occur but for the proposed action (i.e., the road construction is facilitated by the proposed action but is not an explicit component of the project).

No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic on one or more existing roads?

Note: For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

Yes

20. Will the increased vehicle traffic occur on any road that lies between any two areas of contiguous forest that are each greater than or equal to 10 acres in extent and are separated by less than 1,000 feet? Northern long-eared bats may cross a road by flying between forest patches that are up to 1,000 feet apart.

Note: "Contiguous forest" of 10 acres or more may include areas where multiple forest patches are separated by less than 1,000 feet of non-forested area if the forested patches, added together, comprise at least 10 acres.

Yes

21. For every 1,000 feet of road where increased traffic is expected, will there be at least one place where bats could cross the road corridor by flying less than 33 feet (10 meters) between trees whose tops are at least 66 feet (20 meters) higher than the road surface?

Yes

22. Will the proposed action involve the creation of a new water-borne contaminant source (e.g., leachate pond pits containing chemicals that are not NSF/ANSI 60 compliant)?

No

23. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

No

24. Will the action include drilling or blasting?

No

25. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

No

26. Will the proposed action involve the use of herbicide or other pesticides (e.g., fungicides, insecticides, or rodenticides)?

No

27. Will the action include or cause activities that are reasonably certain to cause chronic nighttime noise in suitable summer habitat for the northern long-eared bat? Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time.

Note: Additional information defining suitable summer habitat for the northern long-eared bat can be found at:

<https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

28. Does the action include, or is it reasonably certain to cause, the use of artificial lighting within 1000 feet of suitable northern long-eared bat roosting habitat?

Note: Additional information defining suitable roosting habitat for the northern long-eared bat can be found at:

<https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

29. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

No

30. Will the action result in the use of prescribed fire?

No

31. Will the action cause noises that are louder than ambient baseline noises within the action area?

Yes

32. Will the action cause noises during the active season in suitable summer habitat that are louder than anthropogenic noises to which the affected habitat is currently exposed?

Answer 'no' if the noises will occur only during the inactive period.

Note: Inactive Season dates for areas within a spring staging/fall swarming area can be found here: [https://](https://www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas)

www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas.

Note: Additional information defining suitable summer habitat for the northern long-eared bat can be found at:

<https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

PROJECT QUESTIONNAIRE

Will all project activities be completed by November 30, 2024?

No

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

0

Will all potential northern long-eared bat (NLEB) roost trees (trees ≥ 3 inches diameter at breast height, dbh) be cut, knocked, or brought down from any portion of the action area greater than or equal to 0.1 acre? If all NLEB roost trees will be removed from multiple areas, select 'Yes' if the cumulative extent of those areas meets or exceeds 0.1 acre.

No

Enter the extent of the action area (in acres) from which all potential NLEB roost trees will be removed. If all NLEB roost trees will be removed from multiple areas, enter the total extent of those areas. Round up to the nearest tenth of an acre.

0

For the area from which all potential northern long-eared bat (NLEB) roost trees will be removed, on how many acres (round to the nearest tenth of an acre) will trees be allowed to regrow? Enter '0' if the entire area from which all potential NLEB roost trees are removed will be developed or otherwise converted to non-forest for the foreseeable future.

0

Will any snags (standing dead trees) ≥ 3 inches dbh be left standing in the area(s) in which all northern long-eared bat roost trees will be cut, knocked down, or otherwise brought down?

No

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Vincent Popyk
Address: 18 East Main Street Suite 229
City: Rapid City
State: SD
Zip: 57701
Email: vince.popyk@kljeng.com
Phone: 6056003851

LEAD AGENCY CONTACT INFORMATION

Lead Agency: National Telecommunications and Information Administration

Appendix C – Section 106 Compliance Documentation



Protecting the Land,
Culture, and Tradition
for Heritage and for
future Generations

*Tribal Historic Preservation
Cultural Resource Management Office*

P.O. Box 750
Rosebud, South Dakota
Telephone: (605) 747-4255



*Ione Quigley
Officer*

Thomas Cox
RST Broadband
Project Manager
thomas.cox@rst-nsn.gov
605-319-9682

September 28, 2023

RE: Letter of No Effect for Nineteen (19) archaeological surveys.

Dear Mr. Cox,

I have reviewed the results of an Intensive Archaeological Surveys of Nineteen (19) Proposed 5G broadband towers located in nineteen different locations described below, in Todd and Mellette Counties, Rosebud Sioux Reservation, South Dakota.

Legal Location of Area Surveyed: Nineteen latitude-longitude coordinate points were submitted to the RST Historic Preservation Office for National Historic Preservation Act Section 106 compliance surveys. **The requested survey area is defined as a 200-foot radius around each of the following coordinate points:**

Tower 1: Sicangu Village: 43°00'40.0"N 100°34'43.2"W within the SW1/4SW1/4NE1/4NE1/4 of Section 14, T35N, R28W. USGS 7.5' Quadrangle: Olsonville SE

Tower 2 Olsonville: 43°08'35.3"N 100°36'32.4"W within the NW1/4NW1/4NW1/4NW1/4 of Section 35, T37N, R28W. USGS 7.5' Quadrangle: Olsonville

Tower 3 Koya Existing: 43°13'0.9"N 100°47'27. S"W within the NW1/4SE1/4SE1/4SE1/4 of Section 31, T38N, R29W. USGS 7.5' Quadrangle: Rosebud

Tower 4 KINI Existing: 43°07'50"N 100°54'05.0"W within the SW1/4NW1/4SE1/4SW1/4 of Section 32, T37N, R30W. USGS 7.5' Quadrangle: Saint Francis

Tower 5 Rosebud: 43.234335°N 100.861667°W within the NE1/4SW1/4NE1/4SW1/4 of Section 27, T38N, R30W. USGS 7.5' Quadrangle: Rosebud

Tower 6 Grass Mountain: 43°11'43.33"N 100°58'38.67"W within the SW1/4NE1/4SW1/4NW1/4 of Section 10, T37N, R31W. USGS 7.5' Quadrangle: Saint Francis

Tower 7 Spring Creek: 43°06'50.9"N 101°01'33.94"W within the NE1/4NW1/4SE1/4NE1/4 of Section 12, T36N, R32W. USGS 7.5' Quadrangle: Spring Creek

Tower 8 Mustang Meadows: 43°02'43.84"N 101°03'36.52"W within Lot 4 of Section 2, T35N, R32W. USGS 7.5' Quadrangle: Spring Creek

Tower 9/10 Upper Cut Meat: 43°13'25.3"N 101°11'12.5"W within the NW1/4SW1/4SW1/4NE1/4 of Section 35, T38N, R33W. USGS 7.5' Quadrangle: Iron Shell Flat West

Tower 11 Parmelee: 43°19'25.20"N 101°02'20.4"W within the SW1/4SW1/4SW1/4NW1/4 of Section 30, T39N, R31W. USGS 7.5' Quadrangle: Parmelee

Tower 12 Soldier Creek: 43°18'19.1"N 100° 52' 37.57"W within the SW1/4NW1/4SW1/4SE1/4 of Section 33, T39N, R30W. USGS 7.5' Quadrangle: Soldier Creek

Tower 13 North Mission: 43°20'30.90"N 100°39'12.10"W within the SE1/4NE1/4SE1/4NE1/4 of Section 20, T39N, R28W. USGS 7.5' Quadrangle: Mission

Tower 14 Okcreek: 43°18'50.9"N 100°26'08.9"W within the SW1/4SW1/4NE1/4NE1/4 of Section 31, T39N, R26W. USGS 7.5' Quadrangle: Okcreek

Tower 15 Littleburg: 43°06'15.6"N 100°22'06.2"W within the SW1/4SW1/4SE1/4SW1/4 of Section 10, T36N, R26W. USGS 7.5' Quadrangle: Hidden Timber SE

Tower 16 Norris: 43°28' 11.6"N 101°12'25.5"W within the SW1/4SW1/4SW1/4NE1/4 of Section 3, T40N, R33W. USGS 7.5' Quadrangle: Norris

Tower 17 White River: 43°32'35.13"N 100°44'07.04"W within the NE1/4NE1/4NW1/4SE1/4 of Section 11, T41N, R29W. USGS 7.5' Quadrangle: White River East

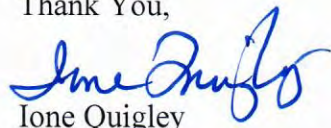
Tower 18 Wood: 43°30'04.7"N 100°30'36.0"W within the SW1/4SW1/4SW1/4NW1/4 of Section 26, T41N, R27W. USGS 7.5' Quadrangle: White River SE

Tower 19 JDC: 43°18'37.8"N 100°48'17.9"W within the SE1/4SE1/4SW1/4NW1/4 of Section 31, T39N, R29W. USGS 7.5' Quadrangle: Soldier Creek SE.

Fieldwork: Archaeologist Jennifer Galindo and field assistant Ben Young conducted systematic surface surveys, walking in 10-meter transect intervals, across the proposed location for Tower #5 on September 23, 2023, for the proposed locations for Towers #7, #8, #9/10, #11, #16, #19 on September 26, 2023, and for Towers #2, #14, #15, #17, and #18 on September 27, 2023. Overall ground visibility was at least 20% for all locations with two track trails, cow trails, and rodent mounds providing additional subsurface visibility.

No significant cultural resources were located and no further work is needed. As **no historic properties will be affected** by the proposed project, clearance is recommended and the project should proceed as planned. If, however, archeological resources are inadvertently discovered during the construction process, all ground disturbing activities should stop and the RST Tribal Historic Preservation Officer, Ms. Ione Quigley, should be contacted immediately at (605) 747-4255

Thank You,



Ione Quigley

Tribal Historic Preservation Officer

Jennifer Galindo
Archaeologist

Ben Young
Section 106 Compliance Officer

Darwin Walking Eagle
Records Manager

Tyeesha Ringing Shield
Secretary/Receptionist

Lea Rattling Leaf
Archivist/Research Assistant



Protecting the Land,
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*Tribal Historic Preservation
Cultural Resource Management Office*

*P.O. Box 750
Rosebud, South Dakota
Telephone: (605) 747-4255*



*Ione Quigley
Officer*

Thomas Cox
RST Broadband
Project Manager
thomas.cox@rst-nsn.gov
605-319-9682

September 9, 2024

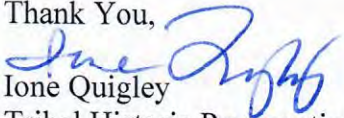
RE: Letter of No Effect for

Dear Mr. Cox,

I have reviewed the results of an Intensive Archaeological Surveys of Alternat Fiber Route located within T35N R28W Sec 23, T35N R28W Sec 14, T35N R28W Sec 11, T35N R28W Sec 2 LAT: 42.998428 LONG: -100.573388. T35N R28W Sec 3, T36N R28W Sec 34, T36N R28W Sec 27 LAT: 43.045934 LONG: -100.593895. T36N R28W Sec 27, T36N R28W Section 22 T 36 N R28W Sec 15 T36N R28W Sec 10 LAT: 43.074897 LONG: -100.596553 T36 N R28W Sec 10 T36N R28W Sec 4, T37N R28W Sec 34 LAT: 43.143133 LONG: -100.608972 LAT: 43.118208 LONG: -100.610264. From **BIA 7, T37N R29W Sec 6 T38N R29W Sec 31 LAT: 43.216772 LONG: -100.790961. LAT: 43.212869 LONG: -100.799476**

Archaeologist Jennifer Galindo recommends clearance for the first four legal descriptions, are located within an established ROW along Highway 83. The last legal in BOLD was surveyed by Ben Rhodd

No significant cultural resources were located and no further work is needed. As **no historic properties will be affected** by the proposed project, clearance is recommended and the project should proceed as planned. If, however, archeological resources are inadvertently discovered during the construction process, all ground disturbing activities should stop and the RST Tribal Historic Preservation Officer, Ms. Ione Quigley, should be contacted immediately at (605) 747-4255

Thank You,

Ione Quigley
Tribal Historic Preservation Officer

Jennifer Galindo
Archaeologist

Ben Young
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Darwin Walking Eagle
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Secretary/Receptionist

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*Tribal Historic Preservation
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*P.O. Box 750
Rosebud, South Dakota
Telephone: (605) 747-4255*



*Ione Quigley
Officer*

Thomas Cox
RST Broadband
Project Manager
thomas.cox@rst-nsn.gov
605-319-9682

March 26, 2024

RE: Letter of No Effect for one (1) archaeological survey.

Dear Mr. Cox,

I have reviewed the results of a Class 1 Archaeological Survey of one (1) Proposal to remove existing copper telecommunications cable, and install fiber optic data cables across a 19.75-mile long, (581-acre) area within the Rosebud Sioux Tribal boundaries. This project will support a transition to high-speed internet for residents of the Rosebud Sioux Tribe.

Legal Description/Location of Project Area:

The proposed project follows a 581-acre pathway connecting US Highway 83, south of Olsenville, to the community of Rosebud, South Dakota. The project area follows 297th Street to 296th Avenue, and continues north along Bureau of Indian Affairs Route 3 into Rosebud, South Dakota. The legal locations of the project are: Sections 7, 8, 9, 10, 15, 16, 17, 18, Township 36 North, Range 28 West; Sections 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, Township 36 North, Range 29 West; Sections 4, 5, 6, 7, 8, 9, 10, 15, 16, 12, 22, 27, 28, 33, 34, Township 37 North, Range 29 West; Section 31, Township 38 North, Range 29 West; Sections 26, 27, 34, 35, 36, Township 38 North, Range 30 West.

RST THPO recommends that a Tribal Cultural Specialist be present for all construction activities within 200 feet of sites 39TD105, 39TD106, and 39TD107... If, however, archeological resources are inadvertently discovered during the construction process, all ground disturbing activities should stop and the RST Tribal Historic Preservation Officer, Ms. Ione Quigley, should be contacted immediately at (605) 747-4255

Thank You,


Ione Quigley
Tribal Historic Preservation Officer

Jennifer Galindo
Archaeologist

Ben Young
Section 106 Compliance Officer

Darwin Walking Eagle
Records Manager

Lea Rattling Leaf
Admin Assistant

Appendix D – Agency Correspondence



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

January 23, 2024

Jessica Callahan
KLJ
4585 Coleman Street
Bismarck, ND 58503-0431

Subject: Environmental Review – Rosebud Sioux Telecom Fiber Cable and Tower Installation

Dear Ms. Callahan,

The South Dakota Department of Agriculture and Natural Resources (DANR) appreciates the opportunity to review the above-referenced project. Due to jurisdictional issues, state records may be incomplete. For this reason, we recommend you also contact the Rosebud Sioux Tribe Environmental Director and the EPA Region 8 coordinator for further information. Based on the information provided, we have compiled information that may be beneficial to your project.

Air Quality

Based on the information provided, it appears this project will have minor impacts to air quality in South Dakota. This impact would be through source and fugitive emissions. Fugitive emissions, although not covered under State air quality regulations, are a common source of public concern and may be subject to local or county ordinances. For further air quality information, please contact Rick Boddicker, Air Quality Program, telephone number 605-773-3151.

Drinking Water

Based on the information provided, this project will not have adverse environmental effects to drinking water in this area. Should the parameters of your project change, please reach out to Mark Mayer at 605-773-6039 or Mark.Mayer@state.sd.us.

Groundwater

Based on the information provided, this project is unlikely to have adverse effects on ground water quality. Should the parameters of your project change, please reach out to Matt Hicks at 605-773-5337 or Matt.Hicks@state.sd.us. If this project impacts tribal lands, DANR recommends you also consult the tribe's environmental coordinator for any additional conditions.

Solid and Hazardous Waste

It appears, based on the information provided, that this project will have little or no impact on solid waste management in this area.

It is not expected that any hazardous wastes sites will be encountered within the vicinity of your project area. To determine whether your project may generate hazardous waste, visit: <https://www.epa.gov/hwgenerators/managing-your-hazardous-waste-guide-small-businesses>. If you have any questions regarding the state's hazardous waste regulations, please contact Anthony Wagner at 605-773-3153, or anthony.wagner@state.sd.us.

Demolition or renovation of a building structure may be subject to the National Emission Standards for Hazardous Air Pollutants. If demolition or renovation is part of this construction project, or if the scope of the project changes to include demolition or renovation, please contact Kristin Jendrek, U.S. EPA Region 8, at (303) 312-6126 or Jendrek.Kristin@epa.gov.

Surface Water

The Water Quality Program has reviewed your request for comments letter. Based on the information provided, the program has the following comments:

All tributaries, creeks, wetlands, and lakes within the vicinity of this project are considered waters of the state and are protected under Administrative Rules of South Dakota (ARSD) Chapter 74:51. Special construction measures may have to be taken to ensure that water quality standards are not violated.

The project is in the vicinity of Parmelee Lake. This waterbody is classified by the South Dakota Surface Water Quality Standards and Uses Assigned to Lakes for the following beneficial uses: (5) Warmwater semipermanent fish life propagation waters; (7) Immersion recreation waters; (8) Limited contact recreation waters; and (9) Fish and wildlife propagation, recreation, and stock watering waters. Because of these beneficial uses, special construction measures may have to be taken to ensure that the 30-day average total suspended solids criterion of 90 mg/L and the daily maximum total suspended solids criterion of 158 mg/L are not violated.

The project work will be near Cut Meat Creek. This waterbody is classified by the South Dakota Surface Water Quality Standards and Uses Assigned to Streams for the following beneficial uses: (6) Warmwater marginal fish life propagation waters; (8) Limited contact recreation waters; (9) Fish and wildlife propagation, recreation, and stock watering waters; and 10) Irrigation waters. Because of these beneficial uses, special construction measures may have to be taken to ensure that the daily maximum total suspended solids criterion of 263 mg/L and the 30-day average total suspended solids criterion of 150 mg/L are not violated.

If this project impacts tribal lands, EPA Region 8 may require a NPDES permit for stormwater discharges from construction activities (1 acre or larger) or if any construction dewatering should occur; contact Monia Ben-Khaled, Project Officer, 303-

312-6209 or ben-khaled.moniam@epa.gov. DANR recommends you contact the proper tribal authorities for any additional conditions.

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site. Any construction activity that disturbs an area of one or more acres of land must have authorization under the General Permit for Storm Water Discharges Associated with Construction Activities. A Surface Water Discharge permit may be required if any construction dewatering should occur because of this project. Contact the Department of Agriculture and Natural Resources for additional information or guidance at 1-800-SDSTORM (1-800-737-8676) or <https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/default.aspx>.

The discharge of pollutants from any source, including indiscriminate use of fill material, may not cause destruction or impairment except where authorized under Section 404 of the Federal Water Pollution Control Act. Please contact the United States Army Corps of Engineers for more information 605-224-8531.

Tanks and Spills

The Inspection, Compliance, and Remediation Program (ICRP) maintains a database of spills/environmental events, including petroleum and chemical releases, as well as registered storage tanks within South Dakota. Due to the vague nature of the tower locations on the submitted map, we are unable to provide accurate information pertaining to nearby spills/environmental events and registered storage tank facilities near your project area. For further information about spills/environmental events or registered tanks in South Dakota, please visit the following website: <https://apps.sd.gov/nr42interactivemap>.

If contamination is encountered during construction activities or occurs during construction, report the contamination to DANR ICRP by calling 605-773-3296 or 605-773-3231 (24 hours) and contact the tribe environmental coordinator or EPA Region 8. If you have any questions, please contact Baylee Hoff at baylee.hoff@state.sd.us or (605) 773-3296.

Thank you for providing DANR the opportunity to comment on this project. If you have any questions regarding the information provided, please contact me at 605-773-3296.

Sincerely,



Baylee Hoff
Environmental Scientist
SD DANR- Environmental Assessment Contact
Phone: (605) 773-3296
Email: Baylee.Hoff@state.sd.us

cc/e: Andrea Hacker, Rosebud Sioux Tribe Emergency Manager, andrea.h.rstoem@rst-nsn.gov;
Trevor Willcuts, Todd County Emergency Manager,
mcdeputy.twillcuts@gmail.com;

Karen O'Brien, Mellette County Emergency Manager, mellem@gwtc.net

From: [Forbes, Ryan - FPAC-NRCS, SD](#)
To: [Vincent Popyk](#)
Cc: [Newman, Sara - FPAC-NRCS, SD](#)
Subject: RE: Rosebud Sioux Telecom Fiver Cable & Tower Installation project-Questions follow up
Date: Wednesday, March 13, 2024 4:16:13 PM

Vincent,

Thank you. You are good to go.

Ryan Forbes
Acting State Resource Conservationist
Natural Resources Conservation Service
South Dakota Natural Resources Conservation Service
Huron State Office
200 4th St. SW Suite 203
Huron, SD 57350
Cell-605-633-0359

From: Vincent Popyk <vince.popyk@kljeng.com>
Sent: Wednesday, March 13, 2024 3:22 PM
To: Forbes, Ryan - FPAC-NRCS, SD <ryan.forbes@usda.gov>
Cc: Newman, Sara - FPAC-NRCS, SD <Sara.Newman2@usda.gov>
Subject: RE: Rosebud Sioux Telecom Fiver Cable & Tower Installation project-Questions follow up

Ryan,

Please find attached the filled out NRCS farmland impact worksheet for your records. Based on the information added to the worksheet, each portion of the project fall below the 160-point threshold that would require.

Please let me know if there are any additional steps needed to satisfy the assessment to prime farmlands as a part of the project.

Thanks for the help,

Vincent P.

Vincent Popyk
605-600-3851
KLJ – Rapid City
18 E. Main St., Ste 229

From: Forbes, Ryan - FPAC-NRCS, SD <ryan.forbes@usda.gov>
Sent: Friday, March 8, 2024 9:11 AM
To: Vincent Popyk <vince.popyk@kljeng.com>
Cc: Newman, Sara - FPAC-NRCS, SD <Sara.Newman2@usda.gov>
Subject: RE: Rosebud Sioux Telecom Fiver Cable & Tower Installation project-Questions follow up

You don't often get email from ryan.forbes@usda.gov. [Learn why this is important](#)

Yes, that is correct.

Ryan Forbes
Acting State Resource Conservationist
Natural Resources Conservation Service
South Dakota Natural Resources Conservation Service
Huron State Office
200 4th St. SW Suite 203
Huron, SD 57350
Cell-605-633-0359

From: Vincent Popyk <vince.popyk@kljeng.com>
Sent: Friday, March 8, 2024 9:11 AM
To: Forbes, Ryan - FPAC-NRCS, SD <ryan.forbes@usda.gov>
Cc: Newman, Sara - FPAC-NRCS, SD <Sara.Newman2@usda.gov>
Subject: RE: Rosebud Sioux Telecom Fiver Cable & Tower Installation project-Questions follow up

Morning Ryan,

Following up to make sure that I am on same page with you and the NRCS.

I have the go ahead to the use the AD-1006 form for the fiber optic portion of the project in addition to the already completed AD-1006 forms for the broadband tower portion of the project.

Thanks for the clarification,

-Vincent

Vincent Popyk
605-600-3851
KLJ – Rapid City
18 E. Main St., Ste 229

From: Forbes, Ryan - FPAC-NRCS, SD <ryan.forbes@usda.gov>
Sent: Thursday, March 7, 2024 2:07 PM
To: Vincent Popyk <vince.popyk@kljeng.com>
Cc: Newman, Sara - FPAC-NRCS, SD <Sara.Newman2@usda.gov>
Subject: Rosebud Sioux Telecom Fiver Cable & Tower Installation project-Questions follow up

You don't often get email from ryan.forbes@usda.gov. [Learn why this is important](#)

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Vincent,

We are good using the AD-1006 that was completed for the projects. Let me know if you have any other questions. Thanks.

Ryan Forbes
Acting State Resource Conservationist
Natural Resources Conservation Service
South Dakota Natural Resources Conservation Service
Huron State Office
200 4th St. SW Suite 203
Huron, SD 57350
Cell-605-633-0359

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South Dakota State Office
200 Fourth Street SW, Room 203
Huron, SD 57350

March 6, 2024

Mr. Vincent Popyk
18 East Main Street, Suite 229
Rapid City, South Dakota 57701

RE: Environmental Review for:
Rosebud Sioux Telecom Fiver Cable & Tower Installation project

Dear Mr. Popyk:

Thank you for the opportunity to provide Farmland Protection Policy Act (FPPA) review of this project.

The project **does** impact prime farmland and land of statewide importance. Enclosed is a Web Soil Survey map delineating the FPPA farmland classifications of the proposed site). Also enclosed is a Farmland Conversion Impact Rating Form (AD-1006) for this project. (Note: The two shapefile projects will each have their own set of Farmland Classification and AD-1006, in a PDF attached form.) We have completed Parts II, IV, and V. Please complete Parts I, III, VI, and VII as per instructions on the back of the form and the attached document titled **Site Assessment Scoring for the Twelve Factors Used in FPPA**. If the TOTAL POINTS in Part VII is less than 160 points, the proposed activity will have no significant impact on the prime farmland or farmland of statewide importance in Todd and Mellette Counties, and no further alternatives need be considered.

The Natural Resources Conservation Service (NRCS) would advise the applicant to consult with the local NRCS and Farm Service Agency offices regarding any United States Department of Agriculture easements or contracts in the project areas that may be affected. For any other easements outside of the NRCS, you should check with the local courthouse.

If you have any questions, please contact me at (605) 633-0359.

Sincerely,



RYAN FORBES
Acting State Resource Conservationist

Attachments

cc:
Nathan Jones, State Soil Scientist, NRCS, Huron SO
Jessica Michalski, State Resource Conservationist, NRCS, Huron SO

South Dakota State Office
200 Fourth Street SW, Room 203
Huron, SD 57350

July 24, 2024

Mr. Vincent Popyk
18 East Main Street, Suite 229
Rapid City, South Dakota 57701

RE: Environmental Review for:
Rosebud_Project Area 20240212 Fiber Route_project

Dear Mr. Popyk:

Thank you for the opportunity to provide Farmland Protection Policy Act (FPPA) review of this project.

The project **does** impact prime farmland and land of statewide importance. Enclosed is a Web Soil Survey map delineating the FPPA farmland classifications of the proposed site. Also enclosed is a Farmland Conversion Impact Rating Form (AD-1006) for this project. We have completed Parts II, IV, and V. Please complete Parts I, III, VI, and VII as per instructions on the back of the form and the attached document titled **Site Assessment Scoring for the Twelve Factors Used in FPPA**. If the TOTAL POINTS in Part VII is less than 160 points, the proposed activity will have no significant impact on the prime farmland or farmland of statewide importance in Todd County, and no further alternatives need be considered.

The Natural Resources Conservation Service (NRCS) would advise the applicant to consult with the local NRCS and Farm Service Agency offices regarding any United States Department of Agriculture easements or contracts in the project areas that may be affected. For any other easements outside of the NRCS, you should check with the local courthouse.

If you have any questions, please contact me at (605) 352-1234.

Sincerely,



JESSICA MICHALSKI
State Resource Conservationist

Attachments

cc:
Nathan Jones, State Soil Scientist, NRCS, Huron SO

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request July 24th, 2024				
Name of Project Project Area 20240212 Fiber Route-Rose		Federal Agency Involved N/A				
Proposed Land Use Description in PDF		County and State Todd, SD				
PART II (To be completed by NRCS)		Date Request Received By NRCS 7/24/2024		Person Completing Form: Jordan Hopper		
Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)		YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	Acres Irrigated	Average Farm Size	
Major Crop(s) N/A	Farmable Land In Govt. Jurisdiction Acres: 50.2 % 446,215		Amount of Farmland As Defined in FPPA Acres: 28 % 245,569			
Name of Land Evaluation System Used	Name of State or Local Site Assessment System		Date Land Evaluation Returned by NRCS			
PART III (To be completed by Federal Agency)		Alternative Site Rating				
		Site A	Site B	Site C	Site D	
A. Total Acres To Be Converted Directly		0				
B. Total Acres To Be Converted Indirectly		0				
C. Total Acres In Site		670				
PART IV (To be completed by NRCS) Land Evaluation Information						
A. Total Acres Prime And Unique Farmland		0				
B. Total Acres Statewide Important or Local Important Farmland		182.8				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		0.0744				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		199				
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)		38				
PART VI (To be completed by Federal Agency) Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)		Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use		(15)	15			
2. Perimeter In Non-urban Use		(10)	10			
3. Percent Of Site Being Farmed		(20)	0			
4. Protection Provided By State and Local Government		(20)	0			
5. Distance From Urban Built-up Area		(15)	0			
6. Distance To Urban Support Services		(15)	0			
7. Size Of Present Farm Unit Compared To Average		(10)	0			
8. Creation Of Non-farmable Farmland		(10)	0			
9. Availability Of Farm Support Services		(5)	0			
10. On-Farm Investments		(20)	0			
11. Effects Of Conversion On Farm Support Services		(10)	0			
12. Compatibility With Existing Agricultural Use		(10)	0			
TOTAL SITE ASSESSMENT POINTS		160	25	0	0	0
PART VII (To be completed by Federal Agency)						
Relative Value Of Farmland (From Part V)		100	38	0	0	0
Total Site Assessment (From Part VI above or local site assessment)		160	25	0	0	0
TOTAL POINTS (Total of above 2 lines)		260	63	0	0	0
Site Selected: Yes		Date Of Selection 07/24/2024		Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		
Reason For Selection: Site does not exceed point threshold.						
Name of Federal agency representative completing this form: Vincent Popyk					Date: 07/24/2024	

(See Instructions on reverse side)

Form AD-1006 (03-02)

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

- Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, <http://fppa.nrcs.usda.gov/lesa/>.
- Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s) of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map, or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)
- Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.
- Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.
- Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.
- Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.
- Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.
2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.

Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site A}$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

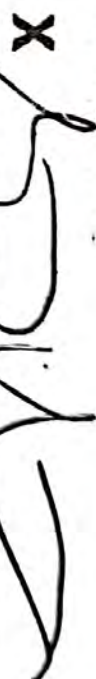
NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

COMPLETE THIS SECTION ON DELIVERY

A. Signature

☒ 

☐ Agent
☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

Frank Vanderwalker, Director
Game, Fish, & Parks/Natural Resources
PO Box 300
Rosebud, SD 57570



9590 9402 7476 2055 6638 47

2. Article Number (Transfer from service label)

9589 0710 5270 0702 0056 83

Insured Mail
Insured Mail Restricted Delivery
(over \$500)

3. Service Type

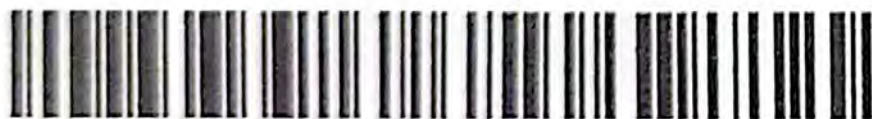
- | | |
|--|---|
| <input type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input checked="" type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | |

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Syed Hug, Director
Water Resources
PO Box 910
Rosebud, SD 57570



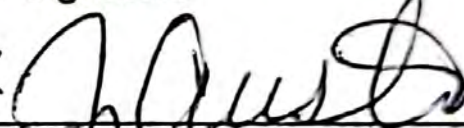
9590 9402 7476 2055 6548 07

2. Article Number (Transfer from service label)

9589 0710 5270 0702 0056 45

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X 

- ☐ Agent
☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No



3. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input checked="" type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | |
| <input type="checkbox"/> Insured Mail | |
| <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500) | |