



PU-21-048
Bridger Pipeline, LLC.
South Bend 16-inch Crude Oil
Pipeline
As-Built Inspection Report

File No. 227705201

May 2023

Prepared for:

North Dakota Public Service Commission
600 E. Boulevard Avenue
Bismarck, ND 58505-0480

Prepared by:

Stantec Consulting Services Inc.
3303 Fiechtner Drive, Suite 100
Fargo, ND 58103



Table of Contents

1.0	EXECUTIVE SUMMARY	1.1
2.0	BACKGROUND INFORMATION	2.2
2.1	INTRODUCTION	
2.2	PURPOSE & SCOPE	
2.3	INSPECTION METHODOLOGY	
3.0	INSPECTION RESULTS	3.1
3.1	DOCUMENT REVIEW	
3.2	TRANSMISSION FACILITY RECLAMATION	
3.3	ROAD CONDITION	
3.4	RIGHT-OF-WAY	
3.4.1	SOIL RESPREAD AND GRADING	
3.4.2	GEOLOGICALLY UNSTABLE AREAS AND STEEP SIDE SLOPES	
3.4.3	WETLAND AND STREAM CROSSINGS	
3.5	FENCES AND GATES	
3.6	DRAIN TILE	
3.7	WASTE REMOVAL	
4.0	RECOMMENDATIONS	3.3
5.0	SIGNATURE	3.1

LIST OF FIGURES

Figure 1-27 As-Built Observation Locations

LIST OF APPENDICES

Appendix A Observation Point Photolog



1.0 EXECUTIVE SUMMARY

The North Dakota Public Service Commission (PSC) retained Stantec Consulting Services Inc (Stantec) to complete inspection(s) during construction of the Bridger Pipeline, LLC. South Bend 16-inch Crude Oil Pipeline, PU-21-048 (i.e., the Project) in Golden Valley and McKenzie County, North Dakota. The purpose of the inspections is to confirm the Project is constructed in compliance with the siting laws and rules and the applicable PSC Orders for the Project.

Project construction involving topsoil disturbance commenced on June 22, 2022 in Golden Valley County, ND. Construction of the pipeline was completed in December 2022, as documented by the Monthly Construction report (Docket Item 82, 5 December 2022). Stantec conducted an as-built inspection of the Project area on April 25-26, 2023. At the time of the as-built inspection, the pipeline trench had been backfilled, soils had been recontoured, and topsoil replaced. However, croplands had not been planted and grasslands were devoid of vegetation. It is unclear if reseeding has occurred in some areas of the Right-of-Way (ROW). As-built conditions in various settings along the route were generally satisfactory. However, some areas of the ROW showed signs of topsoil movement/erosion due to precipitation, snowmelt, and associated runoff. The majority of the Project was adequately maintained and appeared to have been constructed as planned with efforts to minimize impacts. However, some issues likely need to be resolved for the Project to be considered complete and in full compliance.

This As-built Inspection Report includes review of required permits, documentation ROW corridor alignments, trench backfill, subsoil and topsoil respread and contouring, township and county road and land repair, fence/gate reconstruction and repair, and project waste removal during the April 25-26, 2023 on-site inspections of the project. In most places, the ROW corridor alignment and subsoil and topsoil respread and contouring, and fence/gate repair were satisfactory. One area of fence was broken and in need of repair at Observation Point 16. Overall, the project site was in order and general project waste was removed, aside from debris remaining at a few locations. Regular areas of inadequate stormwater best management practices (BMP's) and topsoil erosion were observed which may be mitigated if erosion prevention measures are installed. One area of major soil subsidence and erosion along Cherry Creek presents a safety hazard and should be addressed at Observation Point 25. Stantec alerted the PSC (Adam Renfandt) of this issue in email correspondence on 27 April 2023. Portions of the project occur on steep side slopes which may erode during heavy rain events where timely, safe and effective reclamation practices to establish vegetation may be difficult. Lastly, work along wetland and waterbodies appeared to utilize HDD practices and in compliance with PSC orders.

Stantec recommends the PSC inform Bridger Pipeline LLC (Bridger) of the concern along Cherry Creek and request them to repair soil subsidence and erosion that occurred due to the construction activities. It is also recommended that storm water BMPs be implemented to prevent further topsoil movement along effected slopes along with some areas in need or re-grading. Stantec also recommends that the broken fence location be repaired, and construction debris be removed in select areas.



Stantec is unsure of the status of the post-construction filing of the as-built alignment per Order #33. Lastly, Stantec's inspection did not include a third-party leak detection audit as identified in PSC Finding of Fact 36-38, and it is unknown if this requirement has been fulfilled by Bridger.

2.0 BACKGROUND INFORMATION

2.1 INTRODUCTION

Bridger Pipeline LLC has constructed the South Bend Crude Oil Pipeline in Golden Valley and McKenzie County North Dakota. The transmission pipeline route within North Dakota stretches between Eighty Eight Oil Company's (EEOC) existing Johnson's Corner Terminal to the Montana border, and is approximately 81 miles long. Much of this route is through the US Forest Service-Little Missouri National Grasslands, and the corridor includes a mix of public and private parcels. The project is noted as being "in-service" based on the February 28th progress report, and all but approximately 2-miles being "reclaimed" per the last filed progress report at the time of Stantec's inspection.

2.2 PURPOSE & SCOPE

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorizes the Public Service Commission to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of citizens of North Dakota. Construction inspections aim to ensure that such projects are constructed in compliance with the siting laws (North Dakota Century Code Chapter 49-22) and rules (North Dakota Administrative Code Article 69-06) and the applicable PSC Findings of Fact, Conclusions of Law, and Order (Order). The PSC issued its Findings of Fact, Conclusions of Law, and Order in Case No. PU-21-048 on June 8, 2022, granting Certificate of Corridor Compatibility No. 227 and Route Permit No. 237 for the Project.

The PSC retained Stantec to complete construction inspections of the Project. The inspection process included a review of the Application for Corridor Compatibility and Route Permit, the Project's Order, and other applicable documents. The primary intent of this As-Built Inspection is to document compliance with PSC's Findings of Fact (FoF) and Project Order Provisions:

FoF #6 *"The proposed pipeline corridor is generally 300-feet I width as depicted as the "Project Survey Area" on the Exhibit A.1, Figure A.1 map set (docket 44). The proposed route is depicted as the "Proposed Alignment" on the Exhibit A.1, Figure A.1 map set (docket 44)."*

FoF #24; *"Construction of the Project will not result in the permanent drainage or filling of wetlands or waterbodies. Bridger will avoid impacts to wetlands and waterbodies by utilizing the HDD technique. The Project crosses twelve named creeks, including Cherry Creek, all of which will be avoided through HDD."*

Order Provision #12; *"Company understands and agrees that topsoil, up to 12 inches, or topsoil to the depth of cultivation, whichever is greater, over and along trench areas where cuts will be made, must be*



carefully stripped and segregated from the subsoil. Any area on which excavated subsoil will be placed must first be stripped of topsoil. The stripped topsoil must not be stockpiled in natural drainages, and must be protected from water erosion. Care must be taken to protect topsoil from unnecessary compaction by heavy machinery. Unless otherwise approved by the Commission, topsoil must be removed before topsoil freezes in the late fall/early winter to the point that frost inhibits proper soil segregation. After backfilling with subsoil is completed, any excess subsoil must be placed over the excavation area, blending the grade into existing topography. Topsoil must be replaced over areas from which it was stripped only after the subsoil is replaced.”

Order Provision #18; *“Company understands and agrees that it shall, as soon as practicable upon the completion of the construction of the transmission facility, restore the area affected by the activities to as near as is practicable to the condition as it existed prior to the beginning of construction.”*

Order Provision #19; *“Company understands and agrees that all pre-existing township and county roads and lands used during construction must be repaired or restored to a condition that is equal to or better than the condition prior to the construction of the transmission facility and that will accommodate their previous use, and that areas used as temporary roads or working areas during construction must be restored to their original condition.”*

Order Provision #20; *“Company understands and agrees that reclamation, fertilization, and reseeding is to be done according to the Natural Resources Conservation Service recommendations, unless otherwise specified by the landowner and approved by the Commission.”*

Order Provision #22; *“Company will repair all fences and gates removed or damaged during all phases of construction and operation of the transmission facility.”*

Order Provision #23; *“Company will repair or replace all drainage tile broken or damaged as a result of construction and operation of the transmission facility.”*

Order Provision #25; *“Company understands and agrees that it shall remove all waste that is a product of construction and operation, restoration, and maintenance of the site, and properly dispose of it on a regular basis.”*

2.3 INSPECTION METHODOLOGY

Stantec’s intent was to ensure the Projects obligations of compliance with specifications found in the Findings of Fact, Conclusions of Law and Order, Certifications Relating to Order Provisions, and Tree and Shrub Mitigation. Project Specifications originate from 1) siting laws and rules, 2) Project activities or specifications proposed in the Consolidated Application for a Certificate of Corridor Compatibility and Route Permit (Application), 3) Project plans described in the Findings of Fact, Conclusions of Law, and Order 4) Certification Relating to Order Provisions, and 5) regulations or recommendations from other agencies.

Stantec visually inspected the Project route on April 25-26, 2023. The site was inspected by driving to access points and walking or driving within the Project right-of-way. During inspections, work done by



PU-21-048 BRIDGER PIPELINE, LLC.
SOUTH BEND 16-INCH CRUDE OIL PIPELINE AS-BUILT INSPECTION REPORT
Background Information
May 2023

contractors/equipment operators was observed to verify that the subsoil and topsoil respread and contouring was conducted appropriately, and to verify pipeline corridor. A GPS enabled iPad was used to collect photographs during the inspection. Location-referenced photographs are provided in Appendix A and Geographical Information System (GIS) generated map(s) of observation locations are provided as Figures 1-27.



3.0 INSPECTION RESULTS

3.1 DOCUMENT REVIEW

Stantec staff reviewed publicly-available Project documents in the PSC Online Case Search (ND PSC 2023) to find written verification of compliance for the Project Specifications. PSC required Project documents were filed with the PSC. Non-PSC required documents were referenced in communication to various municipalities or agencies as being received and the communication is filed with the PSC.

3.2 TRANSMISSION FACILITY

Multiple points along the as-built corridor of the pipeline were observed. The site inspection observations coincided well with the GIS shapefiles of the pipeline provided to Stantec (**Figure 1-27; Appendix A, Field Observation Coordinates**). No points were observed to be differing with the route filed with the PSC (PSC Docket #1, 27 January 2021). Stantec staff reviewed the publicly-available documents and did not find any filed Route Adjustments on the PSC docket for this project. Additionally, there is no indication that an as-built alignment of the project has been filed with the PSC post construction completion.

Observed aboveground structures were constructed upon engineered and graded aggregate pads with access roads constructed through roadway Right-of-Way (ROW) and chain link fences exist around the aboveground structures restricting access to authorized personnel only. Aboveground structures were found to be in good condition. Construction of the pipeline was completed in December of 2022 and noted as being “in-service” in February 2023.

3.3 ROAD CONDITION

All road crossing permits detail specifications to be followed which include no disturbance and restoration clauses. At all road crossings inspected, Stantec visually confirmed crossings were conducted through boring operations and have not altered the road surface (**Figure 1, 3; Appendix A, Observation Point Photolog 4, 8**).

3.4 RIGHT-OF-WAY

3.4.1 SOIL RESPREAD AND GRADING

Overall, Stantec did not observe signs of widespread egregious soil respread techniques or disregard for PSC Order #12. Soil grading and slope contouring were generally appropriate and in compliance with PSC Order #12 and 18 (**Appendix A, Observation Point Photolog 3, 5, 7, 8, 14, 15, 18, 23, 29, 34, 35, 37, 42, 44, 48, 71, 73, 78**). A few areas need to be recontoured before reseeding activities (**Figures 20,**



23, 24; Appendix A, Observation Point Photolog 51, 60, 64, 65). Right-of-way soil respread and grading was found to be relatively clear of any significant amounts of subsoil mixing. Previous construction inspection documented that an area contained subsoil/parent material on the topsoil stockpile for approximately 40 linear feet due to incorrect stripping depth and there was no subsoil stockpile at this point. Stantec recommended inspecting the topsoil replacement here to ensure subsoil material is not used for final cover during reclamation. Inspection of the area indicated that the subsoil material was not used for final cover during the reclamation and the subsoil and topsoil were respread in compliance with PSC Order 12 (**Figures 22, 23; Observation Point Photolog 59, 60**).

Prior construction inspection of right-of-way areas on flatter topography were observed to not contain any stripping and would be susceptible to compaction. Current inspection of these areas did not show any signs of compaction and soil respread and grading appeared to be in compliance with PSC Order #18 (**Figure 7; Appendix A, Observation Point Photolog 29**).

3.4.2 GEOLOGICALLY UNSTABLE AREAS AND STEEP SIDE SLOPES

Stantec observed soil respread and grading efforts on steep side slopes (**Appendix A, Observation Point Photolog 17, 19, 20, 57**) which resulted in contouring appropriate and in compliance with PSC Order #12. Further inspection at several points along the route revealed various stages of soil movement from water erosion (**Figures 1-27; Appendix A, Observation Photolog 1, 2, 10, 24, 25, 26, 28, 30, 31, 33, 36, 38, 39, 40, 49, 50, 51, 52, 53, 54, 55, 58, 62, 67, 68, 70, 72, 75, 76, 77, 79, 80**). Soil subsidence and substantial gully formation was observed in Section 6-T149N-R97W (**Figure 7; Appendix A, Observation Photolog 24 & 25**) and presents a safety hazard. Stantec alerted the PSC of this issue in email correspondence on 27 April 2023. Erosion and sediment control measures were observed occasionally in swales along the route as per PSC Finding of Fact #29 (**Figures 1, 2, 3, 6, 15, 18; Appendix A, Observation Photolog 4, 6, 8, 21, 44, 47**) but were generally lacking across the majority of the route or not functioning properly (**Figures 21, 23, 24, 26; Appendix A, Observation Photolog 55, 60, 63, 66, 74**). Soil erosion and sediment loss may be a violation of the North Dakota Department of Environmental Quality (NDDEQ) Construction and Environmental Disturbance Requirements (PSC Docket #48, 12 May 2022). Additional erosion and sediment control measures along the route will help prevent further soil movement. Further vegetation establishment can help to prevent soil erosion and sediment loss. Based on filed progress reports, re-seeding was initiated Fall of 2022 along some portions of the ROW and additional measures to establish vegetation along the route should be implemented as soon as weather conditions permit in 2023.

3.4.3 WETLAND AND STREAM CROSSINGS

The Project alignment crosses several wetlands and/or streams and were inspected to ensure compliance with the PSC order provisions. Impacts to wetlands can be mitigated through use of BMP's such as silt fences or timber mats but must be removed following construction. Timber mats at wetland/Stream crossings were removed and no mats were observed at wetland/stream crossings along the route. One area of potential concern is where tracked vehicles appeared to cross a wet drainage area leaving impressions in which water was flowing (**Figure 4; Appendix A, Observation Point Photolog**



11). It is unclear when this crossing occurred and if it was associated with the pipeline construction. Construction in wetland and streams was observed to be conducted via HDD boring techniques per FoF #12.

3.5 FENCES AND GATES

Bridger committed to repairing and replacing all fences and gates (PSC Order Provision #22, Docket #65, 8 June 2022). Generally, existing fences and/or gates that were impacted by pipeline construction appeared to be replaced or repaired as needed (**Figures 2, 4, 12, 19, 25; Appendix A, Observation Photolog 6, 9, 12, 41, 48, 69**). At one location, the fence was replaced, but the wires were broken (**Figure 6; Appendix A, Observation Photolog 6, 9, 12, 41, 48, 69**). It is unclear if this fence damage occurred during reclamation efforts. Fence should be repaired as soon as possible as to not interfere with landowner agricultural practices.

3.6 DRAINAGE TILE

Bridger will repair or replace all drainage tile broken or damaged as a result of construction and operation of the transmission facility PSC Order Provision # 23, Docket #65, 8 June 2022). Stantec did not observe broken or damaged drainage tile at any point along the pipeline route.

3.7 WASTE REMOVAL

Construction waste removal along the route was generally acceptable. Construction mats and timbers were generally removed or staged for removal, but a few remain in place (**Figures 13, 16, 17; Appendix A, Observation Photolog 42, 45, 46**). It was unclear if the timbers and tires remaining at one location were discarded, or intentionally left to support upcoming revegetation activities (**Figures 20, 22, 24; Appendix A, Observation Photolog 50, 59, 64**). Items should be removed now if not needed, or as soon as revegetation activities are complete.

4.0 RECOMMENDATIONS

As-Built Inspections for PU-21-048 have verified that the Project, overall, is being constructed in compliance with the siting laws, siting rules, and applicable Commission Orders. However, some issues were observed that should be addressed to minimize adverse effects on the environment and the welfare of citizens of North Dakota. Stantec makes the following recommendations to alleviate the issues observed during the Project inspection:



PU-21-048 BRIDGER PIPELINE, LLC.
SOUTH BEND 16-INCH CRUDE OIL PIPELINE AS-BUILT INSPECTION REPORT

4.0 Recommendations

May 2023

- Request Bridger to repair observed soil subsidence and install erosion control in order to prevent sediment washing into Cherry Creek (Observation Point 25).
- Request Bridger to implement BMPs and install additional erosion control measures along swales within the route to prevent soil erosion.
- Request Bridger to repair broken fence to prevent disruption in landowner agriculture practices (Observation Points 16)
- Request Bridger to remove construction debris if not currently in use or will be in use in the near future (Observation Points 42, 45, 46, 50).
- Request regrading/recontouring at select areas prior to final re-seeding (Observation Points 51, 60, 64, 65)
- Verify if the Project as-built files have been provided by Bridger per Order #33.
- Verify if the Project Stormwater Pollution Prevention Plan was filed with the PSC per FoF #29.
- Identify Bridgers plans for third-party audit of control room operations per FoF #36-38 regarding leak detection concerns.
- Request details of the Tree and Shrub Mitigation Plan, per Order # 24, which is to be filed and approved by the PSC.




5.0 SIGNATURE

Stantec's Senior Restoration Ecologist, Ryan Limb, conducted this inspection under the supervision of Stantec's Project Manager and North Dakota Professional Soil Classifier, Matt Retka.

The conclusions in this Report are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from the ND PSC and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended solely for use by the ND PSC in accordance with Stantec's contract with the ND PSC. While the Report may be provided to applicable authorities having jurisdiction and others for whom the ND PSC is responsible, Stantec does not warrant the services to any third party. The report may not be relied upon by any other party without the express written consent of Stantec, which may be withheld at Stantec's discretion.



Matt Retka
Project Manager
Senior Soil Scientist

5/16/2023
Date

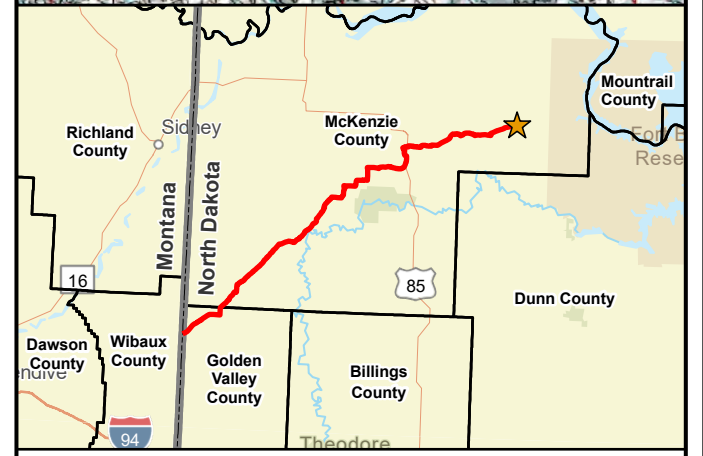
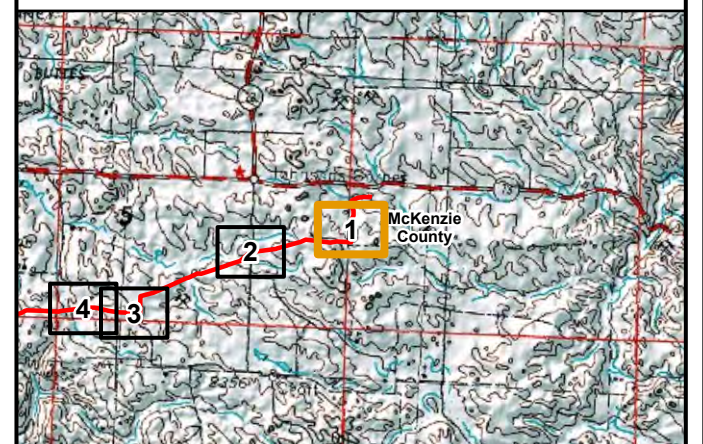


FIGURES

Figure 1-27: As-Built Observation Locations Map

**Bridger Pipeline
Figure 1**

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:57 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



MAY 2023

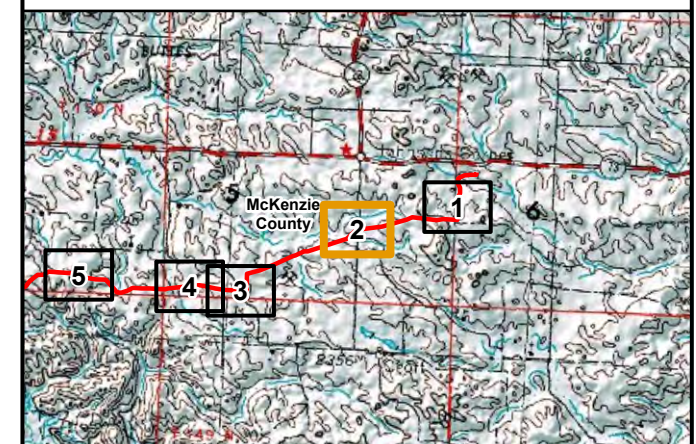
Map 1 of 27



**North Dakota
Public Service Commission**

**Bridger Pipeline
Figure 2**

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:57 PM User: kjmueller

PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations

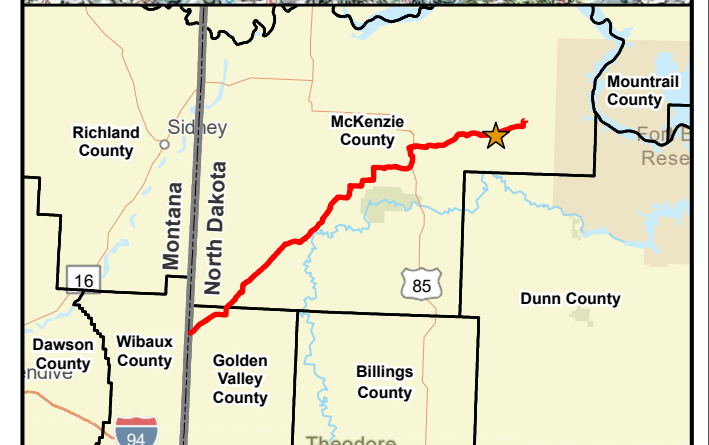
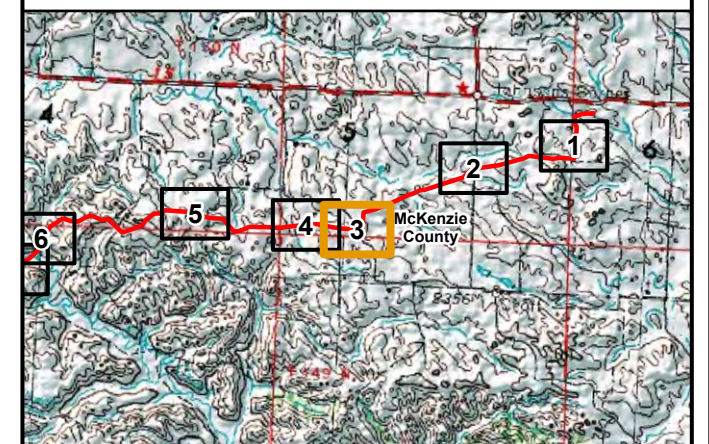


MAY 2023

Map 2 of 27

**Bridger Pipeline
Figure 3**

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:57 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



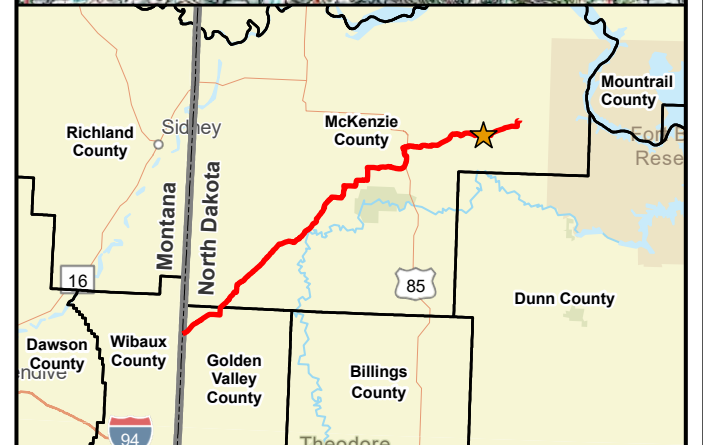
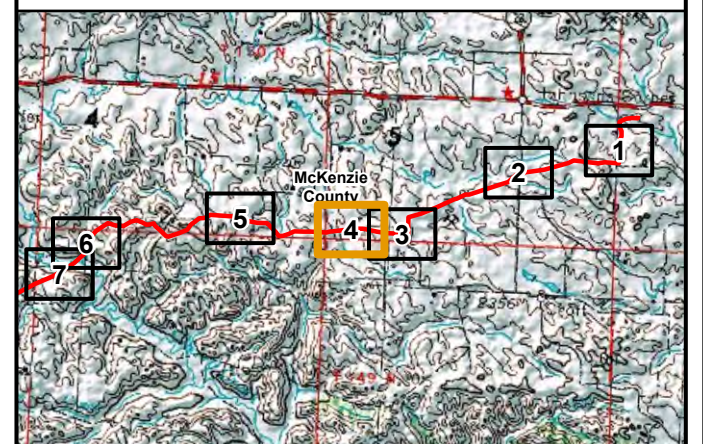
MAY 2023

Map 3 of 27

**North Dakota
Public Service Commission**

**Bridger Pipeline
Figure 4**

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:57 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



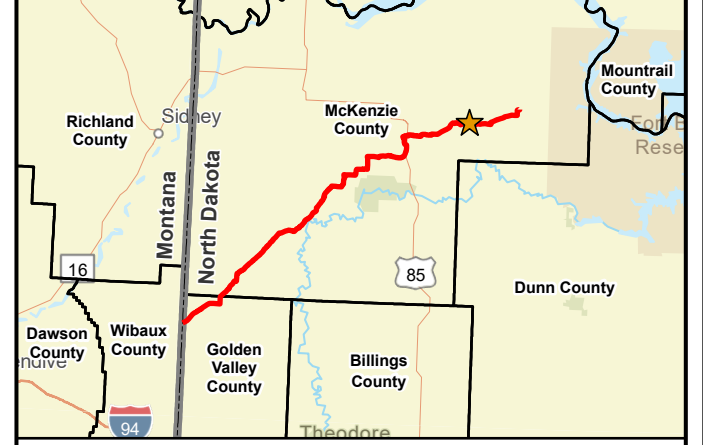
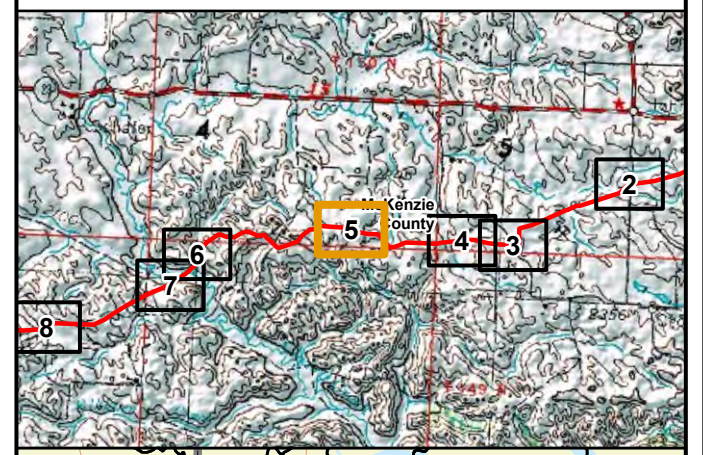
MAY 2023

Map 4 of 27

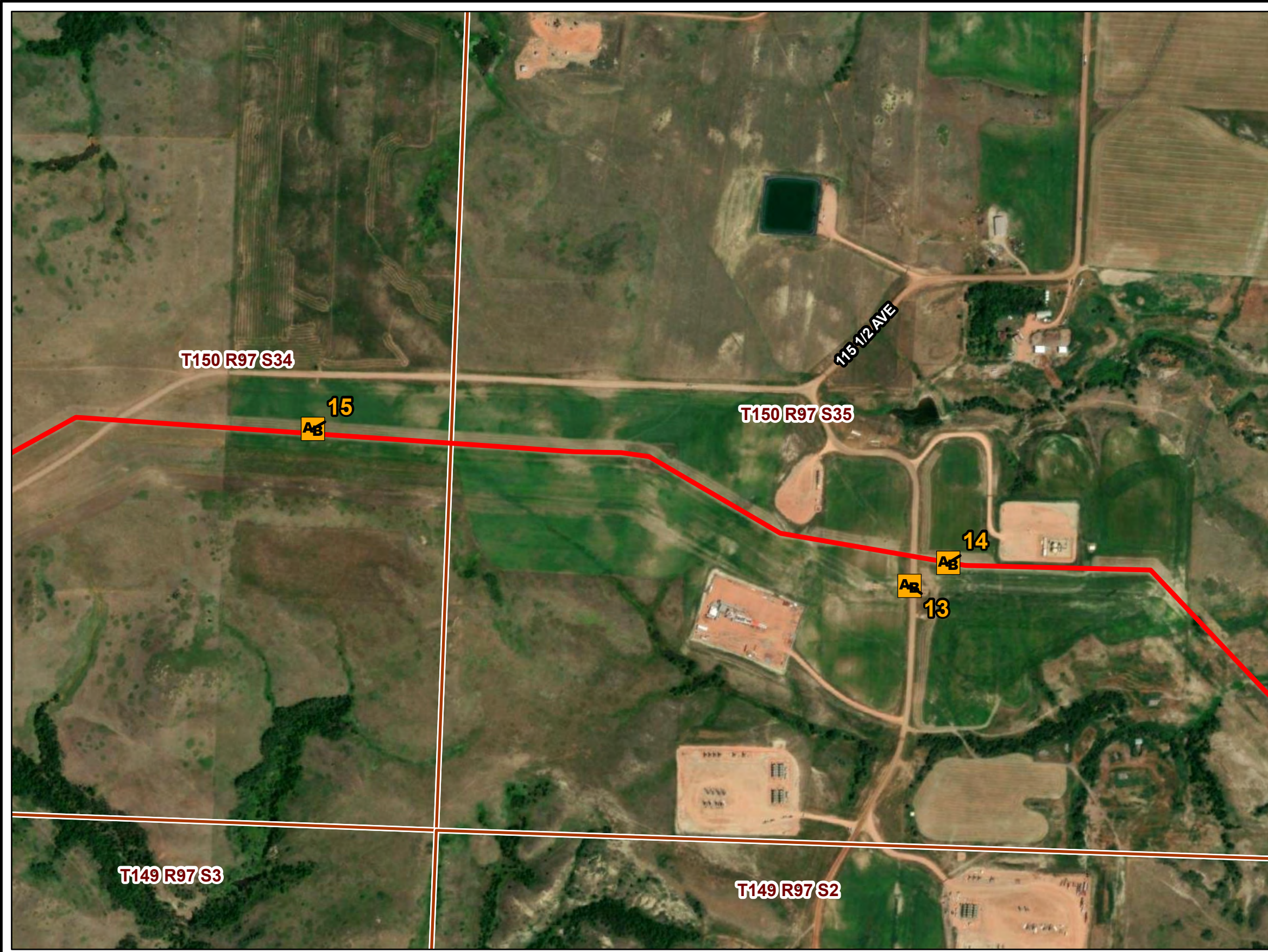
North Dakota
Public Service Commission

Bridger Pipeline
Figure 5

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:57 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations

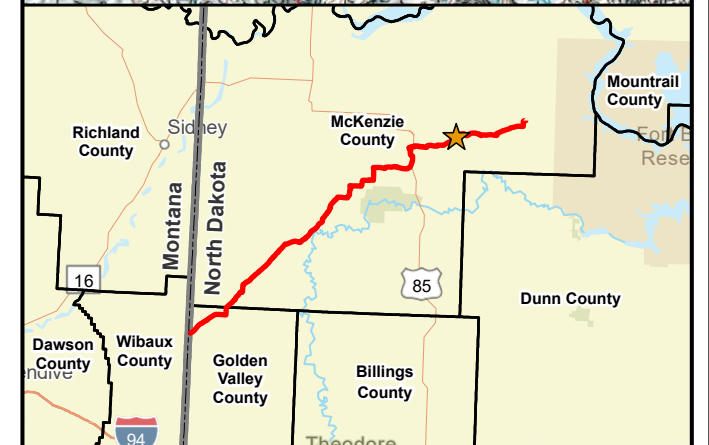
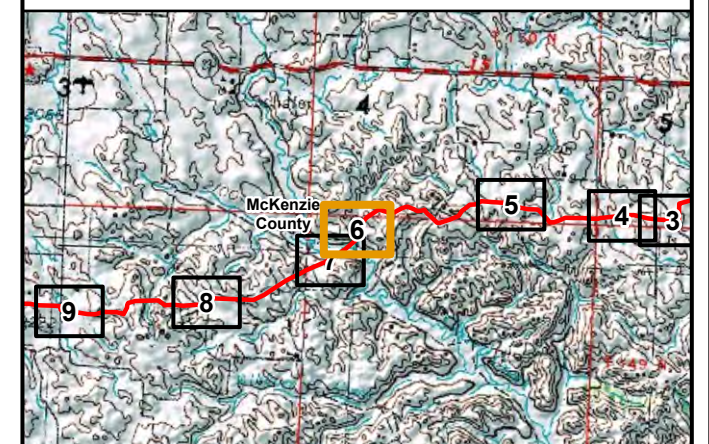


MAY 2023

Map 5 of 27

**Bridger Pipeline
Figure 6**

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:57 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations

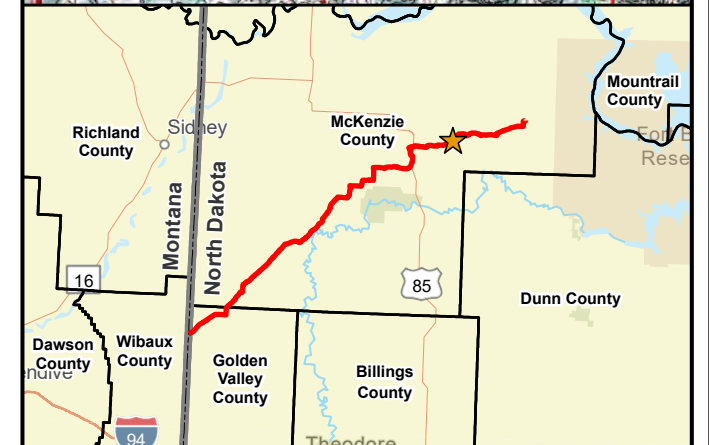
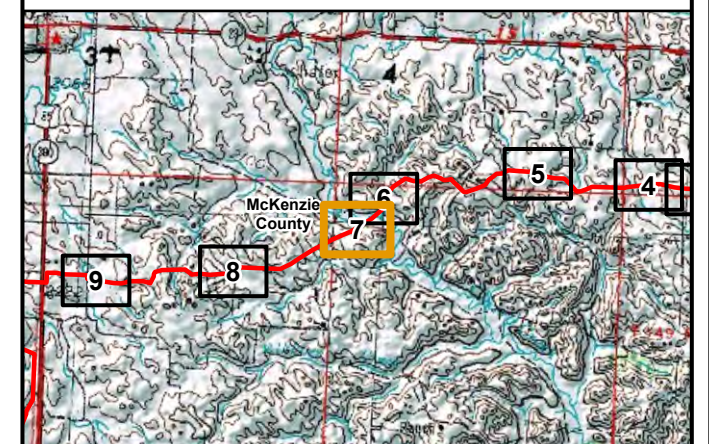


MAY 2023

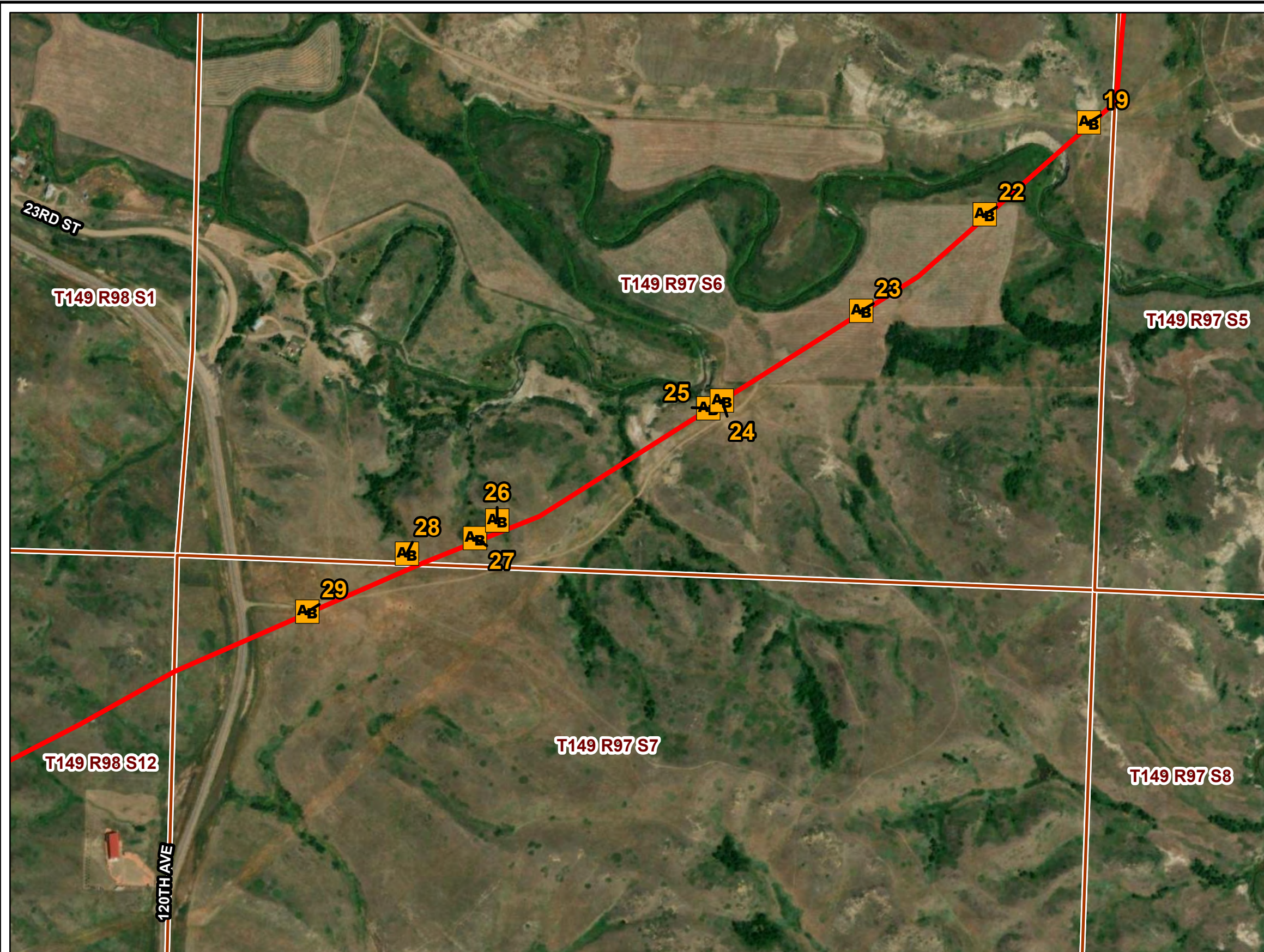
Map 6 of 27

**Bridger Pipeline
Figure 7**

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:57 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations

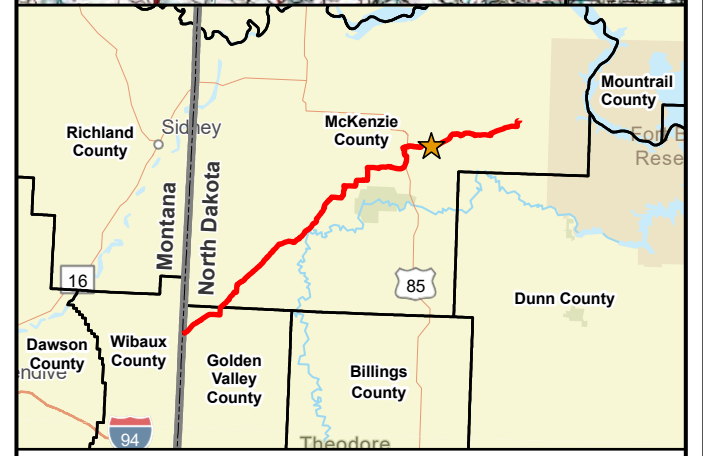
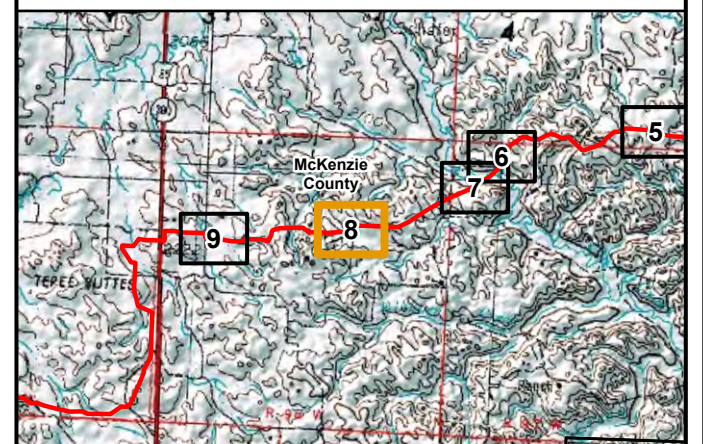


MAY 2023

Map 7 of 27

**Bridger Pipeline
Figure 8**

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:58 PM User: kjmueller

PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



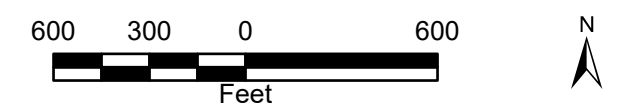
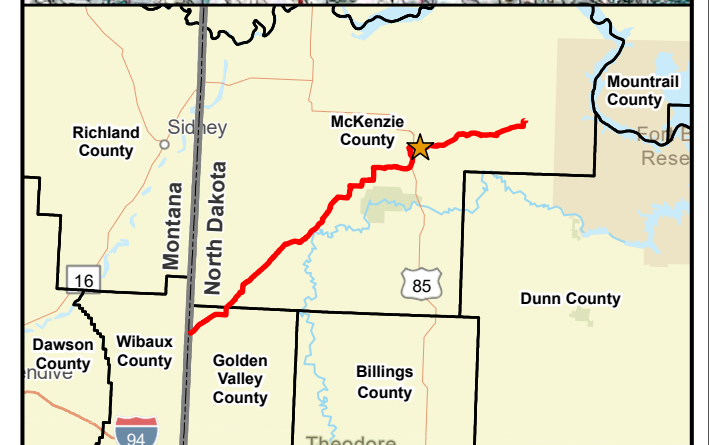
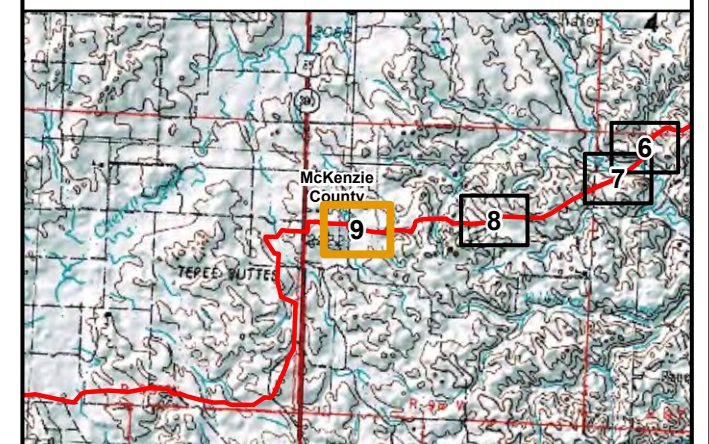
MAY 2023

Map 8 of 27

North Dakota
Public Service Commission

Bridger Pipeline
Figure 9

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



ESRI World Imagery

Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:58 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



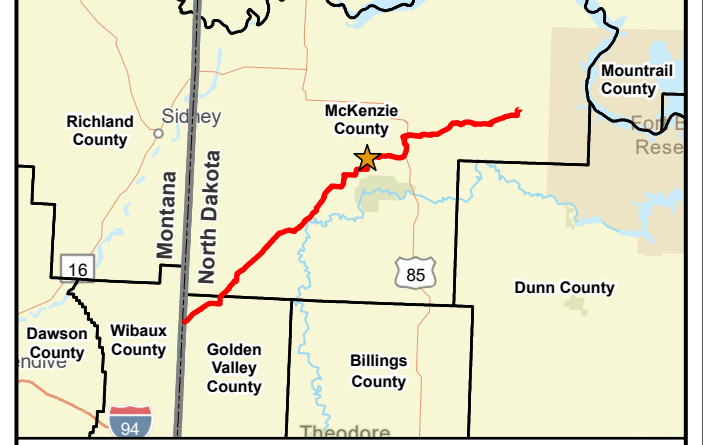
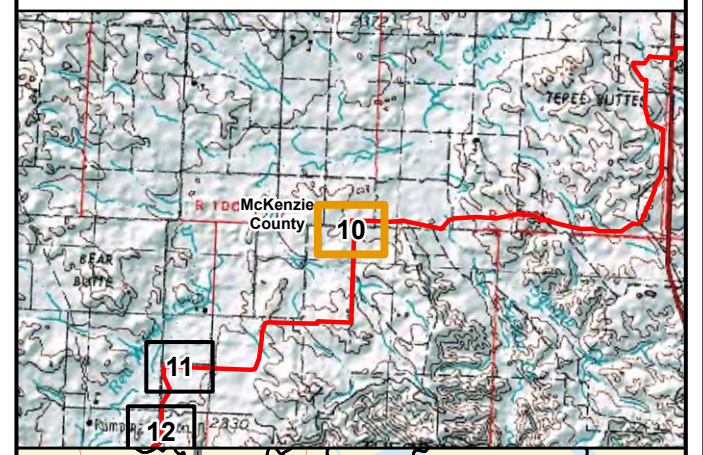
MAY 2023

Map 9 of 27

North Dakota
Public Service Commission

Bridger Pipeline
Figure 10

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:58 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



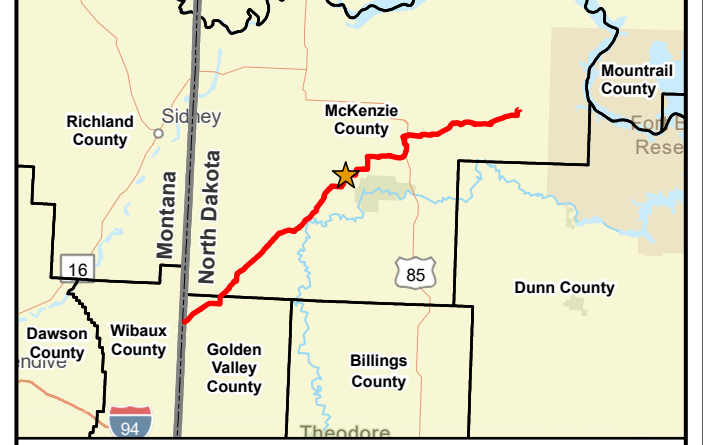
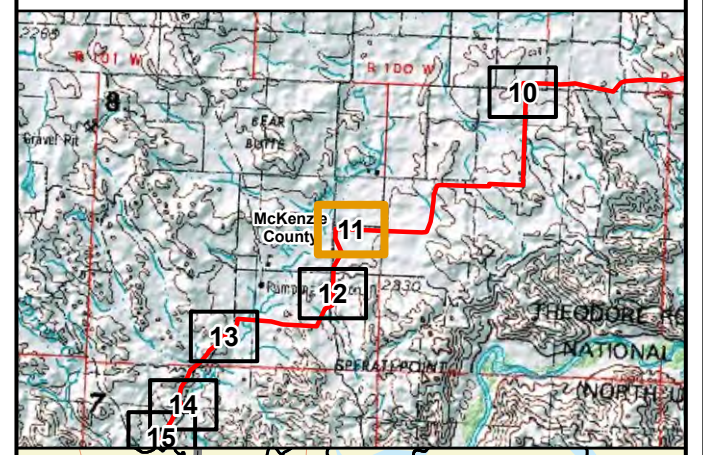
MAY 2023

Map 10 of 27

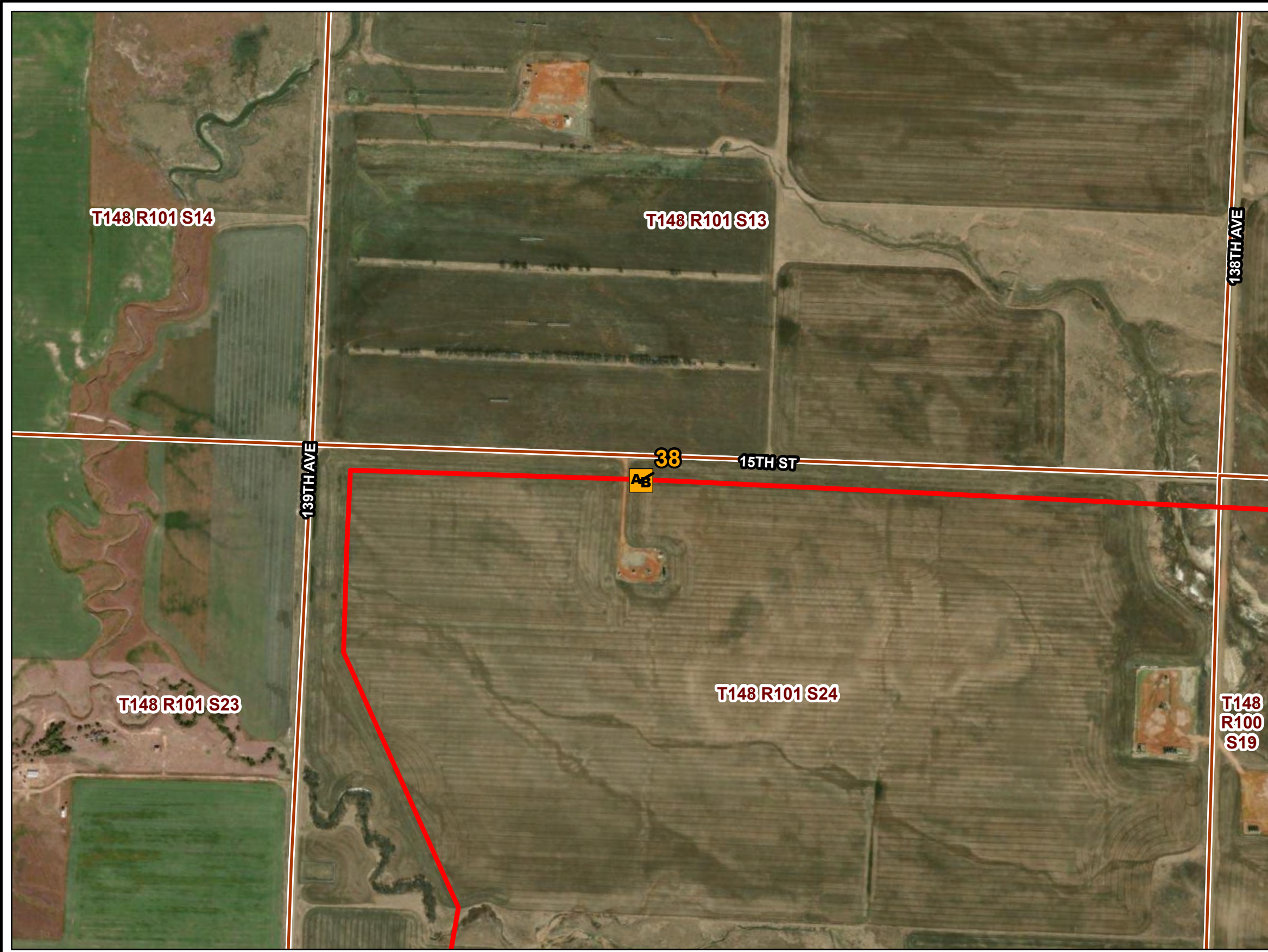
North Dakota
Public Service Commission

Bridger Pipeline
Figure 11

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis\proj\brdger_pipeline\brdger_pipeline.aprx
Date: 2023-05-08 Time: 2:58 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations

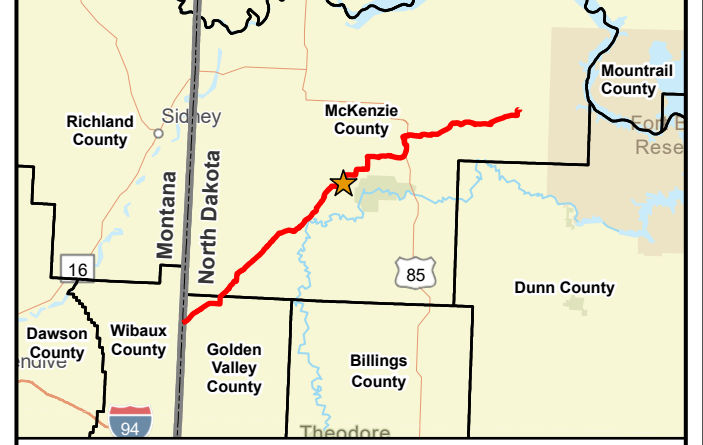
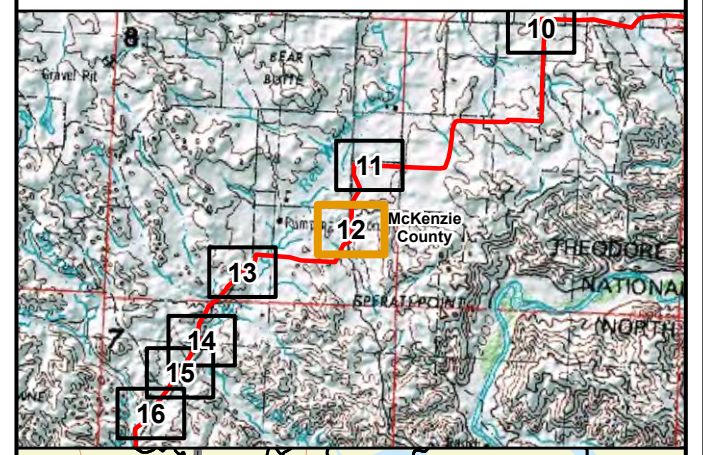


MAY 2023

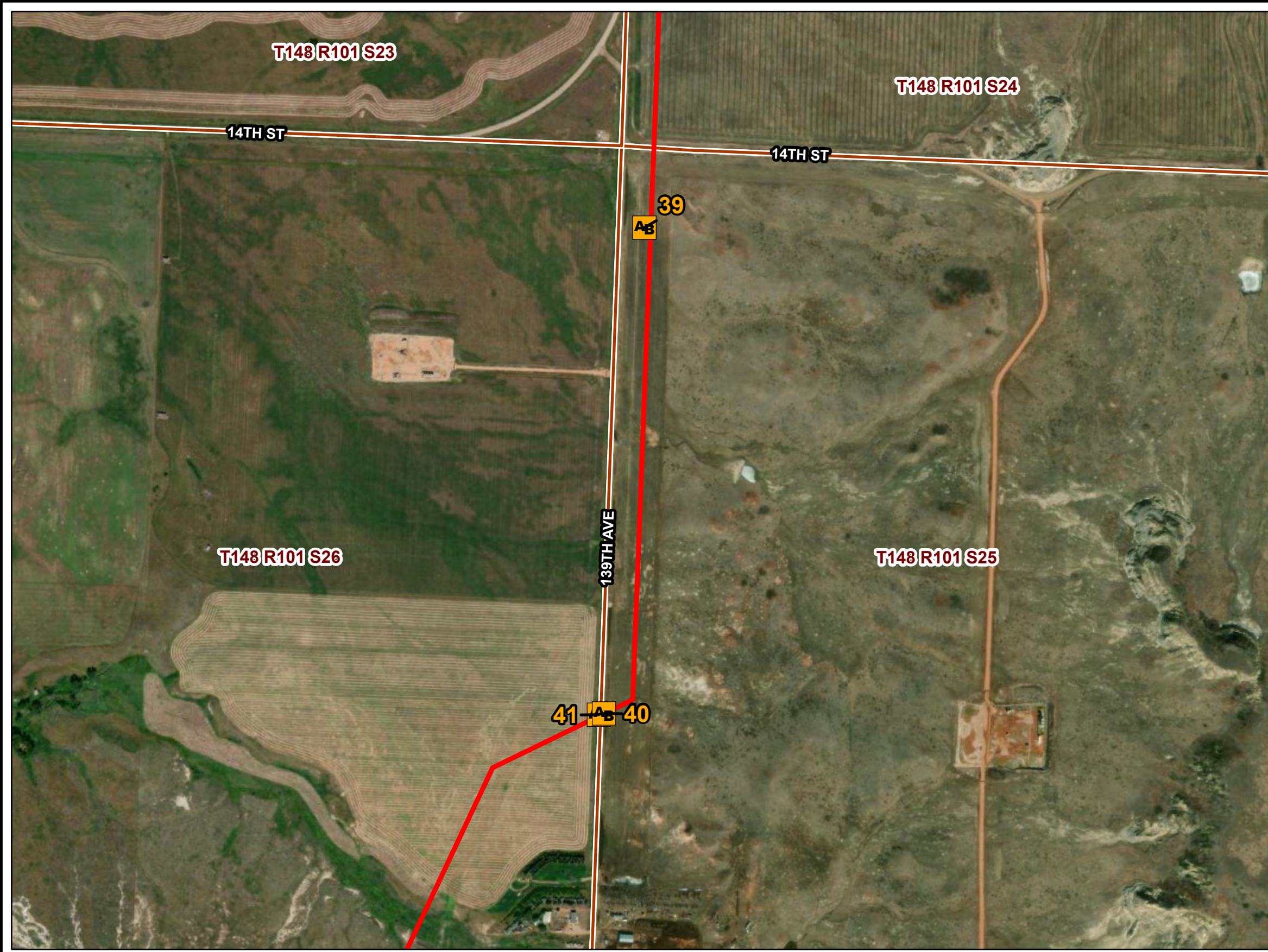
Map 11 of 27

**Bridger Pipeline
Figure 12**

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:58 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



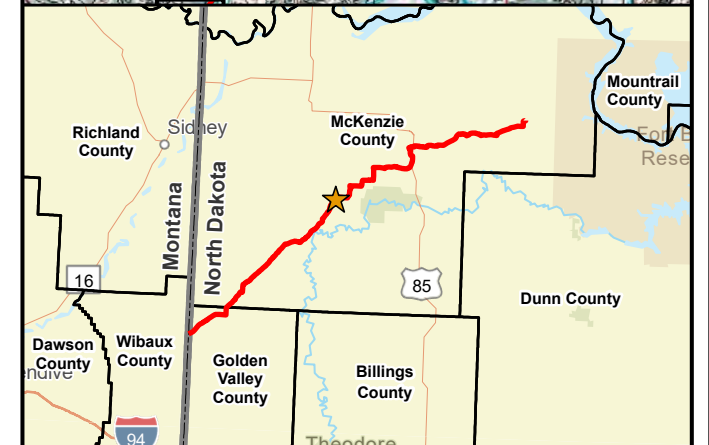
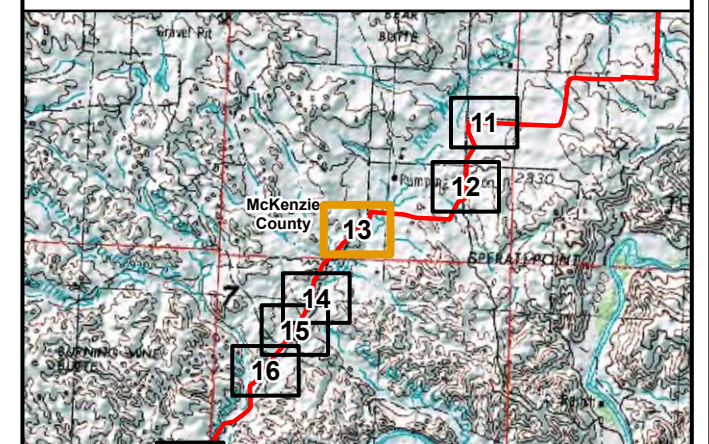
MAY 2023

Map 12 of 27

North Dakota
Public Service Commission

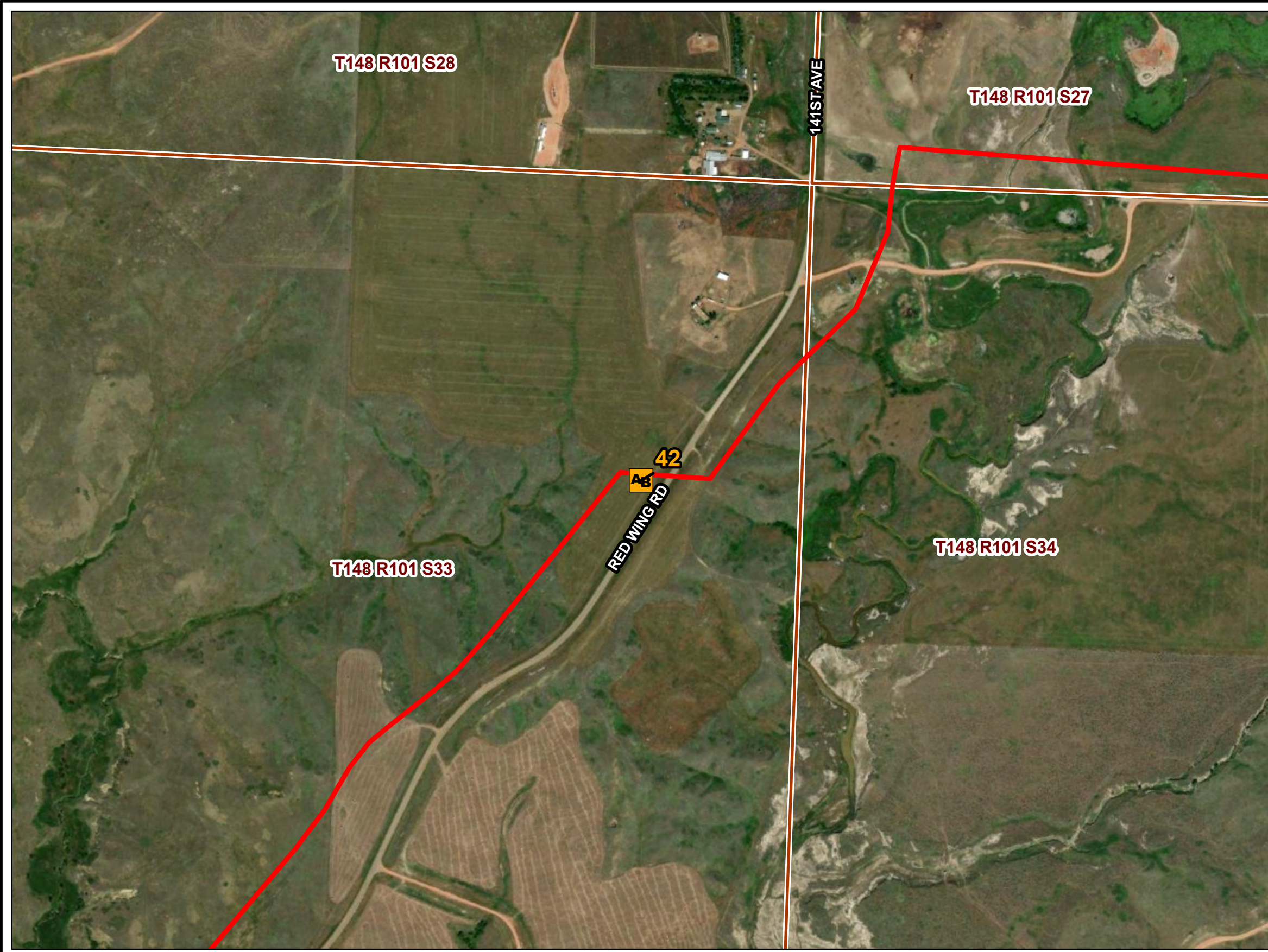
Bridger Pipeline
Figure 13

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



ESRI World Imagery

Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:58 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



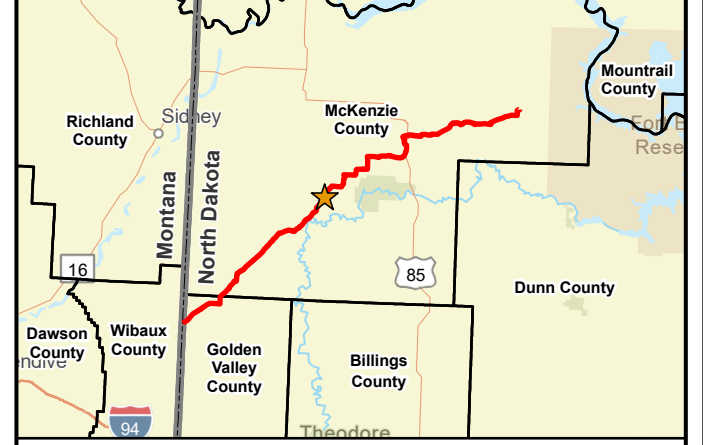
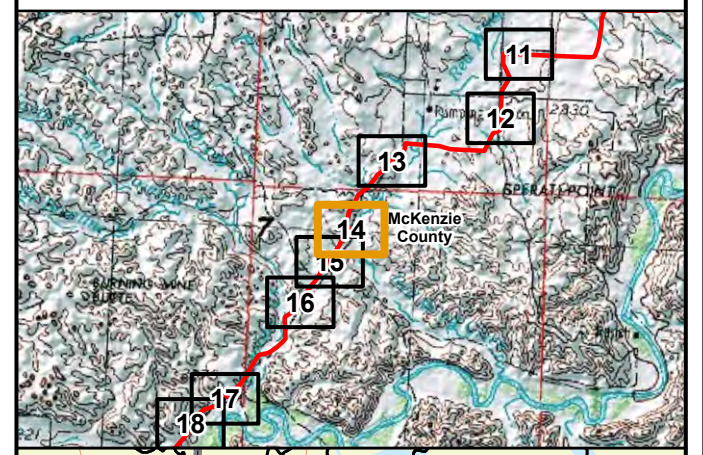
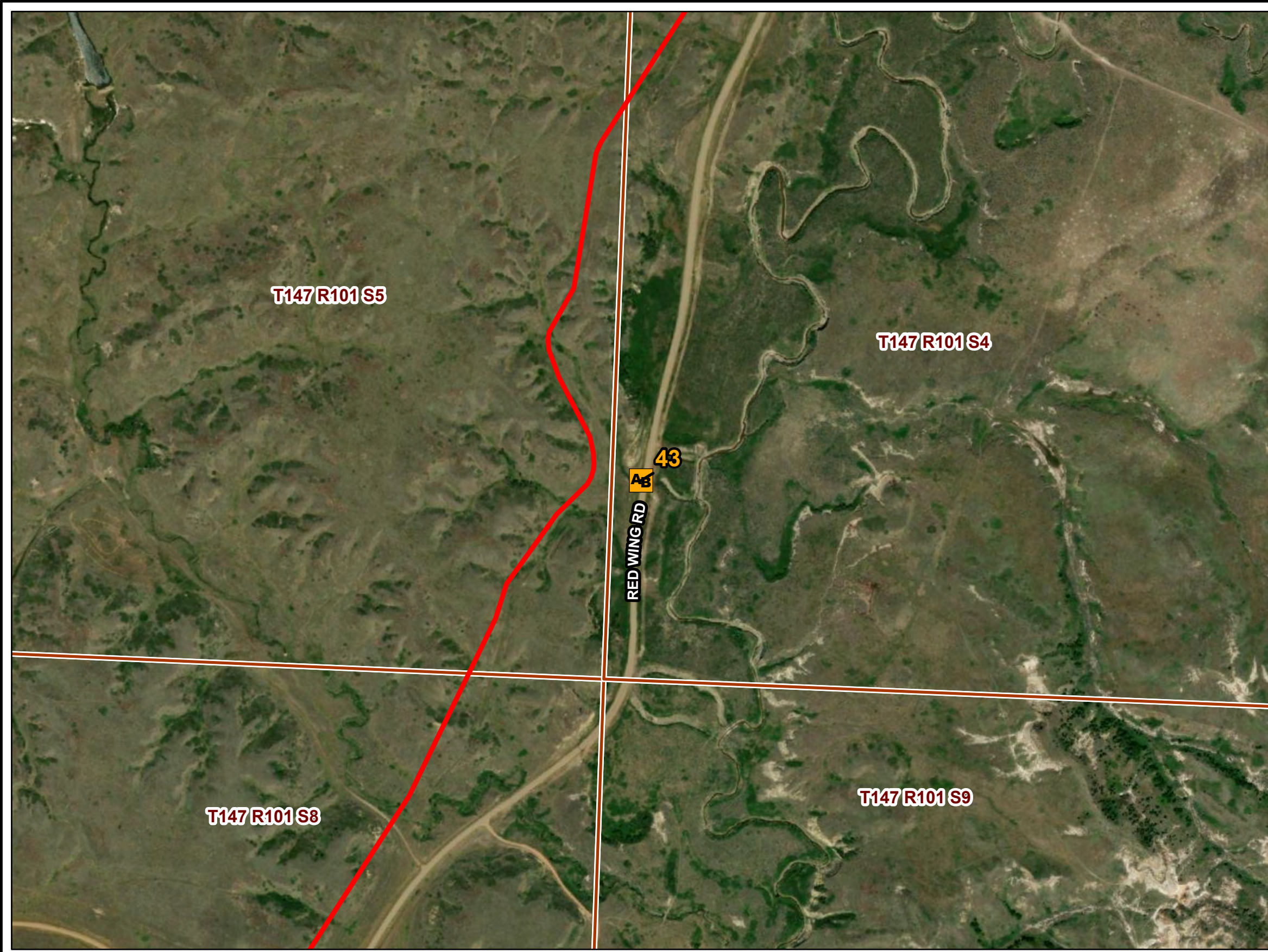
MAY 2023

Map 13 of 27

North Dakota
Public Service Commission

Bridger Pipeline
Figure 14

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



ESRI World Imagery
Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:58 PM User: kjmueller

PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations






MAY 2023

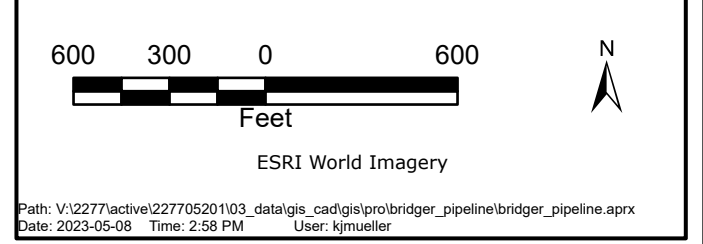
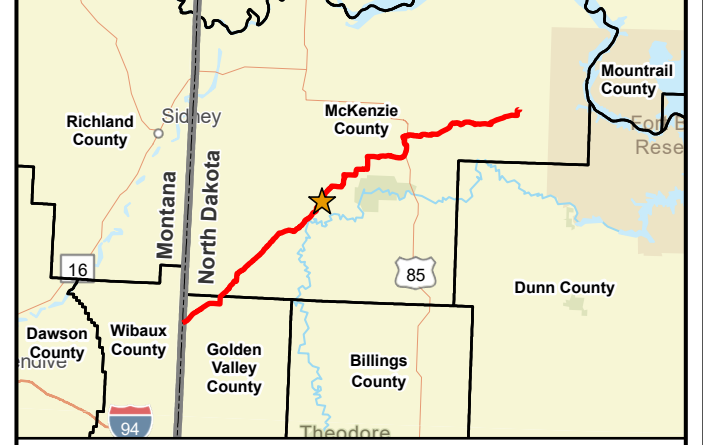
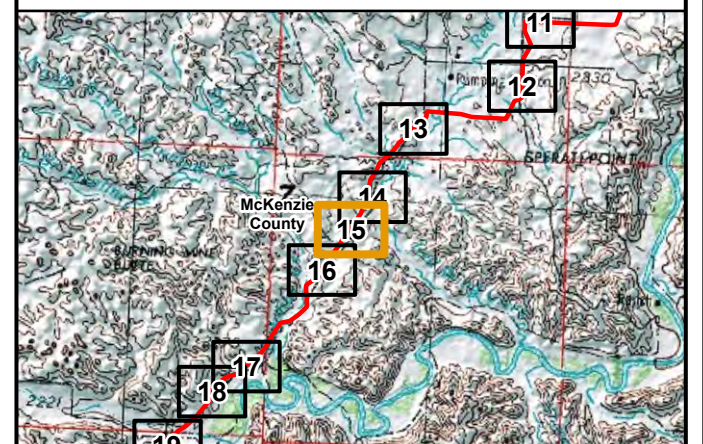
Map 14 of 27



**North Dakota
Public Service Commission**

**Bridger Pipeline
Figure 15**

-  As-Built Observation Point Location
-  Bridger Pipeline Centerline (PU-21-48)
-  Section Boundary






PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION
As-Built Observation Locations

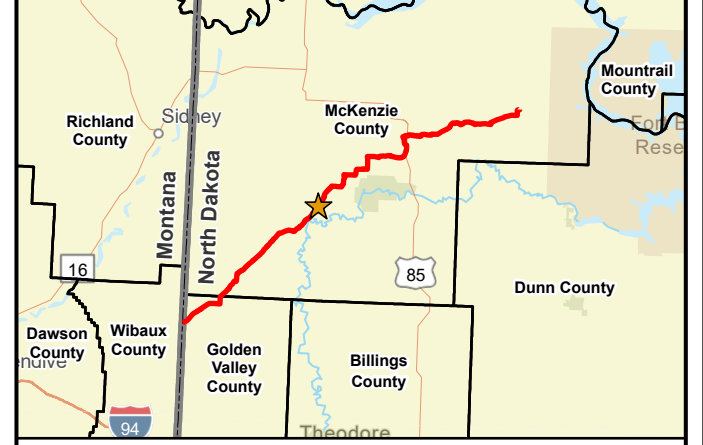
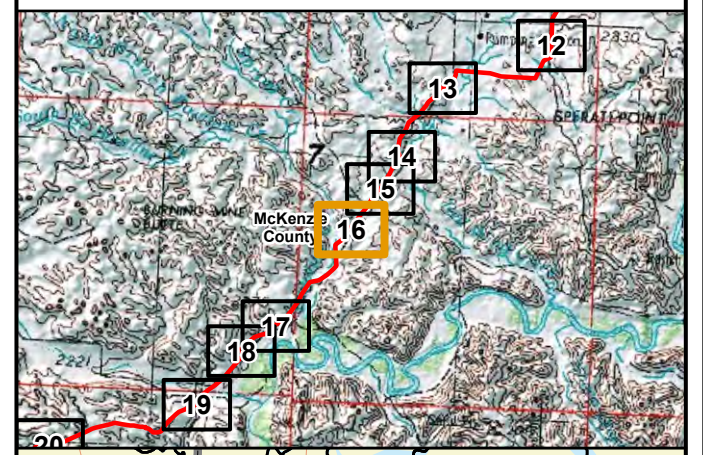


MAY 2023
Map 15 of 27

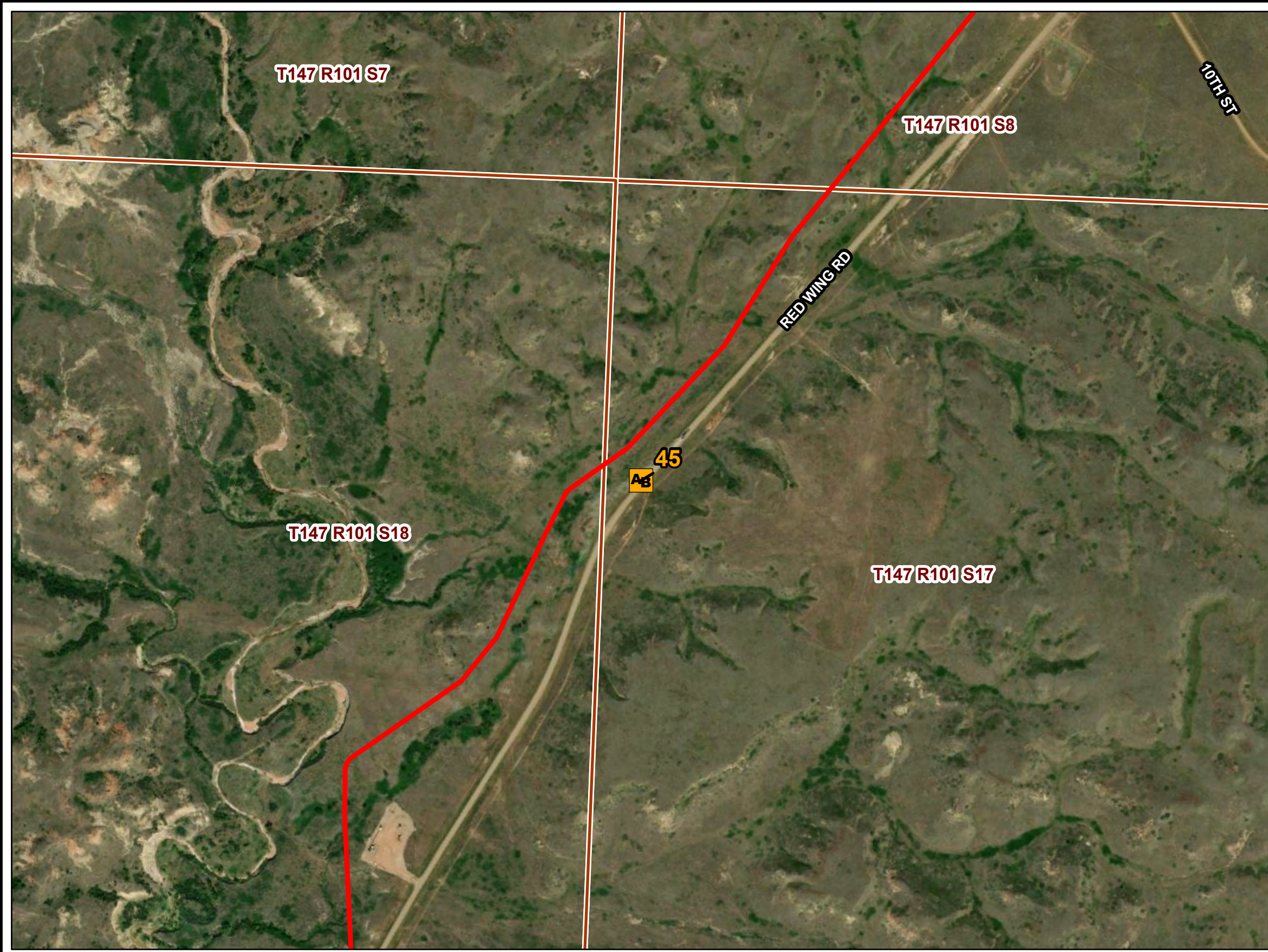
**North Dakota
Public Service Commission**

**Bridger Pipeline
Figure 16**

-  As-Built Observation Point Location
-  Bridger Pipeline Centerline (PU-21-48)
-  Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:58 PM User: kjmueller



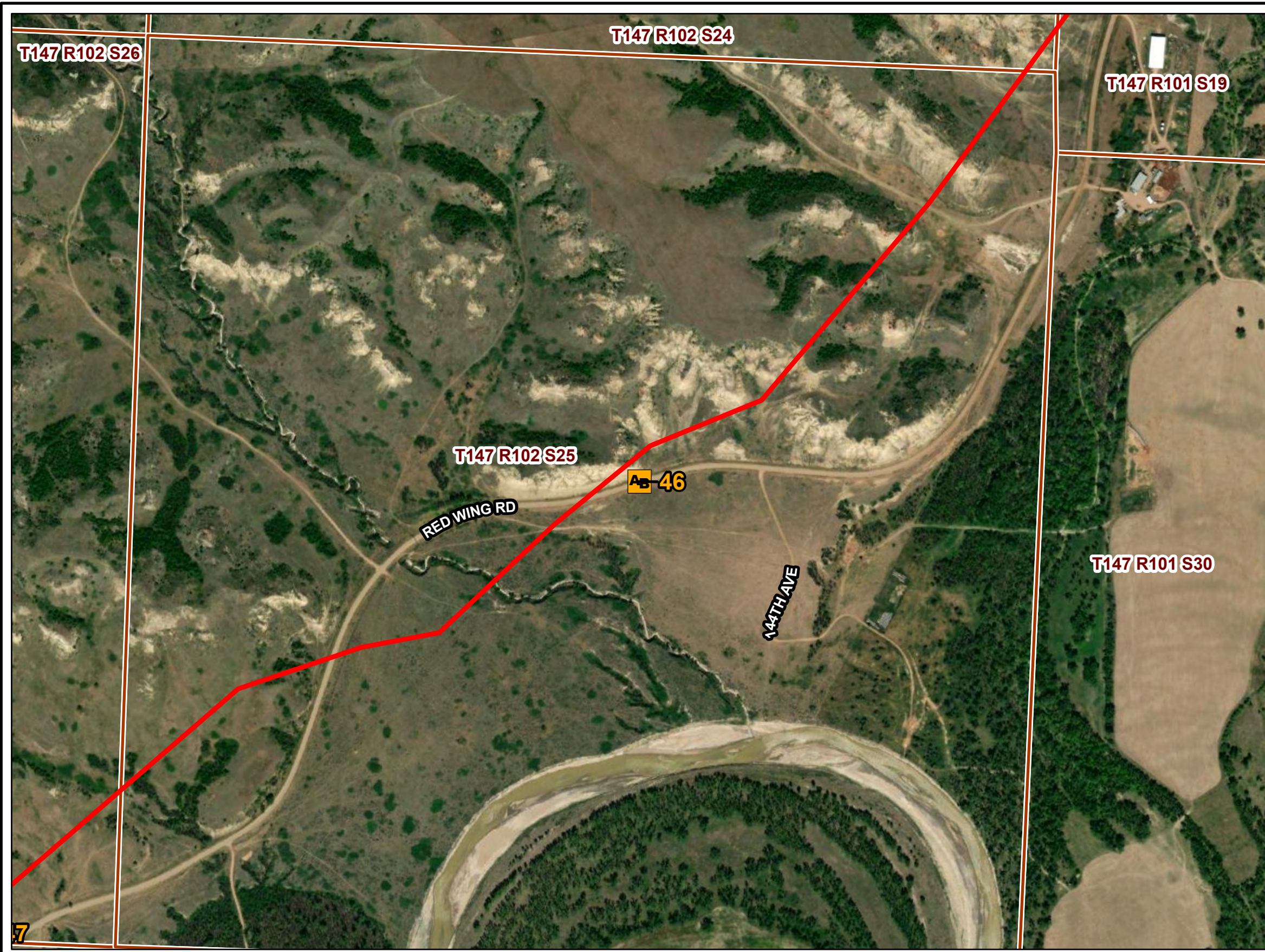
PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations






MAY 2023

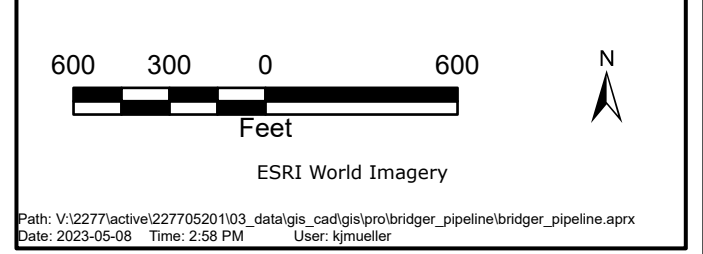
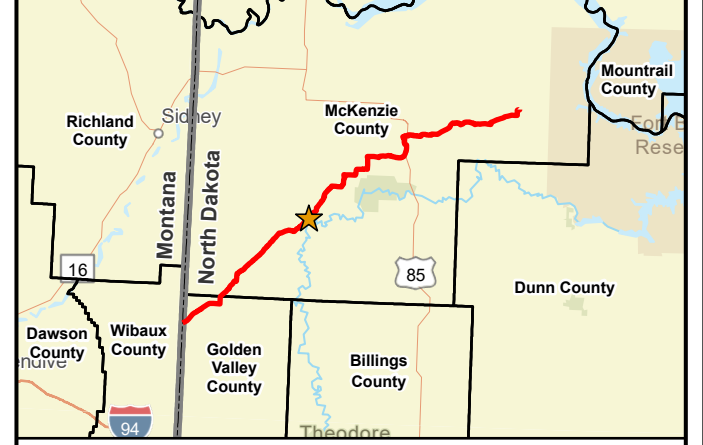
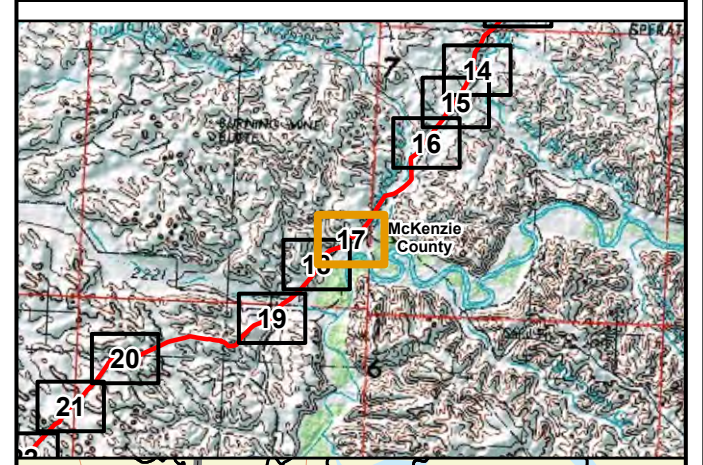
Map 16 of 27



**North Dakota
Public Service Commission**

**Bridger Pipeline
Figure 17**

-  As-Built Observation Point Location
-  Bridger Pipeline Centerline (PU-21-48)
-  Section Boundary



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION
As-Built Observation Locations

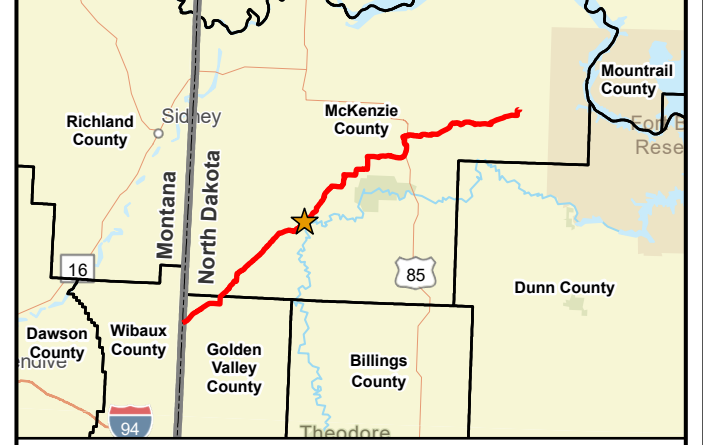
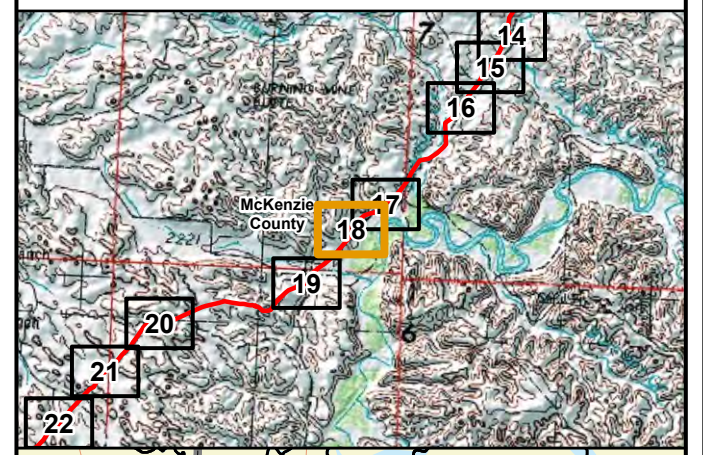


MAY 2023
Map 17 of 27

North Dakota
Public Service Commission

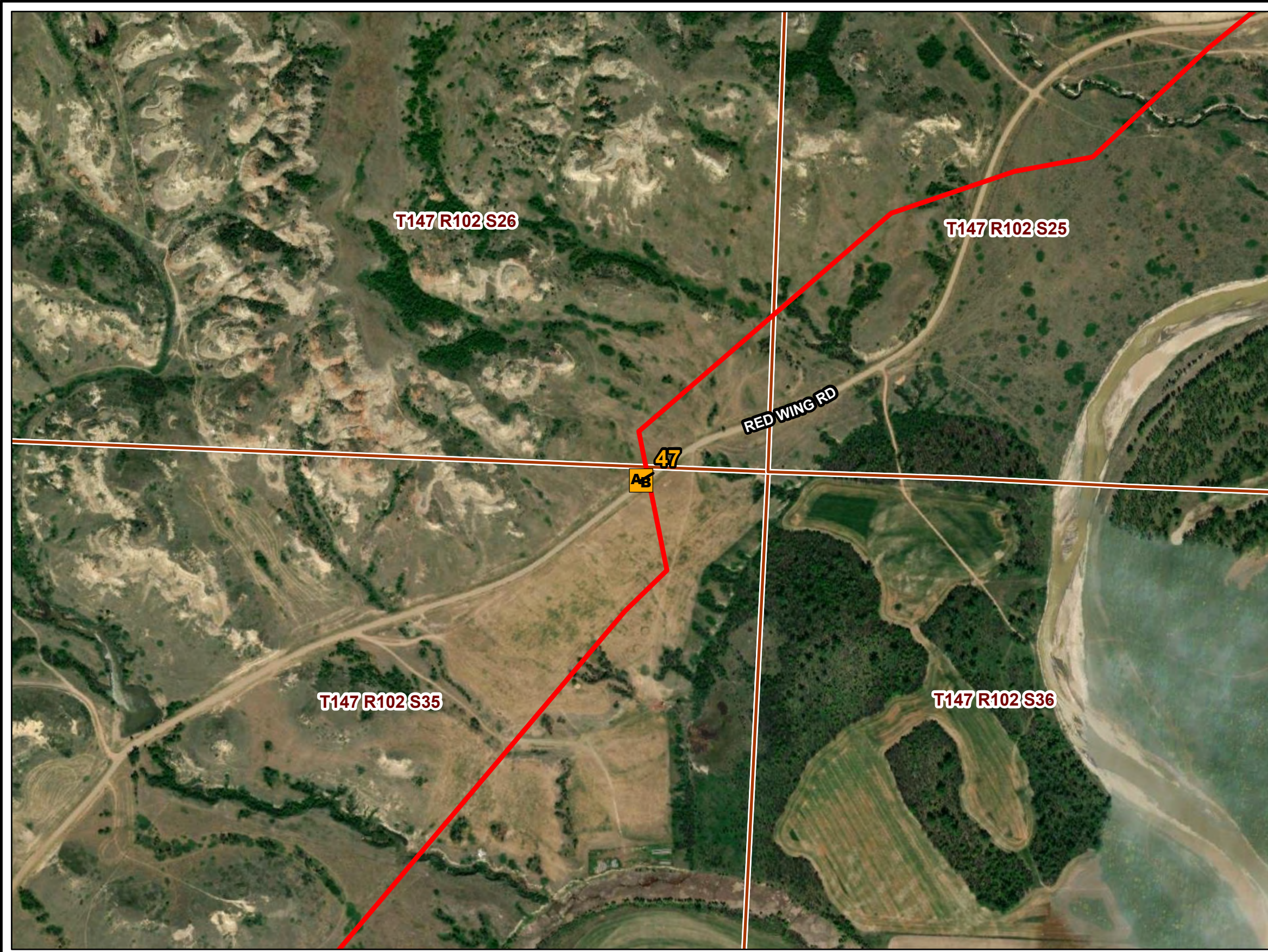
Bridger Pipeline
Figure 18

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



ESRI World Imagery

Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:58 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations

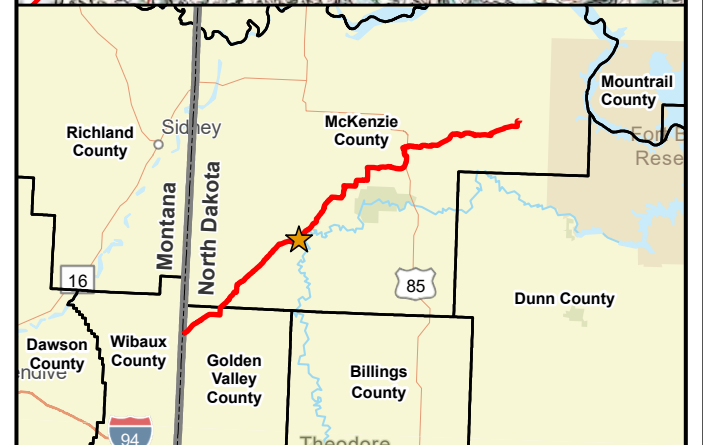
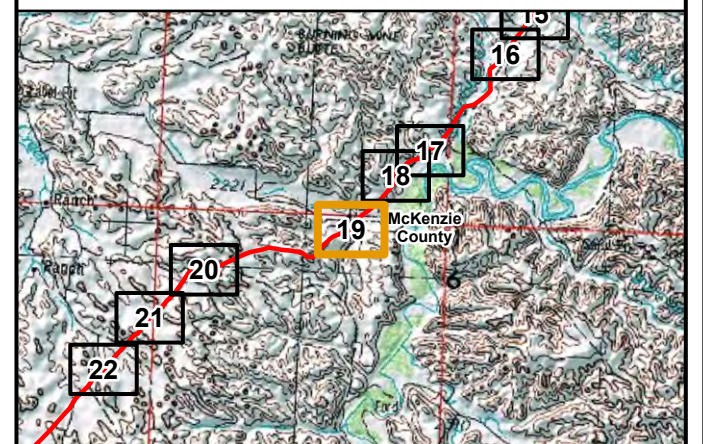


MAY 2023

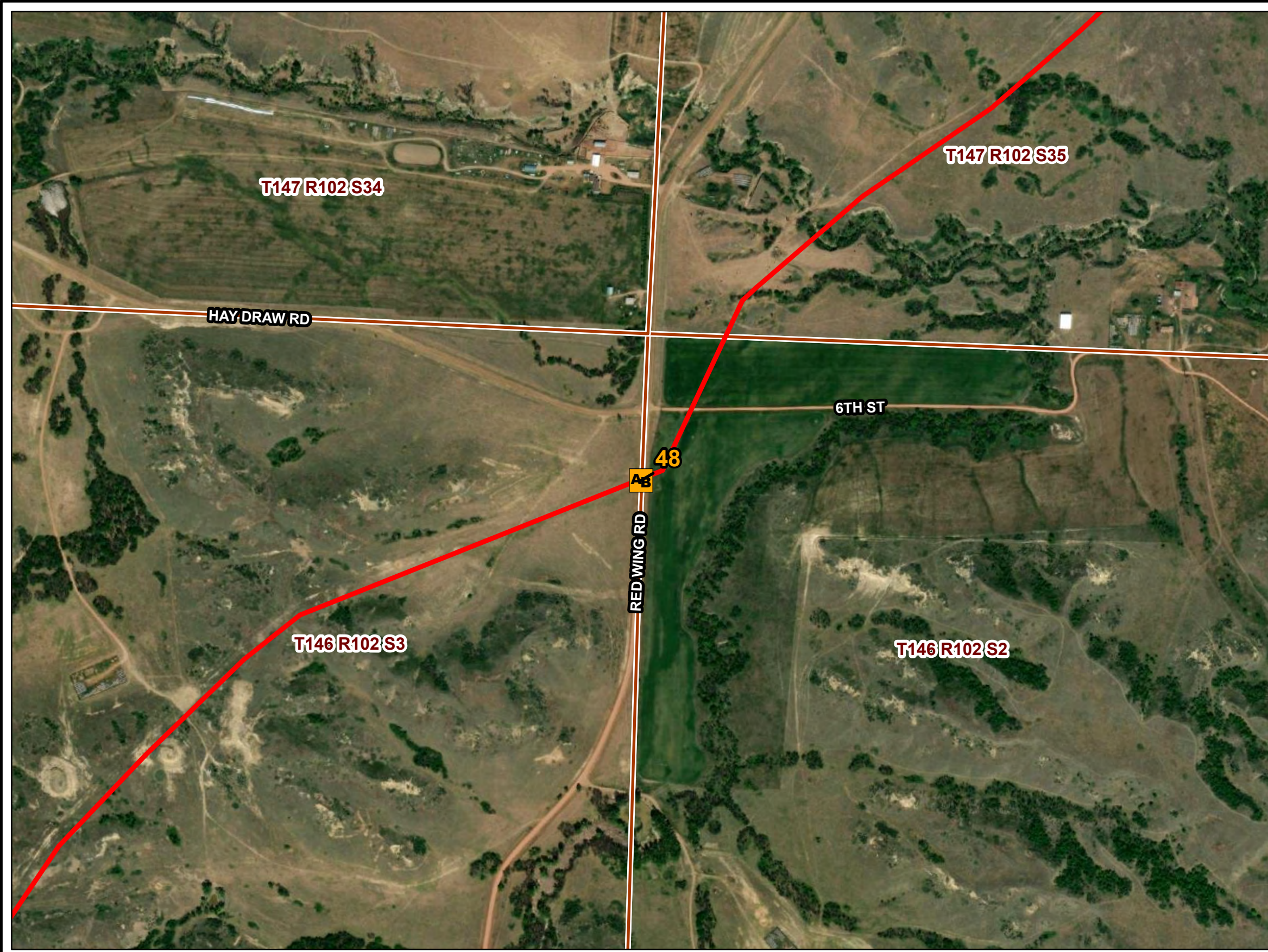
Map 18 of 27

**Bridger Pipeline
Figure 19**

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:59 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



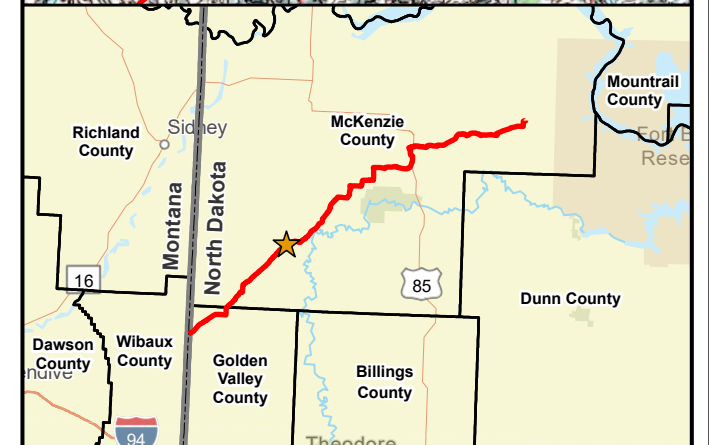
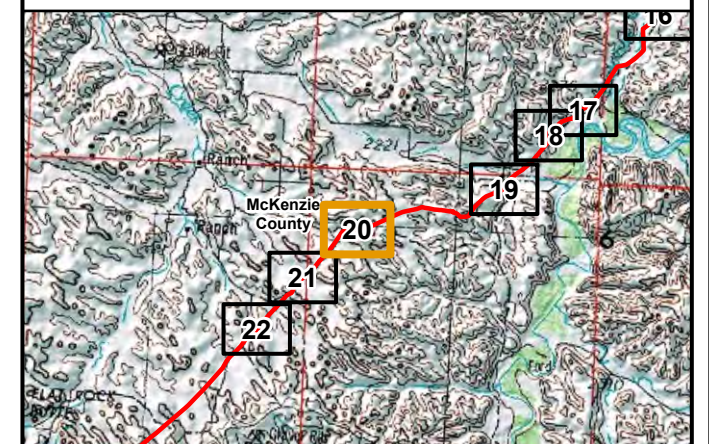
MAY 2023

Map 19 of 27

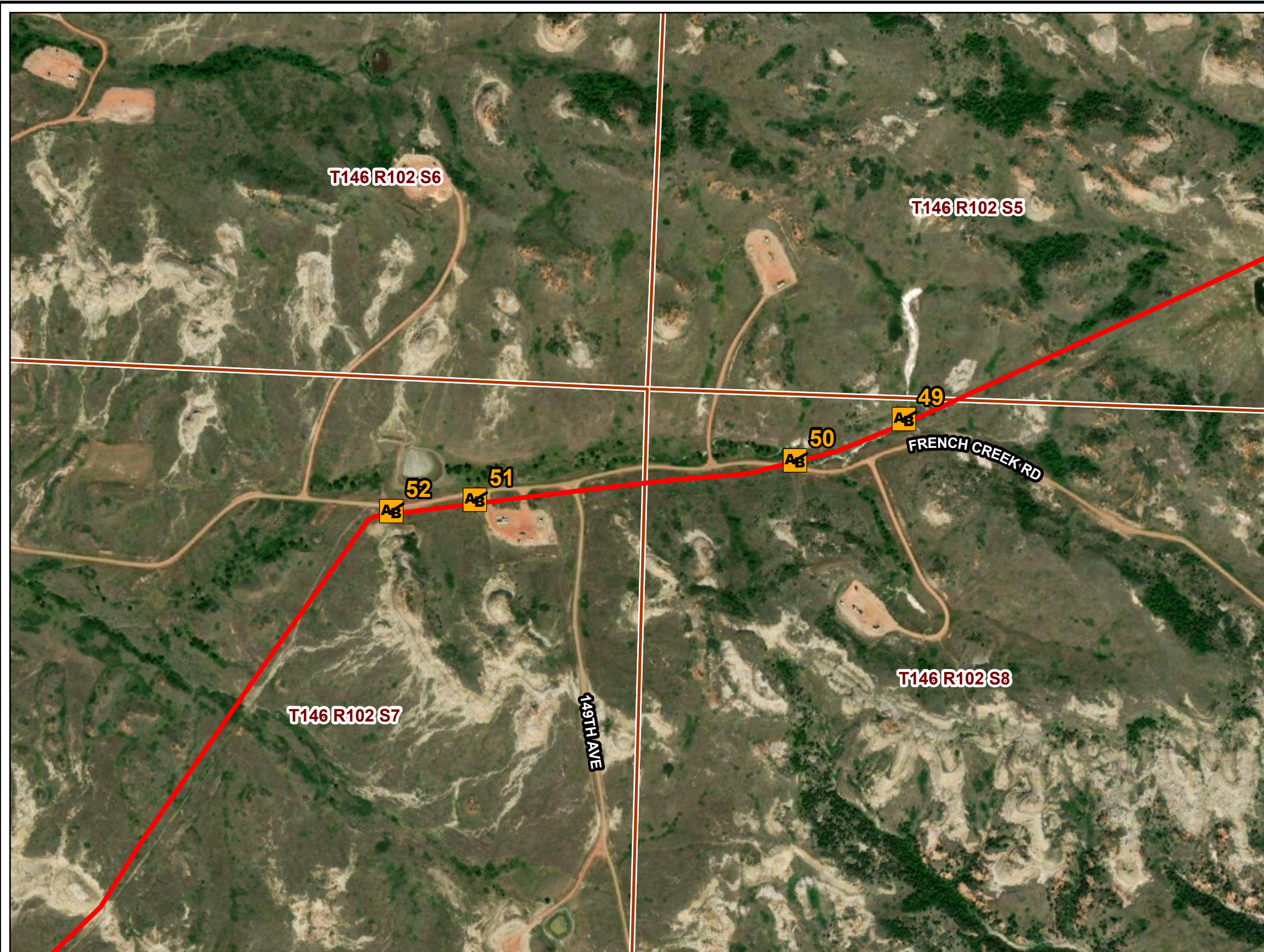
North Dakota
Public Service Commission

Bridger Pipeline
Figure 20

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



ESRI World Imagery
Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:59 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



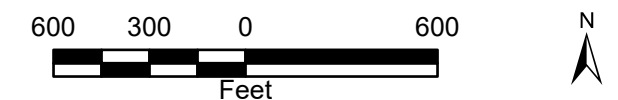
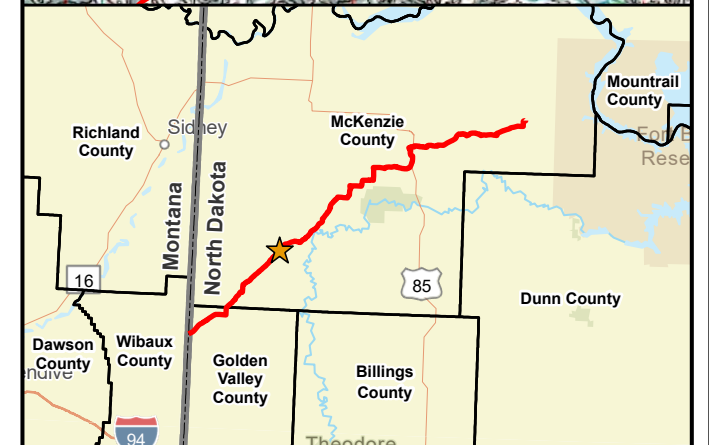
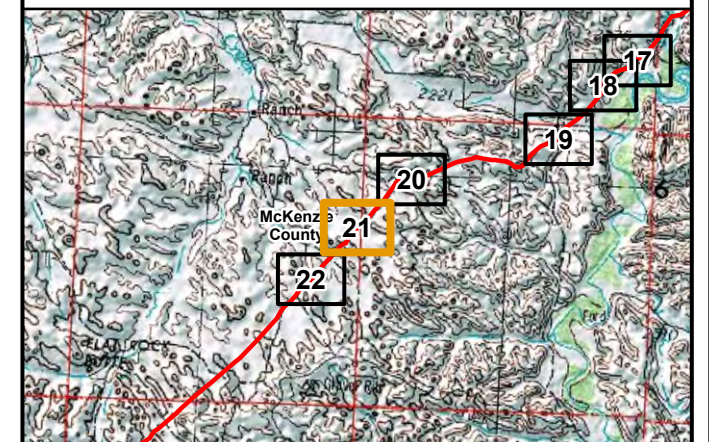
MAY 2023

Map 20 of 27

North Dakota
Public Service Commission

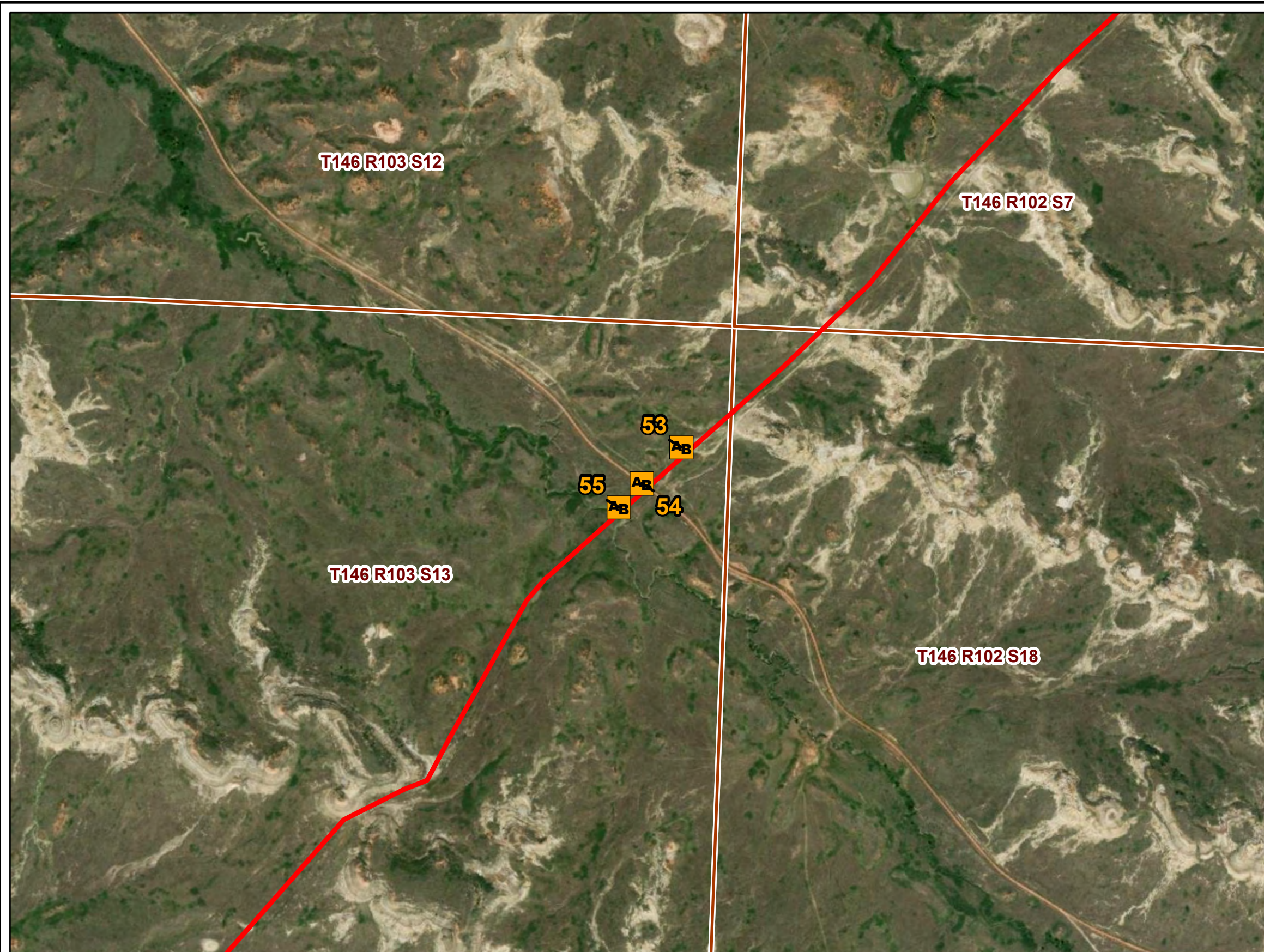
Bridger Pipeline
Figure 21

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



ESRI World Imagery

Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:59 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations

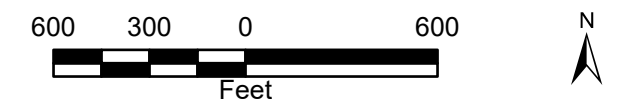
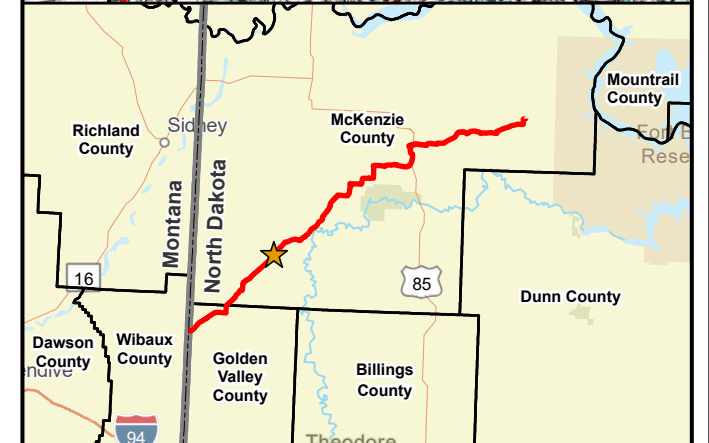
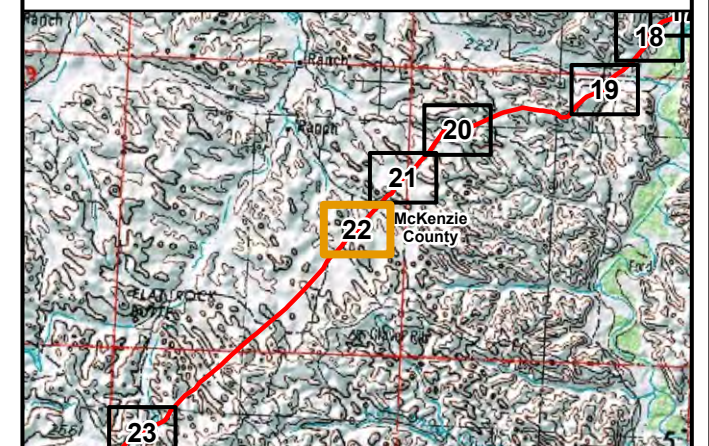


MAY 2023

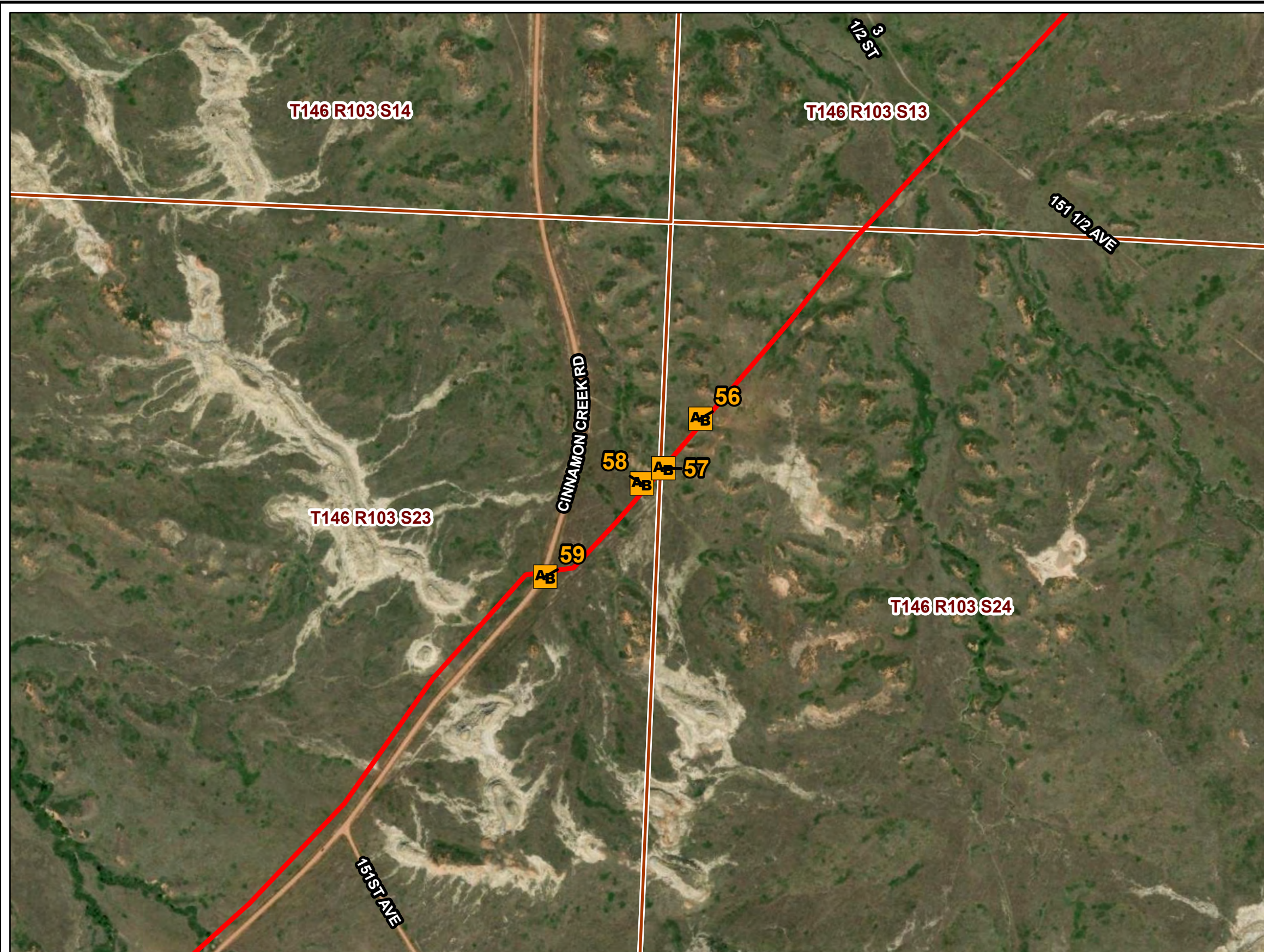
Map 21 of 27

**Bridger Pipeline
Figure 22**

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:59 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



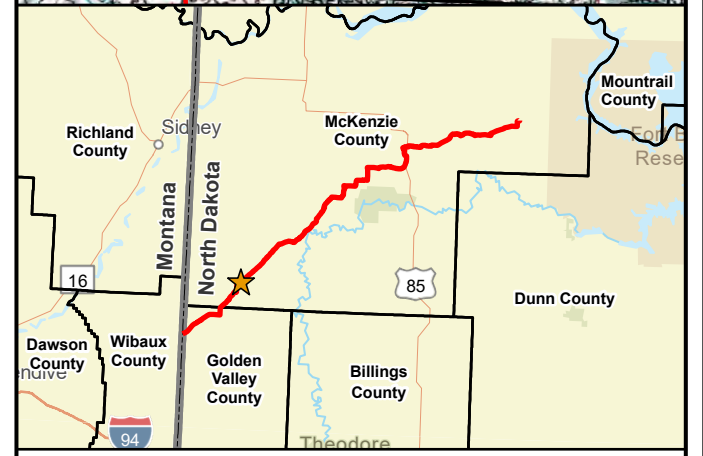
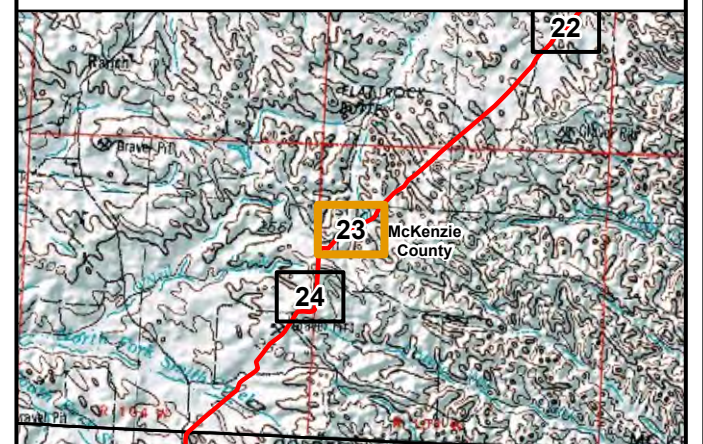
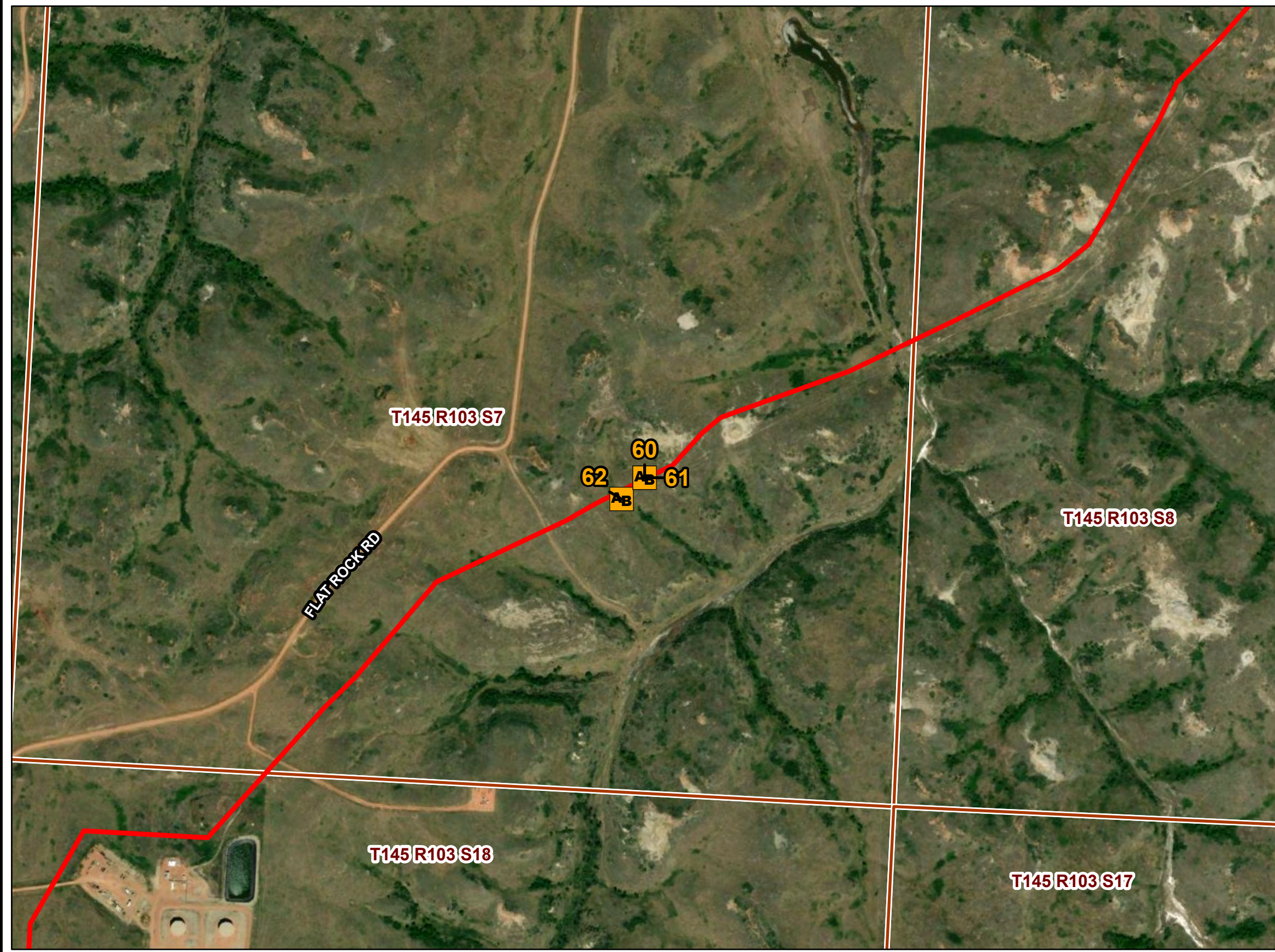
MAY 2023

Map 22 of 27

**North Dakota
Public Service Commission**

**Bridger Pipeline
Figure 23**

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:59 PM User: kjmueller

PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations

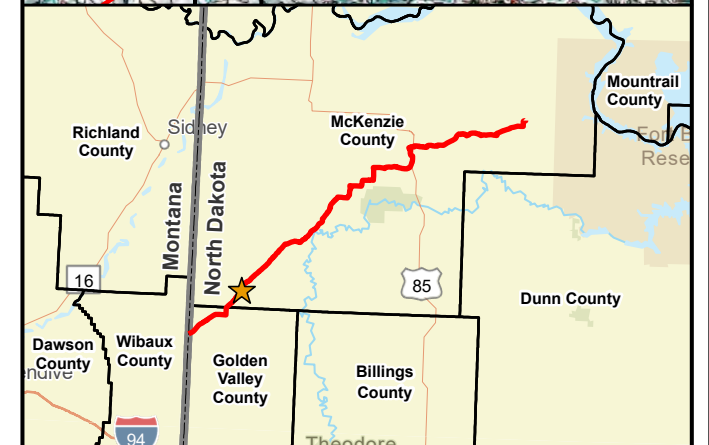
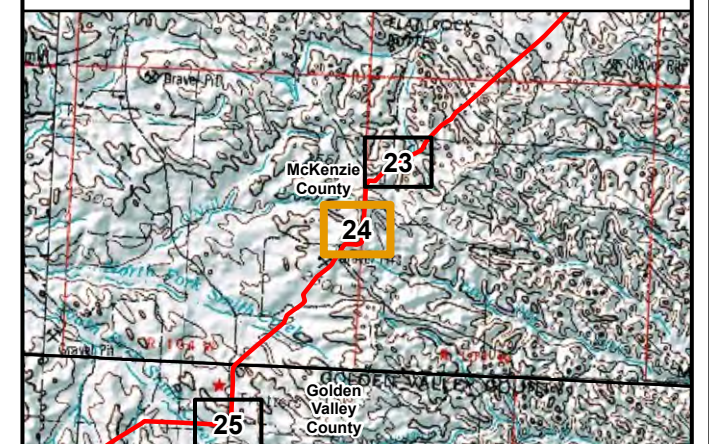


MAY 2023

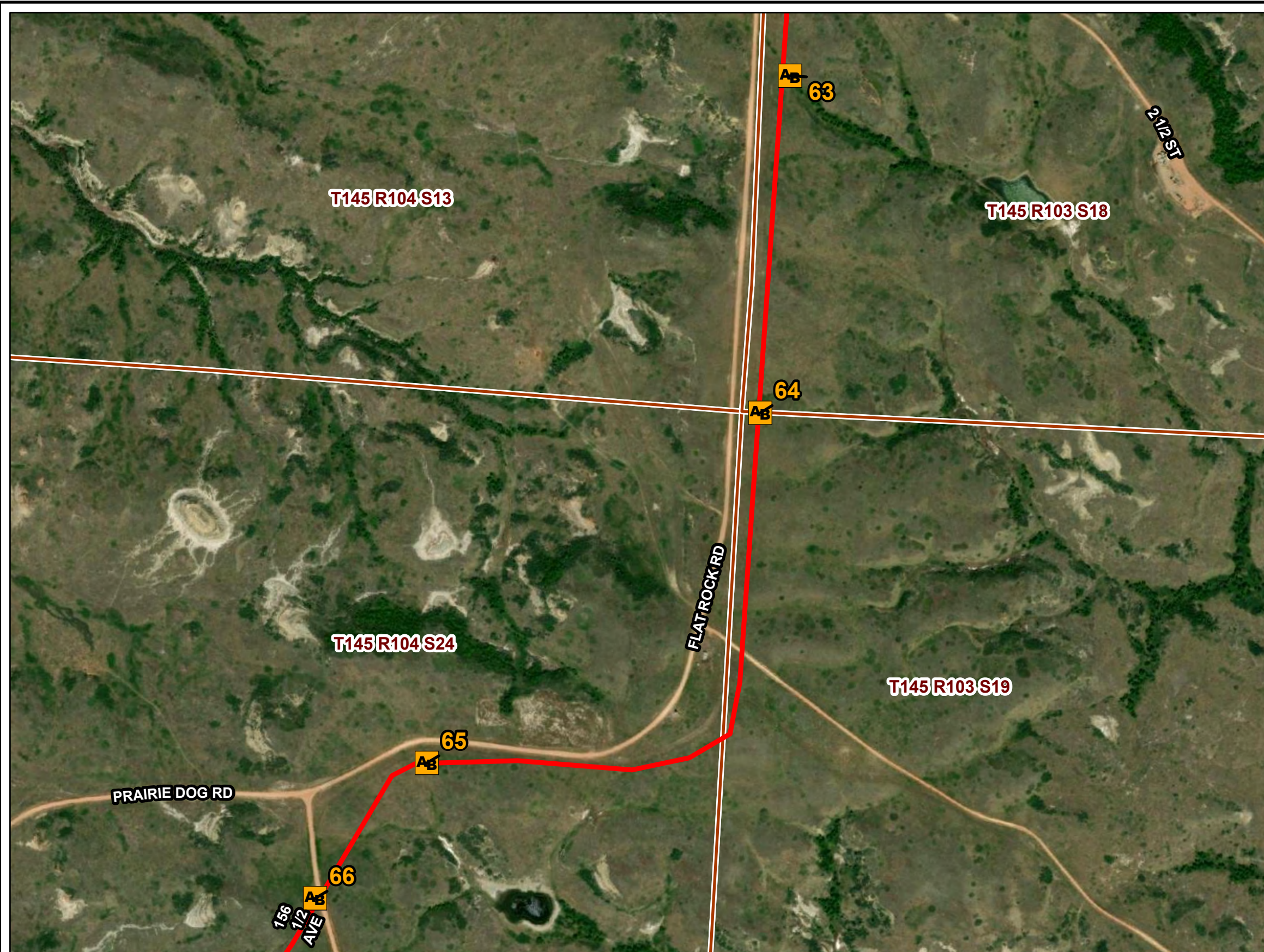
Map 23 of 27

**Bridger Pipeline
Figure 24**

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



ESRI World Imagery
Path: V:\2277\active\22770520\103_data\gis\pro\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:59 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



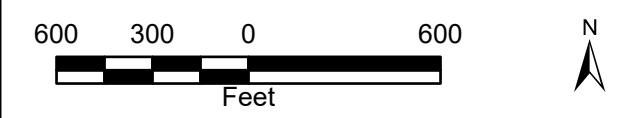
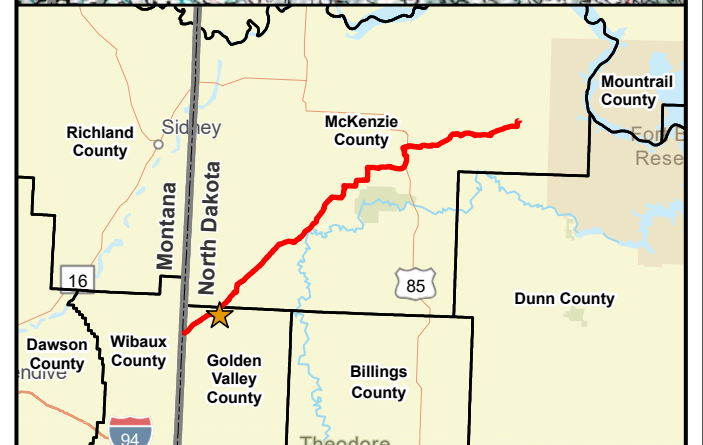
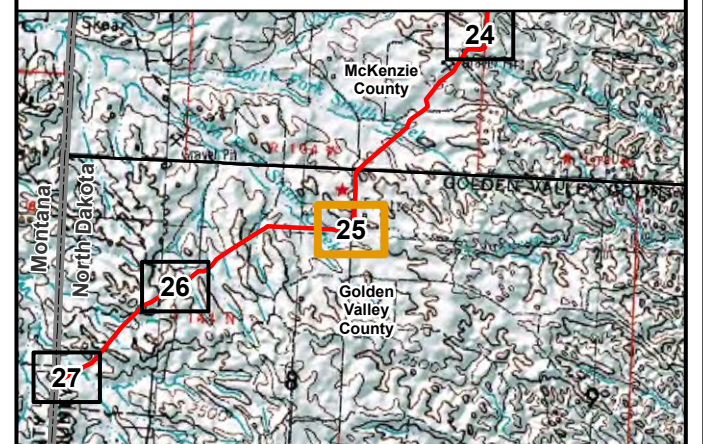
MAY 2023

Map 24 of 27

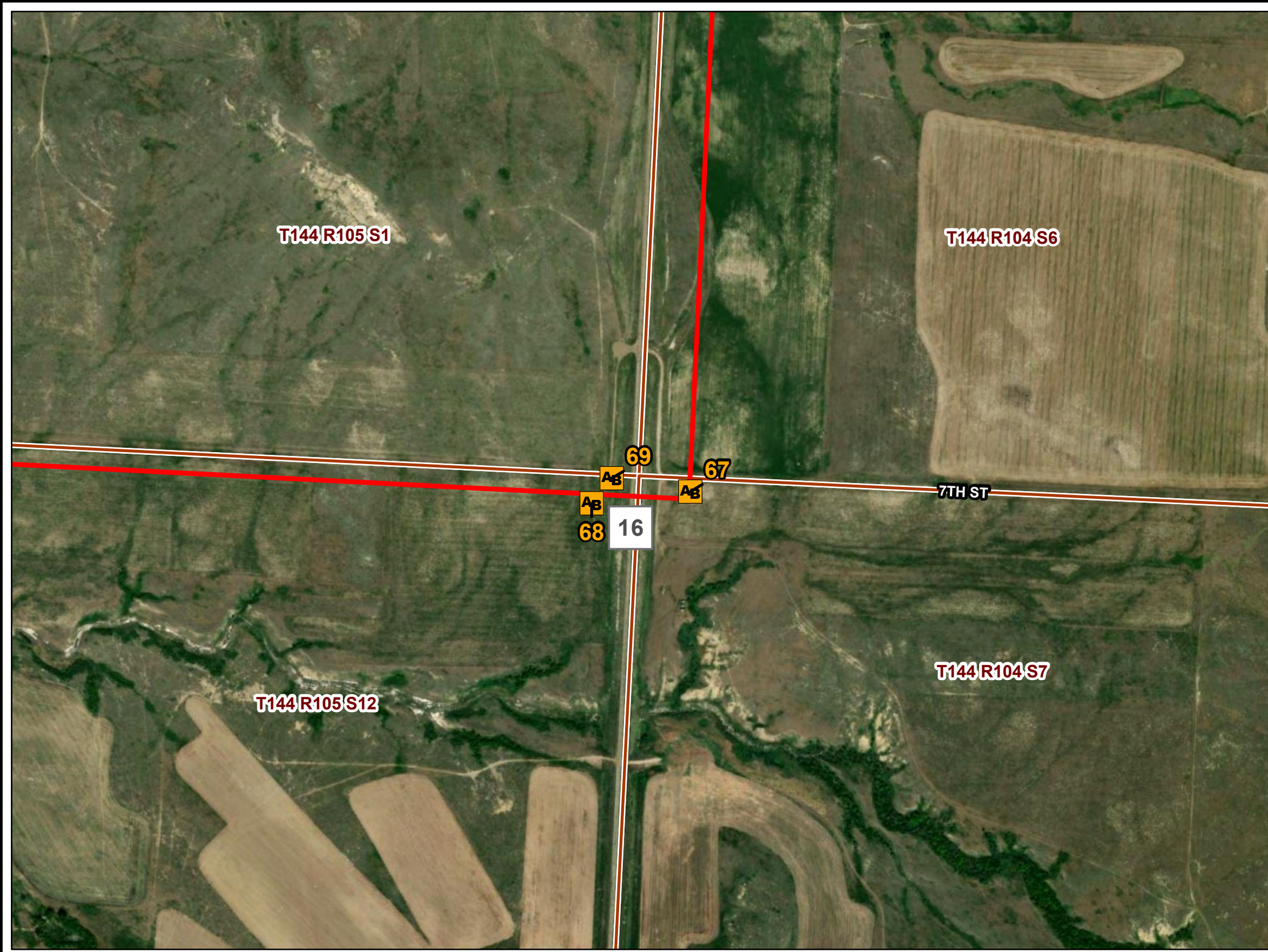
North Dakota
Public Service Commission

Bridger Pipeline
Figure 25

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



ESRI World Imagery
Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:59 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



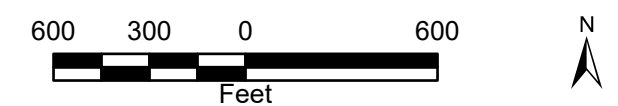
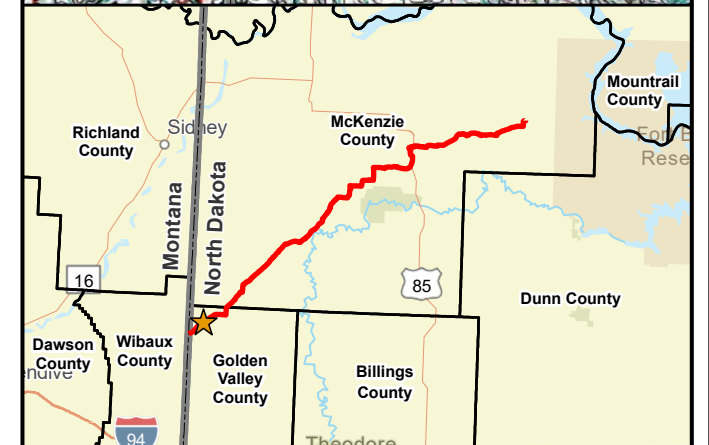
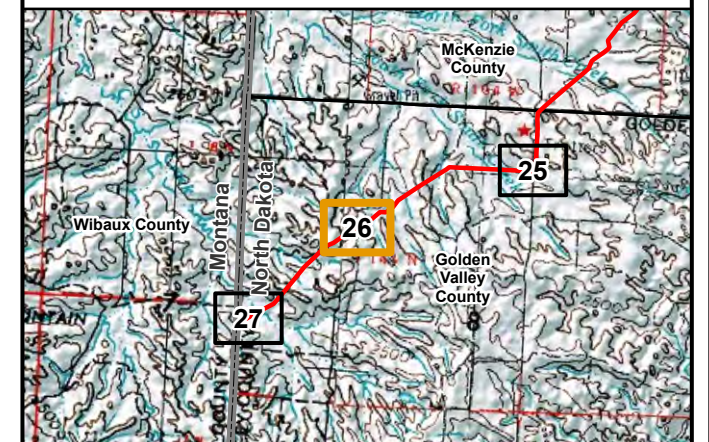
MAY 2023

Map 25 of 27

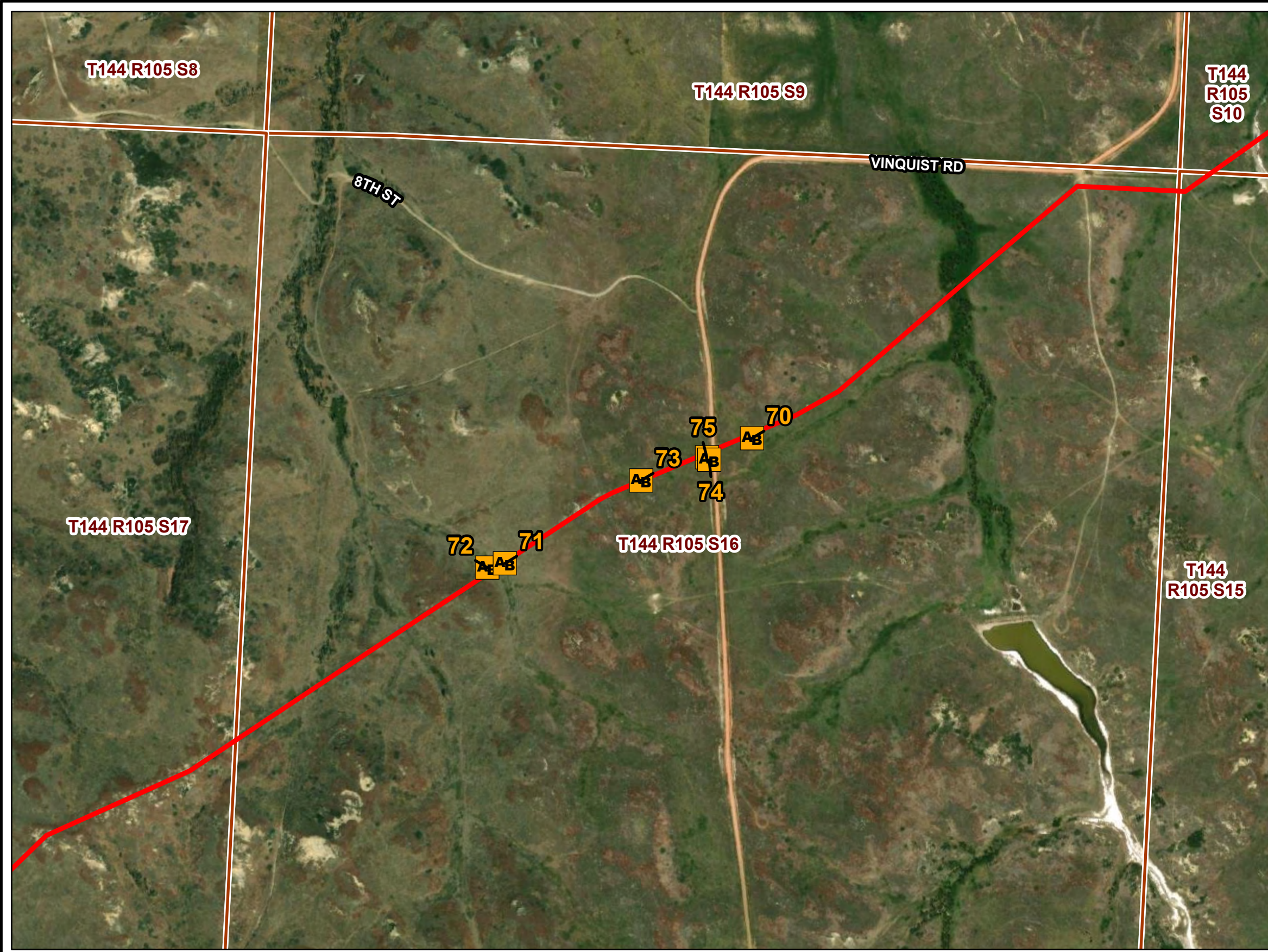
North Dakota
Public Service Commission

Bridger Pipeline
Figure 26

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:59 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



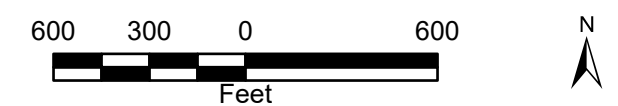
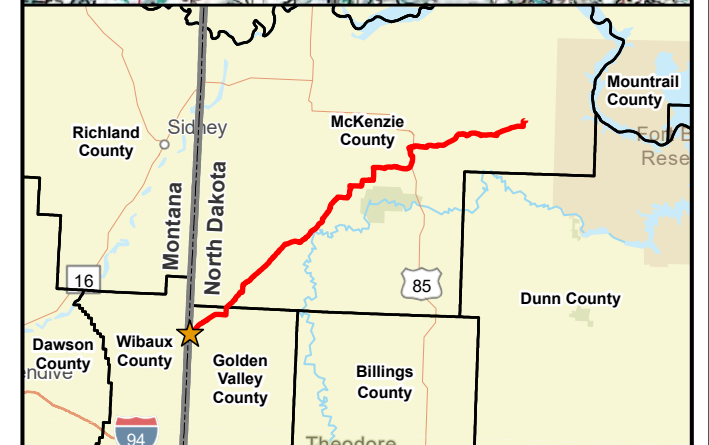
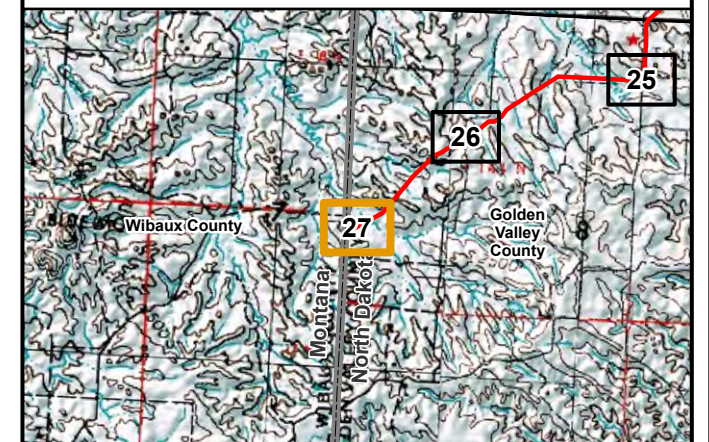
MAY 2023

Map 26 of 27

North Dakota
Public Service Commission

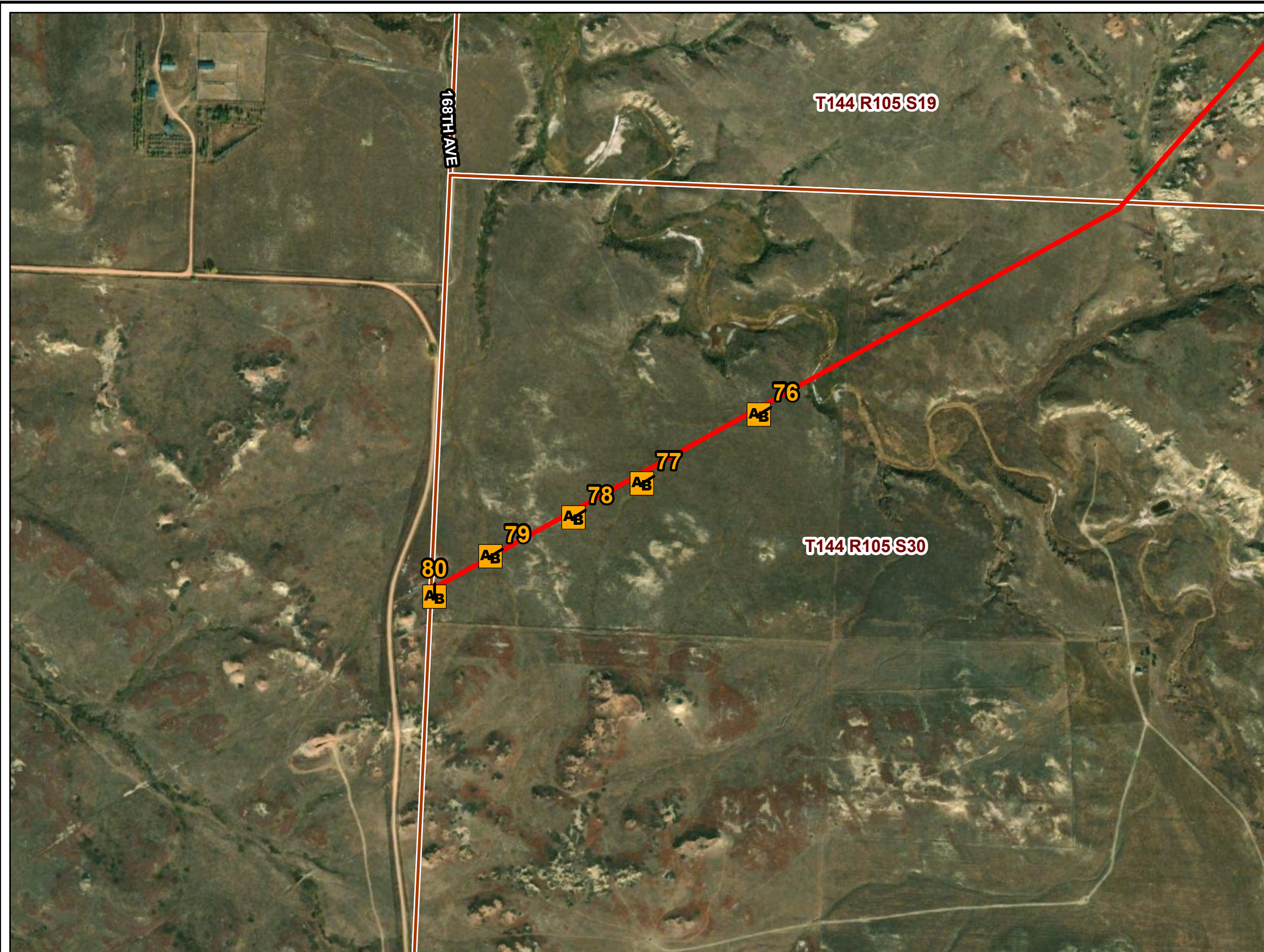
Bridger Pipeline
Figure 27

- As-Built Observation Point Location
- Bridger Pipeline Centerline (PU-21-48)
- Section Boundary



ESRI World Imagery

Path: V:\2277\active\22770520\103_data\gis_cad\gis\proj\bridger_pipeline\bridger_pipeline.aprx
Date: 2023-05-08 Time: 2:59 PM User: kjmueller



PU-21-48 BRIDGER PIPELINE TOPSOIL INSPECTION

As-Built Observation Locations



MAY 2023

Map 27 of 27

APPENDIX A

Observation Point Photolog

PU-21-48: Observation Point Photolog



Observation Point: 1
Date Taken: April 26, 2023
Direction Photo is Taken: Southeast

Photo Description: Topsoil movement forming trenches in respread soil. Soil erosion prevention measures needed

Latitude: 47.76468518
Longitude: -103.01220292



Observation Point: 2
Date Taken: April 26, 2023
Direction Photo is Taken: North

Photo Description: Topsoil movement forming trenches in respread soil. Soil erosion prevention measures needed

Latitude: 47.79319723
Longitude: -102.89806387



Observation Point: 3
Date Taken: April 26, 2023
Direction Photo is Taken: North

Photo Description: Soil in place and good contouring

Latitude: 47.78749014
Longitude: -102.89775194

PU-21-48: Observation Point Photolog



Observation Point: 4
Date Taken: April 26, 2023
Direction Photo is Taken: North

Photo Description: Soil erosion prevention measures in place and boring under road.

Latitude: 47.7866275
Longitude: -102.898582



Observation Point: 5
Date Taken: April 26, 2023
Direction Photo is Taken: Southwest

Photo Description: Soil in place and good contouring

Latitude: 47.78267168
Longitude: -102.94259952



Observation Point: 6
Date Taken: April 26, 2023
Direction Photo is Taken: Northeast

Photo Description: Soil erosion prevention measures in place and fence repaired

Latitude: 47.78280632
Longitude: -102.94139349

PU-21-48: Observation Point Photolog



Observation Point: 7
Date Taken: April 26, 2023
Direction Photo is Taken: East

Photo Description: Soil in place and good contouring

Latitude: 47.76350037
Longitude: -102.99200269



Observation Point: 8
Date Taken: April 26, 2023
Direction Photo is Taken: West

Photo Description: Soil erosion prevention measures in place

Latitude: 47.76362373
Longitude: -102.99452815



Observation Point: 9
Date Taken: April 26, 2023
Direction Photo is Taken: Northeast

Photo Description: Fencing replaced

Latitude: 47.76461882
Longitude: -103.01273759

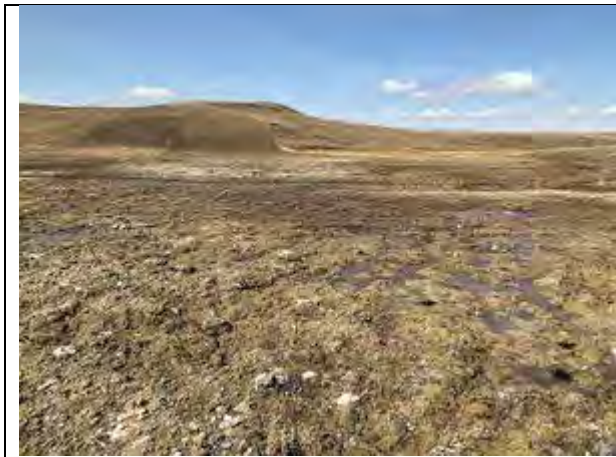
PU-21-48: Observation Point Photolog



Observation Point: 10
Date Taken: April 26, 2023
Direction Photo is Taken: Southeast

Photo Description: Topsoil movement forming trenches in respread soil. Erosion prevention measures needed

Latitude: 47.76434097
Longitude: -103.01547831



Observation Point: 11
Date Taken: April 26, 2023
Direction Photo is Taken:

Photo Description: Vehicle tracks across stream crossing and topsoil movement forming trenches in respread soil. Erosion prevention measures needed.

Latitude: 47.76382528
Longitude: -103.02092374



Observation Point: 12
Date Taken: April 27, 2023 8:57 AM
Direction Photo is Taken: West
Spread:

Photo Description: Fencing in place

Latitude: 47.76415236
Longitude: -103.01864502

PU-21-48: Observation Point Photolog



Observation Point: 13
Date Taken: April 26, 2023
Direction Photo is Taken: West

Photo Description: Construction pads removed

Latitude: 47.76508151
Longitude: -103.0583938



Observation Point: 14
Date Taken: April 26, 2023
Direction Photo is Taken: East

Photo Description: Soil in place and good contouring

Latitude: 47.76546619
Longitude: -103.05750527

PU-21-48: Observation Point Photolog



Observation Point: 15
Date Taken: April 26, 2023
Direction Photo is Taken: West

Photo Description: Soil in place and good contouring

Latitude: 47.76724501
Longitude: -103.072469



Observation Point: 16
Date Taken: April 26, 2023
Direction Photo is Taken:

Photo Description: Fencing down and needs repair

Latitude: 47.7609991
Longitude: -103.12877969



Observation Point: 17
Date Taken: April 26, 2023
Direction Photo is Taken: North

Photo Description: Steep side slope may erode with precipitation without erosion prevention measures

Latitude: 47.76037351
Longitude: -103.1294541

PU-21-48: Observation Point Photolog



Observation Point: 18
Date Taken: April 26, 2023
Direction Photo is Taken: Northeast
Photo Description: Soil in place and good contouring
Latitude: 47.75935582
Longitude: -103.13093291



Observation Point: 19
Date Taken: April 26, 2023
Direction Photo is Taken: East
Photo Description: Steep side slope may erode with precipitation without soil erosion prevention measures
Latitude: 47.75405178
Longitude: -103.13378074



Observation Point: 20
Date Taken: April 26, 2023
Direction Photo is Taken: South
Photo Description: Steep side slope may erode with precipitation without soil erosion prevention measures
Latitude: 47.75728942
Longitude: -103.13295698

PU-21-48: Observation Point Photolog



Observation Point: 21
Date Taken: April 26, 2023
Direction Photo is Taken: Southwest

Photo Description: Soil erosion prevention in place

Latitude: 47.75818957
Longitude: -103.13227734



Observation Point: 22
Date Taken: April 26, 2023
Direction Photo is Taken: East

Photo Description: Tunnel under stream in place

Latitude: 47.7525521
Longitude: -103.13613378



Observation Point: 23
Date Taken: April 26, 2023
Direction Photo is Taken: East

Photo Description: Soil in place and good contouring

Latitude: 47.75096894
Longitude: -103.13893349

PU-21-48: Observation Point Photolog



Observation Point: 24
Date Taken: April 26, 2023
Direction Photo is Taken: Northwest

Photo Description: Topsoil movement forming trenches in respread soil. Soil erosion prevention measures needed.

Latitude: 47.74948386
Longitude: -103.14210759



Observation Point: 25
Date Taken: April 26, 2023
Direction Photo is Taken: Northwest

Photo Description: Topsoil and subsoil movement forming large trench in respread soil. Soil respread and erosion prevention measures needed.

Latitude: 47.74935485
Longitude: -103.14241723



Observation Point: 26
Date Taken: April 26, 2023
Direction Photo is Taken: Southeast

Photo Description: Topsoil movement and erosion observed in respread soil. Add erosion prevention measures.

Latitude: 47.74747823
Longitude: -103.14724408

PU-21-48: Observation Point Photolog



Observation Point: 27
Date Taken: April 26, 2023
Direction Photo is Taken: Southeast

Photo Description: Soil in place but erosion prevention measures needed to prevent soil movement.

Latitude: 47.74718852
Longitude: -103.14774856



Observation Point: 28
Date Taken: April 26, 2023
Direction Photo is Taken: Southeast

Photo Description: Topsoil movement forming trenches in respread soil. Add erosion prevention measures.

Latitude: 47.74690826
Longitude: -103.14931967



Observation Point: 29
Date Taken: April 26, 2023
Direction Photo is Taken: Northeast

Photo Description: Soil in place and good contouring

Latitude: 47.74594346
Longitude: -103.15159326

PU-21-48: Observation Point Photolog



Observation Point: 30
Date Taken: April 26, 2023
Direction Photo is Taken: Northwest

Photo Description: Topsoil movement forming trenches in respread soil. Add erosion prevention measures.

Latitude: 47.73333513
Longitude: -103.20001404



Observation Point: 31
Date Taken: April 26, 2023
Direction Photo is Taken: Southeast

Photo Description: Topsoil movement forming trenches in respread soil. Add erosion prevention measures.

Latitude: 47.73018238
Longitude: -103.25661254



Observation Point: 32
Date Taken: April 26, 2023
Direction Photo is Taken: Southeast

Photo Description: Topsoil movement and washing downslope. Add soil erosion prevention measures

Latitude: 47.73329107
Longitude: -103.19873393

PU-21-48: Observation Point Photolog



Observation Point: 33
Date Taken: April 26, 2023
Direction Photo is Taken: Northeast

Photo Description: Topsoil movement forming trenches in respread soil. Add erosion prevention measures

Latitude: 47.73386249
Longitude: -103.19833662



Observation Point: 34
Date Taken: April 26, 2023
Direction Photo is Taken: South

Photo Description: Respread soil in place and good contouring

Latitude: 47.7353232
Longitude: -103.19806261



Observation Point: 35
Date Taken: April 26, 2023
Direction Photo is Taken: East

Photo Description: Soil in place and good contouring

Latitude: 47.73019573
Longitude: -103.25863886

PU-21-48: Observation Point Photolog



Observation Point: 36
Date Taken: April 26, 2023
Direction Photo is Taken: South

Photo Description: Topsoil movement forming trenches in respread soil. Add erosion prevention measures.

Latitude: 47.73039644
Longitude: -103.26062123



Observation Point: 37
Date Taken: April 26, 2023
Direction Photo is Taken: Southeast

Photo Description: Soil in place and good contouring

Latitude: 47.67424651
Longitude: -103.42105258

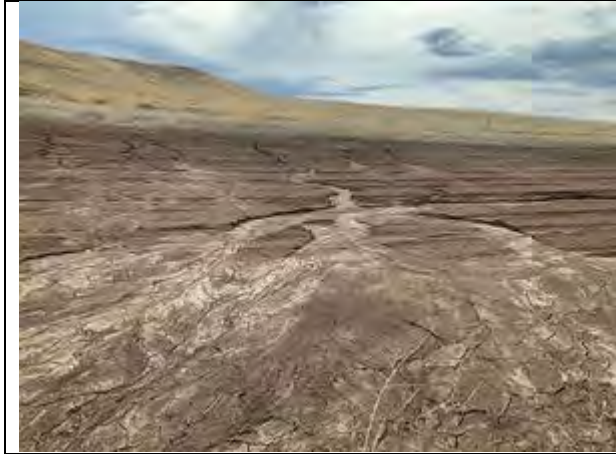


Observation Point: 38
Date Taken: April 26, 2023
Direction Photo is Taken: East

Photo Description: Topsoil movement in respread soil. Soil erosion prevention measures needed.

Latitude: 47.63128344
Longitude: -103.49456966

PU-21-48: Observation Point Photolog



Observation Point: 39
Date Taken: April 27, 2023 9:11 AM
Direction Photo is Taken: East
Spread:

Photo Description: Topsoil movement in respread soil. Add soil erosion prevention measures.

Latitude: 47.61591859
Longitude: -103.5017181



Observation Point: 40
Date Taken: April 26, 2023
Direction Photo is Taken: East

Photo Description: Soil movement creating trenches in respread soil. Add soil erosion prevention measures.

Latitude: 47.60823044
Longitude: -103.50222047



Observation Point: 41
Date Taken: April 25, 2023
Direction Photo is Taken: West

Photo Description: Fence and gate replaced

Latitude: 47.60820741
Longitude: -103.50233804

PU-21-48: Observation Point Photolog



Observation Point: 42
Date Taken: April 25, 2023
Direction Photo is Taken: West

Photo Description: Soil respread looks good. Construction pads to be picked up

Latitude: 47.597902
Longitude: -103.54878382



Observation Point: 43
Date Taken: April 25, 2023
Direction Photo is Taken: West

Photo Description: Temporary access and pads in place and need to be removed after reclamation

Latitude: 47.57698304
Longitude: -103.56559102



Observation Point: 44
Date Taken: April 25, 2023
Direction Photo is Taken: Southwest

Photo Description: Straw wattle in place to prevent soil erosion

Latitude: 47.56712811
Longitude: -103.57450926

PU-21-48: Observation Point Photolog



Observation Point: 45
Date Taken: April 25, 2023
Direction Photo is Taken: Southwest

Photo Description: Temporary access and pads in place. Remove pads after area is reclaimed.

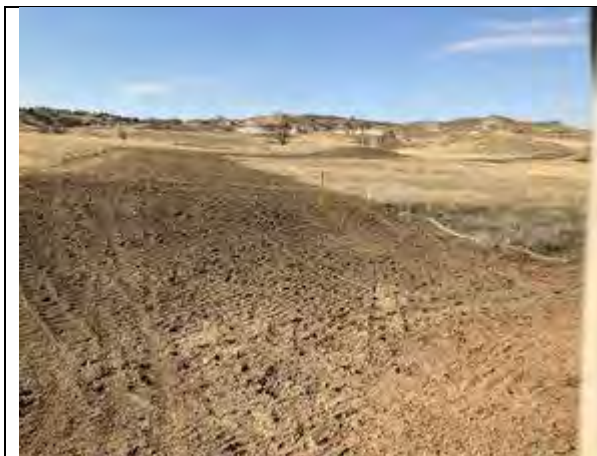
Latitude: 47.55465013
Longitude: -103.58670901



Observation Point: 46
Date Taken: April 25, 2023
Direction Photo is Taken:

Photo Description: Temporary bridge in place. Remove after area is reclaimed.

Latitude: 47.5249418
Longitude: -103.61818742



Observation Point: 47
Date Taken: April 25, 2023
Direction Photo is Taken: North

Photo Description: Straw wattle in place and preventing soil erosion.

Latitude: 47.51702998
Longitude: -103.63292289

PU-21-48: Observation Point Photolog



Observation Point: 48
Date Taken: April 25, 2023
Direction Photo is Taken: Northeast

Photo Description: Fence rebuilt and slope regraded

Latitude: 47.50046674
Longitude: -103.65159884



Observation Point: 49
Date Taken: April 25, 2023
Direction Photo is Taken:

Photo Description: Topsoil movement in respread soil. Add erosion prevention measures. Water flowing over respread soil.

Latitude: 47.48781421
Longitude: -103.70960506



Observation Point: 50
Date Taken: April 25, 2023
Direction Photo is Taken:

Photo Description: Topsoil movement in respread soil and construction debris remaining.

Latitude: 47.48709206
Longitude: -103.71208875

PU-21-48: Observation Point Photolog



Observation Point: 51
Date Taken: April 2, 2023
Direction Photo is Taken: West

Photo Description: Soil erosion and ungraded soil remaining

Latitude: 47.48626383
Longitude: -103.7194681



Observation Point: 52
Date Taken: April 25, 2023
Direction Photo is Taken: South

Photo Description: Topsoil movement in respread soil. Add soil prevention measures

Latitude: 47.48603068
Longitude: -103.72139195



Observation Point: 53
Date Taken: April 25, 2023
Direction Photo is Taken: Southeast

Photo Description: Soil trench forming and eroding in low point. Add erosion prevention measures.

Latitude: 47.47223314
Longitude: -103.73778979

PU-21-48: Observation Point Photolog



Observation Point: 54
Date Taken: April 25, 2023
Direction Photo is Taken: Southeast

Photo Description: Straw wattle broken and soil is washing down the draw.

Latitude: 47.4716383
Longitude: -103.73867111



Observation Point: 55
Date Taken: April 25, 2023
Direction Photo is Taken: Southwest

Photo Description: Silt fence damaged and soil moving into stream.

Latitude: 47.47124978
Longitude: -103.73918105

PU-21-48: Observation Point Photolog



Observation Point: 56
Date Taken: April 25, 2023
Direction Photo is Taken: Northeast

Photo Description: Steep side slope may erode with precipitation. Add wattles or silt fence to prevent soil erosion

Latitude: 47.45670684
Longitude: -103.75670253



Observation Point: 57
Date Taken: April 25, 2023
Direction Photo is Taken:

Photo Description: Steep slope may wash out if not revegetated soon.

Latitude: 47.45590591
Longitude: -103.75751117



Observation Point: 58
Date Taken: April 25, 2023
Direction Photo is Taken:

Photo Description: Soil movement forming trenches. Add soil erosion prevention measures.

Latitude: 47.45565122
Longitude: -103.75799634

PU-21-48: Observation Point Photolog



Observation Point: 59
Date Taken: April 25, 2023
Direction Photo is Taken: North
Photo Description: Construction trash remaining on site.
Latitude: 47.45412358
Longitude: -103.76014065



Observation Point: 60
Date Taken: April 25, 2023
Direction Photo is Taken: Northeast
Photo Description: Large ruts from heavy equipment. May contribute to soil movement if not regraded.
Latitude: 47.39246305
Longitude: -103.84866432



Observation Point: 61
Date Taken: April 25, 2023
Direction Photo is Taken: Northwest
Photo Description: Straw wattles washed out. Repair erosion prevention measures.
Latitude: 47.3924652
Longitude: -103.84866531

PU-21-48: Observation Point Photolog



Observation Point: 62
Date Taken: April 25, 2023
Direction Photo is Taken: West

Photo Description: Soil movement and trenches forming. Add wattles or silt fence to prevent soil erosion.

Latitude: 47.39211436
Longitude: -103.84917502



Observation Point: 63
Date Taken: April 25, 2023
Direction Photo is Taken: Northwest

Photo Description: Silt fence broken and not preventing soil movement.

Latitude: 47.37834164
Longitude: -103.86240546



Observation Point: 64
Date Taken: April 25, 2023
Direction Photo is Taken: West

Photo Description: Large depression starting to form and loose fencing wire in field.

Latitude: 47.37302768
Longitude: -103.86275436

PU-21-48: Observation Point Photolog



Observation Point: 65
Date Taken: April 25, 2023
Direction Photo is Taken: Southwest

Photo Description: Soil not graded to natural slope.

Latitude: 47.36729933
Longitude: -103.87010405



Observation Point: 66
Date Taken: April 25, 2023
Direction Photo is Taken: South

Photo Description: Wattle is not adequately stopping soil movement.

Latitude: 47.36509541
Longitude: -103.87255281

PU-21-48: Observation Point Photolog



Observation Point: 67
Date Taken: April 25, 2023
Direction Photo is Taken: North

Photo Description: Soil movement and trench formed. Add wattles to prevent soil movement.

Latitude: 47.31184573
Longitude: -103.91707871



Observation Point: 68
Date Taken: April 25, 2023
Direction Photo is Taken: North

Photo Description: Soil erosion and trench formed. Add wattles to prevent soil movement.

Latitude: 47.31159193
Longitude: -103.91935226



Observation Point: 69
Date Taken: April 25, 2023
Direction Photo is Taken: West

Photo Description: Fence and gate repaired properly

Latitude: 47.31200165
Longitude: -103.91891327

PU-21-48: Observation Point Photolog



Observation Point: 70
Date Taken: April 25, 2023
Direction Photo is Taken: Southwest

Photo Description: Topsoil movement and gully formation at bottom of slope. Add soil erosion prevention measures.

Latitude: 47.29334197
Longitude: -103.99171345



Observation Point: 71
Date Taken: April 25, 2023
Direction Photo is Taken: East

Photo Description: Good respread and stable soil

Latitude: 47.29119277
Longitude: -103.99730708

PU-21-48: Observation Point Photolog



Observation Point: 72
Date Taken: April 25, 2023
Direction Photo is Taken: Northeast

Photo Description: Soil erosion starting to occur at bottom of slope. Add straw wattle to prevent continued erosion.

Latitude: 47.29111298
Longitude: -103.99770833



Observation Point: 73
Date Taken: April 25, 2023
Direction Photo is Taken: West

Photo Description: Stable soil and good contouring.

Latitude: 47.29259681
Longitude: -103.99423872

PU-21-48: Observation Point Photolog



Observation Point: 74
Date Taken: April 25, 2023
Direction Photo is Taken: North

Photo Description: Straw wattle almost full

Latitude: 47.29297221
Longitude: -103.99268286



Observation Point: 75
Date Taken: April 25, 2023
Direction Photo is Taken: West

Photo Description: Topsoil erosion forming trench downslope. Add soil erosion prevention measures.

Latitude: 47.29300876
Longitude: -103.99273665

PU-21-48: Observation Point Photolog



Observation Point: 76
Date Taken: April 25, 2023
Direction Photo is Taken: North

Photo Description: Topsoil erosion across respread soil. Add soil prevention measures.

Latitude: 47.26525093
Longitude: -104.03741722



Observation Point: 77
Date Taken: April 25, 2023
Direction Photo is Taken: East

Photo Description: Topsoil erosion at bottom of slope forming trench. Add soil erosion prevention measures.

Latitude: 47.26408386
Longitude: -104.04004165

PU-21-48: Observation Point Photolog



Observation Point: 78
Date Taken: April 2, 2023
Direction Photo is Taken: East

Photo Description: Topsoil respread is appropriate and good contouring.

Latitude: 47.26350127
Longitude: -104.04158267



Observation Point: 79
Date Taken: April 25, 2023
Direction Photo is Taken: South

Photo Description: Topsoil erosion at bottom of slope forming trench. No erosion prevention measures in place.

Latitude: 47.26283159
Longitude: -104.04345624

PU-21-48: Observation Point Photolog



Observation Point: 80
Date Taken: April 25, 2023
Direction Photo is Taken: East

Photo Description: Topsoil erosion and trench formation on slope facing east. Add soil erosion prevention measures.

Latitude: 47.2621568
Longitude: -104.04470459