

Executive Summary:

A construction inspection was performed on Spread 8 in Dunn County near Killdeer, North Dakota. No deficiencies or actions needed were observed.

Site/Project Location: Spread 8

Date of Inspection: 26 July 2016

Observed Work / Weather Conditions

Weather was cloudy. Wind 4mph from the north-northeast. Temperature was 72°F.

Ongoing ROW activities were observed.

Topsoil Management / Condition / Erosion Control / Storm Water Management

Topsoil segregation and storage was completed and deemed sufficient. Storm water management practices were implemented in their respected areas along ROW.

Vegetation Condition

No trees were observed cleared.

Depth of Cover / Road Crossings / River Crossings / Riparian Condition at HDD Bore Sites

Trenching for pipeline installation not yet started. One active HDD site was observed. The HDD was being used to route the pipeline through a steep cliff area.

Deficiencies

None to report.

Actions Taken/To Be Taken

No additional actions scheduled.

Keitu Inspector: RJS

Reviewed by Project Lead:

Submitted: 26 April 2017



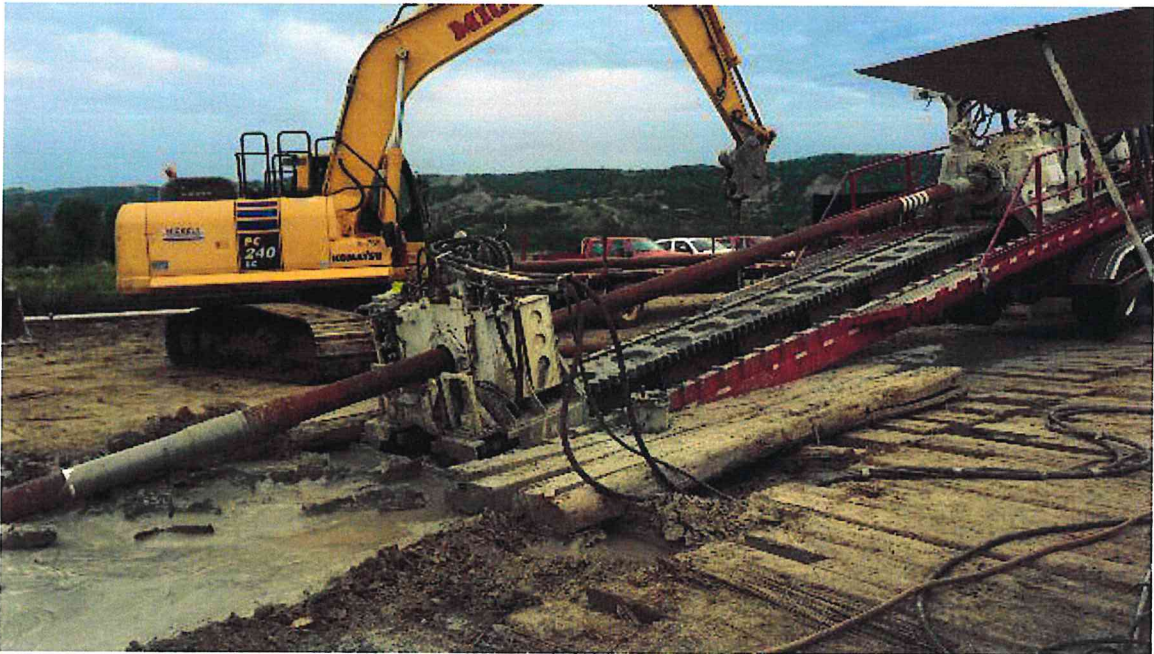
282 PU-14-842 Filed: 4/26/2017 Pages: 72
**Construction Inspection Field Reports not
previously filed**

Keitu Engineers & Consultants, Inc.

Kathleen Spilman, P.E.

Report Photo #1 Cliff HDD site at GPS Coordinates:

47.618333° N 102.872222° W



Report Photo #2 Archy Site Flagged and Untouched at GPS Coordinates:

47.353611° N 102.2925° W

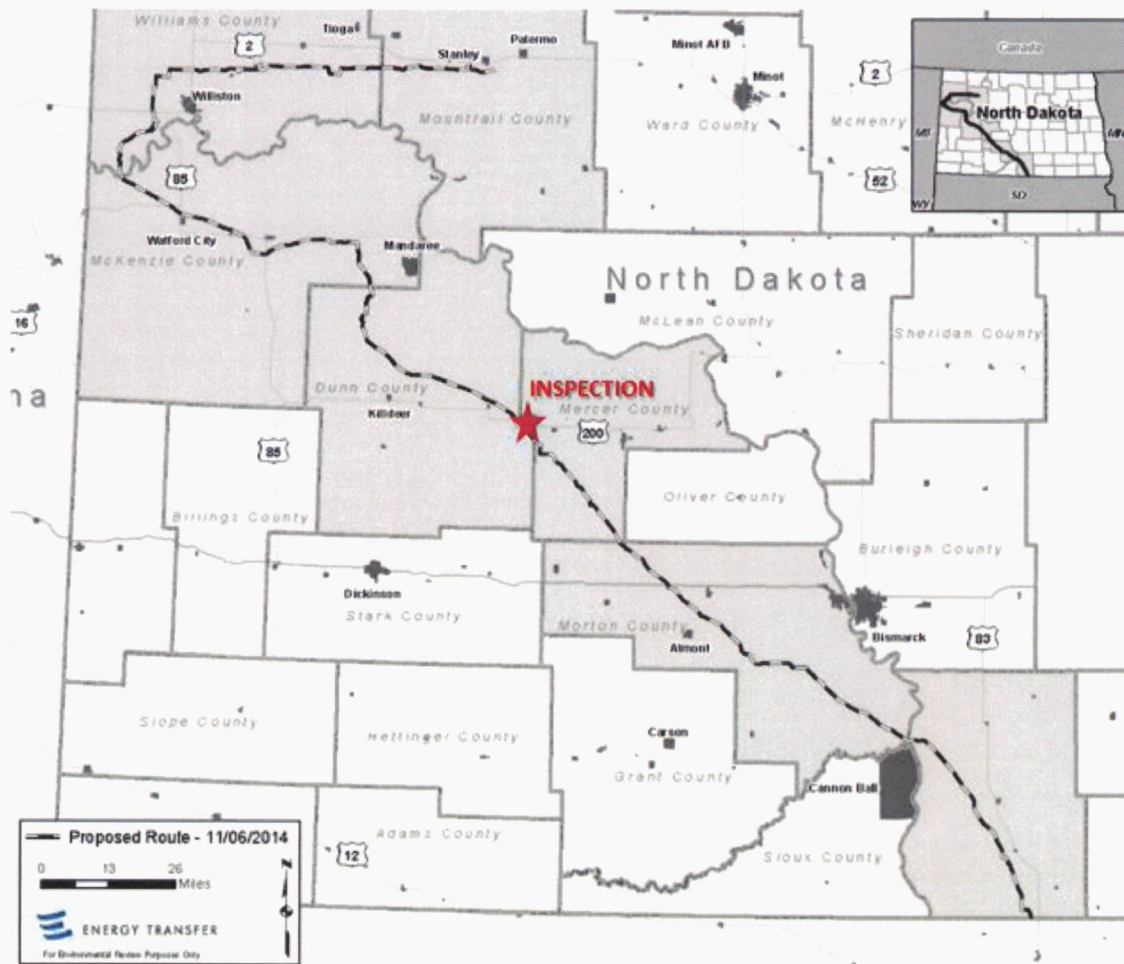


Report Photo #3 Archy Site Flagged and Untouched at GPS Coordinates: 47.333889° N 102.243333° W



Project Map Inspection Location:

Spread 8



Executive Summary:

A construction inspection was performed on Spread 6 in Emmons County near Strasburg, North Dakota. No deficiencies or actions needed were observed.

Site/Project Location: Spreads 7 & 8

Date of Inspection: 21 June 2016

Observed Work / Weather Conditions

Weather was clear with unrestricted visibility. Wind 10mph from the east-southeast. Temperature ranged from 71 to 83°F.

Ongoing ROW activities were observed.

Topsoil Management / Condition / Erosion Control / Storm Water Management

Topsoil segregation and storage was completed and deemed sufficient. Storm water management practices were implemented in their respected areas along ROW. Housekeeping of workspace and debris needed improvement.

Vegetation Condition

No trees were observed cleared.

Depth of Cover / Road Crossings / River Crossings / Riparian Condition at HDD Bore Sites

Trenching for pipeline installation not yet started. No active bore or road crossings was observed.

Deficiencies

None to report.

Actions Taken/To Be Taken

No additional actions scheduled.

Keitu Inspector: RJS

Reviewed by Project Lead:

Submitted: 26 April 2017



Report Photo #1 ND border facing North at GPS Coordinates:

45.942222° N 100.0975° W



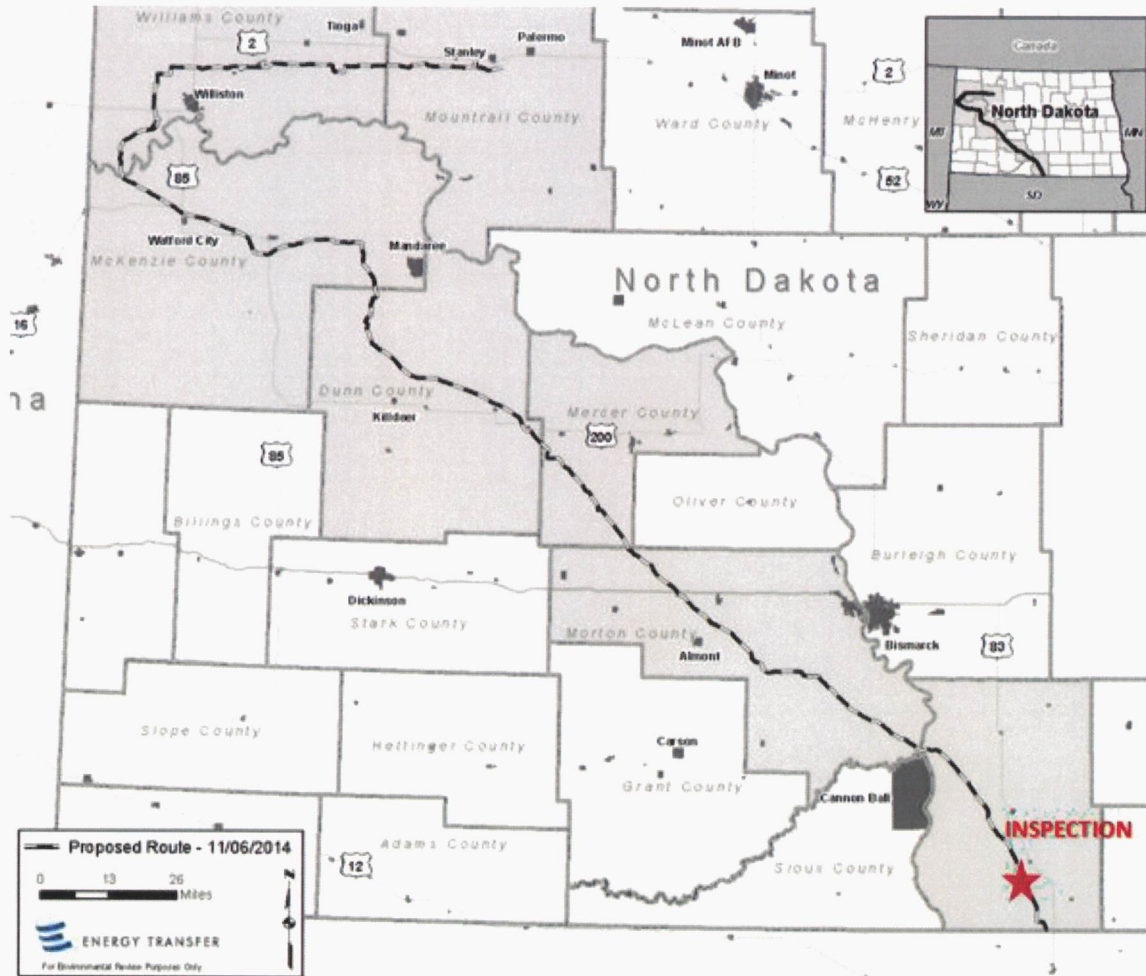
Report Photo #2 Topsoil-Subsoil Segregation at GPS Coordinates:

46.093611° N 100.193611° W



Project Map Inspection Location:

Spreads 7 & 8



Executive Summary:

A construction inspection was performed on Spreads 7 & 8 in Mountrail County near Medicine Hole, North Dakota. No deficiencies or actions needed were observed.

Site/Project Location: Spreads 7 & 8

Date of Inspection: 16 June 2016

Observed Work / Weather Conditions

Weather was partly cloudy with unrestricted visibility. Wind 12mph from the southeast. Temperature ranged from 70 to 82°F.

Ongoing ROW activities were observed.

Topsoil Management / Condition / Erosion Control / Storm Water Management

Topsoil segregation and storage was completed and deemed sufficient. Storm water management practices were implemented in their respected areas along ROW. Topsoil had rolled near or over the ROW boundary as the soil piles settled overtime. Third Party Coordinator and Keitu Inspector agreed that operators should be notified to leave more space between the soil pile and the ROW boundary. Subsoil pile from bore pit was stacked on unstripped surface. Third Party Coordinator notified crew about making sure soil piles from bore pits were stripped of topsoil before stockpiling.

Vegetation Condition

No trees were observed cleared.

Depth of Cover / Road Crossings / River Crossings / Riparian Condition at HDD Bore Sites

Trenching for pipeline installation not yet started. No active bore or road crossings was observed.

Deficiencies

None to report.

Actions Taken/To Be Taken

No additional actions scheduled.

Keitu Inspector: RJS

Reviewed by Project Lead:

Submitted: 26 April 2017



Report Photo #1 Soils clumps near ROW boundary at GPS Coordinates: 47.4675° N 102.743056° W

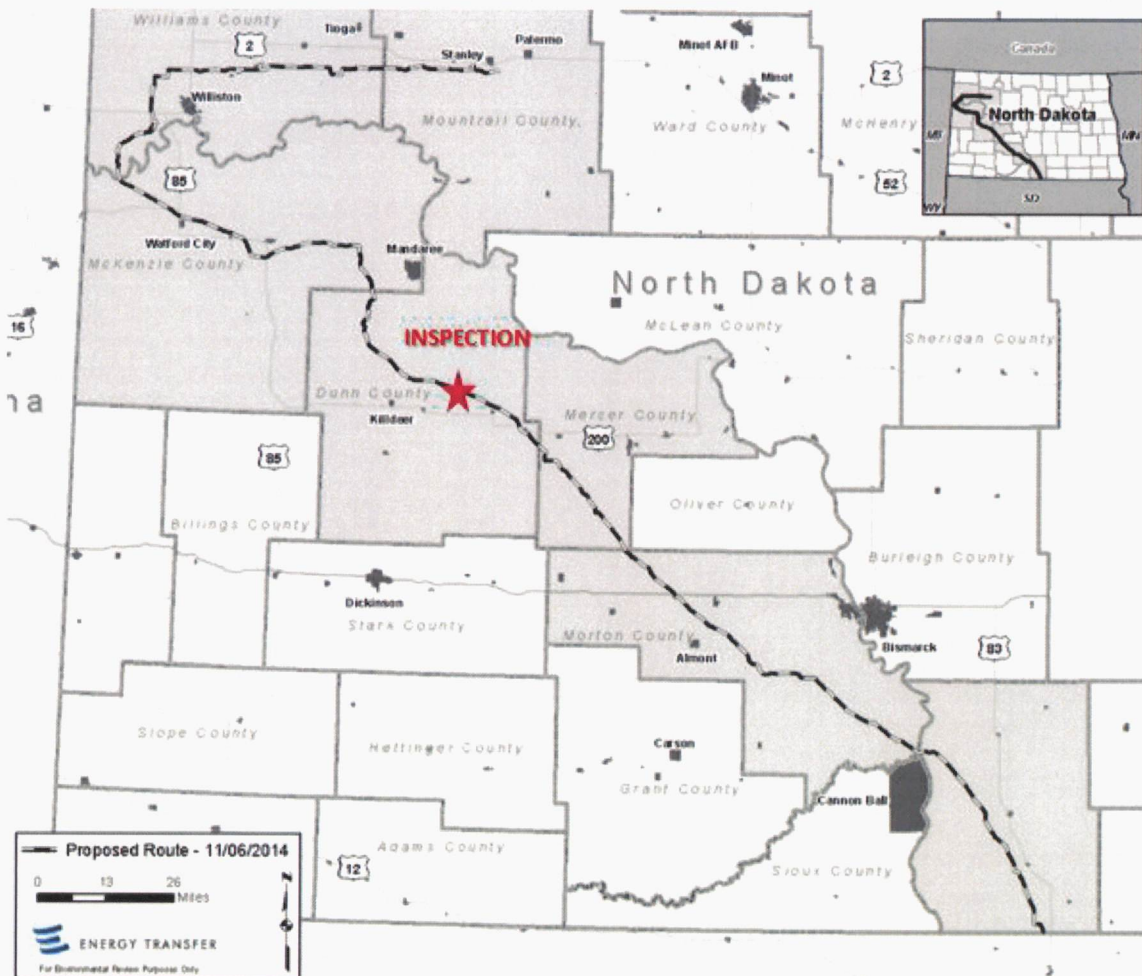


Report Photo #2 Subsoil piled on un-stripped ground at GPS Coordinates: 47.516944° N 102.835278° W



Project Map Inspection Location:

Spreads 7 & 8



Executive Summary:

A construction inspection was performed on Spread 9 in Mountrail County near Manitou, North Dakota. No deficiencies or actions needed were observed.

Site/Project Location: Spread 9

Date of Inspection: 7 June 2016

Observed Work / Weather Conditions

Weather was clear with unrestricted visibility. Wind 9mph from the north. Temperature ranged from 67 to 74°F.

Stringing pipe along the ROW was observed.

Topsoil Management / Condition / Erosion Control / Storm Water Management

Topsoil segregation and storage was completed and deemed sufficient. Storm water management practices were implemented in their respected areas along ROW.

Vegetation Condition

No trees were observed cleared.

Depth of Cover / Road Crossings / River Crossings / Riparian Condition at HDD Bore Sites

Trenching for pipeline installation not yet started. No bore or road crossing underway.

Deficiencies

None to report.

Actions Taken/To Be Taken

No additional actions scheduled.

Keitu Inspector: RJS

Reviewed by Project Lead:

Submitted: 26 April 2017



Report Photo #1 "HDD Environmental Area" at GPS Coordinates:

48.293333° N 102.7025° W



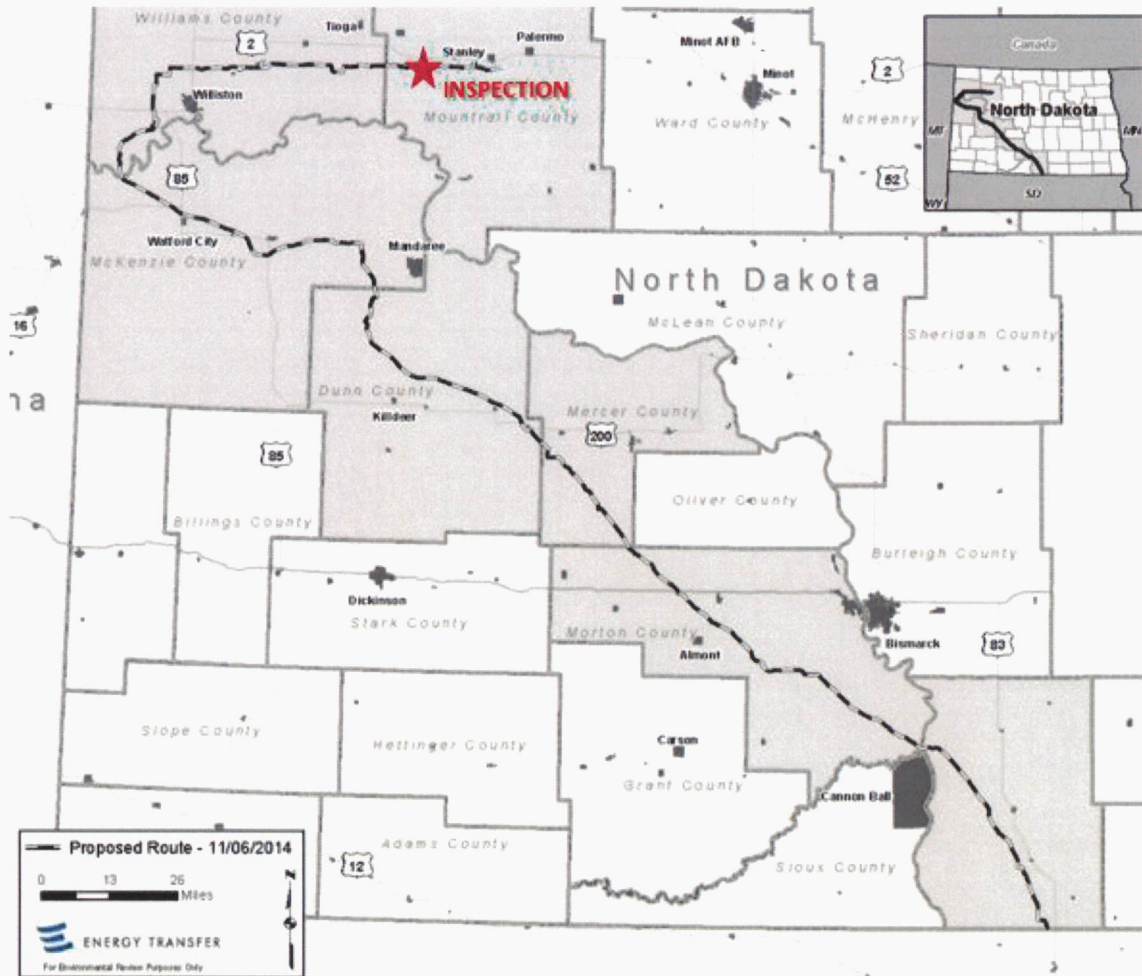
Report Photo #2 "Soils Segregation with Rye Grass" at GPS Coordinates:

48.288333°N 102.469444°W



Project Map Inspection Location:

Spread 9



Executive Summary:

A construction inspection was performed on Spread 6 in Emmons County near Cannonball, North Dakota. On-site inspector observed unsafe work practices.

Site/Project Location: Spread 6

Date of Inspection: 3 June 2016

Observed Work / Weather Conditions

Weather was partly cloudy with unrestricted visibility. Wind 12mph from the west. Temperature ranged from 73 to 77°F.

Stringing pipe along the ROW was observed.

Topsoil Management / Condition / Erosion Control / Storm Water Management

Topsoil segregation and storage was completed and deemed sufficient. Storm water management practices were implemented in their respected areas along ROW.

Vegetation Condition

No trees were cleared up to construction end upon site visit.

Depth of Cover / Road Crossings / River Crossings / Riparian Condition at HDD Bore Sites

Trenching for pipeline installation not yet started. No bore or road crossing underway.

Deficiencies

Spotter was seen guiding pipe while equipment operator was moving it. There was no tag line attached to the pipe and the spotter was at times between the heavy equipment and the suspended pipe.

Actions Taken/To Be Taken

A tag line is recommended to ensure pipe isn't accidentally released from the equipment can cause injury to nearby workers.

Keitu Inspector: EAS

Reviewed by Project Lead:

Submitted: 26 April 2017



Report Photo #1 Pipeline Stringing at GPS Coordinates:

46.4010272° N 100.4775575° W



Report Photo #2 Adequate Soil Separation at GPS Coordinates:

46.3908156° N 100.4650948° W



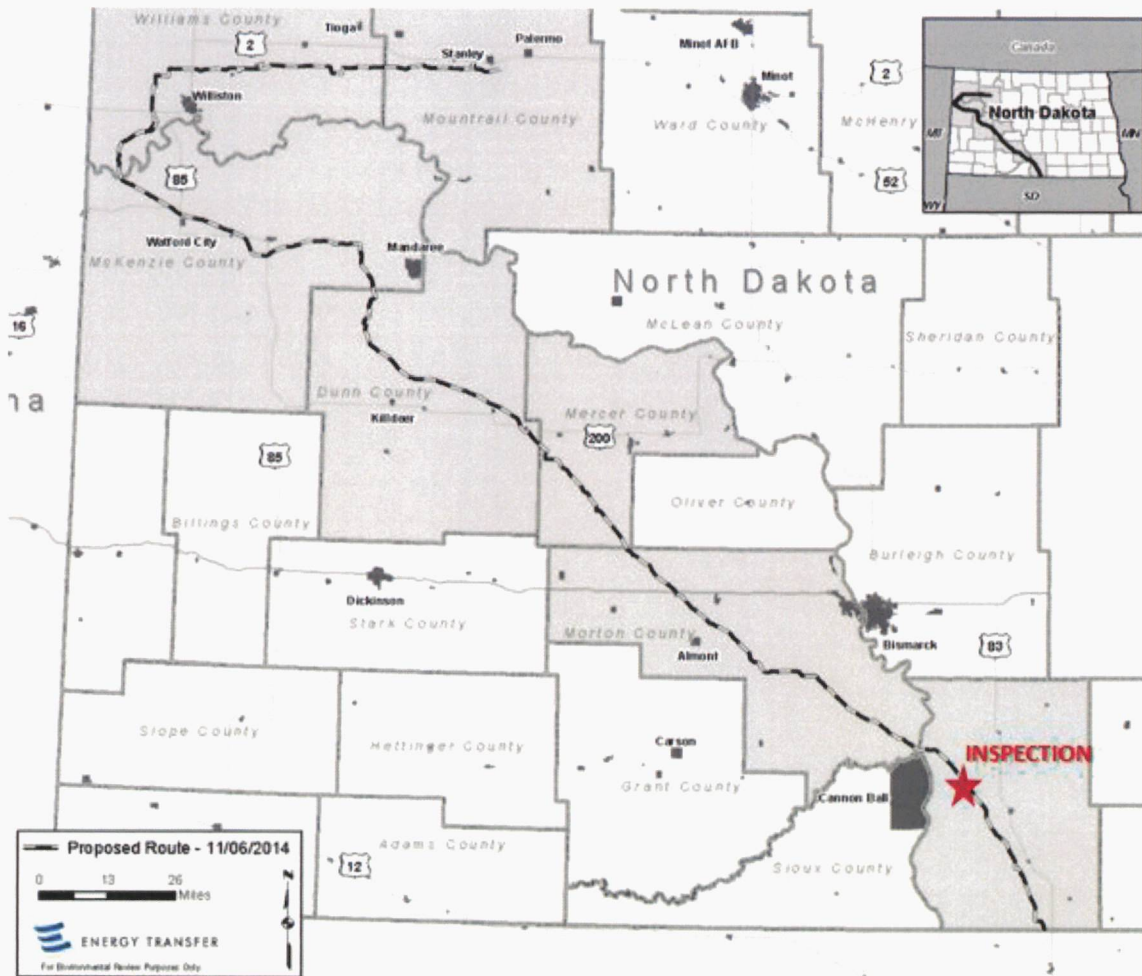
Report Photo #3 Spotter Holding Moving Pipe at GPS Coordinates:

46.378266°N 100.4501439°W



Project Map Inspection Location:

Spread 6



Executive Summary:

A construction inspection was performed on Spread 8 in Dunn County near Killdeer, North Dakota. Topsoil and subsoil segregation was observed as insufficient.

Site/Project Location: Spread 8 (M.P. 20.5 – M.P. 130.25)

Date of Inspection: 24 May 2016

Observed Work / Weather Conditions

Site visit from M.P. 129.5 to 130.25 occurred from 9:00am to 10:15am. Weather was partly cloudy with unrestricted visibility. Wind 7-11mph with gusts up to 13mph from the west. Temperature ranged from 68 to 72°F. Site visit from M.P. 20.5 to M.P. 23 occurred from 11:30am to 12:30pm. Weather was partly cloudy, winds 9-12mph with gusts to 16mph from the southwest. Temperature ranged from 71 to 73°F

Graded ground was completed from M.P. 20 to M.P. 23 with continued stripping headed east from M.P. 23 and north from M.P. 20. Other areas where a 2 foot buffer between topsoil and subsoil piles were also discussed, documented, and will have future re-segregation worked performed.

Topsoil Management / Condition / Erosion Control / Storm Water Management

Topsoil segregation and storage was completed and deemed sufficient from M.P. 129.5 to 130.25. Many areas between M.P. 20.5 to M.P. 23 had inadequate storage between topsoil and subsoil piles. One area appeared to have subsoil stacked on topsoil, although the topsoil could have been already stripped to one foot. Storm water management practices were implemented in their respected areas along R.O.W.

Vegetation Condition

No trees were observed cleared upon site visit.

Depth of Cover / Road Crossings / River Crossings / Riparian Condition at HDD Bore Sites

Trenching for pipeline installation not yet started. No bore or road crossing underway.

Deficiencies

Storage of topsoil from subsoil piles was deemed inadequate in many areas from M.P. 20.5 to M.P. 23. Further re-segregation will be coordinated. Topsoil around the cut looked to be down to the mandatory 12 inch depth, and construction workers will be advised.

Actions Taken/To Be Taken

During visit, Keitu inspector and 3rd party coordinator noticed and documented many areas from M.P. 20.5 to M.P. 23 that need further separation between topsoil and subsoil piles. Extra spotters for heavy equipment drivers should be discussed and a solution to the technical separation between topsoil and subsoil piles.

Keitu Inspector: RJS

Reviewed by Project Lead:

Submitted: 26 April 2017



Report Photo #1 Topsoil and Subsoil Piles Bordering at GPS Coordinates: 47.524167° N 102.848444° W



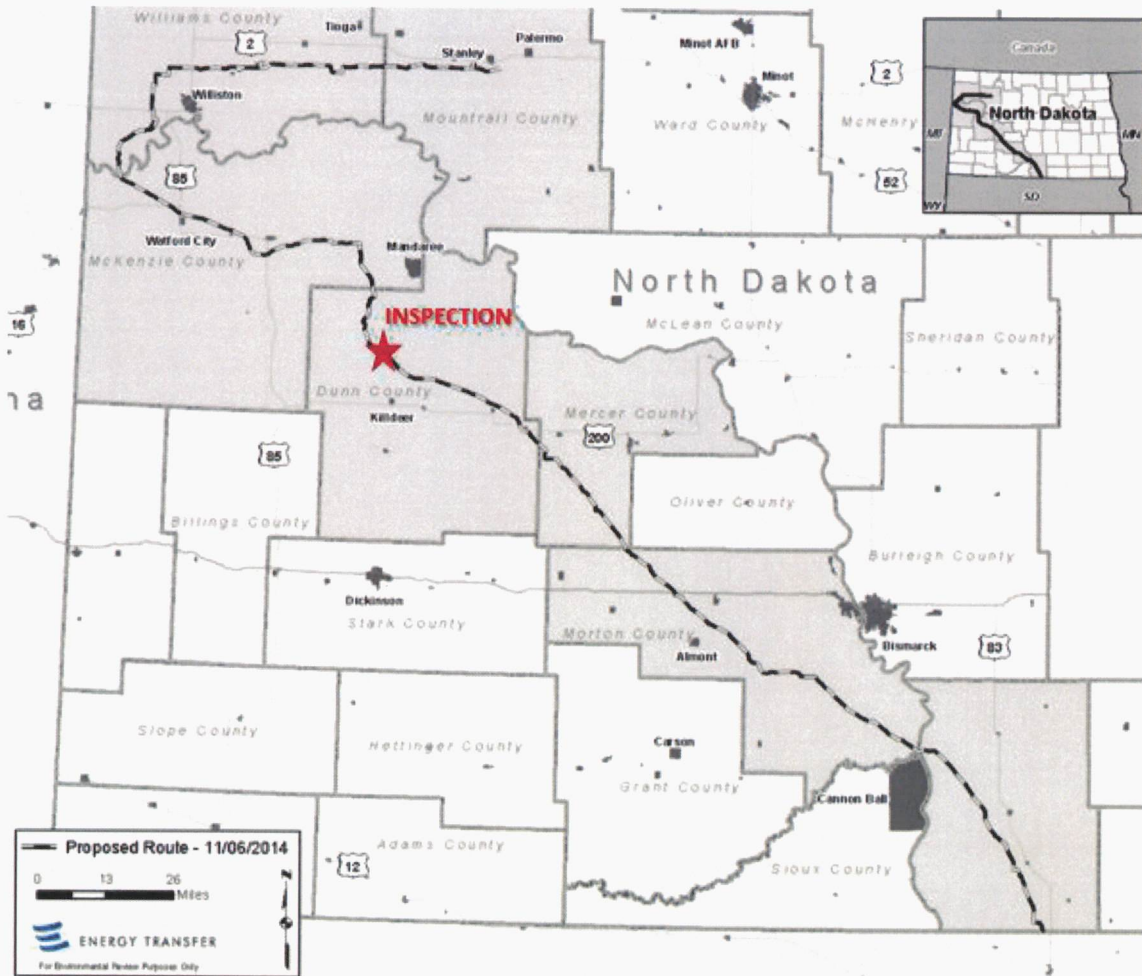
Report Photo #2 Adequate Separation/ROW at GPS Coordinates:

47.547778°N 102.862222°W



Project Map Inspection Location:

Spread 8



Executive Summary:

A construction inspection was performed on Spread 6 in Emmons County near Cannonball, North Dakota. Topsoil and subsoil segregation was observed as insufficient.

Site/Project Location: Spread 6 (M.P. 167.5 – M.P. 172.5)

Date of Inspection: 23 May 2016

Observed Work / Weather Conditions

Visit occurred between 4:30 pm to 7:45 pm. Temperature ranged from 72 to 76°F.

Topsoil segregation was completed up to 69th St. SW, with ground being stripped up to M.P. 172.5. piling was completed almost up to M.P. 1 from M.P. 0 upon site visit. Segregated soil piles were generally located on north and east side of R.O.W. There were areas where extra segregation was performed on the piles since previous week's inspection. Still some scattered areas where further segregating between topsoil and subsoil piles is needed. Newer graded areas of R.O.W. still has areas where subsoil pile is stacked on top of the topsoil pile. From approximately M.P. 172 to M.P. 172.5, R.O.W. stripped was a re-route still unapproved by the N.D. Public Service Commission.

Topsoil Management / Condition / Erosion Control / Storm Water Management

Topsoil segregation and storage was completed up to 69th St. SW upon visit. Topsoil segregation and storage from subsoil was deemed inadequate in some areas. Storm water management practices were implemented in their respected areas along R.O.W.

Vegetation Condition

No trees were cleared up to construction end upon site visit.

Depth of Cover / Road Crossings / River Crossings / Riparian Condition at HDD Bore Sites

Trenching for pipeline installation not yet started. No bore or road crossing underway.

Deficiencies

Storage of topsoil from subsoil piles was deemed inadequate in many areas upon visit. These areas were recorded by 3rd Party Coordinator for further re-segregating. An unapproved re-route was stripped and graded about a day before the re-route was to be reviewed by the North Dakota PSC.

Actions Taken/To Be Taken

During visit, Keitu inspector and 3rd party coordinator agreed construction crews should be keeping a 2 foot buffer between segregated topsoil and subsoil piles. Areas where extra re-segregating will occur were recorded by 3rd Party Coordinator. The soil stripping of an unapproved re-route was documented.

Keitu Inspector: RJS

Reviewed by Project Lead:

Submitted: 26 April 2017



Report Photo #1 Topsoil and Subsoil Piles Bordering at GPS Coordinates: 46.417778° N 100.499722° W

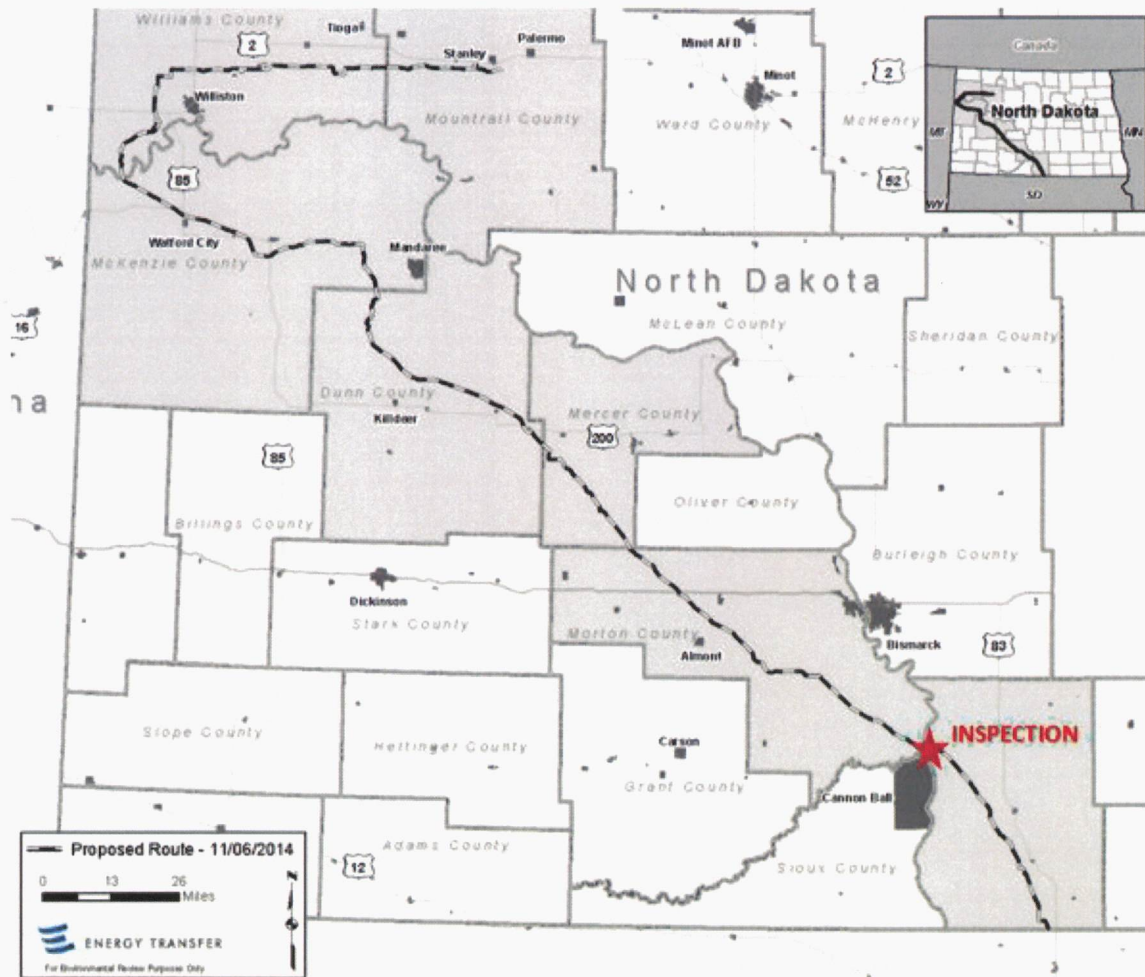


Report Photo #2 Un-Approved Re-Route Stripped at GPS Coordinates: 46.412778° N 100.491667° W



Project Map Inspection Location:

Spread 6



Executive Summary:

A construction inspection was performed on Spread 6 in Emmons County near Cannonball, North Dakota. Topsoil and subsoil segregation was observed as insufficient.

Site/Project Location: Spread 9 (M.P. 167 – M.P. 170)

Date of Inspection: 20 May 2016

Observed Work / Weather Conditions

Weather was clear with unrestricted visibility. Wind 18mph from the south. Temperature ranged from 50 to 71°F.

Topsoil stripping was observed with additional dirt work.

Topsoil Management / Condition / Erosion Control / Storm Water Management

Many areas of excessive subsoil mixed with topsoil, and subsoil piles were touching topsoil piles. Storm water management practices were being implemented upon site visit. R.O.W. conditions were good and dry.

Vegetation Condition

No trees were cleared up to construction end upon site visit.

Depth of Cover / Road Crossings / River Crossings / Riparian Condition at HDD Bore Sites

Trenching for pipeline installation not yet started. No bore or road crossing underway.

Deficiencies

Topsoil segregation from subsoil was not adequate. Excessive amounts of subsoil was mixed with topsoil. Subsoil piles were also touching the topsoil pile.

Actions Taken/To Be Taken

Upon visit, Keitu inspector noticed many areas of concern regarding topsoil and subsoil segregation. Keitu inspector met with 3rd party coordinator and advised to notify construction crews that there was insufficient segregation of topsoil and subsoil.

Keitu Inspector: HDS

Reviewed by Project Lead:

Submitted: 26 April 2017



Report Photo #1 Topsoil with Erosion Control at GPS Coordinates:

46.43740° N 100.56309° W



Report Photo #2 Topsoil and Subsoil Mix at GPS Coordinates:

46.52575° N 100.61727° W

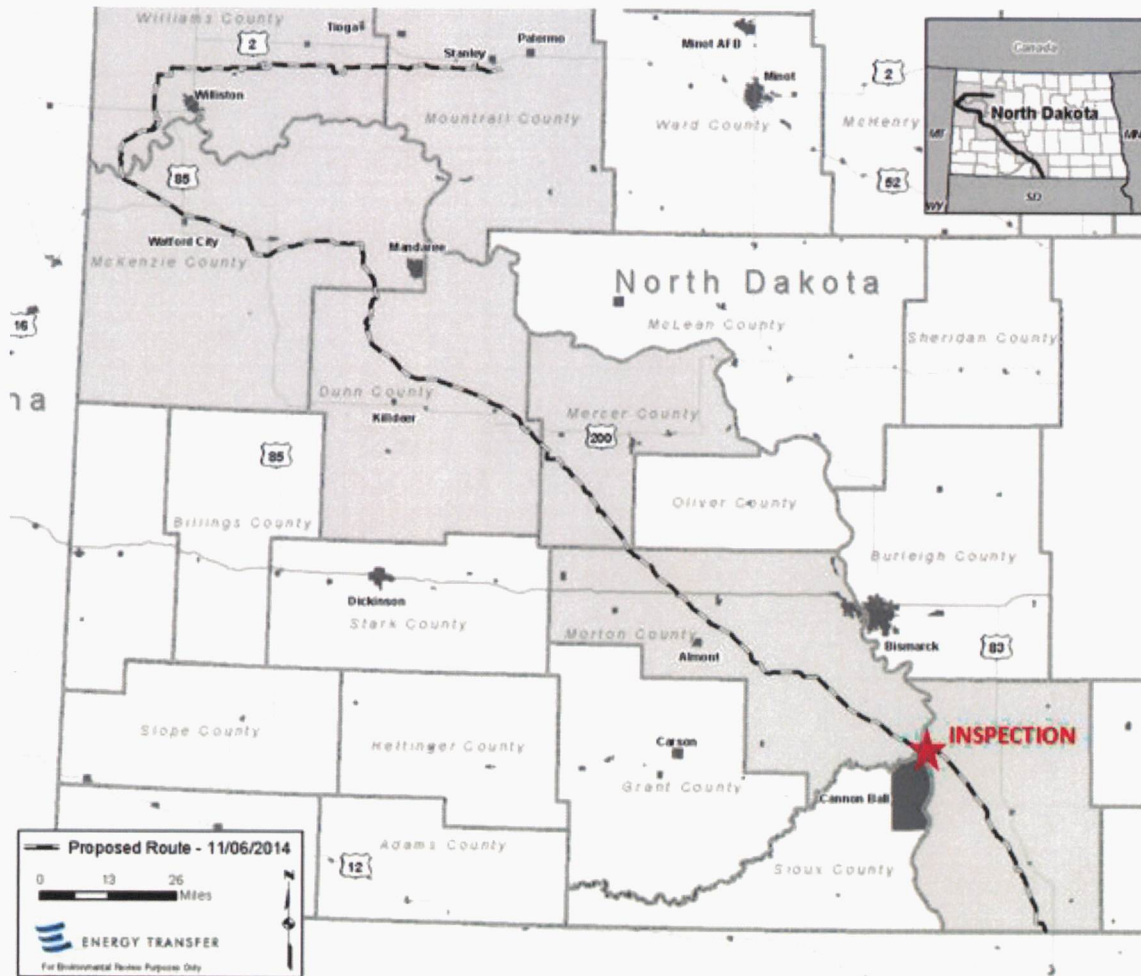


Report Photo #3 Top Soil and Sub Soil Touching at GPS Coordinates: 46.43599° N 100.55867° W



Project Map Inspection Location:

Spread 6



Executive Summary:

A construction inspection was performed on Spread 6 in Emmons County near Cannonball, North Dakota. Topsoil and subsoil segregation was observed as insufficient.

Site/Project Location: Spread 6 (M.P. 167.5 – M.P. 168.5)

Date of Inspection: 19 May 2016

Observed Work / Weather Conditions

Visit occurred between 3:15 pm to 4:15 pm. Weather was partly cloudy with unrestricted visibility. Wind 20-25mph gusting to 30mph from the south. Temperature ranged from 76 to 80°F.

Topsoil segregation piling was completed from M.P. 167.5 to Highway 1804 and east approximately 0.5 miles. Topsoil and subsoil piping was located on north side of R.O.W. Area where the HDD will be located was also stripped of topsoil. Mats were installed over drainage pathways. Goal posts were installed under power lines. Rocks were laid over plastic tarps at the R.O.W. entrances from Highway 1804. Topsoil stripping was being performed up to about M.P. 168.5

Topsoil Management / Condition / Erosion Control / Storm Water Management

Topsoil and subsoil segregation and storage was completed up to about M.P. 168. Many areas of excessive subsoil mixed with topsoil, and subsoil piles were touching topsoil piles. Storm water management practices were being implemented upon site visit. R.O.W. conditions were good and dry.

Vegetation Condition

No trees were cleared up to construction end upon site visit.

Depth of Cover / Road Crossings / River Crossings / Riparian Condition at HDD Bore Sites

Trenching for pipeline installation not yet started. No bore or road crossing underway.

Deficiencies

Topsoil segregation from subsoil was not adequate. Excessive amounts of subsoil was mixed with topsoil. Subsoil piles were also touching the topsoil pile.

Actions Taken/To Be Taken

Upon visit, Keitu inspector noticed many areas of concern regarding topsoil and subsoil segregation. Keitu inspector met with 3rd party coordinator and tried to explain these issues. Talks between parties did not go anywhere and no action was taken upon initial visit. Keitu inspector notified the project leader, and another field visit was deemed required immediately to address and correct these issues.

Keitu Inspector: RJS

Reviewed by Project Lead:

Submitted: 26 April 2017



Report Photo #1 "Subsoil Mixing with Topsoil" at GPS Coordinates:

46.44° N 100.571944° W



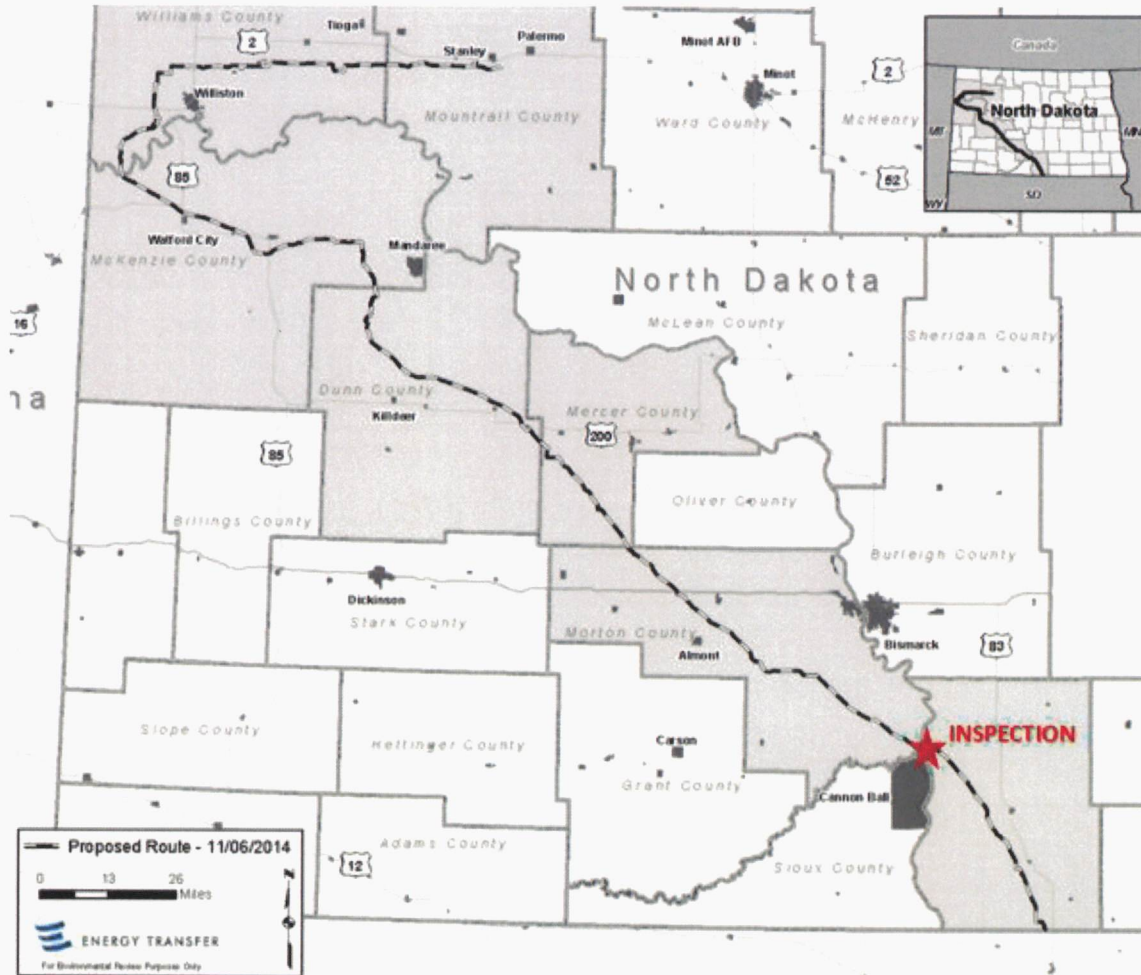
Report Photo #2 "Subsoil stacked against topsoil" at GPS Coordinates:

46.436111°N 100.558889° W



Project Map Inspection Location:

Spread 6



Executive Summary:

A construction inspection was performed on Spread 9 in Mountrail County, North Dakota. Inspected areas were in good condition and care has been taken to minimize impacts. No deficiencies noted.

Site/Project Location: Spread 9

Date of Inspection: 17 May 2016

Observed Work / Weather Conditions

Weather was clear skies. No precipitation during visit. S wind at 5 mph. Temperature was 64-68° F.

Topsoil Management / Condition / Erosion Control / Storm Water Management

Topsoil and subsoil segregation adequate throughout the area. No evidence of topsoil and subsoil mixing or improper replacement was observed. Erosion controls had been installed. Erosion control measures all appeared to be in good repair and working properly.

Vegetation Condition

Vegetation removal and topsoil stripping were underway.

Depth of Cover / Road Crossings / River Crossings / Riparian Condition at HDD Bore Sites

No bore or road crossing construction activity was observed at this site. Depth of cover was maintained.

Deficiencies

None to report.

Actions Taken/To Be Taken

No additional actions scheduled.

Keitu Inspector: RJS

Reviewed by Project Lead:

Submitted: 26 April 2017



Report Photo #1 Topsoil Pile Facing North at GPS Coordinates:

48.298333°N 102.459167° W

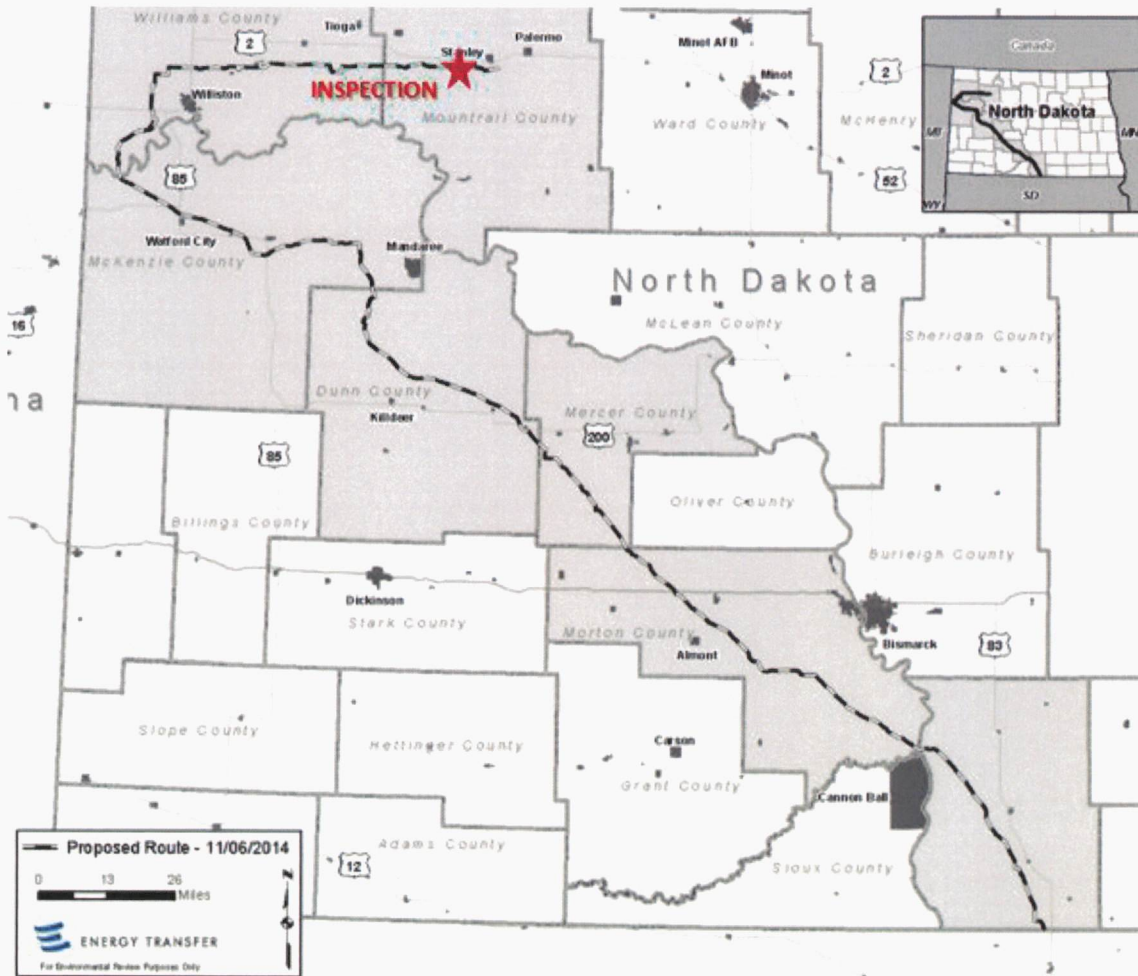


Report Photo #2 Soil Stripping End. BMPs Installed at GPS Coordinates: 48.291944°N 102.461389°W



Project Map Inspection Location:

Spread 9



Construction Inspection Report

Dakota Access Pipeline Project

Dakota Access, LLC

ND PSC Case No. PU-14-842

Prepared by:

Keitu Engineers & Consultants, Inc.

April 2017

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Executive Summary

The State of North Dakota, acting through its North Dakota Public Service Commission (PSC), Division of Public Utilities, has contracted Keitu Engineers & Consultants, Inc. (Keitu) to perform consulting services for topsoil removal, construction, as-built, and reclamation and revegetation inspections. This report represents the findings of the construction inspections performed almost weekly from May 2016 until February of 2017.

The Dakota Access Pipeline Project (Project) is located in Dunn, Emmons, McKenzie, Mercer, Morton, Mountrail, and Williams Counties in the State of North Dakota. Construction for the Project began in January 2016 with the anticipated completion in 2017. The purpose of the construction inspection was to ensure the Project was being constructed in compliance with the siting laws, rules, and the applicable PSC Commission Findings of Fact, Conclusions of Law, and Order (Order) for the Project. Prior to the construction inspection, Keitu reviewed all Project documents to identify any and all aspects requiring site verification. The construction inspection portion of the Project was visually inspected throughout the seven months by Keitu staff.

Overall, the project was generally well maintained and appeared in good condition. Monthly progress reports were not directly provided to Keitu after October 2016 as the PSC's third-party inspector, as instructed. Of more significance were exceptions are limited areas within the approximately 350-mile long project related to soil segregation, tree and shrub removal, North Dakota State Historic Preservation Office (SHPO) requirements for cultural resources, reroutes without proper notification, BMP maintenance, ROW housekeeping, and proper secondary containment of a fuel tank did not meet the provisions of the Public Service Commissions order. All deficiencies have been previously reported to and docketed by the PSC's staff.

Introduction

The Project is currently under construction at the time of this report. The Project is operated by DAPL-ETCO Operations Management, LLC. The new crude oil pipeline will have the capacity to transport approximately 570,000 barrels per day (bpd) from points of origin in the Bakken/Three Forks play in North Dakota through portions of South Dakota and Iowa to a terminus in Patoka, Illinois. The Project is under the jurisdiction of the PSC, which issued its Findings of Fact, Conclusions of Law and Order on Case No. PU-14-842 on January 20, 2016, granting a Certificate of Site Compatibility for Corridor Compatibility No. 179 and Route Permit No. 191. Additionally, a Supplemental Findings of Fact, Conclusions of Law and Order on May 24, 2016 and a Second Supplemental Findings of Fact, Conclusions of Law and Order on June 22, 2016 was issued by the PSC.

Purpose and Scope of Inspection

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorizes the PSC to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and welfare of the citizens of North Dakota. Construction inspections ensure the Project is constructed in compliance with siting laws, rules, and the applicable Order.

The PSC retained Keitu to complete construction inspections and post-construction inspections of the Project. The inspection process included a review of the Application for a Certificate of Site Compatibility, Order, and other applicable documents to determine Project-specific siting and construction requirements; a site visit and inspection of facilities; documentation of compliance; and a report summarizing findings.

Due to the extensive area of impact as well as the extended construction schedule, the scope of work defined by the Commission included a series of construction inspections, typically about once per week, during the height of the construction activity. Inspection specific reports were prepared and submitted shortly after each visit.

This report includes, but is not limited to, site visit observations, documentation of compliance deficiencies, and a summary of issues, if any, that should be addressed for the Project to be considered in full compliance.

Methods

Keitu reviewed North Dakota siting laws and rules, the Application for a Certificate of Site Compatibility, and the Order for the Project to identify what Project-specific documentation was required for compliance. Keitu staff conducted onsite inspections between the months of January 2016 and February 2017. Digital photographs were taken showing typical Project infrastructure and documenting problem areas, if any, and are located in Appendix A.

General Project Information

Project Owner: DAPL-ETCO Operations Management, LLC

The Project is located in North Dakota, South Dakota, Iowa, and Illinois. In North Dakota, the Project begins at Stanley and crosses into the South Dakota near Hague, North Dakota. At the time of the field visits, the project was under construction. By the February construction inspection, most of the Project was constructed and pipeline installed except for the portion that crosses underneath the Missouri River at Lake Oahe. Keitu remained on standby for additional construction inspections until confirmation was received that the pipeline was complete and operations had begun.

Site Visit Observations

On average once a week Keitu staff was onsite. Weekly inspections along the pipeline were conducted with pre-start and inspection during construction at each associated terminal. Overall construction activities typical with pipeline installation and associated facilities were observed.

There were no significant erosion issues observed. Paved roads where the right-of-way (ROW) crosses were observed for any sediment tracking. No sediment was observed being tracked onto roadways from ROW construction activities during Keitu's inspections. Inspection completed on September 26, 2016 near MP 125 found silt fence in disrepair (Docket #216) but within the allowed timeframe for repair. No other deficiencies related to field SWPPP issues were found.

However, the Storm Water Pollution Prevention Plan commonly known as a "SWPPP" was authored by an environmental consultant, Wood Group Mustang, per PSC website (Docket #1). The Project's Construction Manager is responsible for the implementation of the SWPPP, per Application for Corridor Compatibility and Route Permit. The SWPPP inspections are to occur until construction activity ceases and a uniform perennial vegetative cover of at least 70% density of pre-construction cover has been established. The SWPPP states inspections are to be completed at "least weekly in areas of active construction or equipment operation and at least once every 2 weeks in areas with no construction." Inspections are to be done "within 24 hours of the end of a storm event that is 0.5 inch of rainfall or greater." The Authorization to Discharge Under the North Dakota Pollution Discharge System requires a self monitoring and reporting inspection is to be conducted "Within 24 hours after any storm event greater than 0.25 inches rain per 24-hour period". The SWPPP does not appear to comply with North Dakota SWPPP requirements as filed on December 22, 2014. This regulation remains within the jurisdiction of the North Dakota Department of Health – Environmental Section.

Wood matting was also observed to be laid down in sensitive areas. The Project operated under the premise that a preconstruction notification (PCN) was not required for coverage under US Army Corps of Engineers Nationwide-12 Permit (NW-12). USACE clarified at their March 22, 2017 workshop that they subsequently grandfathered use of mats activities prior to December 2016 under that permit, and a specific clearance or permit under NW-3 or NW-33 would be required in the future.

One instance of poor containment observed. During an inspection conducted on August 4, 2016, a secondary containment for a fuel trailer was not adequate. The fuel tank, located at a worksite

trailer, had been at the site for four days protected only by plastic sheeting beneath the tank. In the Project's Spill Prevention, Containment, and Countermeasures Plan it is stated that "Diesel fuel, gasoline, and lubricating oils shall be stored in bermed and lined containment structures or other approved fabricated containment reservoirs." (Docket #1) The Project personnel on site understood the secondary containment was not adequate and communicated with Keitu staff that the issue would be corrected within two days (Docket #205).

An inspection on October 21, 2016, Keitu staff was made aware of an unanticipated discovery made by construction crews on the Project. On-site Environmental Inspector did communicate with the Keitu Inspector that Project archaeologists are working with the SHPO (Docket #225). The ROW was rerouted around the culturally significant area with active equipment in the vicinity but Keitu did not see or was introduced to any archaeologists monitoring the area. The SHPO recommends archaeologists monitor cultural resource sites near the ROW.

On October 21, 2016, one reroute was found without proper notification of the PSC. The reroute was conducted to avoid an unanticipated find of cultural resources (Docket #225). At the time of the field inspection no public filings were found about the reroute and subsequent follow-up has been made by the PSC (Docket #228).

An inspection conducted on August 24, 2016, Keitu staff found tree removal extended significantly beyond 85 feet approved in the revised PSC Order. The tree removal area was located near MP 1 and at the smallest width of trees removal was approximately 127 feet wide measured by Keitu staff. Other portions of the ROW with trees removed were found even wider than 127 feet (Docket #212). Further desktop investigation one tree and shrub removal was done by Keitu and at the present time 83 different areas were identified as being cleared of trees in excess of 85 feet. The desktop findings were filed with the PSC via email on January 3, 2017 (Docket #258). Not included in this list are dozens of sites where trees and or shrubs were cleared in excess of 85 feet wide but not extending completely ROW boundary to ROW boundary.


The most common deficiency found throughout the construction inspections was inadequate soil segregation. Typical issues observed were contact between the subsoil and topsoil piles and subsoil stored above unstripped vegetation and/or topsoil in workspace. Communication was made with on-site personnel over several visits on soil piles that needed segregation. On September 15, 2016, Keitu staff observed construction equipment driving over topsoil and subsoil piles causing the two to mix (Docket #215). Docket #'s 205, 213, 215, 216, 218, 222, and 327 refer to soil deficiencies found during Keitu's construction inspections.

Conclusions

Overall, the project was well maintained and appeared in good condition with the exception of areas that dealt with soil segregation, tree and shrub removal, and improper notification of a reroute. Project deficiencies found during the construction inspections will be given follow through during the as-built and revegetation and reclamation inspections.

Certification

I declare that I have the specific qualifications based on education, training, and experience to assess a property of this nature; I believe to the best of my professional knowledge the contents of this report accurately represents the condition of this project to-date.



Kathleen M. Spilman, P.E.
Project Manager

Appendix A. General Project Photos



Photo 1 –Inadequate secondary containment at 47.6087°N -102.8765°W



Photo 2 – Tree removal greater than 85 feet at 47.7863°N -102.9055°W



Photo 3 -Subsoil cast on topsoil likely during flow-breaker install at 47.2539°N -102.1294°W.



Photo 4 -Topsoil and subsoil piles mixed by equipment traffic at 46.99060°N -101.79373°W.

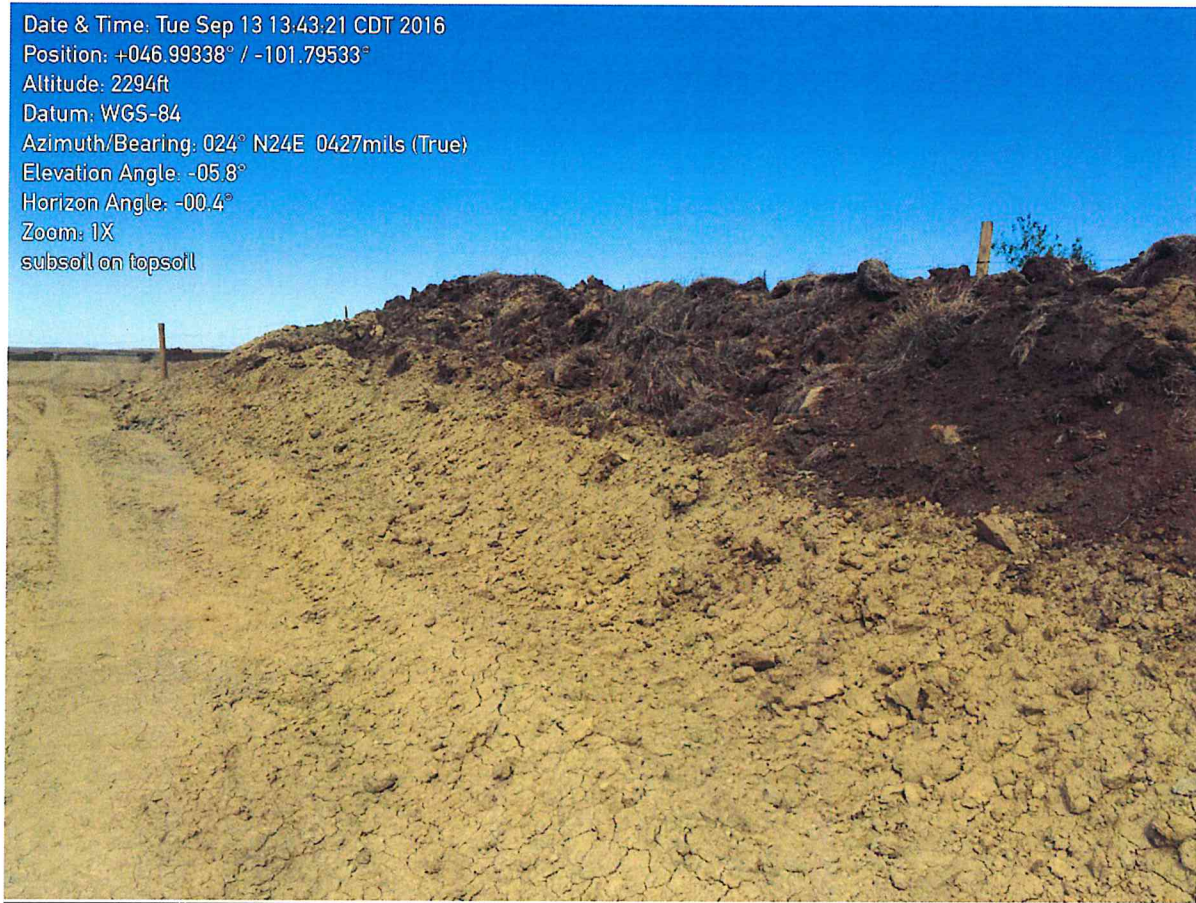


Photo 5 – Subsoil plowed onto topsoil pile at 46.99338°N -101.79533°W.

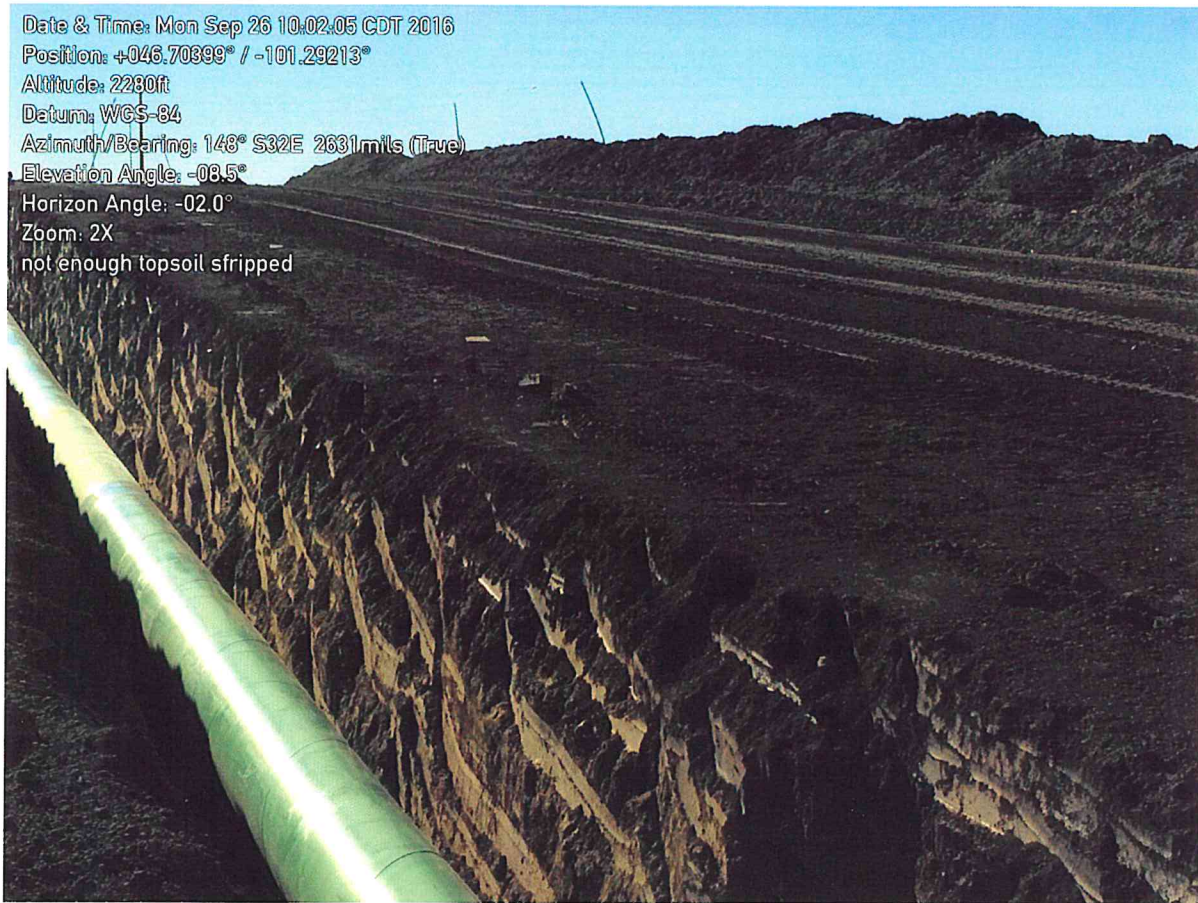
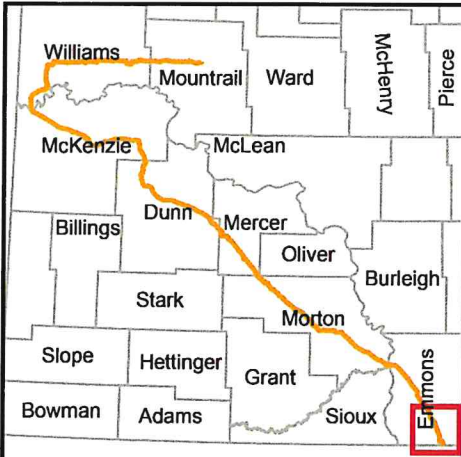
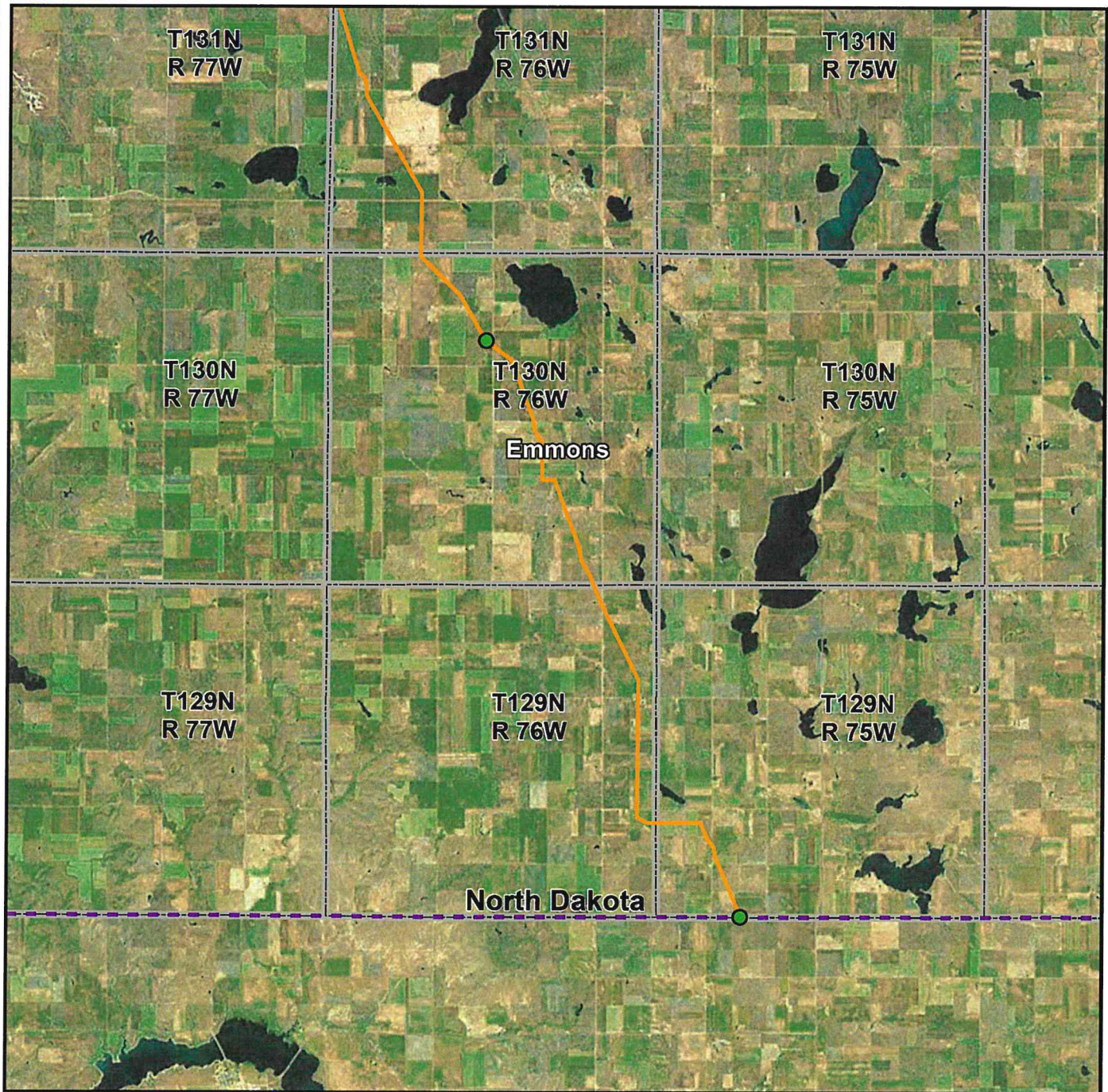


Photo 6 – Topsoil not stripped to required depth at 46.70399°N -101.29213°W.





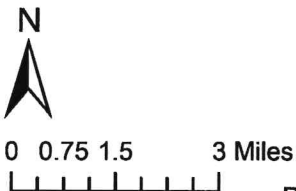
Photo 6 -Trees and shrubs removed at Johnson's Corner Terminal at 47.802597°N -102.928564°W.

Appendix B. Map - Points of Observation



Legend

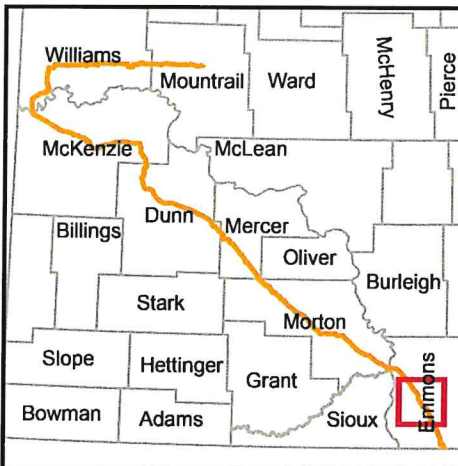
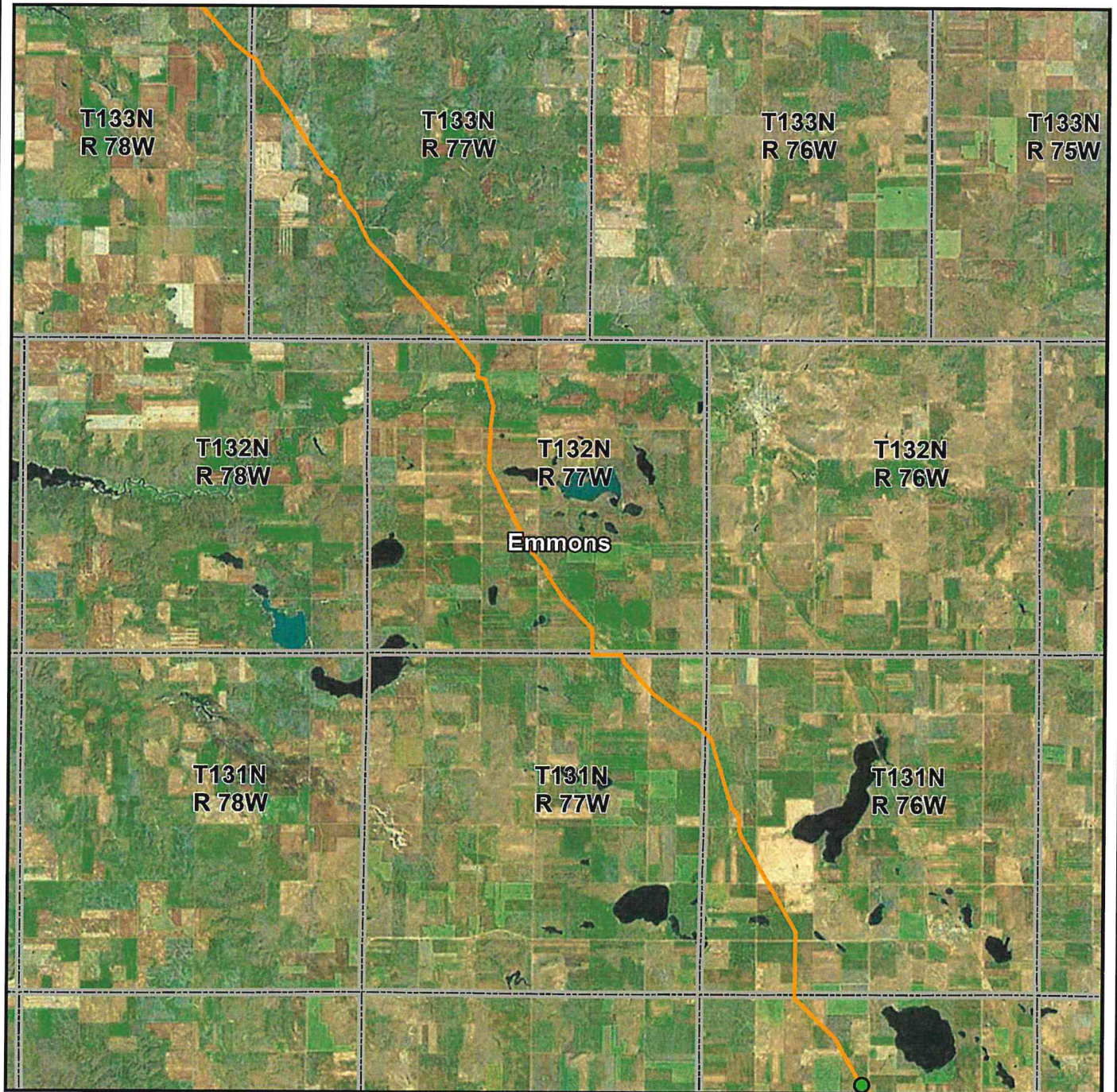
-  Dakota Access Pipeline
-  Township Boundary





**Appendix B.
Maps - Points of Observation**

**Construction Inspection
PU-14-842
Dakota Access Pipeline Project**






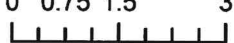
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-  Dakota Access Pipeline
-  Township Boundary

N



0 0.75 1.5 3 Miles



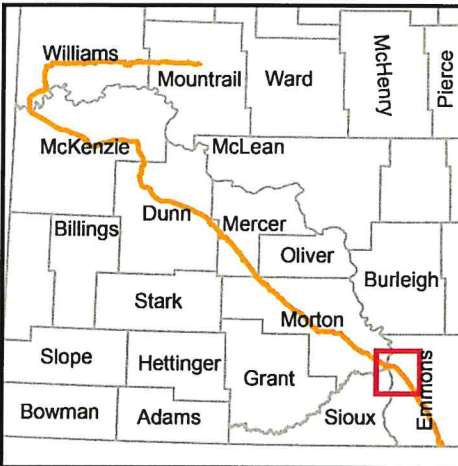
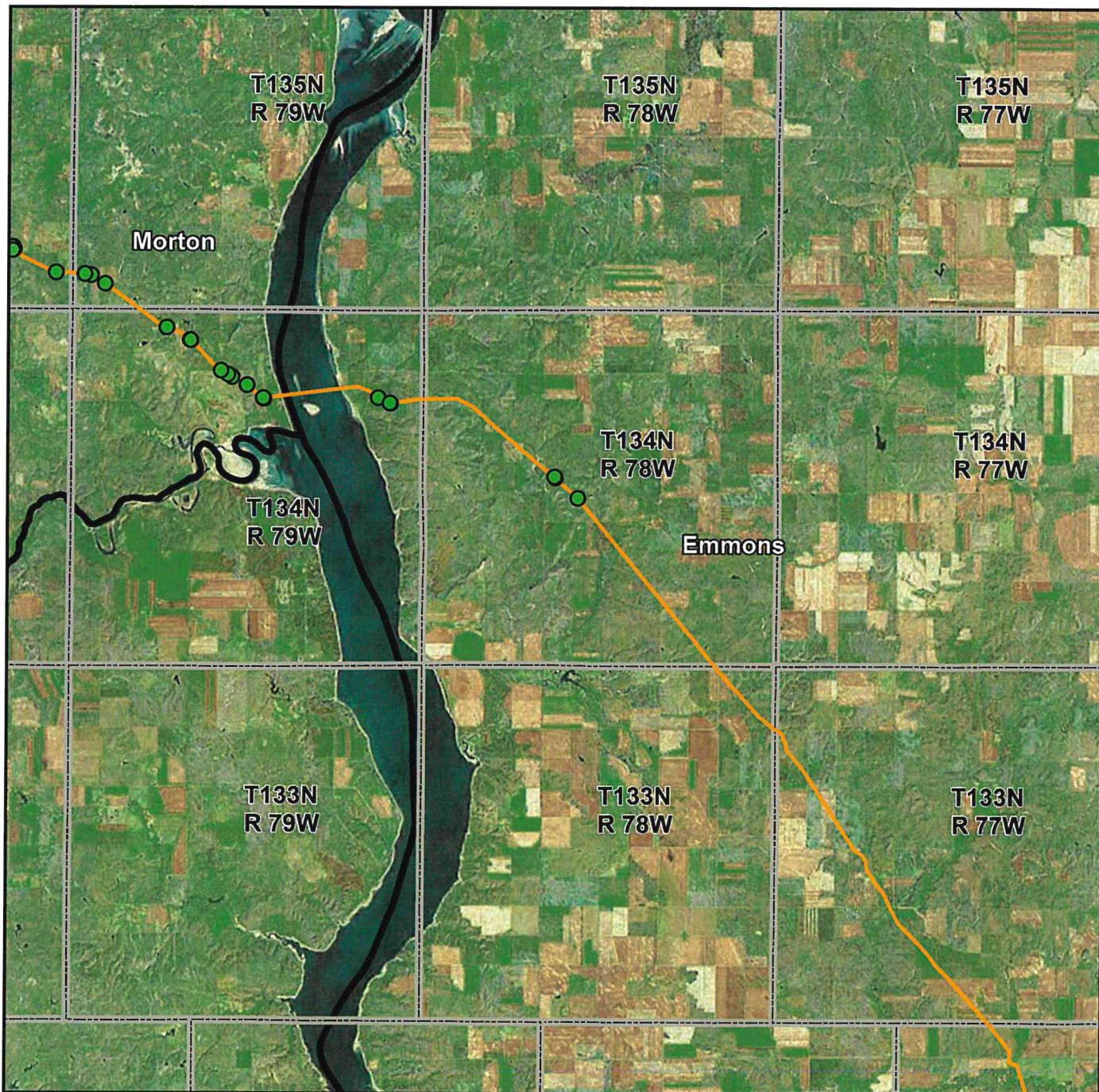
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Construction Inspection
 PU-14-842
Dakota Access Pipeline Project

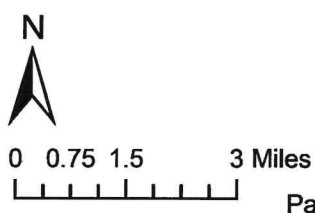
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Legend

-  Dakota Access Pipeline
-  Township Boundary

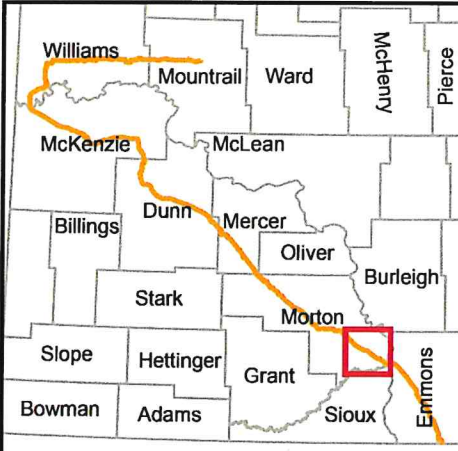
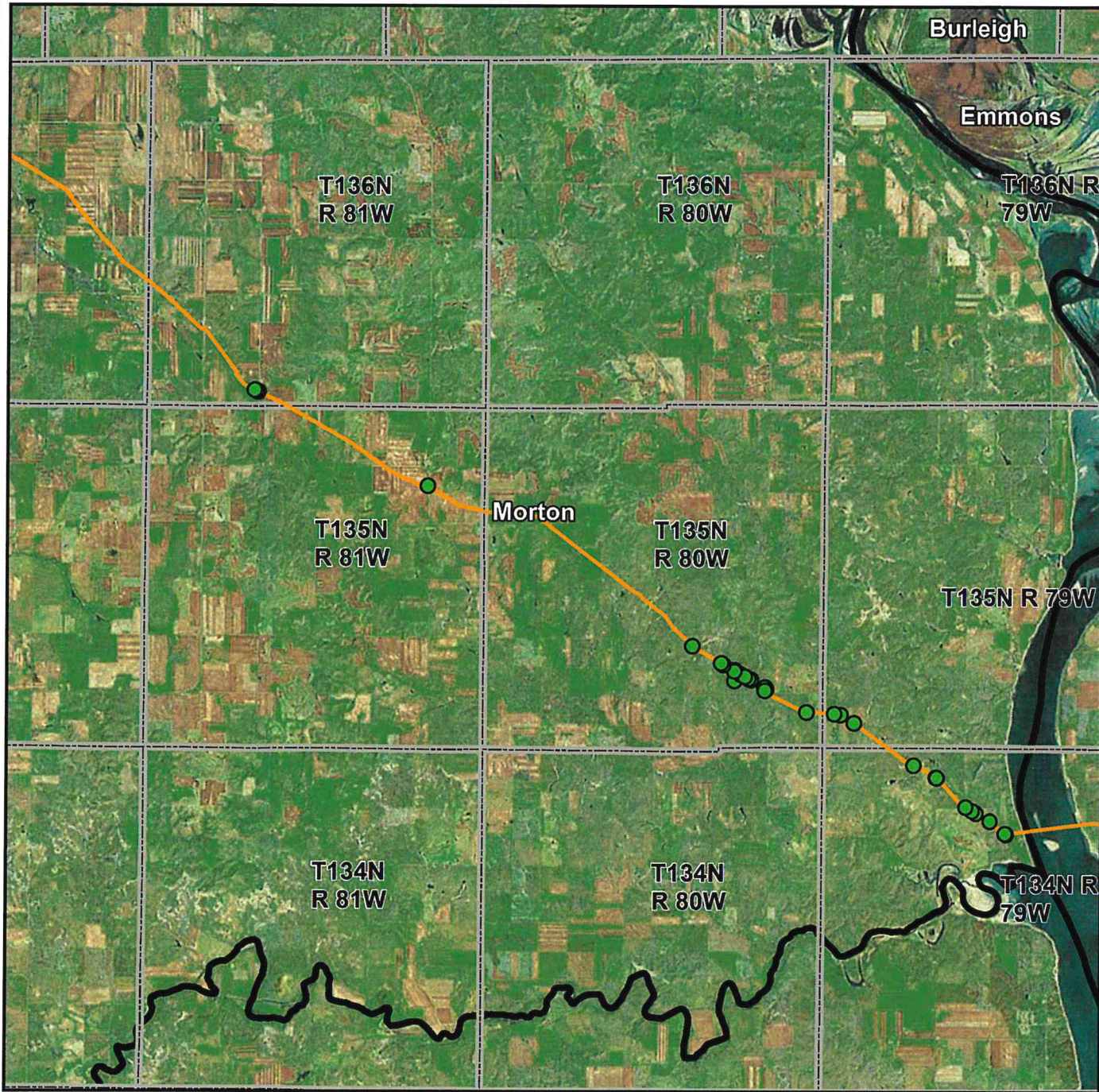


**Appendix B.
Maps - Points of Observation**


**Construction Inspection
PU-14-842
Dakota Access Pipeline Project**

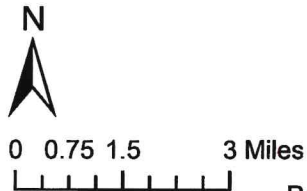


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Legend

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-  Township Boundary

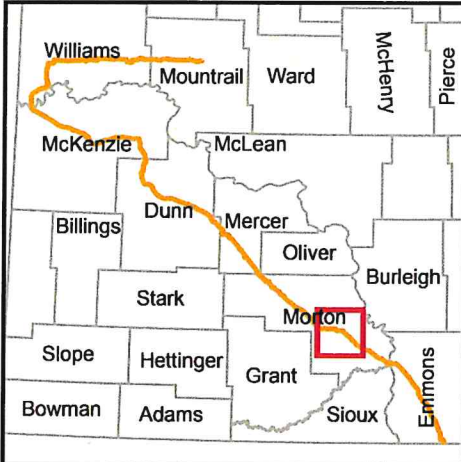
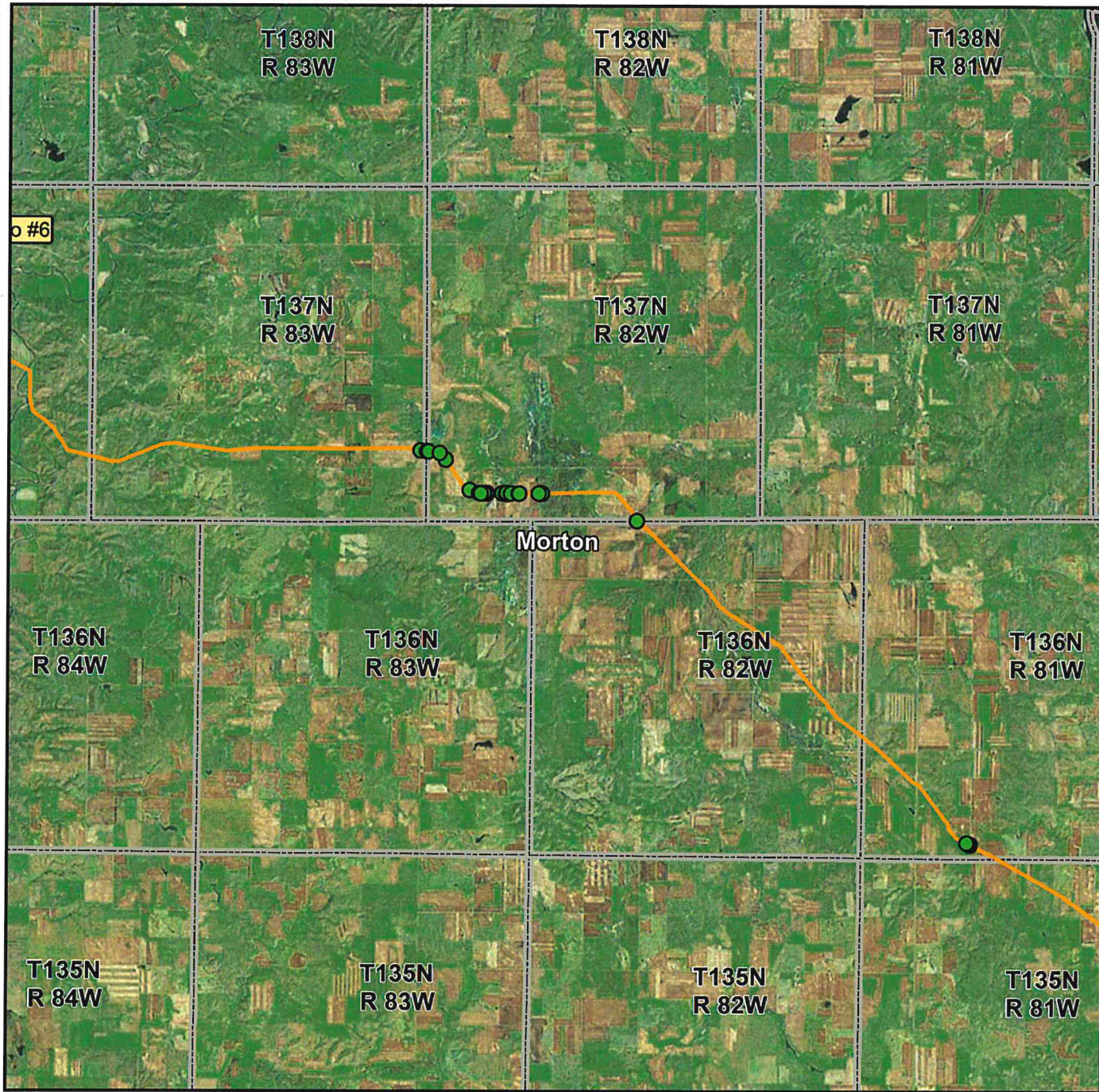


**Appendix B.
Maps - Points of Observation**

**Construction Inspection
PU-14-842
Dakota Access Pipeline Project**



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Legend

- Dakota Access Pipeline
- Township Boundary

N

0 0.75 1.5 3 Miles

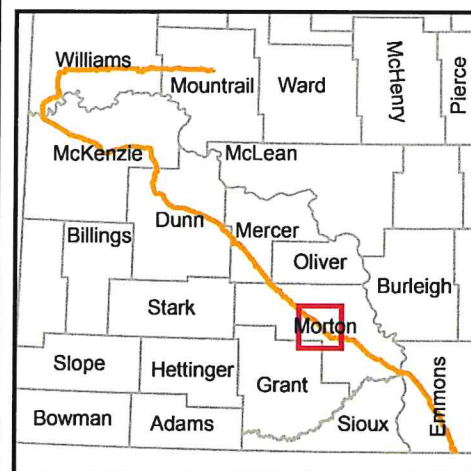
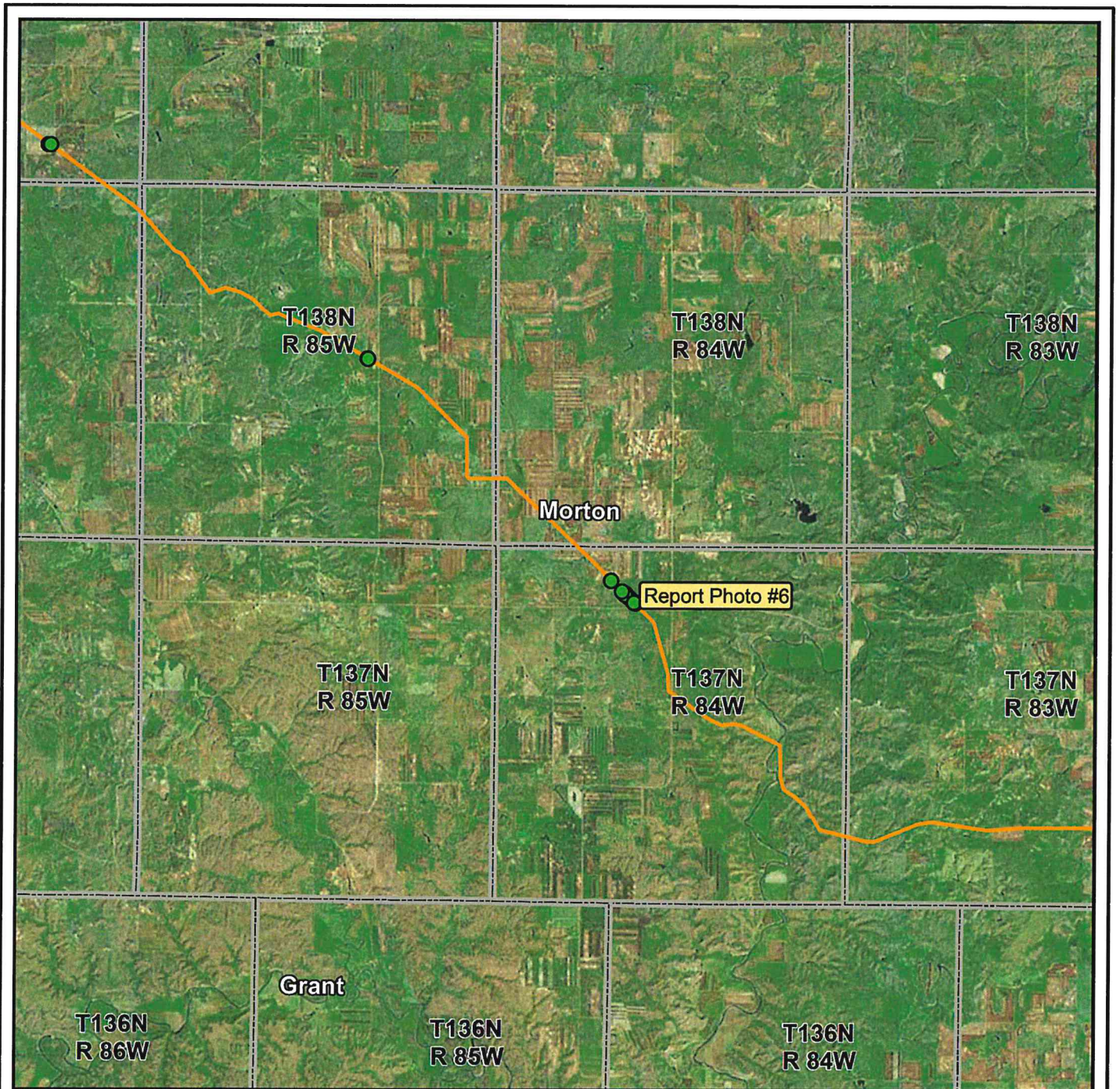
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Legend

- Dakota Access Pipeline
- Township Boundary

N

0 0.75 1.5 3 Miles

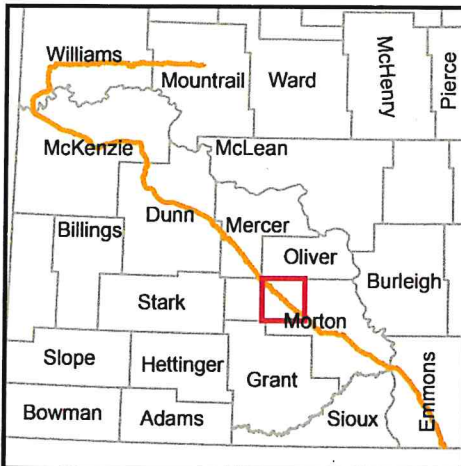
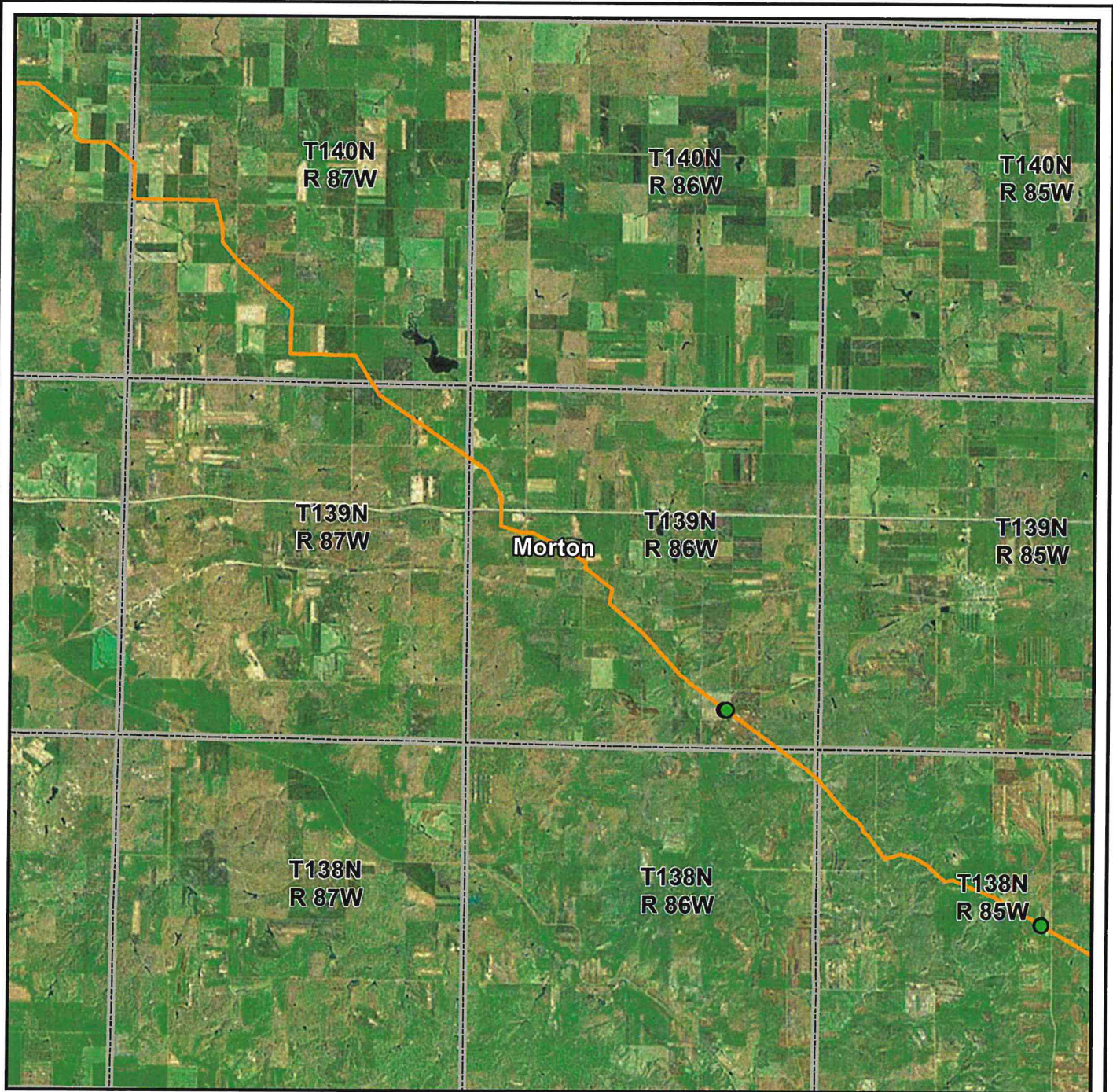
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Legend

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-  Township Boundary

N




0 0.75 1.5 3 Miles

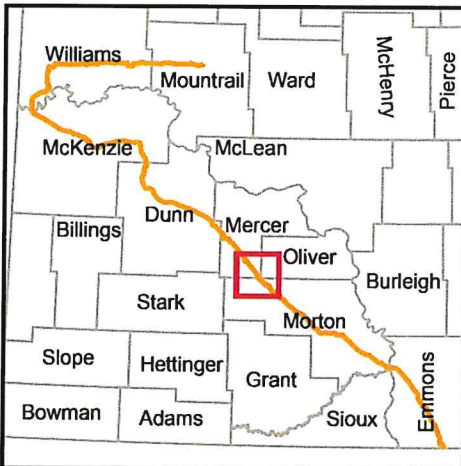
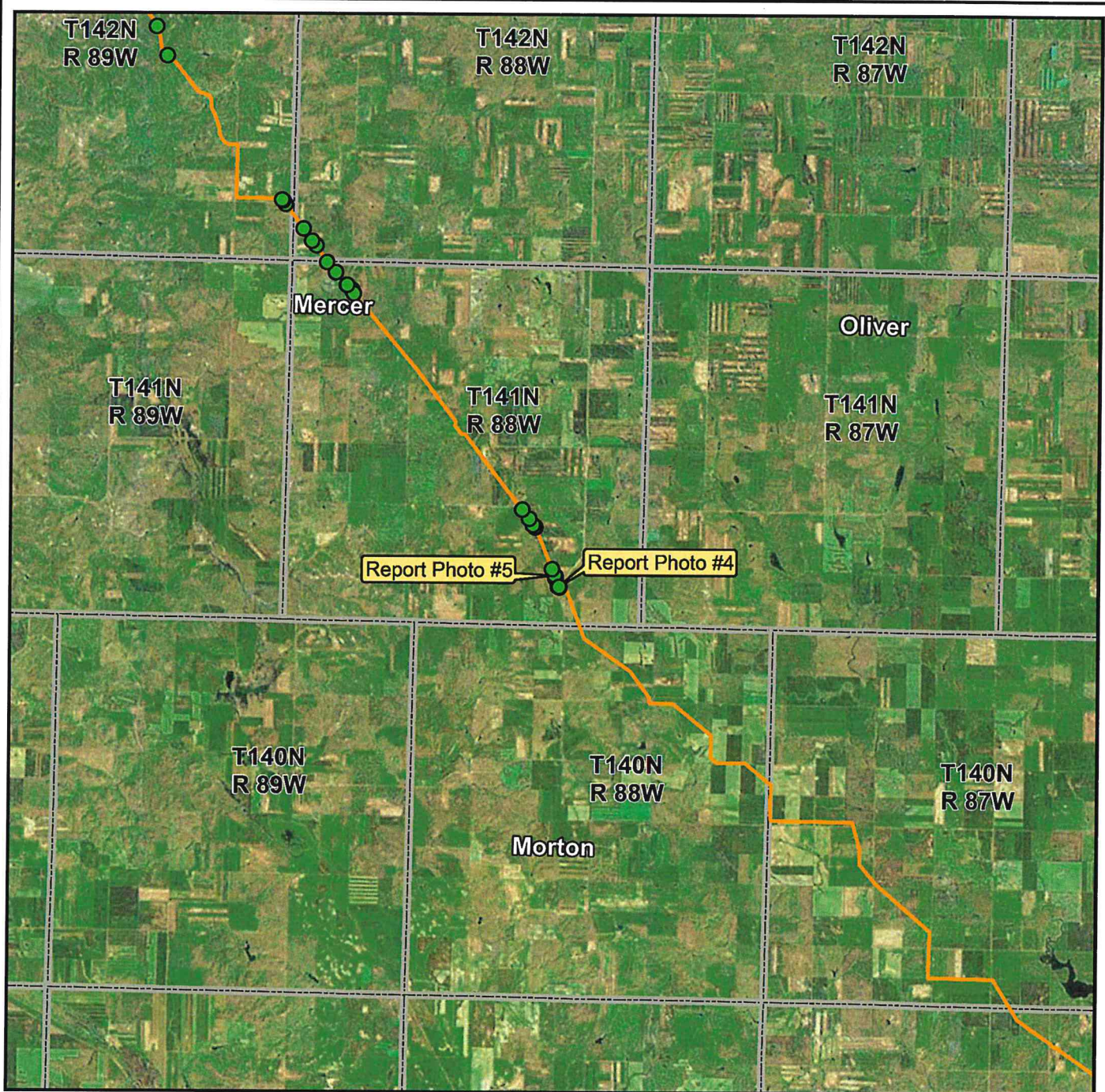
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Construction Inspection
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Legend

-  Dakota Access Pipeline
-  Township Boundary


N

0 0.75 1.5 3 Miles

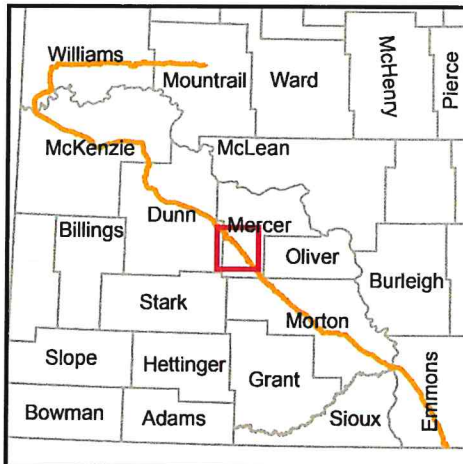
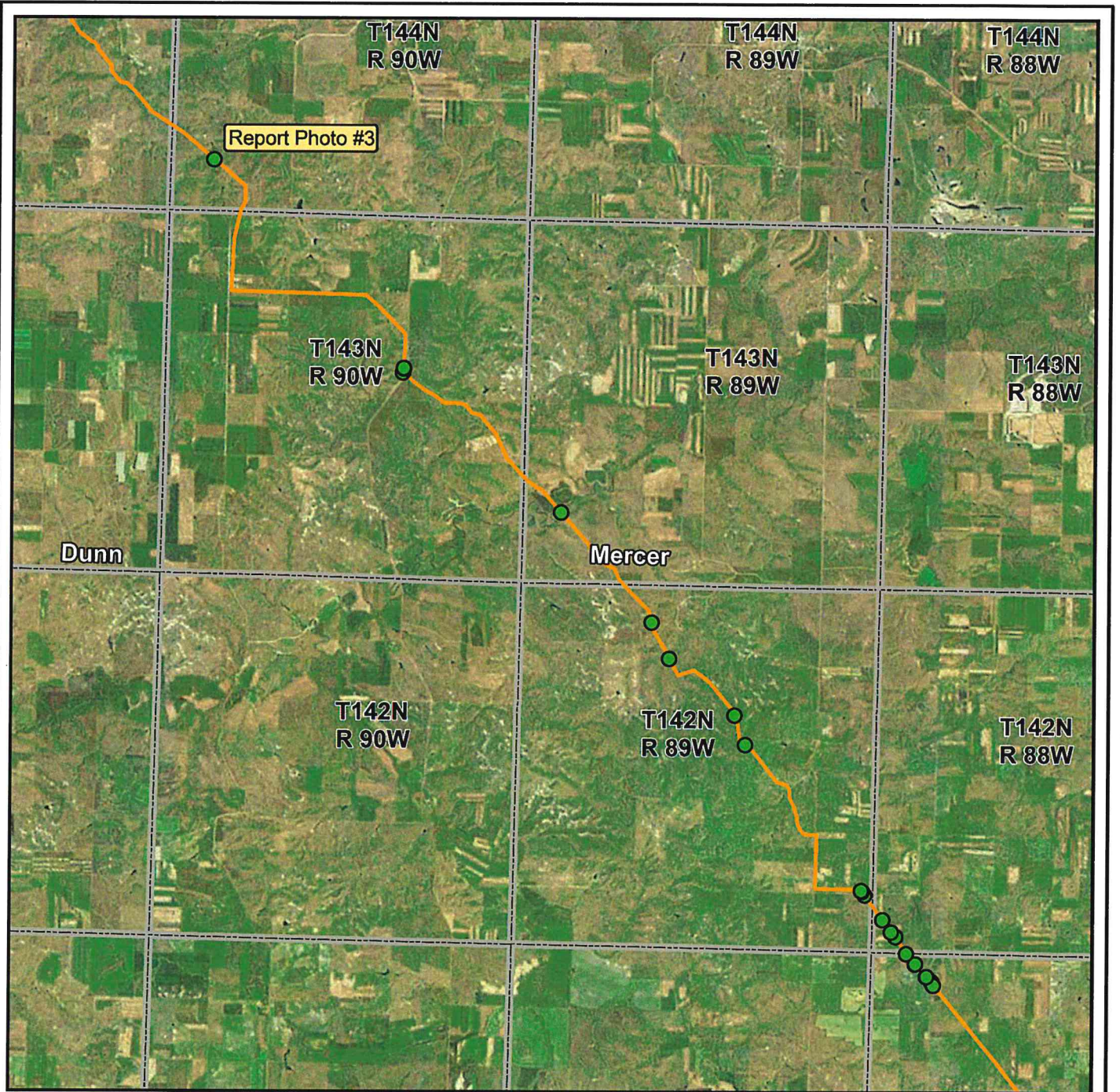
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Construction Inspection
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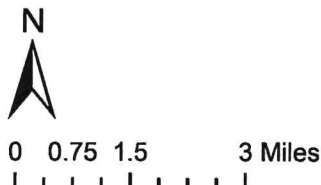
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Legend

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-  Township Boundary

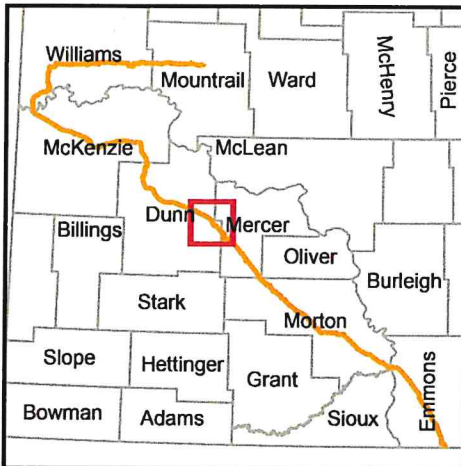
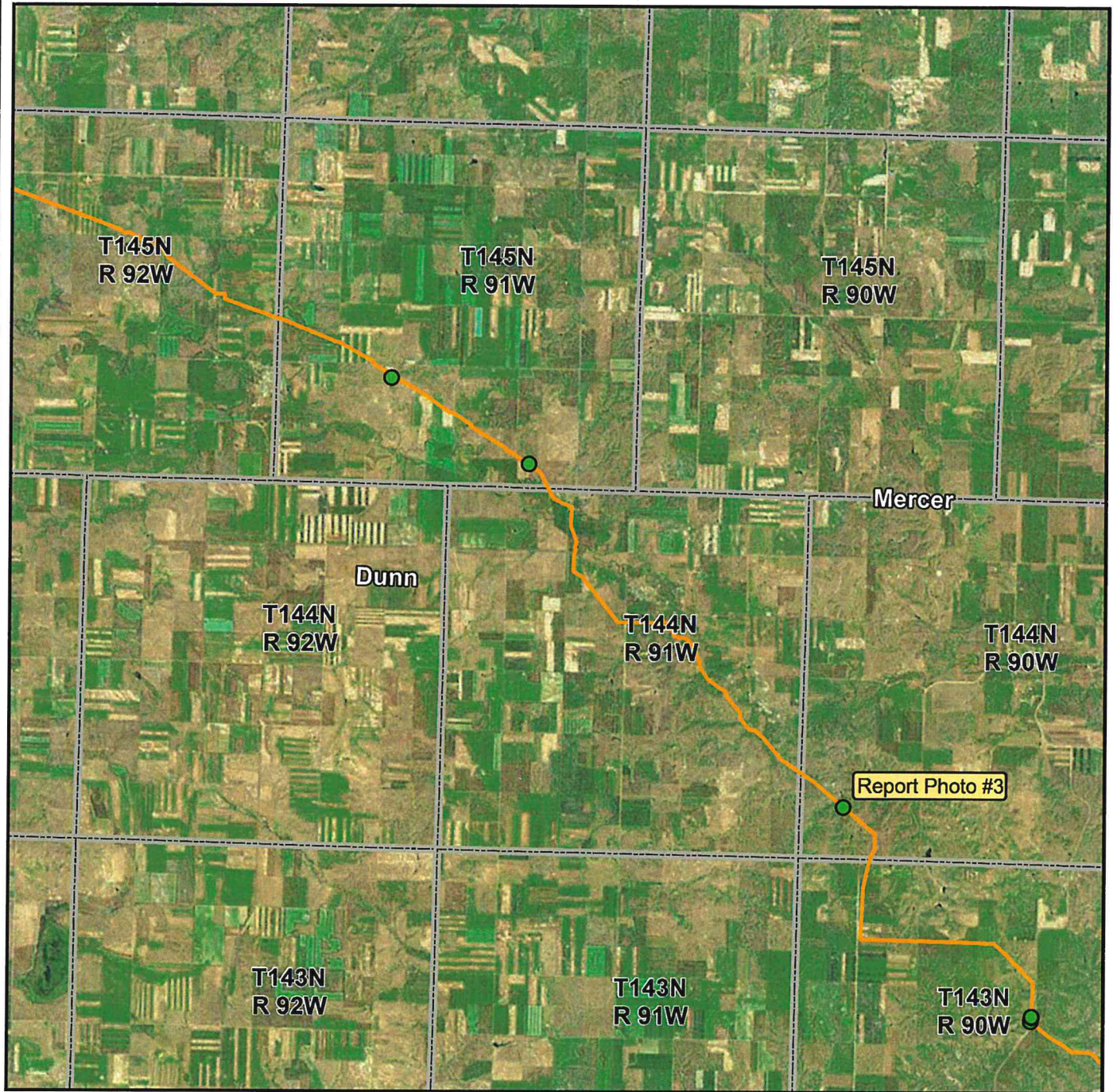


**Appendix B.
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**Construction Inspection
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Dakota Access Pipeline Project**



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Legend

-  Dakota Access Pipeline
-  Township Boundary


N

0 0.75 1.5 3 Miles

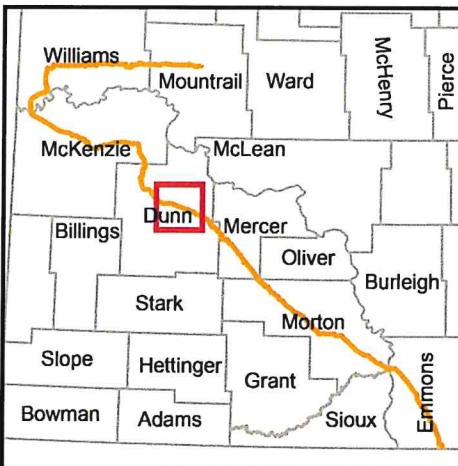
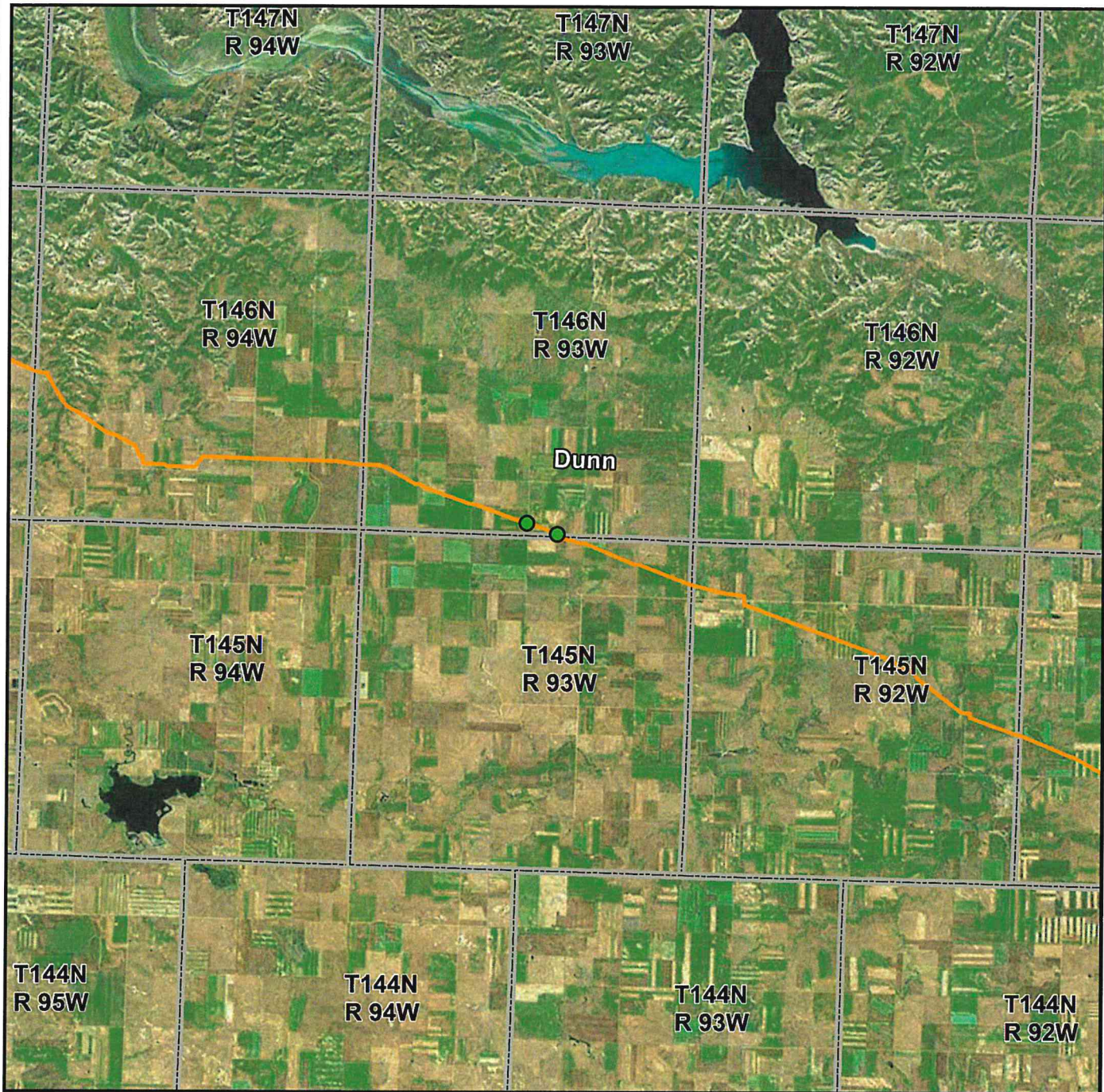
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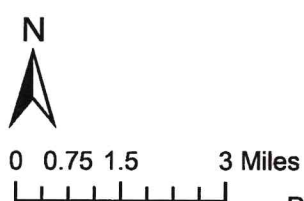

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Legend

-  Dakota Access Pipeline
-  Township Boundary

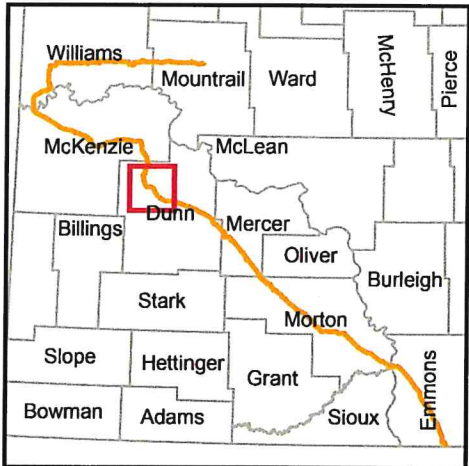
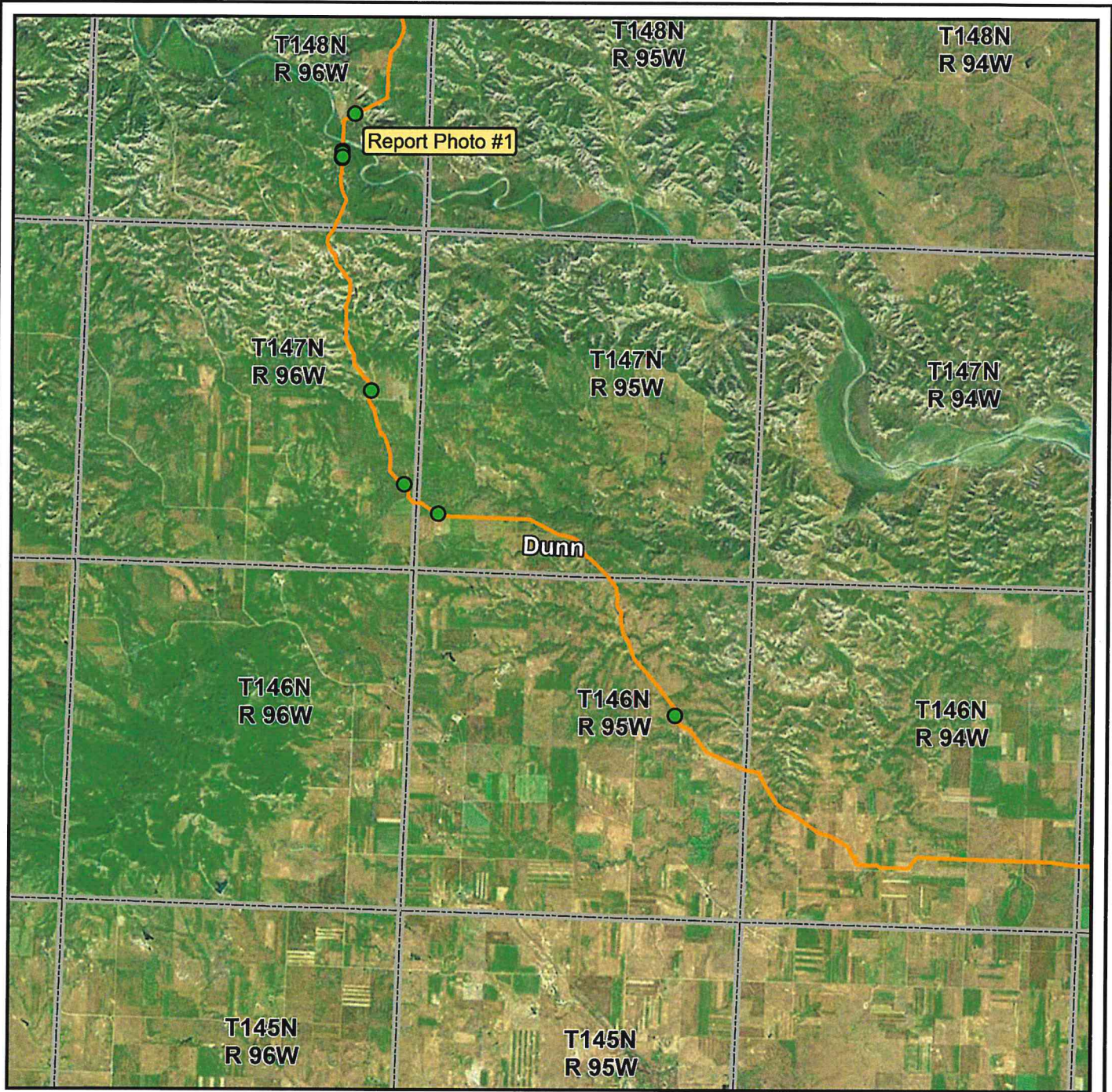


**Appendix B.
Maps - Points of Observation**



**Construction Inspection
PU-14-842
Dakota Access Pipeline Project**

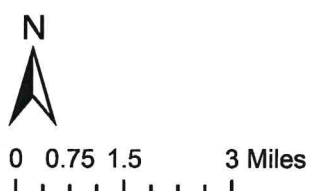


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Legend

-  Dakota Access Pipeline
-  Township Boundary

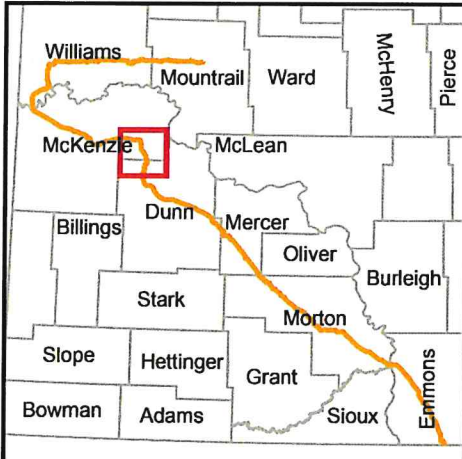
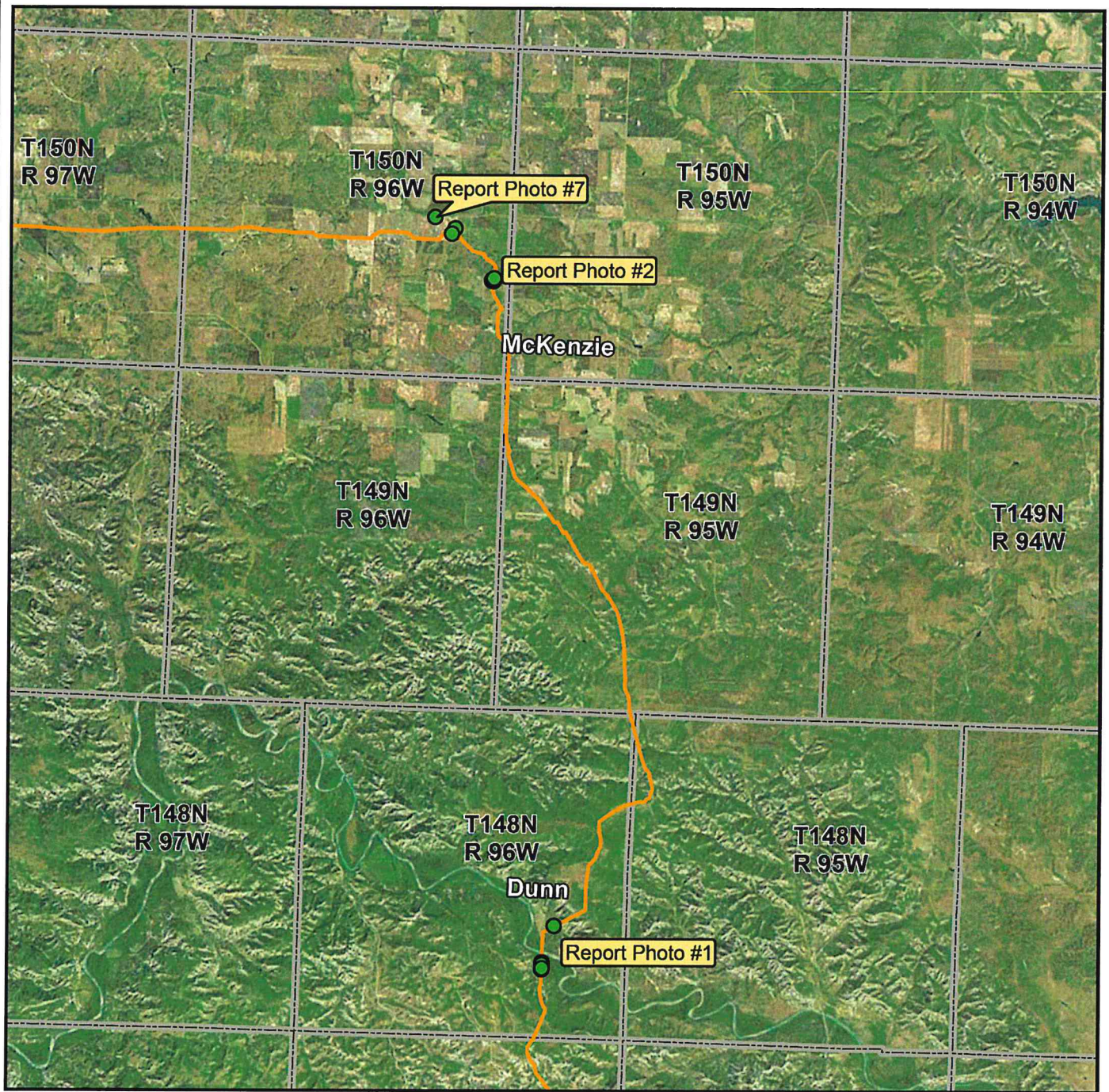


**Appendix B.
Maps - Points of Observation**



Construction Inspection
 PU-14-842
 Dakota Access Pipeline Project

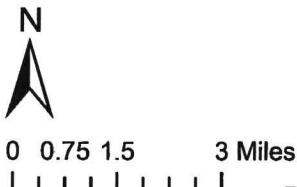


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Legend

-  Dakota Access Pipeline
-  Township Boundary

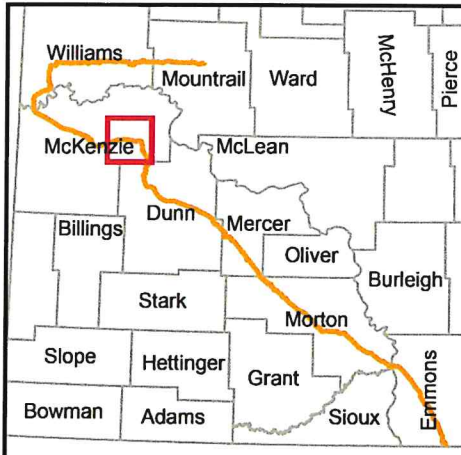
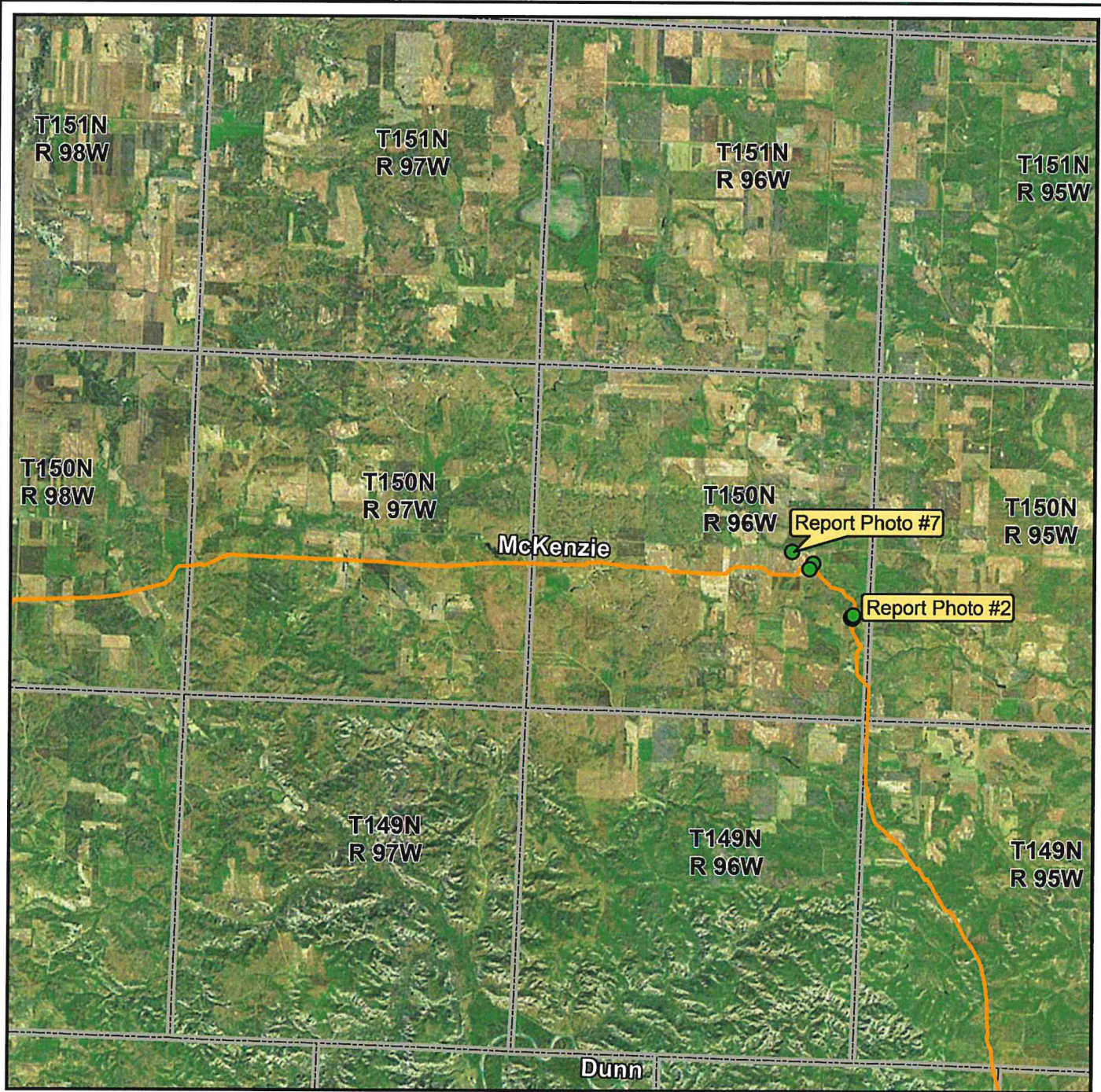


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**Construction Inspection
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Dakota Access Pipeline Project**



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Legend

-  Dakota Access Pipeline
-  Township Boundary


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0 0.75 1.5 3 Miles

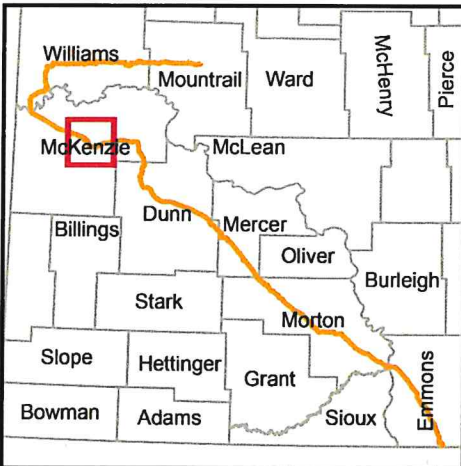
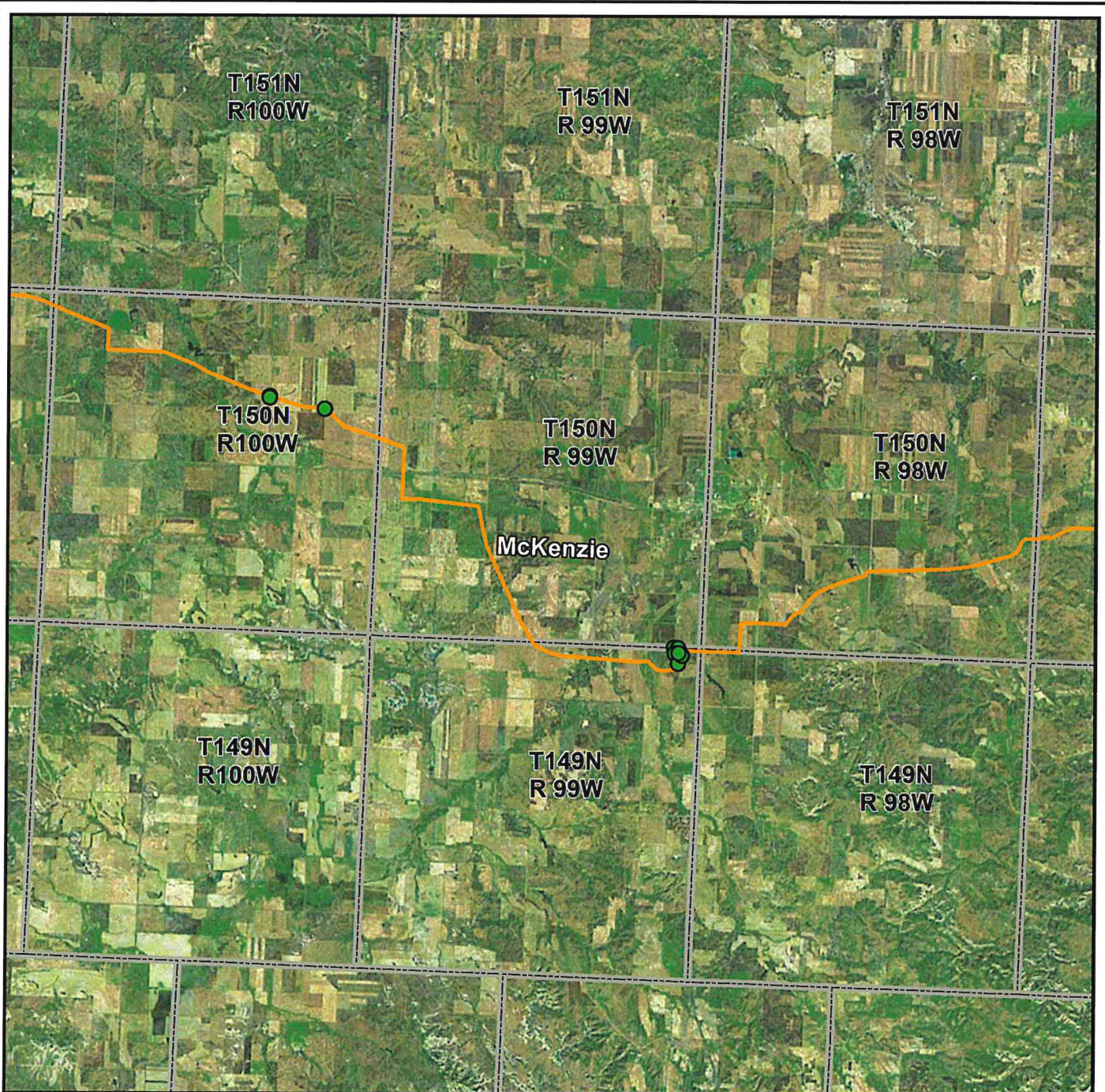
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Construction Inspection
 PU-14-842
 Dakota Access Pipeline Project

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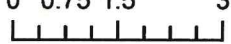
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-  Dakota Access Pipeline
-  Township Boundary

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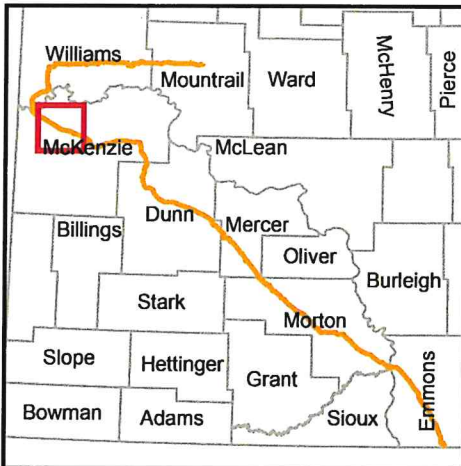
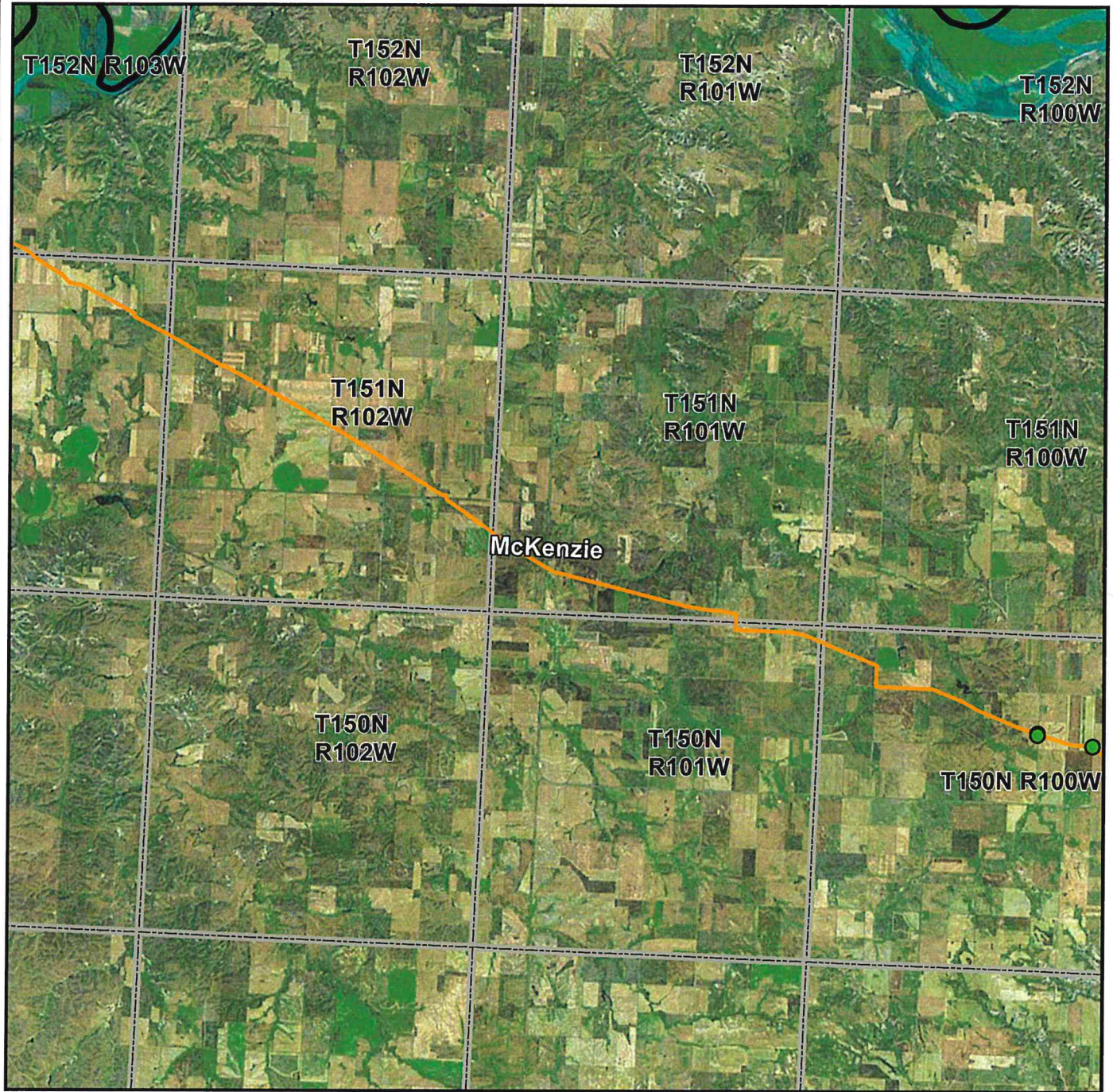
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Legend

-  Dakota Access Pipeline
-  Township Boundary


N

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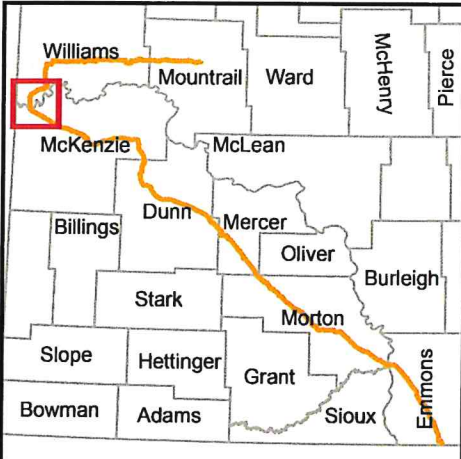
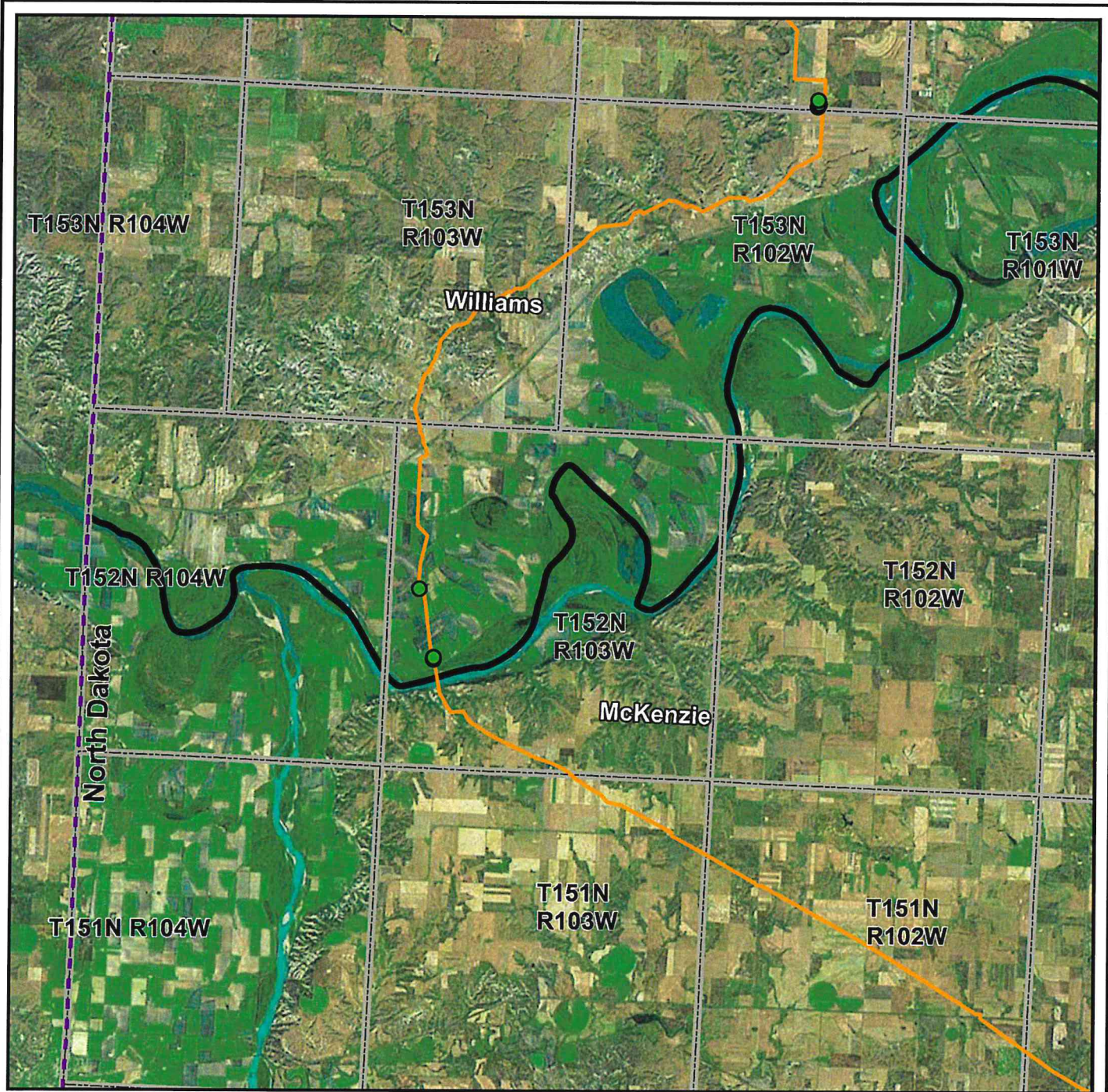
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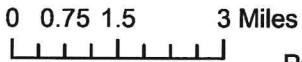
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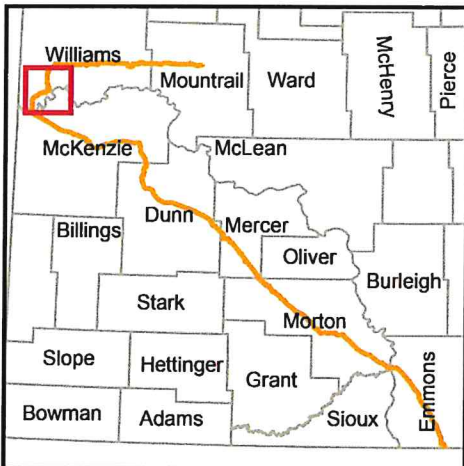
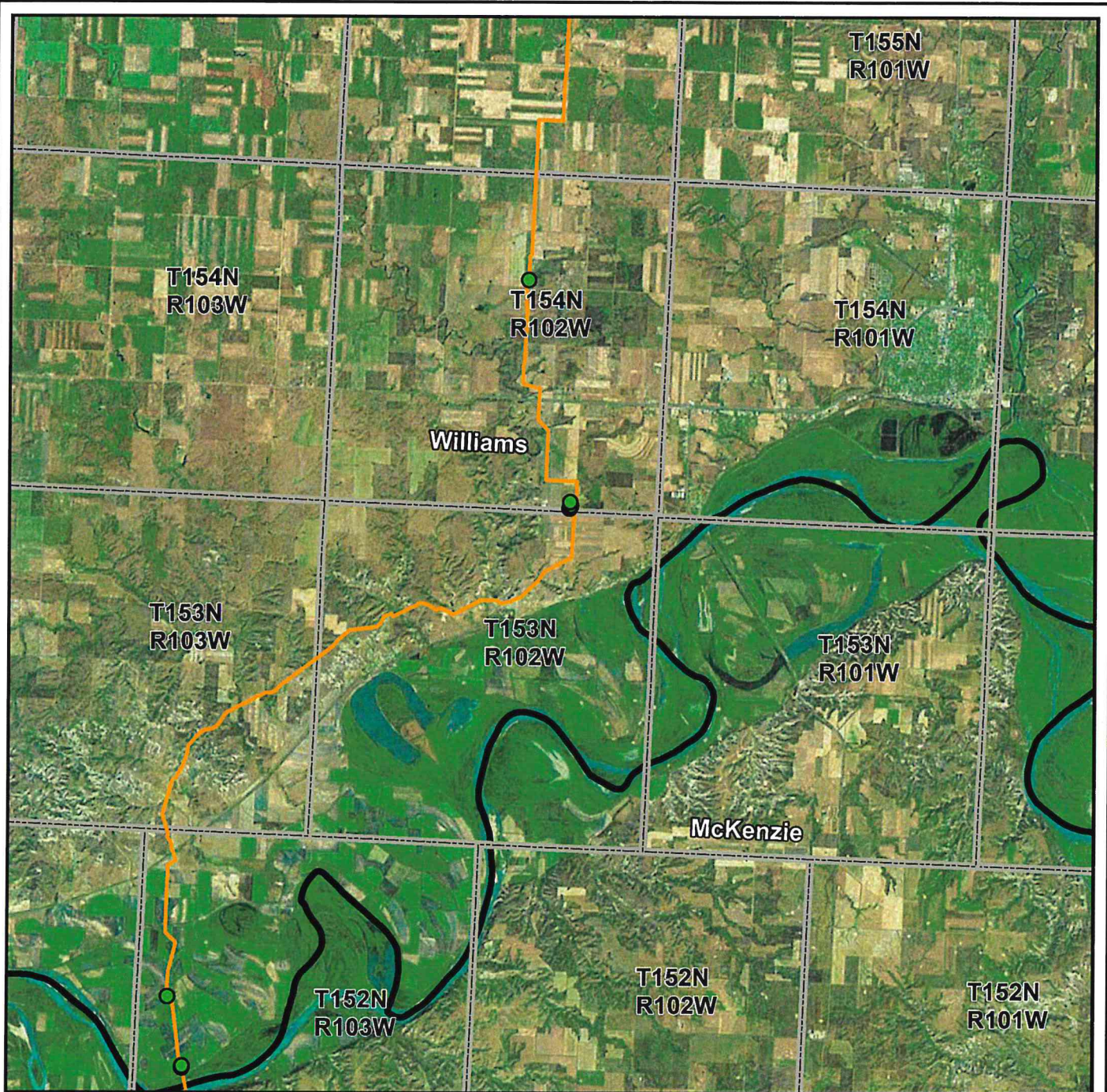
-  Dakota Access Pipeline
-  Township Boundary



**Appendix B.
Maps - Points of Observation**

**Construction Inspection
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Legend

- Dakota Access Pipeline
- Township Boundary

N

0 0.75 1.5 3 Miles

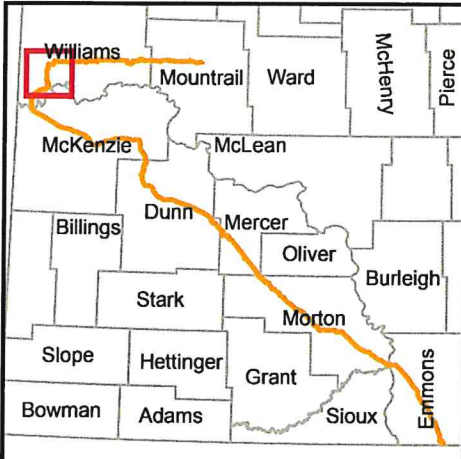
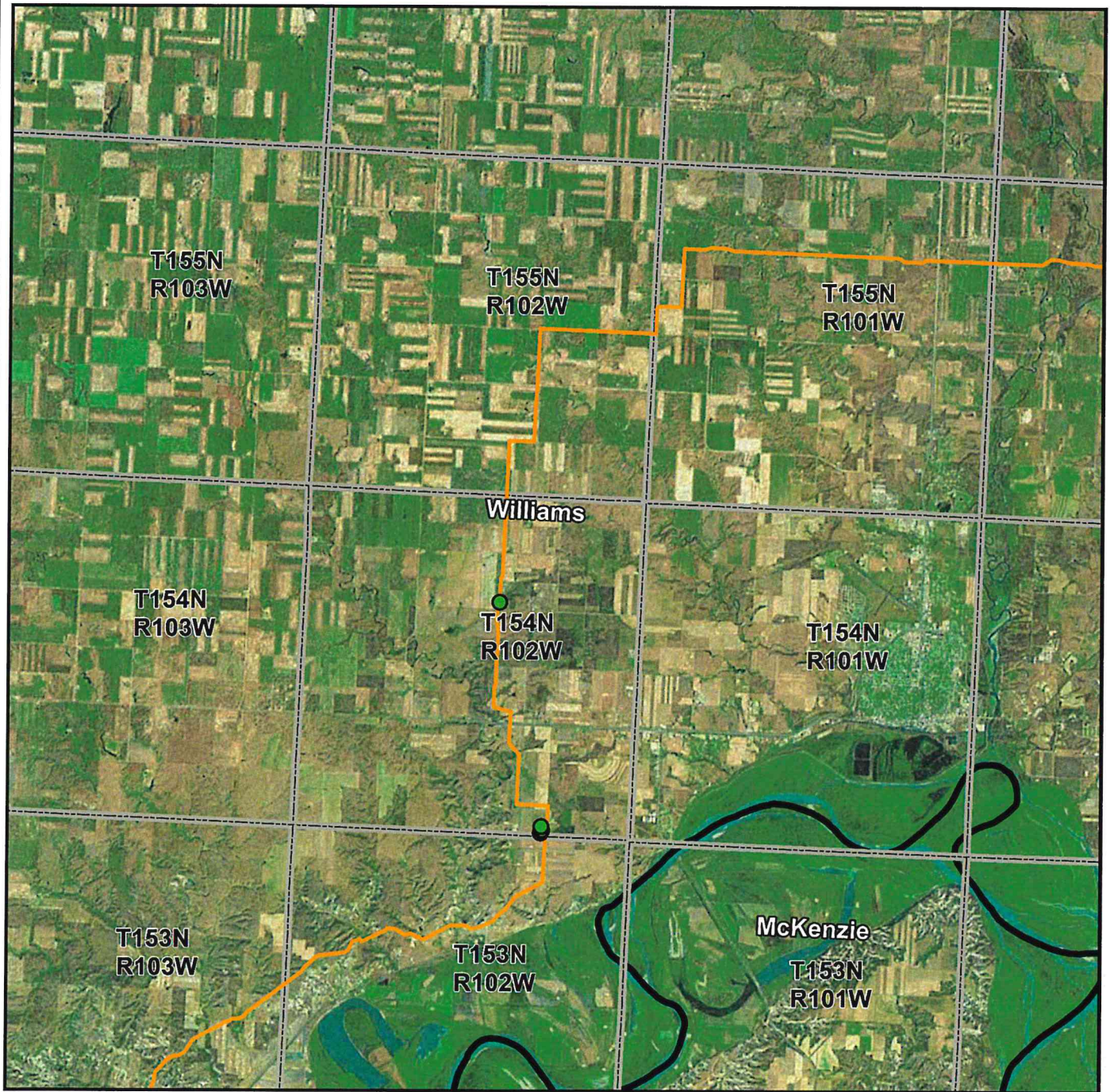
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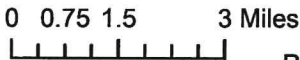
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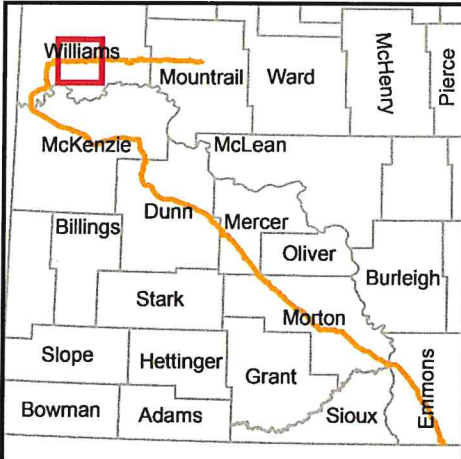
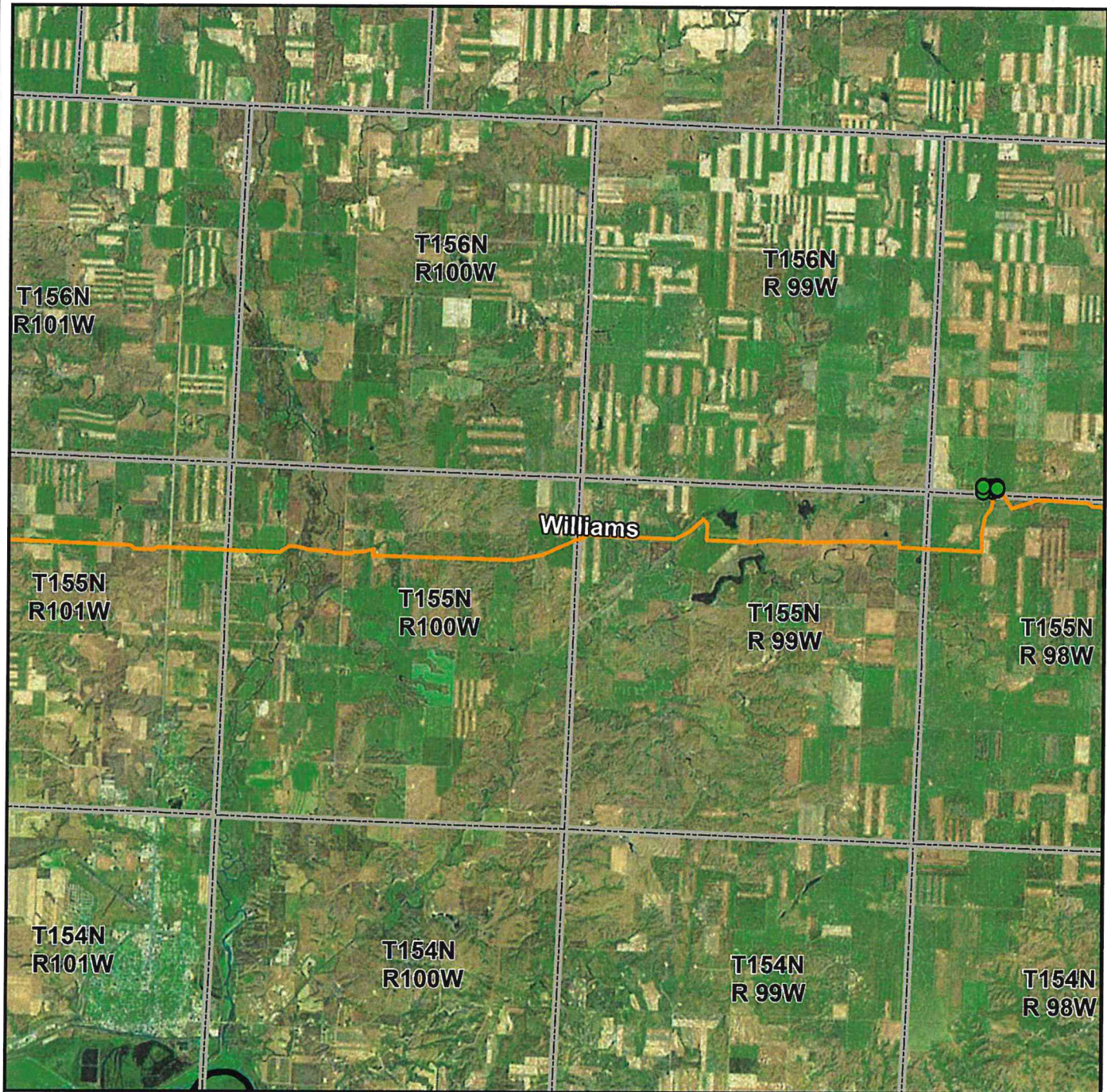
-  Dakota Access Pipeline
-  Township Boundary





**Appendix B.
Maps - Points of Observation**

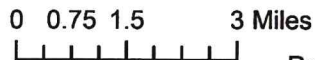
**Construction Inspection
PU-14-842
Dakota Access Pipeline Project**





Legend

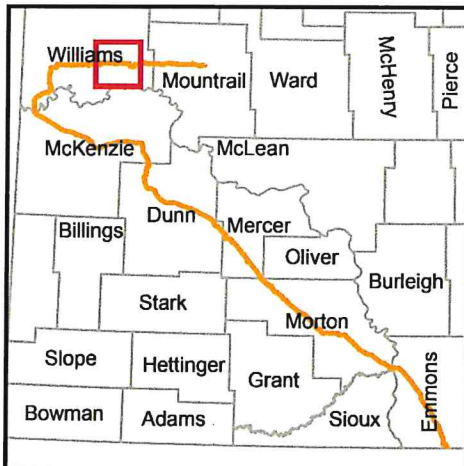
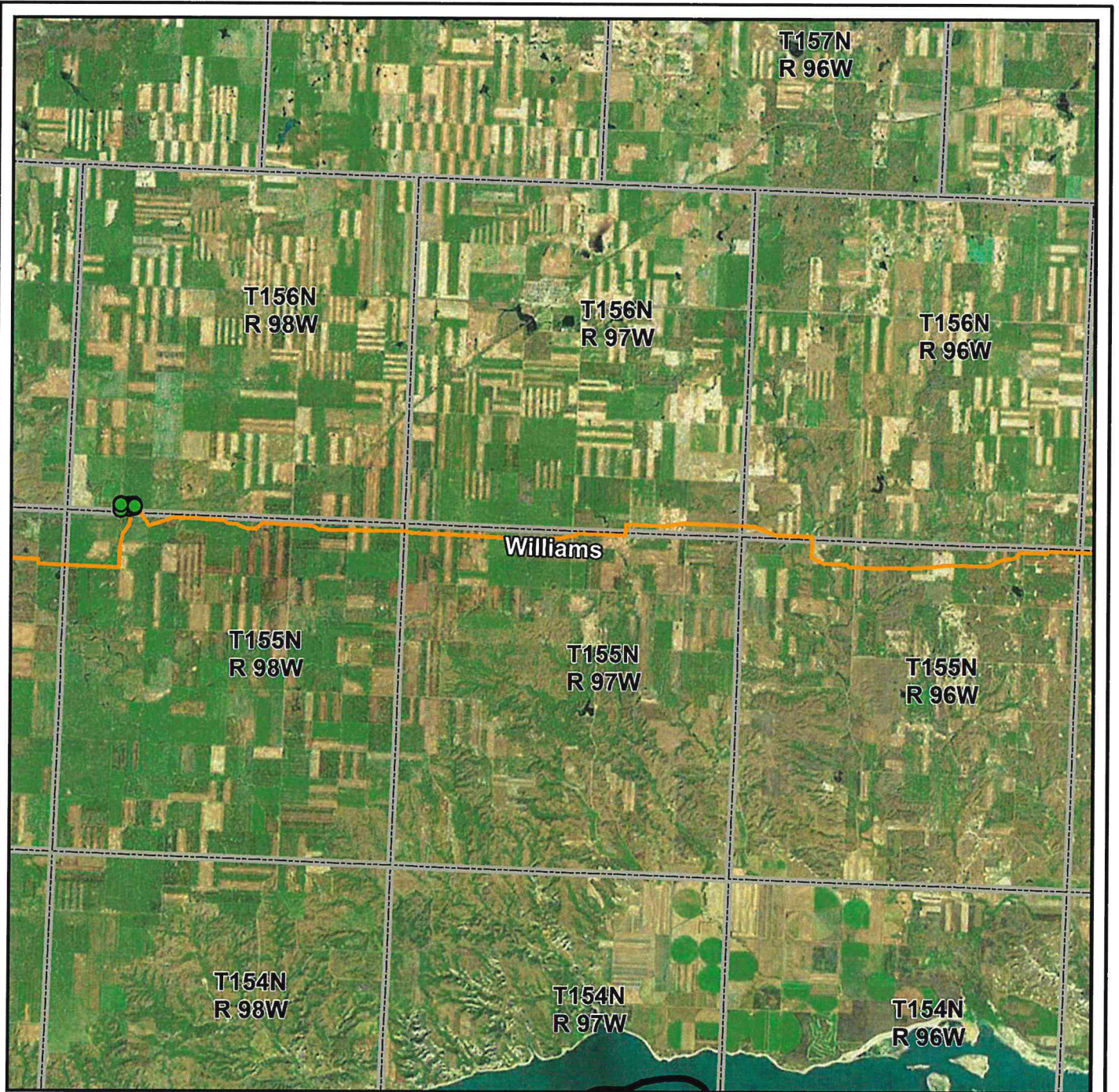
-  Dakota Access Pipeline
-  Township Boundary





**Appendix B.
Maps - Points of Observation**

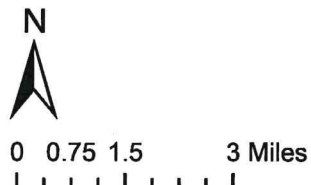
**Construction Inspection
PU-14-842
Dakota Access Pipeline Project**





Legend

-  Dakota Access Pipeline
-  Township Boundary

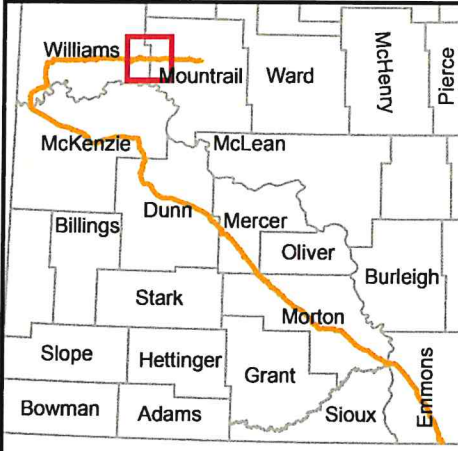
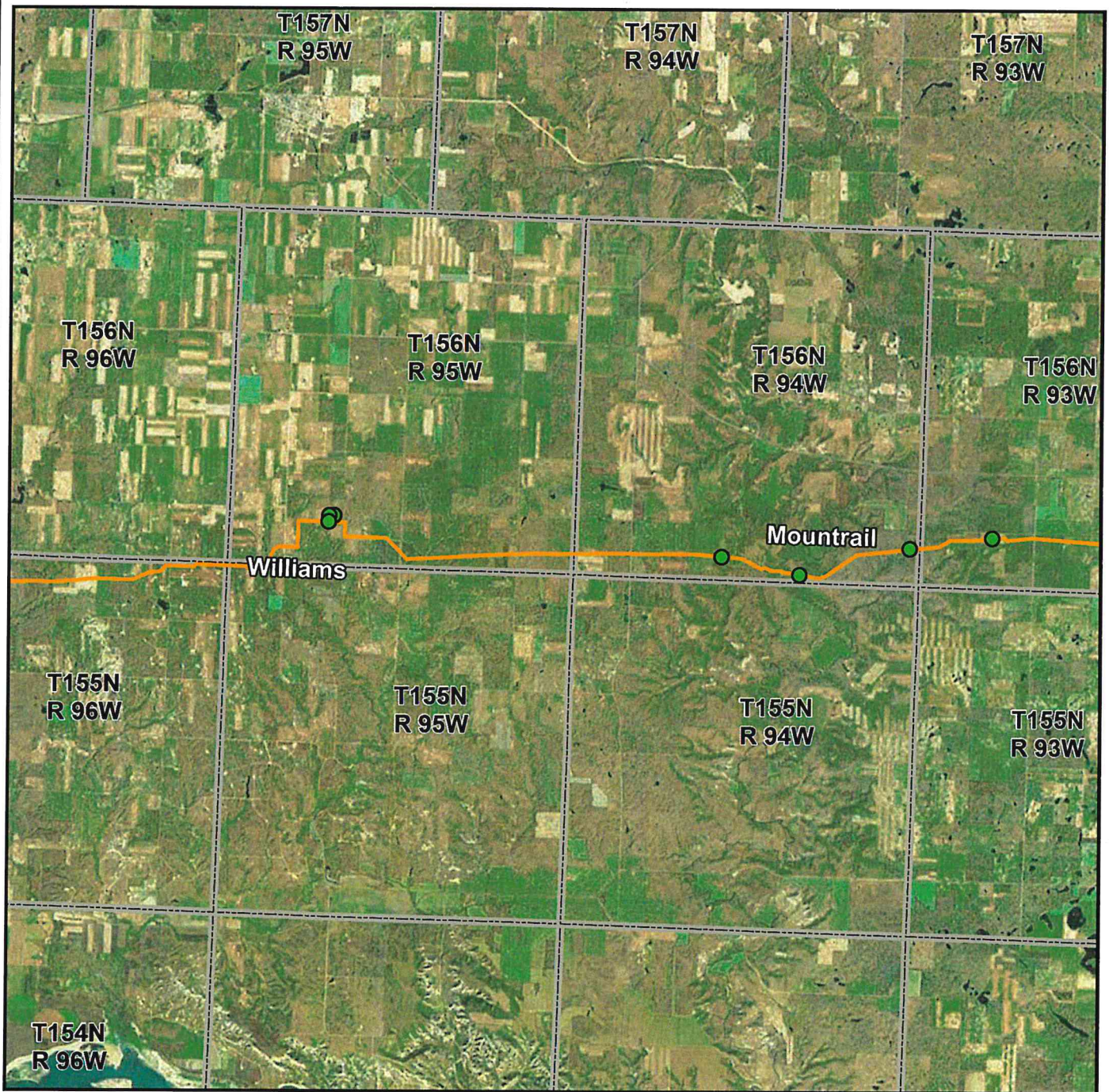


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**Construction Inspection
PU-14-842
Dakota Access Pipeline Project**



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Legend

-  Dakota Access Pipeline
-  Township Boundary



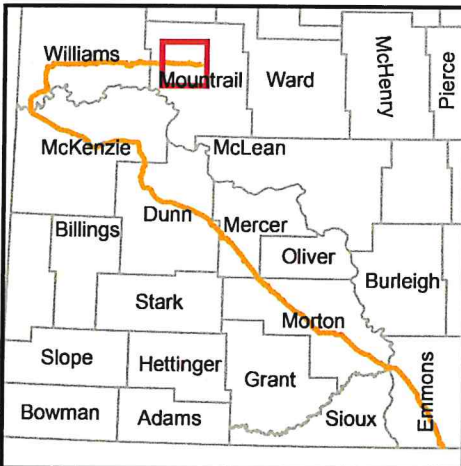
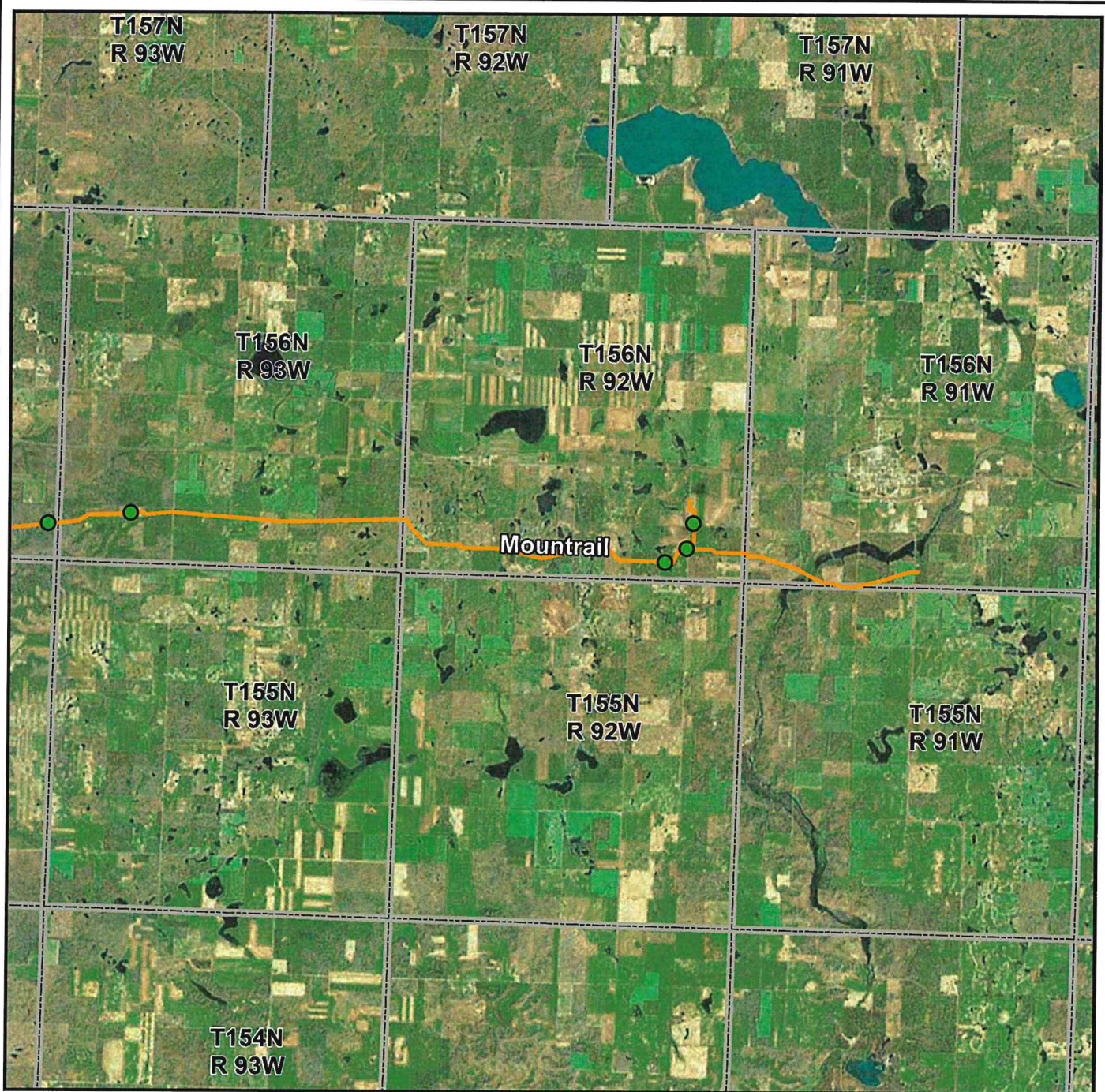
0 0.75 1.5 3 Miles





**Appendix B.
Maps - Points of Observation**

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Legend

-  Dakota Access Pipeline
-  Township Boundary


N

0 0.75 1.5 3 Miles

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