Exhibit D-11 Class III Cultural Resource Survey

North Branch Forest River Dam No. 1 (Bylin Dam)

Class III Cultural Resource Survey

T156N; R57W; Portions of Section 5 & 6

T157N; R57W; Portions of Sections 31 & 32

T 157N; R58W; Portions of Section 25 & Section 36

Walsh County, North Dakota

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U. S. Department of Agriculture
Natural Resources Conservation Service
North Dakota State Office

Abstract:

The Natural Resources Conservation Services proposes construction activities to bring the North Branch Forest River Dam No. 1 (hereafter referred to as Bylin Dam) into compliance with current performance, design, and safety standards. The undertaking will not increase the permanent pool elevation behind the dam but will involve considerable ground disturbance within the immediate vicinity of the dam structure. In accordance with 36CFR§800.11(d) a finding of ***"No Adverse Effect,"*** is recommended for the Bylin Dam rehabilitation project. The finding of effect was predicated on a March 21, 2022 ND SHPO determination that the Dougherty Dam (32WA837) is eligible for the National Register of Historic Places (NRHP) and ND SHPO concurrence with the NRCS determination that the proposed undertaking will not detract from its eligible status (Appendix C).

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Project Title: Bylin Dam Rehabilitation Project
Legal Location: T156N; R57W; Portions of Section 5 & 6
T157N; R57W; Portions of Sections 31 & 32
T157N; R58W; Portions of Sec. 25 & Sec 36
County: Walsh
USGS 7.5' Quadrangle: Adams & Adams SE, North Dakota 2020
Personnel: Christopher A. Plount (Principal Investigator), Rita H. Sveen (Watershed Coordinator, Walsh Co.), Steve Ashpole (Soil Conservationist Technician, Walsh Co.), Gwen Sobolik (Soil Conservationist), Sarah Laundry (Cultural Resources Specialist).
Field Work Dates: October 5-6, 2021 and August 15, 2022
Proposed Total Acres Surveyed: 140 (+/-) acres
Project Description: Rehabilitation of Bylin Dam to current performance, design, and safety standards

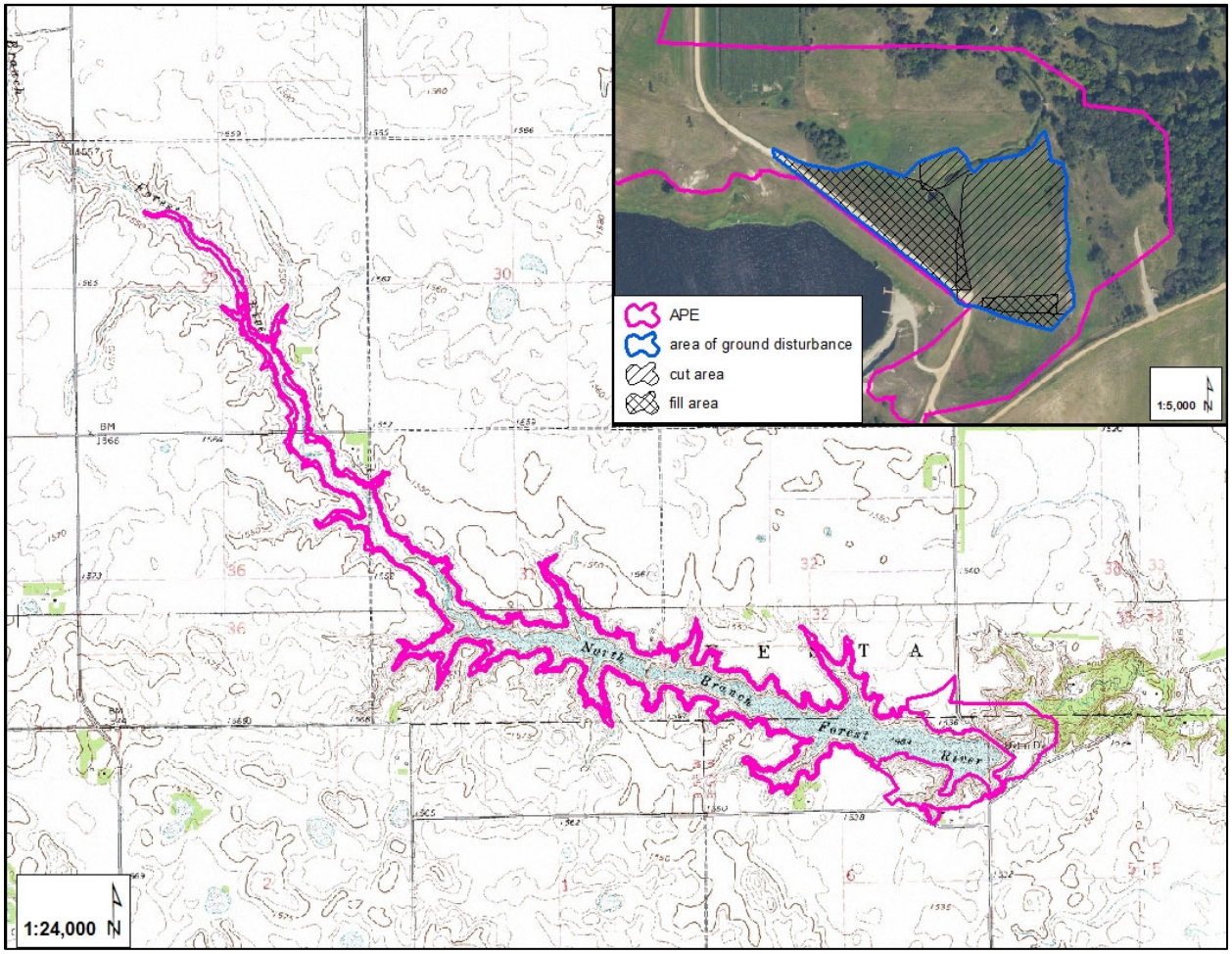

Figure: 1. APE of the Bylin Dam Rehabilitation Project.
(USGS 7.5' series Adams and Adams SE, ND quadrangles; inset: 2022 NAIP orthoimage showing areas of ground disturbance for the Bylin Dam Rehabilitation activities)

1.0 Introduction:

The area of potential effect (APE) is in Walsh County, North Dakota approximately 6.1 miles (9.8 km) southeast of the town of Adams North Dakota. The proposed APE can be reached by travelling southeast on State Highway 17 for 3.1 miles (4.98 km), turning south on 122nd Avenue NE for 2.2 miles (3.54 km). Most of the area of potential effect (APE) rests on 20-30 degree slopes, river bottomland, or areas with previous ground disturbance. Encompassing approximately 140 (+/-) acres, the APE was established through estimation of maximum water impoundment during a flood year and proposed area of ground disturbance near the existing dam structure.

Bylin Dam was built in 1964, prior to the passage of the National Historic Preservation Act, to provide flood control and reduce erosion within a high-hazard portion of the North Branch Forest River Watershed. The undertaking ***may*** have been subject to the Reservoir Salvage Act of 1960 but no cultural resource reports for the dam's construction were found. The design life of Bylin Dam was designated as 50 years from the construction date, which has been exceeded. Several deficiencies at the dam site have been noted, including inadequate spillway hydraulic capacity, erodibility potential of the auxiliary spillway, inadequate embankment slope stability, and incompatibility of the embankment drainage system. The dam currently does not meet NRCS or State of North Dakota dam safety criteria and poses risk to human life and downstream infrastructure, land, and cultural and natural resources. The NRCS proposes construction activities to bring the Bylin Dam into compliance with current performance, design, and safety standards. The undertaking will involve considerable ground disturbance within the immediate vicinity of the dam structure. The proposed undertaking will not change the permanent pool elevation behind the dam. Changes in pool elevation will be minor at all projected flood stages, up to 500-year events, and will not impact any cultural resources discussed in this report.

The preferred alternative for Bylin Dam is to raise the top of dam elevation to accommodate the appropriate design event for a high-hazard dam, harden the auxiliary spillway by using articulated concrete block within the spillway chute, replace the existing principal spillway conduit and riser tower, and reduce the downstream embankment slope at the dam to improve slope stability (NRCS 2022) (see Appendix A). Total project installation cost is estimated at $10,660,000, funded between the NRCS Small Watershed Rehabilitation Program and funds from the sponsorship of the Walsh County Water Resource District (NRCS 2022).

2.0 Research Goals and Methods:

Historic maps, United States Geologic Survey (USGS) topographic maps, North Dakota State Historic Preservation Office archives (SHPO), Natural Resources Conservation Service archives (NRCS) and Farm Service Agency records (FSA) were combined with LiDAR, commercially available satellite imagery and construction design plans to pinpoint areas of interest. Field reconnaissance was designed to achieve four goals:

- Positive location and identification of known cultural resources
- Discovery and recordation of previously unknown cultural resources
- Field assessment of NRHP eligibility of any cultural resources
- Determine effects of the undertaking on any NRHP eligible properties

2.1 Research Limitations:

Much of the APE farther upstream from the dam consists of steep terrain with ravines exceeding 30% slope. These areas were visually surveyed wherever physical access and safety allowed. The field crew understood that any cultural material found in these areas would have most likely washed down from higher elevations. Access was initially denied to a parcel of 26 acres on the south side of the reservoir just above the dam (Figure 2). Landowner permission was later obtained, and a Class III inventory of that area was conducted in 2022.

Figure 2: Boundary of additional parcel (hatch-marked area) surveyed in 2022 (NAIP 2022 orthoimage).

3.0 Environment:

The APE rests within Walsh County upon Coleharbor Group parent materials within a gently rolling topographic setting (Bluemle 1977). USDA Soil Survey (Figure 3, Table 1) shows the soils are primarily Kloten-Walsh-Edgely loams, 6-35% slopes. Humic material on the land above the water impoundment is derived from decades of agricultural production that includes corn, alfalfa, wheat, and barley.

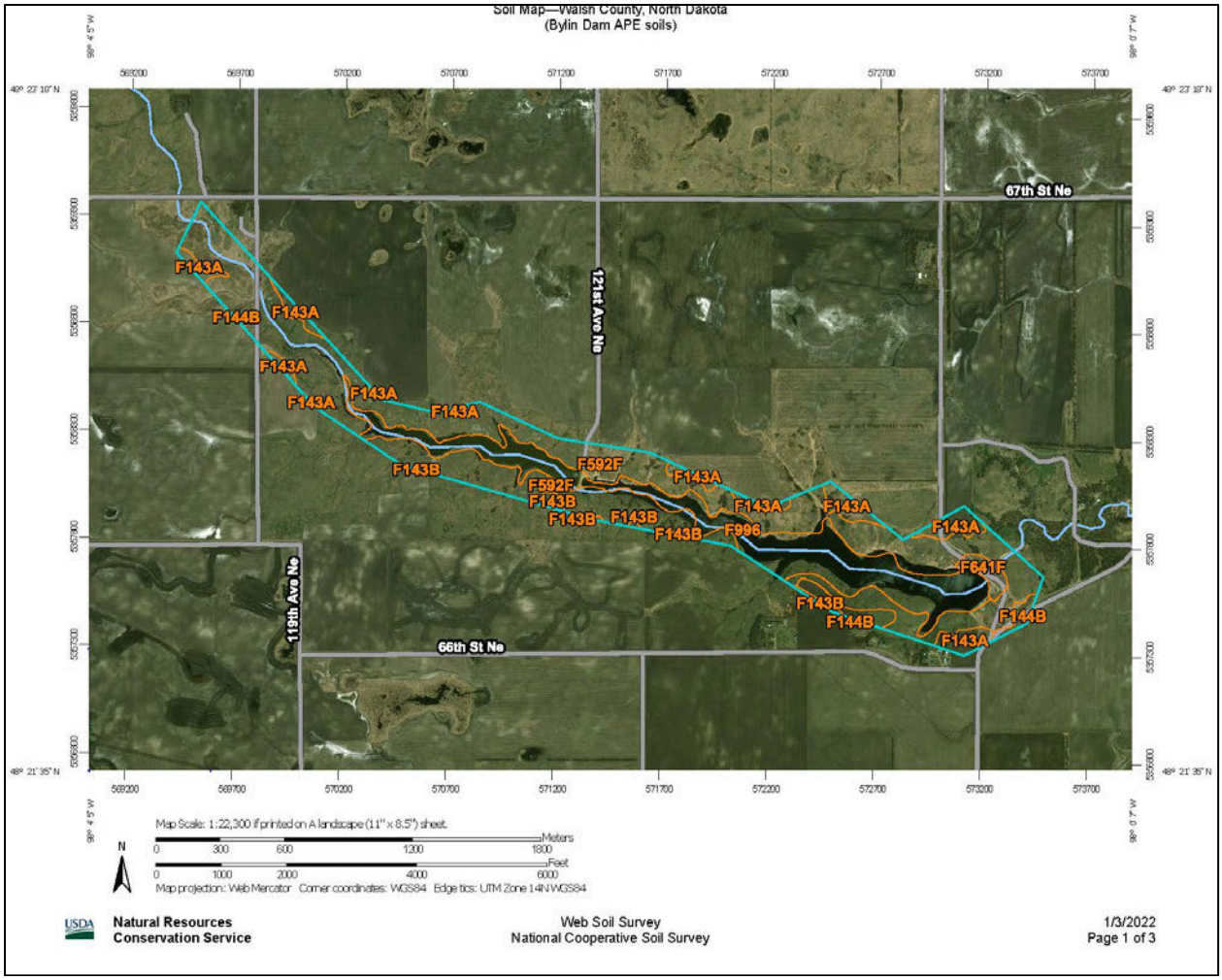

Figure 3: Soil map APE (image source: websoilsurvey.sc.egov.usda.gov).

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
F143A	Barnes-Svea loams, 0 to 3 percent slopes	30.7	8.1%
F143B	Barnes-Svea loams, 3 to 6 percent slopes	3.4	0.9%
F144B	Barnes-Buse loams, 3 to 6 percent slopes	9.8	2.6%
F592F	Kloten-Walsh-Edgeley loams, 6 to 35 percent slopes	236.4	62.2%
F641F	Udarents loamy, earthen dam, 1 to 75 percent slopes	5.5	1.5%
F996	Water	94.5	24.8%
Totals for Area of Interest		**380.3**	**100.0%**

Table 1: Soil types in the APE (data source: websoilsurvey.sc.egov.usda.gov).

Faunal resources include white-tailed deer (Odocoileus virginianus), rabbit (Leporidae), racoon (Procyon lotor), grouse (Tetraoninae), turkey (Meleagridinae), and pheasant (Phasianus colchicus). Introduced flora includes Kentucky Bluegrass (Poa pratensis), Tansy (Tanacetum vulgare), and Sweet Clover (Melilotus officinalis). Native flora includes Common Hazel (Corylus avellana), Post Oak (Quercus stellata), Horsetail (Equisetum L.), and Western Snowberry (Symphoricarpos occidentalis).

4.0 Literature and Archive Review:

Digital and physical archives were accessed for information on the presence of eligible, or potentially eligible, NRHP properties within the APE and one mile surrounding. These sources include 19th century General Land Office maps, North Dakota State Water Commission LiDAR, USGS topographic maps, FSA records, NRCS archives and NDSHPO site forms and manuscripts.

4.1 General Land Office Maps:

General Land Office survey maps reveal multiple homestead and cultivated fields. None are within the project APE (Figures 4, 5 & 6). No mention of permanent/seasonal encampments by Native American Tribes are depicted on the survey map or within the survey notes.

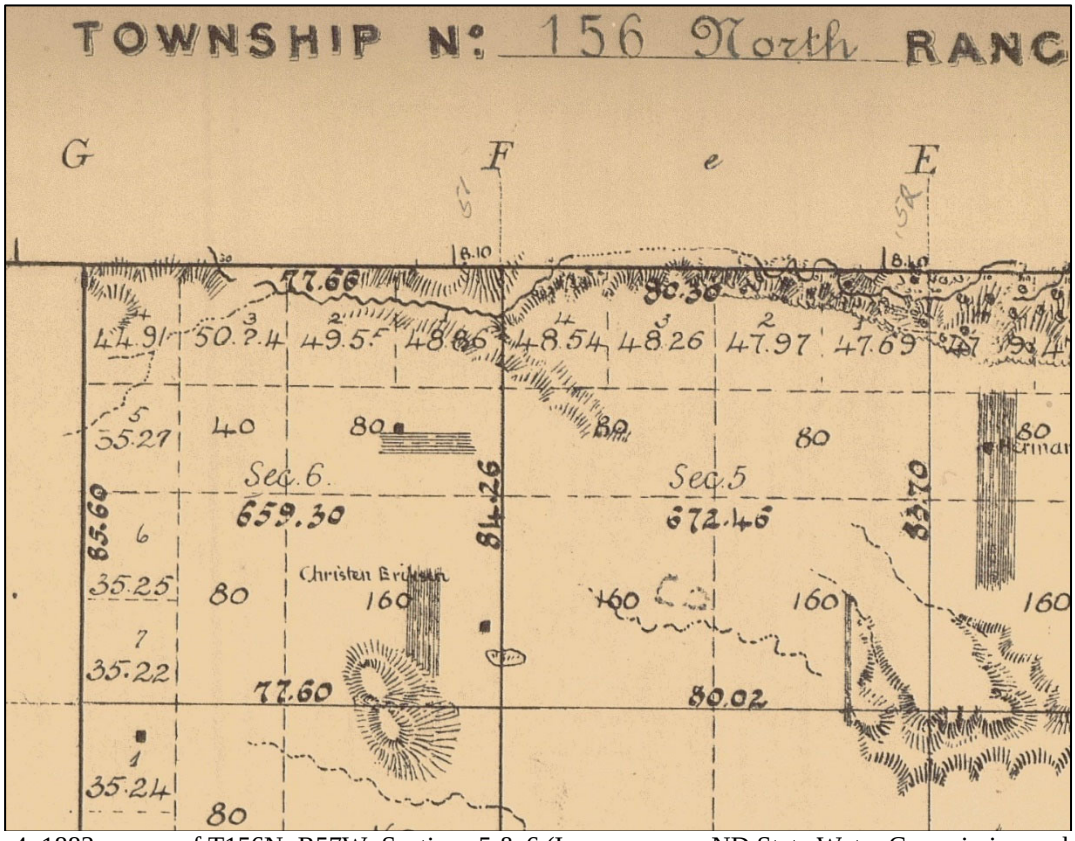

Figure 4: 1883 survey of T156N; R57W; Sections 5 & 6 (Image source: ND State Water Commission archives).

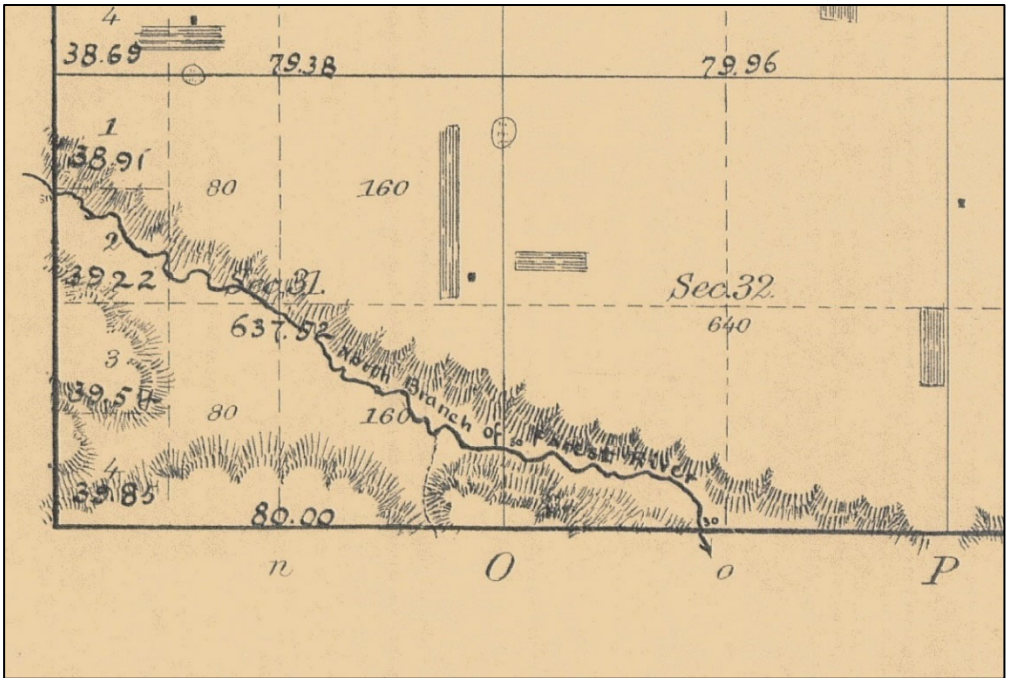

Figure 5: 1883 survey of T157N; R57W; Sections 31 & 32 (image source: ND State Water Commission archives).

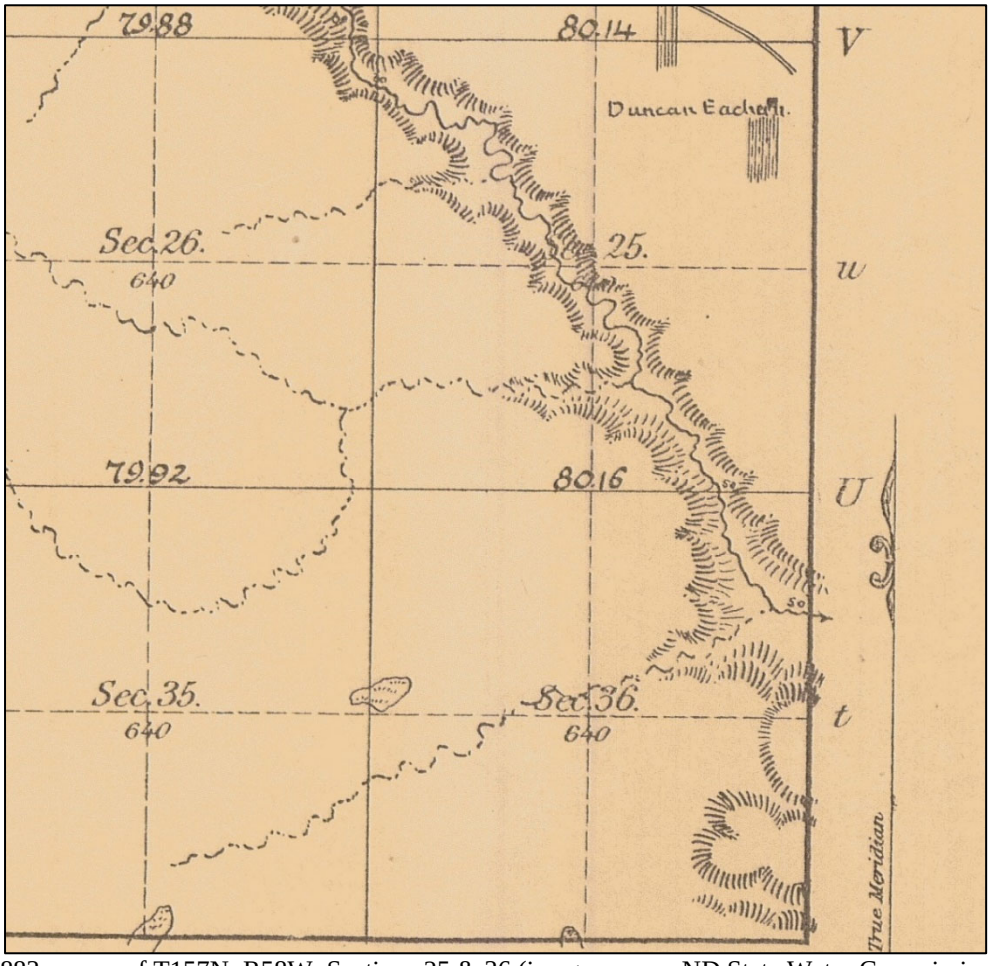

Figure 6: 1883 survey of T157N; R58W; Sections 25 & 36 (image source: ND State Water Commission archives).

4.2 ND SHPO Records:

A Class I records search was conducted at ND SHPO in 2021 prior to the Class III inventory of the APE. This Class I records search was updated on July 3, 2023. The ND SHPO records indicate that there are five recorded cultural resource sites and three unverified site leads within one mile of the APE (Table 2). Site 32WA257, Hoff School, is listed in the NRHP (NR08000233) but the property is of sufficient distance that, excluding catastrophic dam failure, it will experience no direct, indirect, audible, or visual effects due to the proposed undertaking. Site 32WA837 (Dougherty Dam) has been determined to be eligible for listing in the NRHP and concurrence from ND SHPO with a no adverse effect determination was received for the proposed undertaking on March 21, 2022 (ND SHPO Ref# 22-5421) (see Appendix C). The additional cultural resource sites and site leads within the one-mile search radius are either ineligible for NRHP listing or are unevaluated for NRHP eligibility (Table 2). One of the unverified site leads, 32WXA62 (Norton Post Office), intersects the APE. The location of 32WAX62 is approximated to the [redacted]

ND SHPO Sites

Site Number	Name	Distance Miles (km)	NRHP (Y/N/U)
32WAX61	BLANK FORM IN DBASE	0.27 (1.03)	N
32WAX62	NORTON POST OFFICE	intersects APE	N
32WAX63	NORTON POST OFFICE	0.78 (1.40)	N
32WA207	BRIDGE	0.37 (1.06)	U
32WA205	BRIDGE	0.39 (0.00)	U
32WA257	HOFF SCHOOL	0.80 (0.85)	Y
32WA276	BRIDGE	0.30 (0.87)	N
32WA837	DOUGHERTY DAM	intersects APE	Y

Table 3: Known sites listed in ND SHPO records.

Five previous surveys have been conducted within one mile of the project APE. Two of these previous investigations (MS# 008427 and MS# 015776) intersect a portion of the APE but neither documents any cultural resources within the APE (see Appendix B: Figures B1-B3).

- MS# 007049 - Polar Communications 1997 Construction Survey: Level II & III Cultural Resources Inventories in Four Northeastern Counties: Grand Forks, Nelson, Ramsey, and Walsh, in ND (Smith 1997)
- MS# 008427 - Polar Communications Mutual Aid Corporation & Polar Telecommunications, Inc., Fiber Optic Cable Survey: A Class I Literature Search and Class III Cultural Resources Inventory of CS, CV, GF, GG, NE, PB, RY, ST, TR & WA Counties, ND 2003 (Bluemle 2003)
- MS# - 014603 BRO-0050(033) Bridge 50-111-11.0 Replacement PCN 20426: A Class III Cultural Resource Inventory in Walsh County, North Dakota. (Yates 2013)

- MS# - 015776 Class III Cultural Resources Inventory of the Polar Communications Mutual Aid Corporation Adams Exchange ND 527-2015 Outside Plant Construction Buried Cables Project, Walsh County, North Dakota. (Fries 2015)
- MS# 020017 - Walsh Rural District – Northeast Regional Water District Interconnect Project: A Class III Cultural Resource Inventory, in Walsh County, North Dakota (Kulevsky and Morrison 2022)

4.3 LiDAR/ Aerial/Satellite Imagery Analysis:

LiDAR analysis revealed no subsurface features that required investigation. The steep slope of the water impoundment area is visible in Figures 7 & 8. The earliest imagery located with adequate resolution is a Soil Conservation Service 1964 aerial image showing the newly constructed Bylin dam, property owners, and maximum projected height of the water impoundment (Figure 9). When compared to a 2022 satellite view, the usage of the surrounding farmland can be observed to consistently come to the edge of the steep drop (Figure 10).

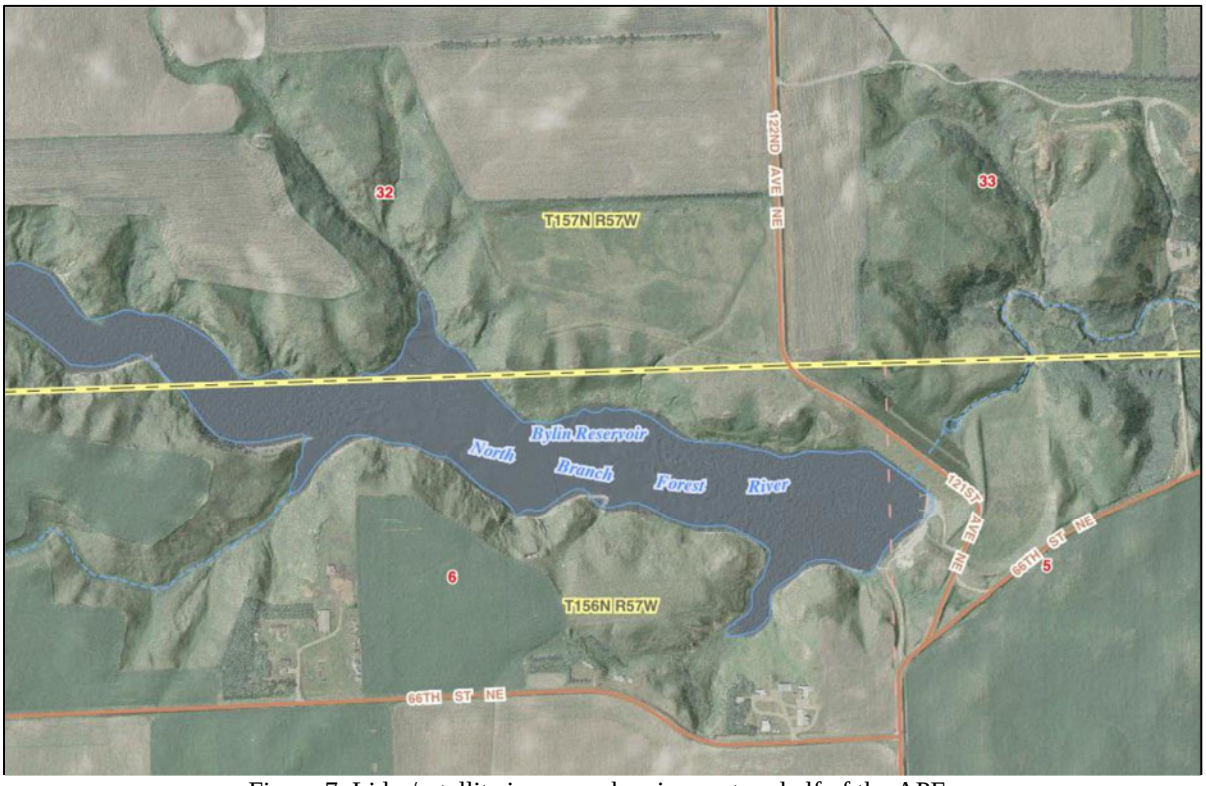

Figure 7: Lidar/satellite imagery showing eastern half of the APE.
(source: www.swc nd.gov/info_edu/map_data_resources/mapservices html)

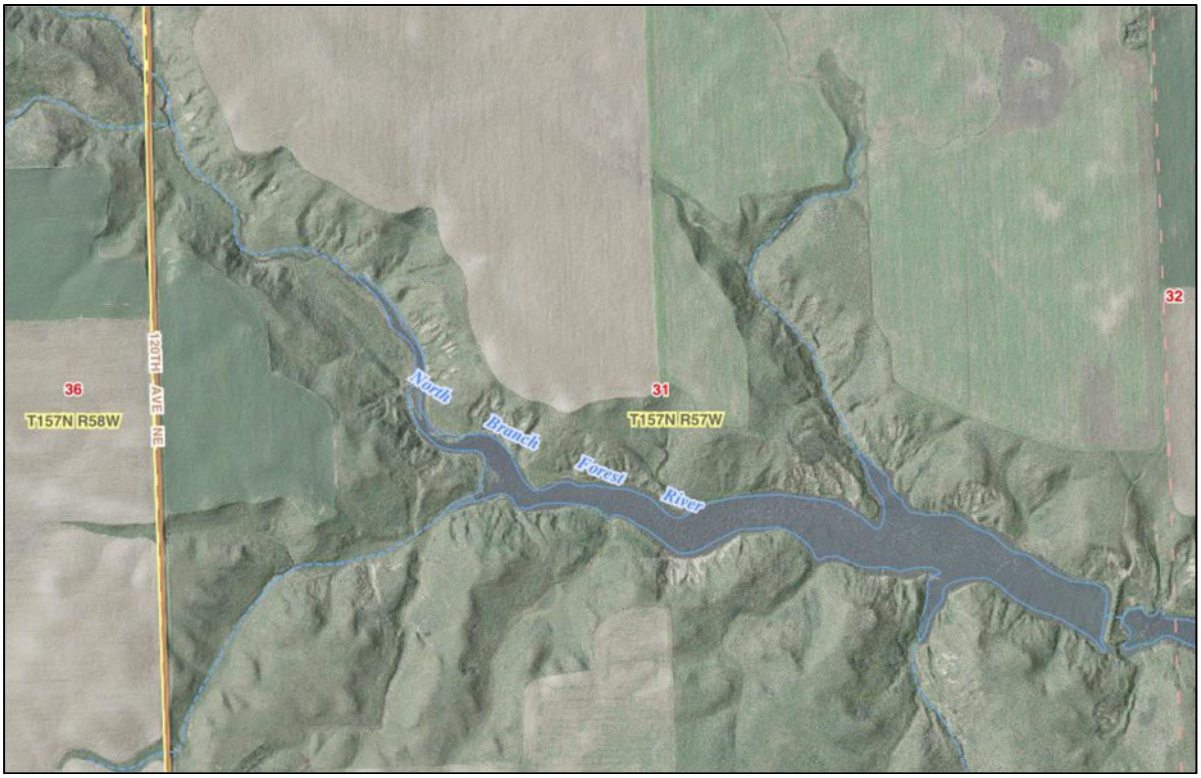

Figure 8: Lidar/satellite imagery showing western half of the APE.
(source: www.swc nd.gov/info_edu/map_data_resources/mapservices html)

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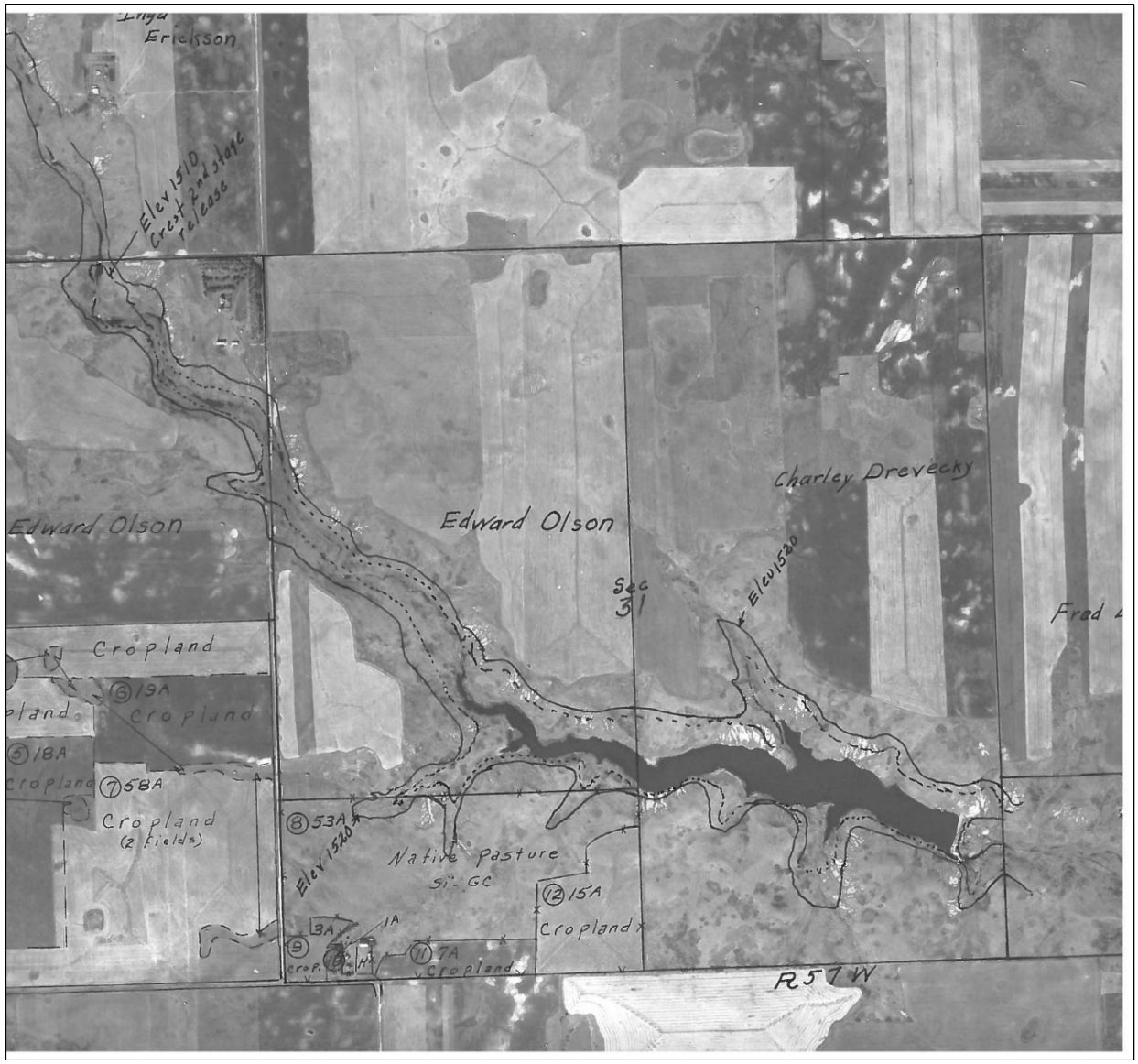

Figure 9: Aerial image showing Bylin Dam with projected impoundment levels.
(image source: NRCS archives).

Figure 10: Satellite image of Bylin Dam.
(NAIP 2022 orthoimage).

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4.4 Treaty of Old Crossing:

In the Treaty of Old Crossing (1863) the Red Lake and Pembina Bands of Chippewa ceded the majority of Walsh County to the United States (Figure 11). When the 1899 map is geo-referenced to ESRI standards, the undertaking clearly lies within the ceded land (Figure 12).

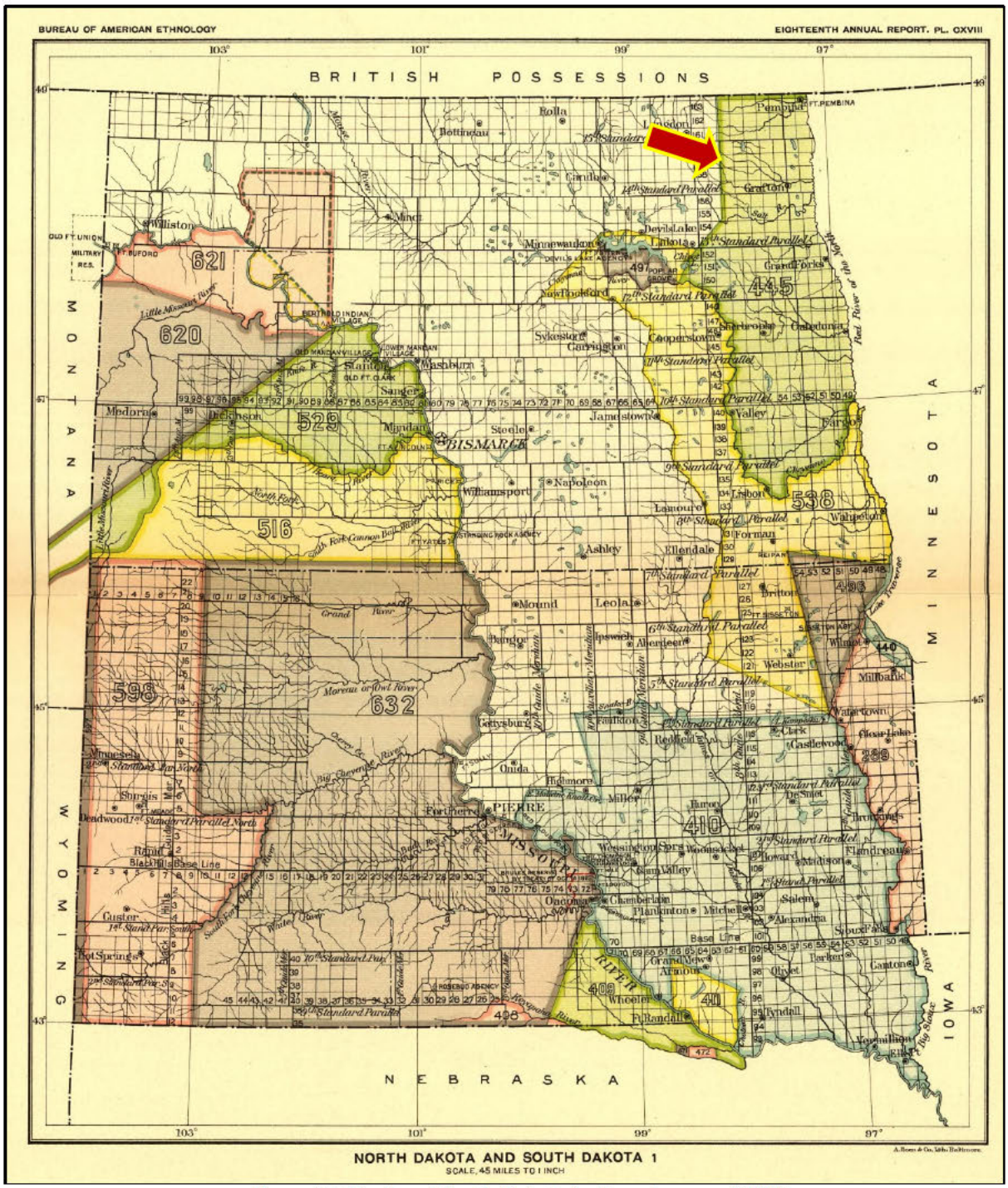

Figure 11: North and South Dakota land cessions as of 1899.
(image source: https://www.loc.gov/item/13023487/)

Figure 12: Close up of 1899 map showing Walsh County and approximate APE (star).
(image source: https://www.loc.gov/item/13023487/)

5.0 Field Research:

On October 5-6, 2021, a Class III pedestrian survey of the project APE was conducted. Pedestrian survey was undertaken on all accessible areas of the 140-acre APE by a team of four individuals using 15-meter transect intervals. Ground visibility ranged from 25-70% with thin topsoil and exposed boulders in the west part of the APE, cropland/pasture in the east part of the APE, and a mixture of bottomland throughout (Figures 13, 14 & 15). A total of ten (10) shovel probes were conducted in two areas identified as being most likely to possess subsurface cultural deposits based on soil types and lack of historical agricultural impacts. One previously unrecorded site, 32WA837 (Dougherty Dam), was documented during this investigation.

On August 15, 2022, a Class III pedestrian survey was conducted on a 26-acre parcel of the APE to which access was denied by the landowner in 2021 (Figure 2). The pedestrian survey was completed by a team of two individuals using 15-meter transect intervals. The ground surface visibility was approximately 20 percent through heavily grazed short grass cover with areas of higher visibility in cattle trails and sparsely vegetated areas on the slopes and shoreline of the reservoir. Abundant glacial erratics are present at the surface across this area of the APE (Figures 16 & 17). There is an occupied farmstead just south of the boundary of this portion of the APE in [redacted] that sits on the valley edge within the boundary of site lead 32WAX62 (Figure 18). The portion of site lead 32WAX62 that is within the survey area largely consists of the valley slope below the active farmstead, which is an unlikely location for the former Norton Post Office. Two foundation features (site lead 32WAX254) were recorded during this investigation and are located just below the active farmstead in the [redacted]

Figure 13: Example of western-most APE.

[redacted]

Figure 14: Pastureland in the eastern APE.

[redacted]

Figure 15: Example of river bottoms.

[redacted]

Figure 16: Overview of the additional parcel surveyed in 2022, looking northeast.

Figure 17: Overview of the additional parcel surveyed in 2022, looking north-northeast.

Figure 18: Active farmstead located south of the APE in [redacted] within the boundary of site lead 32WAX62, looking southwest.

5.1 Shovel Probes:

Ten shovel probes were conducted in the two locations most likely to possess subsurface cultural resources (Figures 19 & 20). Each location was chosen due to its level topography, and elevation on native range that provided observation of wildlife in the river bottomlands. Each shovel probe was dug with a 30 (+/-) centimeter diameter in arbitrary 10-centimeter (+/-) levels to 50 centimeters below surface or until impermeable clay or subsurface rock was encountered. The matrix was screened through a 0.25-inch wire mesh over a tarpaulin. All excavated shovel probes were negative for cultural materials (Table 3).

Shovel Probe	Depth CMBS	Location	Artifacts	Comment
1	40	[redacted]	NO	NATIVE RANGE
2	37		NO	NATIVE RANGE
3	28		NO	NATIVE RANGE
4	34		NO	NATIVE RANGE
5	35		NO	NATIVE RANGE
6	36		NO	NATIVE RANGE
7	39		NO	NATIVE RANGE
8	30		NO	NATIVE RANGE
9	32		NO	NATIVE RANGE
10	41		NO	NATIVE RANGE

Table 3: Shovel probe data.

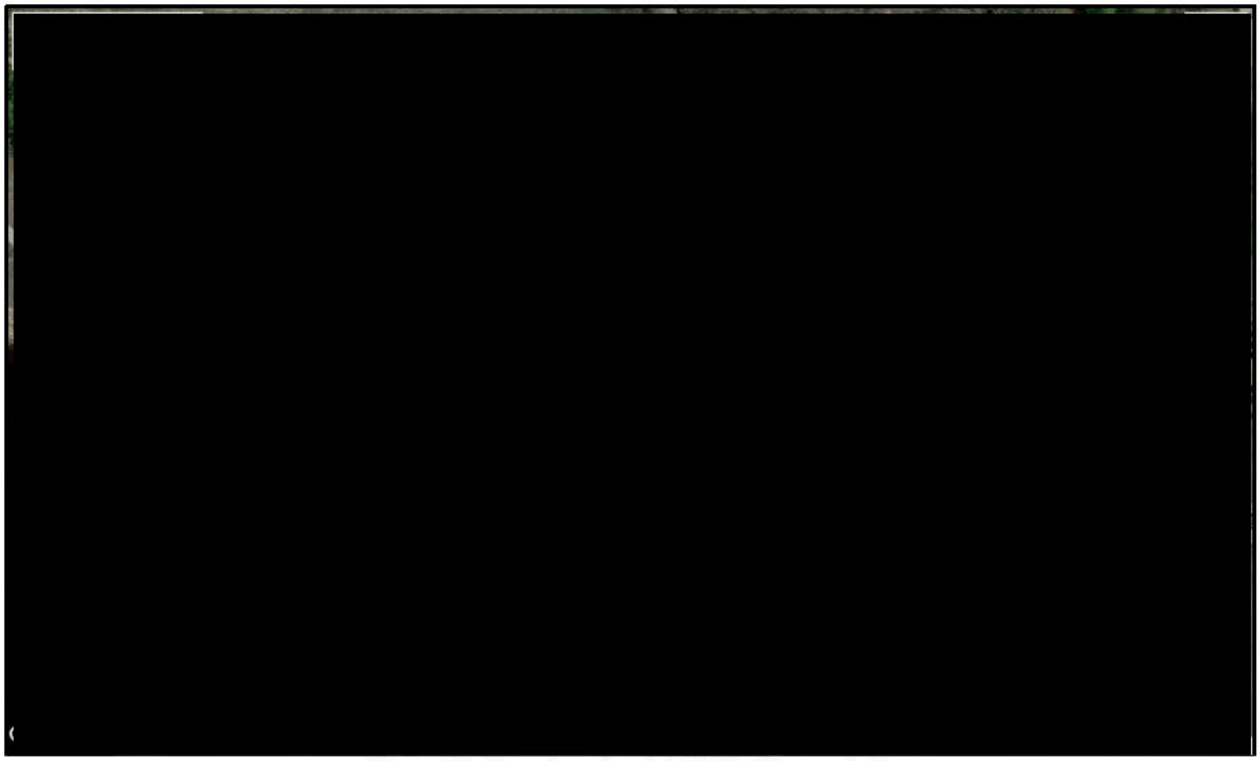

Figure 19: Shovel probes 1-5. Bylin Dam on left
Image Source: Google Earth 2016.

Figure 20: Shovel probes 6-10. Bylin Dam and primary spillway visible lower 1/3rd.
Image Source: Google Earth 2016.

5.2 Documented Sites and Site Leads:

Site 32WA837 (Dougherty Dam)

[redacted] is Dougherty Dam (Figure 21). The *North Branch Forest River Damn No.1 (Bylin Dam) Draft Feasibility Report and Plan of Work* (NRCS 2020) describes the dam:

> *Directly upstream and adjacent to Bylin Dam is Dougherty Dam. Dougherty Dam was built in 1935, originally for recreation, approximately 29 years before the construction of the Bylin Dam. Bylin Dam, built to provide both flood control and recreational benefits, was designed to submerge Dougherty Dam, thus the 22 square mile catchment of Bylin Dam encompasses the catchment of the Dougherty Dam. Dougherty Dam is often exposed during periods of low water (pg. 10).*

Structure 32WA837 was built in 1935 and consists of two features, an earthen berm (Figure 26) and a stone spillway (Figures 22-25). Its most notable characteristic is the stone spillway that looks to be made of locally sourced/quarried stone. The spillway measures 45 feet (14 meters) in width. Both dam wings are obtuse scalene angles. From the top of the spillway, the south wing measures 17 feet (5.22 m) high and 40 feet (12.4 m) at the base. The north wing measures 14 feet (4.40 m) high and 29 feet (8.90m) at the base. Dougherty Dam is currently under the ownership of the Walsh County Water Resource District.

Figure 21: 2016 Satellite view of Dougherty Dam in reference to Bylin Dam.
Image Source: Google Earth.

Figure 22: Dougherty Dam. View faces south.

[redacted]

Figure 23: Dougherty Dam. View faces north

Figure 24: Dougherty Dam south wing. View faces southeast.

Figure 25: Dougherty Dam. View faces north and north wing visible.

Figure 26: Dougherty Dam water impoundment earthen berm (left). View faces east.

32WAX62 (Norton Post Office)(Site Lead)

There is very little information regarding the former Norton Post Office, which was first reported in 1978 to have been located in the [redacted]. There have been two

subsequent cultural resources surveys (MS# 008427 and MS# 015776) that traverse the boundary of site lead 32WAX62 but neither survey report makes mention of or documents a revisit to the site lead (Appendix B: Figure B3). The portion of site lead 32WAX62 that is within the current survey area largely consists of the valley slope below an active farmstead, which is an unlikely location for the former Norton Post Office (Figure 18). Unsurprisingly, there is no indication of a post office in the location reported on the 1883 plat map (Figure 4). Also, no entry for a Norton Post Office could be found in the Postmaster Finder on the USPS website, which lists active and discontinued postal locations by state (USPS 2023). The oldest available aerial imagery from 1962 only shows structures associated with the farmstead within the boundary of site lead 32WAX62 (Appendix B: Figure B4). No cultural materials or features clearly identifiable with a former post office were observed during this investigation.

32WAX254 (Site Lead)

Two stone foundation outlines, located in the [redacted] were recorded during this investigation. Both foundation features sit on the edge of the valley rim just below an active farmstead and near the northern edge of the SHPO provided boundary for site lead 32WAX62 (Figure 18). The modern farmyard contains six structures and several silos. The oldest available aerial imagery for the area dates to 1962 and shows the farmstead containing seven structures and a silo. Four of the structures appear in both the 1962 and the 2022 orthoimages. The two stone foundation outlines recorded correlate very closely to two structures visible in the 1962 orthoimage in terms of size, shape, orientation, and location within the farmyard (Appendix B: Figure B5).

Feature 1 measures 8.6 meters (28.2 feet) long and 4.8 meters (15.7 feet) wide and is located right along the valley rim on the north edge of the farmstead. Feature 2 measures 7.8 meters (25.6 feet) long and 6.1 meters (20 feet) wide and is located approximately 22 meters downslope and to the north of Feature 1 (Appendix B: B5). Both features consist of large cobble-small boulder sized stones of local origin arranged in a rectangular shape with the long axis oriented east-west. Feature 1 has a complete outline of stones and Feature 2 is less well-defined with the west edge having the most complete stone alignment (Figures 27-29). No additional cultural material was observed in the vicinity of these features. Since these features are associated with structures that have been removed from a continuously occupied farmstead that is still active, the features are being recorded as a site lead.

Report continues next page.

Figure 27: Site lead 32WAX254 Feature 1, looking east.

Figure 28: Site lead 32WAX254 Feature 2, looking south-southeast.

Figure 29: Overview of Feature 1 and Feature 2 at site lead 32WAX254, looking west.

6.0 Discussion:

The Class III investigations of the APE resulted in the recordation of one new historic period structure, 32WA837 (Dougherty Dam). These investigations also recorded one new site lead, 32WAX254, and a portion of site lead 32WAX62 was revisited. The following discussion pertains to the NRHP eligibility and determination of effects for each site/site lead. The NDCRS site forms with additional details for each site/site lead are available upon request.

32WA837 (Dougherty Dam)

The design, materials, and workmanship of structure 32WA837 bear resemblance to other Federal relief era conservation structures and the structure meets several criteria for the evaluation of NRHP eligibility of Depression era conservation structures in North Dakota. As described in the SHPO historic context entitled *"Federal Relief Construction in North Dakota, 1931-1943,"* (2010) these include Criterion A and Criterion C. Eligibility for the NRHP may be argued under Criterion A for the association with social history and economics in the country during the Great Depression and the Federal relief response to those conditions. Under Criterion C, eligibility may also be considered as the design, workmanship, and materials of 32WA837 resemble those distinctive of Federal relief era conservation structures in the region. Both features of structure 32WA837 retain most aspects of integrity and are in good condition. Consultation with ND SHPO has determined that Dougherty Dam is eligible for listing in the NRHP under Criterion A and Criterion C (Appendix C).

Analysis of the new impoundment area at the various flood stages shows that the proposed undertaking to rehabilitate the Bylin Dam, will not significantly alter the current condition of structure 32WA837 or lead to additional impacts. The modest increase to the height of Bylin Dam will also not impact the viewshed from structure 32WA837 as Bylin Dam is not visible from 32WA837 due to terrain and a bend in the reservoir/channel between the two structures.

Considering the comparable effect of the proposed undertakings to the conditions currently found at the location of structure 32WA837, the NRCS has rendered a determination of ***no adverse effect*** for the Bylin Dam rehabilitation project with respect to structure 32WA837.

32WAX62 (Norton Post Office) (Site Lead)
Site lead 32WA62 was reported in 1978 as the former location of the Norton Post Office. The portion of site lead that is within the current survey area largely consists of the valley slope below an active farmstead and was subject to intensive pedestrian survey during this investigation. No cultural materials or features identifiable with a former post office were observed during these investigations. The site lead location remains unverified. The boundary of the site lead is located well above the 500-year flood stage for the Bylin Dam, post-rehabilitation, and outside of the areas of ground disturbance associated with the proposed undertaking. The proposed rehabilitation of Bylin Dam poses no direct or indirect effects to 32WAX62.

32WAX254 (Site Lead)
The two stone foundation outline features located at site lead 32WAX254 are clearly related to former structures associated with the adjacent farmstead. These features are part of a larger farmstead complex that is currently still active and occupied, and largely located outside of the project APE. Since the majority of the farmstead was not recorded as part of this investigation the recorded features and the associated farmstead complex are being documented as a site lead.

The additional information necessary to determine the NRHP eligibility of the farmstead and its relationship to the recorded features is outside of the scope of this investigation and the eligibility status of this site lead remains unevaluated. Both recorded features are located well above the 500-year flood stage for the Bylin Dam, post-rehabilitation, and outside of the areas of ground disturbance associated with the proposed undertaking. Therefore, the proposed rehabilitation of Bylin Dam poses no direct or indirect effects to 32WAX254.

Bylin Dam
As Bylin Dam exceeds 50 years in age, a discussion of its NRHP eligibility is warranted. Bylin Dam was constructed in 1964 under local and Federal sponsorship between the Walsh County Water Resource District and the NRCS. The purpose of the dam was to provide flood control and reduce erosion within a high-hazard portion of the North Branch Forest River Watershed. Bylin Dam *may* have been subject to the Reservoir Salvage Act of 1960 but no cultural resource reports for the dam construction could be found.

The dam embankment is constructed from impervious glacial fill material. The top of the dam is 58 feet high and 26 feet wide. The auxiliary spillway is a 300-foot-wide earthen spillway with a 15% average slope cut into the existing hill slope south of the embankment. The principal spillway consists of a concrete open top riser tower with an anti-vortex baffle that is connected to a 30-inch conduit that carries flow through the embankment (Figures 30-34).

The proposed rehabilitation plan for Bylin Dam is to raise the top of dam elevation by 3.91 feet to accommodate the appropriate design event for a high-hazard dam. Additional fill will be placed on the downstream embankment slope at the dam to allow for the raise to the top of the

Figure 30: View of the crest of Bylin Dam, looking southeast.

Figure 31: Downstream embankment slope of Bylin Dam, looking northwest.

Figure 32: Auxiliary spillway of Bylin Dam, looking west toward the dam.

Figure 33: Primary spillway riser tower for Bylin Dam, looking west.

Figure 34: Primary spillway outlet for Bylin Dam, looking south.

dam and to improve slope stability. The auxiliary spillway will be hardened by lining the spillway chute with articulated concrete block. The existing principal spillway riser tower will be replaced by a riser tower with a larger opening, as required by current dam safety standards. The replacement riser tower will be constructed to the same elevation as the existing riser tower, meaning that there will be no change in permanent pool elevation behind the dam. Jack and bore construction will be used to replace the principal spillway conduit through the existing dam. The conduit outlet will be riprapped to dissipate the erosional force at the outlet (NRCS 2022) (Appendix A).

The dam does retain most elements of integrity as it has not been subject to significant alterations to its design and the surrounding setting has undergone little change over the years in terms of land use and/or alterations to the built environment. The 1964 construction date of the dam is more contemporary than the defined period of 1931-1943 of the ND SHPO historic context for federal relief construction in North Dakota. While it was constructed with the use of federal funds, it does not fall under the broader context of New Deal initiated public works aimed at recovering the Nation from the effects of the Great Depression (Criterion A). Nor does it fall into any other historical context that can be shown to be of similar significance locally. The dam structure and its construction are not associated with any historically significant person(s) (Criterion B), is of common and ubiquitous design (Criterion C), and does not possess the potential to yield additional historically significant information (Criterion D). Though the Bylin Dam does retain a high degree of integrity, it does not satisfy any of the NRHP criteria for eligibility. Adequate information

regarding the engineering design, function, and purpose of the dam is available in historical records including as-built design plans, operations and maintenance plans, and inspection reports maintained by the NRCS and the Walsh County Water Resource District. The proposed modifications to the dam will not significantly alter the position or function of the dam or its impoundment zone and, thus, do not pose an adverse effect to the integrity or eligibility status of surrounding cultural resource sites. The Bylin Dam is recommended ineligible for inclusion in the NRHP. Considering that Bylin Dam does not meet the qualifying criteria for a historic property, the proposed undertaking will have no effect.

7.0 Recommendations:

The NRCS has consultation obligations with federally recognized, sovereign Native American groups. The undertaking is located within land ceded by the Red Lake and Pembina Bands of Chippewa Indians, ancestors of the Turtle Mountain Band of Chippewa Indians and Red Lake Nation. Consultation may reveal additional locations in need of consideration and/or protection from adverse effects.

Historic maps, aerial/satellite imagery, and pedestrian survey reveal that the APE consists primarily of steep slopes except in the areas immediately upstream of Bylin Dam. There has been extensive disturbance near the dam from the construction of the dam, sediment accumulation upstream, and erosion near the downstream dam outlet. Decades of agricultural production and anthropogenic modification of the river channel makes the inadvertent discovery of cultural resources unlikely. Regardless, the Bylin Dam water impoundment may possess items, both historic and precontact, that have washed into the APE from higher elevations or were inundated in 1964 during construction. Workers should be provided awareness and response training in the event cultural resources are encountered.

Of the three cultural resources within the project APE, two are site leads (32WAX62 and 32WAX254) that are unevaluated for NRHP eligibility but the proposed undertaking will have *no effect* with respect to these site leads. The Dougherty Dam (32WA837) has been determined to be a NRHP eligible historic property and the proposed undertaking has been determined to have *no adverse effect* with respect to 32WA837. The Bylin Dam structure does not meet the criteria to be an eligible or potentially eligible historic property and the proposed modifications will therefore have *no effect* with respect to Bylin Dam.

In accordance with 36CFR§800.11(d) a finding of ***"No Adverse Effect"*** to historic properties is recommended for the Bylin Dam rehabilitation project. Pursuant to 54USC§302303(b), ND SHPO has determined that the Dougherty Dam is eligible for inclusion in the National Register of Historic Places and the proposed undertaking will not adversely affect its integrity or eligibility status.

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Appendix A: Bylin Dam Rehabilitation Engineering Plan

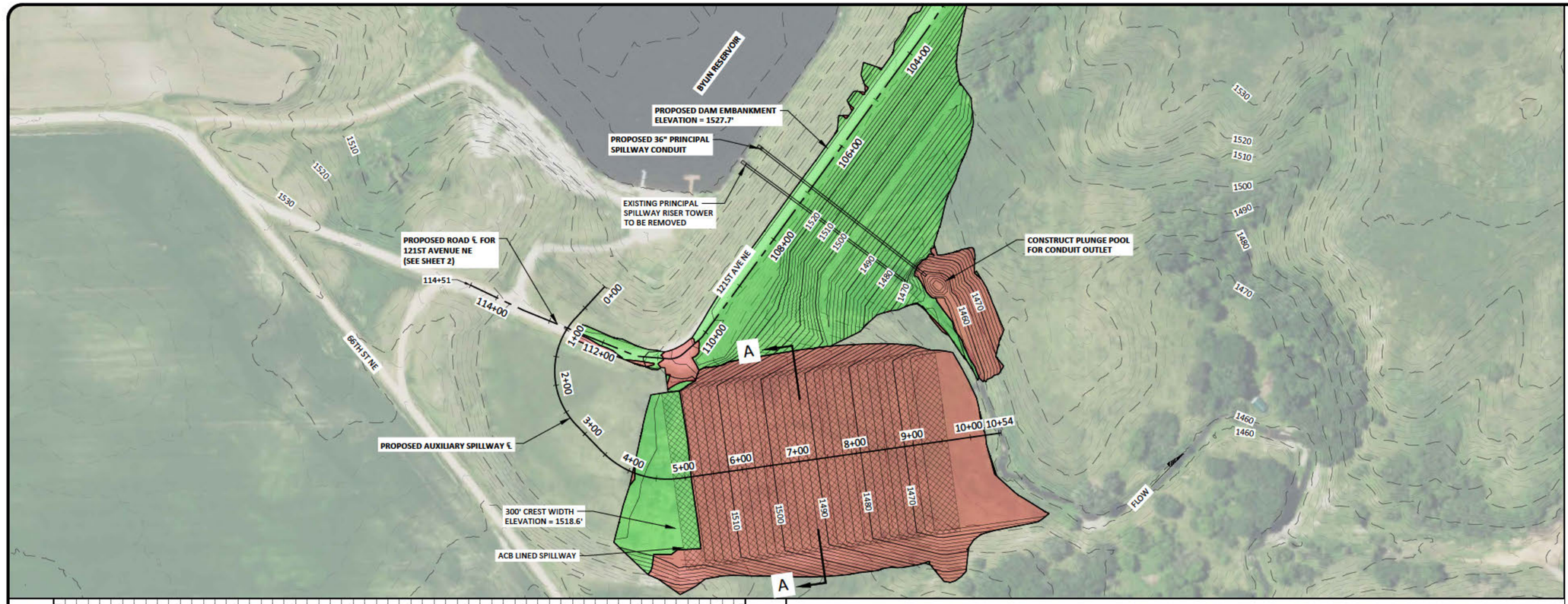
Appendix B: Report Figures with Site Locational Data

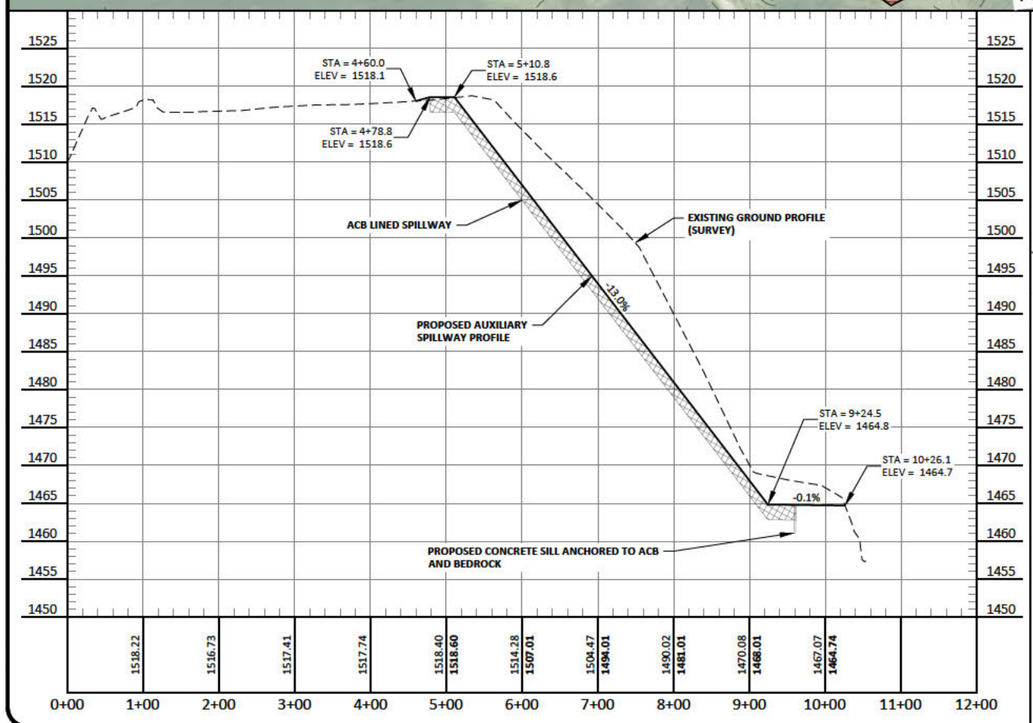
Appendix C: Interagency Communication and Records

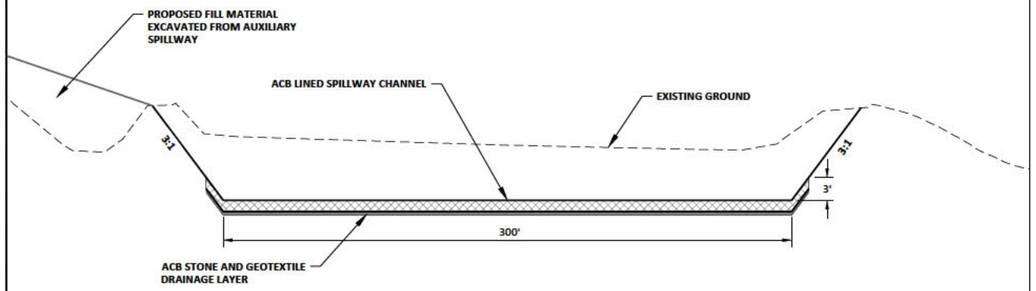
Appendix A

Bylin Dam

Rehabilitation Engineering Plans







SECTION A-A
NOT TO SCALE

N

100 0 100 200
Scale Feet

NOTES:
1. 2020 NAIP AERIAL IMAGERY
2. ALL ELEVATIONS REFERENCE NAVD 1988 VERTICAL DATUM
3. TOPOGRAPHIC SURVEY DATA COLLECTED IN JULY 2020
4. ARTICULATED CONCRETE BLOCK (ACB) DESIGN BASED ON REQUIREMENTS IN CHAPTER 54, PART 628, NATIONAL ENGINEERING HANDBOOK

CUT
FILL
ACB
ACB DRAINAGE LAYER

PRELIMINARY
NOT FOR CONSTRUCTION

No.	Revision	Date	By

HOUSTON engineering, inc.

Drawn by	Date
RCG, ZCF	2-11-22
Checked by	Scale
PDL	AS SHOWN

BYLIN DAM REVIEW POINT 4
WALSH COUNTY WATER RESOURCE DISTRICT
GRAFTON, ND

AUXILIARY SPILLWAY PLAN & PROFILE
PROJECT NO. 7135-0037

SHEET 1 of 4

H:\JBN\7100\7135\7135_0037\CAD\Plan\0- Proposed P&P ACB Raise Dam 3.9'.dwg-P&P - ACB Spillway Algn- 2/23/2022 2:23 PM-(rglatt)

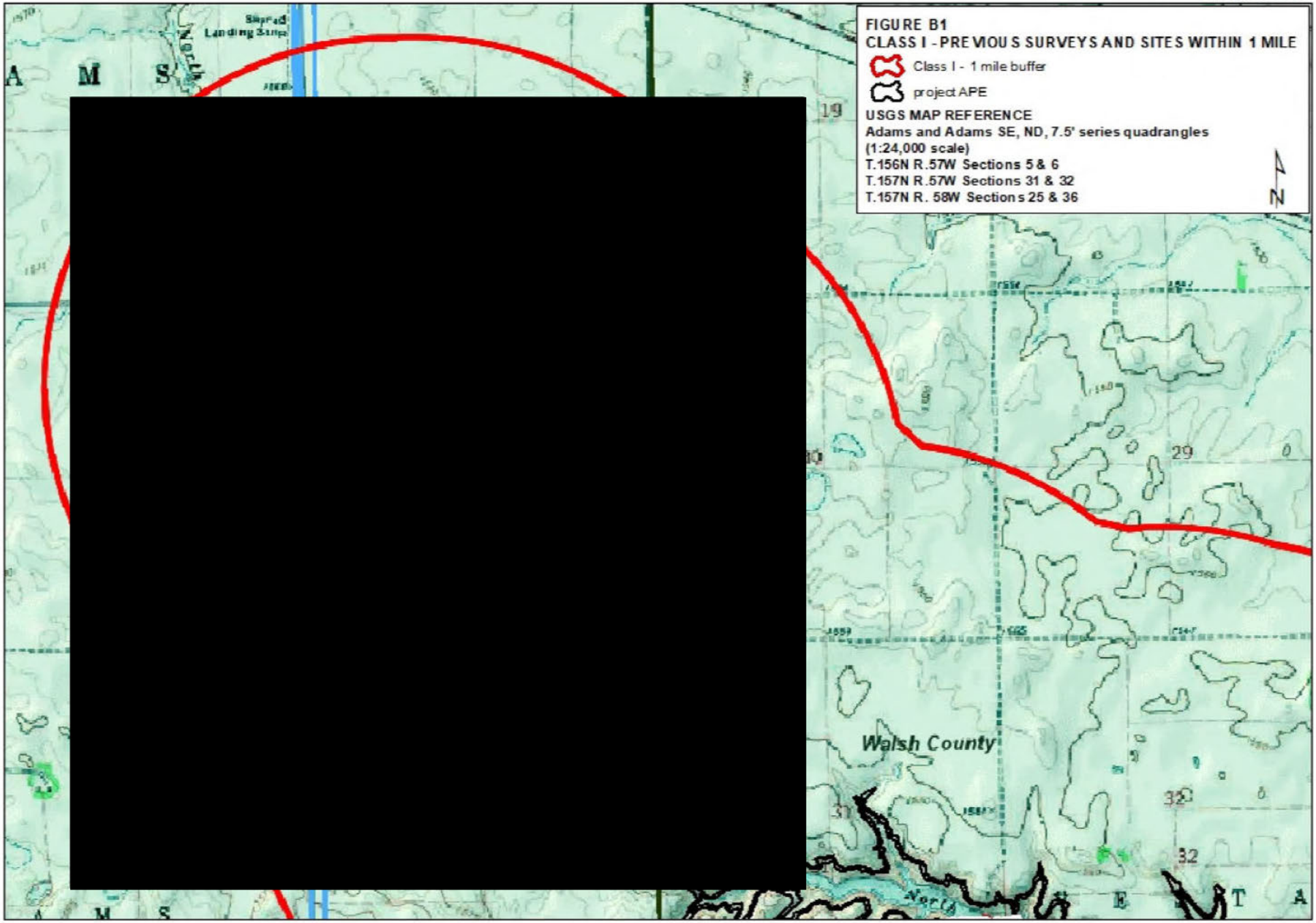
HEI NO. 7135-0037

Appendix B

Report Figures with Site Locational Data

NATURAL RESOURCES CONSERVATION SERVICE (NORTH DAKOTA)

Bylin Dam Rehabilitation
Project Name



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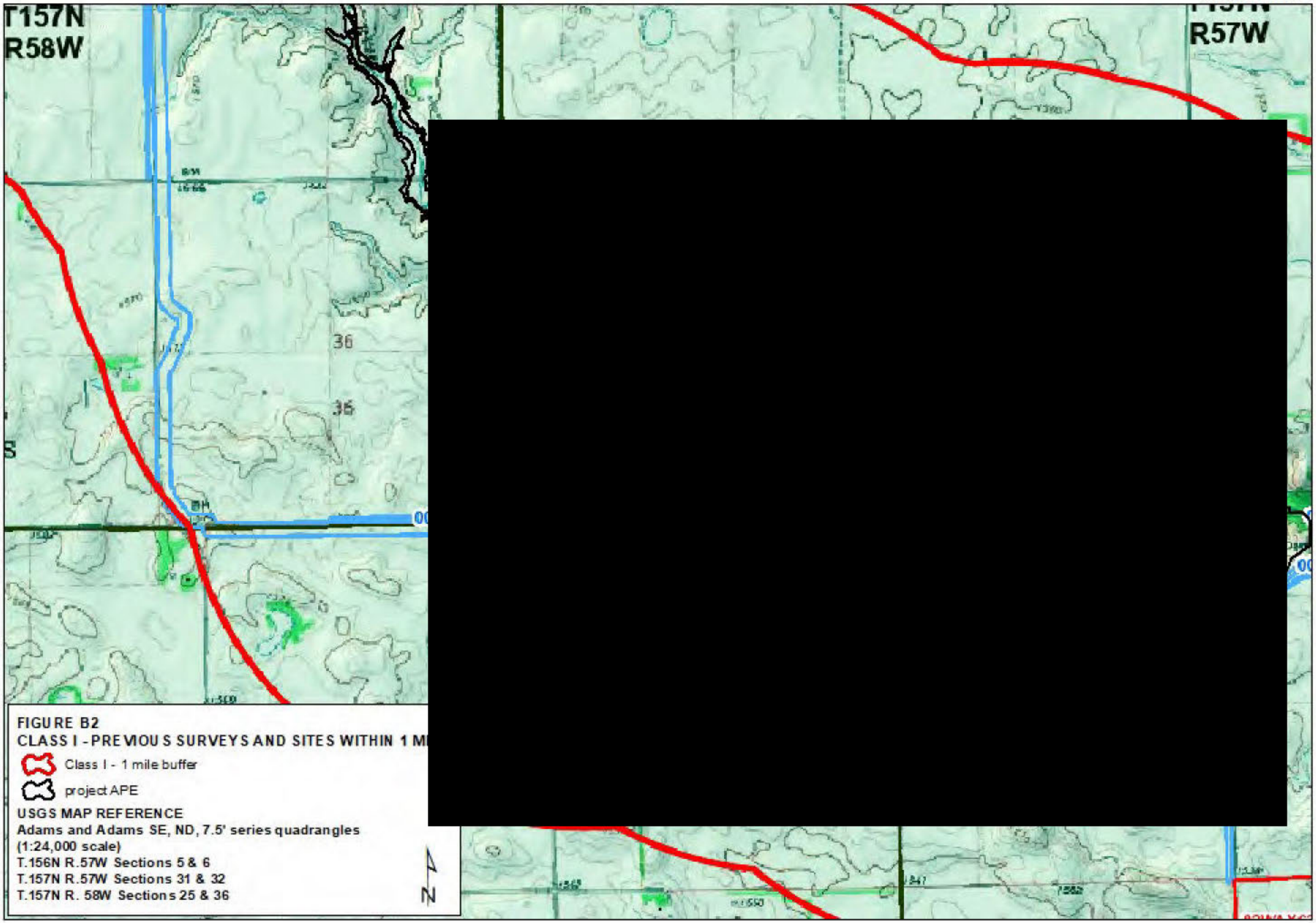
Bylin Dam Rehabilitation
Project Name



NATURAL RESOURCES CONSERVATION SERVICE (NORTH DAKOTA)

Bylin Dam Rehabilitation
Project Name

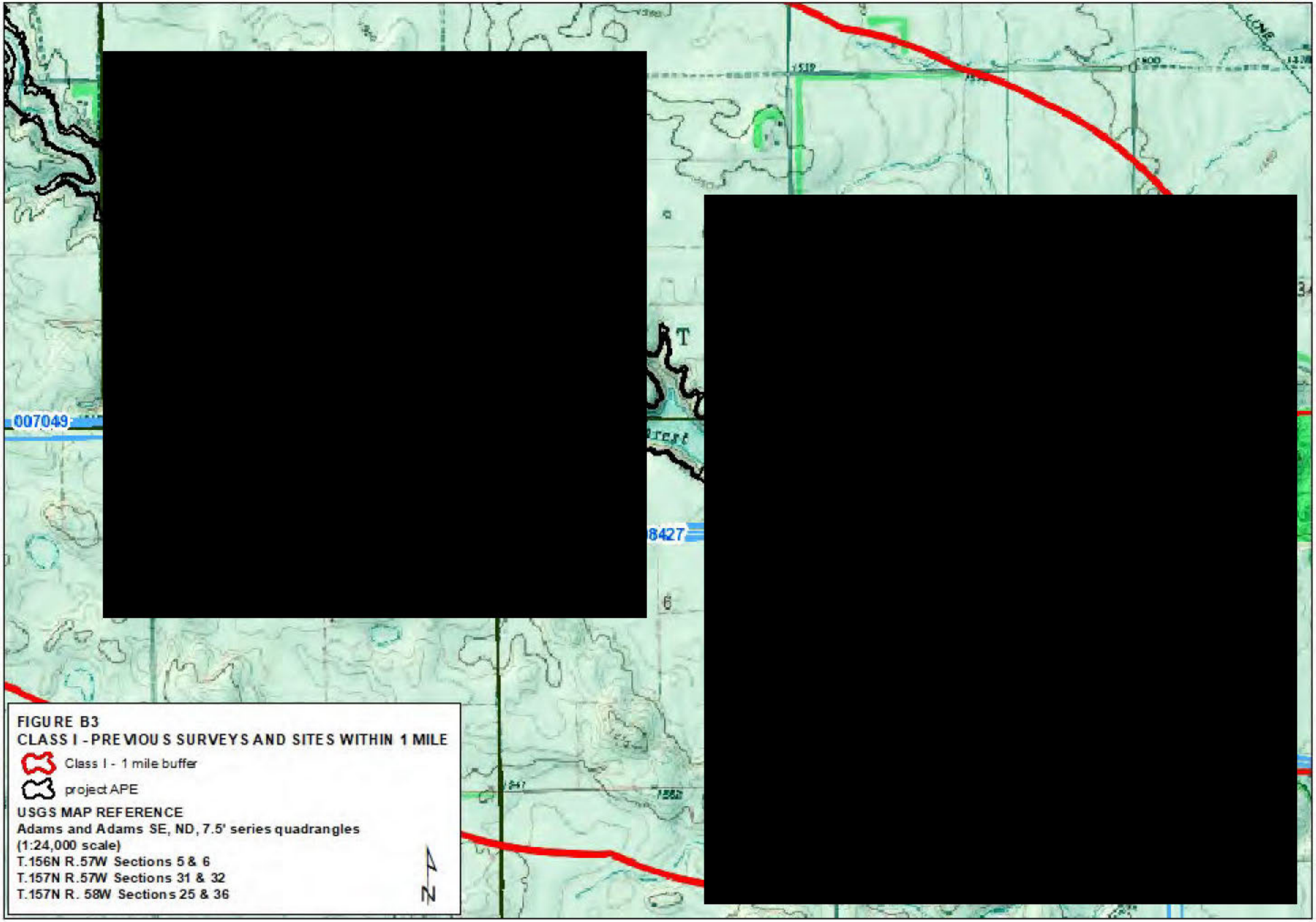


FIGURE B3
CLASS I - PREVIOUS SURVEYS AND SITES WITHIN 1 MILE

Class I - 1 mile buffer

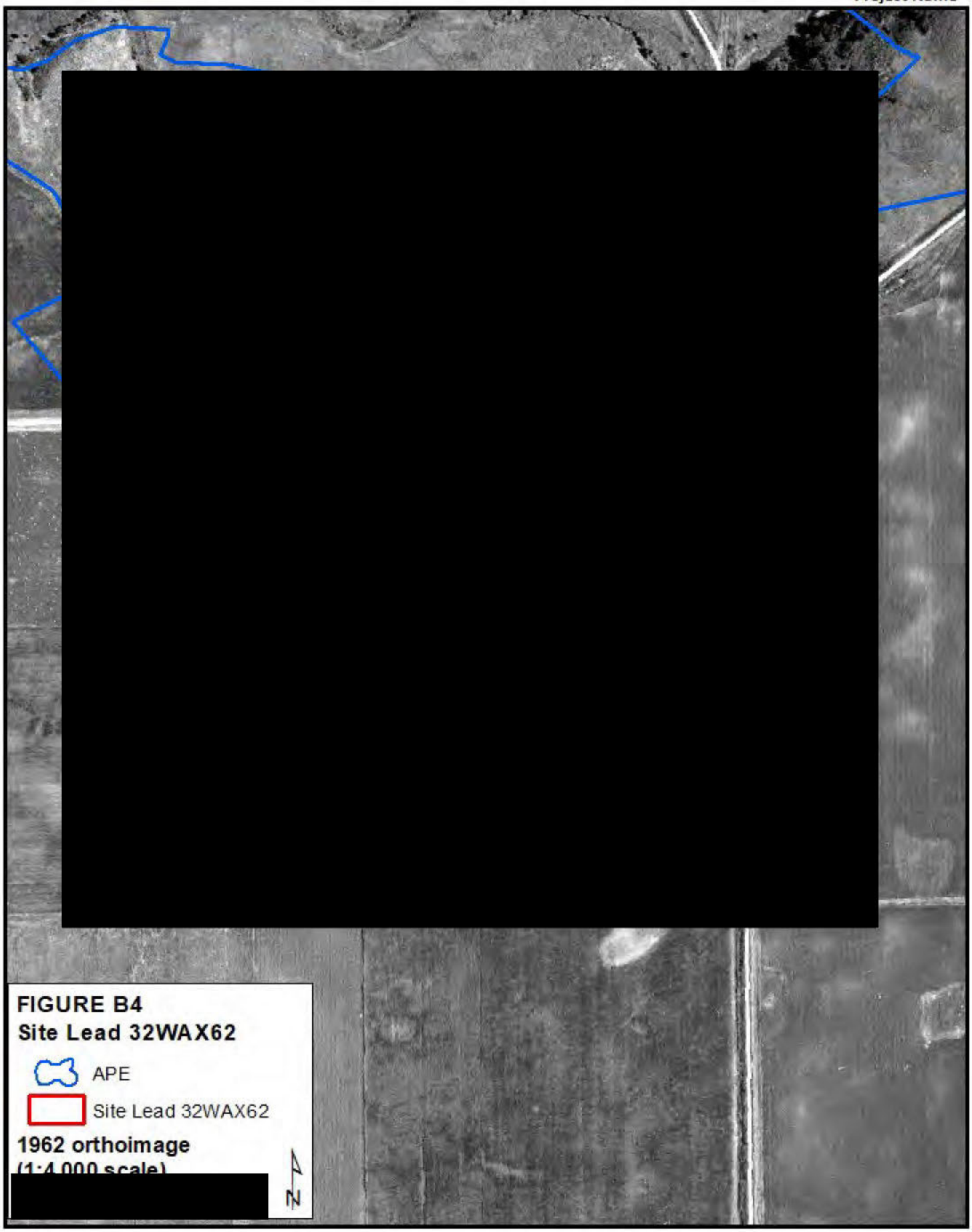
project APE

USGS MAP REFERENCE
Adams and Adams SE, ND, 7.5' series quadrangles
(1:24,000 scale)
T.156N R.57W Sections 5 & 6
T.157N R.57W Sections 31 & 32
T.157N R. 58W Sections 25 & 36

N

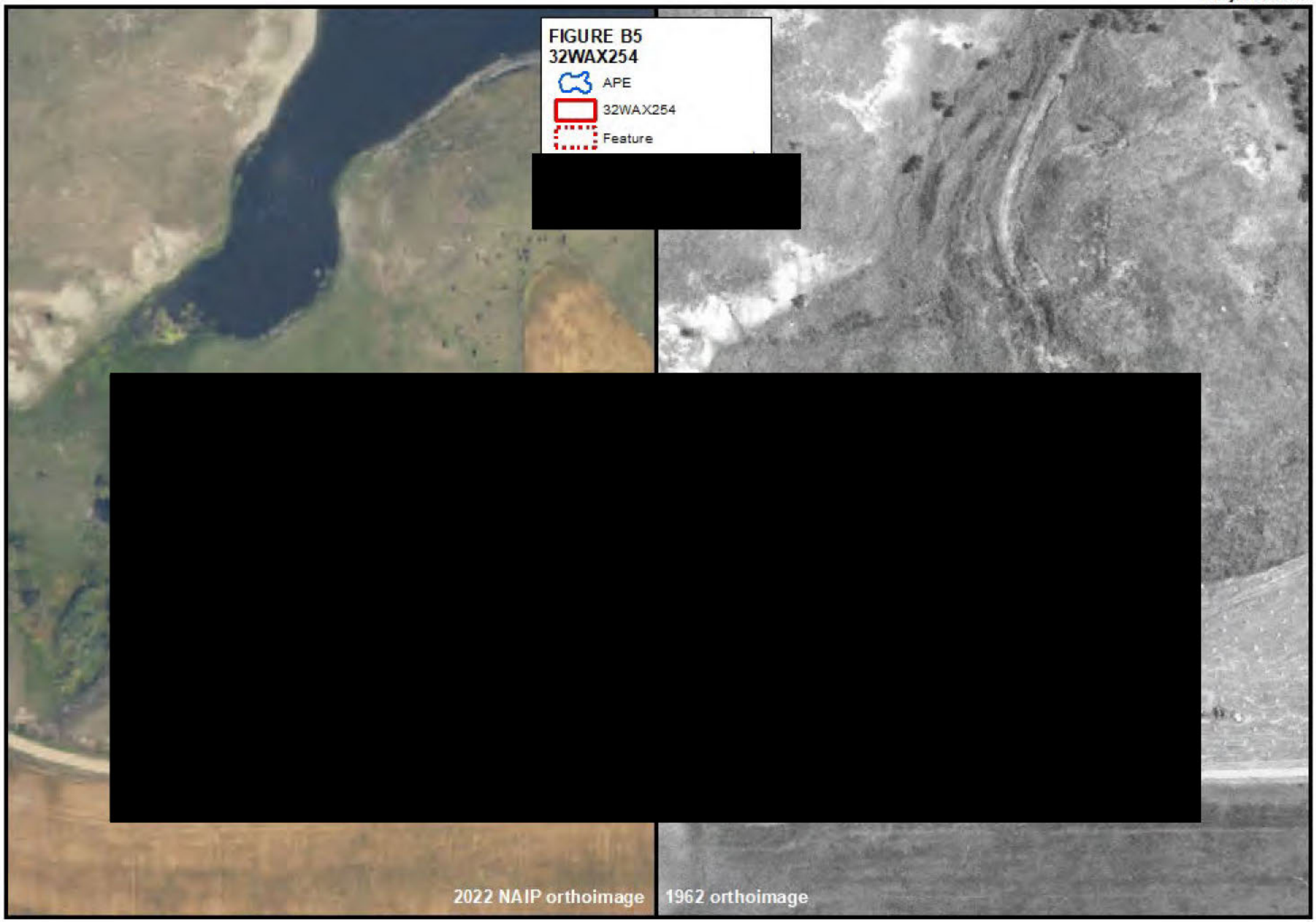
NATURAL RESOURCES CONSERVATION SERVICE (NORTH DAKOTA)

Bylin Dam Rehabilitation
Project Name



NATURAL RESOURCES CONSERVATION SERVICE (NORTH DAKOTA)

Bylin Dam Rehabilitation
Project Name



Appendix C

Interagency Communication

United States Department of Agriculture

Natural Resources
Conservation Service

Bismarck State Office
PO Box 1458
Bismarck, ND
58502-1458

Voice 701.530.2011
Fax 855-813-7556

March 9, 2022

Dr. William D. Peterson
Director
State Historical Society of North Dakota
612 East Boulevard Ave.
Bismarck, North Dakota 58505

RE: Request for determination of NRHP eligibility for site 32WA837

Dear Dr. Peterson:

The Natural Resources Conservation Service North Dakota (NRCS) is requesting a determination of eligibility for the National Register of Historic Places (NRHP) for structure 32WA837. The NRCS is developing plans for rehabilitation of the North Branch Forest River Dam No. 1 (also known as Bylin Dam), located in Walsh County, ND, T156N R57W, NW¼ of Section 5 and NE¼ of Section 6, Adams SE (1990) USGS 7.5- minute quad map. The area of potential effects (APE) for the dam rehabilitation project encompasses approximately 249 acres in portions of T156N R57W (Sections 5 and 6), T157N R57W (Sections 31 and 32), and T157N R58W (Sections 25 and 36) (see attached Project Map 1). Most of the APE consists of 20-30 degree slopes, river bottomland, or areas with previous ground disturbance. The APE was established through estimation of maximum water impoundment during a flood event and the proposed area of ground disturbance near the existing dam structure.

Construction for the North Branch Forest River Watershed Dam No. 1 (hereafter referred to as Bylin Dam) was completed in 1964 to provide flood control and reduce erosion within a high-hazard portion of the North Branch Forest River Watershed. The design life of Bylin Dam was designated as 50 years from the construction date. The design life has been exceeded, and several deficiencies at the dam site have been noted, including inadequate spillway hydraulic capacity, erodibility potential of the auxiliary spillway, inadequate embankment slope stability, and incompatibility of the embankment drainage system. The dam currently does not meet NRCS or State of North Dakota dam safety criteria and poses risk to human life and downstream infrastructure, land, and natural resources. The Natural Resources Conservation Service proposes construction activities to bring the Bylin Dam into compliance with current performance, design, and safety standards. The undertaking will increase the water impoundment surface area volume and will involve considerable ground disturbance within the immediate vicinity of the dam structure.

A Class I records review indicated no cultural resource sites have been previously recorded within or adjacent to the proposed project APE. A Class III inventory of the APE identified a single historic period structure consisting of a smaller non-

functional dam located within the current impoundment area and upstream of the Bylin Dam. This historic period dam structure has been designated as 32WA837 (Dougherty Dam) and is currently unevaluated for National Register of Historic Places (NRHP) eligibility status. Structure 32WA837 consists of two features, an earthen berm (Feature 1) and a stone spillway (Feature 2), the details of which are described in the enclosed NDCRS site form. Built in 1935, the design, materials, and workmanship of structure 32WA837 bear resemblance to other Federal relief era conservation structures and the structure meets several criteria for the evaluation of NRHP eligibility of Depression era conservation structures in North Dakota. As described in the North Dakota State Historic Preservation Office's (SHPO) historic context entitled "Federal Relief Construction in North Dakota, 1931-1943," these include Criterion A and Criterion C. Eligibility for the NRHP may be argued under Criterion A for the association with social history and economics in the country during the Great Depression and the Federal relief response to those conditions. Under Criterion C, eligibility may also be considered as the design, workmanship, and materials of 32WA837 resemble those distinctive of Federal relief era conservation structures in the region. Both features of Structure 32WA837 retain most aspects of integrity and are in good condition (see references and photographs in attached NDCRS site form).

The preferred alternative for the Bylin Dam rehabilitation project is "to raise the top of dam elevation to accommodate the appropriate design event for a high-hazard dam, harden the auxiliary spillway by using articulated concrete block within the spillway chute, replace the existing principal spillway conduit and riser tower, and reduce the downstream embankment slope at the dam to improve slope stability" (2022 NRCS Preliminary Draft Watershed Plan). The impact of these activities on structure 32WA837 will be similar in nature to the existing impacts from the current Bylin Dam impoundment. Structure 32WA837 is periodically inundated by several feet of water during flood events from the 25-year flood stage (3.3 feet) to the 500-year flood stage (up to 14 feet). The proposed undertaking would raise the top of the Bylin Dam by approximately four feet, which will result in modest changes to the depth of inundation of 32WA837 at the various flood stages. At the more frequent flood intervals of 2-10 years, there would be no change in inundation depth and the structure will primarily be above the reservoir level. At less frequent flood intervals of 25-50 years, the depth of inundation of the structure will decrease by up to 1.5 feet. At the least frequent flood intervals of 100-500 years, the depth of inundation of 32WA837 will only increase by less than one foot. Basically, the improvements proposed for the Bylin Dam will not change the frequency of inundation for structure 32WA837 but it will change the depth of water by an increase or decrease of less than two feet when inundated. Due to its location in an area of still water within the reservoir, there will be no increase to erosion around structure 32WA837 due to the proposed rehabilitation of the Bylin Dam.

The impacts of the undertaking, including ground disturbance and raised flood-

stage impoundment area, will not directly or indirectly affect any additional known cultural resource sites. Preliminary analysis shows that the proposed undertakings to improve the Bylin Dam, will not significantly alter the current condition of structure 32WA837 or lead to additional impacts. The modest increase to the height of Bylin Dam will also not impact the viewshed from structure 32WA837 as Bylin Dam is not visible from 32WA837 due to terrain and a bend in the reservoir/channel upstream. The NRCS proposes that structure 32WA837 be considered ***eligible*** for inclusion in the NRHP under Criterion A and Criterion C, as described above and in the attached NDCRS site from. Considering the comparable effect of the proposed undertakings to the conditions currently found at the location of structure 32WA837, the NRCS would render a determination of ***no adverse effect*** for the Bylin Dam rehabilitation project with respect to structure 32WA837.

The NRCS seeks your concurrence with the proposed eligibility status and determination of effect for 32WA837 with regard to the proposed undertakings described herein for the Bylin Dam rehabilitation project. The results of this request will be included in formal consultation efforts planned for 2022. If you have any questions, please contact Sarah Laundry at (701) 530-2011 or by email at sarah.laundry@usda.gov.

Sincerely,

Sarah Laundry
State Cultural Resources Specialist

Enclosures (2):
Project Map 1 showing the proposed APE for Bylin Dam
NDCRS site form for 32WA837

NATURAL RESOURCES CONSERVATION SERVICE (NORTH DAKOTA)

Bylin Dam Rehabilitation Project APE

September 5, 2023

Dan Hovland
Staet COnservationist
NRCS
Bismarck State Office
PO Box 1458
Bismarck, ND 58502-1458

ND SHPO Ref.: 20-5446 "North Branch Forest River Dam No. 1 (Bylin Dam) Class III Cultural Resource Survey; [redacted] Sections [redacted] Dakota"

Dear Dan,

We have reviewed ND SHPO Ref.: 20-5446 "North Branch Forest River Dam No. 1 (Bylin Dam) [redacted] North Dakota" and we concur with a determination of "No Adverse Effect" for this project provided it takes place in the location and manner described in the documentation.

1. We've taken the liberty of correcting the locational info on the cover sheet (157-57-[redacted])
2. Please record the Bylin Dam as an architectural site.

Thank you for the opportunity to review this project. If you have any questions please contact Lisa Steckler, Historic Preservation Specialist at (701) 328-3577, e-mail lsteckler@nd.gov

Sincerely,

for William D. Peterson, PhD
State Historic Preservation Officer
(North Dakota)

20-5446

March 21, 2022

Ms. Sarah Laundry
NRCS
Bismarck State Office
PO Box 1458
Bismarck, ND 58502-1458

ND SHPO Ref 22-5421 Request for determination of NRHP eligibility for site 32WA837 in portions of [redacted] Walsh County, North Dakota

Dear Ms. Laundry,

We have reviewed ND SHPO Ref 22-5421 Request for determination of NRHP eligibility for site 32WA837 in portions of [redacted] County, North Dakota and we concur with a determination of "No Adverse Effect" for this project provided it takes place in the location and manner described in the documentation.

We further concur that 32WA837 is *Eligible* for listing in the National Register of Historic Places.

Thank you for the opportunity to review this project. If you have any questions please contact Lisa Steckler, Historic Preservation Specialist at (701) 328-3577, e-mail lsteckler@nd.gov

Sincerely,

for William D. Peterson, PhD
State Historic Preservation Officer
(North Dakota)

22-5421