A Class III Intensive Cultural Resources Survey for the Development of Spring and Buffalo Creeks Watershed Improvement Project Work Plan, Dawson County, Nebraska

By
David T. Williams

March 20, 2025

Principal Investigator – David T. Williams, MA, RPA

A report prepared for HDR, Inc.
By the State Archeology Office, Lincoln, Nebraska
A program of the Nebraska State Historical Society

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ABSTRACT

HDR, Inc., and Central Platte Natural Resources District requested the State Archeology Office (SAO), a division of the Nebraska State Historical Society, conduct a Class III intensive cultural resources investigation, including pedestrian survey, subsurface testing, and historic structure documentation, in advance of the proposed Spring and Buffalo Creeks Watershed Improvement Project Work Plan, Buffalo, Custer, and Dawson Counties, Nebraska. Proposed project activities are anticipated to include improvements, widening, and installation of new diversion conveyance channels along both Spring and Buffalo Creeks. The USDA Natural Resources Conservation Service (NRCS) is the lead federal agency for this project. The entire Spring and Buffalo Creeks watershed and proposed planning study area encompasses about 320,000 acres (ac), or about 500 square miles.

Based on project plans received from HDR, targeted survey areas near Cozad, Lexington, and Overton were established for completion of cultural resources survey efforts along the Spring and Buffalo Creek channels and proposed diversion conveyance footprints. These project areas of potential effects (APEs) covered a total of 234.49 hectares (ha) (612.09 acres [ac]) within Dawson County. Additional workspaces were added in 2022; the Lexington addition added 21.2 ha (52.39 ac) and the Overton addition added 5.9 ha (14.57 ac). Due to landowner access restrictions, 18.59 ha (45.95 ac) were not surveyed in the Cozad APE. The surveyed areas for the Cozad project area are located in portions of Sections 4, 5, 9, and 16, T10N R23W, and Sections 31 and 32, T11N R23W on the USGS 7.5' Cozad and Cozad NW quadrangles. The surveyed areas for the Lexington project area are located in portions of Sections 3, 4, 6–11, 13, and 14, T9N R21W, Sections 31–33, T10N R21W, Sections 1–2, T9N R22W, and Sections 35–36, T10N R22W on the USGS 7.5' Lexington East and Lexington West quadrangles. The surveyed areas for the Overton project area are located in portions of Sections 18, 19, and 28–30, T9N R19W, and Sections 13 and 24, T9N R20W on the USGS 7.5' Elm Creek West, Lexington SE, and Overton quadrangles. The Class III intensive cultural resources investigation of these areas, including pedestrian survey, auger testing, and structure documentation, was conducted by SAO personnel between November 2021 and May 2022.

As a result of these survey efforts, no new archeological sites were documented. Portions of the canal channels and associated laterals within the Lexington and Overton APEs were documented and evaluated for their potential to be included in the NRHP. None of the canal segments documented are considered Eligible for listing in the NRHP and no further work is recommended. Provided NRCS and the State Historic Preservation Office concur with the site recommendations, the investigators recommended a Section 106 Finding of No Historic Properties Affected relative to the proposed Spring and Buffalo Creeks Watershed Improvement Project.

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INTRODUCTION

HDR, Inc., and Central Platte Natural Resources District requested the State Archeology Office (SAO), a division of the Nebraska State Historical Society, conduct a Class III intensive cultural resources investigation, including pedestrian survey, subsurface testing, and historic structure documentation, in advance of the proposed Spring and Buffalo Creeks Watershed Improvement Project Work Plan, Buffalo, Custer, and Dawson Counties, Nebraska. Proposed project activities are anticipated to include improvements, widening, and installation of new diversion conveyance channels along both Spring and Buffalo Creeks. The USDA Natural Resources Conservation Service (NRCS) is the lead federal agency for this project. The entire Spring and Buffalo Creeks watershed and proposed planning study area encompasses about 320,000 acres (ac), or about 500 square miles (Figure 1).

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As a result of these survey efforts, no new archeological sites were documented. Portions of the canal channels and associated laterals within the Lexington and Overton APEs were documented and evaluated for their potential to be included in the NRHP. None of the canal segments documented are considered Eligible for listing in the NRHP and no further work is recommended. Provided NRCS and the State Historic Preservation Office (SHPO) concur with the recommendations made, the investigators recommended a Section 106 Finding of No Historic Properties Affected relative to the proposed Spring and Buffalo Creeks Watershed Improvement Project Work Plan. It is further recommended that should any evidence of buried cultural resources be encountered during project construction activities, such activities be immediately halted and NRCS, the SHPO, and/or the SAO in Lincoln be notified immediately in order to determine an appropriate course of action. Should any unmarked human burials, human skeletal remains, or buried funerary objects be encountered during construction, all work shall immediately cease and the location of the remains must be reported to the county sheriff and the SAO within 48 hours of discovery pursuant to the Nebraska Unmarked Human Burial Sites and Skeletal Remains Protection Act (State Statutes §12-1201 through 12-1212 and 28-1301). As a reminder, the information included in this report is protected by state law (Statute 84-712.05[14] and [15]) and is not for public distribution.

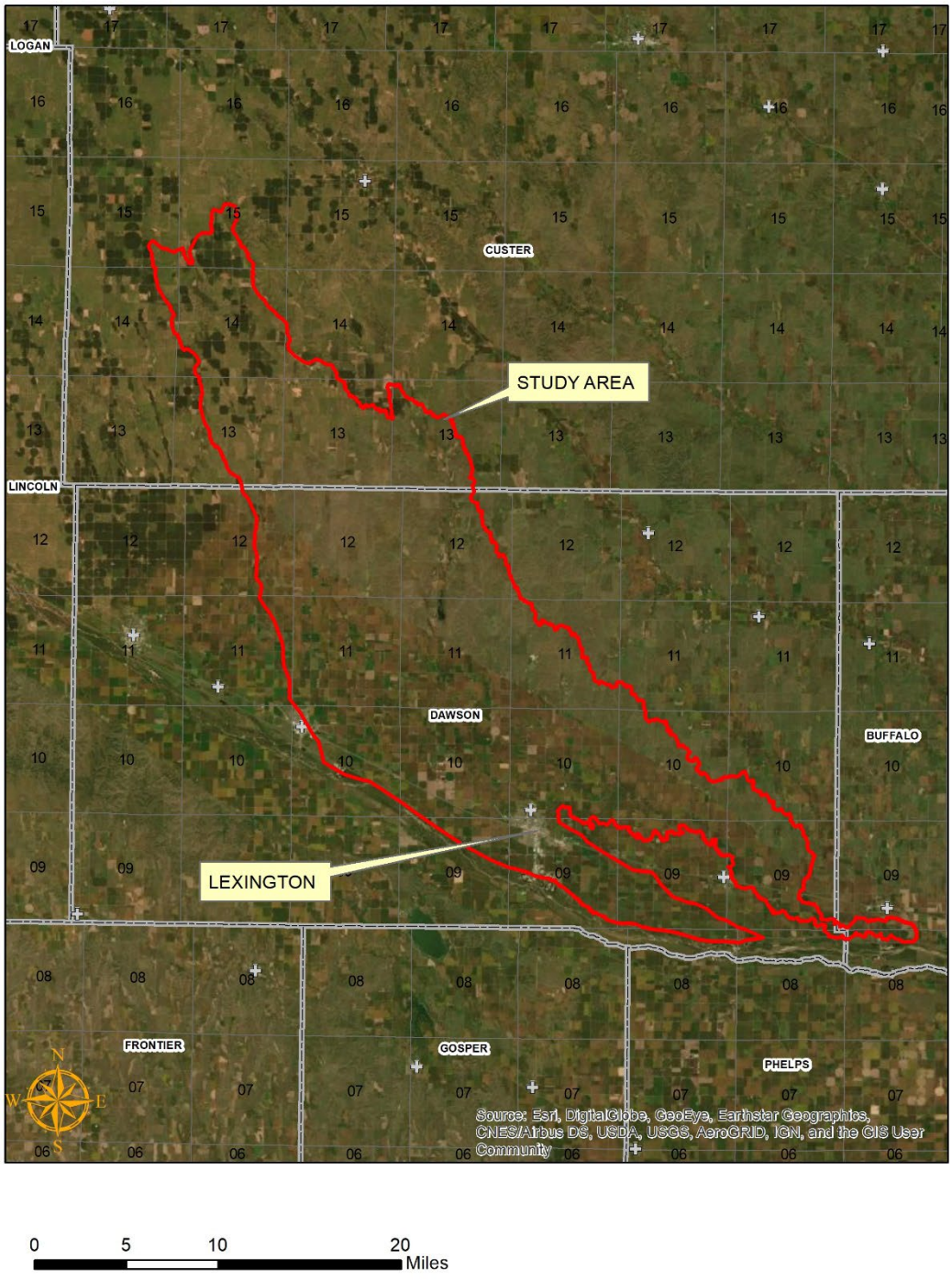

Figure 1. Spring and Buffalo Creeks WFPO Total Project Area. From Bozell and O'Conner 2020.

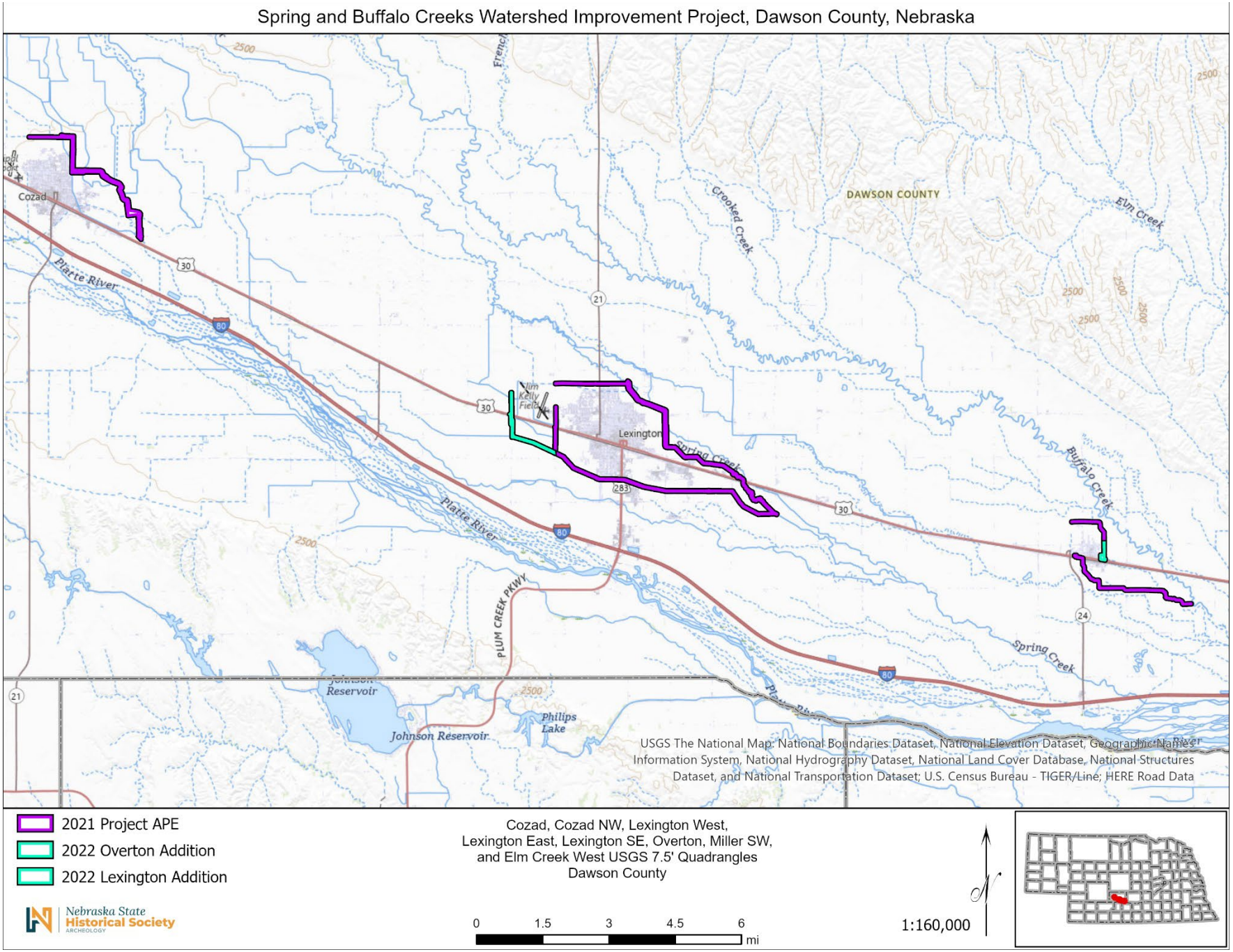

Figure 2. Spring and Buffalo Creeks Cozad, Lexington, and Overton APEs illustrated on USGS National Map.

Figure 3. Cozad APE, archeological sites, and cultural resources surveys illustrated on Farm Service Agency (FSA) orthophoto. [REDACTED]

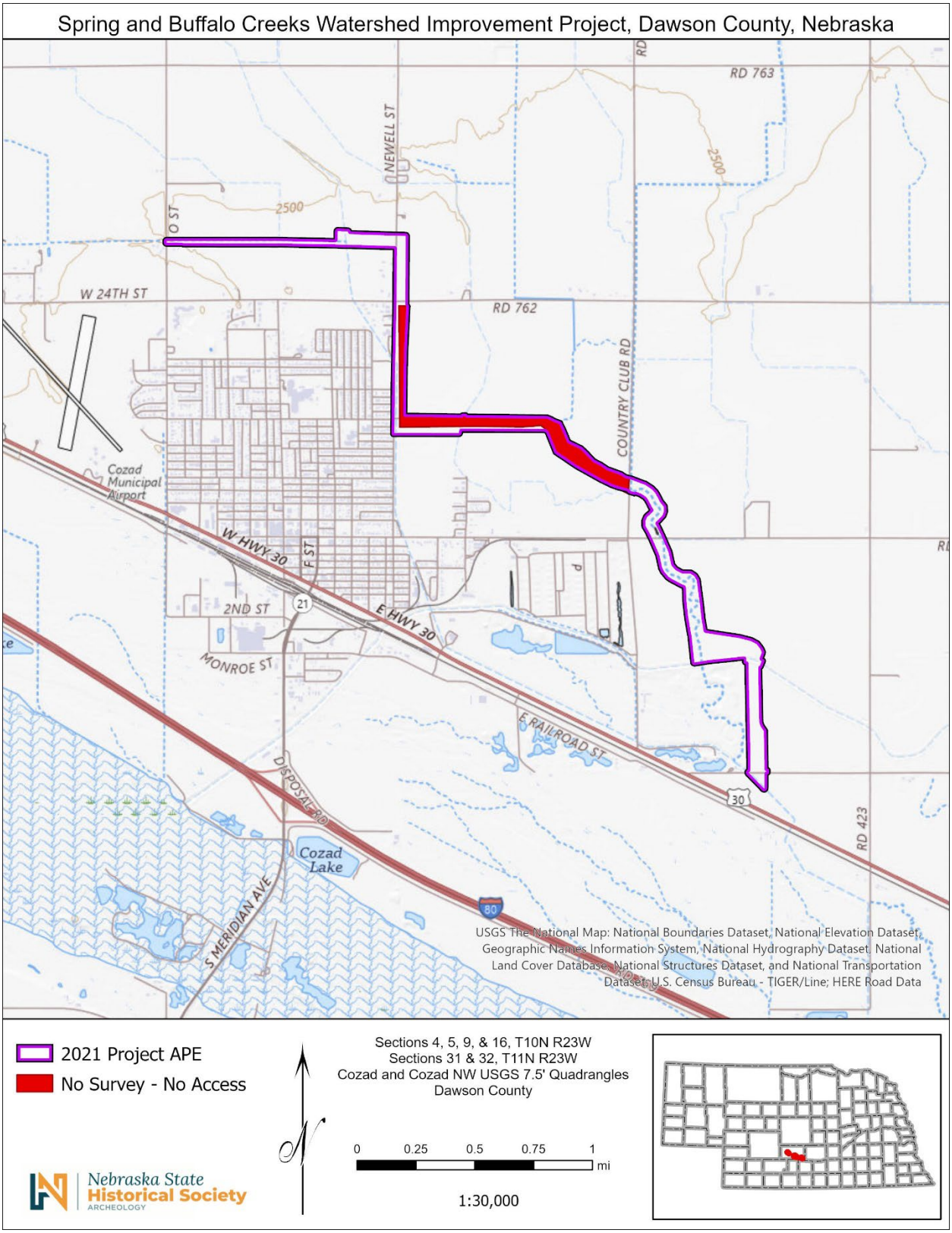

Figure 4. Cozad APE illustrated on USGS National Map.

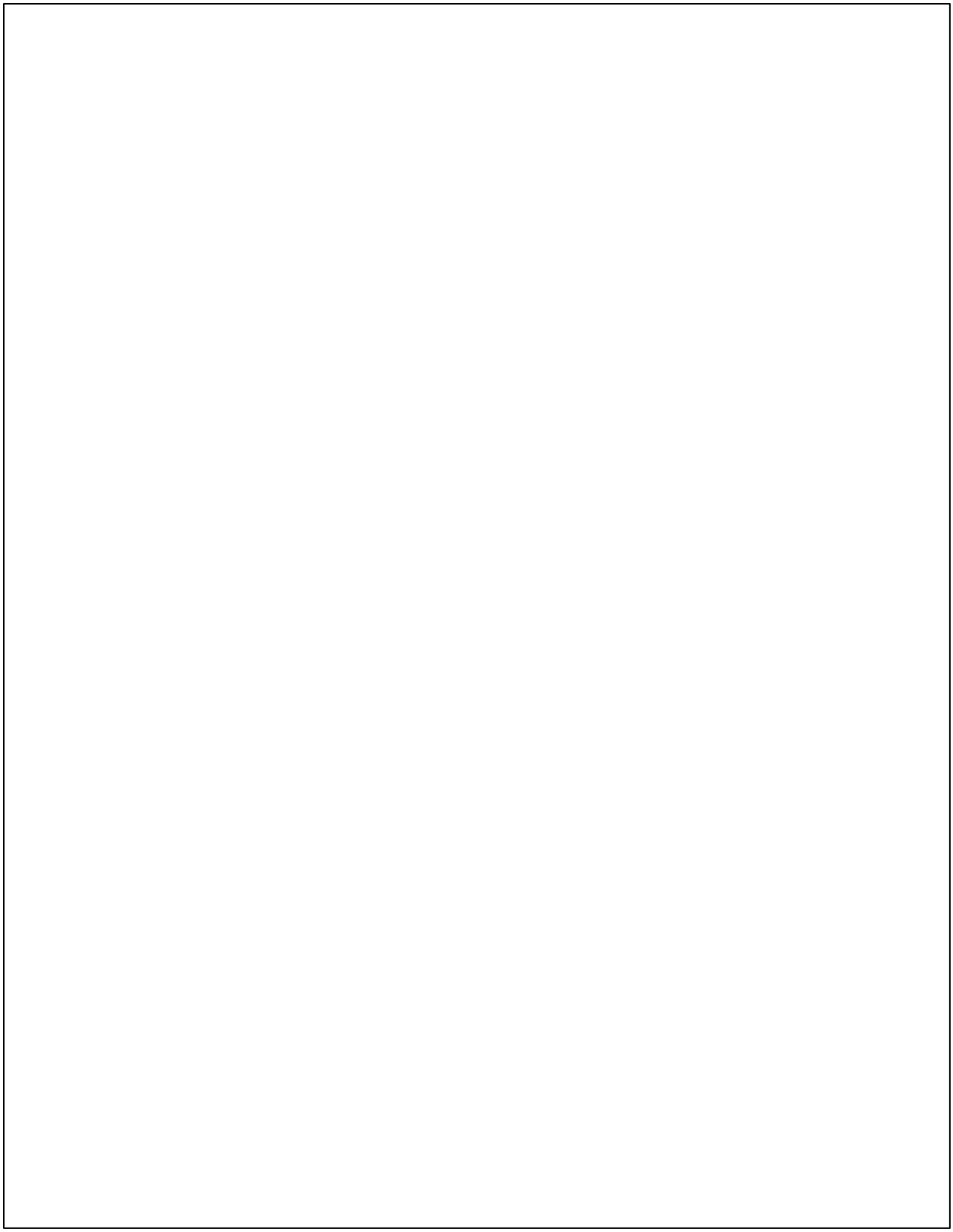

Figure 5. Lexington APE, archeological sites, and cultural resources surveys illustrated on FSA orthophoto [REDACTED].

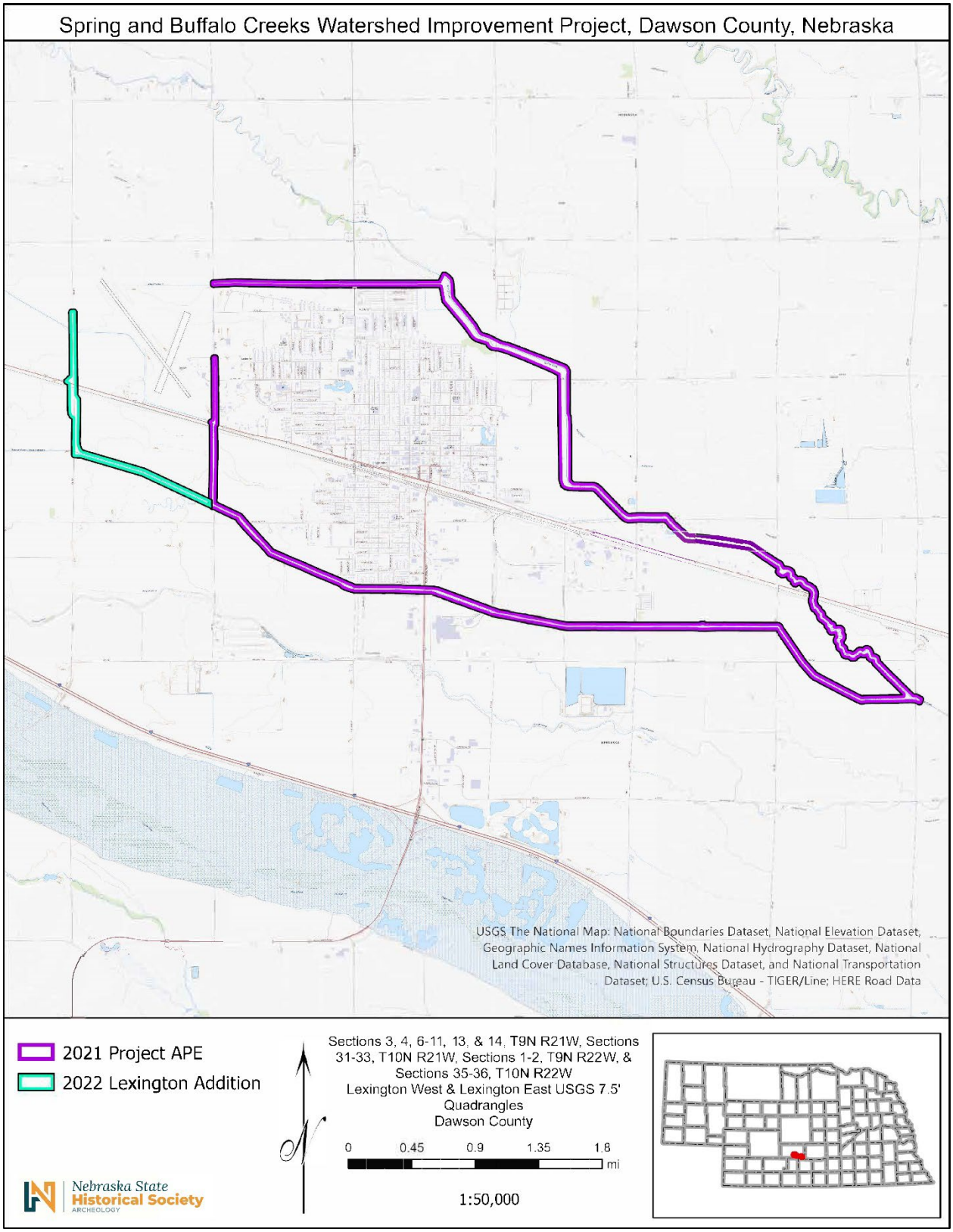

Figure 6. Lexington APE illustrated on USGS National Map.

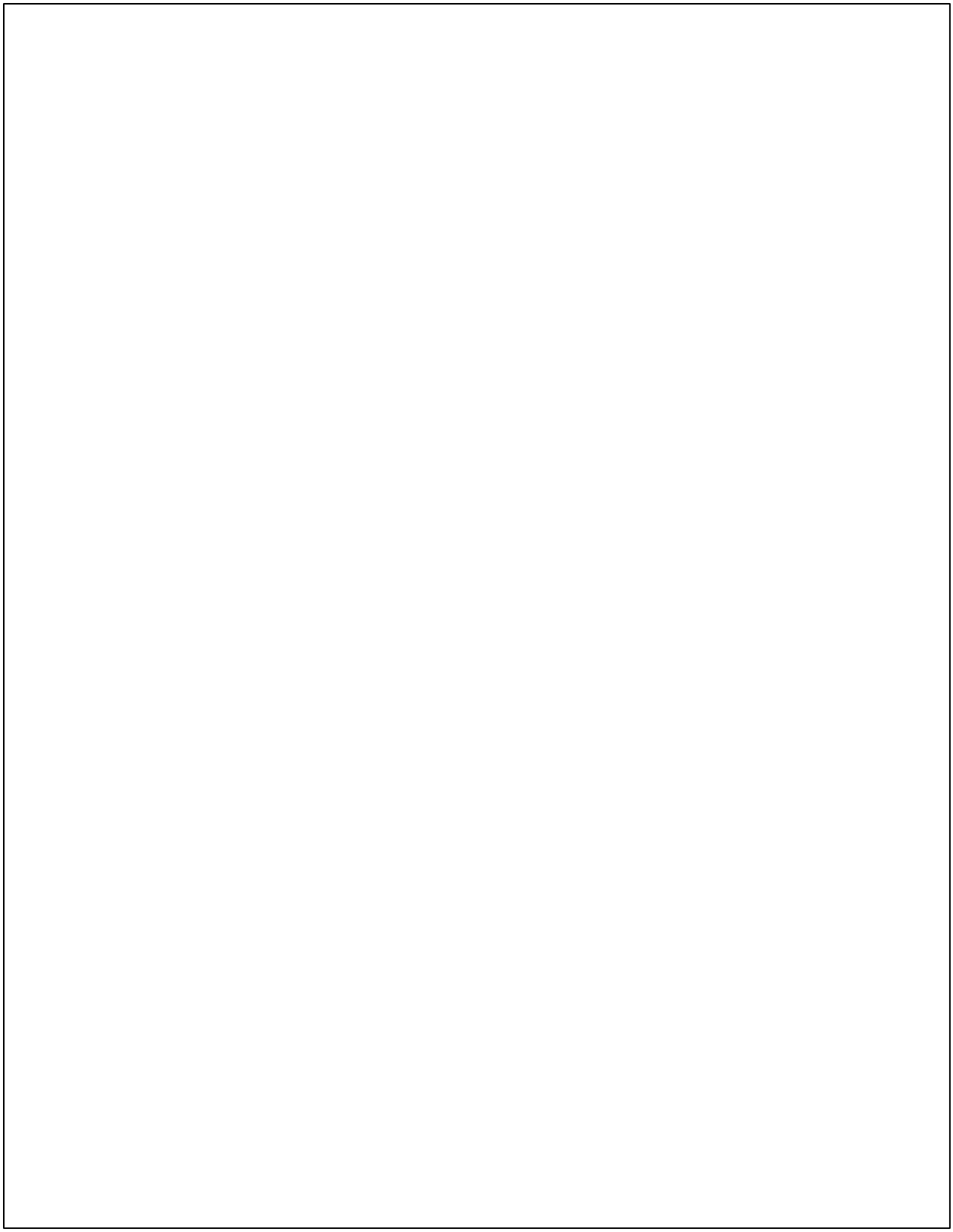

Figure 7. Overton APE, archeological sites, and cultural resources surveys illustrated on FSA orthophoto. [REDACTED]

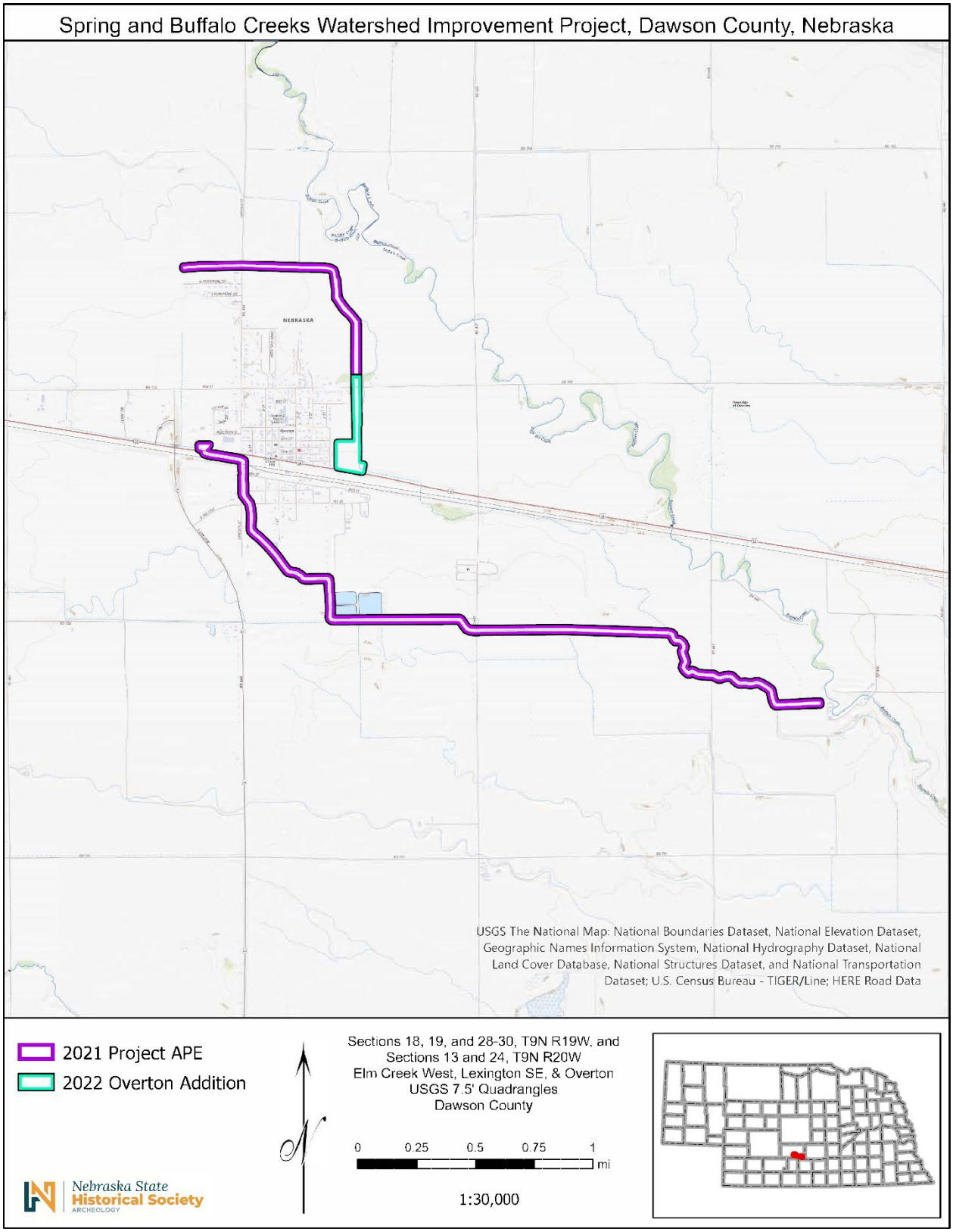

Figure 8. Overton APE illustrated on USGS National Map.

PREVIOUS INVESTIGATIONS

In 2020, SAO staff Archeology Technician Talon O'Conner and retired State Archeologist Rob Bozell authored *Spring and Buffalo Creeks Watershed Plan, Critical Issues-Cultural* Resources, in which the authors provide a brief overview of previous cultural resource investigations, known archeological sites, and architectural properties within the entire Spring and Buffalo Creeks study area. An updated record search was completed by the author using the Nebraska Cultural Resources Geographic Information System (NCRGIS) database maintained by the SAO and SHPO for the Spring and Buffalo Creeks Watershed APEs. No previous archeological sites have been documented within the Cozad, Lexington, or Overton APES, though one previous cultural resources survey intersects the Cozad APE and four previous cultural resources surveys intersect the Lexington APE. Within one mile of the project APEs, seven archeological sites and 23 cultural resources surveys have been recorded (Table 1; see Figures 3, 5, and 7). Additionally, one architectural resource, the Dawson County Drain No. 1 Irrigation Canal (SHPO No. DS00-106), has been partially documented within the Lexington APE.

Table 1. Previous cultural resource investigations in and within one mile of Spring and Buffalo Creeks Watershed project APEs, Dawson County.

Within Cozad and Lexington Project APEs				
Project APE	**SHPO Survey No.**	**Year**	**Author(s)**	**Title**
Lexington	96-0036	1995	Bozell, Rob	NHAP-PSS STPD-30-3(112), Cozad to Lexington.
Lexington	97-0023	1997	Holen, Steven R., and Danial R. Watson	An Archaeological Survey of Union Pacific Railroad Right-of-Way at Four Drainage Crossings in Dawson County, Nebraska.
Cozad	14-0118	2014	Hahs, David G.	Archeological & Historic Architecture Inventory for the Horvath Communications Cozad East HV769 (V14850) Communication Tower, Dawson County, Nebraska.
Lexington	14-0138	2013	Ziska, Courtney L.	NHAP-PSS URB-1705(3), Lexington East Viaduct, Dawson County, Nebraska.
Lexington	21-0035	2021	Ziska, Courtney L.	SAO-PSS URB-1705(3) CN61457 Lexington East Viaduct - Supplemental Review, Dawson County, Nebraska
Within 1 Mile of Cozad, Lexington, and Overton Project APEs				
Site No.	**Name**	**NRHP Eligibility**	**Description**	
25DS25		Unevaluated	Euro-American urban and farmstead site	
25DS26	Danial Freeman House	Unevaluated	Euro-American transportation route	
25DS50		Unevaluated	Euro-American industrial/commercial site	
25DS87		Evaluated by Professional Archaeologist as Potentially Ineligible	Unknown prehistoric site	

Table 1 continued.

Site No.	Name	NRHP Eligibility	Description
25DS125		SHPO Determined as Not Eligible	Euro-American farmstead site
25DS501	Lexington Flour Mill	Unevaluated	Euro-American industrial/commercial site
25DS504	Cozad Roller Mills	Unevaluated	Euro-American industrial/commercial site
SHPO Survey No.	**Year**	**Author(s)**	**Title**
96-0036	1995	Bozell, Rob	NHAP-PSS STPD-30-3(112), Cozad to Lexington.
02-0044	2001	Nelson, Trisha	NHAP-PSS STPD-124B(102), Overton Link.
03-0061	2002	Jones, Carl Hugh	Cultural Resource Survey and Assessment for Lot #1 Proposed Site of Cornhusker Energy Lexington, LLC Lexington, Dawson County, Nebraska.
05-0172	2005	Nelson, Trisha	NHAP-PSS STPD-STPN-TMT-124B(102), Overton Link Borrow Pits 1, 2, 3, and 4.
07-0112	2007	Rieken, Annie and Gabrielle Aberle	A Phase I Cultural Resources Survey of the Proposed Contractor Yards in Keith, Dawson, Franklin, Adams, and Gage Counties, Nebraska.
08-0032	2007	Parks, Stanley M.	Archeological Investigations: Viaero Wireless - Overton Tower Site, Dawson County, Nebraska.
08-0033	2007	Parks, Stanley M.	Archeological Investigations: Viaero Wireless - Lexington Tower Site, Dawson County, Nebraska.
08-0074	2008	Koch, Amy	NHAP-PSS STPD-283-2(105), Lexington Viaduct.
09-0140	2009	Koch, Amy	NHAP-PSS ENH-24(40), Cozad Hike and Bike Trail, Dawson County, Nebraska.
13-0081	2013	Ziska, Courtney L.	NHAP-PSS STP-30-3(116), Cozad to Lexington, Dawson County, Nebraska.
13-0119	2013	Parks, Stanley M.	Cultural Resources Investigations: Terracon - Verizon NE06 Camp Arrowhead Cell Tower, City of Lexington, Dawson County, Nebraska.
13-0135	2012	Ziska, Courtney L.	Nebraska Highway Archeology Program, Project Survey Summary URB-6552(1), 6th Street, Jackson Street and 13th Street Improvements, Dawson County, Nebraska.
13-0221	2012	Ziska, Courtney L.	NHAP-PSS URB-6552(1), 6TH Street, Jackson Street and 13th Street Improvements, Dawson County, Nebraska.
14-0012	2013	Ziska, Courtney L	NHAP-PSS STP-21-2(111), In Lexington, Dawson County, Nebraska.

Table 1 continued.

SHPO Survey No.	Year	Author(s)	Title
14-0026	2013	Hahs, David G.	Archeological & Historic Architecture Inventory for the Horvath Communications Lexington North HV759 (V13802) Communication Tower, Dawson County, Nebraska.
14-0185	2014	Hahs, David G.	Archeological & Historic Architecture Inventory for the Horvath Communications Lexington North HV759 (V14928) Communication Tower, Dawson County, Nebraska.
17-0055	2017	Parks, Stanley M.	Archeological Investigation: Industrial Park Development, City of Cozad, Dawson County, Nebraska.
18-0342	2018	Bozell, Rob	STP-21-2 (118) - Lexington North, Road resurfacing, minor grading, and bridge and culvert repairs, Control# 61647, Dawson County, Nebraska.
20-0096	2020	Carlson, Nancy F.	An Archaeological Survey of Proposed Lexington East Addition, RMLX, LP Project, Lexington, Dawson County, Nebraska
20-0180	2020	Goodrich, Brian	SAO-PSS HSIP-80-4(156) CN61681 Lexington East and West, Dawson and Buffalo Counties, Nebraska
23-0026	2023	Garbowski, Jesse and Matthew Beazley	Phase I Cultural Resources Survey Proposed 208-Foot Overall Height Monopole Telecommunications Structure, 1307 Country Club Road, Cozad, Dawson County, Nebraska, Township 10N, Range 23W, Section 5, ECA Project#: 23-000422
23-0036	2023	Goodrich, Brian	SAO-PSS STP-30-3(119) CN61692 US-30 and US-283 In Lexington, Dawson County, Nebraska
24-0115	2024	Wolfe, Kimberly, Aurelio Julian Hernandez, and Adam Graves	Cultural Resources Investigation Verizon Wireless NE06 LEX EAST-16976982 180' Self-Support Tower Co-locate/New Build 707 E Walnut, Lexington, NE

ENVIRONMENTAL SETTING

Dawson County has a widely varied continental climate with winter temperatures commonly reaching below zero and summer temperatures averaging 95 degrees Fahrenheit but often hitting triple digits. Annual precipitation averages around 21 inches, with most rainfall—about 80 percent of the annual total—occurring between April and September. Historically (i.e., prior to modern expansive cultivation practices), the dominant vegetation in Buffalo County included short, mid, and tall grasses, such as big bluestem, little bluestem, indiangrass, side-oats grama, buffalograss, and wheatgrass, among others (Brown, Buller, and Wahl 1978:90). Dawson County soils developed in three primary parent materials: Peoria loess, eolian sand, and alluvium (both silty and loamy). Primary drainages in Dawson County include the Platte River, which crosses the entire county from northwest to southeast, as well as Buffalo Creek, Elm Creek, Spring Creek, Wood

River, and their associated tributaries and feeder drainages. Each of these drainages eventually flow into the Platte River, whose entire Valley measures 10–15 mi wide.

The Cozad, Lexington, and Overton APEs lie within the wide Platte River Valley. The Cozad APE includes portions of unnamed canal laterals and feeder drainages flowing into the Platte River, the Lexington APE includes portions of Spring Creek and the Dawson County Drain No. 1 canal, while the Overton APE includes portions of unnamed feeder drainages flowing into Buffalo Creek. Spring Creek and Dawson County Drain No. 1 drain into the Platte nearly 13 mi southeast of Lexington, and Buffalo Creek reaches the Platte River nearly 10 mi southeast of Overton.

Primary topographic conditions within the county include gently rolling plains and breaks to the south of the Platte River, and undulating loess hills, similar to much of central Nebraska, north of the Platte. Dawson County is nearly equally comprised of uplands and valleys. The entire Platte River Valley consists of bottom land, well-formed stream terraces, and foot slopes (Brown, Buller, and Wahl 1978:1). The intensification of agricultural practices has resulted in the conversion of the majority of the vegetation from rolling prairieland and plains grasslands, into flattened or contour terraced agricultural fields fed by irrigation canals stemming from the Platte River or pumped from wells. Industrial agricultural practices have eliminated much of the pre-contact prairie biome throughout much of this part of Nebraska.

Soils and Buried Site Potential

Prior to survey, SAO staff reviewed the SAO's Deeply Buried Sites Geographic Information System (GIS) (see Layzell et al. 2018) and USDA's Web Soil Survey databases for information on soil types and potential within the APE for containing buried soils and cultural horizons. Twenty-three discrete soil components are mapped in the two project APEs and possess varying potential for containing deeply buried archeological sites (Table 2; Appendix A). Based on topography and present land use, proposed areas within the APEs with the highest potential for containing Native American sites will be on or near the surface of ridges and terraces overlooking permanent stream valleys, or will be deeply buried in terraces and alluvial fans. Euro-American sites will likely consist of occupied and former farmsteads that can occur in stream valleys but also on upland divides (Bozell and O'Conner 2021).

Table 2. Mapped soil units within Spring and Buffalo Creeks Watershed project areas.

Soil Unit Symbol	Soil Name	Slope (%)	Description	Buried Sites Potential
3952	Fillmore silt loam, frequently ponded	0–2	Typically form in loess, and generally found on playas	
8550	Silver Creek complex, rarely flooded	0–2	Typically form in alluvium, and generally found on stream terraces	High
8563	Platte loam, occasionally flooded		Typically form in loamy alluvium over sandy and gravelly alluvium, and generally found on flood plains	Low-Moderate
8553	Silver Creek silt loam, rarely flooded	0–2	Typically form in alluvium, and generally found on stream terraces	High

Table 2 continued.

Soil Unit Symbol	Soil Name	Slope (%)	Description	Buried Sites Potential
8810	Cozad fine sandy loam	0–1	Typically form in coarse-silty alluvium, and generally found on stream terraces	High
8815	Cozad silt loam	0–1	Typically form in alluvium, and generally found on stream terraces	High
8816	Cozad silt loam	1–3	Typically form in alluvium, and generally found on stream terraces	High
8817	Cozad silt loam	3–6	Typically form in alluvium, and generally found on stream terraces	High
8820	Cozad silt loam, saline-alkali	0–1	Typically form in coarse-silty alluvium, and generally found on stream terraces	High
8821	Cozad silty clay loam	0–1	Typically form in alluvium, and generally found on stream terraces	High
8828	Cozad silt loam, wet substratum	1–3	Typically form in coarse-silty alluvium, and generally found on stream terraces	High
8831	Gosper loam	0–1	Typically form in alluvium, and generally found on stream terraces	High
8832	Gosper loam, saline-alkali	0–1	Typically form in alluvium, and generally found on stream terraces	Moderate-High
8840	Hall silt loam	0–1	Typically form in loess, and generally found on stream terraces	
8846	Hall silt loam, wet substratum	0–1	Typically form in alluvium, and generally found on hillslopes	
8869	Hord silt loam	0–1	Typically form in alluvium, and generally found on stream terraces	High
8876	Hord silty clay loam	0–1	Typically form in colluvium and/or loess, and generally found on stream terraces	
8877	Hord silty clay loam, wet substratum	0–1	Typically form in colluvium and/or loess, and generally found on stream terraces	
8960	Wood River silt loam	0–1	Typically form in silty alluvium, and generally found on stream terraces	High
8965	Wood River-Gayville complex	0–1	Typically form in silty alluvium, and generally found on stream terraces	High
9080	Rusco silt loam	0–1	Typically form in loess, and generally found on playas	
9986	Miscellaneous water, sewage lagoon			
9999	Water			

CULTURAL SETTING

The cultural chronology of Nebraska is generally characterized by seven overlapping periods. The presence, duration, and significance of these periods depend largely on geographic location in the state and the extent of previous research in the specific area. The general cultural/chronological periods presented in years before present (B.P.; ca. 1950) include Paleoindian (ca. 13,500–7,500 B.P.); Plains Archaic (ca. 7,500–2,000 B.P.); Late Prehistoric (ca. 2,000–500 B.P.); Plains Woodland (ca. 2,000–1,000 B.P.); Plains Village (ca. 1,000–250 B.P. / ca. A.D.1050-1700); Pre-

contact (ca. A.D. 1700–1861); and Contact (ca. A.D. 1861 to present). Each of these periods has been, or can be, subdivided into early, middle, and late, as well as into various archaeological phases and cultures. The general cultural/chronological periods detailed above are based on groups of archeological sites that exhibit similar patterns of technology, life ways, that suggest the possibility of connections or continuity through time. However, it is not always known whether these assemblages represent distinct cultural groups or related ethnic groups; it is often impossible to identify the separate ethnic groups in the distant past. Each of these overarching cultural/chronological periods will be briefly detailed below. Within the entire Spring and Buffalo Creeks study area, only three sites predating approximately 2,000 years ago have yet been identified. Sites associated with Woodland, Plains Village (including Central Plains tradition and Dismal River aspect sites), and Euro-American occupations have also been identified; Euro-American and unassigned Native American sites are most common in the study area.

Paleoindian (ca. 13,500–7,500 B.P.)

The initial date of settlement on the Great Plains is a matter of much debate. While claims of greater antiquity of human presence in the region have been entertained, without solid archeological evidence they remain contentious. Only a fraction of archeological sites is preserved over time, and an even smaller fraction of those are discovered and recorded. It is likely that as a result of changes in topography and other factors over the thousands of years since their deposition, many sites have not been preserved or have been destroyed.

The earliest well-established documented human occupation on the Great Plains coincides with the presence of Clovis projectile points, which have been dated to 13,500 cal. B.P. around the end of the last great Ice Age (Bamforth 2021). Clovis and other later projectile technological complexes such as Plainview, Folsom, Hell Gap, Agate Basin, Alberta, Scottsbluff, Eden, Frederick, Lusk, and Brown's Valley types are associated with Paleoindian populations who were present in Nebraska and much of the Great Plains from roughly ca. 13,500–7,500 cal. B.P. (NSHS 1989). Paleoindians have been characterized as highly mobile hunter-gatherers who hunted now-extinct fauna species including mammoths, ground sloths, camels, and extinct species of bison, as well as small game. As a result of low population density and a high degree of mobility, the vast majority of Paleoindian sites consist of mega-fauna kill sites or isolated projectile point finds and are typically either deeply buried or on ridge tops free of sedimentation (Bamforth 2021).

Plains Archaic (ca. 7,500–2,000 B.P.)

After the Early Archaic, during which time the Altithermal climatic event resulted in extensive drought conditions across the Great Plains, climatic patterns characteristic of the modern period became established. By this time, many of the fauna that had dominated the Great Plains during the Ice Age had gone extinct. While people maintained a nomadic lifestyle, their movements appear to have become more localized and evidence suggests that wild plant resources were exploited to a greater extent., with indications that indigenous peoples became more regionally differentiated and locally adapted over time.

During this period, Archaic peoples transitioned from the exclusive use of the lanceolate points named above towards a more varied use of lanceolate, basal notched, and stemmed projectile point types. Some examples found in Nebraska include Duncan, Hanna, Hardin Barbed, Logan Creek, Mallory, McKean, Munkers Creek, Oxbow, Pelican Lake, Table Rock Stemmed, St. Charles Notched, and Stone Square Stemmed point types (NSHS 1989). These point types also tended to span much smaller geographic areas than those utilized in earlier periods. The atlatl, a notched handheld spear thrower which boosted the range and velocity of a spear, a variety of ground stone tools, and chipped stone axes were all a part of the Archaic tool kits (Steinacher and Bozell 1997). By the end of the Archaic, different types of tools, such as celts for girdling trees and grinding stones for processing seeds, had become common. Domestic structures were temporary in nature and constructed of highly perishable materials; rock shelters have also been identified. Archaic sites were typically situated on hilltops or high terraces in close proximity to water sources or utilized natural features where local geomorphology permitted. At the end of this period we begin to see pronounced changes in lifeways developing in various parts of what would become Nebraska. The eastern half of Nebraska was beginning to be occupied by peoples who tended toward more sedentary lifeways (Plains Woodland), while the western half was occupied by nomadic groups who continued to engage primarily in hunting and gathering subsistence practices (Late Prehistoric).

Late Prehistoric (ca. 2,000–500 B.P.)

Beginning around 2,000 B.P., people living throughout Nebraska began to make pottery and utilize the bow and arrow for hunting, technological innovations that marked the beginning of the Woodland cultural tradition, discussed in more detail below (Steinacher and Bozell 1997). However, the use of pottery was not exclusive to these more sedentary groups, nor was the adoption of the bow and arrow. Late Prehistoric cultures in the Panhandle region of Nebraska lived in fairly small groups, utilized open campsites, and resided in hide tents and natural shelters such as Ash Hollow Cave in the North Platte valley (NSHS 1989). Sites include camp locations with hearths or roasting pits, burials, and rock shelter occupations.

Plains Woodland (ca. 2,000–1,000 B.P.)

Increasing evidence of relatively sedentary lifeways alongside the introduction of pottery manufacture, the bow and arrow, and horticulture experimentation featuring corn, gourd, and squash, are indicative of the transition from the Archaic into the Plain Woodland period in the eastern half of Nebraska (NSHS 1989). This period is marked by these and other gradual changes in cultural practices reflective of changes seen amongst cultural groups of the eastern and mid-western United States around the same time. The primary diagnostic artifacts from this period are large conical ceramic wares tempered with grit, sand, or crushed rock. Decoration on these vessels changed over time, but cord-roughened, finger- or tool-applied, and cord-impressed designs and finishes were common (NSHS 1989). Projectile points for the period consisted generally of small- to medium-sized corner-notched projectiles. The hunting of bison, and deer occurred along with a variety of other species including beaver, waterfowl, upland fowl, turtle, fish, and other small mammals.

Domestic structures for this period were of a semi-sedentary nature and consisted of small circular or oval basins centered around hearths. These structures were likely covered in a light pole frame with hide or mat covering. Settlements in Woodland period semi-sedentary communities contained from one to ten structures and were often situated along lower terraces of tributary streams (NSHS 1989). On occasion, storage or refuse pits have been identified at these settlements; evidence of elaborate burials in earthen mounds have been recorded in some instances near these sites.

Plains Village (ca. 1,000–250 B.P.)

The Plains Village period is marked by changes in subsistence practices and material culture traits among existing Plains Woodland populations. In Nebraska, these groups became known broadly as the Central Plains Tradition (CPT) (Bamforth 2021). A primary change that differentiates CPT peoples from Plains Woodland groups included the intensive use of small garden horticultural practices focused primarily on maize, beans, and squash. CPT sites encompass the eastern two-thirds of Nebraska, as well as northern Kansas and the western edge of Iowa along the Missouri River (NSHS 1989). While horticulture was an increasingly important aspect of people's subsistence, wild game and plant resources were still utilized extensively.

Sites consist primarily of occupations containing wattle and daub timber-framed houses with a square to rectangular floor plans and extended entranceways that were arranged into small semi-permanent villages or isolated farmsteads. Storage pits for food, tools, and refuse are often identified under lodge floors. CPT sites are usually located along stream valleys that provided locations suitable for both settlement and horticulture. Artifacts characteristic of the period include a wide variety of globular ceramic wares with rounded bottoms that were decorated most often with geometric patterns of lines along the rims of the vessels. Projectile points that are triangular, with single or multiple hafting notches and diamond beveled knives were commonly used. Hoes crafted from deer and bison scapula are another common artifact type diagnostic of CPT populations. Broad consensus supports the view that CPT peoples spoke languages in the Caddo family and were likely ancestral to the historic Pawnee and Arikara tribes who are also Caddoan-speakers (Bamforth 2021). The similarities between the Pawnee and Arikara Caddoan languages suggests a relatively recent linguistic division, approximately 500 years ago. Despite information gleaned from linguistic evidence, the extent to which individual archeological assemblages represent distinct cultural groups or related ethnic groups in the distant past is not always known (Bozell and Steinacher 1997).

The 13th and 14th centuries marked the initial arrival of Oneota peoples from east of the Missouri River onto the Plains with a secondary wave occurring sometime after A.D. 1500 (Bamforth 2021). Oneota peoples have been identified archaeologically by their ceramic tradition, which involved the production of thin-walled, shell tempered vessels which have been linked to similar ceramic complexes found throughout the eastern woodlands of Iowa, Missouri, and Minnesota (Bamforth 2021). Most recorded Oneota sites in Nebraska are found in the eastern portions of the state, with some following the Nebraska-Kansas border westward towards the middle of the state. Settlement pattern evaluations of Oneota sites suggest they employed temporary or lightly constructed habitation structures in addition to more substantial rectangular and circular earth lodges. The scale

of these sites ranges from small to large villages, but they are usually on hills or terraces adjacent to major stream valleys (Steinacher and Bozell 1997). The secondary wave of Oneota peoples involved speakers of two distinct Siouan language groups: Dhegiha speakers like the Omaha, Ponca, Kansa, and Osage, and Chiwere speakers including the Winnebago, Ioway, Otoe, and Missouri (Bamforth 2021).

The earliest recorded European expedition that may have entered Nebraska was the Spanish expedition led by Coronado around A.D. 1540. Later, Robert La Salle's A.D. 1682 expedition traveled down the Mississippi river to the Gulf of Mexico and laid claimed to the territory of Louisiana, which extended westward from the Mississippi River to the Rocky Mountains and from the Great Lakes region to the Gulf of Mexico, for the French crown. Meanwhile, the British established their first trade posts in the Hudson Bay area in the 1670s and 1680s (Bamforth 2021). During this time, the majority of European incursions into the area that is now Nebraska likely consisted of individual fur traders, trappers, and hunters who left little to no historical documentation of their journeys. However, evidence of European trade goods begins to appear in the archeological record in the 1600s (Bamforth 2021).

Pre-Contact (ca. A.D. 1700–1861)

During the Pre-Contact period and the preceding period, the impacts of European and Euro-American expansion, trade, and settlement in the eastern half of the continent was causing a ripple effect for Indigenous tribes throughout the U.S. European and later Euro-American fur traders, trappers, and hunters continued to range onto the Great Plains where they encountered Indigenous peoples. Throughout the Pre-Contact and Contact periods, epidemic diseases, increased encroachment by Euro-American settlers, conflict with other displaced Indigenous peoples, and land acquisitions by the U.S. government through treaties and other means led to further population decline, and the loss of hunting grounds, ancestral homelands, and autonomy for many Indigenous tribes by the late 1800s (Bamforth 2021).

Around A.D. 1740, Pierre and Paul Mallet, French frontiersmen, documented their journey into what is now Nebraska, when they traveled along the Platte on their way to the Spanish settlement in Santa Fe. With the formalization of the Louisiana Purchase, control of the territory of Louisiana passed from the French crown to the United States in 1804. The Louis and Clarke expedition reached Nebraska on July 15, 1804, at the mouth of the Nemaha River in southeast Nebraska before continuing northward up the Missouri River. During their encampment near modern-day Fort Calhoun that year, they met with the Otoe and Missouri Tribes.

The Pawnee were horticulturalists who also supplemented their diet by hunting deer, elk, wild turkey, and buffalo. They inhabited large portions of the eastern two-thirds of the state. Their settlements consisted of earth lodges, large circular structures with a central hearth surrounded by center posts. Pawnee village sites are situated on terraces of major rivers where extensive bottomlands allowed for horticulture. By the early 1800s, the Pawnee were a loose confederation of four bands: the Skiris (Loups), Chauis (Grands), Kitkahahkis (Republicans), and Pitahawiratas (Tappages) (Wishart 1994). Archeological and historical evidence suggests that the Pawnee

became powerful intermediaries in the exchange of furs, particularly beaver and bison, for European trade goods (NSHS 1989). The Pawnee entered three treaties with the United States, in 1833, 1843, and 1857, under which they gradually sold most of their lands to the United States government with the exception of a reservation along the Loup River near Genoa, Nebraska (Wishart 1994). With the permission of the government, they still maintained the use of western and south-central portions of Nebraska for hunting expeditions into the 1870s.

Up until 1854, Nebraska was closed to Euro-American settlement, however several wagon trail routes passed through the state including the Oregon, Californian, Mormon, and Pony Express Trails along which many emigrants crossed Nebraska heading towards the west coast. Multiple Pony Express stations were established in what is now Dawson County. After the discovery of gold in California in 1849, the passage of Euro-American settlers only increased. The U.S. territories of Nebraska and Kansas were established in the Kansas-Nebraska Act of 1854. The Territory of Nebraska encompassed all of modern-day Nebraska, and parts of Colorado, Wyoming, Montana, as well as North and South Dakota.

CONTACT (CA. A.D. 1861 TO PRESENT)

In the mid- to late-1800s, as Euro-American settlement increased, so too did the U.S. military presence on the Great Plains, which led to increased conflicts with Indigenous people, especially after the Civil War (Bamforth 2021). The passing of The Homestead Act of 1862 only further exacerbated these issues by incentivizing settlement. The Homestead Act of 1862 granted 160 acres of surveyed public land to claimants, provided they could demonstrate they had lived on and improved their plot, by cultivating the land, over a five-year period (National Archives 2023). With settlers claiming more and more land, Indigenous tribes' lifeways were increasingly threatened by western expansion. Conflicts between the U.S. government and Indigenous tribes in western Nebraska and throughout the Great Plains continued from the 1850s into 1890s (Bamforth 2021). Settlers continued to pressure the U.S. government to open Reservation lands for Euro-American settlement. In 1875, the Pawnee made the decision to relocate to Oklahoma (Bamforth 2021).

Dawson County was established by the territorial legislature in 1860 and was surveyed and platted in 1868. It was not until 1871, however, that the county was officially organized under the state. The county seat was established at Plum Creek (later Lexington) in 1873 (Mead and Hunt 2011:2).

Throughout the latter half of the 1800s, three primary railways were built across Dawson County following the earlier Native American hunting trails and emigrant trails: the Union Pacific, the Omaha & Republican Valley Railroad (later known as the Kearney & Black Hills Railway), and the Burlington & Missouri Railroad (Mead and Hunt 2011:2–3). The first Union Pacific station in this area was built in 1866, about one mile east of the present-day site of Lexington (Brown, Buller, and Wahl 1978:1).

From the founding of the county, agricultural and ranching activities formed the primary economic base of the Euro-American residents. By 1885, more than 1,200 farms and/or ranches were

operating in Dawson County, and by 1950, Dawson County was processing half of Nebraska's alfalfa crop (Mead and Hunt 2011:4). To facilitate these activities, systems of irrigation canals allowed for expansion of agricultural production; over 120,000 acres of Dawson County were irrigated from these canals by 1930.

CURRENT INVESTIGATION

Field Work and Methodology

Between November 2021 and May 2022, SAO staff conducted a Class III intensive cultural resources investigation of the proposed Spring and Buffalo Creeks Cozad, Lexington, and Overton APEs, including pedestrian survey, limited subsurface testing, and documentation and evaluation of architectural resources within the three project APEs. Staff assisting with this project included the author and Archeological Technician Talon O'Connor. Based on the results of the project background review, topography of the APE, current land use, and data contained within the SAO's deeply buried sites GIS database, it was determined that reasonable probability existed to encounter archaeological sites within the either project APE.

Fieldwork documentation included GPS mapping, digital photography, and completion of standardized SAO field forms. Field photographs were taken using a 21.51-megapixel Nikon Z50 digital camera. All field datasets generated during this project are on file at the SAO.

Terrain within the surveyed areas was generally level to gently rolling plains within the broad Platte River Valley (Figures 9–10). Vegetation largely consisted of recently planted or harvested agricultural fields, including corn, soy beans, and alfalfa, with smaller areas of grassy pasture and scrubby to woody overgrowth along existing canals and other drainages. At the eastern edge of Overton, mown grass lots were encountered.

Noted disturbances throughout the total APE included impacts from general agricultural practices including planting, harvesting, and ranching activities, as well as standard wind erosion and water erosion throughout streams and canal channels. Limited areas of urban development and the associated infrastructure within the urban environment were encountered, particularly at the southern and western edges of Lexington. Highway 30 and the parallel railway infrastructure bisect the APE in multiple locations near Lexington, and smaller town streets and county roads bisect the APEs elsewhere.

Pedestrian survey within the project APEs was conducted using a combination of linear and meandering pedestrian survey transects spaced no more than 20 meters (m) (65.6 feet [ft]) apart. Survey area boundaries were created prior to field investigation based on project plans provided by HDR. Due to landowner access restrictions, 18.59 ha (45.95 ac) were not surveyed in the Cozad APE (see Figures 3–4). All areas possessing potential for containing surface or near surface cultural components, including cutbanks, blowouts, animal backdirt piles, and turned-over agricultural fields, were closely examined for artifacts and cultural features. No new archeological sites or standing structures were identified during survey. Portions of the canal channels and associated laterals within the Cozad, Lexington, and Overton APEs were documented and evaluated for their potential to be included in the NRHP.

Figure 9. Overview of western portions of the Lexington APE. View is to the north.

Figure 10. Overview of southern portions of the Lexington APE. View is to the east-southeast.

Ground surface visibility (GSV) within the surveyed areas varied from 0–100 percent, though GSV was generally very high (Figure 11). While some areas of canal banks were overgrown with grasses, trees, and shrubs, leaving low to zero average GSV (Figure 12), low water levels allowed surveyors to walk within canal footprints to investigate exposed banks to identify the presence of buried soils with the potential to contain cultural deposits and exposed cultural material (Figures 13–14). Agricultural fields surrounding the canals were generally sparsely covered, having been recently tilled or harvested, or containing little crop growth at the time of survey. Areas where new canal diversion channels will be constructed, such as north of Cozad, Lexington, and Overton, fell within high GSV agricultural fields; based on high GSV, exposures from animal burrow backdirt piles, and visibility in nearby canal and creek cutbanks, no subsurface testing was conducted within these areas.

A single auger test was placed at the southeast edge of Overton in the proposed conveyance structure footprint near the town sewage disposal pond. The test was placed due to low GSV in a mown grassy field and was excavated to 165 cm (65 inches) below ground surface (bs). Stratigraphy observed indicated a layer of dense road or parking lot gravel at a depth of 30-40 cmbs followed by thick strata of brown, grayish brown, and yellowish-brown subsoil. No buried soils or cultural materials were observed within the auger test.

Figure 11. Examples of average GSV throughout Cozad, Lexington, and Overton APEs.

Figure 12. View of overgrown canal channel within Lexington APE. View is to the southeast.

Figure 13. View within canal channel within Lexington APE.

Figure 14. Exposed bank within canal channel within Lexington APE.

Architectural Resources

A variety of imagery sources, including historic Dawson County plat maps, topographic maps, and aerial imagery, were used to compare the change and development of irrigation systems and drainages around the Cozad, Lexington, and Overton project APEs. Due to the complexities in illustrating these changes through the years, a separate set of maps was produced to highlight the variation. Appendix B contains changes in the drainages, by year, for each of the three project areas illustrated on modern aerial imagery.

The existing and planned additions to the canal systems included within the Cozad, Lexington, and Overton APES are part of a larger irrigation system built, modified, and utilized for decades across Dawson County. Irrigation canals began to appear throughout Dawson County by 1890, with canal systems developing near Cozad, Lexington, and Overton within the next decade (Mead and Hunt 2011:4-5). The 1896 Lexington and Kearney 1:125,000 topographic maps show Buffalo Creek northeast of Lexington and east of Overton, Spring Creek northwest of Lexington, and an unnamed tributary to the Platte River draining from northwest to southeast of Cozad (Figure 15). No irrigation canals or laterals are visible on those topographic maps.

County plat maps from 1904 and 1919 illustrate the large Farmers and Merchants Irrigation Canal running from south of Cozad, then north of Lexington to southeast of Overton where it connected to Buffalo Creek (Figures 16–22). Numerous canal laterals, such as the Lateral No. 1 and Strever Slough, both passing the north edge of town, are also depicted around Lexington, though only portions of the Lateral No. 1 drainage follow the footprint of the current project area east of town. Based on a comparison of the 1919 Dawson County plat map and later 1955 USGS 1:250,000 Grand Island topographic map, it appears that Lateral No. 1 may have originally been a lateral extending off of the Farmers and Merchants Irrigation Canal, which then seems to have been renamed the Dawson County Lateral No. 1 canal on later maps. Plat maps from 1919 show a slightly different footprint of Lateral No. 1 northeast and east of Lexington, as well as an additional unnamed lateral southwest of town (see Figure 20). Additionally, multiple sloughs, including the Stump Slough and Spring Creek Slough, as well as a lateral to the Farmers and Merchants Irrigation Canal, cross the project APE around Cozad. None of the drainages follow the current APE footprint exactly, though portions of the Stump Slough east of Cozad match the APE for a short distance (see Figure 22).

By 1951, an unnamed canal appears at the east edge of Lexington, running south along Taft St at the section line of Sections 4 and 5, T9N R21W, before paralleling Highway 30 and connecting to canalized portions of Spring Creek at the southern edge of Section 3, T9N R21W (Figure 23). The Spring Creek canal extends across the southwest ¼ of that section, as well as across the northern ½ of Section 10, T9N R21W. The Taft St. lateral may have been incorporated into below-ground city infrastructure by 1972, allowing water to run underground to the intersection of Taft St. and Highway 30 where the channel reappears (Figure 24).

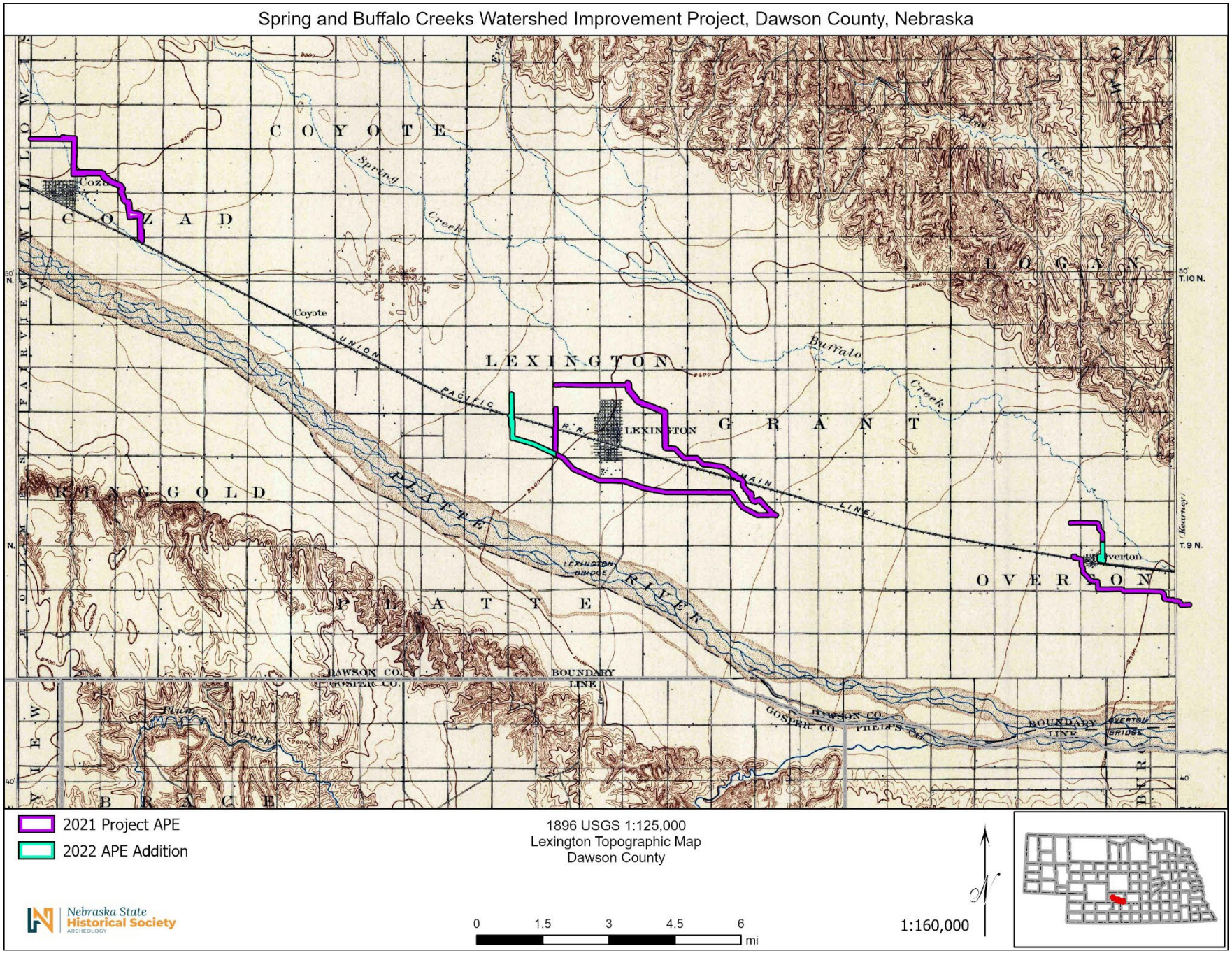

Figure 15. 1896 USGS 1:125,000 Lexigton topographic map major drainages around Cozad, Lexinton, and Overton APEs.

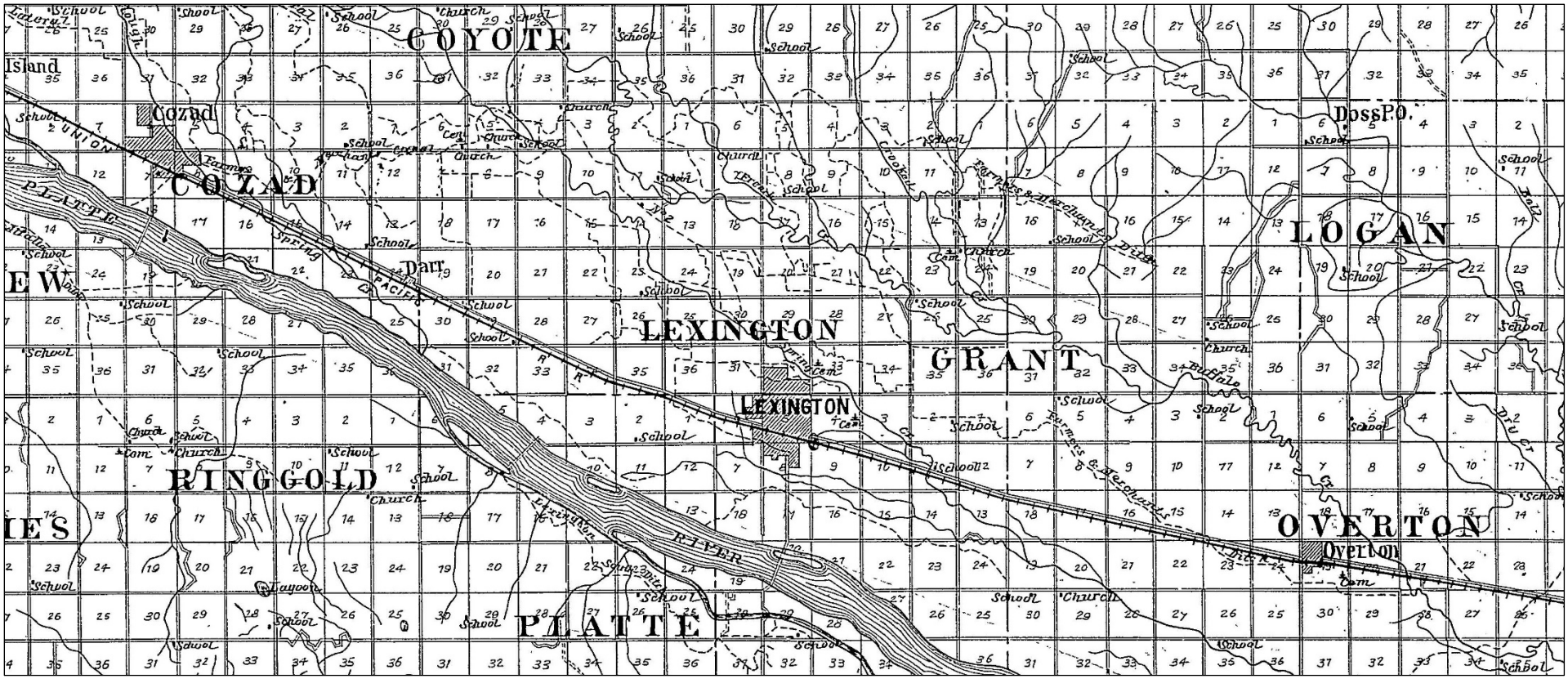

Figure 16. 1904 Dawson County plat map showing canal systems and drainages around Cozad, Lexinton, and Overton.

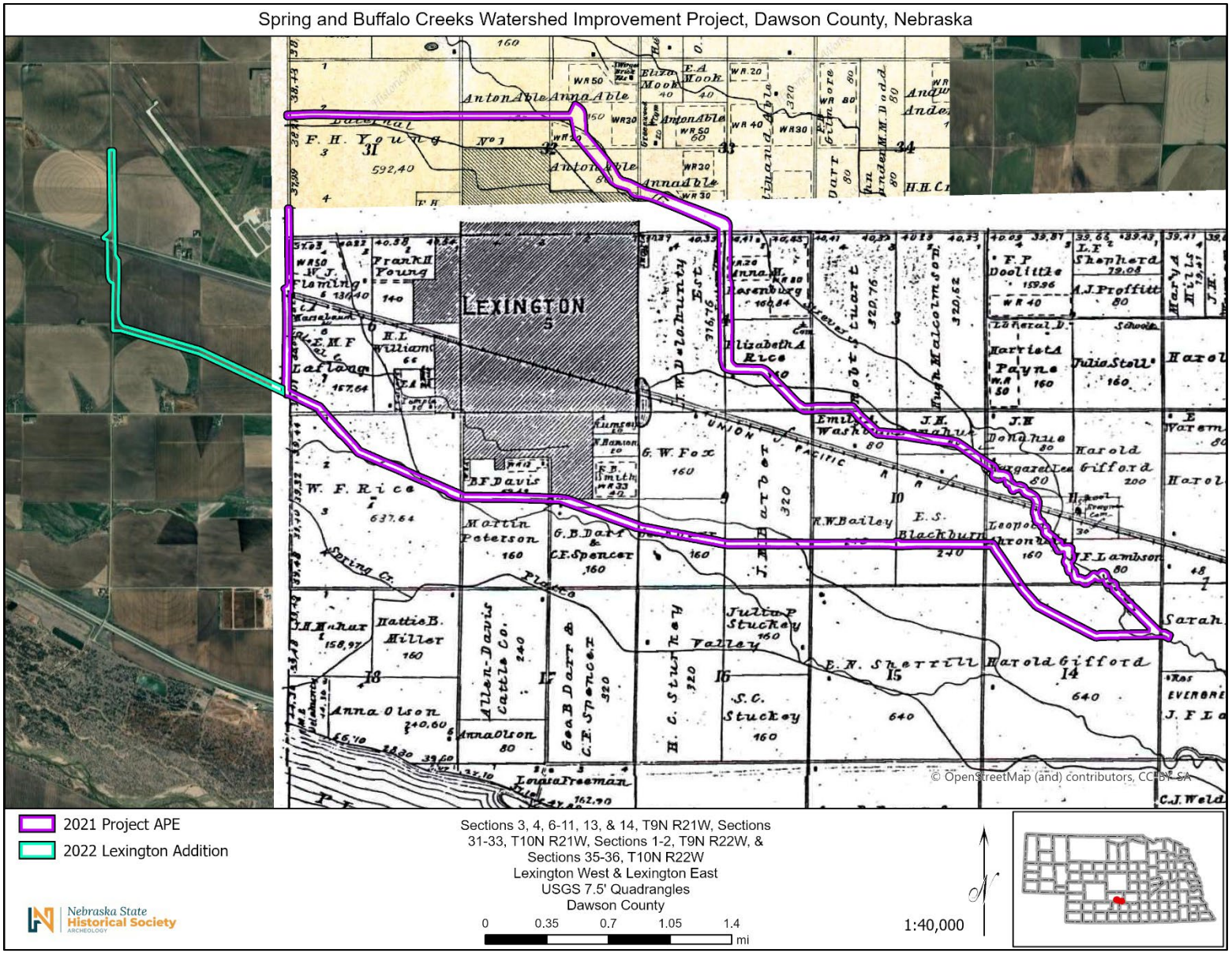

Figure 17. Lexington APE illustrated on 1904 plat maps showing local irrigation canals and laterals.

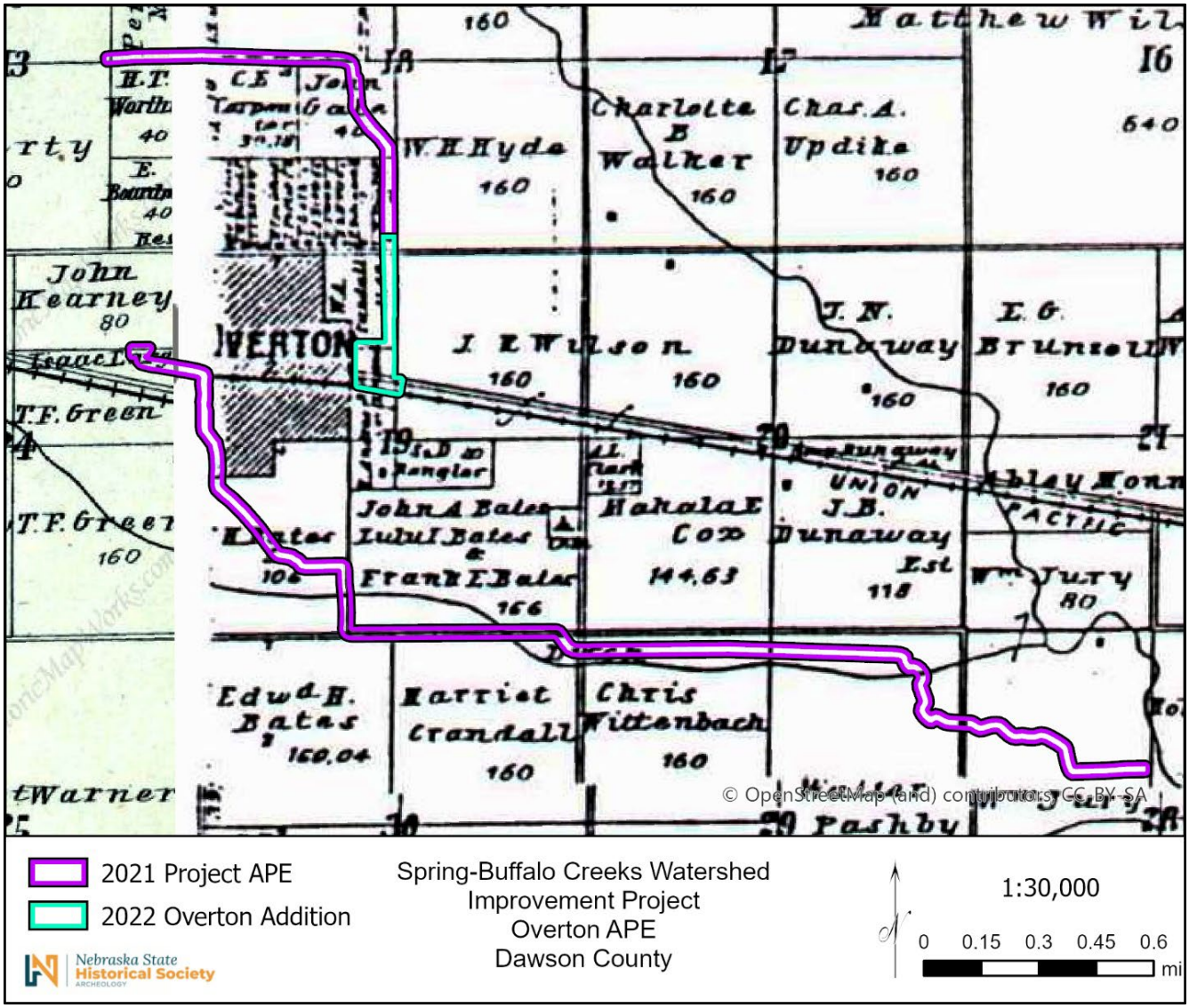

Figure 18. Overton APE illustrated on 1904 plat maps showing local irrigation canals and laterals.

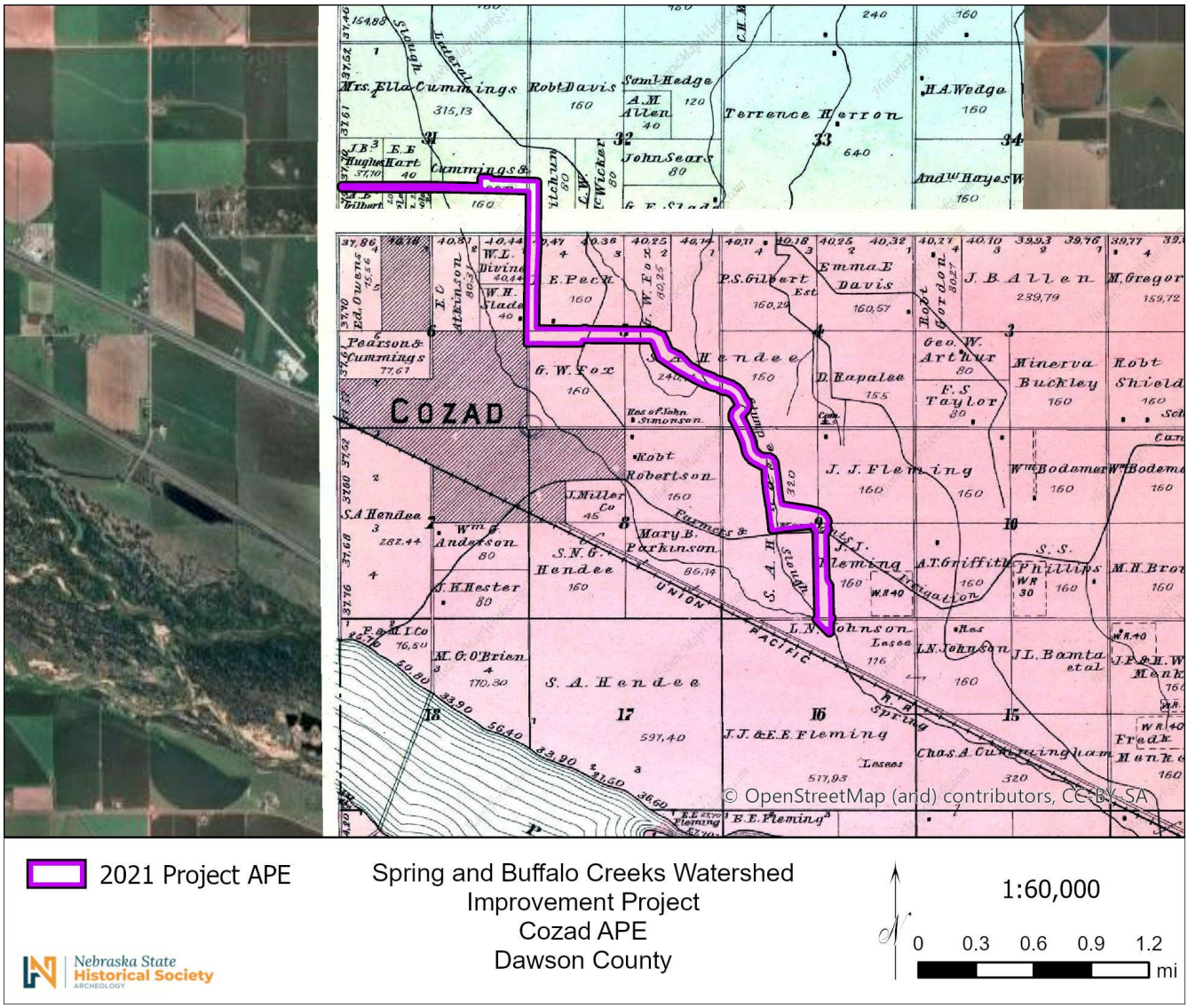

Figure 19. Cozad APE illustrated on 1904 plat maps showing local irrigation canals and laterals.

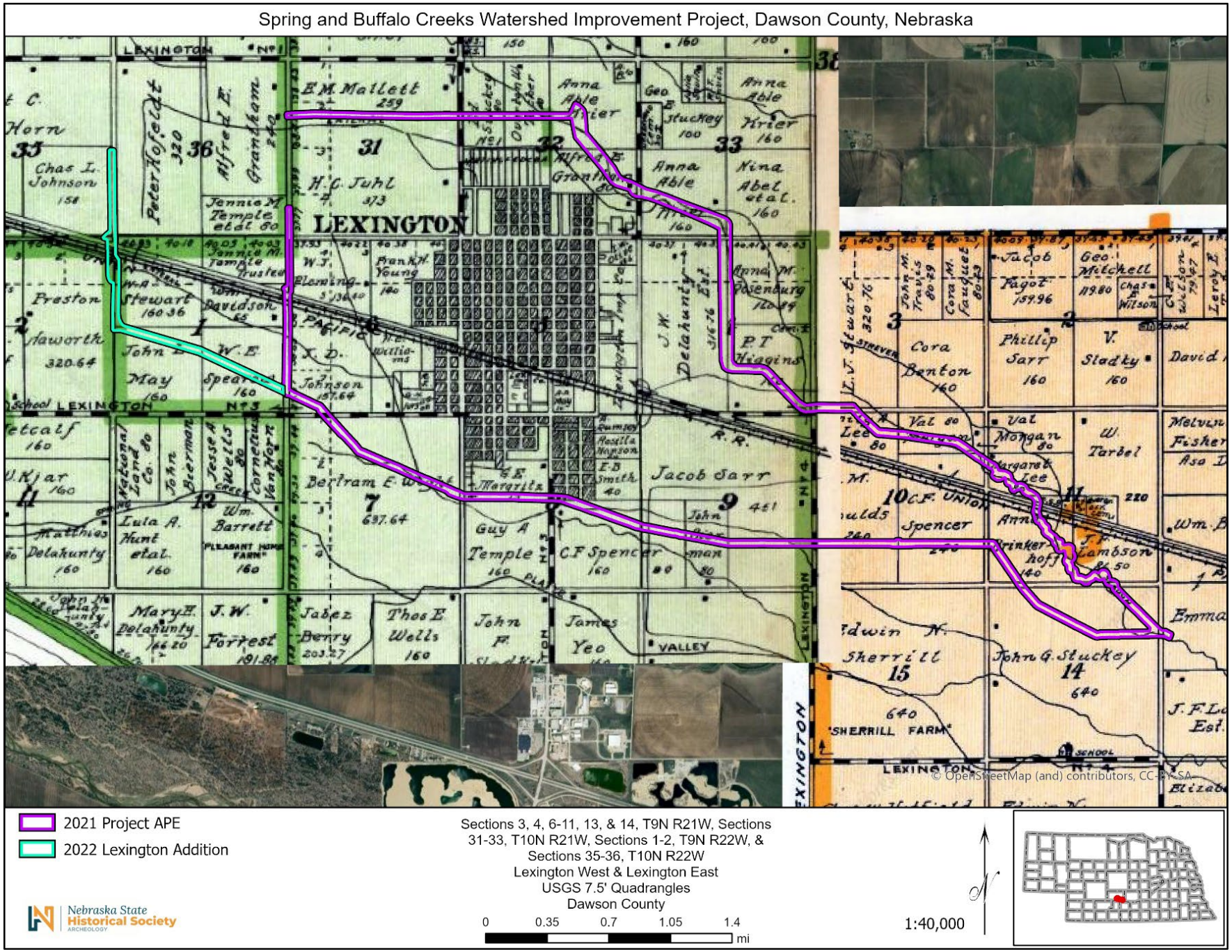

Figure 20. Lexington APE illustrated on 1919 plat maps showing local irrigation canals and laterals.

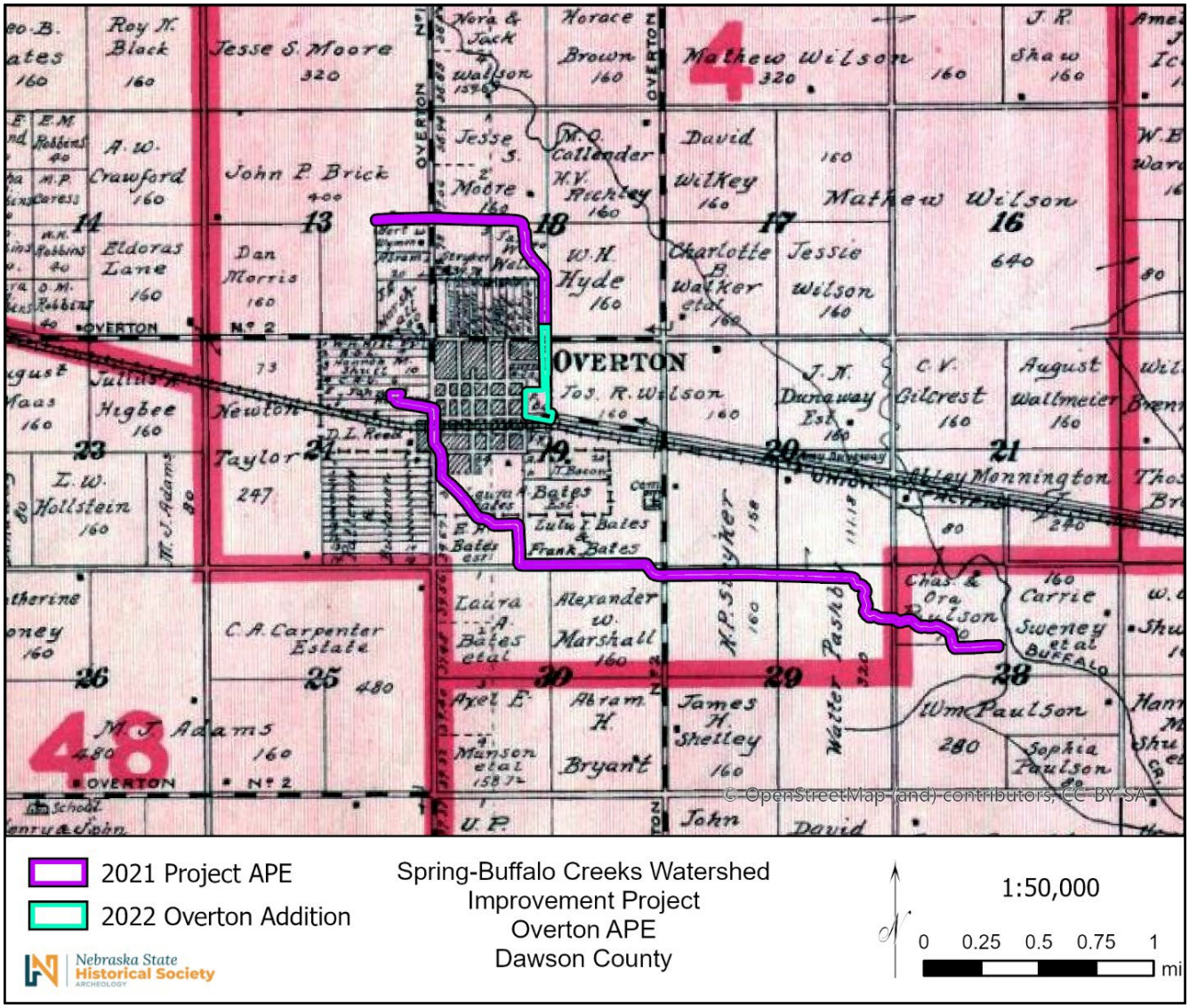

Figure 21. Overton APE illustrated on 1919 plat maps showing local irrigation canals and laterals.

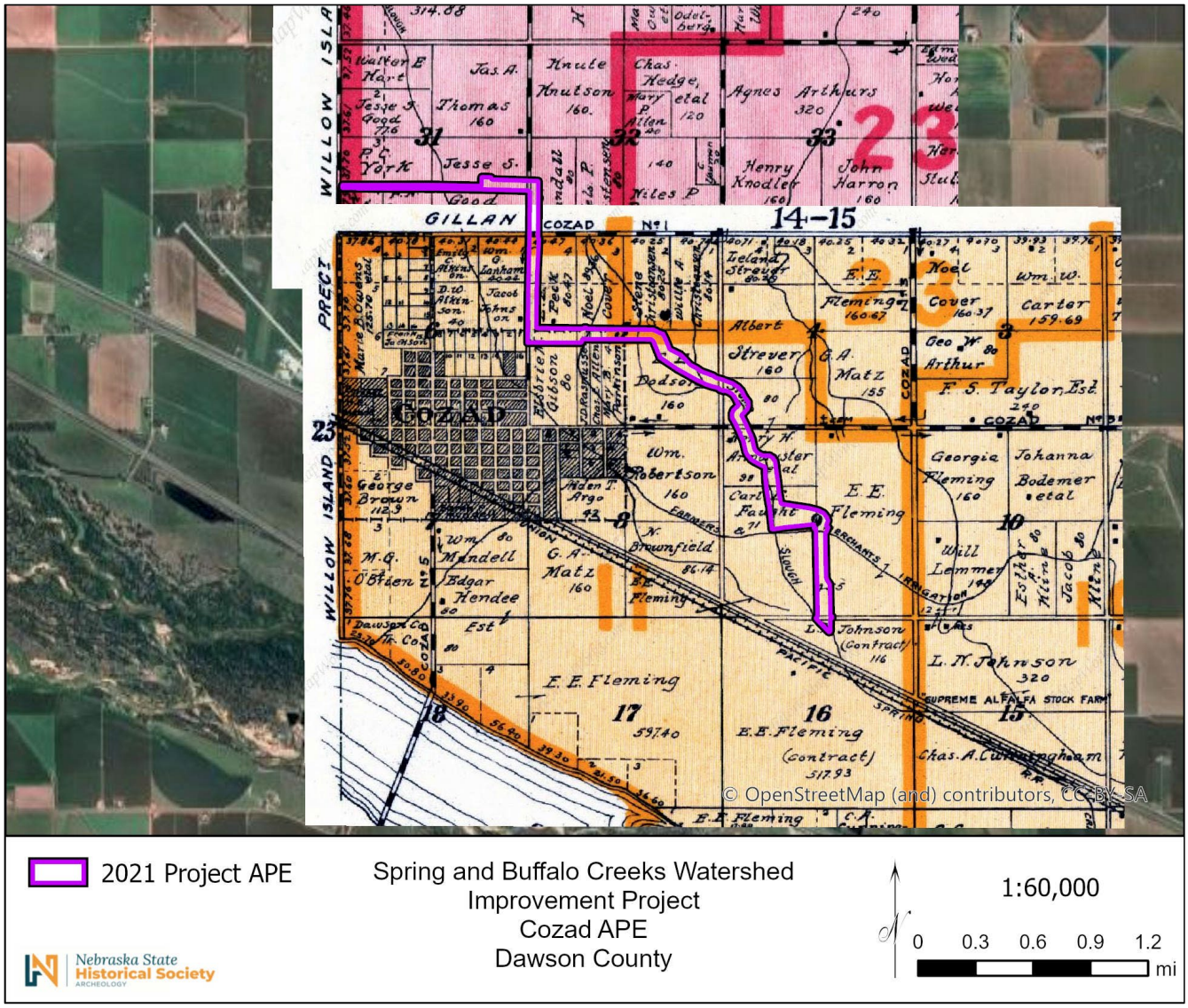

Figure 22. Cozad APE illustrated on 1919 plat maps showing local irrigation canals and laterals.

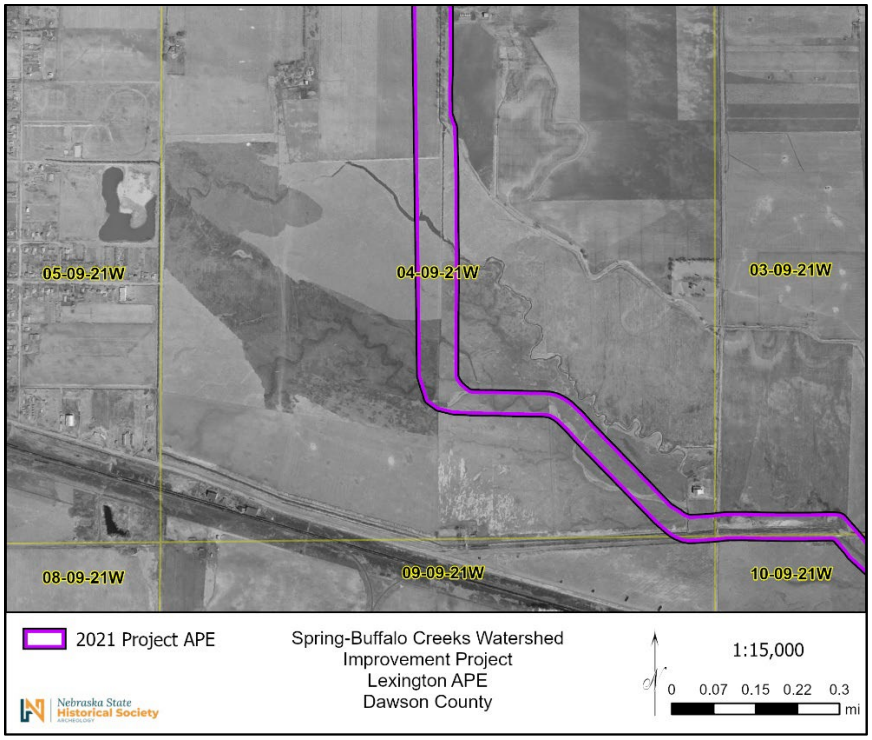

Figure 23. Lexington APE east of Lexington showing canal along boundary of Sections 4 and 5, T9N R21W, and canalized Spring Creek in N ½ of Section 4, T9N R21W. Illustrated on 1951 aerial photograph.

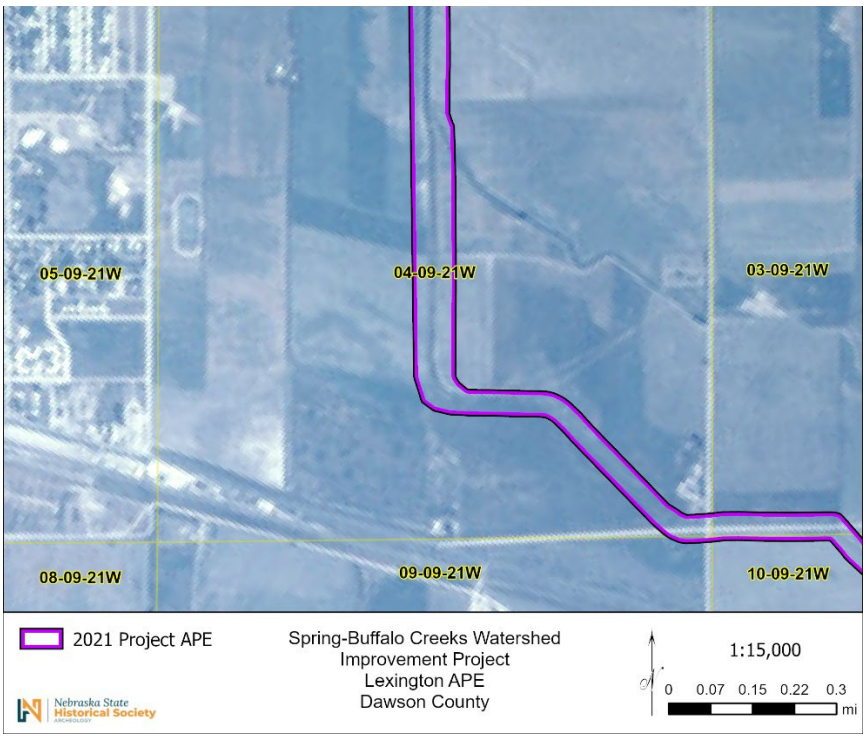

Figure 24. Lexington APE east of Lexington showing canal along boundary of Sections 4 and 5, T9N R21W. Illustrated on 1972 aerial photograph.

Portions of the Dawson County Canal system, including the Dawson County Lateral No. 1 (Dawson County Canal) extending through and east of Cozad, and the Dawson County Drain No. 1 canal south of Lexington, intersect the Cozad and Lexington APEs. While the Dawson Lateral No. 1 (Dawson County Canal) passes through Cozad and continues into the northwest edge of Lexington, as first seen on 1951 aerial imagery and the 1955 USGS 1:250,000 Grand Island topographic map, its footprint does not align with the proposed project APE around Cozad. The portion of the canal ending in Section 31, T10N R21W north of Lexington also roughly matches the earlier Lateral No. 1 footprint seen in the 1904 and 1919 imagery.

The Dawson County Drain No. 1 canal encompassed much of the southern portion of the planned Lexington APE and may have been constructed as early as 1930 (Oltman 1951:34). This canal has also been reported with a 1940 construction date (NCRGIS data). The earliest aerial imagery depicting the Dawson County Drain No. 1 canal comes from 1951 (Figure 25) and the 1955 USGS 1:250,000 Grand Island topographic map is the earliest map showing the structure (Figure 26). This canal was previously documented (SHPO ID # DS00-106) by Mead and Hunt (2011). Records provided following Mead and Hunt's 2011 report describe the Dawson County Drain No. 1 canal as containing "Tree-lined steel culverts runs approximately 11 miles and connects with spring creek [sic] in the southeast portion of Dawson County" (NCRGIS); Mead and Hunt noted that additional information was needed to determine the NRHP eligibility of this canal. Of that 11 miles, nearly half of the canal length—approximately 6.22 miles—is included in the current Lexington APE.

Portions of Spring Creek directly east of Lexington–in the north ½ of Section 4, T9N R21W–appear to have been canalized, forming part of the Beatty Ditch, by 1962, as illustrated on aerial imagery from 1951 (see Figure 23) and the 1962 USGS 7.5' Lexington East quadrangle (Figure 27). The Beatty Ditch headgate is still in use today (Figure 28). Further canalization of Spring Creek occurred by 1972 south of the Beatty Ditch, within the SE ¼ of Section 4, T9N R21W (Figure 29). The creek maintains its meandering course through Sections 11 and 14, T9N R21W, connecting with the Dawson County Drain No. 1 canal near Rd. 437 approximately half a mile south of Interstate 80. Sometime between 1985 (based on the USGS 1:100,000 Kearney topographic map) and 1993 (based on aerial imagery) a straight diversion channel was constructed on Spring Creek in the NE ¼ of Section 14, T9N R21W (Figures 30–31). At a similar time, portions of Spring Creek through Sections 32 and 33, T10N R21W were canalized, forming the drainage footprint that is followed by the current Lexington APE (Figures 32–33).

Current canal features around Overton do not appear until around 1985 when the canal lateral northeast of town is first illustrated on the USGS 1985 Kearney topographic map (Figures 34–35). Prior to that time, unnamed tributary drainages to Buffalo Creek are seen on aerial imagery and topographic maps, such as the USGS 1962 7.5' Overton quadrangle, but no canal system is immediately obvious in any earlier imagery.

Figure 25. Lexington APE illustrated on 1951 aerial photographs. Southern line of APE follows Dawson County Drain No. 1 canal.

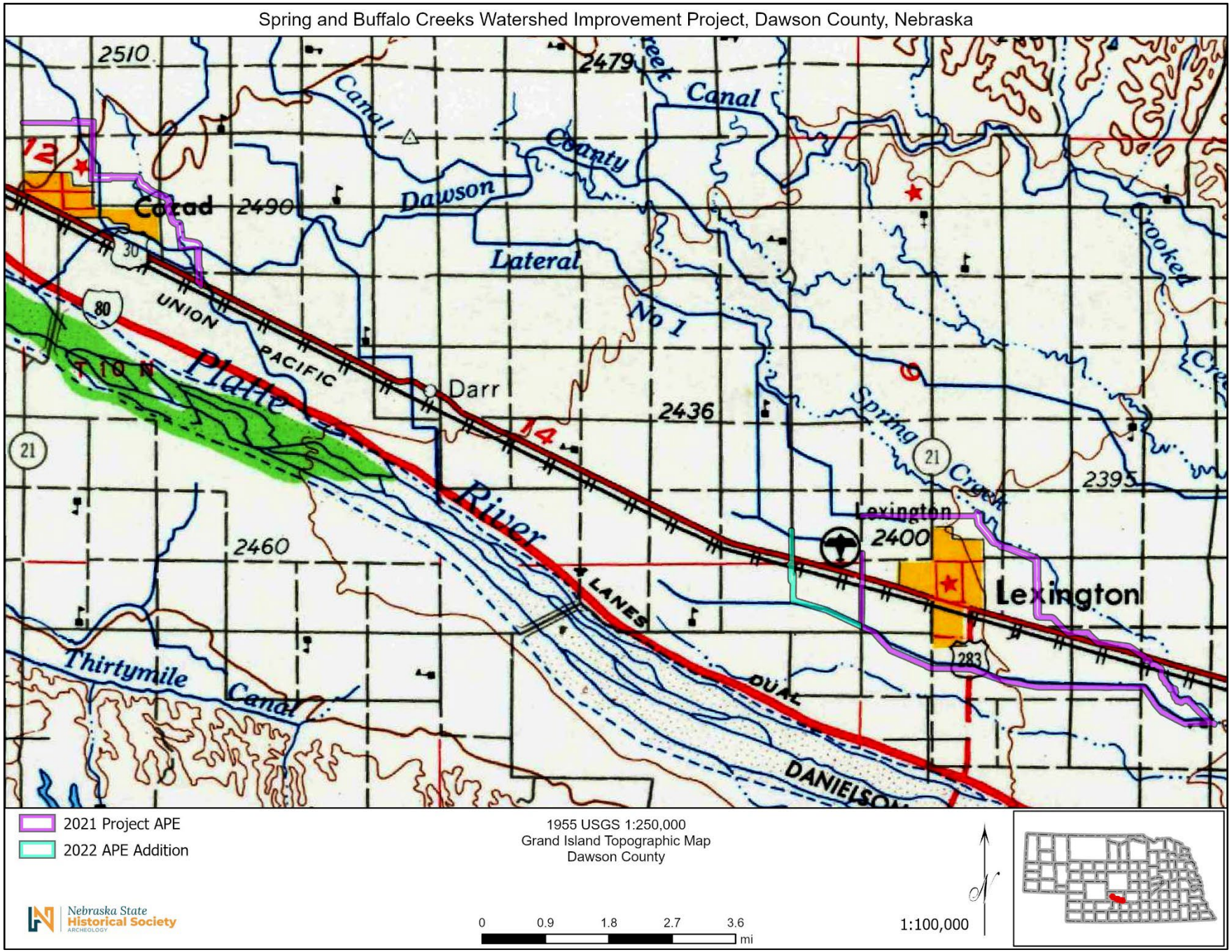

Figure 26. 1955 USGS 1:250,000 Grand Island topographic map showing Dawson County Canal system around Cozad and Lexington APEs.

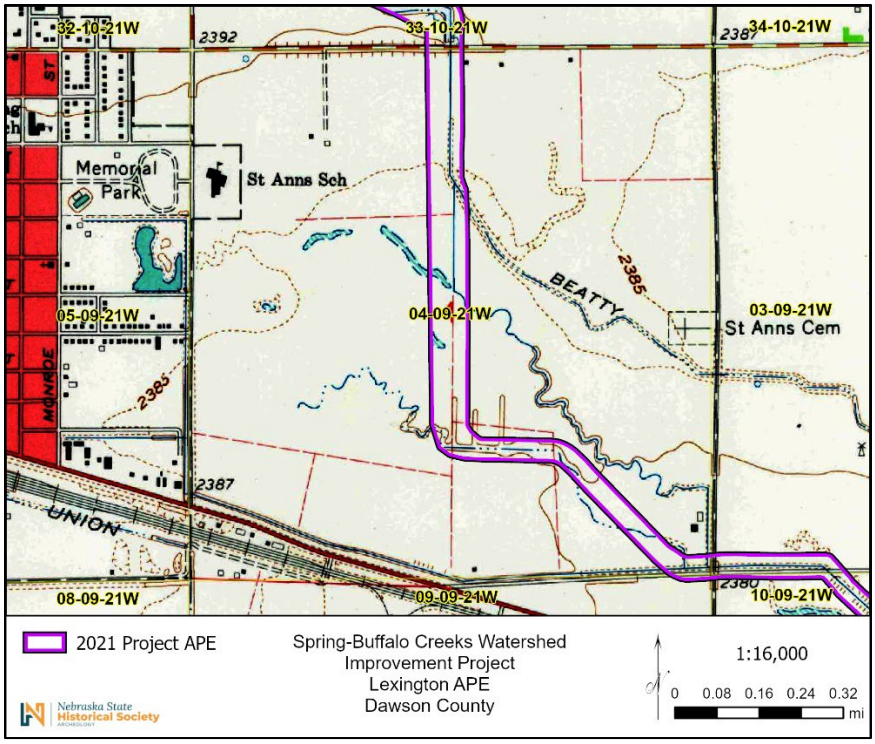

Figure 27. Lexington APE east of Lexington showing canalized Spring Creek segment illustrated on 1962 USGS Lexington East quadrangle.

Figure 28. Beatty Ditch headgate east of Lexington (N ½ of Section 4, T9N R21W). Photo taken by HDR wetland mitigation crew.

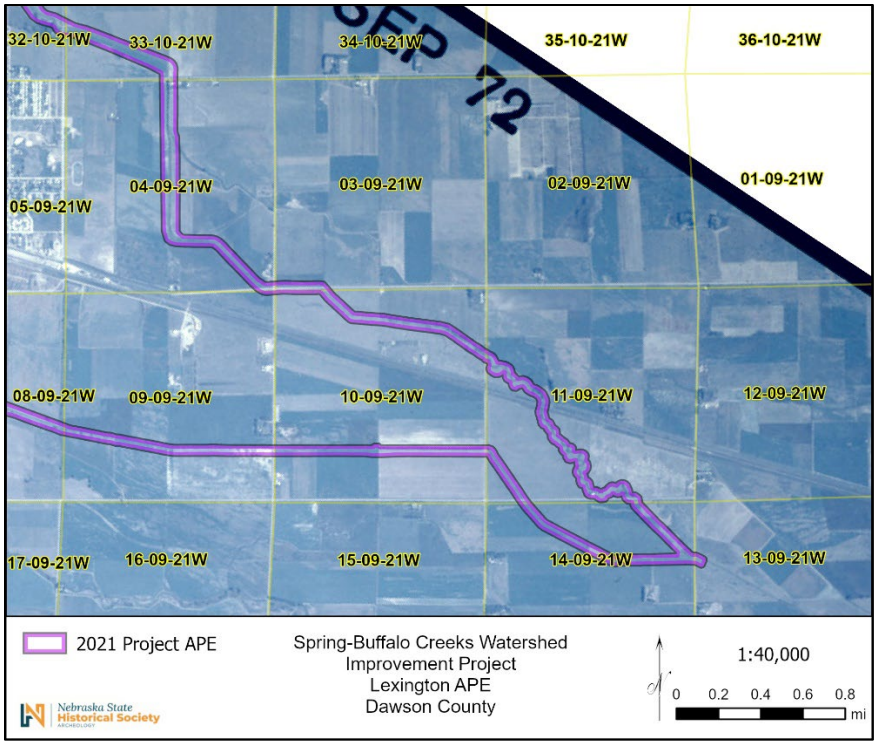

Figure 29. Lexington APE east of Lexington showing canalized Spring Creek segments in the SE ¼ of Section 4, T9N R21W, illustrated on 1972 aerial imagery.

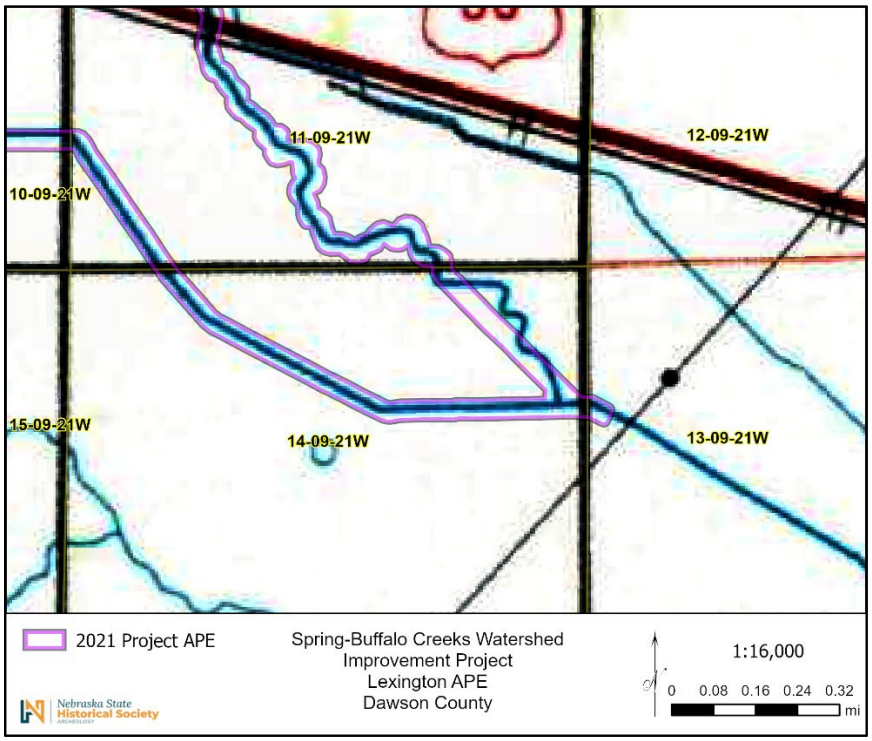

Figure 30. Lexington APE east of Lexington showing Spring Creek in the NE ¼ of Section 14, T9N R21W, illustrated on USGS 1985 Kearney topographic map.

Figure 31. Area east of Lexington showing Spring Creek in the NE ¼ of Section 14, T9N R21W, illustrated on 1993 aerial imagery. Red arrow points to creek segment canalized after 1985.

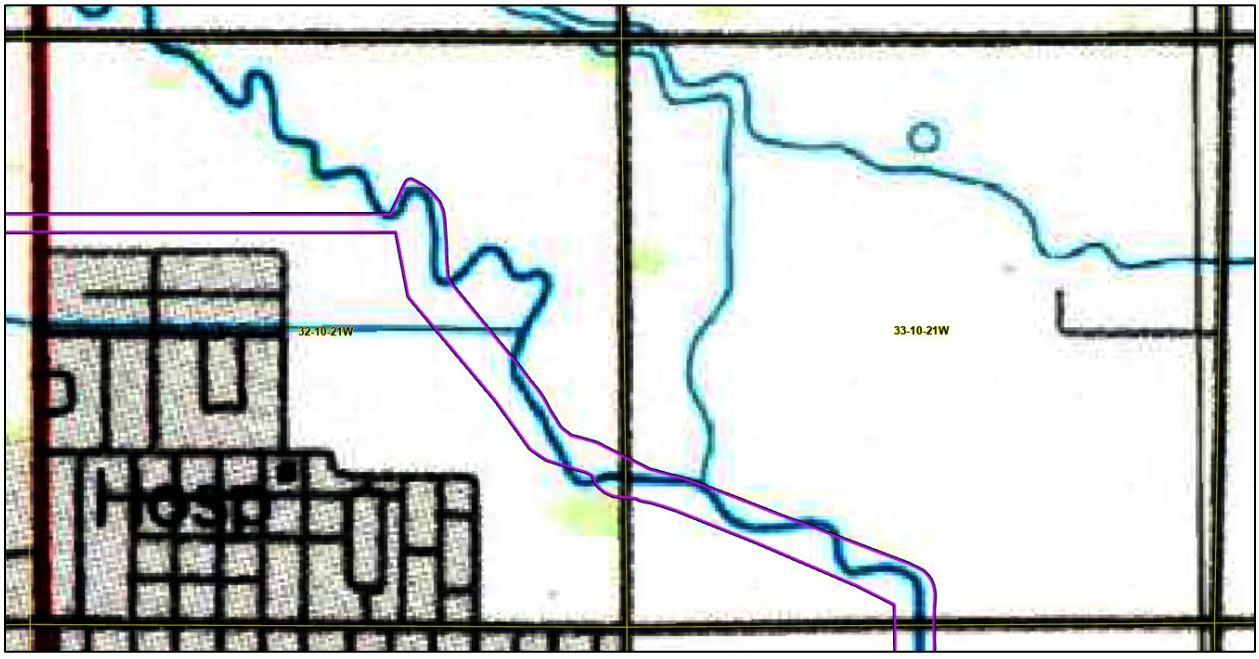

Figure 32. Area east of Lexington showing Spring Creek channel in Sections 32 and 33, T10N R21W, illustrated on USGS 1985 Kearney topographic map. Purple polygon is Lexington APE.

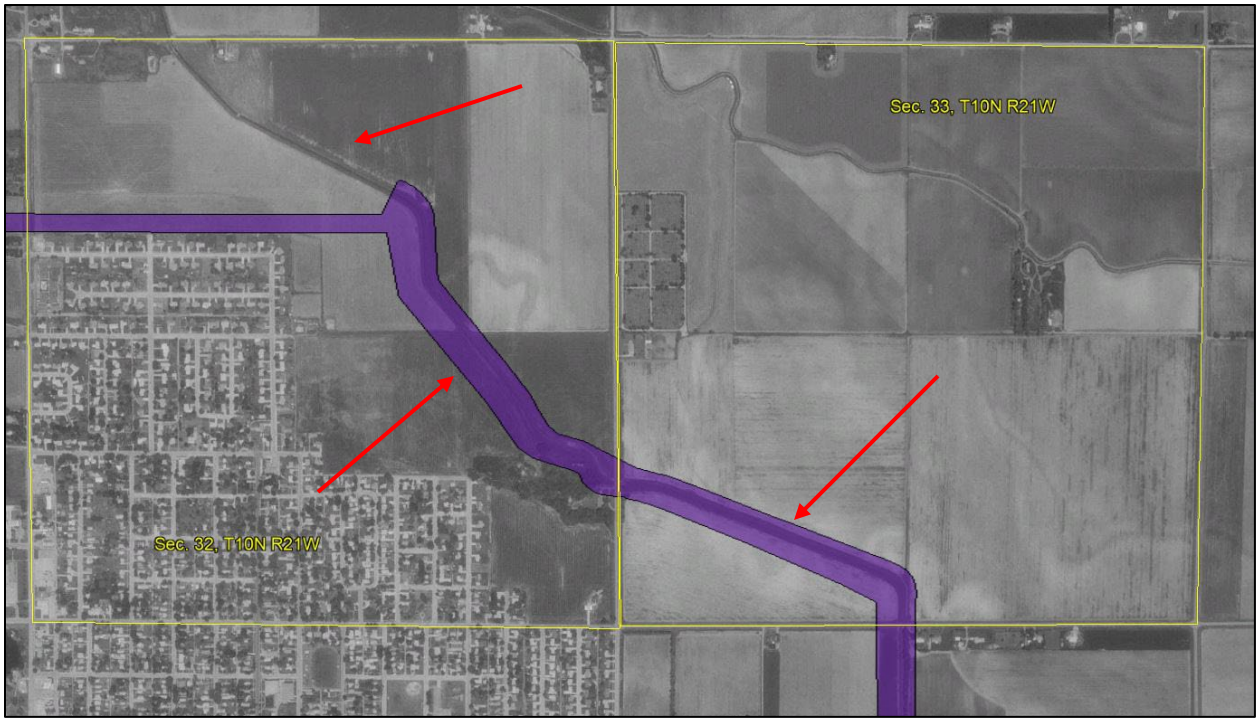

Figure 33. Area east of Lexington showing Spring Creek in Sections 32 and 33, T10N R21W, illustrated on 1993 aerial imagery. Purple area is Lexington APE and red arrows point to creek segments canalized after 1985.

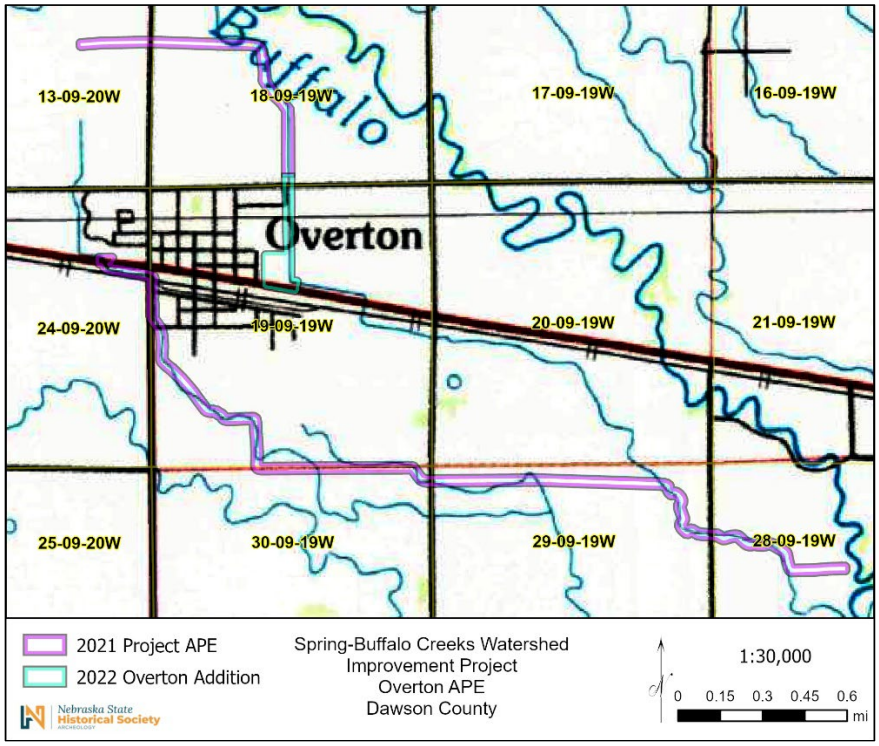

Figure 34. Overton APE illustrating Buffalo Creek and unnamed tributaries illustrated on USGS 1985 Kearney topographic map.

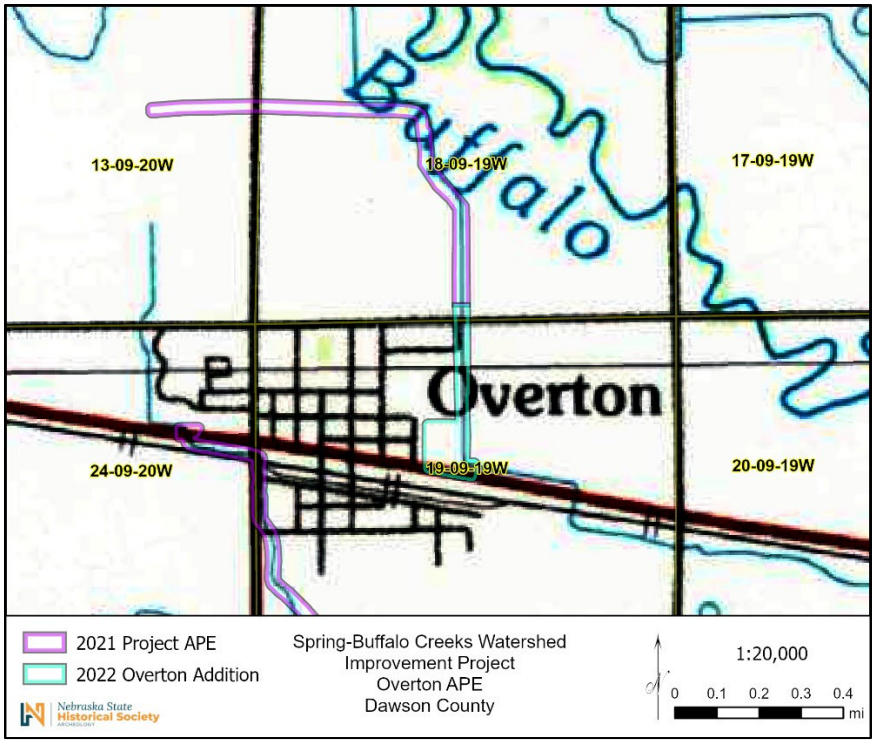

Figure 35. Zoomed view of Overton APE illustrating canal northeast and east of Overton illustrated on USGS 1985 Kearney topographic map.

Additionally, portions of the unnamed Buffalo Creek tributaries south of Overton did not become canalized until more recently. Aerial imagery from 1974 shows a meandering stream channel along the boundary of Sections 19 and 30, T9N R19W, as well as through the northern half of Section 29, T9N R19W (Figure 36). This is also reflected in the 1985 topographic map (see Figure 34). However, aerial imagery from 2002 to present shows straight canal channels extending across the Section 19 and 30, T9N R19W, boundary and in the NW ¼ of Section 29, T9N R19W, suggesting those portions of the drainage were canalized only sometime in the past 40 years, possibly around the same time as the canal segments northeast of Overton.

Around Cozad, the segments of the Dawson County Canal that show up on the USGS 1955 1:250,000 Grand Island topographic map also appear on the USGS 1971 7.5' Cozad and Cozad NW quadrangles (Figure 37). An unnamed tributary drainage running roughly north-south to the east of Cozad connects to the Dawson County Canal in the S ½ of Section 9, T10N R23W on the 1955 topographic map, and the same unnamed drainage connects to an unnamed lateral canal in the same area on the 1971 quadrangle map. Aerial imagery from 1951 shows a meandering segment of that unnamed drainage within the SE ¼ of Section 5, T10N R23W, but by 1953 that same portion of the drainage had been canalized (Figures 38–39). The drainage footprint remains largely the same to present day. That small portion of the unnamed drainage in Section 5, T10N R23W, along with meandering portions of the drainage in Sections 4 and 9, T10N R23W, and a small length of the Dawson Lateral No. 1 canal in the W ½ of Section 5, T10N R23W, are the only segments of the Cozad APE that follow existing drainage footprints.

Throughout the Cozad, Lexington, and Overton APEs, existing canal channels exhibited high levels of slumping and disturbance due to decades of water erosion (Figures 40 and 42a-d). Additionally, dense plant growth has generally filled the canals, with grasses, shrubs, and trees impacting bank stability and potentially restricting water flow during high water periods (see Figure 12). Culverts and canal channels contain dense deposits of silt and runoff debris, diminishing the functionality of the overall system. In some areas, local measures have been taken to shore up slumping canal walls with poured concrete or concrete riprap (Figures 41 and 42e), but overall integrity of the structures has been diminished.

While the canal channels and laterals throughout the current project APEs are associated with the local expansion of irrigation activity and agricultural activities across Dawson County, the specific canals and their associated features are not among the more historically significant and prominent canals in Dawson County, such as the Thirty-Mile Canal, Tri-County Canal, and Elm Creek Canal. The canal system within the current project APEs also does not possess any unique architectural elements and could not be attributed to any master builders. Given other historic canals within Dawson County retain greater integrity and offer better research potential for early irrigation systems in south-central Nebraska, and because the canalized portions of Buffalo Creek near Overton are not yet 50 years old, it is recommended that none of the mainline canals or laterals within the current project APEs be considered Eligible for listing in the NRHP. No further work is recommended for any of the observed canal structures.

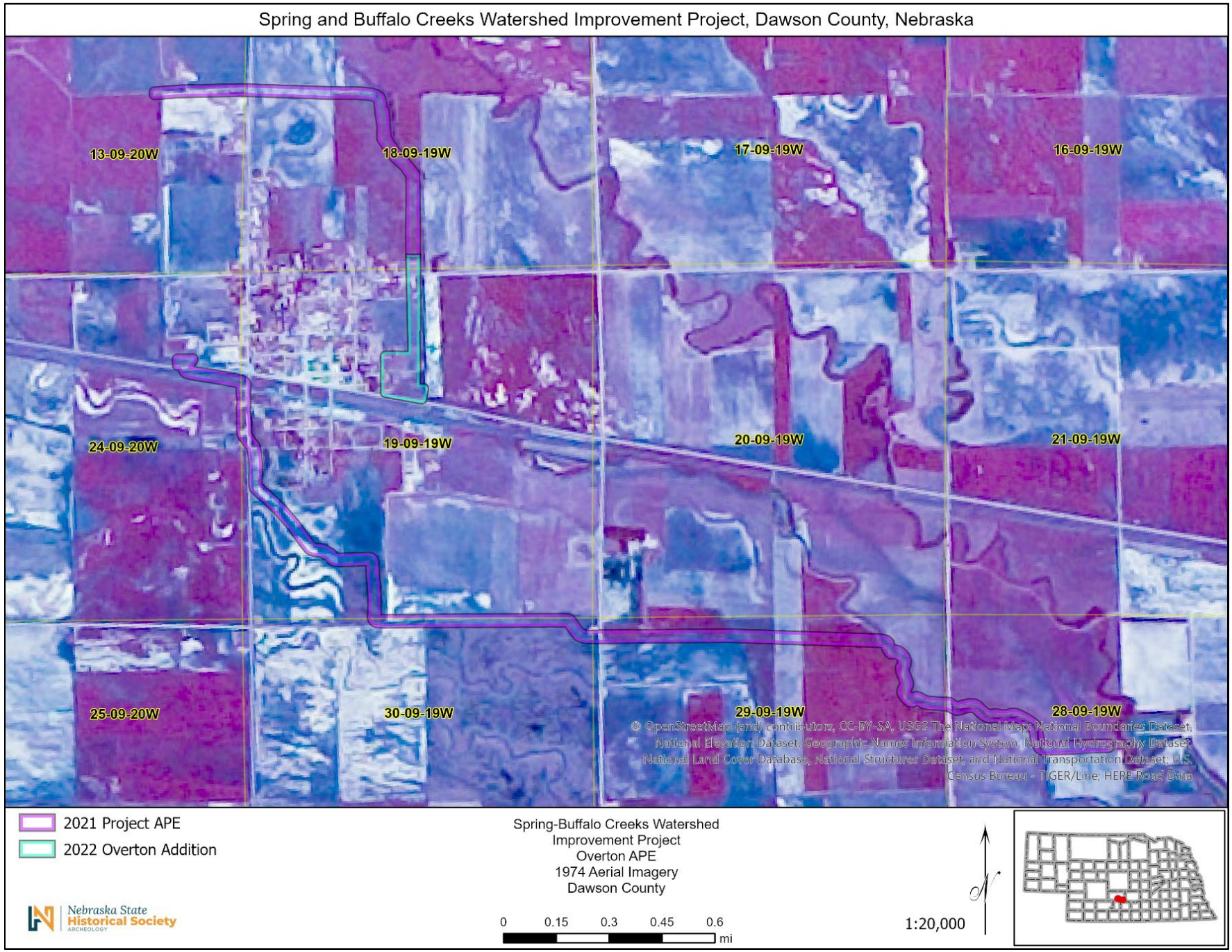

Figure 36. Overton APE showing meandering Buffalo Creek tributary south of Overton illustrated on 1974 aerial imagery.

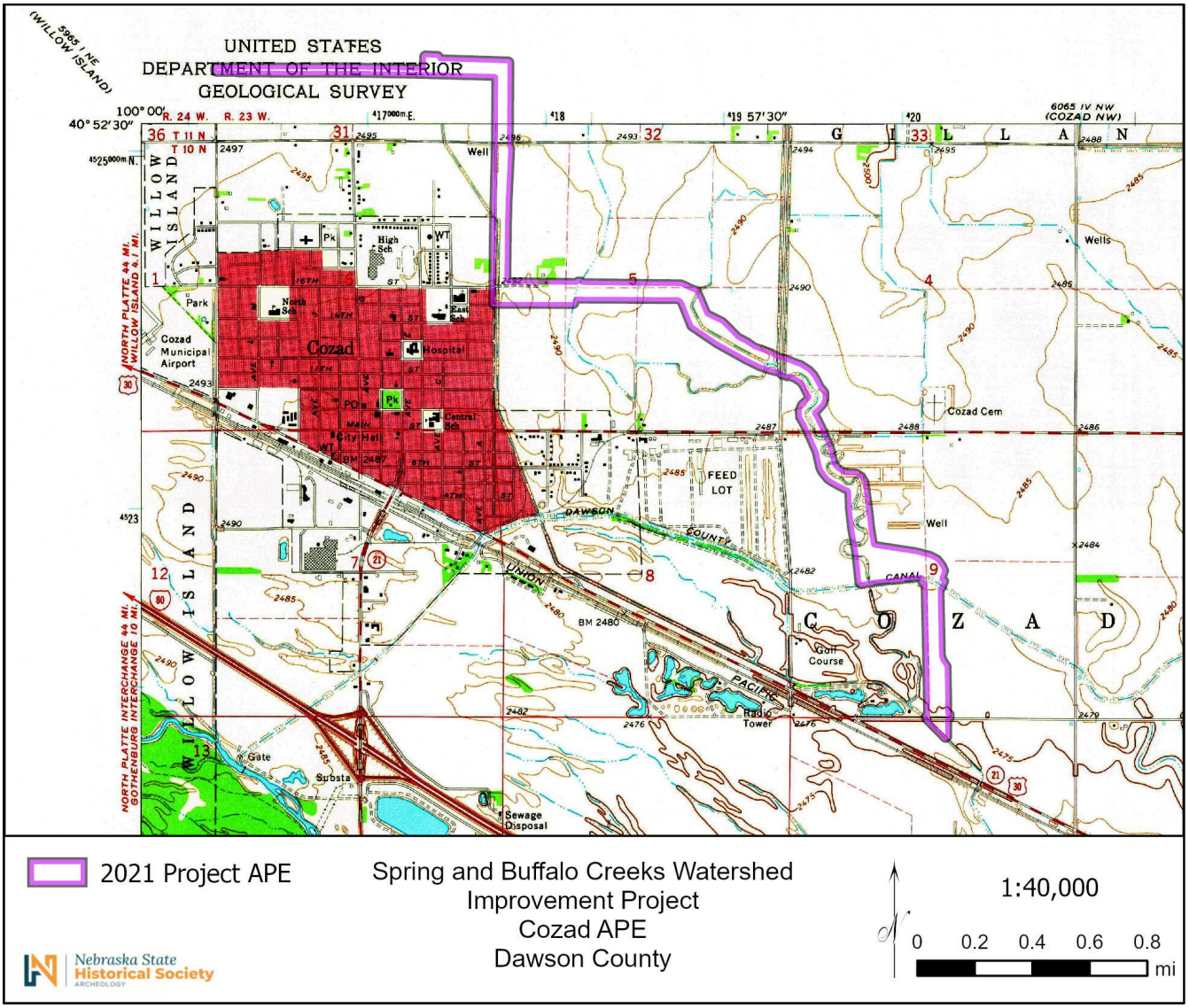

Figure 37. Cozad APE illustrating canals, laterals, and drainages illustrated on 1971 USGS 7.5' Cozad quadrangle.

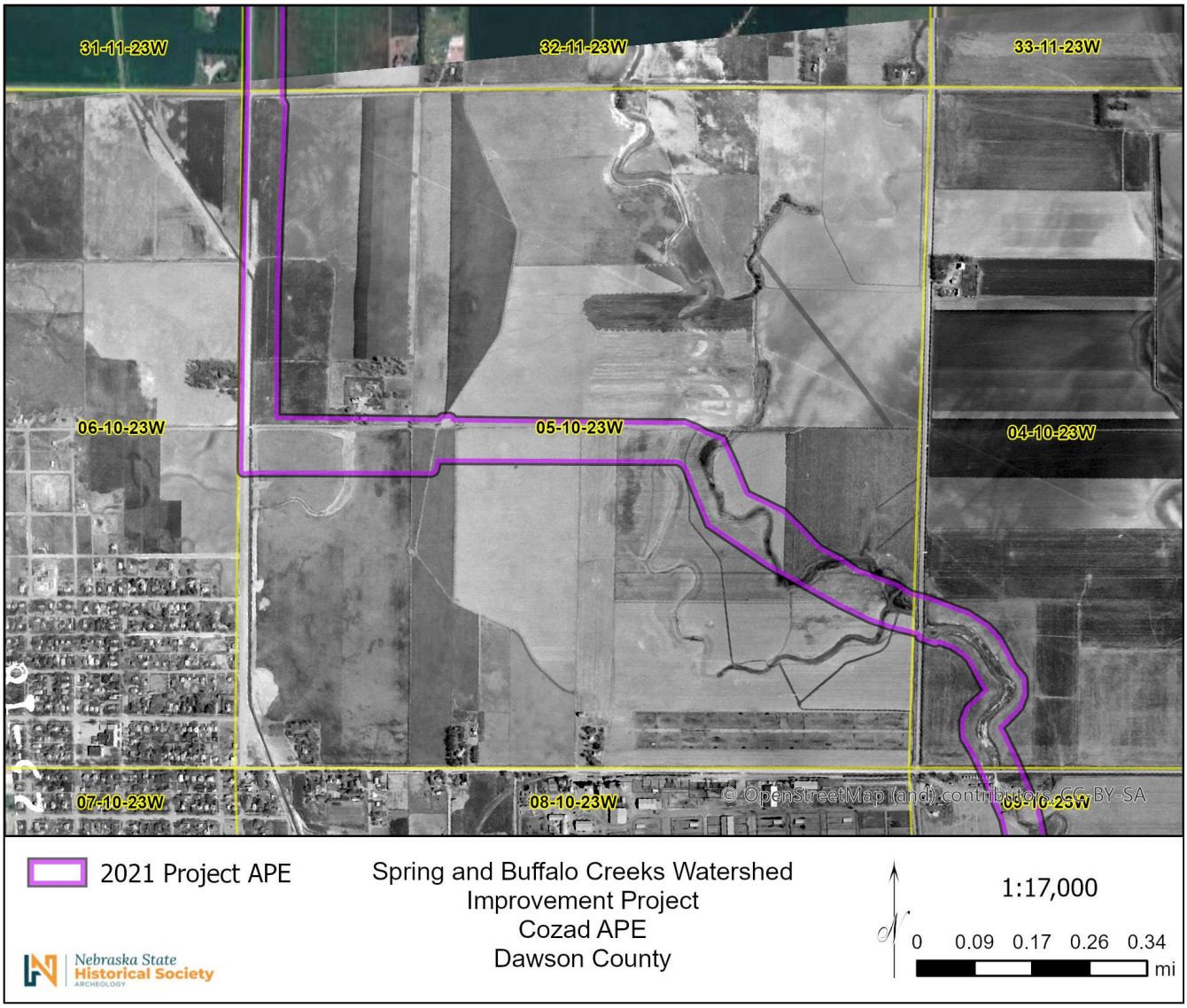

Figure 38. 1951 aerial photo showing meandering unnamed drainage east of Cozad in the SE ¼ of Section 5, T10N R23W.

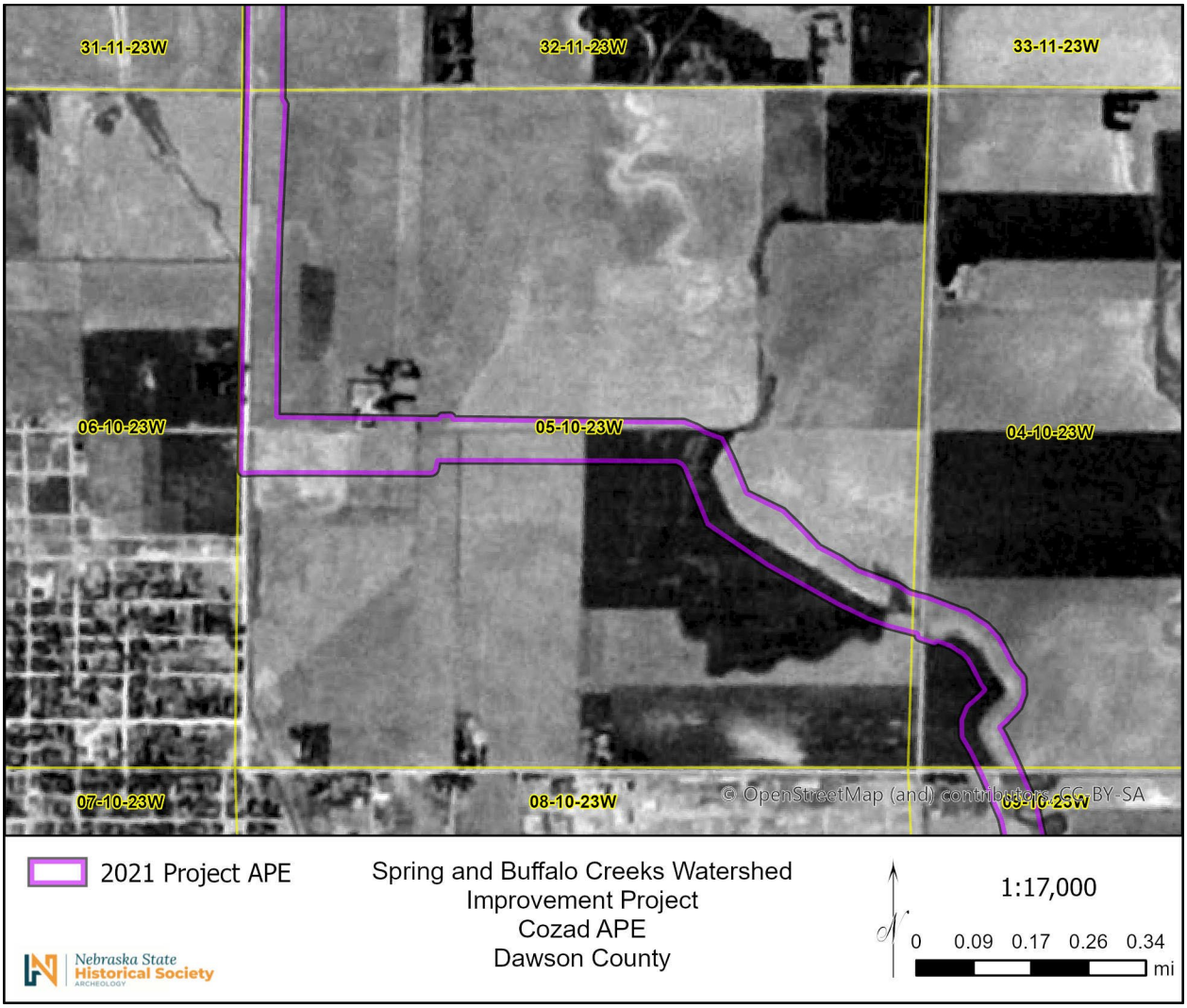

Figure 39. 1953 aerial photo showing canalized unnamed drainage east of Cozad in the SE ¼ of Section 5, T10N R23W.

Figure 40. Example of eroding and slumping bank within Lexington APE near Rd. 755. View is to the southeast.

Figure 41. Example of local measures to shore up eroding and slumping bank within Lexington APE. View is to the south.

Figure 42. Examples of canal overgrowth, slumping, and shoring canal banks (a and b) north of Cozad, (c) east of Cozad along Country Club Road, (d) east of Cozad on Rd. 761, and (e) Dawson County Canal east of Cozad at northeast corner of Cozad Country Club, all within the Cozad APE.

CONCLUSIONS AND MANAGEMENT RECOMMENDATIONS

HDR, Inc., and Central Platte Natural Resources District requested the SAO, a division of the Nebraska State Historical Society, conduct a Class III intensive cultural resources investigation, including pedestrian survey, subsurface testing, and historic structure documentation, in advance of the proposed Spring and Buffalo Creeks Watershed Improvement Project Work Plan, Buffalo, Custer, and Dawson Counties, Nebraska. Proposed project activities are anticipated to include improvements, widening, and installation of new diversion conveyance channels along both Spring and Buffalo Creeks. The USDA NRCS is the lead federal agency for this project. The entire Spring and Buffalo Creeks watershed and proposed planning study area encompasses about 320,000 ac, or about 500 square miles.

As a result of these survey efforts, no new archeological sites were documented. Portions of the canal channels and associated laterals within the Cozad, Lexington, and Overton APEs were documented and evaluated for their potential to be included in the NRHP. None of the canal segments documented are considered Eligible for listing in the NRHP and no further work is recommended.

Provided NRCS and the SHPO concur with the site recommendations, the investigators recommended a Section 106 Finding of No Historic Properties Affected relative to the proposed Spring and Buffalo Creeks Watershed Improvement Project. It is further recommended that should any evidence of buried cultural resources be encountered during project construction activities, such activities be immediately halted and the SHPO or the SAO in Lincoln be notified immediately in order to determine an appropriate course of action. As a reminder, the information included in this report is protected by state law (Statute 84-712.05[14] and [15]) and is not for public distribution.

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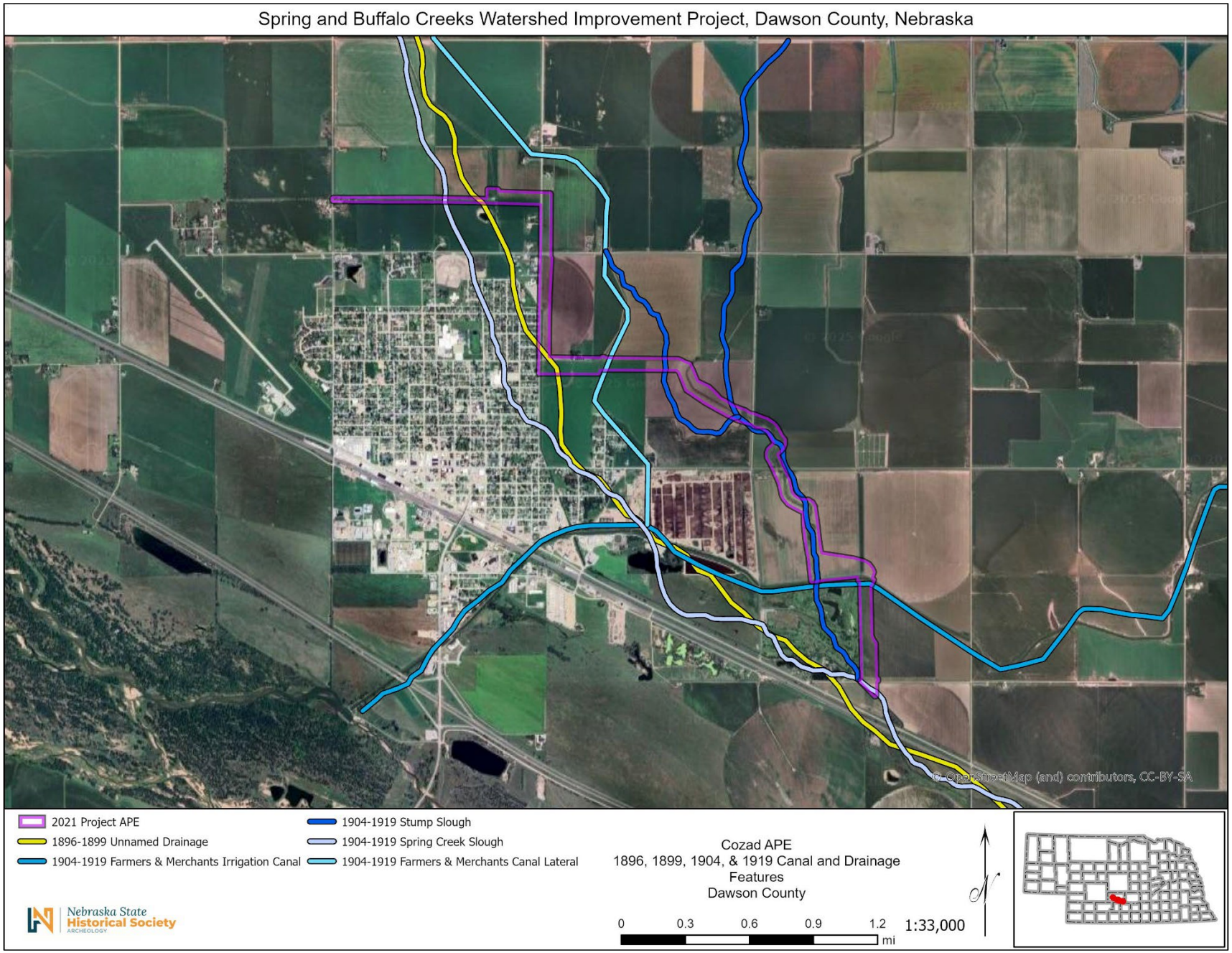
APPENDIX A.
Soil Unit and Buried Site Potential Maps and Soil Unit Descriptions (REDACTED)

APPENDIX B.
Mapped Drainage and Canal Features, by Year, within Spring and Buffalo Creek Project Areas

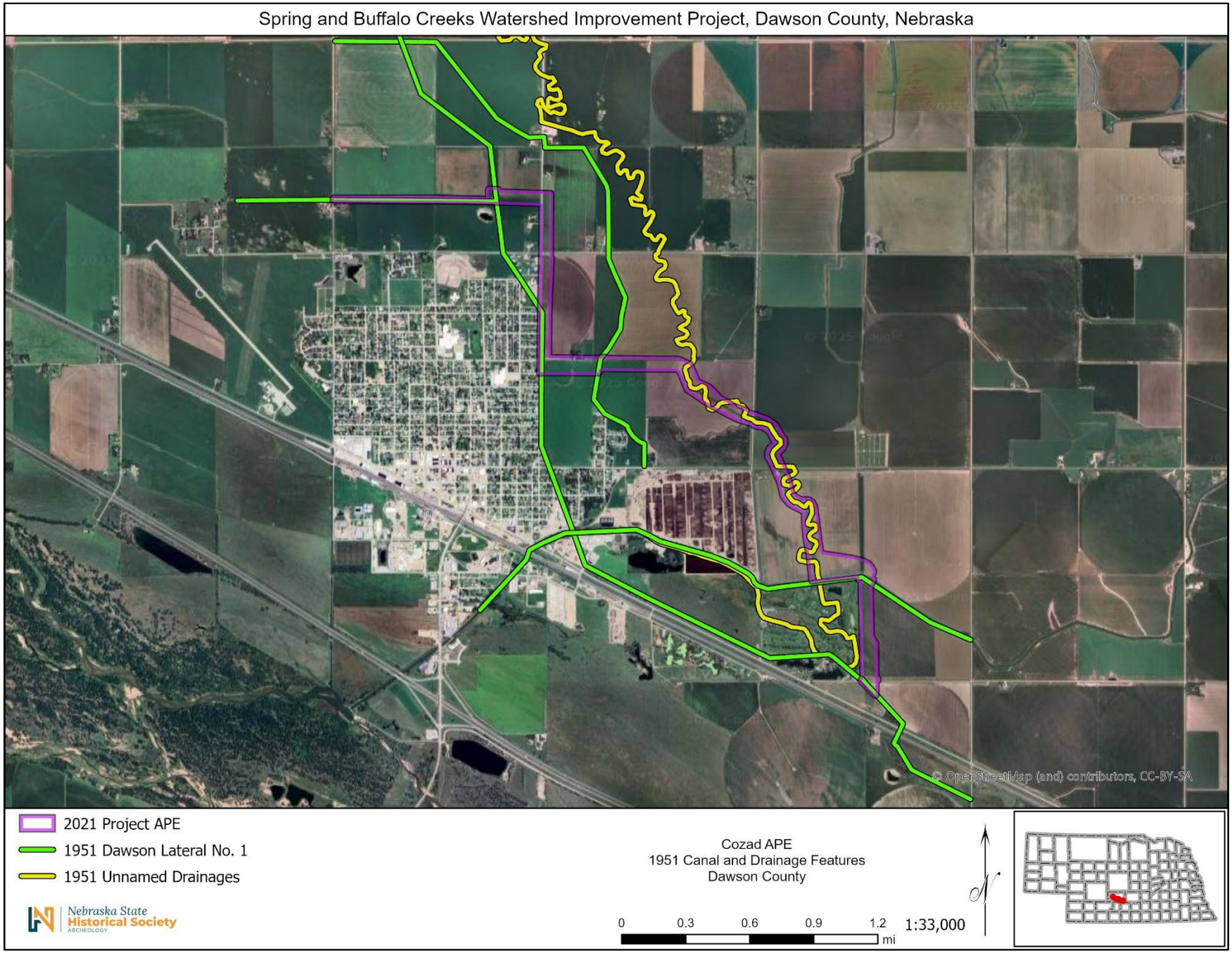
Imagery resources reviewed to document drainage and canal feature changes over time.

APE Name	Year	Resource
Cozad, Lexington, Overton	1896	USGS 1:125,000 Lexington topographic map
Overton	1896	USGS 1:125,000 Kearney topographic map
Cozad	1899	USGS 1:125,000 Lexington topographic map
Cozad, Lexington, Overton	1904	Dawson County Plat Book, Published by Geo. A. Ogle
Cozad, Lexington, Overton	1919	Atlas of Dawson County, Published by The Anderson Publishing Co.
Cozad, Lexington, Overton	1951	FSA aerial orthophotos
Cozad	1953	FSA aerial orthophotos
Cozad, Lexington, Overton	1955	USGS 1:250,000 Grand Island topographic map
Overton	1961	USGS 7.5' (1:24,000) Elm Creek West topographic map
Lexington	1962	USGS 7.5' (1:24,000) Bertrand NW, Lexington East, Lexington SE, and Lexington West topographic maps
Overton	1962	USGS 7.5' (1:24,000) Overton topographic map
Cozad	1971	USGS 7.5' (1:24,000) Cozad and Cozad NW topographic maps
Lexington	1972	FSA aerial orthophotos
Lexington and Overton	1974	FSA aerial orthophotos
Cozad, Lexington, Overton	1985	USGS 1:100,000 Kearney topographic map
Cozad, Lexington, Overton*	1993	USGS aerial orthophotos (via Google Earth Pro)
Cozad, Lexington, Overton	1999	USGS DOQ aerial photographs

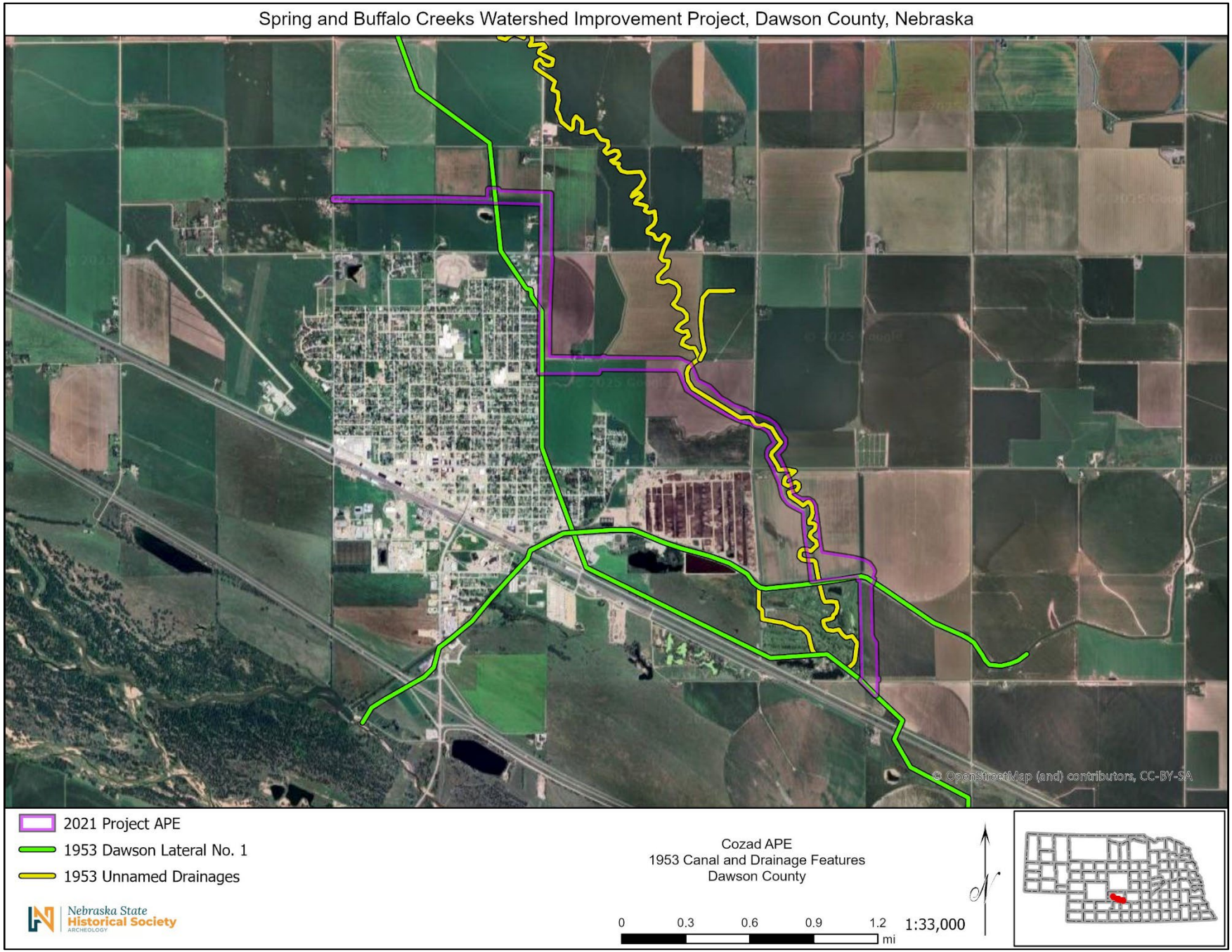
*Entire Overton APE not visible in Google Earth Pro 1993 aerial imagery.



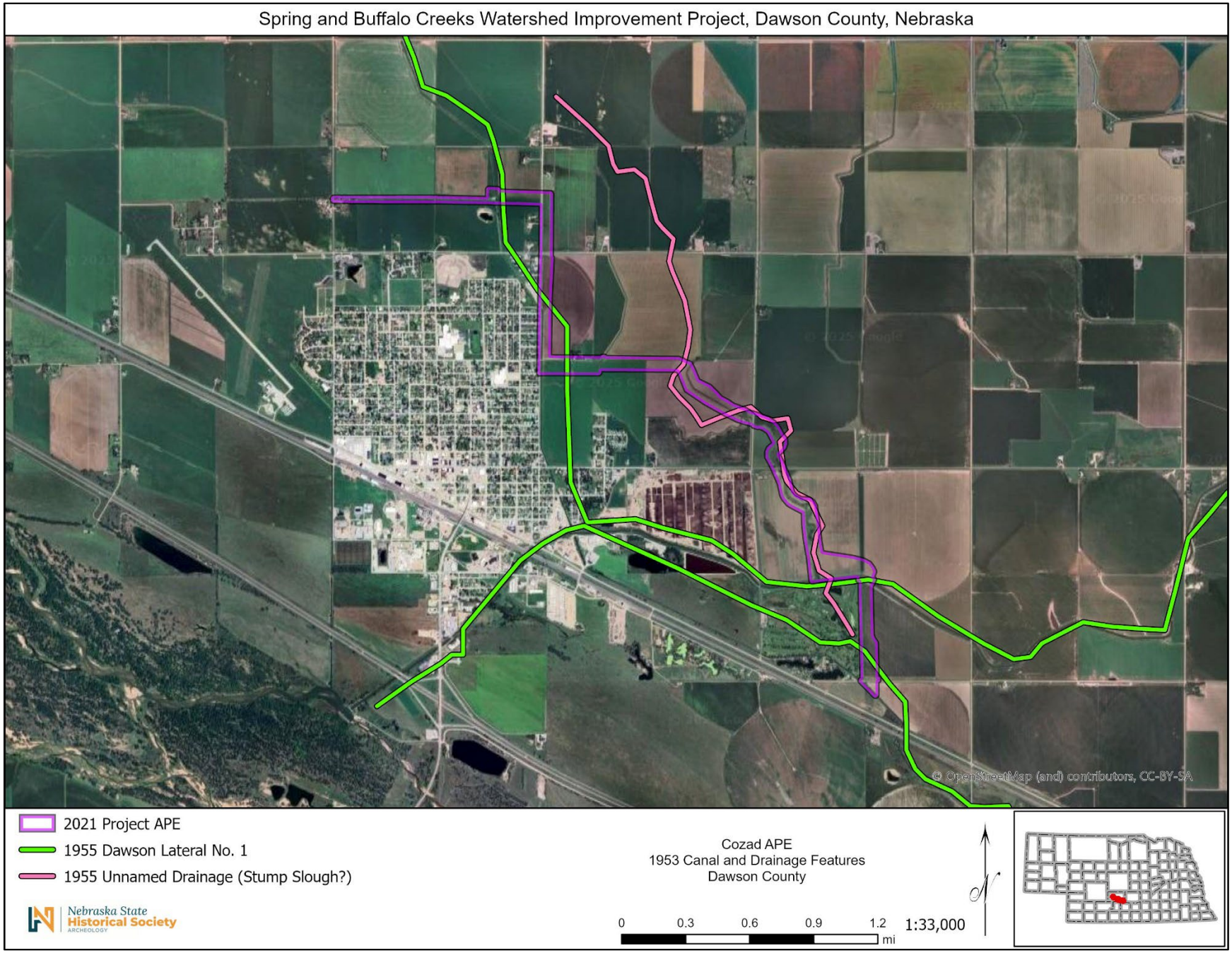
Cozad APE with 1896, 1899, 1904, and 1919 canal and drainage features illustrated on FSA orthophoto.



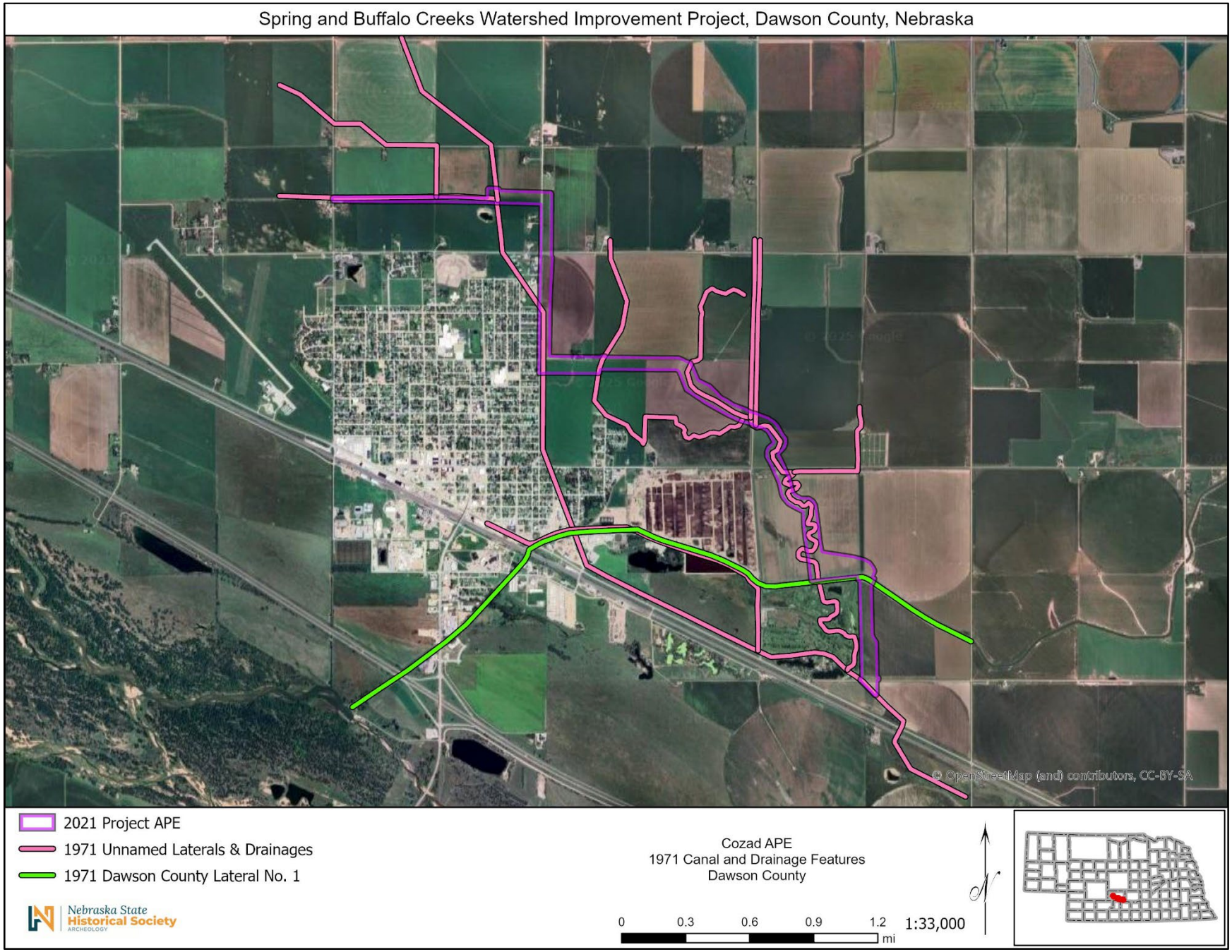
Cozad APE with 1951 canal and drainage features illustrated on FSA orthophoto.



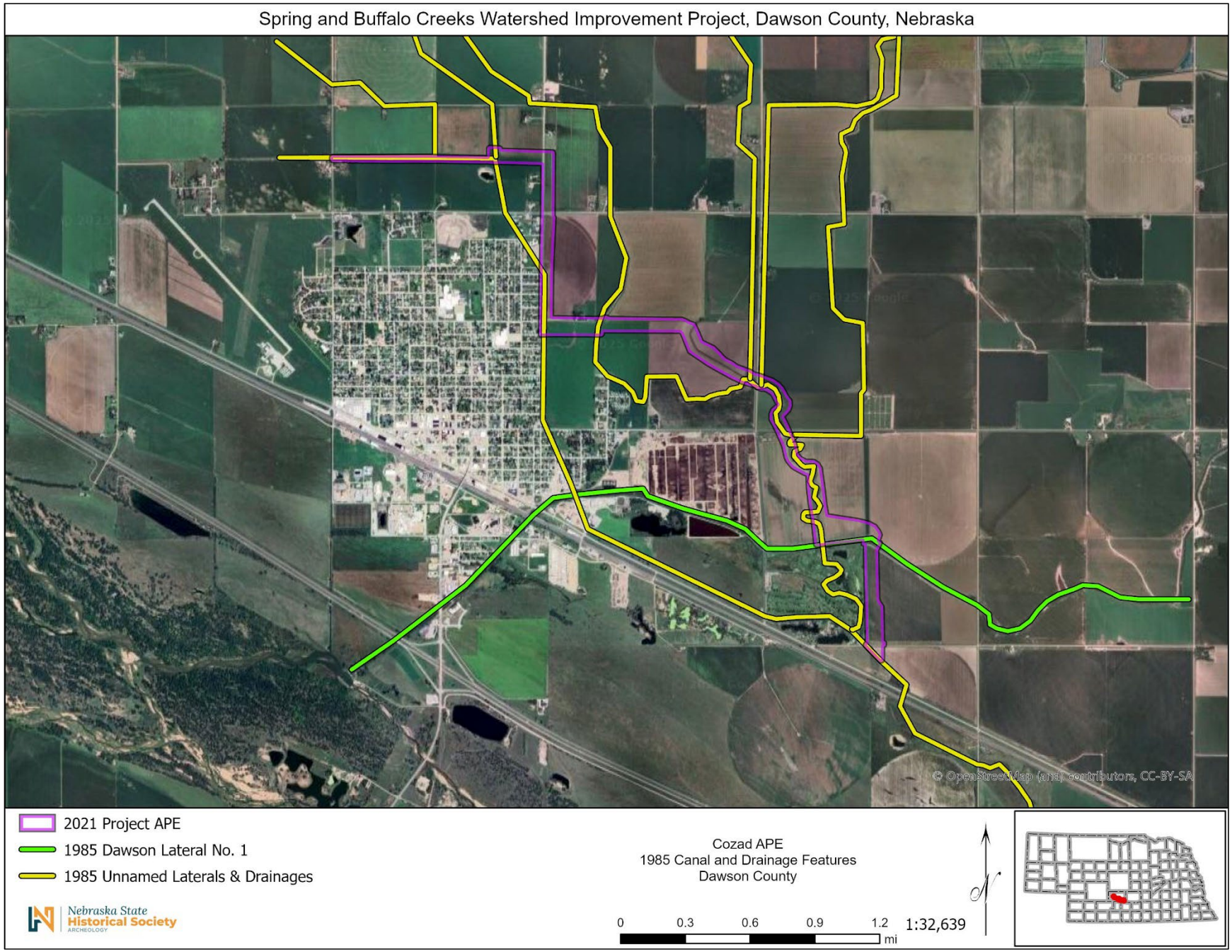
Cozad APE with 1953 canal and drainage features illustrated on FSA orthophoto.



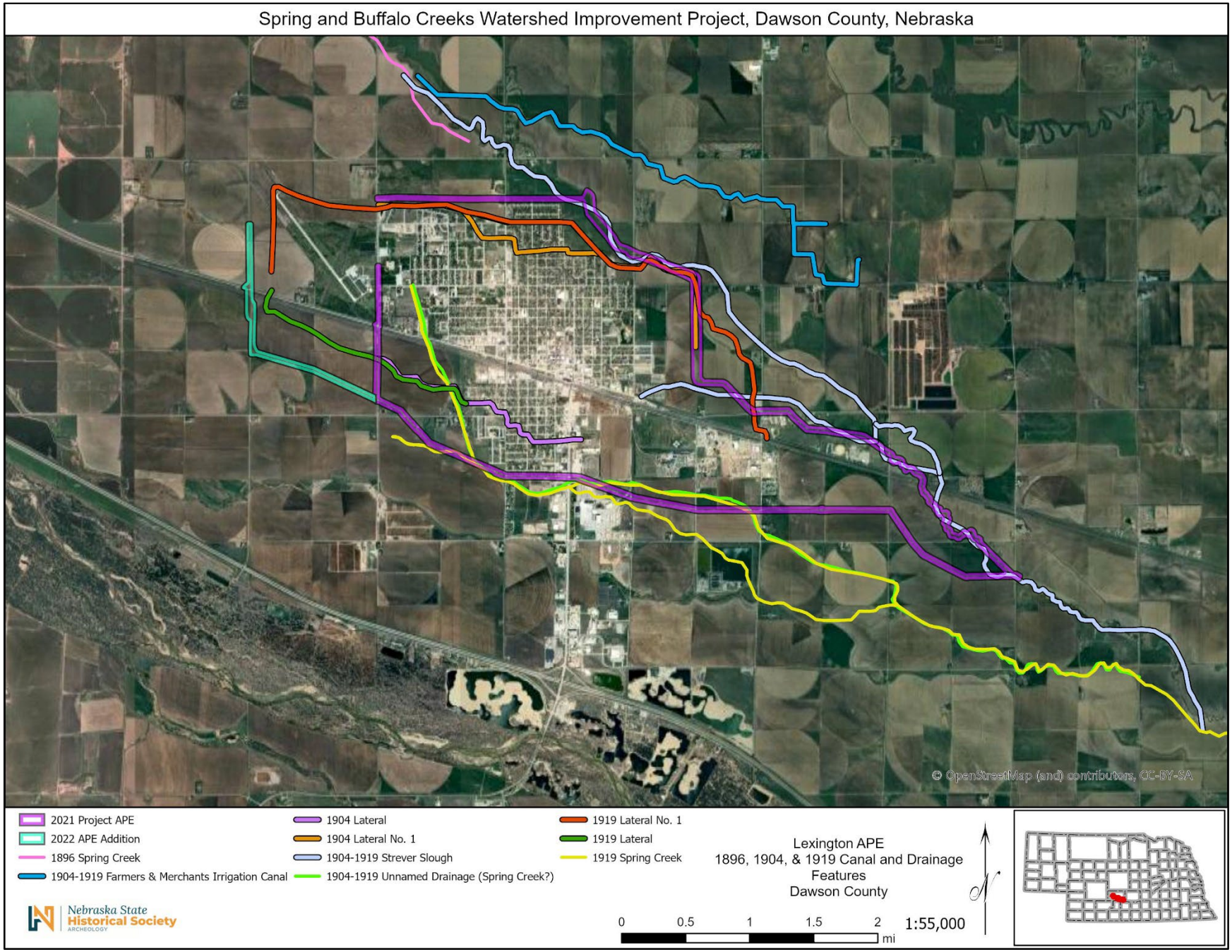
Cozad APE with 1955 canal and drainage features illustrated on FSA orthophoto.



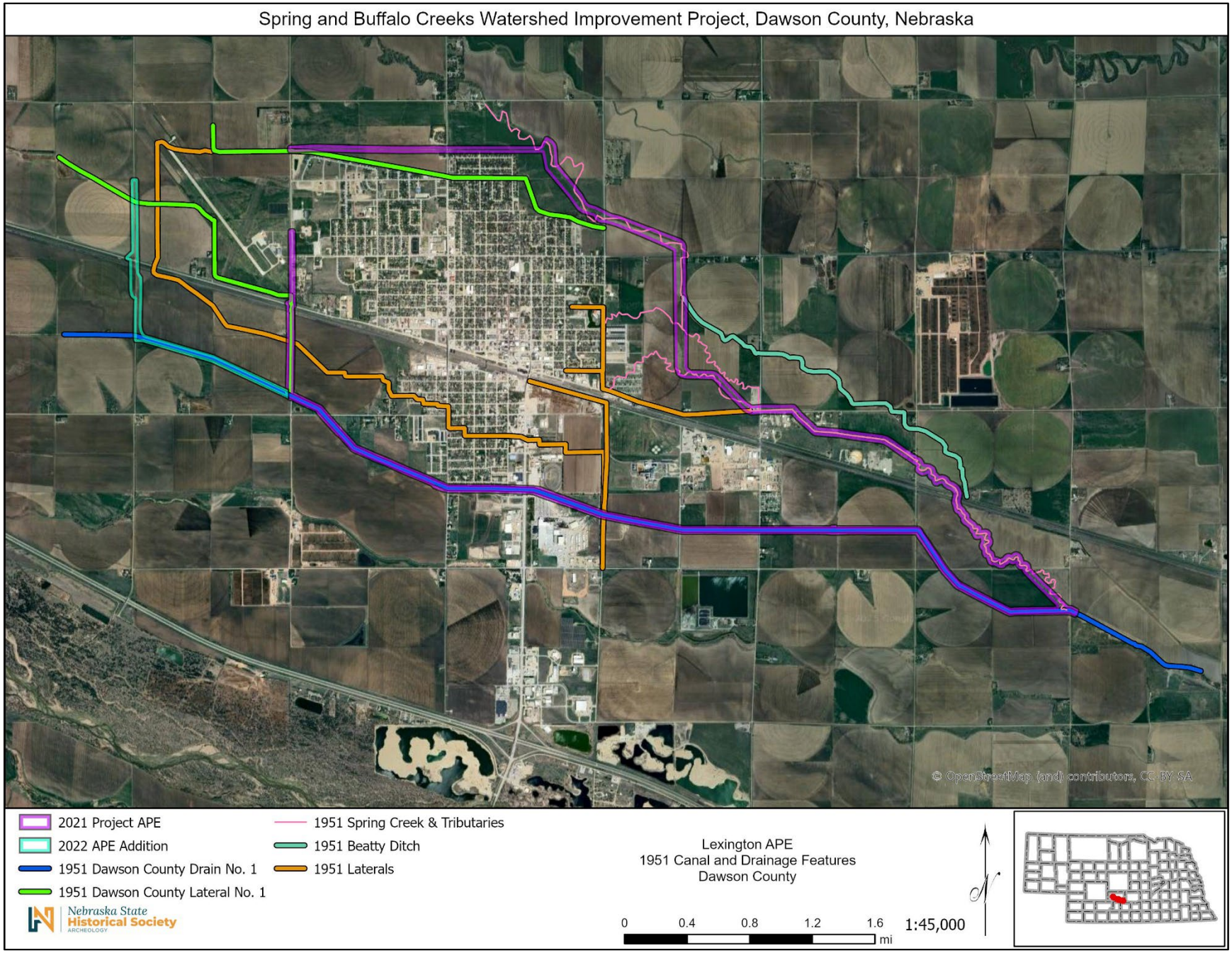
Cozad APE with 1971 canal and drainage features illustrated on FSA orthophoto.



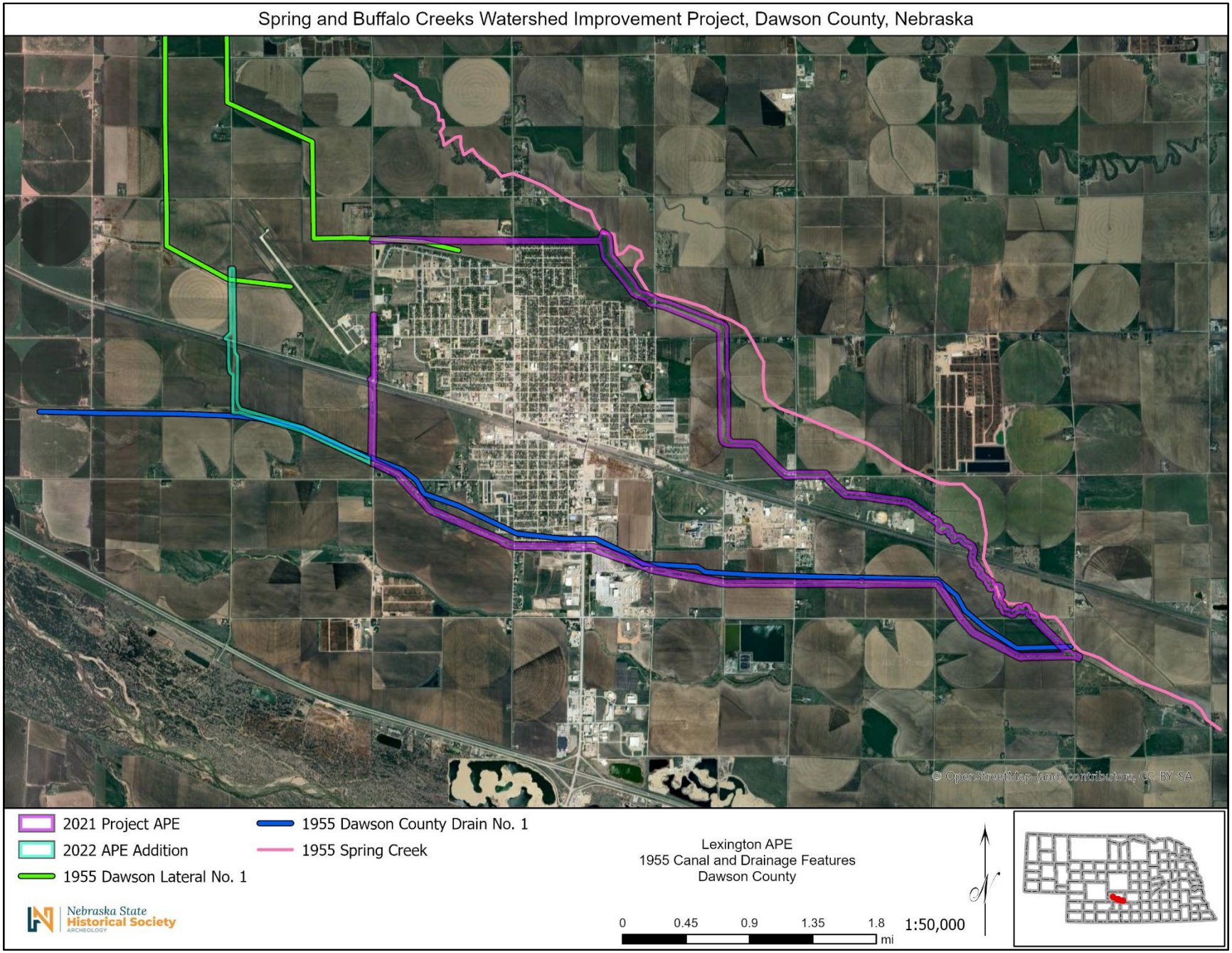
Cozad APE with 1985 canal and drainage features illustrated on FSA orthophoto.



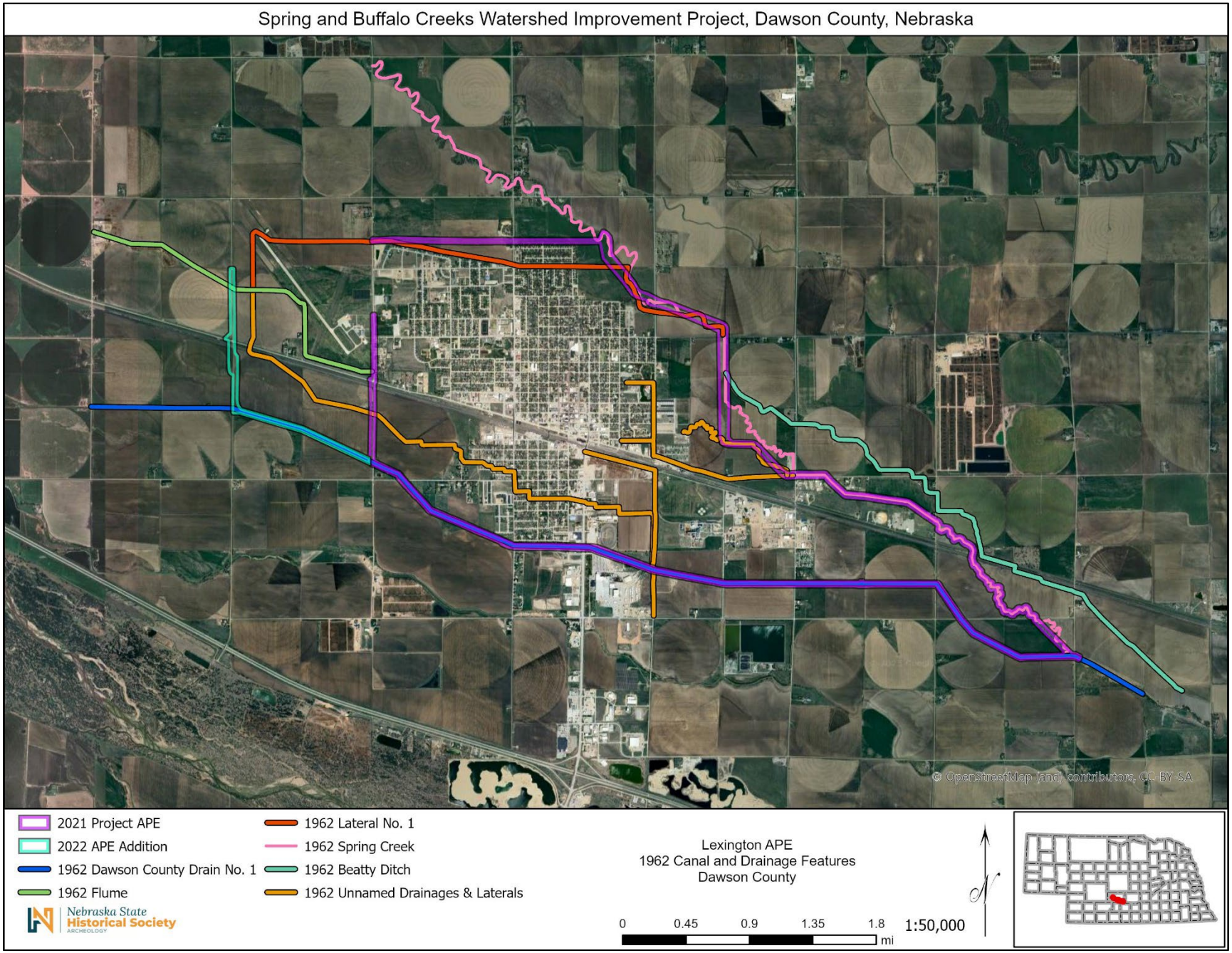
Lexington APE with 1896, 1904, and 1919 canal and drainage features illustrated on FSA orthophoto.



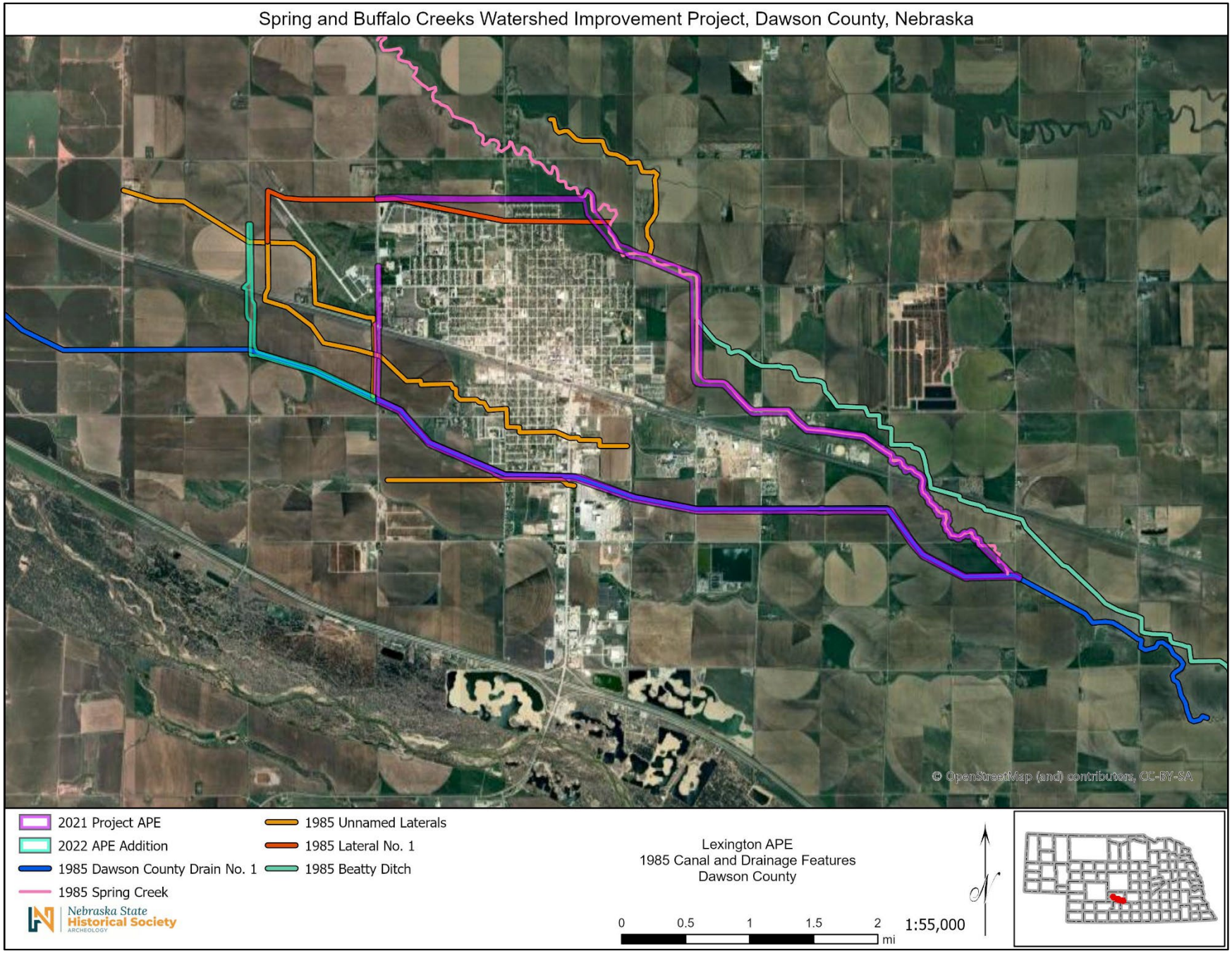
Lexington APE with 1951 canal and drainage features illustrated on FSA orthophoto.



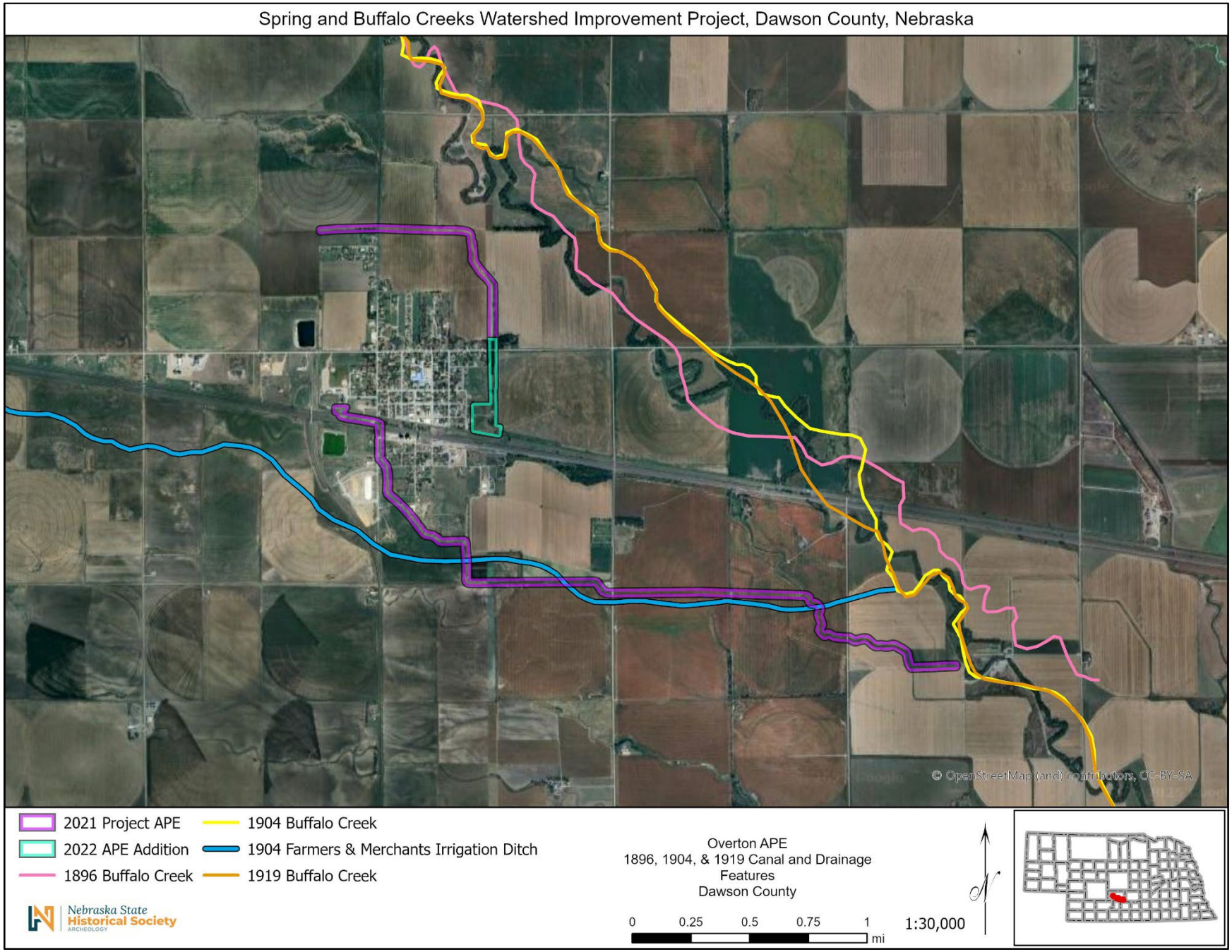
Lexington APE with 1955 canal and drainage features illustrated on FSA orthophoto.



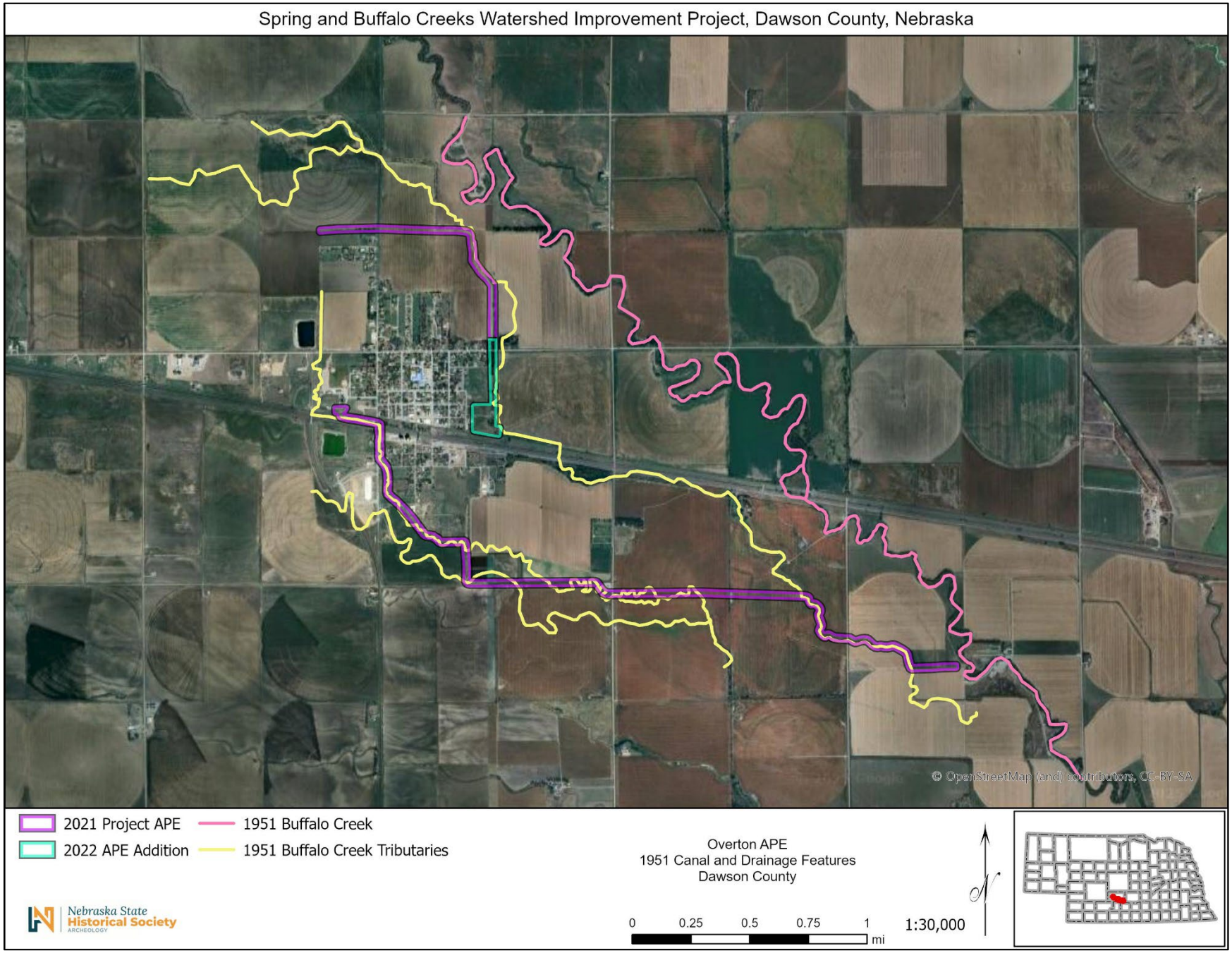
Lexington APE with 1962 canal and drainage features illustrated on FSA orthophoto.



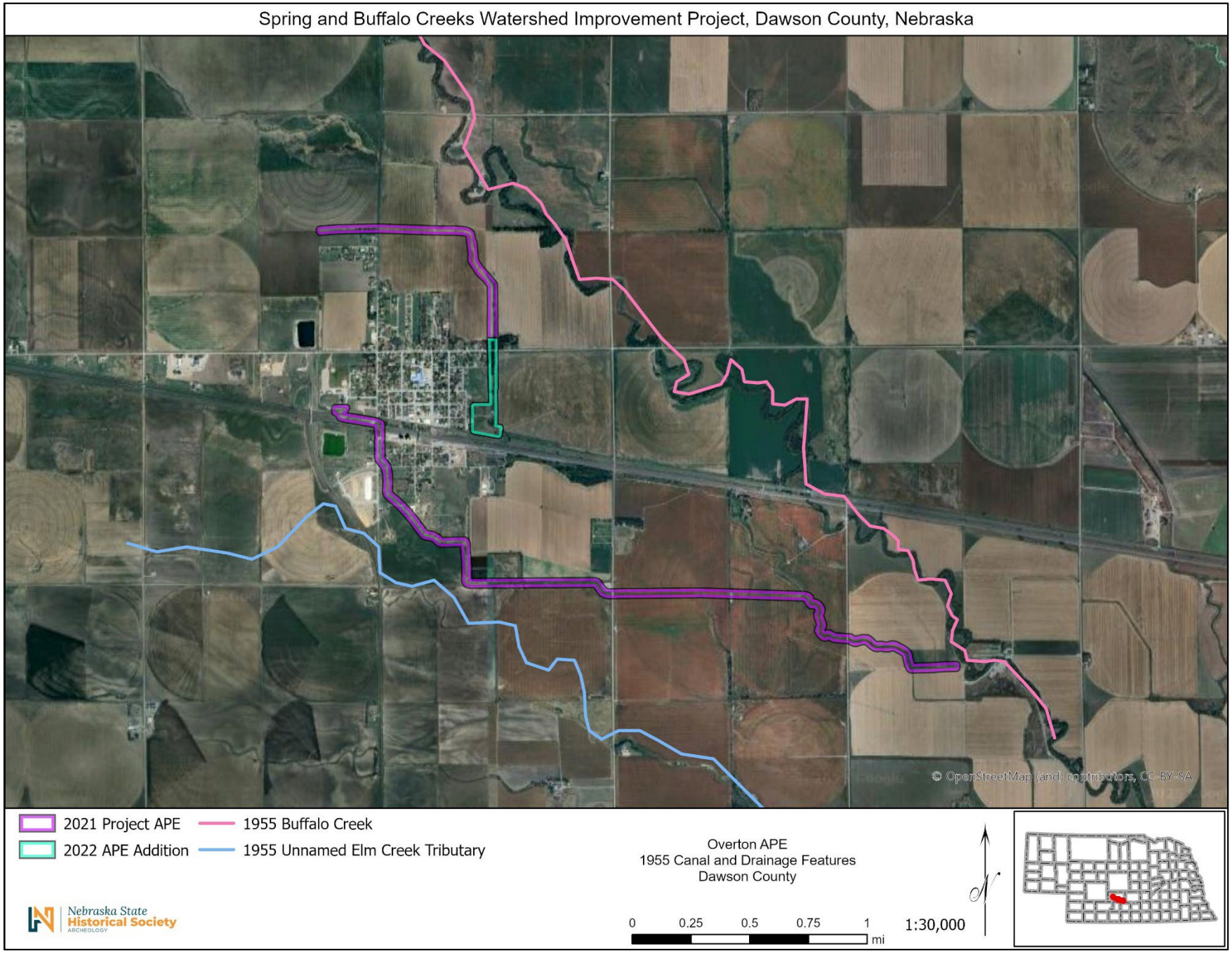
Lexington APE with 1985 canal and drainage features illustrated on FSA orthophoto.



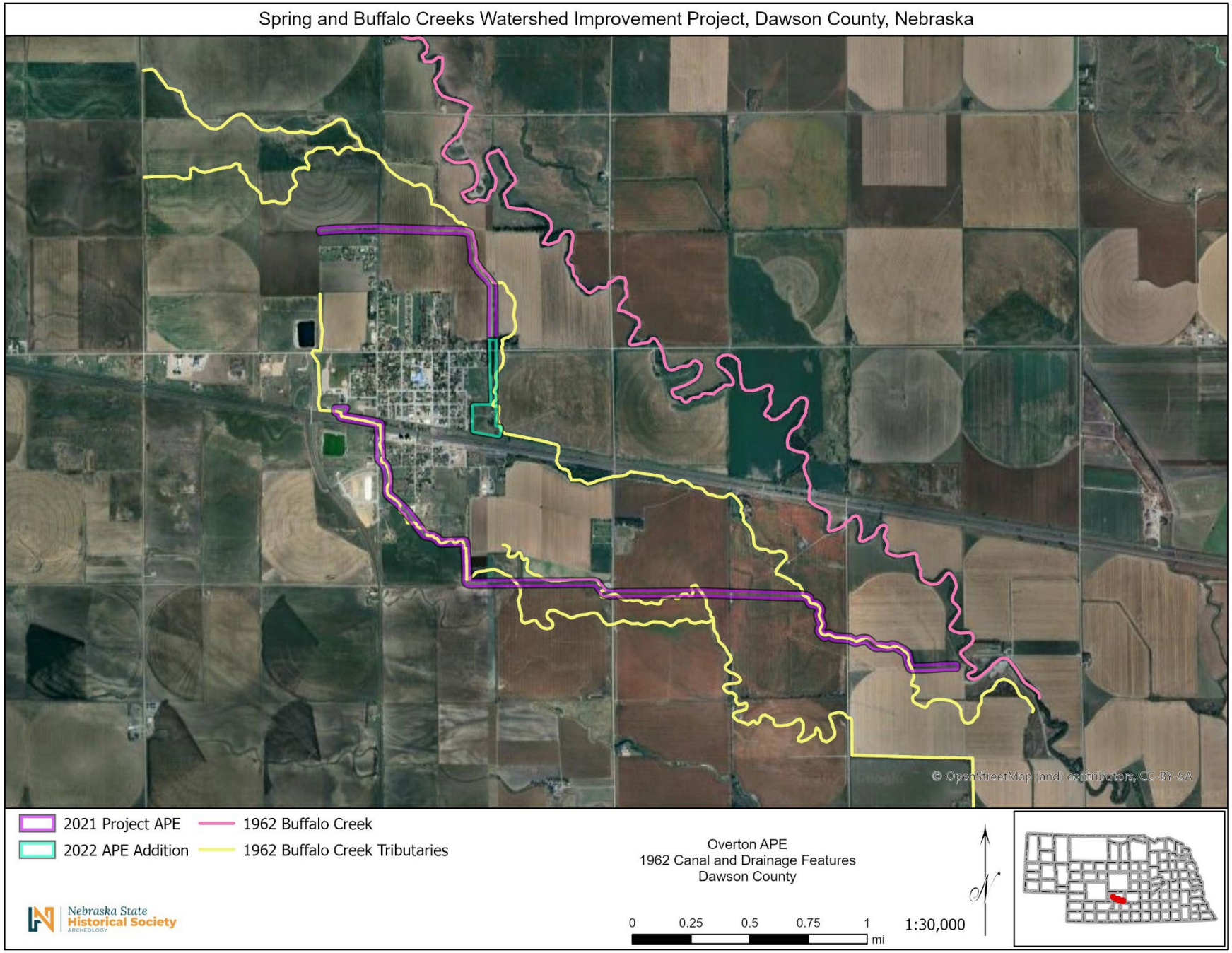
Overton APE with 1896, 1904, and 1919 canal and drainage features illustrated on FSA orthophoto.



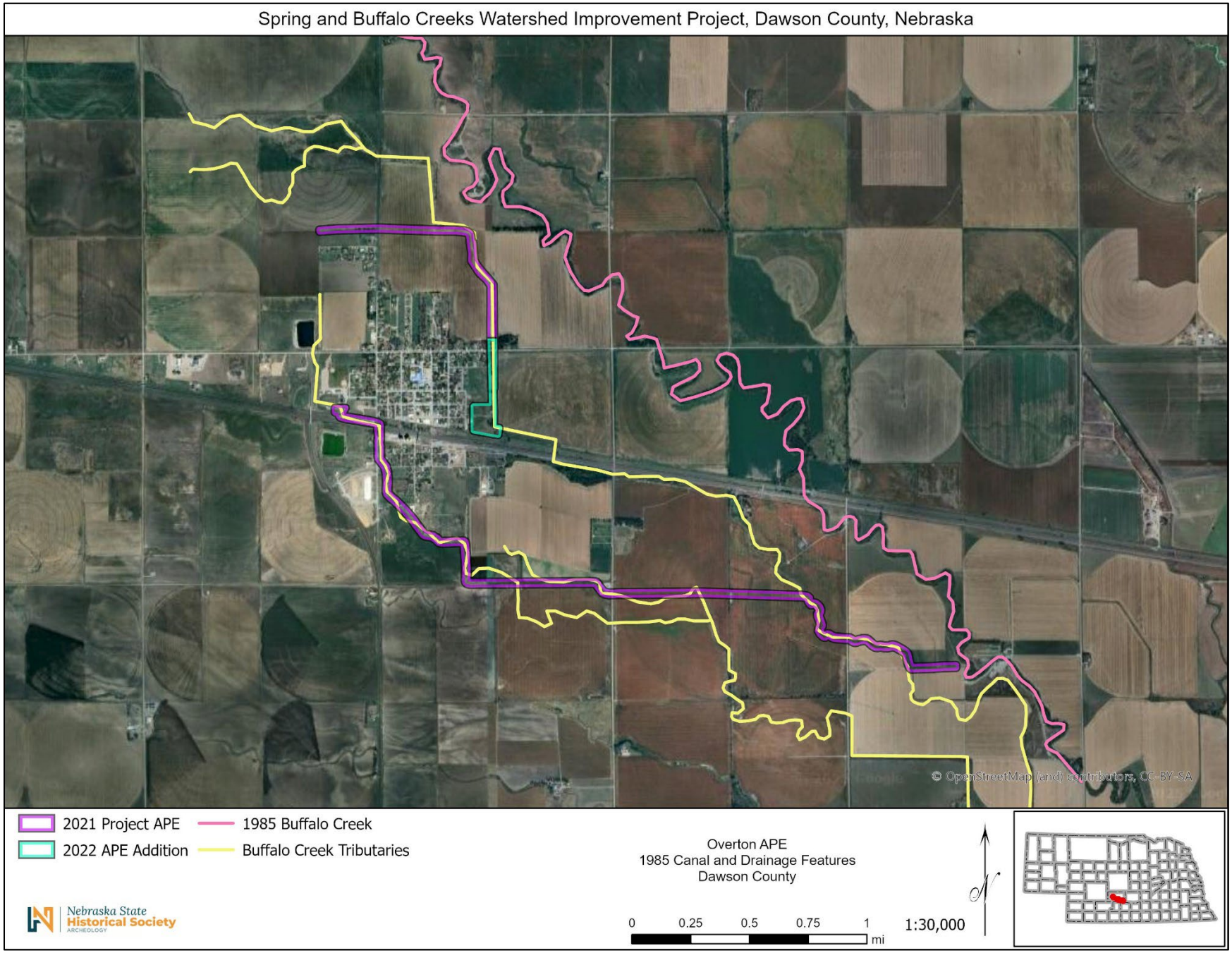
Overton APE with 1951 canal and drainage features illustrated on FSA orthophoto.



Overton APE with 1955 canal and drainage features illustrated on FSA orthophoto.



Overton APE with 1962 canal and drainage features illustrated on FSA orthophoto.



Overton APE with 1985 canal and drainage features illustrated on FSA orthophoto.