

April 21, 2023
J-1269.rev1/J-1926

Lia Michaels, P.E., PTOE, RSP
Transportation Manager
Hubbell, Roth & Clark, Inc.
Delivered electronically

RE: Adams Road Reconstruction Project—Preliminary Cultural Resources Review

Dear Ms. Michaels,

Commonwealth Heritage Group, LLC (Commonwealth) completed a preliminary cultural resources assessment for Hubbell, Roth & Clark, Inc. (Client) for the Adams Road Reconstruction project (Project) in Sections 17, 18, 19, 20, 29, and 30 of T3N R11E, City of Rochester Hills, Oakland County, Michigan (Figure 1). The Client is conducting a Planning and Environmental Linkages Study for the corridor. As part of the effort, the Client provided to Commonwealth a textual description of the Project and map of the Project location (Project Area) in December 2020. This cultural resources review was conducted under Task 1 of Commonwealth's contract with the Client.

The Project Area includes Adams Road from north of Hamlin Road to Walton Boulevard, including adjacent areas on both sides of the road. The Project Area encompasses 6.9 ha (17.2 ac), is 3,451 m (11,322 ft) long and approximately 20 m (66 ft) wide, however, the width of the planned project is not finalized.

This letter report provides the results of the background research, including land use history, an archaeological sensitivity analysis, and review of previously identified above-ground resources. For the background research, Commonwealth conducted a literature review at the Michigan State Historic Preservation Office (SHPO) compiling information regarding previously identified archaeological sites and surveys in the Project Area and in a 1.6-km (1.0-mi) area surrounding Project Area (Archaeology Study Area). Commonwealth compiled information derived from a review of the National and State Registers of Historic Places, historic aerials and maps, and online soils data for understanding the archaeological potential in the Project Area. Commonwealth also conducted a desktop review of above-ground architectural/historic resources in the Above-Ground Study Area, which extends in a radius of 0.8 km (0.5 mi) beyond the Project Area.

Environmental Setting

The Project Area is 258 to 280 m (846 to 919 ft) above mean sea level. The Clinton River crosses the Project Area approximately 515 m (1,690 ft) north of its southern boundary, and a small unnamed creek that drains Miller Lake crosses the Project Area approximately 1,524 m (5,000 ft) south of its northern boundary. This creek joins Galloway Creek approximately 390 m (1,280 ft) west-southwest of the Project Area, and Galloway Creek empties into the Clinton River approximately 1.0 km (0.6 mi) south-southwest of that point. The unnamed creek is flanked by a 15 ha (37 ac) scrub-shrub wetland, which is approximately 90 m (295 ft) wide where it crosses the Project Area (National Fish and Wildlife Service 2005).

The Project Area is in the Oakland County part of the Ann Arbor moraines sub-subsection of Albert's (1995) landscape ecosystem scheme for the Upper Great Lakes. This sub-subsection is characterized as a long, narrow band of parallel fine- and medium-textured end and ground moraines, with the flat Maumee Lake plain to the east and sandy outwash, end moraine, and ice-contact features to the west. Narrow end moraine ridges of rolling topography (generally in the 7-15% slope class) interrupt the flat till plain of the ground moraine. Some of the end moraine ridges are broken up by glacial outwash channels and post-glacial drainage channels. Soils in the sub-subsection tend to have loam or sandy loam textures, with finer textured silt loams and clay loams on the easternmost end moraine ridges. Poorly drained mineral soils occupy lower slopes of the ground moraine, with poorly drained organic soils in outwash channels. The Clinton River, Huron River, and River Raisin cross the sub-subsection (Albert 1995:104–106).

The Project Area lies on a large northeast-southwest trending medium-textured end moraine, with a parallel band of outwash sands and gravels immediately to the southeast of the Project Area (Michigan Natural Features Inventory 1998). The Natural Resource Conservation Service (NRCS) lists twelve soil types present in the Project Area (Table 1; Figure 2 through Figure 4) (USDA NRCS 2023). Arkport, Dixboro, Fox, Marlette, Metea, Oshtemo-Boyer, and Spinks soils occupy 16.0 ac, or 93.0% of the Project Area. These are well drained soils formed from loamy and sandy glacial deposits associated with various moraine and outwash landforms. The Clinton River floodplain is occupied by the poorly drained Cohoctah-Fox complex, which is an alluvial soil associated with floodplains. The typical profile for Cohoctah-Fox complex soils includes 122 cm (48 in) of fine sandy loam and sandy loam overlying gravelly sand. The floodplain of the unnamed creek draining Miller Lake is occupied by very poorly drained Houghton and Adrian mucks, which form from herbaceous organic material in wet depressions. Precontact vegetation in the majority of the Project Area was black oak barren, with mixed oak savanna in the northern end of the Project Area and mixed hardwood swamp in the Clinton River floodplain (Michigan State University Extension 2022).

Table 1. Soil types in the APE

Soil Code	Soil Name	Drainage	Associated Landforms	Parent Material	Acres	% of APE
10B	Marlette sandy loam, 1–6% slopes	Well drained	Knolls on moraines, flats on till plains	Loamy ablation till	1.5	8.7%
13E	Oshtemo-Boyer loamy sands, 12–40% slopes	Well drained	Hills on outwash plains, hills on ice-contact slopes, hills on beach ridges	Loamy supraglacial till over sandy and gravelly glaciofluvial deposits	0.6	3.5%
18B	Fox sandy loam, till plain, 2–6% slopes	Well drained	Outwash plains, outwash terraces	Loamy glaciofluvial deposits over sandy and gravelly outwash	1.8	10.5%
18C	Fox sandy loam, Huron Lobe, 6–12% slopes	Well drained	Moraines, outwash plains, ice-contact slopes	Loamy till over sandy and gravelly outwash	3.6	20.9%
27	Houghton and Adrian mucks	Very poorly drained	Depressions on moraines, depressions on outwash plains, depressions on till plains	Herbaceous organic material	0.2	1.2%
31B	Metea loamy sand, 0–6% slopes	Well drained	Knolls on moraines	Sandy glaciofluvial deposits over loamy ablation till	1.5	8.7%
45B	Arkport loamy fine sand, 2–6% slopes	Well drained	Knolls on moraines, knolls on outwash deltas	Loamy and/or sandy glaciofluvial deposits	2.6	15.1%
46A	Dixboro loamy fine sand, 0–3% slopes	Somewhat poorly drained	Flats on outwash deltas, flats on lake plains	Stratified loamy glaciofluvial deposits	0.2	1.2%
59	Urban land	N/A	N/A	N/A	0.5	2.9%
60B	Urban land-Marlette complex, 0–8% slopes	Well drained	Flats on till plains, knolls on moraines	Loamy ablation till	2.3	13.4%
62C	Urban land-Spinks complex, 8–15% slopes	Well drained	Hills on outwash plains, hills on moraines	Sandy and/or loamy glaciofluvial deposits	1.9	11.0%
68	Cohoctah-Fox association	Poorly drained	Flood plains	Loamy and/or sandy alluvium	0.5	2.9%
Total					17.2	100.0%

Historic Land Use

Commonwealth reviewed the original Bureau of Land Management General Land Office (BLM GLO) survey map of T3N R11W, as well as other historical plat maps (Beers 1872; Brown and Farmer 1894; Kace Publishing Company 1896; McAlpine 1925, 1947; Ogle 1908), U.S. Geological Survey (USGS) topographic maps, and aerial images that include the Project Area.

The original survey for T3N R11W was approved in 1818 (BLM GLO 1818). The survey map does not depict any roads, structures, or other cultural features in or adjacent to the Project Area. The map shows two small drainages crossing the section line between Section 17 and Section 18. The southernmost of these two drainages is shown in generally the same position as the unnamed creek draining Miller Lake. The map shows a larger drainage, presumably the Clinton River, crossing the section line between Section 19 and Section 20. This drainage is shown

approximately 0.8 km (0.5 mi) north of the current location of the Clinton River channel. This is likely a surveying error, as all later maps show the Clinton River in its current location and there is no topographic indication that there is an abandoned channel in the more northern position.

The General Land Office issued the first patents for land in T3N R11E (Avon Township) in 1818, issuing patents for land inclusive of the Project Area between 1824 and 1837 (Table 2) (BLM GLO 2023).

A county atlas from 1872 (Figure 5) depicts a road in the Project Area following the section line dividing Sections 18, 19, and 30 from Sections 17, 20, and 29, the current alignment of Adams Road (Beers 1872:97). Roads are also shown following the current alignments of Walton Boulevard, Avon Road, Butler Road, and Hamlin Road. This map shows the Project Area and adjacent land divided into properties ranging from 8 to 97 ha (20 to 240 ac) (Table 2). Major landowners with holdings over 40 ha (100 ac) in the area include the Carey, Hubbell, Miller, Nelson, and Ross families. A total of eight structures are depicted in or adjacent to the Project Area, including a structure labeled “SCHOOL” in the northwest corner of Section 17 at the intersection of what is now Adams Road and Walton Boulevard and a structure labeled “SCHOOL NO. 9” in the center of Section 20 at the intersection of what is now Adams Road and Butler Road. This map also shows the Clinton River and the unnamed creek draining Miller Lake in their current locations.

A county map from 1894 (Figure 6) shows the same general layout of roads and tracts of land, but with some changes in property boundaries and ownership, with the Carey, Hubbell, Ross, Renshaw, and Shoemaker families holding at least 40 ha (100 ac) adjacent to the Project Area (Table 2) (Brown and Farmer 1894). This map does not depict structure locations.

A county atlas published in 1896 (Figure 7) shows only some minor changes to property boundaries and ownership (Kace Publishing Company 1896:11). The map shows J. Martrot (spelled Maitrott on later maps) as the owner of the former Carey property in Section 20. This map depicts a total of nine structures in or adjacent to the Project Area, including two structures marked as schools, one labeled “No. 8” in the northwest corner of Section 17 and one labeled “No. 9” in the center of Section 19 at the intersection of what is now Adams Road and Butler Road. School No. 8 is shown in the same location as the school on the 1894 map, but School No. 9 is shown on the west side of Adams Road instead of the east.

A county atlas from 1908 (Figure 8) depicts eight structures, including two schools, in or adjacent to the Project Area (Ogle 1908:42). Besides minor changes to property boundaries, this map shows James L. Higgins as the owner of the former Hubbell family properties in Section 18. The Maitrott, Renshaw, Ross, and Shoemaker families are shown still holding large tracts of land adjacent to the Project Area.

A county atlas published in 1925 (Figure 9) shows the establishment of the John F. Dodge estate (McAlpine 1925:3). This property includes large tracts in Sections 17, 18, 19, and 20, including the former Hubbell/Higgins property in Section 18. The road in the Project Area (currently Adams Road) is labeled “Dodge Road.” In Sections 19 and 30, large portions of the former Renshaw and Shoemaker family properties, among others, are shown as part of the extensive holdings of Charles F. Fisher and Joseph H. Braun. In Section 20, this map shows Alfred

Lucking as the owner of the former Maitrott family property. This map depicts 15 structures in or adjacent to the Project Area, including two schools in the locations previously noted and a row of six structures on the east side of Dodge Road/Adams Road in Section 17 on property owned by the Dodge Estate.

A 1947 county atlas (Figure 10) shows the former Dodge estate owned by Matilda R. Wilson, John F. Dodge's widow, and the former Fisher/Braun property owned by Frances D. Johnson (McAlpine 1947:15). The road in the Project Area is labeled "ADAMS ROAD." Hamlin Road, Avon Road, and Butler Road are also labeled, and the road currently known as Walton Boulevard is labeled "PONTIAC-ROCHESTER ROAD." This map, which only includes structures of special interest, depicts two schools in the locations previously discussed.

A review of thirteen USGS topographic maps published between 1908 and 2017 and seventeen aerial images taken between 1951 and 2020 reveals the general pattern of twentieth century and early twenty first century development in the Project Area and surrounding area (NETROnline 2023). The earliest USGS topographic map reviewed was published in 1908 and shows roads following the current alignments of Adams Road, Walton Boulevard, Avon Road, Butler Road, and Hamlin Road, as well as six structures in or adjacent to the Project Area. The map depicts schools in the locations previously discussed, with the school in Section 17 labeled "Hubbel School" and the school in Section 19 labeled "Fox School." The surrounding area is shown as undeveloped rural land. USGS topographic maps published in 1917 and 1936 are largely unchanged, although the 1917 map depicts two additional structures in or adjacent to the Project Area. A USGS topographic map published in 1945 labels the former Fox School "Christian Hill School" and shows the row of six structures in Section 17. This map additionally shows a cluster of structures and roads in Section 18 at Meadow Brook Farms to the west of the Project Area. A map published in 1954 shows Hubbel School and Christian Hill School as abandoned, and a map published in 1971 shows Oakland University in Section 13 of T3N R10E, approximately 1.4 km (0.9 mi) west of the Project Area. The 1971 map also shows suburban residential subdivisions adjacent to the Project Area in the northwest quarter of Section 17 (Spring Hill subdivision); the southwest quarter of Section 17 (Meadowbrook subdivision); and the north half of Section 20 (Christian Hills subdivision). A map from 1981 shows a suburban residential subdivision adjacent to the Project Area in the southwest quarter of Section 19 (Quail Ridge subdivision), as well as a golf course on Oakland University property in Sections 18 and 19.

An aerial photograph taken in 1951 (Figure 11) shows the Project Area in a rural setting, with open fields, cultivated agricultural fields, and woods occupying the surrounding sections (EarthExplorer 1951). Meadow Brook Farms is visible in Section 18, with a row of five structures visible across the road from the entrance in Section 17 (Figure 12). Another entrance to Meadow Brook Farms is visible further south at the corner of Sections 17, 18, 19, and 20, with a gatehouse visible approximately 27 m (90 ft) west of Adams Road (Figure 13). The three long structures at the Student Organic Farm are visible on the north side of Butler Road approximately 94 m (308 ft) west of Adams Road (Figure 13). Two clusters of buildings that appear to be farmsteads are visible on the east side of Adams Road, one approximately 146 m (479 ft) south of its intersection with Butler Road and the other approximately 1.0 km (0.6 mi) south. In an aerial photograph from 1955, the Spring Hills and Christian Hills subdivisions are visible under construction. The Meadowbrook subdivision is visible under construction in a 1964 aerial photograph, along with continued expansion in the Spring Hill subdivision. The review of

April 21, 2022

Page 6

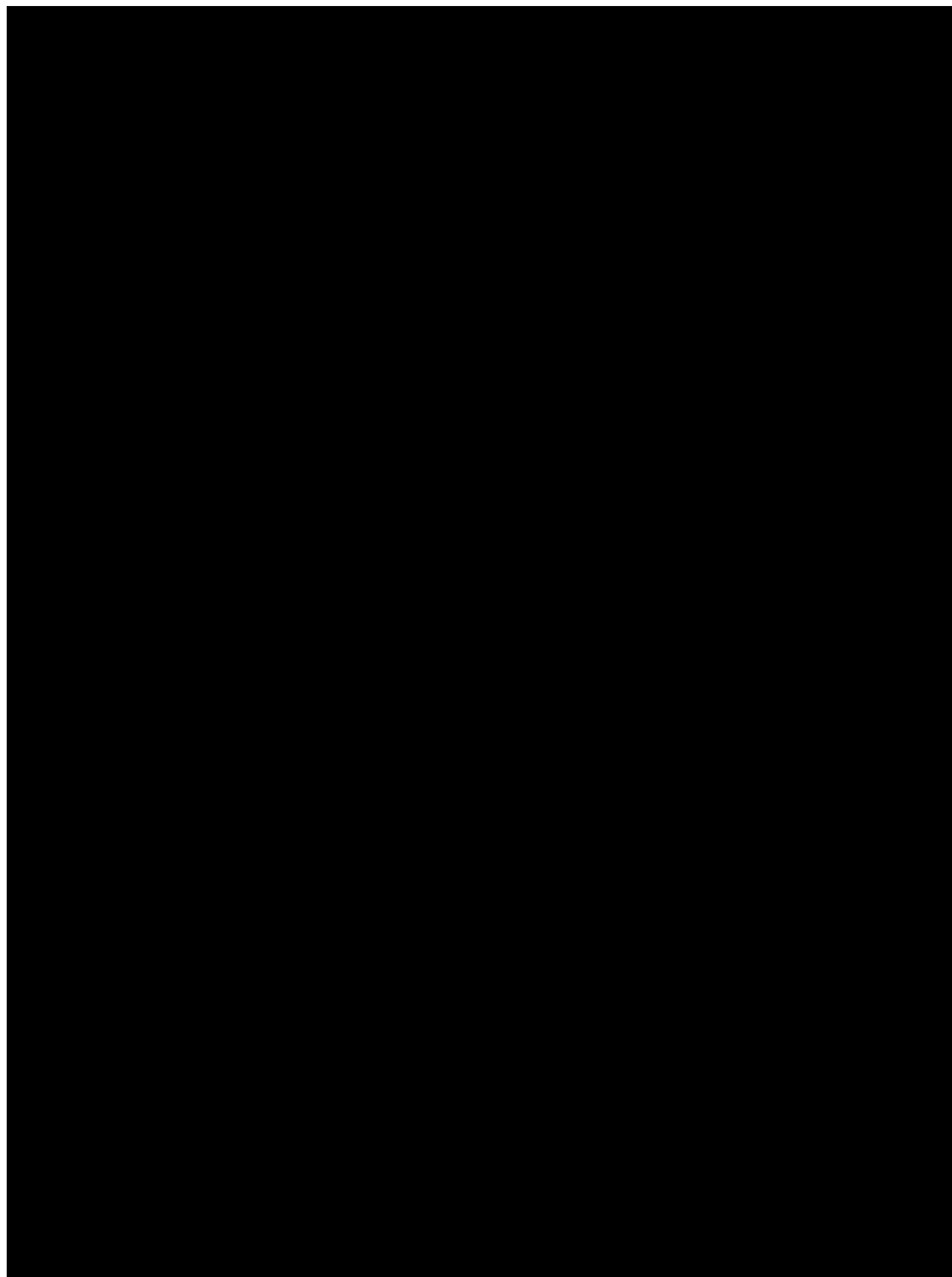
the aerial photographs revealed that the apartments on Charter Oak Drive, Stoney Brook Drive, and Riverside Drive were constructed between 1967 and 1973; the Quail Ridge and Pheasant Ring subdivisions were constructed between 1973 and 1983 with substantial expansion between 1983 and 1999; and the Rochester campus of Brookfield Academy was built between 1983 and 1999. The golf course on Oakland University property in Sections 18 and 19 is visible on aerial photographs from 1983 onward.

Table 2. Land Ownership in the Project Area

Sec.	Tract	Acres	Owner	Year	Source
17	NW¼	160	Needham Hemingway	1825	(BLM GLO 2023:MI0030__128)
	S½	320	Amos Brown	1837	(BLM GLO 2023:MI0690__340)
	NW¼-NW¼	71	J. Lomason	1872	(Beers 1872:97)
	SW¼-NW¼	70	J. Ross		
	SW¼	223	Heirs of J. Miller Sr.		
	N½-NW¼	126	G. Ross	1894	(Brown and Farmer 1894)
	S½-NW¼	70	J. Ross		
	N½-SW¼	120	S. Decue		
	S½-SW¼	120	G. Renshaw		
	N½-NW¼	126	G. S. Ross	1896	(Kace Publishing Company 1896:11)
	S½-NW¼	70	D. H. Ross		
	SW¼	130	C. O. Renshaw		
	NW¼-NW¼	72	Wm. Nichols	1908	(Ogle 1908:42)
	S½-NW¼	70	D. H. Ross		
	SW¼	130	Jas. Renshaw		
	NW¼-NW¼ and N½-SW¼-NW¼	71	Ed. F. Stout	1925	(McAlpine 1925:3)
	S½-SW¼-NW¼ and SW¼	NA	John F. Dodge Est		
	NW¼-NW¼ and N½-SW¼-NW¼	71	Grace Stout	1947	(McAlpine 1947:15)
	S½-SW¼-NW¼ and SW¼	158	Matilda R. Wilson		
18	E½-NE¼	80	Samuel Hubbell	1824	(BLM GLO 2023:MI0020__045)
	E½-SE¼	80	Samuel Pitts	1837	(BLM GLO 2023:MI0690__355)
	NE¼	160	S. H. Douglas	1872	(Beers 1872:97)
	SE¼ and W-SW¼	240	J. A. Hubble & Brother		
	W½-NE¼, SE¼, and E½-SW¼	320	J. Hubbell	1894	(Brown and Farmer 1894)
	W½-NE¼, SE¼, and E½-SW¼	320	J. A. Hubbel	1896	(Kace Publishing Company 1896:11)
	W½-NE¼, SE¼, and E½-SW¼	320	Jas. L. Higgins	1908	(Ogle 1908:42)
	N½, SE¼, and E½-SW¼	567	John F. Dodge Est	1925	(McAlpine 1925:3)
	N½, SE¼, and E½-SW¼	567	Matilda R. Wilson	1947	(McAlpine 1947:15)

Sec.	Tract	Acres	Owner	Year	Source
19	NE $\frac{1}{4}$	160	James A. Weeks	1837	(BLM GLO 2023:MI0670__226)
	SE $\frac{1}{4}$	160	Smith Weeks	1837	(BLM GLO 2023:MI0010__139)
	N $\frac{3}{4}$ -NE $\frac{1}{4}$	97	F. Weaver	1872	(Beers 1872:97)
	N $\frac{1}{2}$ -SE $\frac{1}{4}$ and S $\frac{1}{4}$ -NE $\frac{1}{4}$	65	P. L. Fox		
	S $\frac{1}{2}$ -SE $\frac{1}{4}$	40	C. Crenshaw		
	NE $\frac{1}{4}$ -NE $\frac{1}{4}$	57	G. Shoemaker	1894	(Brown and Farmer 1894)
	SE $\frac{1}{4}$ -NE $\frac{1}{4}$ and N $\frac{1}{2}$ -SE $\frac{1}{4}$	NA	J. Butler		
	S $\frac{1}{2}$ -SE $\frac{1}{4}$	75	W. Renshaw		
	E $\frac{1}{2}$ -NE $\frac{1}{4}$	30	G. Shoemaker	1896	(Kace Publishing Company 1896:11)
	SE $\frac{1}{4}$ -NE $\frac{1}{4}$ and N $\frac{1}{2}$ -SE $\frac{1}{4}$	60	Jac. R. Butler		
	S $\frac{1}{2}$ -SE $\frac{1}{4}$	75	W. F. Renshaw		
	N $\frac{3}{4}$ -NE $\frac{1}{4}$	60	Robert Featherston	1908	(Ogle 1908:42)
	N $\frac{1}{2}$ -SE $\frac{1}{4}$ and S $\frac{1}{4}$ -NE $\frac{1}{4}$	82	Robert King		
	S $\frac{1}{2}$ -SE $\frac{1}{4}$	75	W. F. Renshaw		
	N $\frac{3}{4}$ -NE $\frac{1}{4}$ and W $\frac{1}{2}$ -NW $\frac{1}{4}$	165	John F. Dodge Est	1925	(McAlpine 1925:3)
	S $\frac{1}{4}$ -NE $\frac{1}{4}$ and NE $\frac{1}{4}$ -SE $\frac{1}{4}$	81	H. Wilson		
	S $\frac{1}{2}$ -SE $\frac{1}{4}$ and NW $\frac{1}{4}$ -SE $\frac{1}{4}$	106	Chas. F. Fisher & Jos. A. Braun		
	N $\frac{1}{2}$	228	Matilda R. Wilson	1947	(McAlpine 1947:15)
	S $\frac{1}{2}$	333	Frances D. Johnson		
20	NW $\frac{1}{4}$	160	Alonzo Goodman	1837	(BLM GLO 2023:MI0690__337)
	W $\frac{1}{2}$ -SW $\frac{1}{4}$	80	Smith Weeks	1825	(BLM GLO 2023:MI0020__384)
	W $\frac{3}{4}$ -NW $\frac{1}{4}$	130	W. A. Nelson	1872	(Beers 1872:97)
	SW $\frac{1}{4}$	156	H. Carey		
	W $\frac{1}{4}$ -W $\frac{1}{2}$ -NW $\frac{1}{4}$	20	G. Shoemaker	1894	(Brown and Farmer 1894)
	W $\frac{1}{2}$ -SW $\frac{1}{4}$	80	J. Martrot		
	W $\frac{1}{4}$ -W $\frac{1}{2}$ -NW $\frac{1}{4}$	20	G. Shoemaker	1896	(Kace Publishing Company 1896:11)
	SW $\frac{1}{4}$ -SW $\frac{1}{4}$ -NW $\frac{1}{4}$	8	E. Fox		
	W $\frac{1}{2}$ -SW $\frac{1}{4}$	82	John Maitrott		
	W $\frac{1}{4}$ -W $\frac{1}{2}$ -NW $\frac{1}{4}$	20	Robert Featherston	1908	(Ogle 1908:42)

Sec.	Tract	Acres	Owner	Year	Source
	SW $\frac{1}{4}$ -SW $\frac{1}{4}$ -NW $\frac{1}{4}$	8	E. Fox		
	W $\frac{1}{2}$ -SW $\frac{1}{4}$	82	John Maitrott		
	W $\frac{1}{2}$ -W $\frac{1}{2}$ -NW $\frac{1}{4}$	28	John F. Dodge Est	1925	(McAlpine 1925:3)
	W $\frac{1}{2}$ -SW $\frac{1}{4}$	83.5	Alfred Lucking	1947	(McAlpine 1947:15)
	NW $\frac{1}{4}$	169	Matilda R. Wilson		
	SW $\frac{1}{4}$ -SW $\frac{1}{4}$ -NW $\frac{1}{4}$	10	Anchor Reality Co.		
	W $\frac{1}{2}$ -SW $\frac{1}{4}$	82.5	Alfred Lucking		
29	NW $\frac{1}{4}$	160	Smith Weeks	1824	(BLM GLO 2023:954744)
	W $\frac{1}{2}$ -NW $\frac{1}{4}$	96	A. C. Shoemaker	1872	(Beers 1872:97)
	W $\frac{1}{2}$ -NW $\frac{1}{4}$	104	A. Shoemaker	1894	(Brown and Farmer 1894)
	W $\frac{1}{2}$ -NW $\frac{1}{4}$	104	A. C. Shoemaker	1896	(Kace Publishing Company 1896:11)
	W $\frac{1}{2}$ -NW $\frac{1}{4}$	104	Garrett Shoemaker	1908	(Ogle 1908:42)
	W $\frac{1}{2}$ -NW $\frac{1}{4}$	100	D. E. Sharpe	1925	(McAlpine 1925:3)
	W $\frac{1}{2}$ -NW $\frac{1}{4}$	86	Peter Christenson	1947	(McAlpine 1947:15)
30	NE $\frac{1}{4}$	160	George Nichols	1833	(BLM GLO 2023:MI0130__110)
	N $\frac{1}{2}$ -NE $\frac{1}{4}$	72	J. Butler	1872	(Beers 1872:97)
	N $\frac{1}{2}$ -NE $\frac{1}{4}$	72	J. Voorheis	1894	(Brown and Farmer 1894)
	N $\frac{1}{2}$ -NE $\frac{1}{4}$	72	John Voorheis	1896	(Kace Publishing Company 1896:11)
	N $\frac{1}{2}$ -NE $\frac{1}{4}$	72.5	W. F. Renshaw	1908	(Ogle 1908:42)
	N $\frac{1}{2}$	173	Chas. F. Fisher & Jos. A. Braun	1925	(McAlpine 1925:3)
	N $\frac{1}{2}$	319	Frances D. Johnson	1947	(McAlpine 1947:15)



Potential for Deeply Buried Soils

In addition to surface and near-surface soils that may harbor archaeological resources, cultural materials and features may become buried beneath significant amounts of sediment. Research by Monaghan and Lovis (2005) concluded that deeply buried soils, and therefore deeply buried cultural resources, have an increased likelihood where fluvial deposits overlie alluvial deposits as a result of waterways breaching their banks. Monaghan and Lovis (2005) developed a geoarchaeological model for southeastern Michigan that takes these effects into account and rates area likelihood from Low to High-Very High.

Figure 16 shows the results of the Monaghan and Lovis (2005) model applied to the Project Area and Archaeology Study Area. Soils in the majority of the Project Area and Archaeology Study Area are rated Low, which is defined as areas that are “typically not within floodplains, mid-Holocene lake plains, or other areas where site burial is likely. Areas within urban settings, however, may include sites buried by historic cultural fills related to urbanization.” (2005:194). Deep testing is generally not required in these areas.

Soils in the Clinton River floodplain are rated High, which is defined as areas that “typically form the floodplains of major streams or the lower reaches of minor streams, are of relatively low gradient, and include coarse- and fine-grained flood-prone soils or fine-grained non-alluvial soils. [...] Site burial is likely to occur in these areas. [...] These areas should be deep tested” (2005:195) if project related ground disturbing activity is planned to exceed 122 cm (48 in), the expected depth of the fine sandy loam and sandy loam that overlies the gravely sand associated with the potentially buried alluvium (see Soils section above).

Above-Ground Resources

For the Adams Road Project, Commonwealth conducted a literature review for the Above-Ground Study Area, which extends 0.8 km (0.5 mi) beyond the Project Area, to identify any previously recorded above-ground resources. Review of SHPO survey files revealed that there is

one previously recorded above-ground resources in the Above-Ground Study Area: Meadow Brook Farms (Figure 17).

Meadow Brook Farms, 350 Estate Drive, is listed in the NRHP and is a National Historic Landmark (NHL; NRHP #79001166). It includes a Tudor mansion, Meadow Brook Hall; a carriage house; a barn and stable; four workers' cottages; farm- and recreation-related buildings; a bridge; a boundary wall; a road system; gardens; and small-scale features. Designed by architect William E. Kapp of Smith, Hinchman & Grylls, the mansion was built in 1926–1929 for Matilda Dodge Wilson and her second husband, Alfred Wilson. Matilda's first husband, John F. Dodge, the auto magnate, purchased the original 320-acre farm in 1908. John continued buying acreage to expand the farm and built additions to the existing farmhouse, including a nine-hole golf course and a clubhouse, up until his death in 1920. After Matilda's second marriage in 1925, Matilda and Alfred Wilson developed the property into a large country estate with an award-winning farming operation. In addition to building Meadow Brook Hall, the Wilsons hired landscape architect Arthur E. Davidson to design the gardens and associated landscape. Matilda continued to develop and expand the gardens for several decades with the help of Kapp (Mohr 2010).

Meadow Brook Farms is historically significant under the NRHP Criteria A and C for its significance in agriculture, landscape architecture, architecture, and art. The period of significance is 1915–1947 (Meadow Brook Hall Staff 1978). It includes 29 buildings, 2 sites, 11 structures, and 7 objects, 36 of which contribute to the NHL's historic significance (Mohr 2010). Several of these are in or directly adjacent to the Project's planned Project Area (Table 5; Figure 18).

Table 5. Contributing and non-contributing features at Meadow Brook Farms

Resource Name/Construction Date	Status	In Project Area?
Meadow Brook Hall (1926–1929)	Contributing	No
Carriage House (1928)	Contributing	No
Open Auto Shed (1930)	Contributing	No
Doghouse/Gardener's Shed (ca. 1926)	Contributing	No
Knole Cottage (1926; moved 1929)	Contributing	No
Guardhouse (ca. 1929)	Contributing	No
Knole Pump House (ca. 1929)	Contributing	No
Stable (ca. 1935)	Contributing	No
Riding Ring (1935)	Contributing	No
Stud Barn (ca. 1938)	Contributing	No
Well House (ca. 1928)	Contributing	No
Pump House (1918)	Contributing	No
Garage and Heating Plant (1926)	Contributing	No
Garage/Golf Course Maintenance Building (ca. 1938)	Contributing	No
Farmhouse (ca. 1898; alterations in 1908 and 1914)	Contributing	Adjacent
Greenhouse (ca. 1917)	Contributing	Adjacent
Guardhouse (ca. 1917)	Contributing	Adjacent
Clubhouse (1915)	Contributing	Adjacent
Tea House/Cabana (ca. 1926)	Contributing	No
Playhouse/Golf Starter Station (1934)	Contributing	No
Danny's Cabin (1926; 1937 addition)	Contributing	No
Worker's Cottage A (415 Adams Road; ca. 1925)	Contributing	Adjacent

Resource Name/Construction Date	Status	In Project Area?
Worker's Cottage B (437 Adams Road; 1917)	Contributing	Adjacent
Workers Cottage C (449 Adams Road; 1917)	Contributing	Adjacent
Workers Cottage D (461 Adams Road; 1917)	Contributing	Adjacent
Garage (ca. 1925)	Contributing	Adjacent
Gazebo (ca. 1928)	Contributing	No
Bridge (1928)	Contributing	No
Root Cellar (ca. 1918)	Contributing	No
Ice House (ca. late nineteenth century)	Contributing	No
Outdoor Pool (ca. 1936)	Contributing	Adjacent
Road System	Contributing	No
Boundary Wall	Contributing	YES
Birdhouse (1918)	Contributing	No
Fountain (ca. 1930)	Contributing	No
<i>Colt Pegasus</i> Fountain (created ca. 1943; installed 1947)	Contributing	No
Bath House (ca. 1985)	Non-contributing	No
Driving Range Building (1999)	Non-contributing	No
Golf Cart Building (2000)	Non-contributing	No
Tennis Court (after 1980)	Non-contributing	No
Entrance Gate (1977)	Non-contributing	No
Woodland Shelter (ca. 1996)	Non-contributing	No
Pergola (ca. 1985)	Non-contributing	No
Pagoda (ca. 1985)	Non-contributing	No
<i>The Golden Fleece</i> (1939; installed late 1990s)	Non-contributing	No
<i>Rhythms & Vibrations</i> (1981)	Non-contributing	No
<i>Telegraph Exchange</i> (1981)	Non-contributing	No

In addition to the resources within the Meadow Brook Farms NHL boundary, there are additional resources over 50 years old in or near the Project Area. These include the Gate Lodge, southwest of Avon Road; the Poultry Farm, north of Butler Road; and Oakland University faculty housing on the east side of Adams Road, north of Avon Road. Determinations of eligibility with SHPO concurrence have not been conducted for any of these resources. However, as part of the upcoming cultural resources assessment for the Adams Road Project, these resources, along with any others that are 50 years of age or older, will be evaluated for their historic significance and eligibility for listing in the NRHP. Their potential associations with Meadow Brook Farms will be evaluated as well. The survey will also examine the Project's potential effects on Meadow Brook Farms' resources that are in and adjacent to the Project Area, including the boundary wall and workers' cottages.

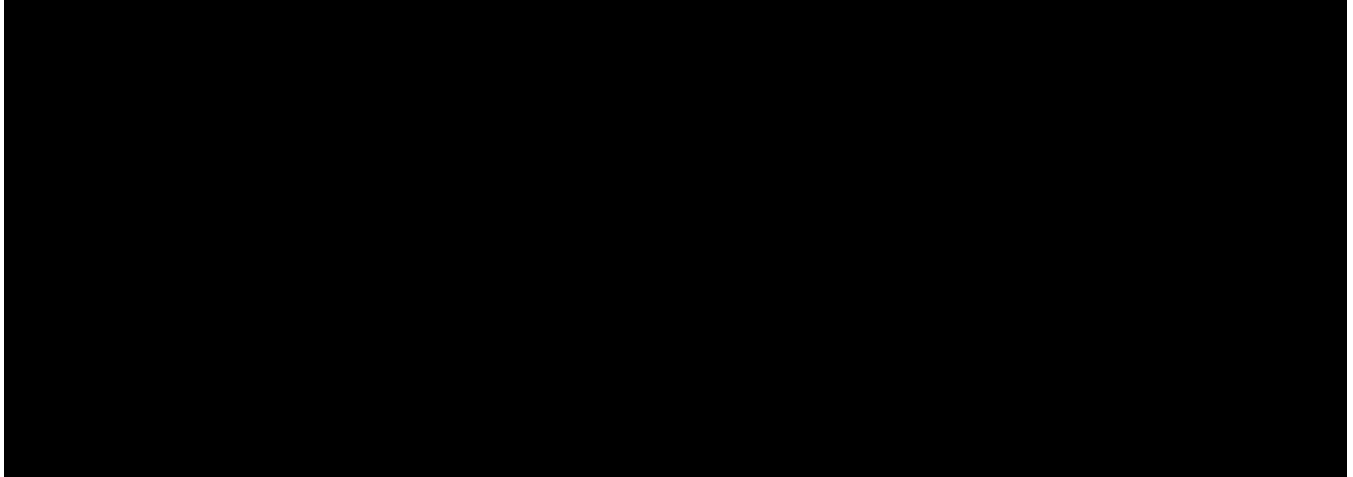
Summary and Conclusions

Commonwealth's background research revealed that the Project Area and its surroundings followed a general pattern of historic land use that is common in Oakland County: initial settlement and forest clearance in the 1820s and 1830s; the development of large family farms from the 1840s through the 1940s; and rapid suburbanization in the 1950s through 1980s. The area generally reached its current level of development by the mid-1980s. The land adjacent to the Project Area to the west followed this pattern until the early twentieth century, when the Dodge/Wilson estate at Meadow Brook Farms was established, absorbing several former family

April 21, 2022

Page 14

farms, and preventing suburban development on the west side of Adams Road. While the Project Area has been disturbed by construction of Adams Road and associated infrastructure, the literature review did not reveal any evidence of significant disturbance in the portions of the Project Area adjacent to Adams Road.



As part of the literature review for above-ground resources, Commonwealth identified one previously recorded above-ground resources in the Above-Ground Study Area: Meadow Brook Farms. Meadow Brook Farms is an NHL that is historically significant under the NRHP Criteria A and C for its significance in agriculture, landscape architecture, architecture, and art. It includes 29 buildings, 2 sites, 11 structures, and 7 objects, 37 of which contribute to the NHL's historic significance. Several of these are in or directly adjacent to the Project's planned Project Area. The upcoming above-ground field survey will examine the Project's potential effects on Meadow Brook Farms' resources that are in and adjacent to the Project Area, including the boundary wall and workers' cottages. All additional properties in and adjacent to the Project Area will also be evaluated for historic significance and evaluated for the potential to be listed in the NRHP. No determinations of eligibility with SHPO concurrence have taken place for these resources. Any historic associations between these resources and Meadow Brook Farms will also be examined.

Commonwealth is pleased to have been able to assist with your cultural resource reviews for this project. Please do not hesitate to contact either me or the Michigan Office Principal, Ethan Epstein (715-482-0273; ethan.epstein@chg-inc.com) if you have any additional questions or concerns related to this letter or require assistance with future cultural resources projects.

Sincerely,



Samuel Burns, MPhil
Project Archaeologist
samuel.burns@chg-inc.com
P: 734.623.0321



Katie Remensnyder, MS
Senior Architectural Historian
kremensnyder@chg-inc.com
P: 517.303.1406

Freedom of Information Act (FOIA) Notice

The location of any archaeological site is considered sensitive information and is protected from release under the Freedom of Information Act (FOIA). Site location data should not be released to the public because the information may create a risk, harm, theft, or destruction of a non-renewable resource. Information on archaeological sites should only be shared with those individuals directly involved with the subject project. Archaeological site information should not be used for future unrelated projects.

References Cited

Albert, Dennis A.

- 1995 *Regional Landscape Ecosystems of Michigan, Minnesota, and Wisconsin: A Working Map and Classification*. General Technical Report NC-178. United States Department of Agriculture, Forest Service, North Central Forest Experiment Station, St. Paul, Minnesota.

Beers, F. W.

- 1872 *Atlas of Oakland Co., Michigan: from recent and actual surveys and records*. F.W. Beers & Co., New York, New York.

BLM GLO

- 1818 United States Department of the Interior Bureau of Land Management General Land Office Plat Map of T3N R11E. Electronic document, <https://glorerecords.blm.gov/default.aspx>; accessed February 2021.
- 2023 Records Database. *United States Department of the Interior Bureau of Land Management General Land Office*. <https://glorerecords.blm.gov/default.aspx>, accessed March 7, 2023.

Brown, Mason L., and Silas Farmer

- 1894 Wayne County and part of Oakland and Macomb. Silas Farmer & Co., Detroit.

EarthExplorer

- 1951 Earth Resources Observation and Science Image #1PN0000060021. *USGS EarthExplorer*. <https://earthexplorer.usgs.gov/>.

Fitting, James E., and Richard Zurel

- 1976 The Detroit and St. Clair Area. In *The Late Prehistory of the Lake Erie Drainage Basin: A 1972 Symposium Revised*, edited by David S. Brose, pp. 214–250. Cleveland Museum of Natural History, Cleveland, Ohio.

Kace Publishing Company

- 1896 *Illustrated Atlas of Oakland County, Michigan*. Kace Publishing Company, Racine, Wisconsin.

McAlpine, Wilbur S.

- 1925 *McAlpine's Official Map of Southeastern Oakland County Michigan*. W.S. McAlpine Map Co., Birmingham, Michigan.
- 1947 *McAlpine's Atlas of Oakland County Michigan*. W.S. McAlpine Map Co., Birmingham, Michigan.

Meadow Brook Hall Staff

- 1978 Meadow Brook Farms National Register of Historic Places Nomination Form. Electronic document, <https://catalog.archives.gov/id/25340198>, accessed March 30, 2023.

Michigan Natural Features Inventory

- 1998 Quaternary/Surficial Geology of Michigan. *Michigan Natural Features Inventory*.
<https://mnfi.anr.msu.edu/resources/quaternary-geology>, accessed August 8, 2022.

Michigan State University Extension

- 2022 Vegetation circa 1800. *Michigan Natural Features Inventory*.
<https://mnfi.anr.msu.edu/resources/vegetation-circa-1800>, accessed March 17, 2022.

Mohr, Paula A.

- 2010 Meadow Brook Hall National Historic Landmark Nomination. National Historic Landmarks Program, National Park Service. Michigan Historic Preservation Office.

Monaghan, G. William, and William A. Lovis

- 2005 *Modeling Archaeological Site Burial in Southern Michigan: A Geoarchaeological Synthesis*. Environmental Research Series 1. Michigan State University Press, East Lansing, Michigan.

National Fish and Wildlife Service

- 2005 Wetlands Mapper. *National Wetlands Inventory*.
<https://www.fws.gov/wetlands/data/Mapper.html>, accessed March 17, 2022.

NETROnline

- 2023 Historic Aerials. Electronic Database, <https://www.historicaerials.com/viewer>, accessed March 23, 2023.

Ogle, Geo. A.

- 1908 *Standard Atlas of Oakland County, Michigan*. Geo. A. Ogle & Co., Chicago, Illinois.

Prahl, Earl J., and Mark C. Branstner

- 1986 *Archaeological Survey of Oakland Technological Park*. Caminos Associates.

Stamps, Richard B.

- 1976 *Oakland University East Campus Water System, Archaeological Survey*. Oakland University Working Paper in Archaeology. Oakland University, Rochester, Michigan.

Stamps, Richard, and Richard Zurel

- 1980 *A Pilot Survey of the Archaeological Resources of Oakland County, Michigan*. Working Papers in Archaeology, Technical Report Series 27. Oakland University, Rochester, Michigan.

Taylor, Kent C., Robert A. Linn, and Sean B. Dunham

- 2002 *Proposed Adams Road Relocation Project, Pontiac and Avon Townships, Oakland County, Michigan*. Commonwealth Cultural Resources Group, Jackson, Michigan.

April 21, 2022

Page 18

USDA NRCS

2023 Web Soil Survey. *Natural Resources Conservation Service.*

<http://websoilsurvey.sc.egov.usda.gov/>, accessed March 29, 2023.

Figures

Figure 1. Project location.....	20
Figure 2. Identified soils (map 1 of 3)	21
Figure 3. Identified soils (map 2 of 3)	22
Figure 4. Identified soils (map 3 of 3)	23
Figure 5. Project Area georeferenced to an 1872 map (Beers 1872:97).....	24
Figure 6. Project Area georeferenced to an 1894 map (Brown and Farmer 1894).....	25
Figure 7. Project Area georeferenced to an 1896 map (Kace Publishing Company 1896:11)	26
Figure 8. Project Area georeferenced to a 1908 map (Ogle 1908:42)	27
Figure 9. Project Area georeferenced to a 1925 map (McAlpine 1925:3).....	28
Figure 10. Project Area georeferenced to a 1947 map (McAlpine 1947:15).....	29
Figure 11. Project Area georeferenced to a 1951 aerial photograph (EarthExplorer 1951)	30
Figure 12. Detail of Project Area georeferenced to a 1951 aerial photograph (EarthExplorer 1951) (1 of 2)	31
Figure 13. Detail of Project Area georeferenced to a 1951 aerial photograph (EarthExplorer 1951) (2 of 2)	32
Figure 14. Archaeological sites and investigations (map 1 of 2).....	33
Figure 15. Archaeological sites and investigations (map 2 of 2).....	34
Figure 16. Potential for deeply buried soils	35
Figure 17. Previously identified above-ground resources.....	36
Figure 18. Identified above-ground resources in and near the Project Area.....	37

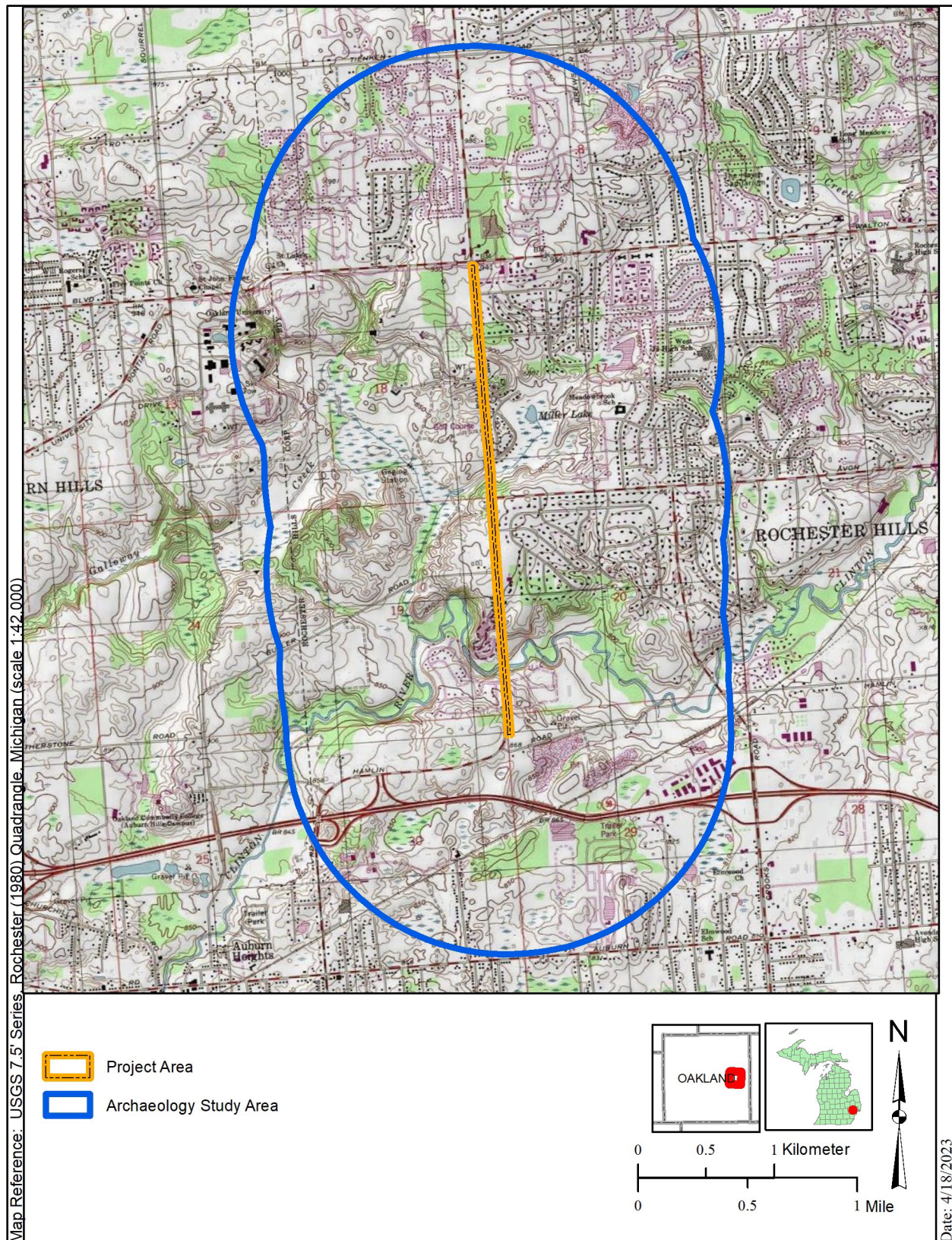


Figure 1. Project location

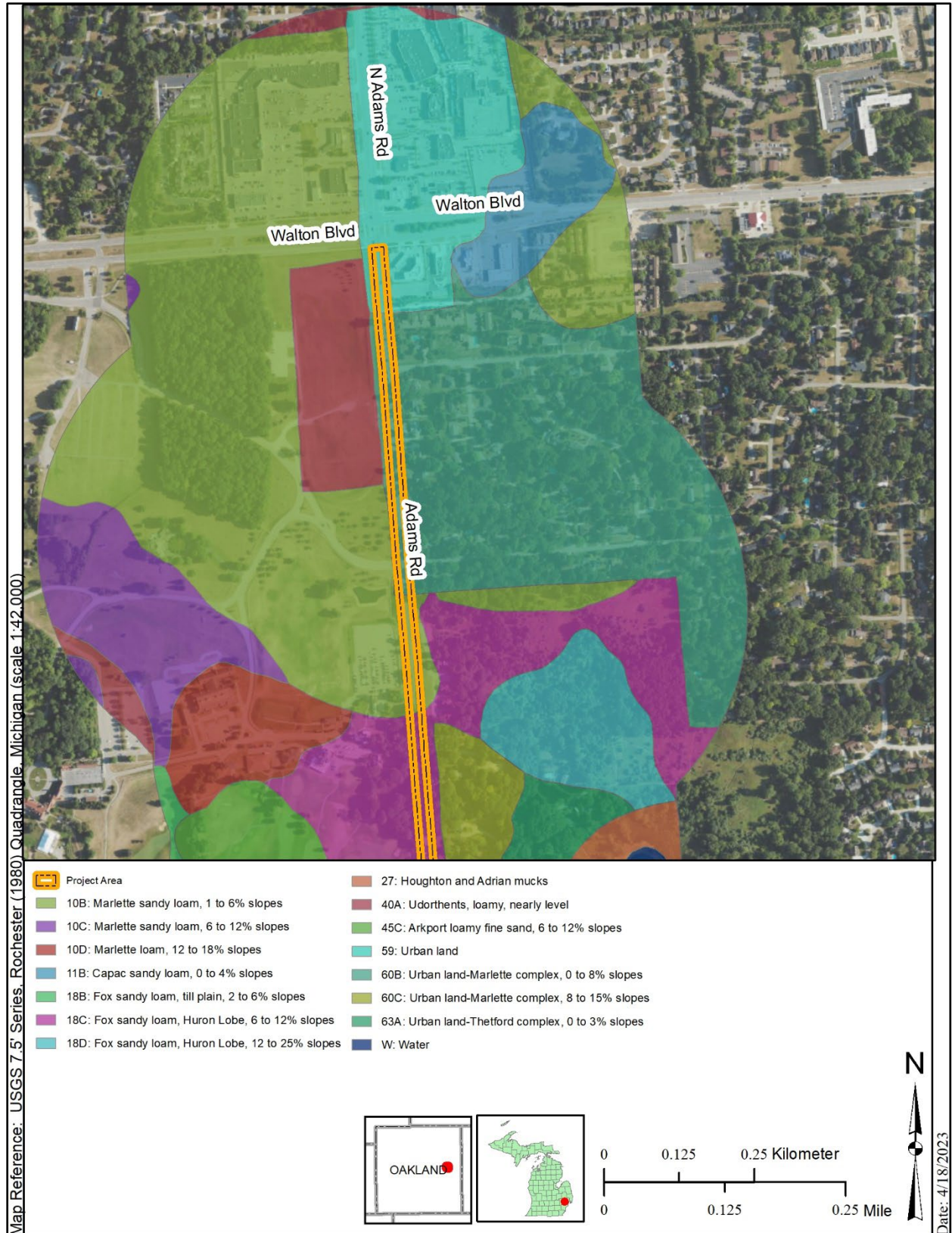


Figure 2. Identified soils (map 1 of 3)

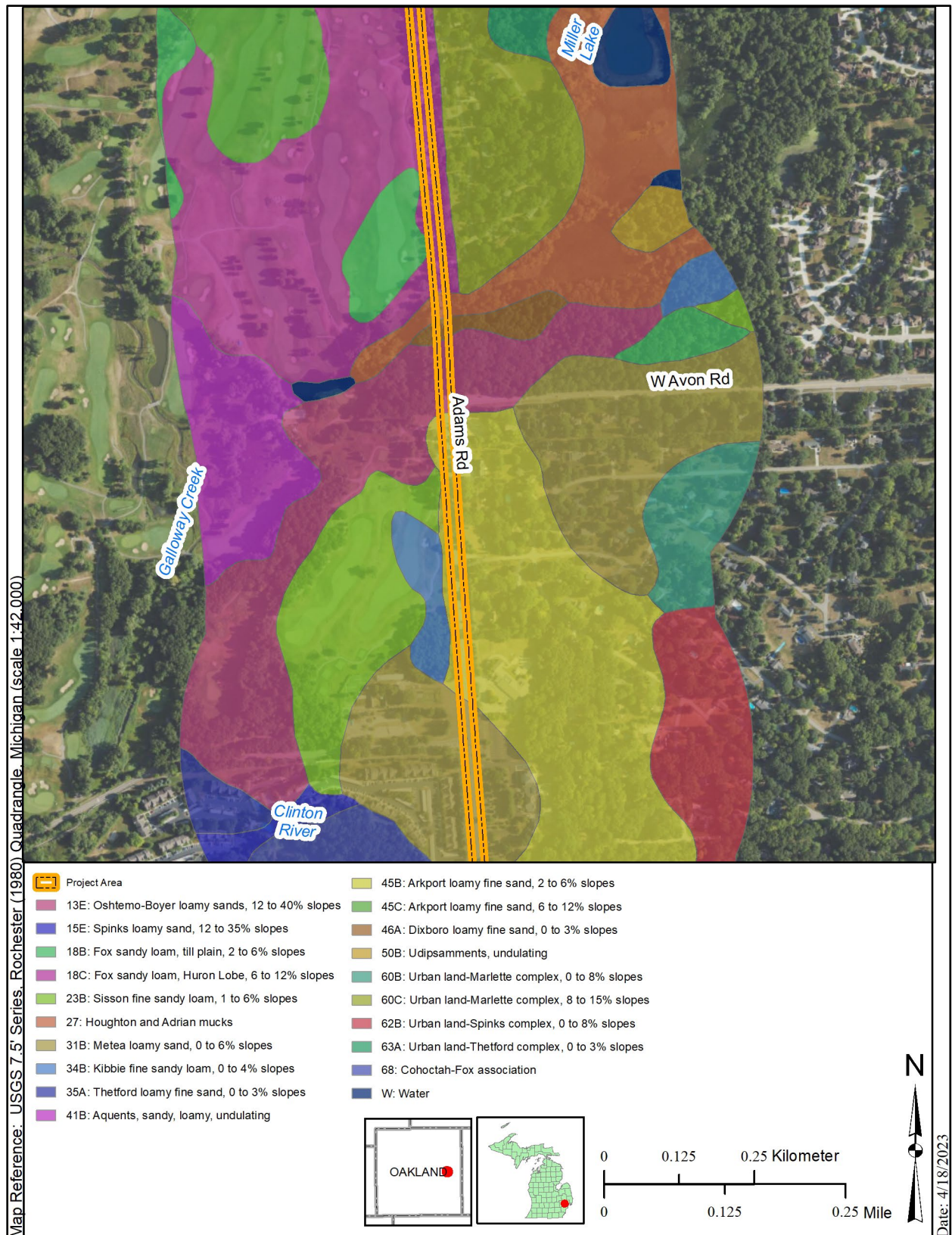


Figure 3. Identified soils (map 2 of 3)

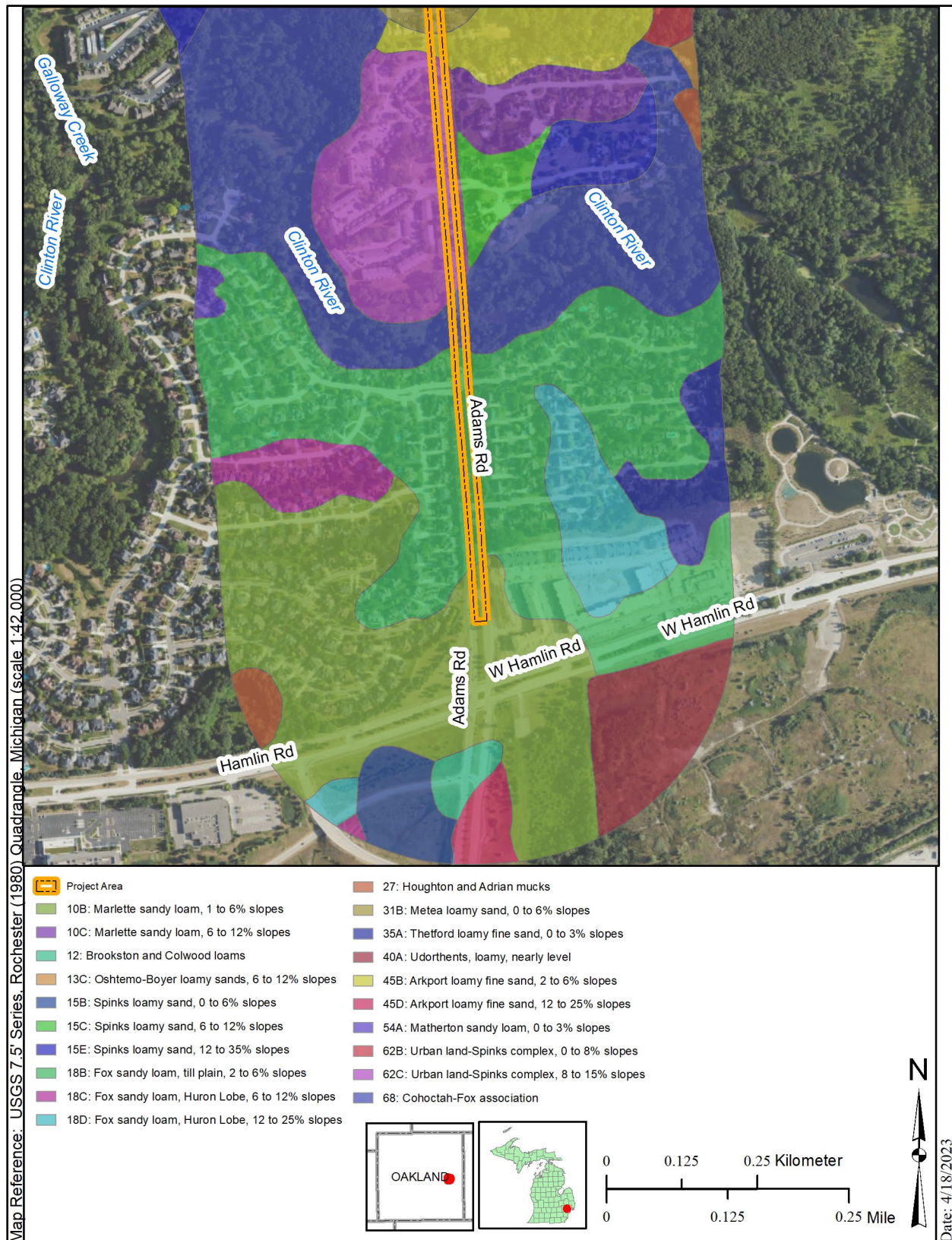


Figure 4. Identified soils (map 3 of 3)

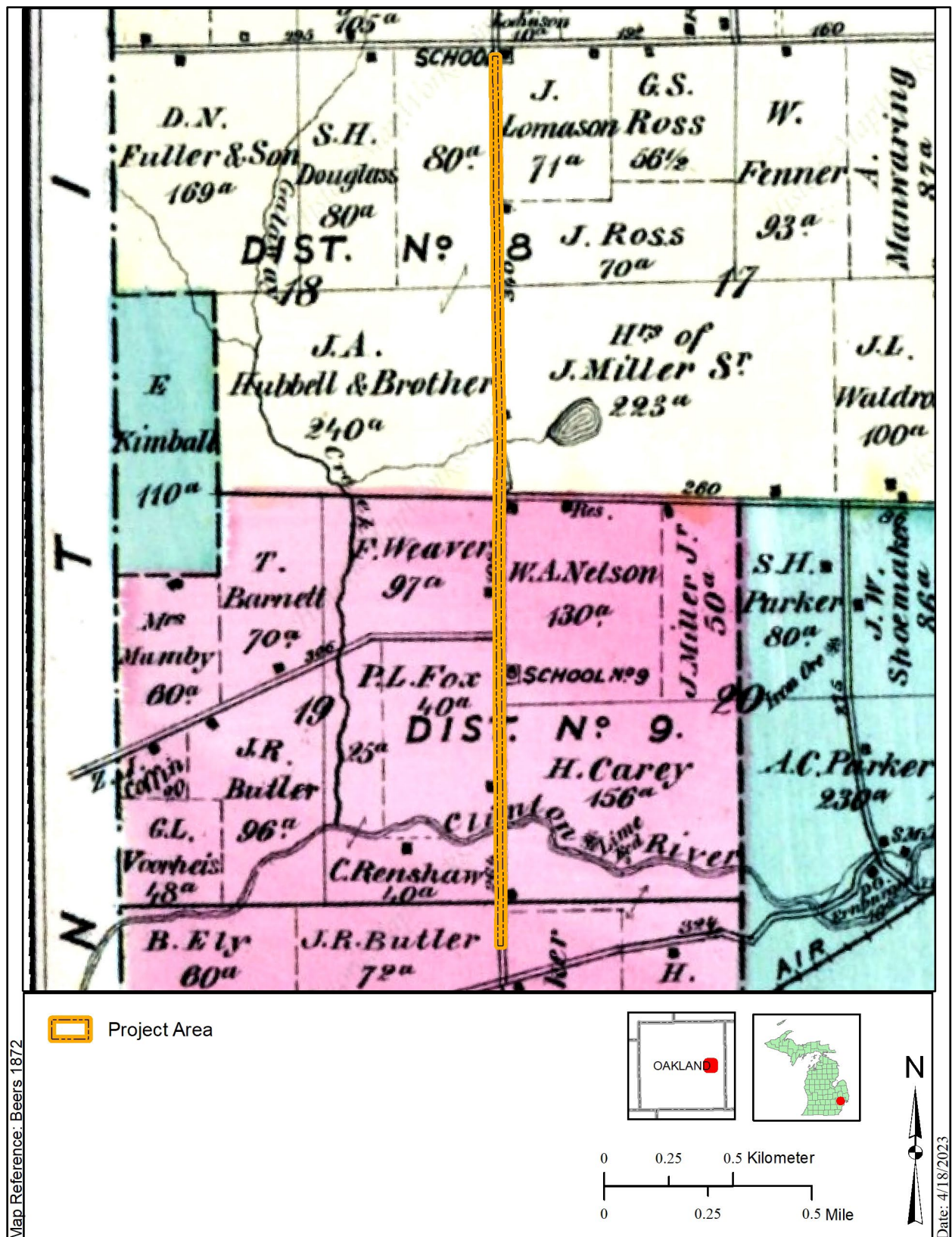


Figure 5. Project Area georeferenced to an 1872 map (Beers 1872:97)

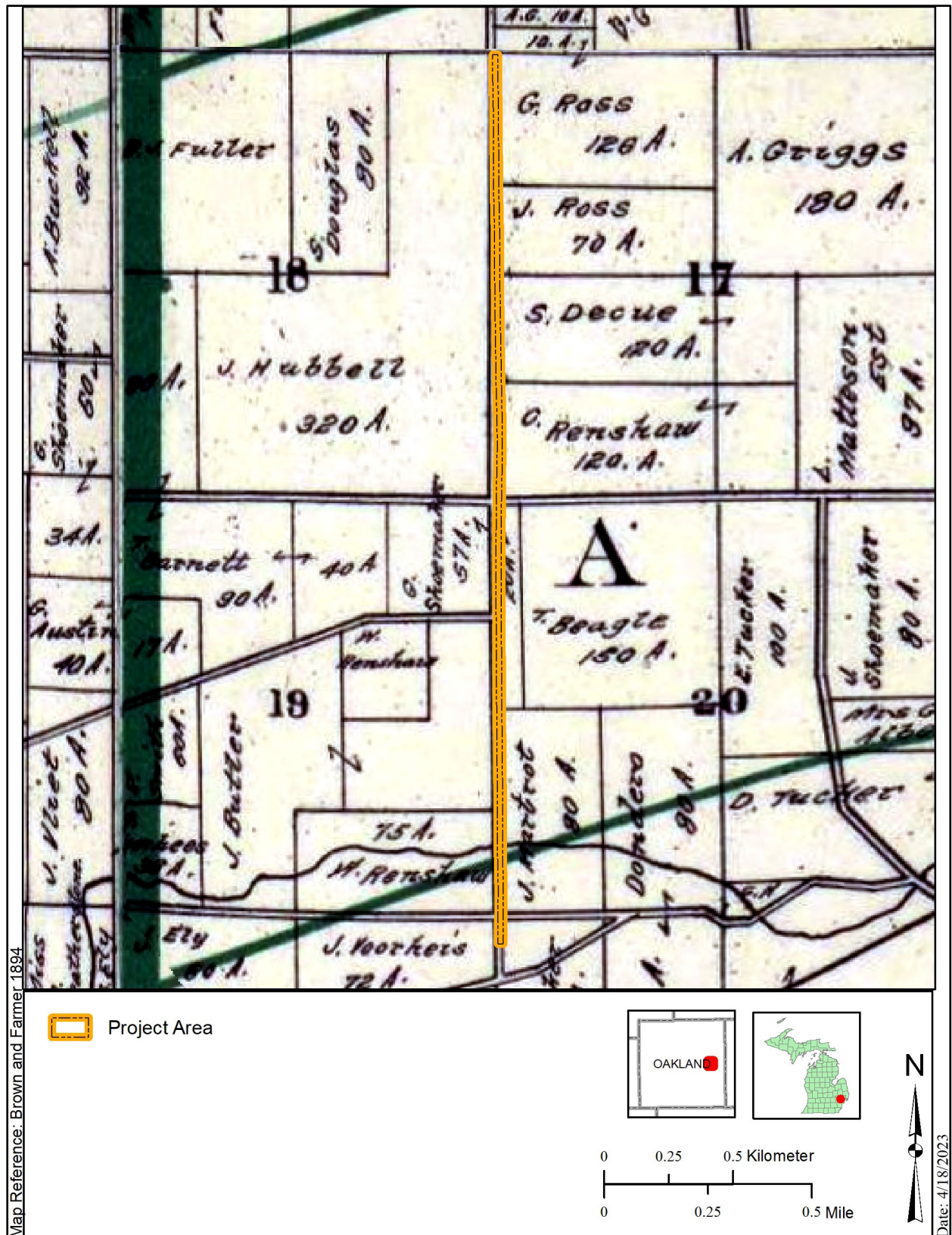


Figure 6. Project Area georeferenced to an 1894 map (Brown and Farmer 1894)

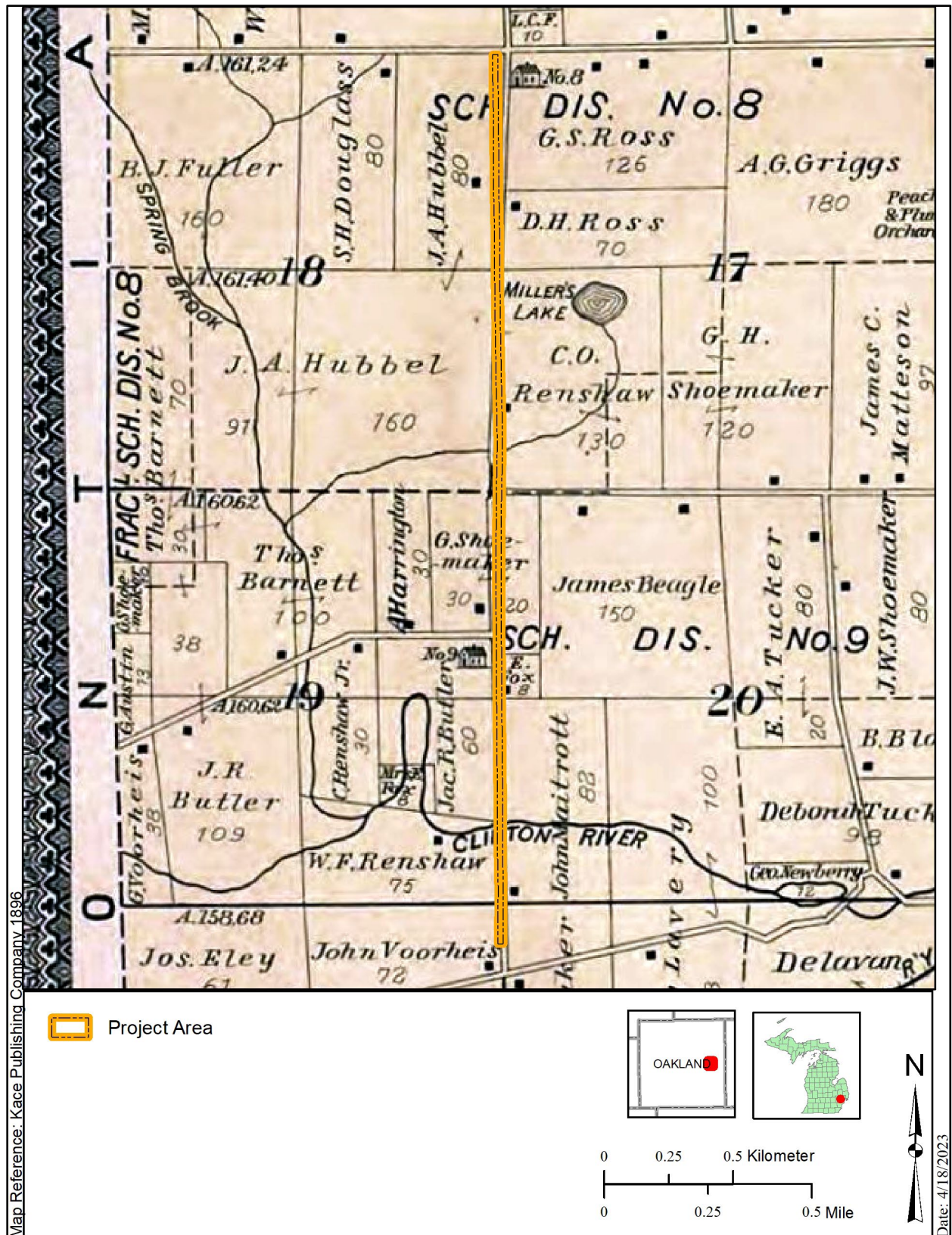


Figure 7. Project Area georeferenced to an 1896 map (Kace Publishing Company 1896:11)

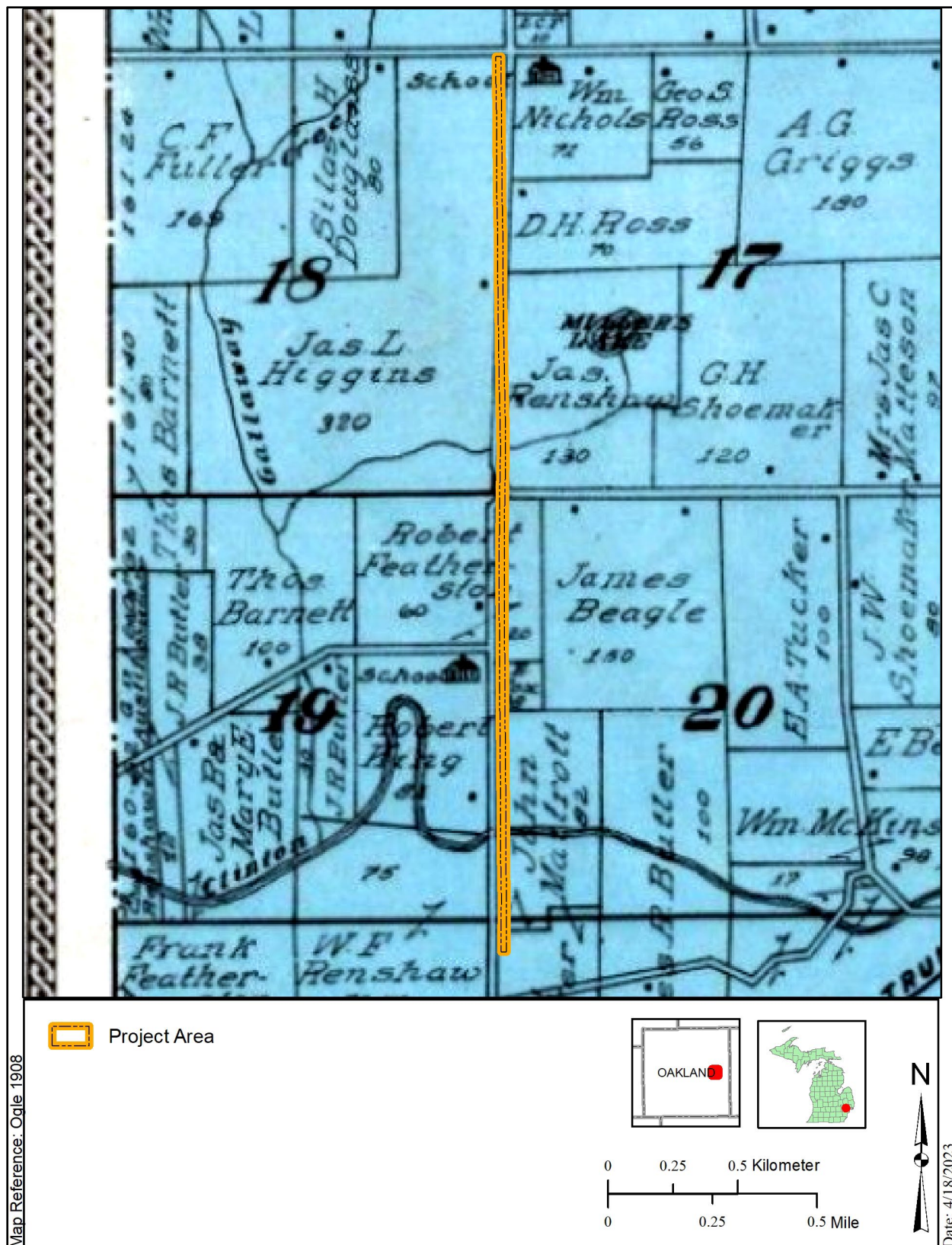


Figure 8. Project Area georeferenced to a 1908 map (Ogle 1908:42)

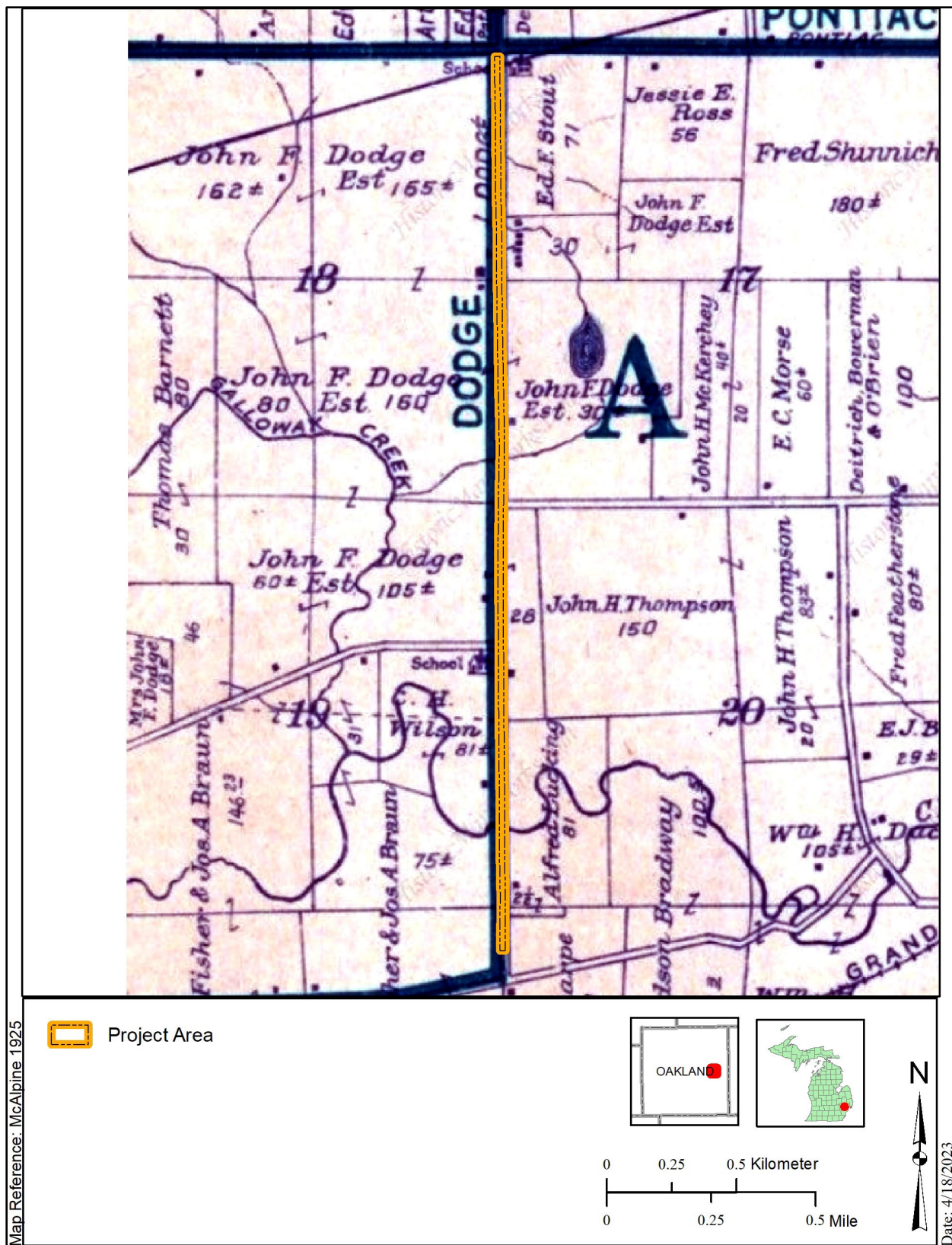


Figure 9. Project Area georeferenced to a 1925 map (McAlpine 1925:3)

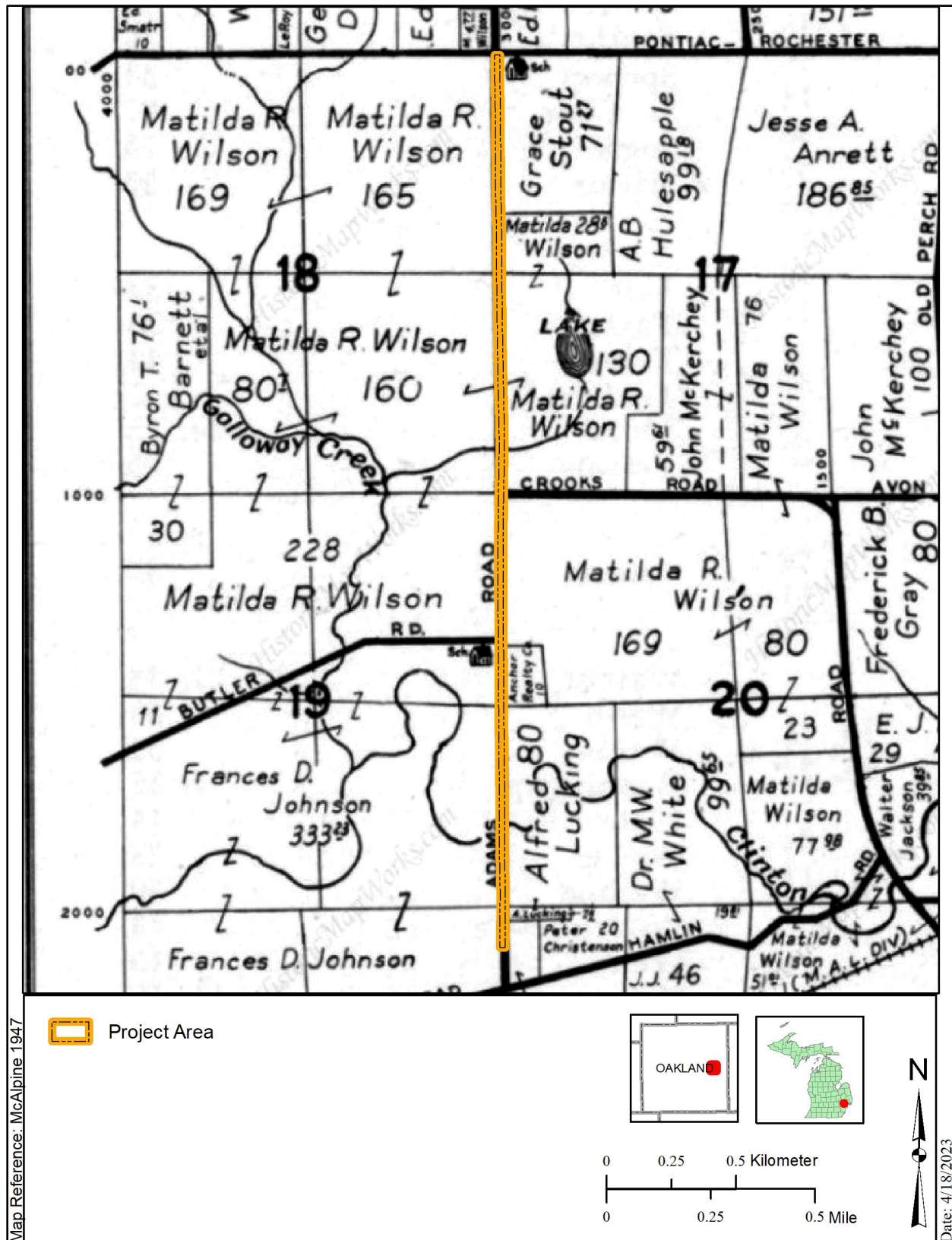


Figure 10. Project Area georeferenced to a 1947 map (McAlpine 1947:15)

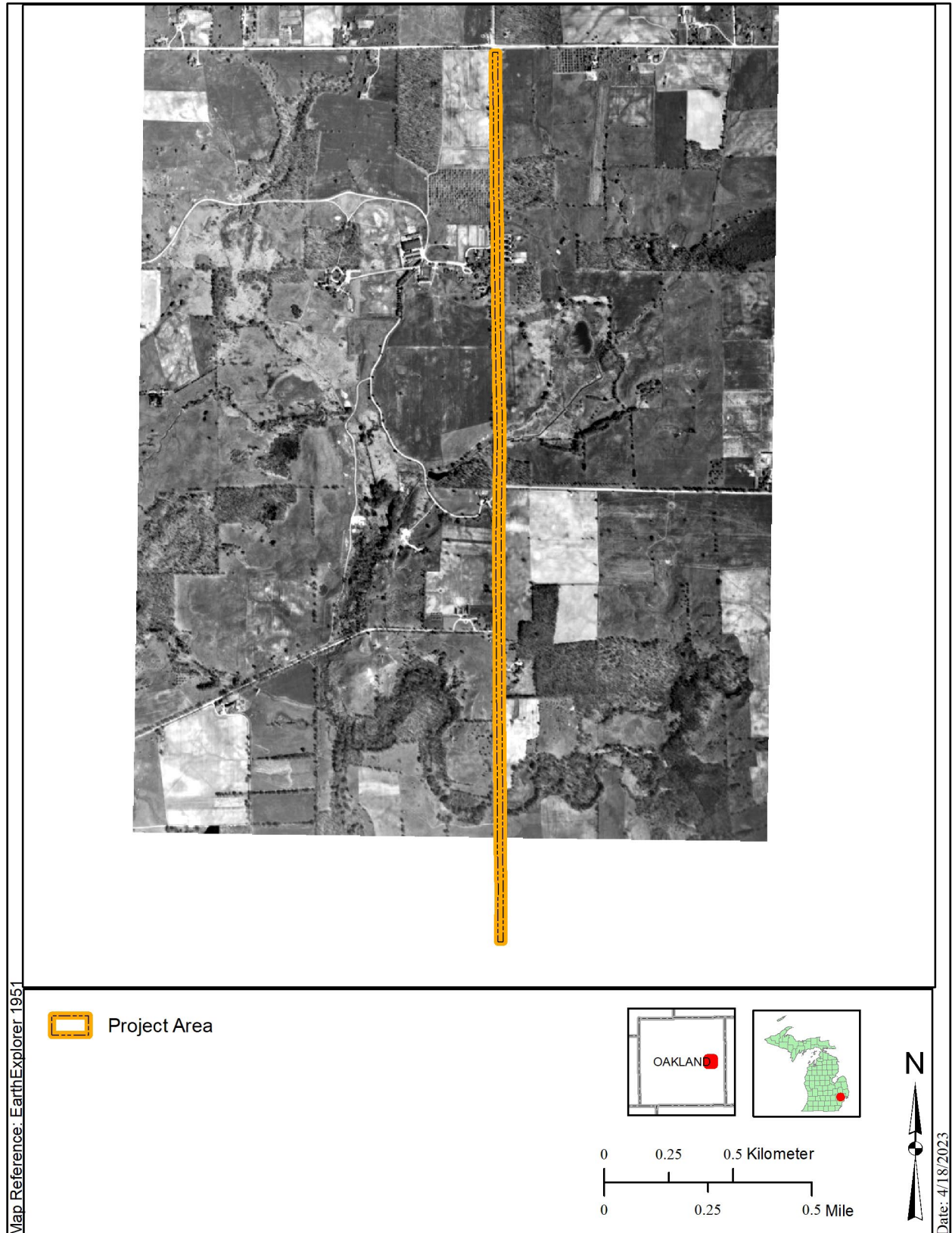


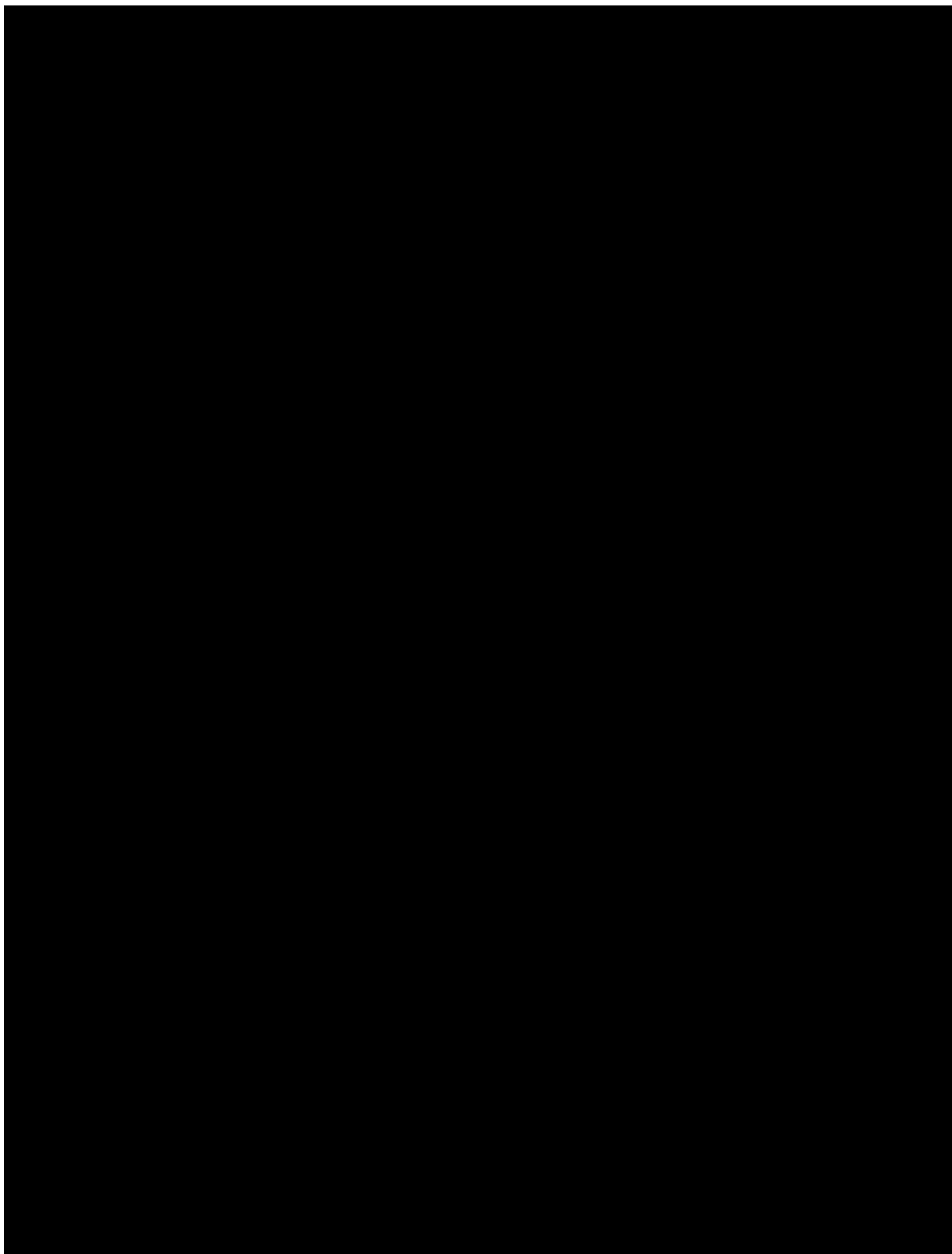
Figure 11. Project Area georeferenced to a 1951 aerial photograph (EarthExplorer 1951)

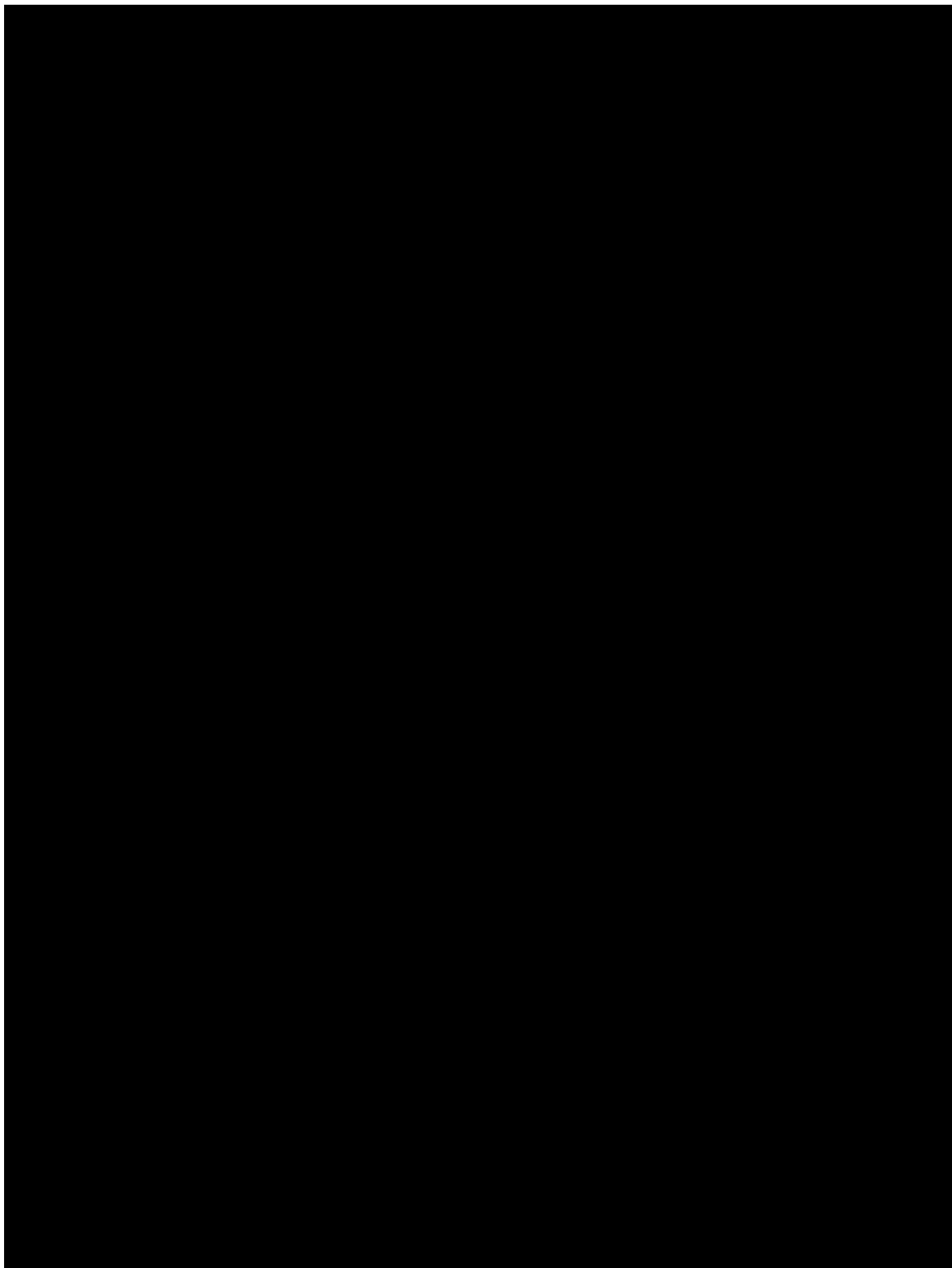


Figure 12. Detail of Project Area georeferenced to a 1951 aerial photograph (EarthExplorer 1951)
(1 of 2)



Figure 13. Detail of Project Area georeferenced to a 1951 aerial photograph (EarthExplorer 1951)
(2 of 2)





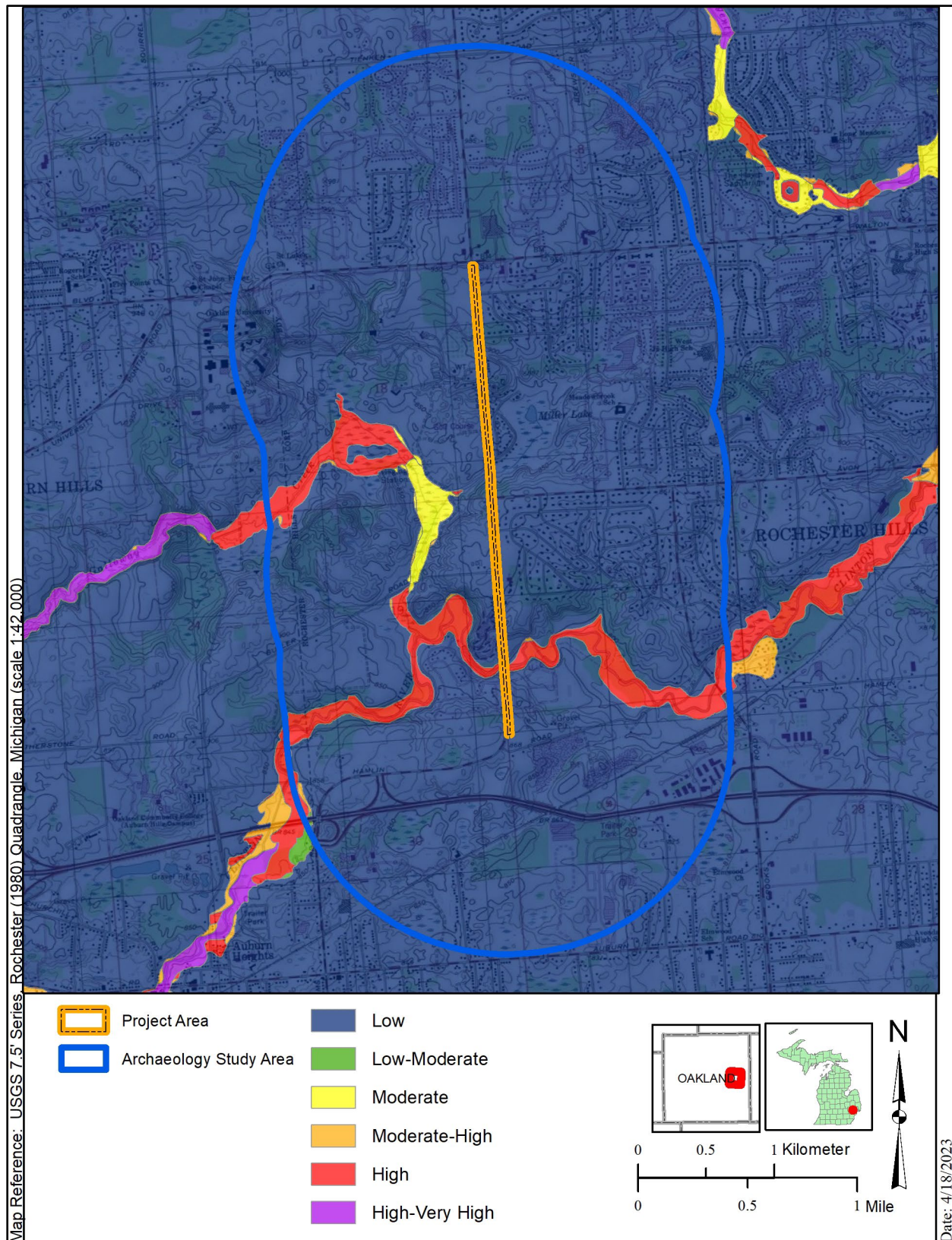


Figure 16. Potential for deeply buried soils

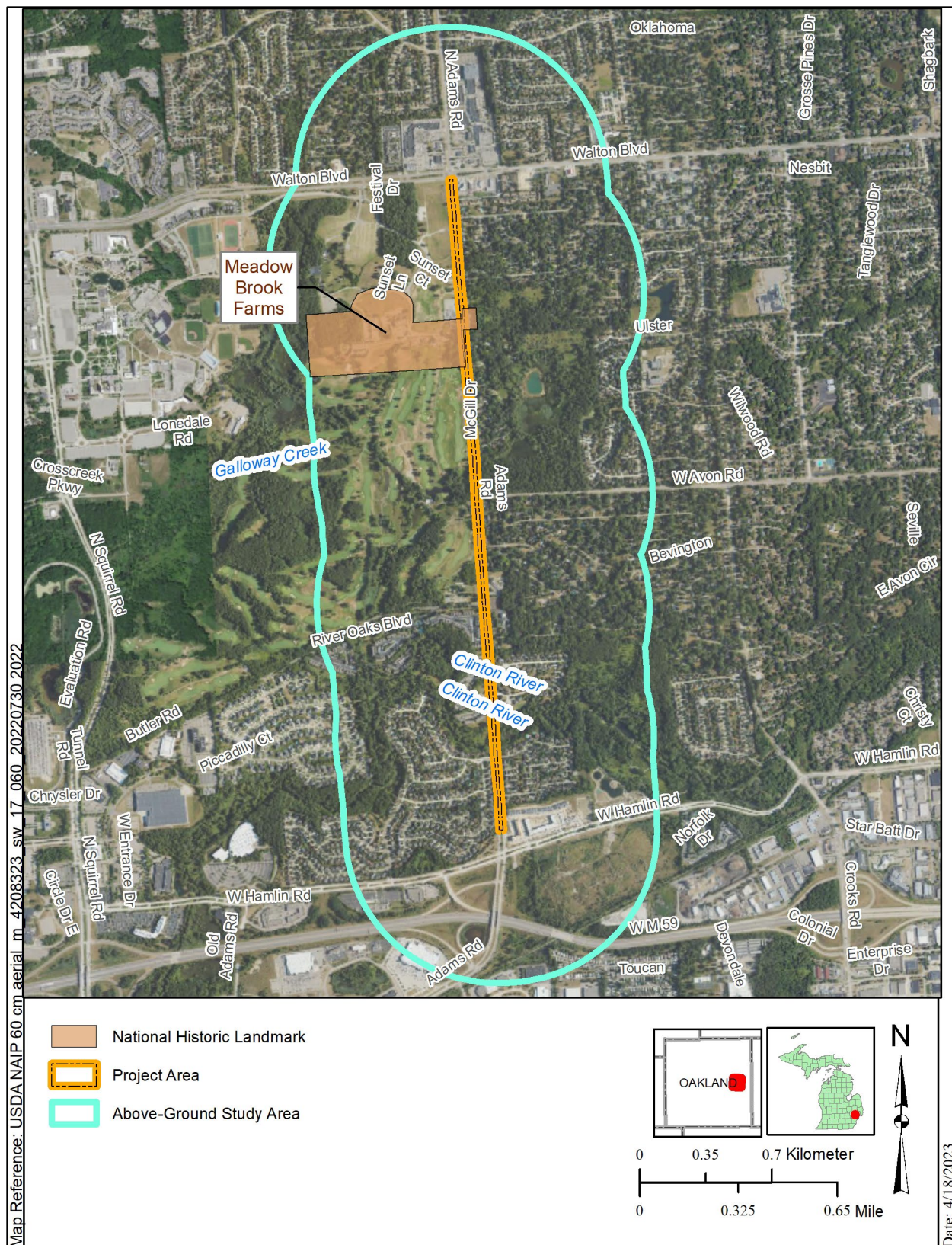


Figure 17. Previously identified above-ground resources

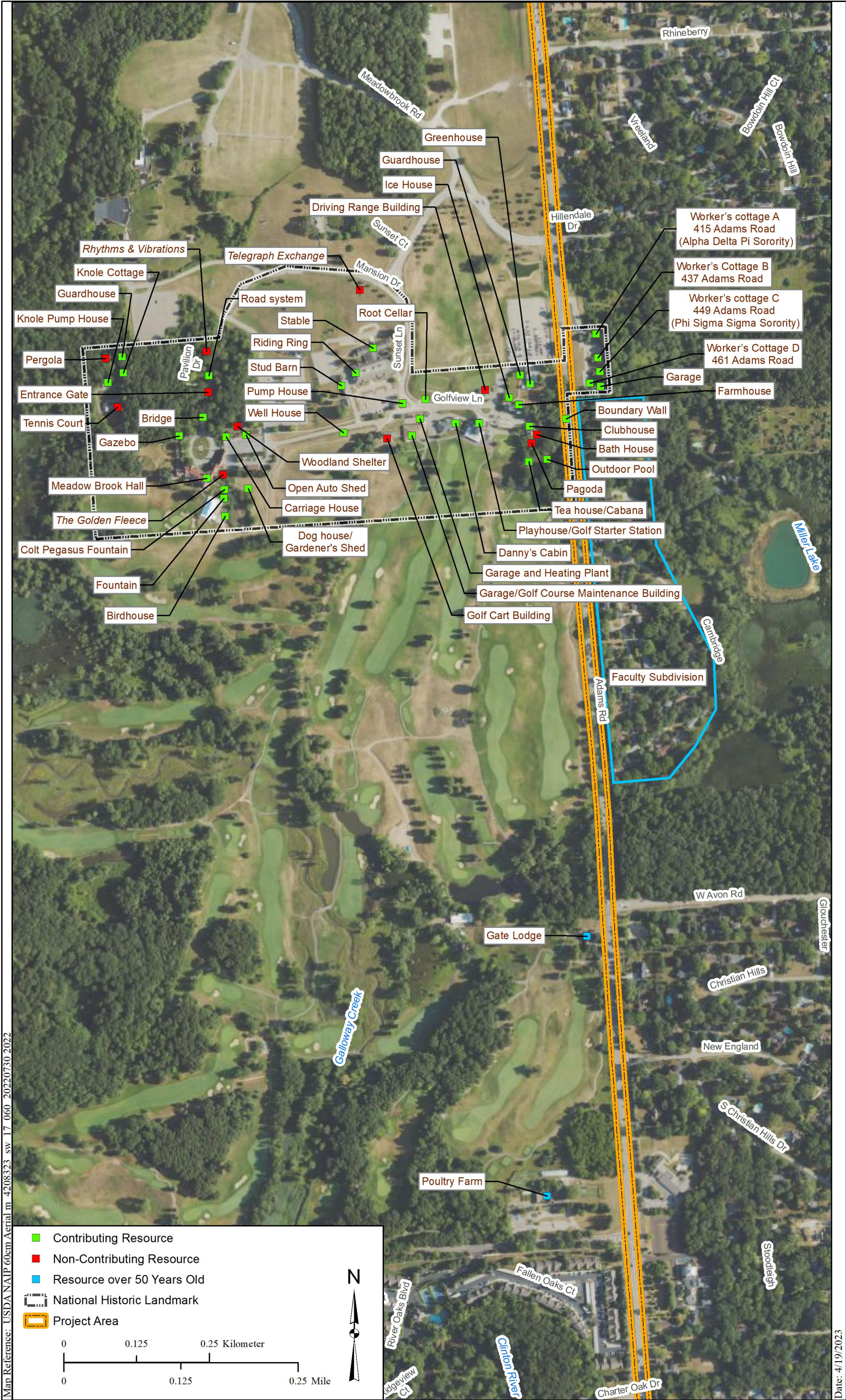


Figure 18. Identified above-ground resources in and near the Project Area