



Re: Cates Landing Railroad Report , Gerald Smith 
Joshua Wayland to: Jennifer Barnett

05/28/2015 12:30 PM

Ms. Barnett,

I have attached a copy of the most recent Cultural Resources Survey report for the proposed rail line construction at Cates Landing in Lake County, Tennessee. The archeologist and the contractor have reformatted the report according to your office's standards and guidelines. We have also updated the introductory language to better reflect the nature of the project and the roles of the agencies involved. I was hoping you would be able to review this document at the earliest convenience to ensure that it is adequate for your review. If you think that the updated report is adequate, I will be happy to send a hard copy to your office.

Thank you for your guidance and assistance.



Cates Landing Railroad Cultural Resources Survey Report May 2015.pdf

Best,

Josh Wayland
 Environmental Protection Specialist
 Office of Environmental Analysis
 Surface Transportation Board
 Tel: (202) 245-0330

Jennifer Barnett

Good Morning, I received a revised report for the...

04/17/2015 11:29:49 AM

From: Jennifer Barnett <Jennifer.Barnett@tn.gov>
 To: "Joshua.Wayland@stb.dot.gov" <Joshua.Wayland@stb.dot.gov>, Jimmy McNeil
 <jimmy.d.mcneil@us.army.mil>
 Date: 04/17/2015 11:29 AM
 Subject: Cates Landing Railroad Report, Gerald Smith

Good Morning,

I received a revised report for the Cates Landing railroad line directly from Gerald Smith without a cover letter or any consultation documentation from the federal agency(s). I am attaching a copy of the report. Gerald addressed some of my report revision requests, as listed in the attached notes. I acknowledge that Gerald has done his best at improving the report and I have an acceptable level of confidence that there are no unknown resources within the area of potential effect.

The report still does not address the following comments:

1. There is no mention of the federal agency responsible for the undertaking or that the survey was conducted as part of an agency(s) Section 106 compliance obligations.
3. There is no discussion of previous archaeological investigations associated with the Cates Landing project. – This is particularly important so as to put the investigation into the context of the overall Northwest Tennessee Harbor development project.
5. There was no subsurface testing and/or drawings or descriptions of the soil stratigraphy within the area of potential effect. – Although page 14 states that visual examination of the ditches showed sterile

channel fill without buried soil horizons.

In addition the cover page needs to be changed to reflect the date of the current version of the report.

The attached report is compliance document on behalf of the Surface Transportation Board (STB) and is directly related to the stipulations of the former Programmatic Agreement for the harbor with the Corps of Engineers. As such, I am going to withhold our response until I formally receive the document and a cover letter from the agency(s). I will leave it to the agency(s) discretion to determine whether it meets their standards and if they concur with the findings of the investigations.

Thanks,

- Jennifer

Jennifer M. Barnett
Archaeologist Supervisor and Federal Programs Archaeologist
Tennessee Division of Archaeology
Cole Building #3, 1216 Foster Avenue
Nashville, TN 37243
Office: 615-741-1588, ext. 105
FAX: 615-741-7329
Email: Jennifer.Barnett@tn.gov



Sign-up for the [TDEC E-Newsletter](#).

[attachment "Gerald Smith Report Review.doc" deleted by Joshua Wayland/STB] [attachment "Cates Landing, Gerald Smith revised 2015.pdf" deleted by Joshua Wayland/STB] [attachment "TNSHPO Arch. Standards & Guidelines 2009.pdf" deleted by Joshua Wayland/STB]

**CULTURAL RESOURCES SURVEY FOR THE PROPOSED CATES LANDING
RAILROAD IN LAKE COUNTY, TENNESSEE**

by

Gerald P. Smith and Nancy C. Smith
Smith Archaeological Consulting
3453 Blueberry Lane
Birmingham, Alabama 35216
(478) 225-7263

for

Brian Yates, Senior Ecologist
EnSafe, Inc.
5724 Summer Trees Drive
Memphis, Tennessee 38134
(901) 372-7962

Lead Federal Agency

Surface Transportation Board
Office of Environmental Analysis
395 E Street, SW
Washington, DC 20423-0001

May 2015

MANAGEMENT SUMMARY

By petition filed with the Surface Transportation Board (the Board) on June 27, 2014, the Northwest Tennessee Regional Port Authority (NWTRPA) is seeking an exemption under 49 United States Code §10901 for authority to construct and operate a new rail line in Lake County, Tennessee. In the petition, NWTRPA proposed to construct and operate approximately 5.5 miles of new rail line to serve the newly constructed Port of Cates Landing on the Mississippi River near the town of Tiptonville, Tennessee.

The Board is the federal agency responsible for granting authority for the construction, operation, and maintenance of new rail line facilities. The Board's Office of Environmental Analysis (OEA) is responsible for undertaking environmental and historic review of proposed projects on behalf of the Board under the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (Section 106), and related laws. OEA is preparing an Environmental Assessment (EA) in accordance with NEPA, the Council on Environmental Quality guidelines, and the Board's environmental rules to identify and analyze the potential environmental impacts associated with NWTRPA's proposed project and all reasonable and foreseeable alternatives, including the No Action Alternative.

NWTRPA is a regional rail authority and political subdivision of the State of Tennessee established by the three counties of Dyer, Lake, and Obion in northwest Tennessee for the purpose of constructing, owning, and operating a regional river port on the Mississippi River. In 2014, NWTRPA completed construction of the Port of Cates Landing near Tiptonville in Lake County (river mile 900) and approved the contracting firm R.J. Corman Railroad Group as the port operator. The port site includes a slack water harbor and a 44-acre site for the port facilities and associated infrastructure. The proposed rail line would service the port, as well as a proposed 345 acre industrial park located south of and adjacent to the port.

The proposed rail line would be approximately 5.5 in length and would have a right-of-way approximately 150 in width, for a total project area of approximately 100 acres. The entire project area is on the Tiptonville 1:24,000 topographic sheet (Index No. 419 NW).

The Cultural Resources Phase I reconnaissance survey was conducted on behalf of the Board in partial compliance with the Board's Section 106 obligations and will inform the EA that OEA is preparing for the proposed rail line construction.

Field surveys were conducted by Gerald and Nancy Smith on August 2-4, 2014 under generally good to excellent field conditions. The entire area except for roads was under cultivation with clear soil visibility under standing crops. No archaeological sites were found within the proposed railroad corridor.

Table of Contents

MANAGEMENT SUMMARY	2
INTRODUCTION	1
ENVIRONMENT	4
CULTURE/HISTORICAL BACKGROUND	6
Prehistory	6
History: Regional Settlement.....	9
Local Archaeology and History	11
FIELD METHODS.....	17
RESULTS AND RECOMMENDATIONS.....	19
REFERENCES CITED.....	30

Figures

Figure 1. Project Location. Base map is Dyersburg Tenn.:KY,MO,IL 1:250,000 sheet, 1982.	3
Figure 2. Project area location showing railroad right of way.	20
Figure 3. View southward along right of way from southeastern corner of industrial park.	21
Figure 4. View eastward across right of way toward Northwest Correctional Center.	22
Figure 5. View northwest along right of way from main line railroad.	23
Figure 6. Transect locations, Sheet 1 of 6.	24
Figure 7. Transect locations, Sheet 2 of 6	25
Figure 8. Transect locations, Sheet 3 of 6.	26
Figure 9. Transect locations, Sheet 4 of 6.	27
Figure 10. Transect locations, Sheet 5 of 6.	28
Figure 11. Transect locations, Sheet 6 of 6.	29

INTRODUCTION

This was a Phase I survey of a proposed railroad corridor done on the Surface Transportation Board (the Board), and its contractor, Ensafe, Inc. of Memphis, Tennessee. The project proponent for the proposed rail line is the Northwest Tennessee Regional Port Authority (NWTRPA), a port authority and political subdivision of the State of Tennessee. NWTRPA has submitted a petition to the Board for authority to construct and operate the proposed rail line, which would provide rail service to the newly constructed Port of Cates Landing and the planned Lake County Industrial Park adjacent to the port. The Board is not involved in the planning, approval, or construction of either the Port of Cates Landing or the Lake County Industrial Park.

The Board is federal agency responsible for granting authority for the construction, operation, and maintenance of new rail line facilities. The Board's Office of Environmental Analysis (OEA) is responsible for undertaking environmental and historic review of proposed projects on behalf of the Board under the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (Section 106), and related laws. The Board is the lead federal agency for the historic and environmental review of the proposed rail line. OEA is preparing an Environmental Assessment (EA) that will analyze the potential impacts to environmental, cultural, and historic resources should the Board approve NWTRPA's proposal. The U.S. Corps of Engineers is a cooperating agency.

The proposed rail line would extend approximately 5.5 miles from the Port of Cates Landing, through the Lake County Industrial Park, to a connection with the Tennken Railroad, a Class III common carrier short line railroad. The rail corridor would be approximately 150 in width. The total project area is approximately 100 acres. The entire project area is on the Tiptonville 1:24,000 topographic sheet (Index No. 419 NW). Figure 1 shows the location of the project area and of identified archeological sites in the vicinity of the project area.

The field survey was conducted by Gerald and Nancy Smith on August 2-4, 2014, under generally good to excellent field conditions. The survey covered the portion of the proposed rail corridor south of the planned Lake County Industrial Park. Longitudinal pedestrian transects

were conducted at 30 foot intervals along the entire route. No cultural remains were observed.

The Lake County Industrial Park, including the area that the proposed rail line would cross, was the subject of a 2013 survey conducted by Gerald and Nancy Smith. This survey identified one archeological site (40LK212) within the industrial park area, but outside of the proposed rail corridor. Because no archeological sites were identified in the proposed rail corridor in the 2013 survey, no additional survey was conducted in that area for the present project.

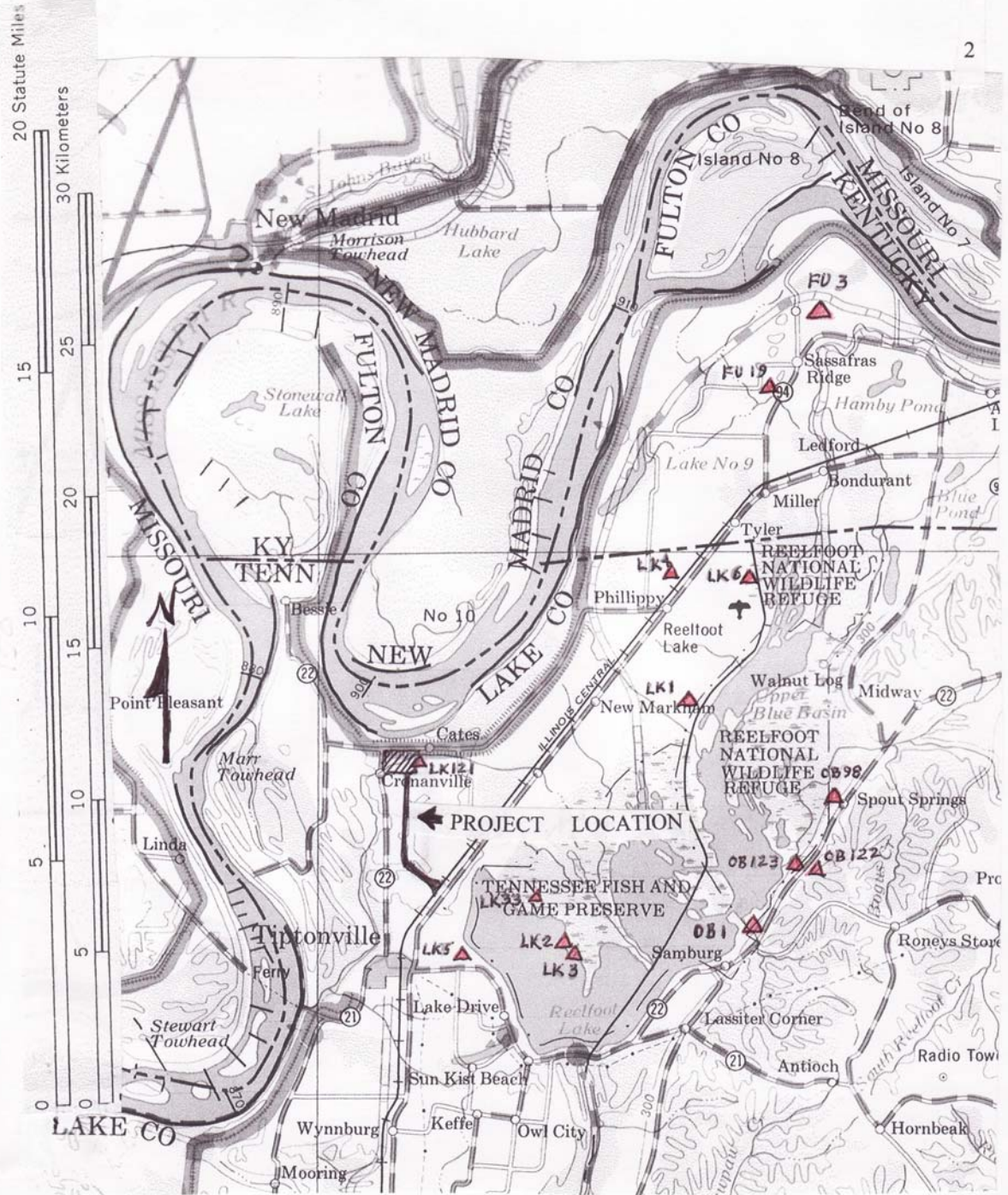


Figure 1. Project Location. Base map is Dyersburg Tenn.:KY,MO,IL 1:250,000 sheet, 1982.

ENVIRONMENT

The project area is in the Lower Mississippi River Alluvial Valley, adjacent to the Mississippi River, with the industrial park and northern railroad corridor areas on a recent natural levee of the river and the central and southern railroad corridor passing through lower lying earlier river channel scars. The climate is moderate, with a growing season averaging about 221 days (Brown 1969:2). Average temperatures range from a high of 92° Fahrenheit in July to 49° in January and lows of 70° in July to 28° in January. Rainfall is fairly evenly distributed throughout the year with an occasional dry periods in August - October. Winter and spring rains tend to come as long periods of drizzle and summer rains generally as thunderstorms.

Geologically, the area is quite young, being comprised of late and post-Pleistocene Mississippi River surfaces and meander belt ridge and channel fill deposits. The areas east and west of the industrial park consist of a mosaic of recent channels and meander belt ridges, and the industrial park itself is on a modern natural levee formation. Reelfoot Lake and much of southern and eastern Lake county are in areas noted by Saucier (1994: 298-299) as being on the downwarped eastern side of the Reelfoot Fault, while the project area is mainly on the uplifted western side.

The Reelfoot area has long been the focus of extensive ecological study, including reconstruction of the probable preclearing forest habitats by Victor Shelford (1963). Shelford's work there (1963: 94 - 103) emphasizes development of a succession of habitats as the area is abandoned by the river and is gradually elevated by flood deposits. Initial Cottonwood-Willow forest is characteristic of sand bars and banklines in and along the active channel. The Mature Cottonwood-Willow Forest is less frequently flooded and includes a wide range of vines and understory plants with swamp rabbits, opossums, and raccoons, commonly present and grey squirrels and deer also present. The Old Cottonwood-Willow Forest begins to develop as soil deposition reaches 28 to 30 feet above mean low water and the previous forest is invaded by boxelder, hackberry, elm, and sweetgum.

Shelford's Sugarberry (a.k.a. hackberry)-Elm-Sweetgum Forest includes a wide range of other tree species along with vines and shrubs. Additional animal species present include bear, cougar, bobcat, and wolf. This forest is followed by the Floodplain Oak-Hickory Forest of about

50% cherrybark and pin oak, 15 to 20% shellbark and bitternut hickory, and otherwise including a wide range of species from previous stages. The Tulip Poplar-Oak Forest is considered probable for all areas 40 to 45 or more feet above low water and not disturbed by the river for several hundred years. It includes tulip poplar, basswood, chinkapin oak, Shumard oak, beech, elm, and hackberry as major arboreal species. Backswamp and lake marginal areas of permanent to extensive seasonal flooding are characterized by the Cypress-Ash Forest of cypress, tupelo gum, and ash. Successive non forest aquatic zones extend into progressively deeper areas of old meander loop lakes such as Reelfoot Lake and others in the area.

Correlation of Shelford's forest type distributions (1963: Fig. 4-2 and 4-3) with soils on the Lake County soil survey (Brown *et al*: 1969) suggests Tulip Poplar - Oak Forest on Reelfoot-Tiptonville-Adler soils with Sugarberry-Elm-Sweetgum and Cypress-Ash Forest on various elements of the Iberia-Sharkey-Bowdre soil association. Had conversion from forest to agriculture not occurred, the industrial park would have been in Tulip Poplar-Oak forest and most of the railroad corridor in a mosaic of wetland habitats. Sweetgum-Elm-Cypress Seasonal Swamp would be expectable in Iberia and Bowdre soil areas and Cypress Swamp areas of Sharkey clay. However, the area has been cleared and converted to cropland. The majority of the industrial park and railroad corridor is located within row crops comprised of soybeans and corn.

CULTURE/HISTORICAL BACKGROUND

Prehistory

The Mississippi River drainage of western Tennessee and Kentucky has been occupied by humans for at least the past 10,000 to 12,000 years. It is covered in general regional treatments as provided by McNutt (1996); Morse and Morse (1983); Phillips (1970); and Phillips, Ford, and Griffin (1951). More localized information is provided in Mainfort (1996), Smith (1979, 1990, 1993, and 1996), Smith and Evans (1987), and Smith and Smith (2013). The summary provided here is intended as a general framework for the study area discussion.

The cultural remains of the earliest inhabitants consist primarily of large fluted points and an associated complex of scrapers, flake knives, multipurpose flake tools, and unfluted points otherwise similar to the fluted forms. Most of the known specimens are from east of the loess sheet, but some are also known from the vicinity of the Mississippi River bluffs where they have apparently been exposed by deep erosion cutting into the loess deposits in which they were included. Specimens from this period are rare, and very few sites are known. The population was apparently small and consisted of small groups living by hunting large animals and gathering plant foods. Climatic conditions were much cooler than the present and may well have been more similar to those currently characteristic of the Great Lakes than to local modern conditions.

By approximately 8000 BC the archaeological record indicates increasing importance of plant foods by the appearance of grinding tools meant mainly for grinding seeds and nuts from species present in the environment. The large, slow game animals of the late Pleistocene were gone and deer was the main large animal available. Hunting weapons emphasized the use of spear thrower darts tipped with stemmed, notched, or barbed points. The population during this cultural period, the Early Archaic, appears to have increased and archaeological sites are now present on the oldest exposed surfaces of the Alluvial Valley itself.

The Middle Archaic period of about 5000 to 3500 BC is poorly known in the area. Basally notched Eva points are present in the Tennessee River valley during this period, and a variety of side notched types are present to the north in the Midwest. Some of the Midwestern types are

occasionally found in western Tennessee, but many are also similar to Early Archaic types, thus rendering clear definition of Middle Archaic occupations in western Tennessee difficult. Ground stone axes and spear thrower weights appear regionally during this period and continue in use into late prehistoric times. The climate had become much warmer and drier than the present, with the upland forests likely made up of xeric oak and hickory species of minimal food value and permanent surface water restricted to the largest streams. Middle Archaic occupations are known from the Mississippi alluvial valley and adjacent uplands to the south, and are quite distinct from either the Tennessee River or the Midwestern materials of the period.

By about 3500 BC climatic and environmental conditions had improved to approximate modern conditions in the area. This change and the introduction of new subsistence methods appear to have resulted in continuing population growth. The most important development combined concentration on seasonally concentrated food sources with storage methods allowing effective preservation of food from times of abundance through those of severe shortage. In the western Tennessee area this Late Archaic development resulted in spring and summer occupation of the Tennessee River valley, emphasizing use of fish and mussels along with generalized hunting and gathering, followed by movement to the eastern part of the loess sheet for fall and winter occupation of groves of shagbark and scalybark hickories on stream terraces for storable nuts as well as hunting territory.

Between about 1500 and 1000 BC, a new way of life, and possibly new people, appeared from the south in southwestern Tennessee, southwest of the Hatchie River. This new culture in the area represented the expanding frontier of the Poverty Point culture based in Louisiana and southern Mississippi. By about 500 BC these sites had appeared throughout the Mississippi River drainage of western Tennessee, to the exclusion of Tennessee River based Late Archaic activity. Projectile point styles are distinct from those of the Tennessee River valley, corresponding instead to those of the lower Mississippi River valley. The larger sites in particular are marked by the presence of a wide variety of spherical, biconical, and ellipsoidal baked clay objects used to the south for baking food in cooking pits. The form, frequencies, and decoration of these objects occur in distinctive local clusters, suggestive of local social groups. Use of these objects continued to some extent after the introduction of pottery which marks the beginning of the Early Woodland period.

The Early Woodland cultural period in the area appears to have lasted from about 400 BC to about AD 100. The initial ceramic styles were drawn from the Tchula tradition of northwestern Mississippi, with local variation suggesting continuation of the previous Poverty Point derived local groups. However, by the end of the period, Adena projectile points derived from the Ohio River Valley and sand tempered cordmarked and fabric impressed ceramics derived from the Hatchie-Tombigbee-Yalobusha headwaters area had become common.

During the Middle Woodland period of about AD 100 to 400, western Tennessee was included in the vast trade network shared by the Marksville culture of the lower Mississippi River valley, Hopewell in the Ohio and upper Mississippi valleys, Miller in the Hatchie-Tombigbee-Yalobusha headwaters, and others along the coast of the Gulf of Mexico. The Pinson site near Jackson on the South Fork of Forked Deer River (Mainfort 1986) is the primary center for the western Tennessee area at this time. Baldwin series sand tempered ceramics, primarily with plain and cordmarked surface finishes, are the most common marker for the period. The lack of variability in this ware has so far precluded any effort to use it for defining local groups.

Late Woodland sites of the approximate AD 400 to 1000 period are common in the Mississippi delta portions of westernmost Tennessee and Kentucky, but are rare in the uplands. The few known upland sites of the period are mostly on the main stem and North Fork of Obion River and appear to be small special purpose camps rather than permanent occupations. Ceramics are of clay grog tempered ware and have plain, cordmarked, or occasionally check stamped surfaces. Projectile points are generally small notched or triangular forms apparently meant for use on arrows rather than spear thrower darts.

The Mississippian cultural period of about AD1000 to 1550 is the era of large town and ceremonial centers in the southeastern and midwestern United States. Agriculture, fishing, and hunting provided the food supply for a large and growing population. Large towns, usually fortified, were up to 100 acres or more of dense occupation with a central plaza. Pyramidal earthen platform mounds were the homes of most of the population of the Mississippi River flood plain and bluffs below the Ohio River. Hunting camps and hamlets are scattered up the lower 20 miles or so of the tributary streams, but the incipient Mississippian Obion site (Garland) on the upper North Fork of Obion River is the only known large upland center in the area.

Numerous local area cultural units have been defined throughout the area, including one centered in the Reelfoot Lake area and another in far western Kentucky north of Reelfoot Lake.

Mississippian ceramics include a wide variety of vessel forms, mainly jars, bottles, and bowls and a wide variety of punctuated, painted, decorated, incised, and engraved decoration as well as plainware and effigy vessels of all kinds. Stone items primarily include small triangular and lanceolate arrow points along with chipped and ground stone axes and chisels.

Arrival of the DeSoto expedition in 1541 at once provided a glimpse of Mississippian culture at its peak of powerful chiefdoms, extensive agriculture, and elaborate arts and crafts, and brought its demise through Old World epidemic diseases which killed nearly everyone. Accounts written by survivors of this expedition provide virtually our only non-archaeological information about this culture until the eighteenth century French accounts of the Natchez and their neighbors.

History: Regional Settlement

After the DeSoto expedition there were no further recorded European activities in the lower Mississippi River valley until the Marquette and Jolliet expedition of 1673, when they descended the Mississippi to the vicinity of the mouth of the Arkansas River. They found no trace of the populous provinces reported by the Spanish until they reached the Quapaw at the mouth of the Arkansas. By this time the Quapaw already had European trade goods, an expectable state of affairs given the flood of trade goods pouring into Cherokee, Creek, Choctaw, and Chickasaw territory by this time as a result of the deerskin trade with Virginia and South Carolina. French activity in the Mississippi valley grew gradually, but resulted in regular travel by the early 1700's with the establishment of New Orleans, Natchez, Arkansas Post, Kaskaskia, and points to the north which relied upon the river system for the transportation of supplies and exports.

British claim to the territory between the Tennessee and Mississippi Rivers was solidified with the capture of French Canada, and was passed to the United States at the end of the Revolutionary War. Actual control of the area, however, rested with whichever adjacent tribal claimant could evict intruders first, with the Chickasaw and Shawnee as primary contenders, and

the Cherokee and Choctaw were also occasionally involved. In 1793, the Chickasaw sold Spain a tract on the Fourth Chickasaw Bluff of the Mississippi River for Fort San Fernando and its associated settlement and trading facilities. This grant was assumed by the United States in 1798, with the existing Fort San Fernando being replaced by a new fort and trading facilities to the south near the present railroad and highway bridges. North Carolina was particularly energetic in providing land grants in the area to Revolutionary War veterans. These grants often overlapped and became the subjects of rampant land speculation and decades of lawsuits rather than being settled by their nominal owners. Non-tribal settlement of these lands was considered illegal until after the Jackson Purchase of the area from the Chickasaws in 1818. Squatter occupation of the area appears to have been rare in most of the area until then.

After the Jackson Purchase the area filled rapidly, with most of the key towns and major routes of travel established by the 1830's. Towns were generally established along the main rivers and were served by keelboats and small steamboats for primary transportation. Roads were both in poor condition and of only seasonal utility. Settlement of the upland areas was mainly by small scale subsistence farmers, with large commercial plantations operated by slave labor found mainly in the river bottom areas. By the 1840's cotton was the cash crop for all, with grains and general food crops raised only to the extent necessary to provide for the draft animals and local human population. Effective rail transportation in most of the area was not established until just before the Civil War, during which most of it was destroyed.

Large troop operations in the area were virtually over by the middle of 1862. After that the main activities were small units of the regular armies, mainly raids and recruiting trips by Confederate cavalry and pursuit by Union occupation troops. Irregular and guerrilla group attacks against both military and civilian facilities were also frequent. While local damage was often severe, the project area was spared the wholesale destruction visited on such areas as northern Virginia or the Chattanooga-Atlanta-Charleston corridor.

After the Civil War the end of the plantation-slavery agricultural system required formation of new working relationships between the large landowners and their now free former slaves in order for all to survive. Tenant farming became the dominant system, in which the tenant provides the labor and the landowner provides the rest of the resources necessary to produce a crop whose proceeds are then shared. Formerly tightly nucleated plantation headquarters

communities became dispersed as tenant farmers were scattered along roads and bayous on the 20 to 60 acre tracts each family was now responsible for farming.

Settlement of lowland areas was severely hampered by repeated flooding, which restricted most occupation either to rarely flooded natural levee ridges, terraces, or the adjacent uplands until stream channelization and effective levee construction during the first half of the twentieth century. Southern timber became a more valued commodity by the 1880's with the exhaustion of the great northern forests, and commercial clearing of previously uncultivated areas began in earnest. Logging railroads and ephemeral/portable sawmills abounded until most of the major stands of timber were cut by the end of the 1930's. The introduction of soybeans, capable of growing well on land too wet for other commercial crops of the area, spurred the clearing of most of the surviving tracts of lowland timber during the mid-1900's. The modern post-tenancy era emphasizes diversified wheat, soybean, rice, and sorghum/milo production which is conducted with heavy farm equipment requiring only a fraction of the previously necessary labor force. By the 1950's most of the rural population was moving in to the nearby towns and cities in search of new employment. Lowland areas once characterized by large plantation operations now only have a few families and most of the once ubiquitous small sawmill/cotton gin towns are now gone.

Local Archaeology and History

Human occupation of the Reelfoot area is known to have occurred since the Late Pleistocene. Paleo Indian hunter-gatherers visited the loess covered uplands overlooking the modern Mississippi River flood plain (Mainfort 1996:80), followed by evidence of Archaic Period activity (Smith 1979 and Mainfort 1996) in the uplands and Early to Middle Woodland occupations in the adjacent upland drainages and a few sites in the flood plain itself. The Woodland materials include Tchula related Early Woodland and sand tempered ceramics apparently related to Middle Woodland materials better known from the Pinson and related sites in western Tennessee and the LaPlant site in southeastern Missouri.

Several large Late Woodland sites have been recorded along and near the base of the bluffs forming the eastern margin of the Reelfoot Basin. These are part of the extensive Late

Woodland tradition of the northern Mississippi delta and the Mississippi River valley northward to the vicinity of St. Louis at the mouth of the Missouri River. Ceramics of the period are primarily grog tempered Mulberry Creek Cordmarked and Baytown Plain with small amounts of Wheeler Check Stamped, Kimmswick Fabric Impressed, Larto Red, Kersey Incised, and Wickliffe Thick. Mill Creek chert hoe flakes, produced by sharpening hoes imported from southern Illinois, are frequent on these sites. Particularly large sites include 40OB98, 40OB128, 40LK6, 15FU18, and 15FU19, all on old natural levees of the Mississippi River. This complex is dated to the approximate AD 700 to 950 time span (Mainfort 1996:84).

The Emergent Mississippian Period of approximately AD 950 to 1050 is represented by a group of sites near Samburg which are characterized by a high frequency of Mulberry Creek Cordmarked, Baytown Plain, Mississippi Plain, and Varney Red Filmed ceramics with Mississippian vessel forms, apparently related to the similar Malden Plain complex of southeastern Missouri and northeastern Arkansas. Sites 40OB1, 40OB6, 40OB122, and 40OB123 are part of this group. Site 40LK10 in the central part of Reelfoot Lake and 40LK5 at the southwestern end of the lake also appear to be related, but distinctive sites of this period. Later Mississippian sites related to the Cairo Lowland sites of southeastern Missouri and similar sites in western Kentucky are present in the area, particularly 40LK1, 40LK2, 40LK3, 40LK33, and the major mound center at 15FU3. There is also a complex of approximate early to mid-seventeenth century date at 40LK4, 15FU119 in particular, characterized by snub nosed end scrapers, Nodena and large triangular projectile points, and jars with closely spaced vertical applique strips on their necks. This complex is also represented at the Campbell site in Pemiscott County, Missouri and others near it. Also present are three fragments of iron and a brass tinkler from 40LK4, which have carbon dates indicating occupation around AD 1650 (Mainfort 1996:94).

Although there was early French activity on the Mississippi River near the study area, there is no evidence of local French occupation. By the mid eighteenth century French travelers were using a small river east of the study area, which they called Bayou du Chein. There was some trading with local Indians along this stream, but little is known about it. The Chickasaws were the main claimants of the area by this time.

In 1775, J. F. D. Smyth, an English traveler on the Mississippi, noted a river he called the

Kiskinopa, which seems to have been Bayou du Chein (Williams 1930:30-31). The first systematic exploration of the area was undertaken in June 1785. This was done by a party consisting of Henry Rutherford, James Robertson, Edward Harris, and two assistants, who explored much of western Tennessee. They found a small Indian settlement near Bayou du Chein, which they called "Reelfoot" after their name for the headman of the community. In remarking on the local terrain they noted that there were no hills and little rolling land between the Mississippi River and the Reelfoot cliffs. Most was essentially first or second bottoms - ideal for agriculture but not for permanent settlement due to flooding.

The Rutherford survey attracted some interest in the study area, but the continued Chickasaw presence was enough to discourage white settlement into the nineteenth century. By this time New Madrid had been established on the west bank of the Mississippi. This community had been established by Colonel George Morgan, a prominent veteran of the American Revolution, on land he purchased from the Spanish (Penwick 1976:16-31). New Madrid became famous as a result of the massive earthquakes of 1811-1812. These earthquakes began in December 1811 and continued into January 1812. The land along the Reelfoot Cliffs sank from one to fifteen feet and up to twenty feet just east of the study area. The Mississippi River is said to have run backwards for 48 hours as it flooded the new great depression now known as Reelfoot Lake (Fuller 1912:9-11, Penwick 1976:43-81).

Andrew Jackson and Isaac Shelby negotiated the Jackson Purchase treaty of 1818, which extinguished the Chickasaw title to West Tennessee and opened the area to white settlement. The area was rapidly settled, with George W. L. Marr, a war of 1812 veteran and friend of Andrew Jackson, as a prominent local settler. He claimed Island No. 10 in the Mississippi in 1823 (Henley 1962:6-7) and the Meriwether family established Silver Top plantation just above the present location of Tiptonville in 1826. In 1856 William Tipton moved from Kentucky and built a house and store on the Mississippi River about a mile and a half below Silver Top plantation on land purchased from James Reeves. Tiptonville then grew up around his store (Goodspeed 1887: 734).

Tiptonville served as the shipping point and mercantile center for the surrounding area, where cotton was the main cash crop. Grain was initially ground with horse-powered mills, but a steam powered mill was established in the area in 1845. By 1860 the study area had developed a

typical slave labor based cotton economy. Although still part of Obion County, the county held separate courts west of Reelfoot Lake due to the difficulties of travel to the rest of the county.

At the beginning of the Civil War, the white residents of the Tiptonville area were nearly unanimous in support of the Confederacy and provided four companies of troops for the Confederate Army. Island No. 10 was regarded as crucial to the defense of the Mississippi valley and was the next point of defense between Memphis and the fortifications at Columbus, Kentucky. There were five batteries of artillery on the island, five batteries on the Tennessee bank, two earthwork forts at New Madrid, a battery of six heavy guns above the New Madrid bend, and a 16-gun floating battery moored at the island. The garrison approximated 7,000 troops. (Henley *et al*: 1962:4)

Early in 1862, Grant's capture of Forts Henry and Donelson opened both the Tennessee and Cumberland Rivers to the Union navy and outflanked the fortifications at Columbus. The guns from there were sent to strengthen the defenses at Island No. 10. On March 3, 1862, the earthwork forts on the Missouri side of the river were overcome from the rear, and only part of the garrisons and artillery could be evacuated to Tiptonville. (Melton 1979:8).

The next Union move, an attack by seven ironclads, was beaten off by the floating battery, so the Union forces under Pope awaited the arrival of their ten mortar rafts. Heavy rains and flooding complicated efforts by both sides and forced abandonment of the Confederate works above the island. Before daylight on April 6, 1862, two ironclads fought past the island to provide artillery cover for a Union crossing of the river from New Madrid. The Confederate Army was then forced to fall back from the island, but was trapped between Reelfoot Lake and the Mississippi River at Tiptonville, and surrendered April 7 (Melton 1979:46; Henley 1962:5-6). This essentially ended the war in the area, except in Tiptonville, as a known center of support for the Confederacy, was shelled by Union gunboats and completely burned out.

No effort was made to rebuild Tiptonville until 1865 when J. C. Harris and W. H. Shelton were instrumental in its restoration. In 1870 the state legislature created Lake County with Tiptonville as its county seat. Cotton remained the economic base of the area and Tiptonville was its main shipping point. A major ferry crossing was established by Robert Nall about a mile above Tiptonville.

In 1880, a fire destroyed much of Tiptonville, and then in 1891 the Mississippi River shifted its course about a quarter mile eastward and destroyed the rest of the original 1865 town area. By 1902, the river had moved another half mile eastward, and by 1905 began shifting back westward to its 1891 course. Another major fire in 1905 destroyed most of the town as it existed at that time. Arrival of the railroad in 1907 provided rail transport to Dyersburg, which was extended to Hickman, Kentucky by 1910. In 1885 the Keystone Lumber Company built a railroad from Reelfoot Lake to the river and began cutting large quantities of cypress, oak, and walnut. Their operations also included the removal of large quantities of sunken timber from Reelfoot Lake itself.

Even as late as the 1880's, most settlement in Lake County was restricted to the high ground from Tiptonville northward to the Mississippi River at Cates Landing. Goodspeed (1887:854) notes that the only approximation of a village in the county was the community of Cronanville. It then consisted of a store, cotton gin, and gristmill owned by James Cronan along with a few houses. Cronan had built a blacksmith shop and saloon there after the Civil War and continued operations there. The area seems to have been a center of activities in the area well before the Civil War; Emmet Lewis (personal communication) notes that the first burial in the Cronanville cemetery took place in 1838 and a Cumberland Presbyterian church was built near the northwest corner of the cemetery in 1852 or 1853. The 1890 Mississippi River Commission map of the area shows several structures in the area, some of which seem to have survived to appear on the 1965 aerial photographs used as the base for the Lake County soil map of 1969 (Brown *et al*: 1969).

Historic period sites noted in the area include late nineteenth century through twentieth century tenant occupation sites in Fulton County, Kentucky, and Lake County, Tennessee, recorded by Gerald Smith (1993), and sites near Grays Camp in Lake County, Tennessee, recorded by Guy Weaver (2008). The late nineteenth century through mid-twentieth century rural center of Cronanville was recorded by Gerald Smith (1993) and revisited by Smith and Smith (2013) in connection with the survey done for the Lake County Intermodal Industrial Park. The earliest local sites include the mid nineteenth century cemetery at Cronanville (Smith 1993) and also 40LK121 (Smith and Smith 2013: 11-12) containing mid nineteenth century residential scatter in the eastern edge of the industrial park tract. This area probably represents the western

edge of a site centered to the rim fields outside the present survey areas and too densely covered in standing crops for effective investigation.

The industrial park survey of 2013 covered the industrial park under bare ground conditions and included investigation of a late nineteenth through late twentieth century farmstead noted in 1993 as an active farm headquarters. By 2013 it had been completely demolished and the remains were hauled away, leaving a clean field in its place. The northeastern margin of the tract included scattered mid-20th century debris from a series of structures noted on the 1940's and 1950's topographic maps, but there were no definable concentrations and no indication of pre 1935 occupation. The rest of the area was devoid of evidence of human occupation. Whatever additional settlement activity was associated with Cronanville, it was apparently as scattered farmsteads such as 40LK121 whose apparent occupation span is within the use period of the Cronanville cemetery. Adjacent settlement in the area to the northeast of the industrial park tract is indicated on the late nineteenth century Mississippi River Commission maps as present on Mississippi River natural levee areas.

Materials recovered from 40LK121 range in approximate date from about 1840 to 1875. These include:

Aqua blown-in-mold rectilinear bottle fragments with beveled corners	2
Aqua paneled apothecary bottle fragment with lettered panel	1
Very dark green bottle glass, 1 applied/turned lip and 1 embossed rectilinear mold blown fragment	2
Very dark amber bottle glass: rectilinear base, blown in snap mold	1
Plain whiteware	4
Blue sponge decorated whiteware	1
Blue edge painted/embossed whiteware	1
Botanic embossed whiteware	1
Salt glazed exterior/reddish brown interior stoneware	1
Salt glazed exterior/black interior glazed stoneware	1
Dark reddish brown glazed stoneware	1
Cast iron fragments, approximately 1/8 inch thick, slightly curved	2

The "very dark" glass semiopaque items fall within the "black glass" category generally used for wine, liquor, and a wide variety other items considered to need protection from sunlight, commonly used from at least the 1500's into the mid 1800's, and still in use for some goods. The applied/turned lip finish is noted by Weaver (1993: 197) as having been in use from the late 1820's into the early 1870's when improved lipping tools came into general use. Blue edge painted/embossed whiteware appeared by the 1780's and continued into the 1850's; the specimen from 40LK121 appears to be relatively late in the sequence. The cast iron fragments could easily have come from simple flared-wall skillet, kettle, or Dutch oven-like cooking vessels.

FIELD METHODS

The railroad right of way was all under cultivation except for a paved road crossing it at a right angle, with good visibility under the standing crops. A drainage ditch forms the eastern edge of the central third of the right of way, with lateral drainage ditches entering the main ditch from the adjacent fields and the county road. The southern three quarters of the right of way is in swampy Mississippi river channel fill soils, primarily Bowdre silty clay, Iberia silt loam, Iberia silty clay loam, and Sharkey clay. The northern quarter is Adler silt loam on the backslope of a Mississippi River natural levee. There were no sites recorded in the survey area in the state site files and no structures visible on extant aerial photographs or topographic maps.

Field surveys were carried out along the main line route as longitudinal pedestrian transects covering the entire route at 30 foot intervals, proceeding outbound from the local parking spot outbound along one side of the right of way and returning along the other half. The fan shaped area at the connection with the main line was covered at approximate 50 foot intervals in parallel pedestrian transects. Lateral drain banks were examined for evidence of buried cultural horizons, with such exposures present at irregular intervals rarely exceeding 200 feet.

There were no cultural remains found during the survey. Examination of the lateral drains across the right of way into main ditches revealed only sterile channel fill without buried soil horizons. Soil visibility was excellent over most of the area and soil disturbances consisted of plowing fields for farming and excavation of drainage ways to prevent ponding of water in the fields, both activities that tend to expose rather than conceal sites. The right of way over most of

the area passes through channel fill deposits which formed in relict lake/swamp bottoms and thus should not have been suitable for human occupation. This would also be consistent with local flood plain settlement patterns which emphasize settlement on natural levee crests adjacent to rather than within lacustrine habitats.

Ditch profile logs are as follow:

1. South edge of industrial park; Plat Sheet 5
0 - 16 cm PZ 10YR5/3 sandy silt loam
16 - 39 cm 10YR4/3 silt loam
2. Lateral ditch about 3400 feet south of industrial park; Plat Sheet 4
0 - 112 cm 10YR4/2 clay
3. TN SR 212 south road ditch; Plat Sheet 4
0 - 20 cm road fill
20 - 67 cm 10YR4/2 silty clay
67 - 126 cm 10YR3/2 silty to sandy loam
4. Lateral ditch about 1600 feet south of SR212; Plat Sheet 3
0 - 37 cm 10YR3/1 silty clay
37 - 43 cm 10YR4/1 clay
5. Lateral ditch about 1400 feet south of location 4; Plat Sheet 3
0 - 41 cm 10YR3/1 clay
6. North side of main ditch at corner, upper part of 3 to 4 meter deep ditch with vertical sides; Plat Sheet 2
0 - 90+ cm 10YR4/1 clay
7. West side east property line ditch, about 1300 feet S of corner in main ditch; Plat Sheet 2
0 - 115+ cm 10YR4/1 clay
8. Edge of current railroad ditch; Plat Sheet 1
0 - 41 cm 10YR3/1 sandy to silty loam

RESULTS AND RECOMMENDATIONS

No cultural remains were recorded or reported. Therefore, no further investigation of the project area is recommended.

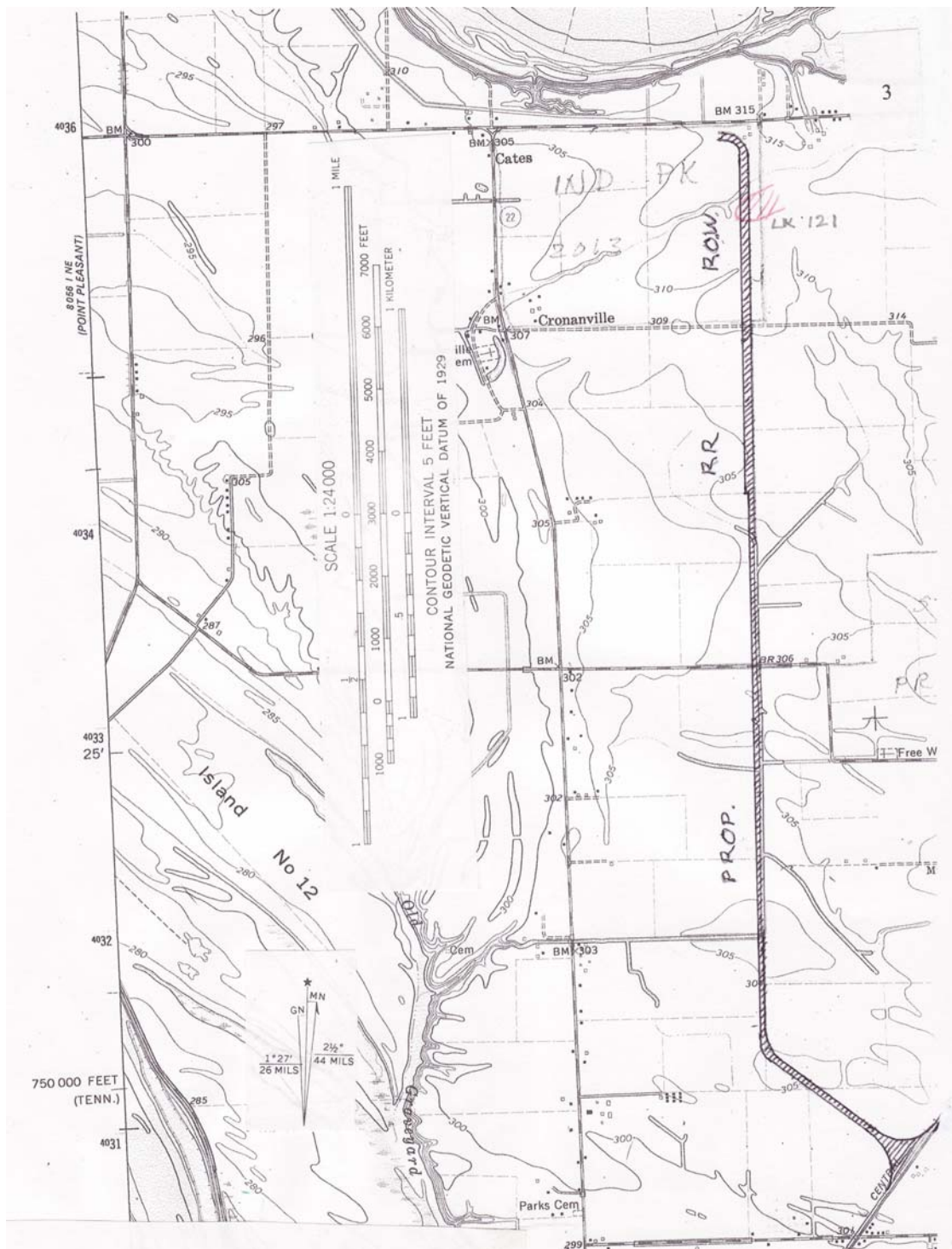


Figure 2. Project area location showing railroad right of way.



Figure 3. View southward along right of way from southeastern corner of industrial park.



Figure 4. View eastward across right of way toward Northwest Correctional Center.

Right of way is marked by tree line at eastern edge of cornfield and dry grass strip along eastern edge of soybean field.



Figure 5. View northwest along right of way from main line railroad.

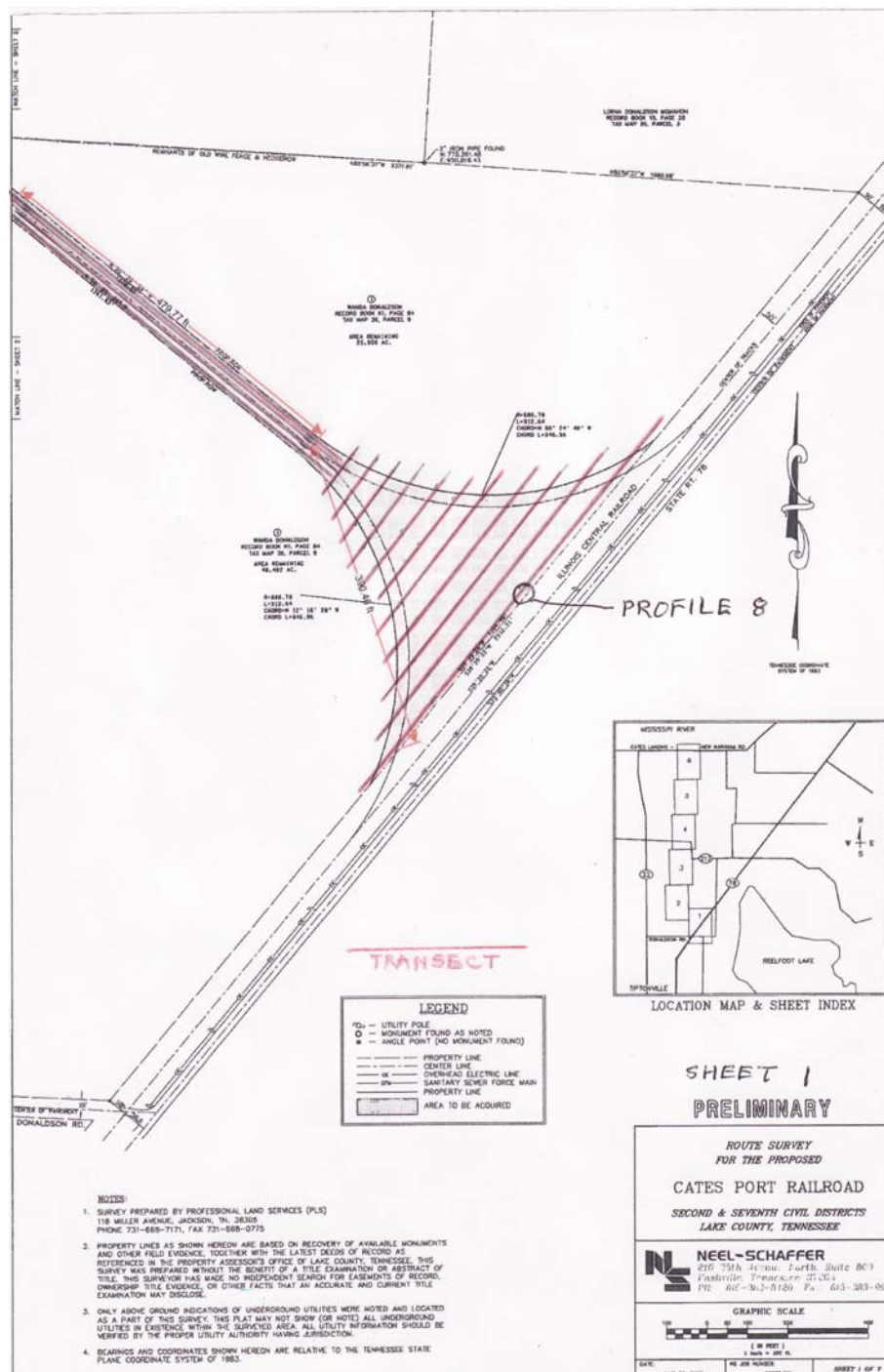


Figure 6. Transect locations, Sheet 1 of 6.



Figure 8. Transect locations, Sheet 3 of 6.

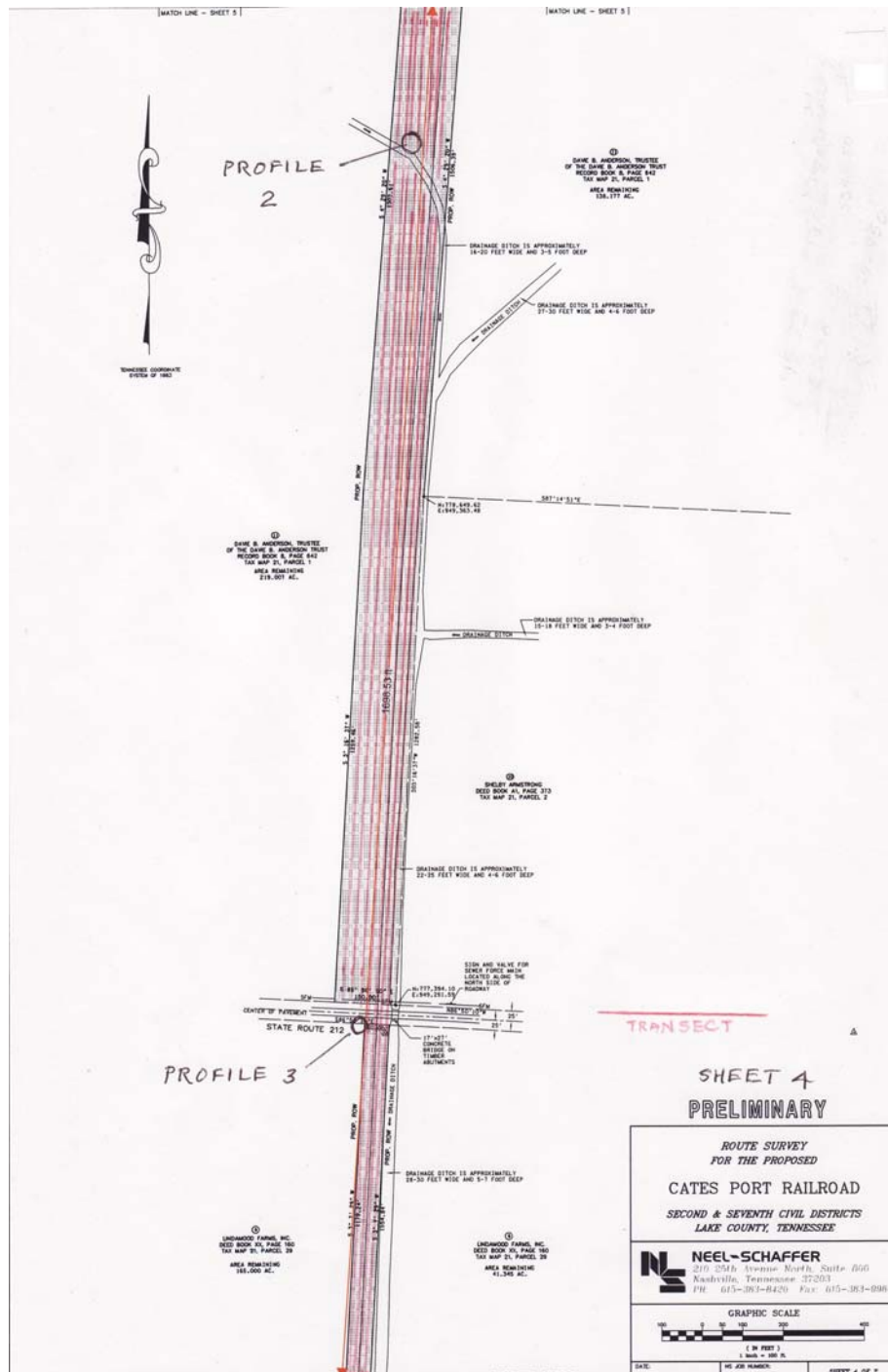


Figure 9. Transect locations, Sheet 4 of 6.

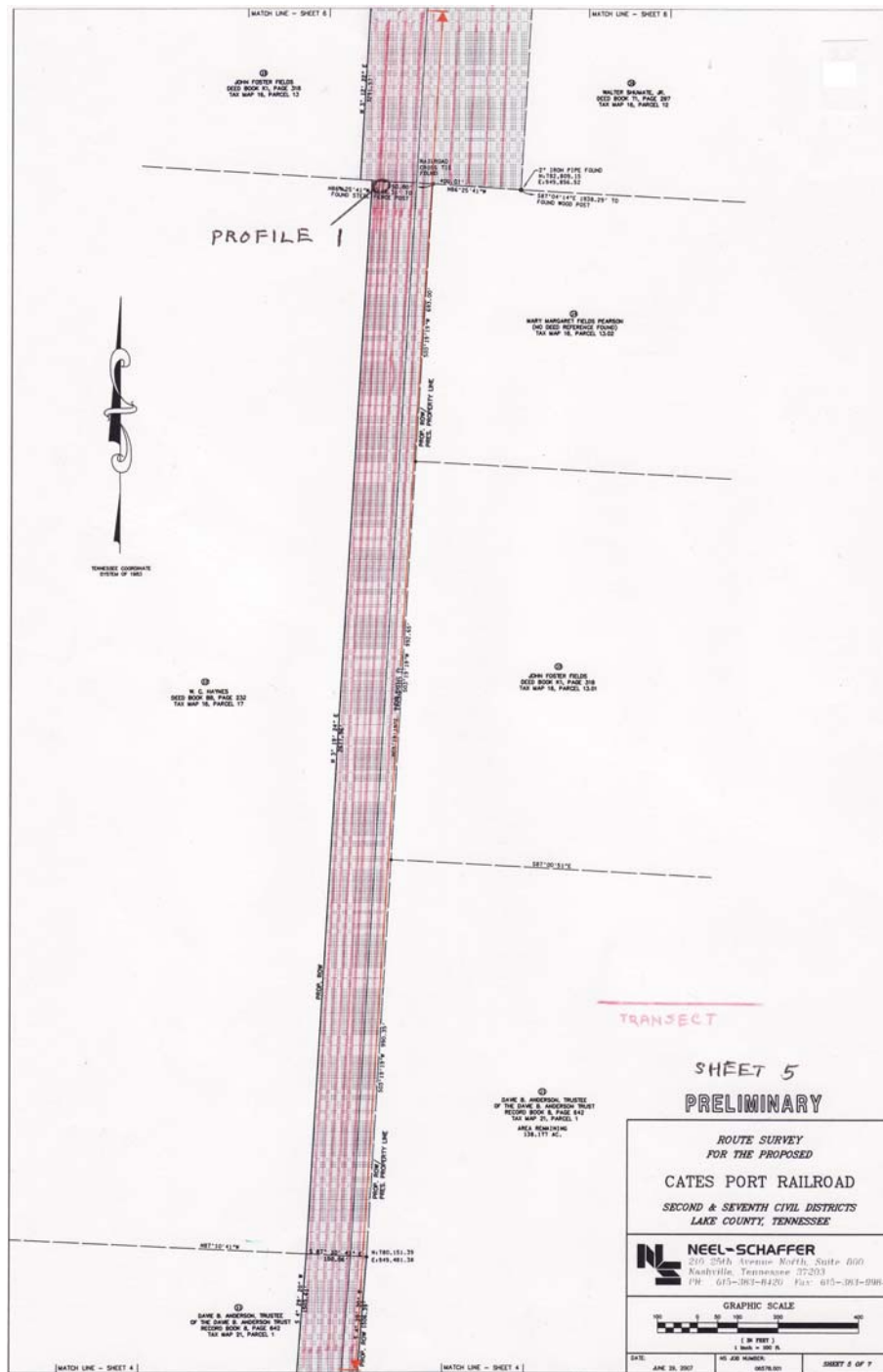


Figure 10. Transect locations, Sheet 5 of 6.

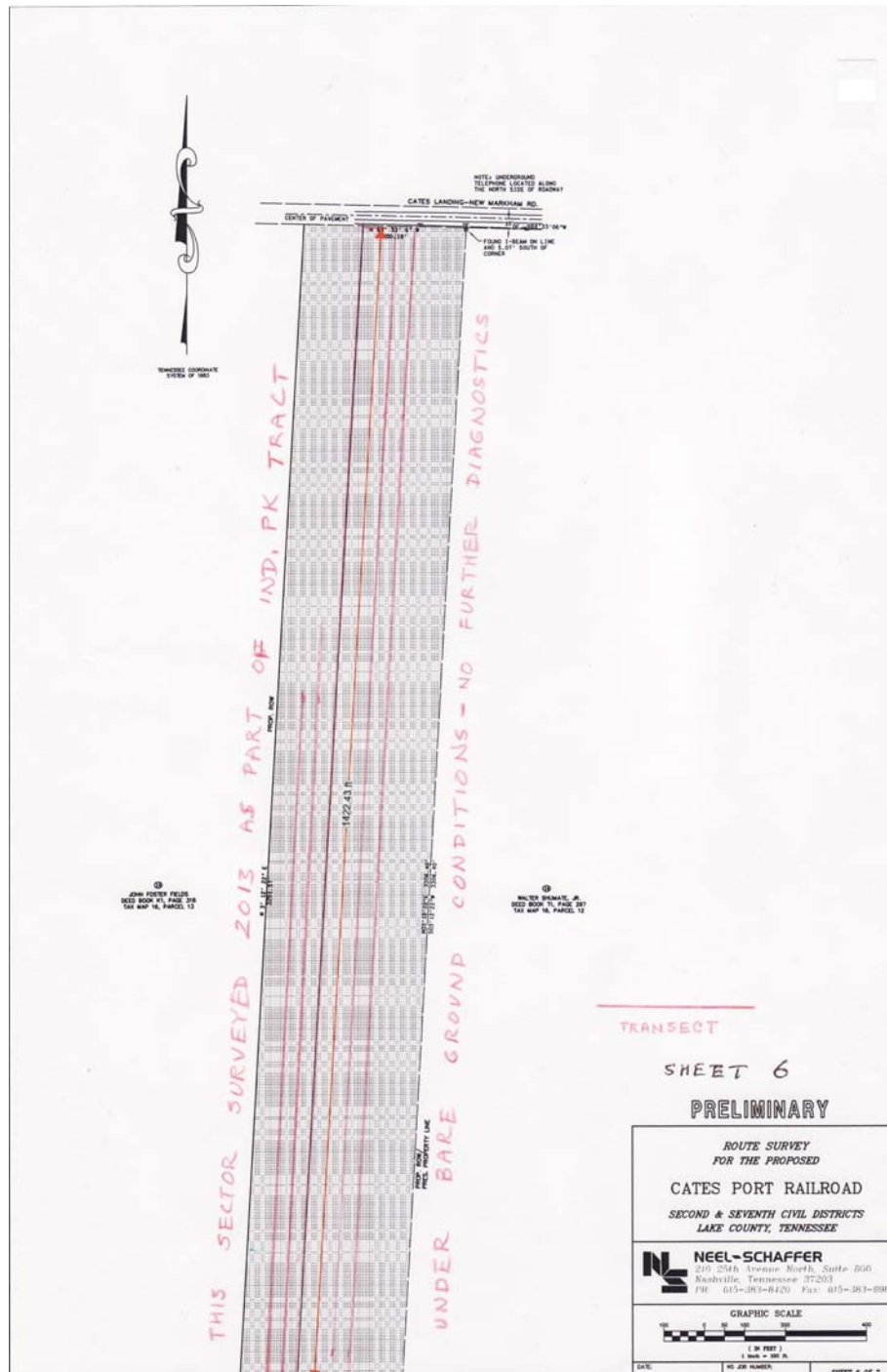


Figure 11. Transect locations, Sheet 6 of 6.

REFERENCES CITED

- Brown, William T.; W. C. Jackson; G. L. Keathley; and C. I. Moore, 1969. *Soil Survey of Lake County, Tennessee*. U. S. Department of Agriculture Soil Conservation Service. Washington, D.C.
- Fuller, Myron L., 1912. *The New Madrid Earthquake*. U. S. Department of the Interior Bulletin 392.
- Garland, Elizabeth B., 1992. *The Obion Site: An Early Mississippian Center in Western Tennessee*. Mississippi State University, Cobb Institute of Archaeology Report of Investigations No. 7. Starkville.
- Goodspeed, W., 1887. *History of Tennessee*. Goodspeed Publishing Co., Nashville, Tennessee.
- Mainfort, Robert C., Jr., 1996. The Reelfoot Lake Basin, Kentucky and Tennessee. In: *Prehistory of the Central Mississippi Valley*, pp 77-96, edited by Charles H. McNutt. University of Alabama Press, Tuscaloosa.
- McNutt, Charles H. (ed), 1996. *Prehistory of the Central Mississippi Valley*. University of Alabama Press, Tuscaloosa.
- Melton, Maurice, 1979. The Struggle for Island No. 10. *Civil War Times Illustrated* 17(1): 4-46.
- Morse, Dan F., and Phyllis A. Morse, 1983. *Archaeology of the Central Mississippi Valley*. Academic Press, San Diego.
- Palmer, N. Nicole, and Guy G. Weaver, 2008. *Phase I Archaeological Assessment of a Proposed 50 Acre Tract on Donnell Road for Wetland Mitigation, Near Grays Camp on Reelfoot Lake, Lake County, Tennessee*. Weaver & Associates, LLC, for Tennessee Department of Transportation, Nashville.
- Peacock, Blanche G., 1977. A Note on Lake County. *Tennessee Historical Quarterly* 36(4): 537-538.
- Penwick, James, 1976. *The New Madrid Earthquake of 1811-1812*. University of Missouri Press, Columbia.
- Phillips, Philip, 1970. *Archaeological Survey in the Lower Yazoo Basin, Mississippi, 1949-1955*. Papers of the Peabody Museum of Archaeology and Ethnology 60. Harvard University, Cambridge, MA.

- Phillips, Philip; James A. Ford, and James B. Griffin, 1951. *Archaeological Survey in the Lower Mississippi Alluvial Valley, 1940-1947*. Papers of the Peabody Museum of Archaeology and Ethnology 25. Harvard University, Cambridge, MA.
- Saucier, Roger T., 1994. *Quaternary Geology of the Lower Mississippi Valley*. Arkansas Archaeological Survey Research Series 6. Fayetteville.
- Sease, E. C.; R. L. Flowers; W. C. Mangrum; and R. K. Moore, 1970. *Soil Survey of Shelby County, Tennessee*. United States Department of Agriculture, Soil Conservation Service. Washington, D. C.
- Shelford, Victor E., 1963. *The Ecology of North America* University of Illinois Press, Urbana.
- Smith, Gerald P., 1979. *Archaeological Surveys in the Obion-Forked deer and Reelfoot-Indian Creek Drainages, 1969 Through Early 1975*. Memphis State University Anthropological Research Center Occasional Papers No. 9.
- Smith, Gerald P., 1990. The Walls Phase and Its Neighbors. In: *Towns and Temples Along the Mississippi*, pp 135-169. Edited by David H. Dye and Cheryl Anne Cox. University of Alabama Press, Tuscaloosa.
- Smith, Gerald P., 1993. *Phase I Archaeological Surveys of Three Tracts in Tennessee and Kentucky*. University of Memphis, for Tennessee Valley Authority.
- Smith, Gerald P., 1996. The Mississippi River Drainage of Western Tennessee. In: *Prehistory of the Central Mississippi Valley*, pp 97-118, edited by Charles H. McNutt. University of Alabama Press, Tuscaloosa.
- Smith, Gerald P., and Nancy C. Smith, 2013. *Phase I Archaeological Survey of the Intermodal Regional Industrial Park Tract at Cates Landing, Lake County, Tennessee*. For Reelfoot Area Chamber of Commerce, Tiptonville, Tennessee.
- South, Stanley, 1977. *Method and Theory in Historical Archaeology*. Academic Press, New York.
- Weaver, Guy G., 1993. *The Gowan Farmstead Archaeological Data Recovery at Site 40DV401 (Area D), Davidson County, Tennessee, Final Report*. Garrow & Associates, Inc., Memphis. For the Nashville Airport Authority and Tennessee Department of Conservation, Division of Archaeology.
- Williams, Samuel Cole, 1930. *Beginnings of West Tennessee: In the Land of the Chickasaws*.