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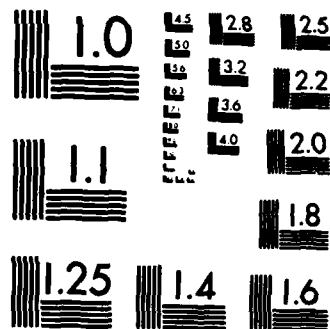
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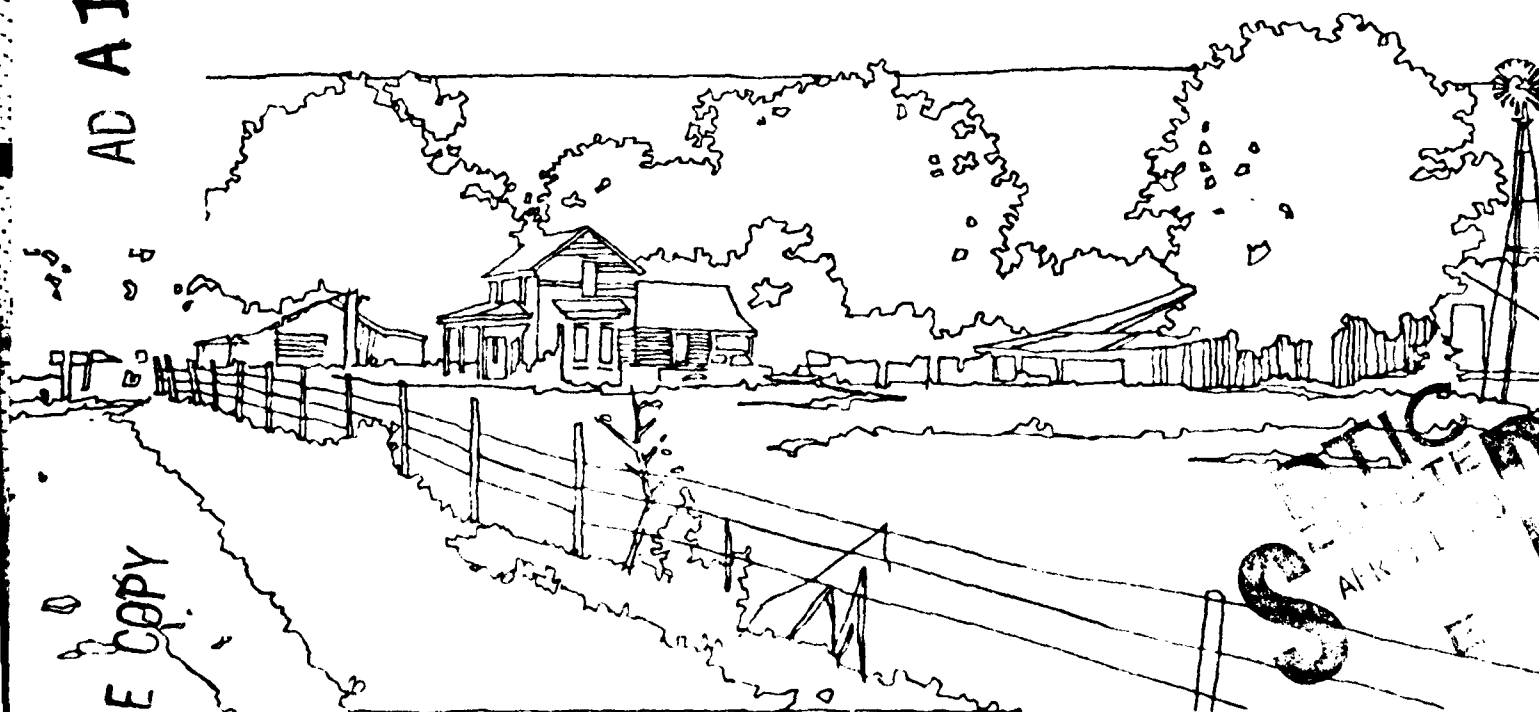


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Historical and Architectural Reconnaissance KANSAS and SMOKY HILL RIVERS BANK STABILIZATION STUDY, KANSAS

Principal Investigator
R. Gail White

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Fischer Stein Associates
Carbondale Illinois
Cultural Resources Management
Studies No. 49

U.S. Army Corps of Engineers
Kansas City District
Kansas City, Missouri
DACW41-80-M-0218

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HISTORICAL AND ARCHITECTURAL RECONNAISSANCE

KANSAS AND SMOKY HILL RIVERS
BANK STABILIZATION STUDY, KANSAS

R. Gail White, Principal Investigator

Prepared For
U.S. Army Corps of Engineers
Kansas City District
Contract No. DACW41-80-M-0218

Fischer-Stein Associates, Inc.
Carbondale, Illinois

January 1981

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ABSTRACT

A reconnaissance level investigation of historical and architectural resources in eight study areas along the Kansas and Smoky Hill rivers, Kansas is presented. The study extends 1,000 feet from the shoreline in each of eight areas generally between Linwood and Abilene, Kansas, and encompasses approximately 3,900 acres.

The field reconnaissance portion of the study identifies 1 potential cemetery, and 21 sites containing architectural features. Recommendations are made for further investigation of the cemetery site, and documentation of selected architectural features for inclusion in the Kansas Statewide Historic Inventory. No sites were identified which appear to be potentially eligible for inclusion in the National Register of Historic Places.

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ACKNOWLEDGEMENTS

Appreciation is expressed to the Kansas State Historical Society for use of their office and library in conducting the literature search for this study. Numerous individuals and local agencies throughout the study area contributed information and assistance in identifying sites and historical sources for specific study areas. Thanks are also extended to the Kansas City District Corps of Engineers for their aid in coordinating this study.

The cover designs and the illustration of the Pawnee earth lodge in this report were prepared by Jerry Otterson. The drawing for the front cover is based on a farmstead located within the study area in rural Douglas County. The building types and farmstead composition are typical of rural architectural forms of the study area. The back cover is a conjectural illustration of a permanent village of earth lodges once common to horticulturalist Indians which inhabited east-central Kansas prior to settlement and development of the state by Europeans and Anglo-Americans in the nineteenth century.

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GLOSSARY

Historical Terms

Homestead Act of 1862 - Legislation which provided for grants of 160 acres of land to any person who was the head of a family or 21 years old and who was a citizen or declared his intent to become one. A homesteader was required to pay a \$10 filing fee, live on the land for five years, cultivate it and improve it. The Timber Culture Act of 1873 supplemented the Homestead Act, offering 160 acres to anyone who would plant 40 acres in trees and maintain them for 10 years (Richmond 1977:127).

Kansas-Nebraska Act of 1854 - Legislation which repealed the Missouri Compromise of 1820, created the two territories of Kansas and Nebraska divided by the 40th parallel, and introduced the idea of "popular sovereignty" allowing resident voters to decide for themselves whether or not slavery would be allowed in the territories (Richmond 1977:61-2).

Missouri Compromise of 1820 - Legislation which provided for the admission of Missouri as a slave holding state, but prohibited slavery north of 36° 30' in the rest of the Louisiana Purchase (Richmond 1977:61).

Pre-emption Act of 1841 - Legislation which allowed settlers on the land to purchase up to 160 acres at \$1.25 per acre prior to the time of a public auction for the region (Richmond 1977:76).

Architectural Terms*

Batten door - A door made of boards held together with battens nailed cross-wise.

Broken joints - Joints made so that they are not aligned with adjacent joints above and below.

Bungalow - A single-story house characterized by a rectangular plan form and gently pitched broad gables with the lower gable covering an open or screened porch and the larger covering the main portion of the house. Porch piers are often battered and wood shingles, stucco, brick or wood siding are used for exterior finish materials. The bungalow tradition has its roots in India where the Indian government built low houses surrounded by verandas as rest houses along the road. The bungalow tradition was popular in the United States between approximately 1890 and 1940, peaking before the First World War (Blumenson 1978:71; Lancaster 1958:29; Whiffen 1969:217-21).

Classical Revival - A revival of or return to the principles of Greek or Roman art and architecture. Buildings constructed in the United States during the period 1895-1920 using the Classical Greek or Roman styles tended to be notable for their symmetrical arrangements, solid and weighty character and use of pretentious figural and ornamental motifs. Walls tend to be of pale, smooth surfaced marble, limestone, or sandstone.

Dugout - A temporary shelter made by digging out a small room into the side of a hill or ravine, and building a front wall across and facing into the ravine of square-cut turf, log or frame construction. A roof structure was built of poles or logs covered with brush, a layer of prairie grass and final layer of dirt.

Italianate - A style of architecture popular in the United States from approximately 1840 to 1880. The Italianate style, popular for residential architecture, is generally rectangular or squarish in form, two or three stories in height, has wide eaves supported by large brackets, tall thin first floor windows, and a low-pitch hip roof topped with a cupola. Central one-bay or long porches, bold detailing and rusticated quoins are also common features of the style.

Italian Villa - A style of architecture popular in the United States from approximately 1830 to 1880. Buildings in this style are characterized by an asymmetrical composition, a two-story "L" or "T" shaped floor plan, with a tall tower, a gently pitched roof with projecting eaves, groupings of windows into threes or small arcades, and porches placed between the tower and house or at corners. Ornamentation is generally exuberant and the building has a picturesque quality.

Log house construction - a means of construction using logs as structural elements. Horizontal log construction traditions which were found on the Kansas frontier reflected the influence of German and Swedish log building techniques. The Swedish type is generally characterized by unhewn logs with V-shaped corner notches and projecting ends. The German type is generally characterized by hewn logs and notched, smooth-cut corners. The walls were sealed by inserting chinking between the logs and daubing the inside and outside with mud or lime plaster.

Log house types:

Single-pen - A single room structure having a generally square plan form, one story or one story plus attic height, few windows or doors, and a gable roof.

Double-pen - A two room structure, generally rectangular in plan form and one story or one story plus attic height. The double-pen house frequently began as a single-pen cabin which was later expanded by adding an adjacent second room.

Dog trot - Often referred to as the "southern double log house," consists of two rooms approximately equal in size, sharing a common gable roof but separated by a central open aisle or "dog trot." The dog trot was frequently left unfloored and the stairway to the loft was located there.

Puncheon - A slab frame of log or split timbers, roughly dressed used with the face side up for flooring.

Queen Anne Style - A style of architecture popular in the United States between approximately 1880 and 1900. The style is characterized by asymmetrical compositions and a great variety of forms, textures, materials

and colors resulting in an exuberant effect. Towers, turrets, tall chimneys, bays, encircling verandas, and textured wall surfaces are trademarks of the style.

Quoin - A corner of stone or other material toothed into the walls making the angle.

Renaissance Revival - Revival of the Renaissance architectural style. In the United States, the Renaissance Revival manifested itself during the mid-19th through early 20th centuries. Characteristics of the style are arched openings, rusticated masonry laid with deep joints emphasizing strong horizontal lines and a massive quality. Cornices tend to be finely detailed with crisp elements.

Rubble construction - A wall of stone masonry construction using rough, courseless and undressed stone.

Second Empire - A style of architecture popular in the United States from approximately 1860 to 1890. Buildings in this style are generally two- or three-story symmetrical square blocks with a projecting central pavilion. The mansard roof is the distinguishing feature of the style; roofing is generally multi-colored slates or tin plates. Classical details such as moldings, cornices, quoins and belt courses are frequently dramatized by different textures and colored materials.

Shake construction - A type of wood frame construction; "shake" cabins erected as temporary shelters in Kansas were built by setting corner posts into the ground and nailing rough hewn boards or, "shakes," split from trunks of trees to them.

Sod construction - A construction type using structural units of sod in a manner similar to standard stone masonry. Sod units were made by turning furrows of turf of an even width and depth, and cutting them into sections approximately three feet in length. The sod units thus formed could be laid up much like or stone masonry to form a self supporting wall. Roofs were generally of frame construction covered with prairie grass and finally with a layer of sod. Sod houses, or "sod-dies," as well as corrals, henhouses, cribs, pig pens and windbreakers were commonly found in Kansas in the mid through late 19th century. Sod construction became very common in western Kansas and was utilized as late as 1938.

Wattle-and-daub - A method of construction consisting of branches or thin laths (wattles) roughly plastered over with mud or clay (daub).

*Definitions derived from Blumenson 1977; Fleming et. al. 1972; Lancaster 1958; Richmond 1977; Rifkind 1980; Siegele 1946; Ware et. al. 1945; and Whiffen 1969.

INTRODUCTION

General

This study was prepared for the Department of the Army, Corps of Engineers, Kansas City District under purchase order number DACW41-80-M-0218. The government is currently engaged in a study to develop plans to correct problems associated with bank erosion and channel migration on the Kansas and Smoky Hill Rivers, Kansas.

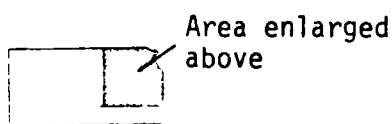
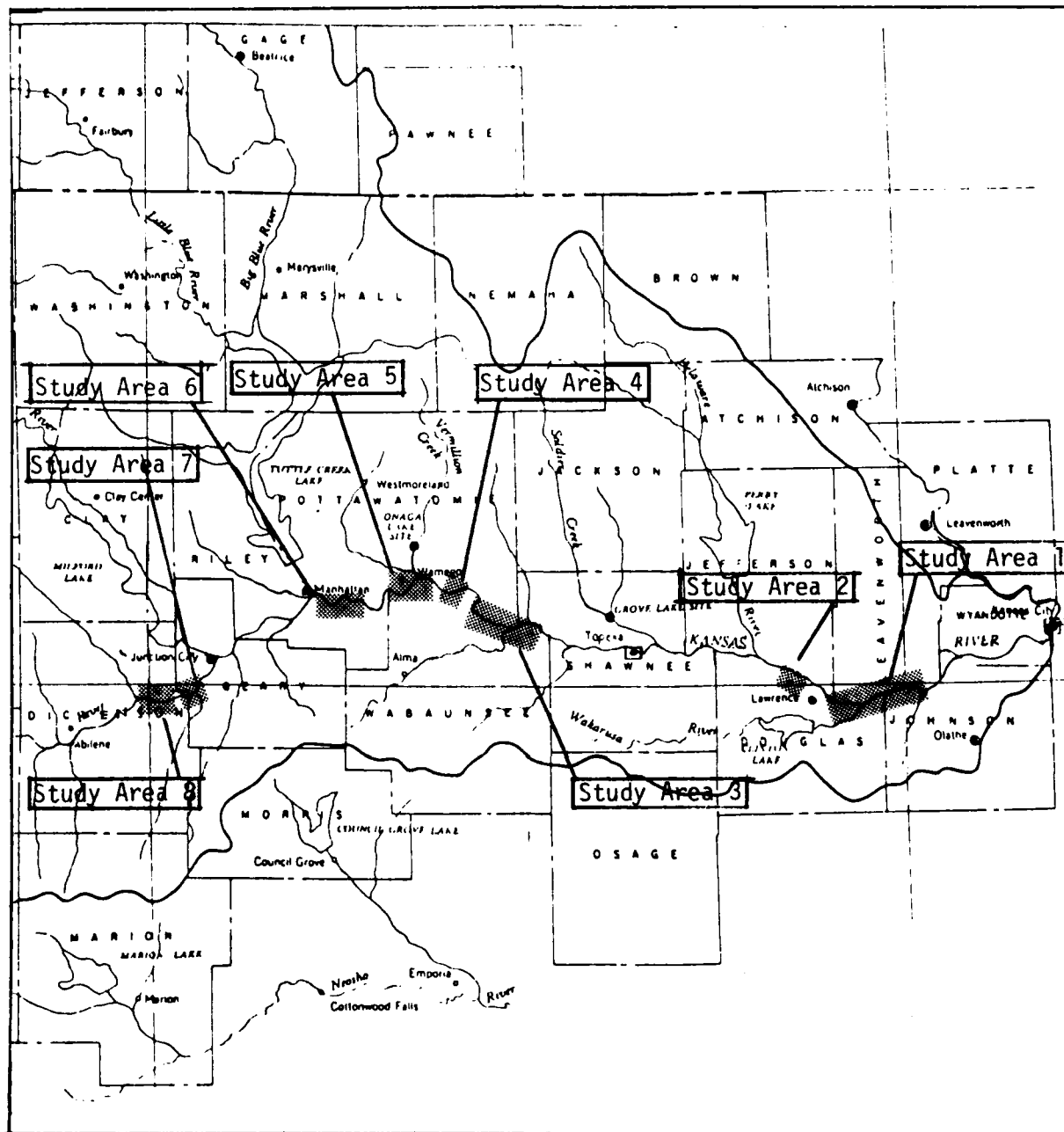
The work included in this study is required by the National Environmental Policy Act of 1969 (PL 91-190) and the National Historic Preservation Act of 1966 (PL 89-655). Funding is provided under Public Law 86-523 as amended by Public Law 93-291.

Study Area

The study area consists of eight (8) non-contiguous parcels of land located along the Kansas and Smoky Hill Rivers, generally between Kansas City and Abilene, Kansas (Map 1). The study area includes approximately 3900 acres, totals approximately 32 miles in length and is limited to an area 1000 feet from the bank in the erosion areas (Map 1).

Scope of Work

The scope of work for this study consists of a historical and architectural field reconnaissance of 15 percent (approximately 580 acres) of the zones identified in Map 1. The purpose of the reconnaissance was to obtain preliminary, predictive data on the distribution and nature of historical and architectural sites, to provide a general impression of the value of the sites, and the probable impact of future plans on the sites.



MAP 1

Kansas and Smoky Hill Rivers
Bank Stabilization Study

STUDY AREA MAP

STUDY APPROACH

Few cultural resource studies of the study area have been conducted. A previously completed study (White 1979) of known historic and architectural resources along the Kansas River and its major tributaries did not identify any resources or sites within the area of this study. Because no systematic field investigations have been completed for the study area, the reconnaissance portion of this study was expected to provide a preliminary data base for generally assessing the nature of the historic and architectural resources located in the study area.

Methods

The previously completed literature and records search for known cultural resources along the Kansas River (White 1979) was updated for the erosion impacted areas for this study. Historic and architectural files of the Kansas Statewide Historic Inventory were reviewed. State, county and local histories were reviewed for historical background information. Representatives of county historical societies and local residents were consulted for their knowledge of historic resources in the study area.

A field reconnaissance was conducted in the eight designated areas (Appendix A). Each area was examined in order to obtain preliminary, predictive data on the distribution and nature of historical and architectural sites, to provide a general impression of the value of the sites, and the probable impact of future plans on the site.

Sites and features identified during the reconnaissance were recorded using standard data forms (Appendix C, submitted separately), photographed, and locations mapped on U.S.G.S. Topographic and Corps of Engineers study maps.

Site numbers were assigned to each site identified during the reconnaissance. Numbers are consistent throughout the report, data forms and maps.

SETTING

Physiography

Two major physiographic provinces occupy Kansas. The Great Plains province occupies the western two-thirds of the state, while the Central Lowland province occupies the eastern third. The Flint Hills subprovince is generally considered the division between these two major provinces. A westward extension of the Ozark Plateau is located in extreme southeast Kansas. The area considered in this study lies within the Central Lowland province and reaches almost to the western boundary of this province.

The Central Lowlands are subdivided into the Osage Plains in the south and the Dissected Till Plains (Glaciated Region) in the north, the Kansas River being the dividing line. The Osage Plains are further subdivided into the Cherokee Lowlands, the Chautauqua Hills, the Osage Cuestas, and the Flint Hills (Zornow 1957:6). Study areas 1, 2, 3 and 4 are situated along the interface of the Dissected Till Plains and Osage Cuestas subdivisions, while study areas 5, 6, 7 and 8 are located in the Flint Hills subdivision.

The Flint Hills subdivision extends north and south across Kansas from Nebraska to the Oklahoma border and beyond. The maximum width of the Flint Hills region is approximately 60 miles. The eastern border of the Flint Hills is a rocky escarpment several hundred feet high, and is the most rugged surface feature in the state. The escarpment is of resistant, flinty limestone. The landform of the Flint Hills is gently rolling, with occasional sink holes. The Flint Hills subprovince is considered the finest grazing area in Kansas. Less than half the land in this subprovince is suitable for cultivation, because of thin soil and steep slopes along the streams (Self 1979:44-5).

The Osage Cuestas subprovince is generally the area lying south of the Kansas River, east of the Flint Hills and northwest of the Cherokee Plain. This area is characterized by irregular rows of east-facing cuestas. The cuestas are formed by the differential erosion of alternating hard and soft layers of limestone. Relief ranges from 50 to more than 200 feet from the lowland floor to the crest of the escarpment. The more rugged crests of the cuestas are used for pasture while the harder, less elevated slopes are suitable for cultivation. Valleys of major streams are wide, ranging from one to several miles in width, and being 100 to 200 feet below the cuesta peaks (Self 1979:93). The Pennsylvanian Surface rock strata of the Osage Cuestas contain stone of building quality, and use in manufacturing cement.

The Dissected Till Plains (also known as the Glaciated Region or Kansas Drift Plain) are located in northeast Kansas. They are bordered on the south by the Kansas River Valley, and on the west by the Flint Hills. This area was once overlain by a glacier which extended south of the Kansas River in places, and overlapped the Flint Hills on the west. The topography of this region is gently undulating. Where large streams occur, valleys tend to be broad and open, and well suited to cultivation. Along the Missouri River, local relief ranges from 50 to 300 feet and is too rugged for cultivation.

Vegetation

Kansas lies within the prairie grassland province. Prior to the settlement of Kansas, vast expanses of prairie grass were found here. Deciduous trees were present along streams and along the shaded sides of ridges in eastern Kansas. The Flint Hills generally were the western limit of these wooded environments, though broadleaf trees were found along streams as far west as the one hundredth meridian. West of this point, trees have generally been planted as windbreaks. Even in eastern Kansas, timber resources were limited to approximately 25% of the total land area.

Hardwood trees in eastern Kansas were the source of fuel and building materials for early settlers to the area. Trees in Kansas are mainly of the deciduous type. Common trees in Kansas include cottonwood, elm, white oak, hackberry, sycamore, black walnut, ash, red-oak, and pecan (Self 1978: 66-70).

Soils

With the exception of extreme southeastern Kansas, soils in the state are classed under the order known as Mollisols. Generally considered the most productive agricultural soils, they tend to be used for food production wherever they are found, and are well known for their production of corn, wheat, sorghum and other cereal grains. Kansas soils fall into the Ustoll and Udoll suborders.

The Udolls cover approximately the eastern one-fourth of the state and include portions of Johnson, Leavenworth, Douglas, Jefferson, Shawnee and Wabaunsee counties. The Typic Udoll suborder soils were formed from glacial till deposits along with some thick deposits of loess. Soils range from shallow to deep, and include black and very dark-brown silt loams, clay loams, and silty clay loams. Native vegetation of these soils was mainly tall grasses with forest growth along streams and the shaded sides of many hills. The natural fertility of these soils and the favorable climate of the area normally results in the highest crop production of all soils in Kansas. Principal crops in the Typic Udoll area are grain sorghum, corn, hay, wheat and soybeans. General livestock raising is also an important element of the crop-livestock economy (Self 1979:78-79).

The Udic Ustoll suborder soils occupy approximately one-fourth of east-central and central Kansas. The Flint Hills and a portion of the Smoky Hills physiographic provinces are contained within the Ustoll order soils. A portion of the Wabaunsee County, and all of Riley, Geary and Dickinson counties are part of the Udic Ustoll soil suborder. Soils of this suborder range from shallow to deep, and are dark grayish brown and very dark grayish-brown silty loams, silty clay loams and silty clays. Parent material is windblown loess on the north, thinning and almost disappearing southward. Over much of the Flint Hills, soil is thin with only a few inches above bedrock on sloping land. Native vegetation of these soils consisted of mixed tall and short grasses in the western portion and predominantly tall grasses on the east. While the soils are less fertile than those further west, the more reliable precipitation generally gives higher crop yields. Principal crops are wheat, grain and forage sorghum, corn and hay. Raising general

livestock, including cattle, hogs, sheep and poultry is important in this area. Range livestock pasture grasses cover more than 60 percent of these soils in the Flint Hills region (Self 1977:77-8).

HISTORICAL CONTEXT

The exploitation and development of natural resources of Kansas is as old as the history of the area. Since the earliest inhabitation by Indians, the potential significance of Kansas and its resources has been recognized. The Indian groups which occupied Kansas during the post-contact period recognized the value of food resources in Kansas. The Pawnee and Wichita Indians were horticulturalists (Davis 1976:13-14). The Pawnee generally inhabited an area between the Platte River, southward into the valleys of the Republican, Solomon and Smoky Hill Rivers. The Kansa and Osage Indians occupied extreme eastern Kansas. Other tribes, including the Comanche and Apache, were hunters who roamed western Kansas, Oklahoma, northern Texas and eastern Colorado (Wedel 1957:24-5).

Exploration of Kansas began as early as the mid-16th century with Coronado's expedition to find the Seven Cities of Cibola. By the early 17th century, Spain, and later France developed an interest in the area. Spain's interest was mainly that of finding gold, while France sought not only precious metal, but furbearing animals. During the 18th century, a number of French expeditions were sent into Kansas, with Bourgmond's expedition travelling far up the Kansas, Smoky Hill and Saline Rivers in 1774 (Villiers 1925:105-113). Trading posts were established early in Kansas. The Chouteau Brothers had a trading post near present day Bonner Springs in Wyandotte County. The post was reestablished in 1827 near Turner, Kansas after the earlier one was destroyed by flood (Harrington 1935:11, 24). No information was located which would identify sites of trading posts within the area of this study.

After the United States acquired the Louisiana Territory from France in 1803, subsequent expeditions by Lewis and Clark, Pike, Long and Fowler during the first quarter of the 19th century opened the west to the United States. However, the notion that the area was the "Great American Desert" and "Indian Country" would persist until the mid-19th century.

Between 1825 and 1854, massive relocation of Indians from the eastern United States to Kansas took place. The Delaware, Kansas and Shawnee Indians were settled on reservations along the Kansas River and its tributaries. Increased encroachment by settlers on Indian lands, increased travel across Indian land by prospectors headed for western gold mines, and decreased quantities of buffalo resulted in a full-scale Indian war by mid-1864. Forts built throughout Kansas by the United States government increased in number and importance during this period. Many of these were built along old and established trails. After the California gold rush, the army built a network of military roads throughout Kansas, some of which interconnected several forts (Zornow 1956:64). The military road from Fort Leavenworth, Kansas to Fort Laramie, Wyoming via Fort Riley passed near the study area of this investigation.

A wave of emigration to Kansas occurred in the mid-1850s. Repeal of the Missouri Compromise by the Kansas-Nebraska Act of 1854 left the state open to deciding its own future in domestic issues. Both pro-slavery

factions and free-staters rushed into Kansas during this period. Each group was determined to establish the state slave or free, according to their particular persuasion. A period of violence and bloodshed ensued, to be ended only by ratification of a constitution in 1859 prohibiting slavery.

The period of greatest settlement in Kansas occurred after the Civil War, and particularly after about 1870. Most early settlers to Kansas came from the region between Iowa and Missouri and the eastern seaboard. The Homestead Law of 1862 and land development by railroad companies encouraged European and American colonies to locate in Kansas. Groups of Scandinavians, Welsh, Russians, Bohemians, Germans and Pennsylvania Dutch established colonies in Kansas where they were free from the pressures and restrictions of their homelands (Zornow 1952:177-187; Muilenburg and Swineford 1975:17-18).

Religious groups including Quakers, River Bretheren, German Baptists, Mennonites and Mormons also settled in Kansas. During the period 1878-1880 approximately 30,000 blacks entered Kansas from the south (Davis 1976:117).

A review of atlases, maps and documents pertaining to the area of this study provides an opportunity to better understand the settlement and development of this area. By the early 1870s, considerable development of the valleys had taken place with 40 acre plots, numerous plantations and houses indicated adjacent to the rivers.

Augustus Packard made a land claim along the Smoky Hill River as early as 1855 in rural Dickinson County. A portion of the land included in this early claim is located within Study Area 8 of this investigation. Packard acquired land in Sections 1, 11, 14 and 15 (Township 13S, Range 3E) up through the first decade of this century. Packard bought timber land, operated a saw mill in 1856 and sold lumber to many early settlers. He was one of the first settlers to plant extensive orchards, having large peach orchards raised from seed from his native state of Ohio, and later establishing large apple orchards. Mr. Packard was sufficiently well established in 1870 that he employed Swedish masons to build a seven room stone house which still stands immediately adjacent to Study Area 8. Packard was not typical of other early settlers to Kansas. He chose to stake out land claims in the fertile, but flood prone lowlands, whereas most early settlers chose the uplands which were protected from flooding and generally considered to be healthier climes. Mr. Packard's land holdings once included the land where the town of Enterprise was built (Dingler 1937:n.p.).

Land holdings in the vicinity of the areas of this study varied considerably in size during the latter part of the 19th and early 20th century period. During the 1870s, tracts of land with 40 acres or less were common (Beers 1873; Bird and Mickle 1881; Everts & Co. 1887; Gillen & Davy 1885; Heisler & Smith 1874). By the turn of the century, land holdings of over 100 acres were common (Acme 1899; Ogle 1901, 1902a, b; 1905, 1909). By this time orchards had been established in both the flood plain and uplands, but especially in the flood plain.

By the early 20th century, Kansas was well established as an agricultural center and generally well established in the mainstream of American culture. National problems such as prohibition, women's suffrage and the rise of the populist movement were also problems of Kansas. Since the early 20th

century, the population of Kansas has increased and become more homogeneous. It is from the period prior to and up through the early 20th century that the cultural resources of Kansas are most distinct and regionalized.

ARCHITECTURAL CONTEXT

The relatively brief history of Kansas is surprisingly rich and colorful. The cultural resources of Kansas are likewise varied and distinguished, especially considering that most of Kansas' development occurred during and after the late 19th century.

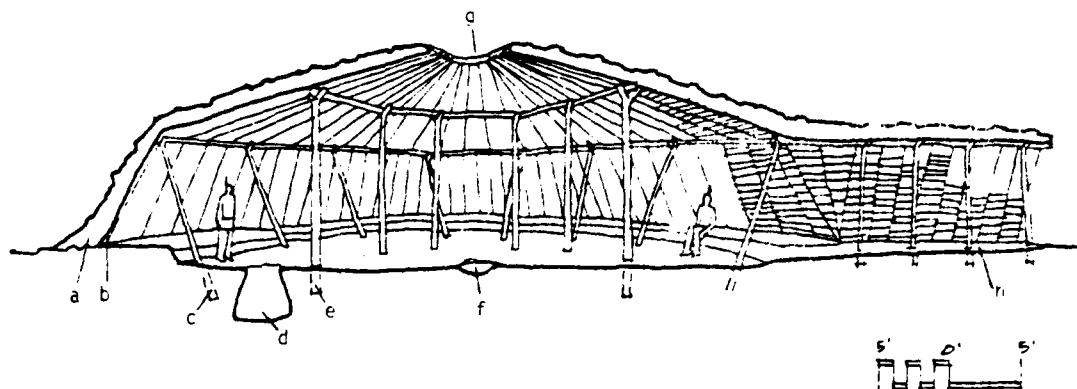
The contrast between the earth lodges of the Plains Indians which were found in Kansas well into the 19th century and the elaborate, stylized large houses of the late 19th century Kansas is but one indication of the rapid development of the state. The transformation of Kansas from a highly publicized and glamorously portrayed Eden in the mid- and late 19th century to the highly organized and developed agro-industrial center of today is equally impressive.

The architectural resources of the state serve as an excellent gauge of the cultural maturation of Kansas. Although the earliest structures of modern-day Kansas have given way to time and progress, a good collection of buildings survives representing a wide range of development in Kansas. The relatively late development of Kansas, and the use of durable building materials in many instances, have been partially responsible for the continued existence of buildings from the late 19th century.

The earliest known permanent man-made structures in present day Kansas were lodges built by the Wichita, Kansa, Osage and Pawnee Indian tribes. These groups were both agriculturalists and hunters who established permanent homes near fertile valley bottoms where they raised small patches of garden products.

The characteristic Pawnee earth lodge, or akkaros, consisted of a main framework of timbers and posts supporting a thatch of grass and a final covering of turf. This dome-like structure was built over a shallow (approximately 18" deep) circular excavation. Entrances to the lodges projected from the lodge and generally faced southeast or east (Wedel 1936:23-24). In 1835, Dunbar described the interior of a lodge, after serving as a missionary to a Pawnee village. A fireplace was formed in the center of the lodge by digging out a hole about 8 inches deep and 3 feet in diameter, and forming a hearth around the pit with the excavated earth. The floor of the lodge consisted of hard packed earth. Foodstuffs were stored in pits dug below the surface of the floor. Sleeping areas were located around the perimeter of the lodge. The earth lodges were either round or rectangular in shape and were large enough (rectangular shaped lodges measuring about 25' x 60') to house an entire family, its property, produce and livestock in the same house (Plate 1). In some lodges, a raised platform was built and separated from the main lodge area by curtains of rush mats. Sleeping apartments were in some instances divided from each other by partitions of small willow rods interwoven with slips of bark (Wedel 1936:44-46).

Written accounts and photographic records of early explorations of the area now known as Kansas, reveal much about the character of these early settlements of lodges. Coronado's exploration of the area in the mid-16th century included a visit to approximately 25 Quiviran villages of Wichitas, generally



- a. Sod and exterior tamped earth covering
- b. Grass and willow mats
- c. Secondary roof supports
- d. Food storage pit
- e. Primary roof supports
- f. Firepit
- g. Smoke hole
- h. Entrance

Plate 1. Cross section of a Pawnee lodge,
after a drawing from Wedel (1936).

considered the region's pioneer agriculturalists (KSU 1975:5). In the early 1700s, the earliest documented Kansa village was reported by French explorers. The village consisted of 150 lodges close to the Missouri River near present Doniphan, northeastern Kansas (KSU 1975:5). Later explorers' reports indicate that the Kansa Indians began shifting to sites near the Kansas River in the latter half of the 18th century, with the principal settlement from about 1800-1830 being located about two miles east of present day Manhattan. Professor Thomas Say, a zoologist and naturalist who visited this Kansa village in 1819, described it as consisting of 120 earth lodges (KSU 1975:5). Stockade type fences around the settlements kept deer, elk and buffalo from crops (Slagg 1968:2).

It is believed that the Pawnee originally dwelt in skin tipis. Later adopting the earth lodge as their permanent dwelling. Dunbar's description of the tipi reveals that this portable structure measured approximately 18 feet in diameter at the base. The frame consisted of three poles, 16 feet or more in length set up like a tripod and lashed together at the top with 12 to 15 other poles set up against the first three to form a circle. The frame was covered with thinly scraped, translucent bison skins tied to one end of a long pole and carried over the framework. The smoke/vent which was left at the top could be adjusted by manipulating the long pole to which the cover was attached. The entrance was an opening at the bottom where the overlapping ends of the tent cover were left unfastened, and covered with a bear-skin flap. The fireplace was located in the center of the tipi and furniture was piled against the back of the tipi (Wedel 1936:50-51).

A third type of summer shelter is described by Murray who accompanied the Pawnee on their hunt during the summer of 1835. The tent-like shelter was semicircular in form, with a frame of curved willow rods set into the ground 2 to 3 feet apart around the curve of the semicircle and bound to four large, upright poles forming the front of the lodge. The front wall poles were faced with transverse willow rods to which the curved rods were fastened. The whole was then covered with buffalo hides, sewed together tightly. An aperture for entrance was left in the center of the front, or in good weather, the whole front was left open (Wedel 1936:51).

As late as the 1870s, the Kansa had small villages in other locations along the Kansas and Neosho Rivers (KSU 1975:5). It is indeed remarkable that within 10 to 20 years of this time, fashionable houses, commercial and public buildings were being constructed by European and American immigrants to Kansas. While no examples of early Indian shelters survive within the study area, they were the earliest known forms of architecture in the area.

The early settlers of the plains were confronted with the need to provide immediate shelter for themselves and their families. In addition to needing shelter for basic survival, the homesteaders were required to establish at least an indication of a building in the process of construction in order to secure their land claim.

Upon arriving at the spot to be claimed, the settlers constructed a temporary shelter. Depending on available resources and time, the temporary house may have been a cabin of log or "shake" construction, but was frequently a tent, a dug-out, or a "soddy." The covered wagon in which the immigrants had been travelling was often used for shelter while building their first or

temporary house. Many of the canvas covered wagons were outfitted with a cookstove set in the center of the wagon with the pipe running through the top. Even after construction of the temporary house, it was often necessary to continue using the wagon for storing clothing away from the leaky roofs of the "soddies" and dug-outs. During storms, settlers frequently took refuge in the covered wagons which were heavier and more durable than tents.

Log construction was employed in the plains where stands of timber were to be found. Timber was available along the rivers and streams and particularly in the eastern portions of the plains. Western and upland portions provided fewer large straight trees from which to make logs for building purposes. As a result, log construction was less common there.

During preemption days, it was customary for the claimant to stake off a tract and begin construction of a house which was frequently of log construction. Construction of a house served to secure the tract while the claimant went back to town or returned to the old home for his family. In time, the anxious preemptors became less careful and resorted to fashioning a pen three or four feet high with logs dragged out of the woods as proof of ownership. Eventually, speculators undertook extreme and often deceiving measures in securing their claims. It was common for several pieces of land to be proved up using one small frame house, mounted on wheels and moved from claim to claim in order to comply with the requirement for a residence on the plot. Other techniques included laying four poles on the ground, and filing a claim based on this "foundation" for a residence, or more simply, by driving a stake in the ground to mark the center of the claim (Dick 1979:34-6).

The common log cabin consisted of one room only, measuring about twelve by sixteen feet. A large fireplace for heating and cooking was frequently of wattle-and-daub construction. Primitive cabins had neither windows nor doors, the doorway being covered with a piece of old carpet or buffalo skin which was later replaced with a door of batten construction. More comfortable cabins had a small window covered with greased paper. Bare earth served as floors at first, but puncheon floors were eventually laid. Roofs consisted of wooden shakes laid loosely on top of poles and held in place by additional pole weights placed on top of the shakes (Dick 1979:77).

For many of the early settlers, log construction was a building technique not only environmentally suitable, but culturally familiar. Many of the building traditions of the eastern and southern states were applied in Kansas. Architectural types (single pen, double pen, and dog-trot cabins) and techniques (half dovetail and dovetail corner notching) which were common in the old home states have been found in log buildings in Kansas. For example, a single pen cabin has been moved to the Smoky Valley Roller Mill in Lindsborg, and a dog-trot cabin built in 1857 in rural Geary County has been identified (KSH! 1973).

One early account describes a cabin built by Samuel Dyer where the town of Juniata (Riley County) later developed. Dyer's cabin, built to house himself, his wife and their thirteen children, was one story high and three stories long (Riley County Historical Museum n.d.:11). The description does not make clear whether the cabin was of frame or log construction. However,

L. A. Huffman's 1879 photograph of Bill Reece's Dance Hall in Miles City, Montana reveals that log construction techniques were used in the plains for buildings larger than just simple cabins (Brown, et.al. 1955:145). In the case of this structure, horizontal logs between upright posts set at regular intervals allowed for construction of a long rectangular shaped building. It is possible that Dyer's cabin was of similar log construction.

"Shake" cabins were commonly built as temporary shelters. The "shake" cabin was built by setting corner posts into the ground and nailing shakes (rough hewn boards, split from trunks of trees) to them.

Further west and also in areas where timber supplies were less abundant the earth itself provided materials for building temporary shelters. Of the two common types of earth constructions, the dugout was more easily and quickly prepared. The dugout was essentially a room dug in the side of a hill or ravine (Plates 2a, 6). A door frame and possibly a window were made with posts or rails. The front wall, facing into the ravine was made of square cut turf, or logs if they were available. The roof structure was made of poles or logs covered with brush, a layer of prairie grass thick enough to hold dirt, and a final layer of dirt over the grass.

The dugout was generally small in size and afforded minimal comforts. The Wright family in Nuckolls County, Nebraska had a dugout nine by twelve feet which housed a family of six. A boy and girl slept on the table, and a bed-tick placed on the floor at night had to be carried out during the day in order to have enough room to walk around the house (Dick 1979:110-12).

Roofs invariably leaked and dirt continuously sifted through the brush and grass covering. Travelers driving across the prairie at night were apt to drive over the inconspicuous dugout and cattle occasionally wandered over the housetop. The constant "shower" of dirt from the roof, the danger of collapsing roofs, and the predictable leaks must have made the dugout a dismal introduction to prairie living. The reaction of Mrs. John McCashland, of Fillmore County, Nebraska, was no doubt typical of many who anticipated greater things in the land of promise. When she first saw the dugout her husband had prepared, she was so discouraged she burst into tears. Mrs. George Shefer of Delphos, Kansas, is reported to have objected strenuously to living in a hole in the ground like a prairie dog (Dick 1979:111).

In spite of the disadvantages of the dugout, it was an expedient and cheap shelter. The dugout was a very common structure and was used for many purposes, including blacksmith shops, post offices and lodging places (Dick 1979:112).

The sod house, though basic, was more comfortable and durable than the dugout. During the 1870s, three types of sod houses were reported as common in McPherson County, Kansas - those which were laid up rough, those which were plastered and those which were hewed off smooth (Dick 1979:113). Though sod houses varied in size, a common building plan-form was rectangular, measuring approximately sixteen by twenty feet long (Plate 3a).

Sod "bricks" were made by turning furrows of turf of an even width and depth, and cutting the sod into three foot long sections. The sod bricks



Plate 2a. Exterior view, Mead family dugout, Ford County. Photo - The Kansas State Historical Society, Topeka, Kansas.



Plate 2b. Interior view, Mead family dugout, Ford County. Photo - The Kansas State Historical Society, Topeka, Kansas.



Plate 3a. A soddy built in Dighton, Lane County. This building is reported to have been the first hotel in town. Photo - The Kansas State Historical Society, Topeka, Kansas.



Plate 3b. The Hartford House, a prefabricated frame house shipped to present day Manhattan aboard the steamboat Hartford in May 1855.

were laid up much like brick masonry. Broken joints were used and cracks were filled with dirt. Third courses were laid sidewise to interlock and bind the wall together, and hickory withes were sometimes driven down into the wall as a sort of reinforcement. The roof was of pole construction with a covering of brush, a layer of prairie grass and a final layer of sod. Better and more expensive roofs were built of frame rafters covered with wood sheeting boards and tar paper. The roof was then covered with thin sods placed grass side down, and grass allowed to grow on the roof. A mixture of clay and ashes were used if the walls were plastered. If walls were to be smooth, a spade was used to hew the wall to a smooth finish (Dick 1979:113-14).

Like the dugout, the "soddy" had a propensity for leaking. When the roof was saturated, it continued to drip for days afterward. Dirt and straw dropped from the roof into the house making cleanliness a constant struggle. Light and ventilation were minimal due to the few windows found in the "soddies."

While most "soddies" were humble abodes, not all were simple one room structures. A Mr. George Rowley built a seven room sod house at Wauneta, Nebraska in 1876, and had a piano among his furnishings (Dick 1979:116).

An earlier type of sod house was reportedly common in Lawrence, Kansas, in the mid-1850s. Walls were of sod construction, but not the roof, as were the later frontier sod houses (Dick 1979:57-8).

Sod construction was also used for building corrals, henhouses, corn cribs, windbreaks and pig pens. Pig pens were commonly made by building a sod wall and digging a ditch around the inside of the wall to prevent the animals from rooting down the wall. Windbreaks were made by building a sod wall, and lining it with stacks of hay. Sometimes a hay shed was built out over the wall (Dick 1979:115-16). Though generally associated with the settlement period of Kansas, sod construction became very common throughout western Kansas and was utilized as late as 1938 (WPA 1949:153).

Prefabricated frame houses were manufactured by companies in Pittsburgh, Cincinnati and St. Louis for shipping to the frontier. An advertisement from an 1857 Cincinnati newspaper (Riley County Historical Museum Collections 1857), offered prefabricated houses manufactured by Hinkle, Guild & Co. of Cincinnati. The frame buildings were advertised as being "for Kansas and Nebraska," and "entirely different from the portable cottages we formerly built." Four models were available in varying sizes, weights and prices. The simplest was a single room house, 15 square feet, 7'-10" high and costing \$80. A two room model 15' x 30' long was also available at a higher cost. Two-story houses with separate entrances into each room were advertised for multiple family occupancy. A good example of a prefabricated frame house which was brought to Kansas is the Hartford House (Plate 3b) in Manhattan. The house was brought to present day Manhattan on the steamboat Hartford in May 1855 (Riley County Historical Society Collections n.d.). The single room structure was built onto and eventually incorporated into a larger dwelling, of which the Hartford House formed the living room. Recent efforts have resulted in the relocation of the original house to the grounds of the Riley County Historical Museum.

Balloon frame construction became possible with the development of sawmills. At first, the wood was rough and rather crudely sawn. As a result,

houses and furniture built from the lumber tended to be of a similar character. In spite of their primitiveness by present day standards, these early frame houses were "modern" enough to cause neighbors to consider their occupants to be putting on airs (Dick 1979:78).

More durable than sod or frame buildings were stone buildings which were erected in parts of the plains. Simple one-room structures were built in portions of Kansas where stone was abundant and timber was scarce. These early structures tended to be straightforward and unadorned. Walls of rubble construction with quoin-like corners, and gable roofs with wood shingles were common (e.g. outbuilding of site KR-6-01, Plate 4a). By the 1870s and 1880s, substantial stone houses, barns and public buildings were being built in Kansas. Stone buildings observed in rural Riley, Wabaunsee, Pottawatomie and Dickinson counties reflect a wide range of stone construction techniques. Small buildings, such as Stony Point School (Plate 4b) in rural Dickinson County, as well as substantial residences (Plates 5a and 5b) were built of locally available stone. The availability of local stone and masons in need of employment after construction of Ft. Riley, made possible the exploitation of this abundant material. The stone buildings in various regions of Kansas provide an excellent opportunity to observe the use of diverse materials available to settlers and developers of the plains.

During the late 19th and early 20th centuries, Kansas architecture is more nearly akin to the mainstream of American architectural development. Architectural resources from this period are more abundant than from the earlier period of Kansas' development. Several factors are responsible for this.

Kansas achieved a sense of stability in the wake of Indian relocations, the Civil War struggle, and early attempts at homesteading. The Homestead Act (1862), the Timber Culture Act (1873) and the federal land grants to the railroads in the 1870s opened the floodgates of emigration to Kansas. The liberal mix of settlers from the lake states, New England, the south, Mexico and northern Europe enriched the cultural blend of Kansas in the last quarter of the 19th century. The influx of settlers during this period who were interested in establishing permanent homes provided greater stability in the developing state.

Architecture in Kansas, during the last quarter of the 19th century contrasted greatly with that of the mid-19th century. The temporary shelters and hovels of the first settlement period quickly gave way to more permanent and stylish buildings of stone, brick and frame construction.

Architectural styles which were popular in eastern cities became more frequent in Kansas during the late 19th century. Houses in the Italianate, Italian Villa, Second Empire and Queen Anne styles became common in both small and large towns. Farmhouses also tended to be more stylish and pretentious. The large, two story frame farmhouse with an irregular plan and profile, with encircling verandahs and porches tucked into corners became ubiquitous throughout east and central Kansas. The Johnson house (Site KR-1-01, Plate 6a) is a good prototype of the large frame farmhouses in the Kaw Valley in the DeSoto vicinity. A more elaborate example of 19th century Kansas farmhouse architecture is the Lothholz house (Plate 6b) in rural Douglas County, located immediately adjacent to the project area.



Plate 4a. Site KR-6-01, outbuilding of rubble stone construction in rural Wabaunsee County.



Plate 4b. Stony Point School, built ca. 1872 in rural Dickinson County.



Plate 5a. Abandoned house of stone construction, vicinity of Study Area 6 in rural Riley County.



Plate 5b. House of stone construction, Merz farmstead in the vicinity of Study Area 6, rural Riley County.



Plate 6a. Site KR-1-01, the Johnson farmstead house, rural Johnson County.



Plate 6b. Lothholz house, located adjacent to Study Area (Eudora Bend) in rural Douglas County.

Farmstead development was given greater consideration during the late 1800s and early 1900s as the agricultural potential of Kansas was more fully recognized. Mixed farming (stock and grain) became known in eastern and central Kansas. Farmsteads in eastern and central Kansas generally are large and consist of the farmhouse, one or more medium or large barns, and numerous sheds and outbuildings (Plate 7a). Though no longer used, windmills mounted on iron towers are still common features of the Kansas farmstead. While no formal analysis of farmstead composition was undertaken during the reconnaissance, certain characteristics were observed. Farmhouses generally faced onto the highway passing in front of the farmstead. Older barns and outbuildings were situated behind or to the side of the farmhouse. Garages, machine sheds and other outbuildings which post dated the farmhouse and main barns were often placed in front of, but at some distance from the farmhouse. Driveways between farmsteads and service roads were rarely centered with respect to the house; rather they were placed on one side or the other of the house and provided access to the barn and outbuildings as well. Windbreaks of trees to the north and west of farmhouses are common features, as are isolated ornamental and shade trees around the house and outbuildings. In general, farmsteads correspond to Trewartha's (1948:201-204) category of cash grain farmsteads. Trewartha observed that cash grain farmsteads are characterized by numerous and substantial buildings.

By the late 1910s, the influence of the Renaissance and Classical Revivals was being reflected in public and private buildings. Schools, stores and residences tended towards simplification of massing and detail.

By the late 1920s, architectural styles were becoming simpler, reflecting the 20th century movement towards simplified, less ornamental buildings. Bungalow style houses (e.g. Site SH-2-01a, Plate 7b) became common throughout Kansas as the style gained in national popularity. The bungalow tradition also influenced public buildings, frequently being evident in modest size rural churches and schools.

Standardized buildings have become even more common in Kansas during recent decades. Ranch/tract type houses are found in rural and urban settings, replacing in many instances, the large 2-story frame or stone farmhouses so characteristic of the rural landscape. Mobile homes have likewise become familiar residential features of the area. Machine sheds or pole frame construction and of prefabricated component steel systems are being used to provide storage space for both machinery and livestock on many farmsteads.

Urban and Trade Centers

During the 1850s and 60s, Kansas was obsessed with town-building mania. Legislation passed by Congress on May 23, 1844 provided that 320 acres could be held as a town site when it was occupied. It was common for a group of speculators to incorporate by a special act of legislature and stake out 320 acres. Settlers were frequently engaged to preempt surrounding quarter sections purportedly for their own use and not for resale. However, the settlers frequently sold out to the town speculators, who then had a town site of 500 to 1,000 acres of land (Dick 1979:40-1).

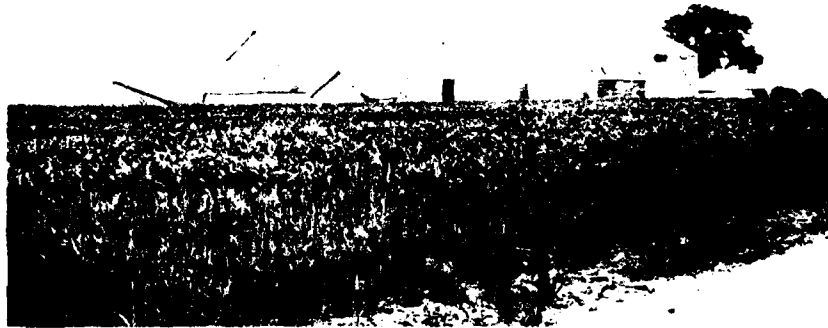


Plate 7a. Typical farmstead of east-central Kansas.



Plate 7b. Site SH-2-01a, bungalow house, rural Geary County.

After a town was laid out, the more difficult task of attracting investors and settlers to the "new metropolis" began. Several methods were popular. Newspapers, either hired or lured to set up shop in the new community, were effective mouthpieces. Town speculators, or sometimes citizens groups, had newspapers printed and then sent copies to the eastern states. The Herald of Freedom of Lawrence had a subscription list of 7,000 in 1857 when the fledgling town was but three years old (Dick 1974:44).

Another popular technique used in promoting a town was hotel building. Frequently the town company would erect the hotel which provided lodging for newcomers, and equally important, helped give the impression of a developing stable community.

Free lots were often given to churches, lodges, business establishments, and other organizations. In some cases, lots were given to anyone who would build a house of a stipulated value. So keen was the competition to establish stable, successful communities that town promoters would offer free lots to anyone in order to undermine the development of nearby towns. When rivalry became extreme, town companies were compelled to buy out a neighboring town in order to save themselves (Dick 1979:45).

Some towns succeeded but many failed to achieve their destinies as emporiums of the midwest. Scores of towns were merely fabrications of crafty speculators who arranged a town company and had imaginative lithographs and maps printed. Shares in these paper towns were sold to naive investors back east (Dick 1979:45). John J. Ingalls, a native New Englander who later represented Kansas as Senator, was lured from his Massachusetts home to Sumner, Kansas. Promoted in Massachusetts as a commercial city of large proportions, Sumner's purported accoutrements included four churches, substantial residences, schools, a commercial exchange, and a college. Ingalls found only one street interspersed with stumps which had any grade, the rest being footpaths between the cabins and shacks. The cabins themselves were shabby, some without chimneys, windows and doors, some without shingles or clapboards, set on stone pilings or tree stumps. Ingalls referred to Sumner as a "chromatic triumph of lithographed mendacity." Other writers and travelers related their impressions that these new western villages were indescribable, and comparable to nothing but themselves.

It must have been discouraging to many settlers to discover that much of the development they had anticipated remained to be accomplished. However, growth of such towns as Leavenworth and Lawrence was rapid enough to easily gauge their progress. Within 60 days in 1855, some 50 dwellings were built in Lawrence, with stone structures and other modest buildings being quickly erected (Dick 1979:45; Robinson 1856:66). During an eight month period in 1854, Leavenworth was transformed from a meager camp of four tents and one house, to a booming town with a steam-sawmill, two brick yards, a three-story hotel, numerous commercial facilities and over a hundred houses (Dick 1979: 45-6). Within thirty years, Leavenworth had grown to an important outfitting center for western travelers and boasted a population of 19,000.

Buildings in these early towns differed little from the temporary shelters of settlers in the rural areas. In 1854, Lawrence was a village of tents, though sod houses were common by the following year (Dick 1979:57-8). Dugouts, sod houses, log cabins and shake structures were common to the early towns as well as to homesteads.

Prior to the Civil War, towns tended to be located along and oriented towards rivers and creeks. Common belief that the Kansas River and its tributaries would be navigable year round resulted in considerable optimism for development of major streams. Speculative plats and lithographs showed commercial blocks fronting onto rivers, with residential districts complete with parks and churches laid out in a grid pattern back from the bustling waterfront. The general availability of timber in the stream environment greatly facilitated early development of these areas. Places where a trail crossed a stream were particularly favored. While no evidence of early communities within the right-of-way of this project was found, several early communities which are now extinct, were located in the vicinity of the study area. The vanished towns of Lakeview, Benicia and Douglas located in the Kaw Valley west and north of Lawrence were three examples. Early isolated homesteads were also generally situated in the valleys, rather than in the uplands for the same reasons. In time settlers ventured farther upstream or into the uplands.

In the 1870s, homesteaders had traveled in frame covered wagons - box-car like creations equipped with stoves for winter travel (Dick 1979:121). But by the 80s, railroad travel was well established.

Development of the railroad during this period resulted in greater flexibility in locating trade centers away from navigable streams. Simultaneously, widespread standardization and greater availability of manufactured materials in late 19th and early 20th century America affected town development, architectural styles and, to an extent, farmsteads.

John C. Hudson in his essay on plains country towns has observed that many villages of the plains are oriented with respect to the railroad line, rather than with the cardinal points on the standard grid system (Blouet et. al. 1979:100-105). Plains towns of the late 19th and early 20th century are frequently characterized by what Hudson refers to as the "T-town" form, where the business district is located on one side of the tracks, while the principal avenue is a perpendicular beginning near the centrally located depot and terminating in a square or park containing a school or other public building (Blouet et. al. 1979:103). Many small towns in Kansas (e.g. Wamego and Enterprise) reflect this basic orientation.

Standardized railroad depots were built by railroad companies during this period. Manufactured building components encouraged a homogeneous quality in many buildings and subsequently in small communities of the period. Sawn lumber available at local lumber yards and cast iron store fronts available as stock items from foundry catalogs represent two examples of standard materials commonly available in Kansas during the late 19th and early 20th centuries. Small trade centers in Kansas, such as Eudora and St. Mary's still offer the opportunity to observe general town development and architectural patterns from this period.

Bridges

From the earliest days of settlement, Kansas' rivers and streams have been the source of both blessing and frustration. While providing attractive locations for early settlements, their propensity to overflows and

limited navigability were obstacles to early development of the state.

A number of ferries established on the Kansas River in the 19th century partially solved the transportation problem. However, many streams were too small for a ferry. In many cases where they were established, inclement weather prevented operation of ferries resulting in delays to the overland traveler.

Technological advances of the late 19th and early 20th century permitted the wide spread construction of bridges across both large and small streams. One of the first bridges across the Kansas River at Topeka, opened on May 1, 1858 (Whittmore 1936:75). The Atchison Railroad Bridge (1875) spanning the Missouri River at Atchison, is the oldest bridge across the Missouri River.

During the early 20th century numerous bridges were built on county roads across tributaries throughout Kansas. Bridges of the late 19th and early 20th centuries are basically iron and steel derivatives of earlier wooden ones. Specialized bridge construction companies often prefabricated them and then erected them in both urban and rural locations (Comp 1977:1). Late 19th and early 20th century bridges across major streams (e.g. the Union Pacific Railroad Bridge at Linwood) are steel construction, through type bridges of Warren, Pratt, Parker, Camelback or Baltimore trusses. Deck type bridges of concrete construction, supported on concrete piers became the norm for bridges built during the mid-20th century. No bridges are located within the area of this study.

HISTORIC AND ARCHITECTURAL RESOURCES WITHIN THE STUDY AREA RIGHT-OF-WAY

No sites or structures within the study area were identified by the literature and records review. None of the sites identified during the Preliminary Assessment of Historic Sites and Architecture (White 1979) are located within the eight areas of erosion in this study.

As a result, the field reconnaissance became the sole source for obtaining information on sites and structures within the study area. A windshield survey of the eight areas of erosion was completed. Structures where indicated on USGS topographic maps and where observed during the windshield survey were noted in maps (Map 2 of this report, and USGS Topographic and Corps of Engineers maps submitted separately), briefly described on data forms (Appendix C) and photographed. Table 1 is a summary of historic sites and standing structures within the right-of-way which were identified during the field reconnaissance.

Summary of Sites and Structures

A total of 1 historic and 21 architectural sites was identified during the field reconnaissance. These sites are within 1,000 feet of the river bank, and are all rural sites. None of the sites are listed in the National Register of Historic Places, or in the Kansas Statewide Historic Inventory. Three study areas - Lawrence Lakeview, Tri-County and St. Marys, and Smoky Hill #1 - contained no known historic sites or standing structures.

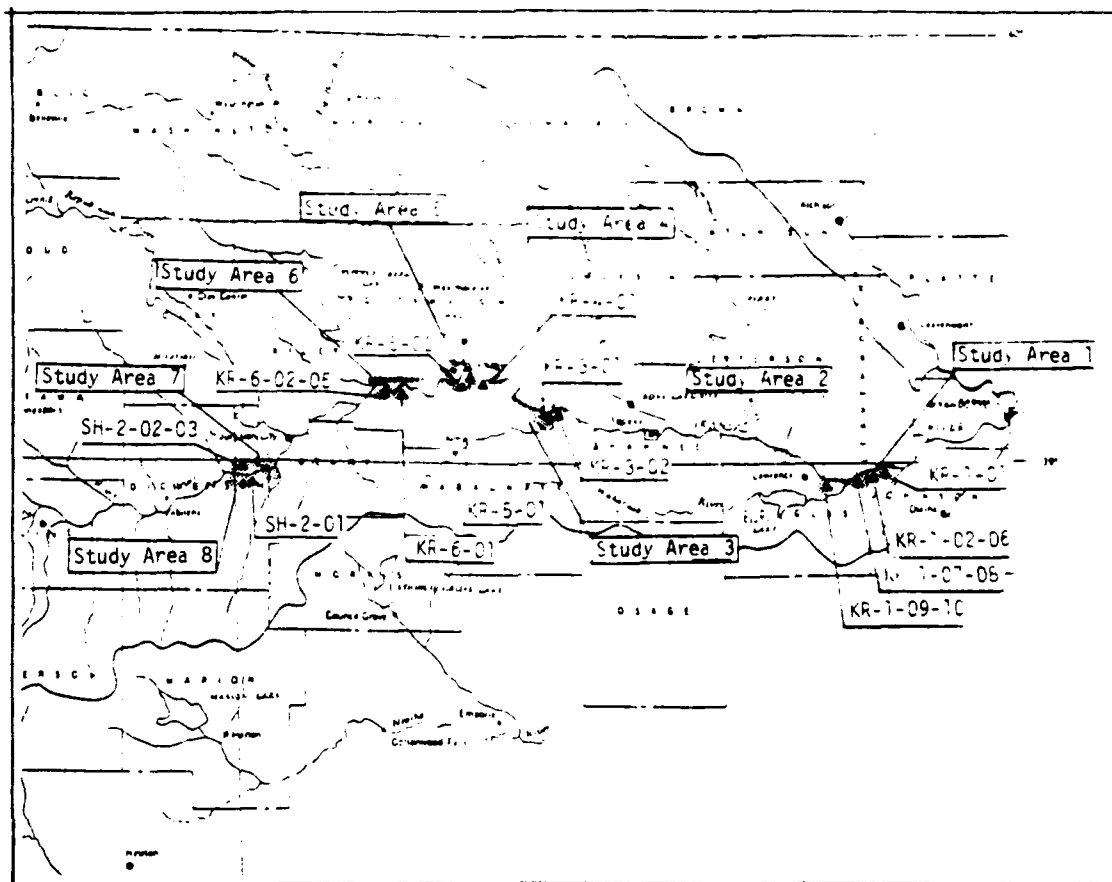
Study Area 1: Eudora and Schaaake Bends. Structures in the vicinity of the study area are generally grouped into farmstead complexes consisting of both large and small buildings. Houses are commonly 2 stories in height and irregular in plan form and profile. The larger and more elaborate houses of the study areas in Johnson and Douglas counties are imposing Italianate, and Italian Villa style structures. Barns tend to be large structures of frame construction. Hay lofts with peaked rain hoods and gable roofs are common features of the barns in these areas. Numerous supportive service buildings (including machine sheds, stock shelters, granaries, coops, garages, privies and windmills) are generally associated with the farmsteads of these two study areas. While only two such farmsteads are located within the study areas, a number of such farmsteads (e.g. the Robert Lothholz farmstead, Plate 6b) were observed in the immediate vicinity. A total of ten sites was identified within this study area.

KR-1-01. Johnson Farmstead. This farmstead consists of four standing structures including a 2-story frame house, a frame barn, shed and hog house. The house with its "cross" plan-form, corner porches, and Italianate detailing is a good prototype of other large frame farmhouses in the vicinity. The estimated period of construction is late 19th/early 20th century. It is recommended that the farmstead be documented for inclusion in the Kansas Statewide Historic Inventory (see Plan of Survey).

TABLE 1
HISTORICAL AND ARCHITECTURAL RESOURCES
KANSAS AND SMOKY HILL RIVERS

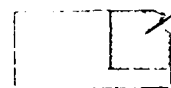
<u>SITE NO.</u>	<u>SITE</u>	<u>QUADRANGLE</u>	<u>ESTIMATED DATE</u>
<u>Study Area 1</u>			
KR-1-01	Johnson Farmstead	Eudora	Late 19th/ Early 20th C.
KR-1-02	House	Eudora	Mid-20th C.
KR-1-03	House	Eudora	Mid-20th C.
KR-1-04	House	Eudora	Mid-20th C.
KR-1-05	House	Eudora	Mid-20th C.
KR-1-06	House	Eudora	Mid-20th C.
KR-1-07	Mid-States Agricultural Chemical Products	Eudora	Mid-20th C.
KR-1-08	Barn	Eudora	Late 19th/ Early 20th C.
KR-1-09	Gene Pennel Residence	Lawrence East	Early/Mid- 20th C.
KR-1-10	Carl Perkins Farmstead	Lawrence East	Late 19th/ Early 20th C.
<u>Study Area 3</u>			
KR-3-01	Cemetery	St. Marys	Mid/Late 19th C.
KR-3-02	George Wild Farmstead	St. Marys	Early/Mid- 20th C.
<u>Study Area 5</u>			
KR-5-01	Farmstead	Wamego	Early/Mid- 20th C.
KR-5-02	Robert B. Morgan	Wamego	Early 20th C.

<u>SITE NO.</u>	<u>SITE</u>	<u>QUADRANGLE</u>	<u>ESTIMATED DATE</u>
<u>Study Area 6</u>			
KR-6-01	Abandoned Farmstead	St. George	Mid/Late 19th C.
KR-6-01	Ralph C. Parks Farmstead	St. George	Late 19th/ Early 20th C.
KR-6-03	Charles Cragg Farmstead	St. George	Late 19th/ Early 20th C.
KR-6-04	Wilford Johnson Farmstead	St. George	Late 19th/ Early 20th C.
KR-6-05	House	Manhattan	Mid-20th C.
<u>Study Area 8</u>			
SH-2-01	Harold Jackson Farmstead	Chapman	Mid-20th C.
SH-2-02	Farmstead	Chapman	Late 19th/ Mid-20th C.
SH-2-03	Stirtz Farmstead	Chapman	Late 19th/ Mid-20th C.



LEGEND

- ▲ Architectural Feature
- Cemetery
- KR-0-00 Kansas River Site
- SH-0-00 Smoky Hill River Site
- Study Area 1 - Eudora/Shaaake Bends
- Study Area 2 - Lawrence/Lakeview
- Study Area 3 - Tri-County/St. Mary's
- Study Area 4 - Belvue
- Study Area 5 - Wabaunsee
- Study Area 6 - Swamp Angel
- Study Area 7 - Smoky Hill #1
- Study Area 8 - Smoky Hill #2



Area enlarged
above



MAP 2

Kansas and Smoky Hill Rivers
Bank Stabilization Study

HISTORICAL AND ARCHITECTURAL RESOURCES RECONNAISSANCE

KR-1-02-06. This group of sites consists of a cluster of five houses and miscellaneous outbuildings. The houses are of standard frame construction and common types (bungalow, tract, modular home). Estimated period of construction is mid-20th century. No further investigation is recommended.

KR-1-07. This site consists of three component steel buildings and storage yard for agricultural chemical products. The buildings are of mid-20th century origin. No further investigation is recommended.

KR-1-08. This site is a general purpose barn of frame construction. The building has a gable roof, peaked rain hood, bent seam metal roofing and vertical board siding and is a standard building and structural type. The period of construction is estimated to be mid-20th century. No further investigation is recommended.

KR-1-09. Gene Pennel Place. This site consists of three structures - a bungalow house of frame construction, a shed of pole frame construction, and a steel grain bin. All are standard structural and building types. Estimated period of construction is mid-20th century. No further investigation is recommended.

KR-1-10. Carl Perkins Place. This farmstead consists of eleven standing structures - a frame "I" house, a frame transverse-crib barn, a frame stock shelter, miscellaneous frame outbuildings, a concrete cellar previously used for storing seed potatoes and an Aermotor windmill on a steel platform. Several of the outbuildings are somewhat rundown. However, the farmstead as a whole provides a good impression of a regional farmstead of the early to mid-20th century. Recording of the farmstead for the Kansas Statewide Historic Inventory is recommended (see Plan of Survey).

Study Area 2: Lawrence/Lakeview. Farmsteads in the vicinity of the study areas generally consist of large houses and numerous supportive service buildings. Commonly observed house types include 2 story box houses, "I" houses, and bungalow influenced frame houses. The site of the ghost town of Lakeview is located in the immediate vicinity of this study area. No standing structures or historic sites were identified within the limits of the study area. No further investigation is recommended.

Study Area 3: Tri-County/St. Marys. Farmsteads in the vicinity of this study area consist of a wide variety of building and structural types. Generally, the farmsteads consist of a large house and numerous supportive service farm buildings. Houses frequently observed in the vicinity of the study area include box, "I", cottage, stone vernacular and bungalow type houses. Barns in the vicinity are general purpose type and usually large in size. Machine sheds, coops, smokehouses and miscellaneous outbuildings are commonly associated with main farm buildings in this area. Stone masonry and wood frame were the most commonly observed structural systems, being used for houses, barns and supportive service structures. Two sites were identified within this study area.

KR-3-01. This site is believed to be an unmarked cemetery. No stones or markers were found. Mr. George Wild, whose family has lived on the farmstead adjacent to the cemetery since the early 20th century related that the cemetery is believed to date from approximately the 1870s when a group of settlers spent the winter at this site. The graves are believed to be those of travelers who died during the encampment there. No further documentation of this cemetery nor actual gravesites were found. If the study is authorized as a project and the site is to be impacted by future construction, it is recommended that the site be investigated further for evidence of the location of the graves.

KR-3-02. George Wild Farmstead. This site is a farmstead with three standing structures - a 2-story, frame box house, a frame outbuilding and a pole frame construction machine shed. These structures are standard structural and construction types. The house dates from approximately 1910. The farmstead does not appear to meet National Register of Historic Places criteria. It is recommended that the house be documented for the Kansas Statewide Historic Inventory (see Plan of Survey).

Study Area 4. Belvue. Farmstead composition in the vicinity of this study area is like that of Study Area 3. No standing structures or historic sites were identified within this study area. No further investigation is recommended.

Study Area 5. Wabaunsee. Farmstead composition in the vicinity of this study area is like that of study areas 3 and 4. A mixture of house and farm building types of both frame and stone construction were observed. Two sites within this study area were identified.

KR-5-01. This site is a farmstead consisting of a 1-1/2 story frame house, numerous frame outbuildings, one stone outbuilding, steel grain bins and a hog pen. A ranch house is located adjacent to the main farmstead. Documentation of the farmstead for inclusion in the Kansas Statewide Historic Inventory is recommended (see Plan of Survey).

KR-5-02. Robert B. Morgan House. This feature is a 1-1/2 story frame, bungalow house. According to Mrs. Robert Morgan, the structure was originally a barn, which was moved to its present location and converted to a residence ca. 1948. No additional investigation of this structure is recommended.

Study Area 6. Swamp Angel. Numerous large farmsteads were observed in the vicinity of this study area. Farms are both cash grain and stock raising types. A number of large and substantial stone and vernacular houses and barns are found in this general area. The Parks farmstead (Site KR-6-02, Plate 8a) is typical of the stone vernacular houses throughout the central and western portions of the Kaw Valley study area. The house and barn of the Merz farmstead (Plates 5b, 8b) located near the study areas 5 and 6 are representative of highly developed stone buildings in this region. Barns tend to be large and frequently more than one barn is found on each farmstead. Numerous outbuildings and supportive service structures were observed on farmsteads in the vicinity of Study Area 6. Stone construction is frequent in this area. Five sites were identified within the study area.



Plate 8a. Site KR-6-02, stone house on Parks farmstead in rural Riley County.



Plate 8b. Barn of stone construction, Merz farmstead in the vicinity of Study Area 6, rural Riley County.

KR-6-01. Abandoned Farmstead. This site consists of the stone foundation of a farm house, a rubble stone smokehouse, and a mound of rubble and dirt adjacent to the house site. No further investigation is recommended.

KP-6-02. Ralph C. Parks Farmstead. This farmstead consists of a 2 story, stone vernacular house, two garages of frame construction, a frame machine shed, a privy and a steel grain bin. Former structures on the site included a barn, an ice house, a granary, beehive shed, chicken houses and a windmill. The estimated period of construction is pre-1883 and of the other structures is early 20th century. It is recommended that this farmstead be documented for inclusion in the Kansas Statewide Historic Inventory (see Plan of Survey).

KR-6-03. Charles Cragg Farmstead. This farmstead consists of five standing structures - a 2 story frame "T" house, a frame garage, a mobile home, a frame 3-bay barn, and a machine shed of pole-frame construction. The estimated period of construction is late 19th through mid-20th century. Documentation of this farmstead for inclusion in the Kansas Statewide Historic Inventory is recommended (see Plan of Survey).

KR-6-04. Wilford Johnson Farmstead. This abandoned farmstead consists of six standing structures - a 2 story frame "T" house, a rubble stone garage, a frame privy, a frame shed, a frame 3-bay barn, a frame shed, and two steel grain bins. The estimated period of construction of the buildings is late 19th/early 20th century. Documentation of the farmstead for inclusion in the Kansas Statewide Historic Inventory is recommended (see Plan of Survey).

KR-6-05. House. This site consists of four standing structures - a frame tract house, a frame coop, a frame smokehouse, and a frame outbuilding. These structures date from the mid-20th century, and are common structural and building types. No additional investigation of this site is recommended.

Study Area 7. Smoky Hill #1. The Smoky Hill Valley in the vicinity of Study Area 7 is narrow and the course of the river has changed considerably over time. As a result, few buildings have been built in the immediate vicinity of the study area. Most farmstead development has taken place in the uplands, away from the river and the project area. No standing structures or historic sites were identified within this study area. No further investigation of this site is recommended.

Study Area 8. Smoky Hill #2. Farmsteads in the vicinity of Study Area 8 are generally large and consist of numerous structures. Large vernacular style houses of stone or frame construction are frequent in the area. One or more large general purpose barns of frame construction are commonly found in each farmstead. Numerous outbuildings, granaries and machine sheds are common components of the farmsteads in this area. Three sites were identified within this study area. More modest houses of bungalow and cottage styling are common features in the area.

SH-2-01. Harold Johnson Farmstead. This farmstead consists of ten standing structures - a frame bungalow house, a frame privy, a frame machine shed, a pin wheel windmill on a steel tower, two frame poultry houses, a frame granary, a frame outbuilding, a frame machine shed, and the ruins of a rubble stone barn. The estimated period of all standing structures, excluding the stone barn ruins,

is mid-20th century. These buildings are standard architectural and structural types. No further investigation of this site is recommended.

SH-2-02. Farmstead. This farmstead consists of the following standing structures - a frame tract house, a frame transverse crib barn, miscellaneous frame and stone outbuildings. The estimated period of construction is late 19th through mid-20th century. Documentation of this farmstead for inclusion in the Kansas Statewide Historic Inventory is recommended (see Plan of Survey).

SH-2-03. Stirtz Farmstead. This farmstead consists of nine standing structures - a 2 story frame "T" house, a component steel machine shed, a frame poultry house, a frame outbuilding, a frame shed, a frame general-purpose barn, a frame double-crib granary, a machine shed of pole-frame construction, and a garage of frame construction. The estimated period of construction of the house and main farmstead building is late 19th/early 20th century. The estimated period of construction of the machine sheds and garage is early/mid-20th century. The house and main structures are good examples of regional farmstead architecture of the late 19th/early 20th century. Documentation of the farmstead for inclusion in the Kansas Statewide Historic Inventory is recommended (see Plan of Survey).

SUMMARY AND RECOMMENDATIONS

Architectural and historic features were identified within Study Areas 1, 3, 5, 6, and 8. All architectural features are rural in character, and most are associated with farmsteads. Recommendations for future study and/or documentation of specific sites are presented below.

Study Area 1

1. Site KR-1-01: Record for inclusion in the Kansas Statewide Historic Inventory.
2. Site KR-1-10: Record for inclusion in the Kansas Statewide Historic Inventory.

Study Area 2

No further study is recommended.

Study Area 3

1. Site KR-3-01: If the study is authorized as a project, and Site KR-3-01 will be affected, further investigation of this site to verify the existence of, and identify the limits of the cemetery is recommended.
2. Site KR-3-02: Record for inclusion in the Kansas Statewide Historic Inventory.

Study Area 4

No further study is recommended.

Study Area 5

Site KR-5-01: Record for inclusion in the Kansas Statewide Historic Inventory.

Study Area 6

1. Site KR-6-02: Record for inclusion in the Kansas Statewide Historic Inventory.
2. Site KR-6-03: Record for inclusion in the Kansas Statewide Historic Inventory.
3. Site KR-6-04: Record for inclusion in the Kansas Statewide Historic Inventory.

Study Area 7

No further study is recommended.

Study Area 8

1. Site SH-2-02: Record for inclusion in the Kansas Statewide Historic Inventory.
2. Site SH-2-03: Record for inclusion in the Kansas Statewide Historic Inventory.

PLAN OF SURVEY

At the present time, none of the identified sites appears to be eligible for the National Register of Historic Places. However, several buildings and farmsteads are representative of regional architectural traditions of the late 19th through mid-20th centuries. Because of the lack of previously completed work in identifying and analyzing the rural, traditional architecture of Kansas, several sites identified by this study have been recommended for inclusion in the Kansas Historic Inventory as previously stated. Corps of Engineers regulations do not currently allow the Corps to document sites for inclusion in the Kansas Historic Inventory. It is suggested that the preliminary site information obtained by this study might be added to the statewide inventory, to be examined further and documented in more detail by the Kansas State Historical Society and other appropriate agencies or individuals. The site locations and summary descriptions included in this study provide a preliminary data base which can be expanded as research is completed and information becomes available.

The remaining structures which were identified do not appear to have potential historic or architectural significance. No further study of those sites is recommended.

The previous recommendations are partially based on the assumption that future construction and the resulting impacts will be limited to the eight study areas examined in this study. If other areas outside the defined limits of these eight areas, a survey and assessment of the expanded area is recommended. A number of architectural features which are located immediately adjacent to the eight areas examined in this study were observed. Several of these features possess a high degree of architectural integrity which would potentially qualify them for inclusion in the National Register of Historic Places.

PHOTOGRAPHIC SUMMARY

A photographic summary of principal sites within the study area, and of selected structures in the vicinity of the study area is presented in this section. The order of the photographs parallels that of the study in general. That is, sites located in Study Area 1 are presented first and those of subsequent study areas through Study Area 8 follow sequentially. Sites and structures outside the right-of-way are presented with the study area to which they are proximate.



KR-1-01: Johnson Farmstead



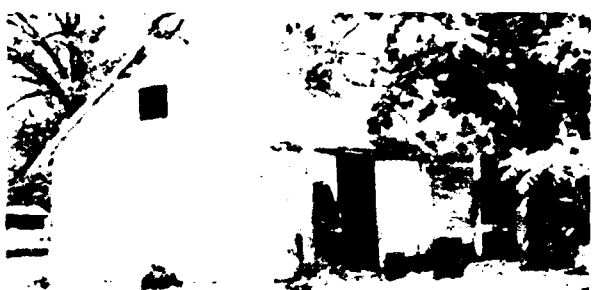
KR-1-08: Robert Lothholz Barn



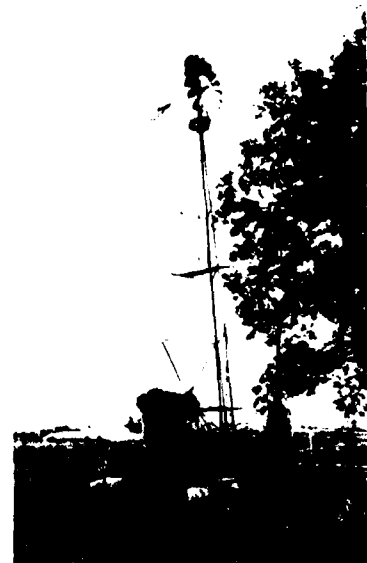
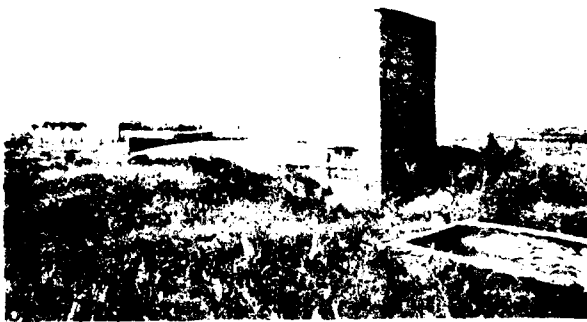
Vicinity of KR-1-08



KR-1-09: Gene Pennel Place



KR-1-10: Carl Perkins Farmstead



KR-1-10: Carl Perkins Farmstead



KR-3-02: George Wild Farmstead

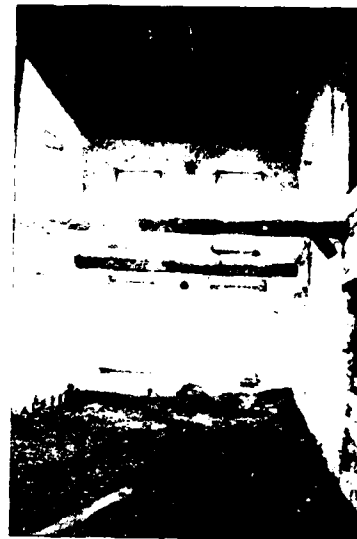


KR-3-02: George Wild Farmstead

KR-5-02: Robert B. Morgan House



Merz Farmstead, vicinity of Study Area 6 (Swamp Angel/KR-6)



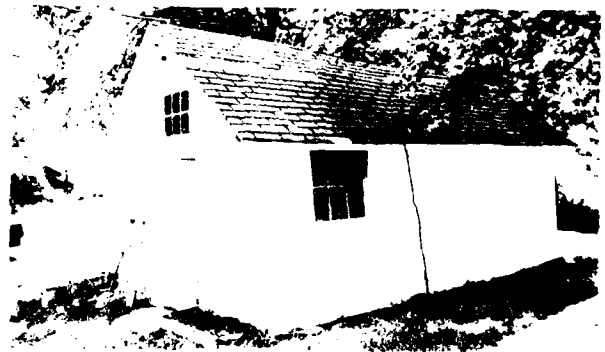
Vicinity of Study Area 5



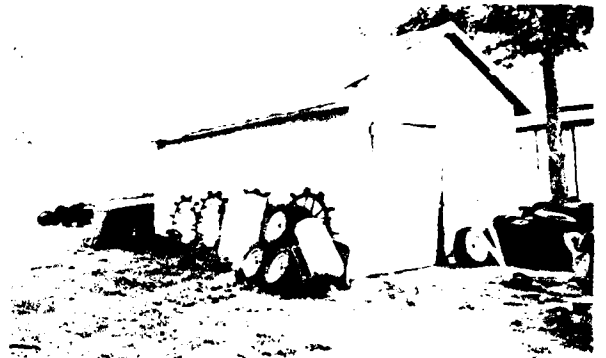
Vicinity of Study Area 6



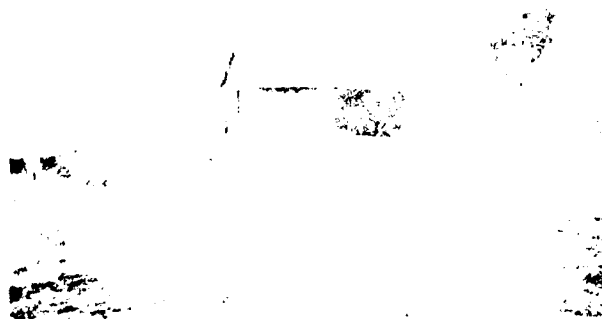
KR-6-01: Site of abandoned farmstead



KR-6-02: Parks Farmstead



KP-6-03: Charles Cragg Farmstead



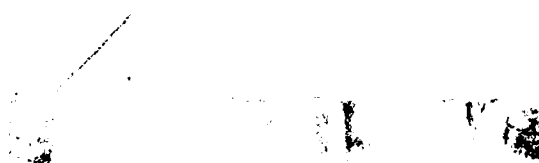
KP-6-04: Wilford Johnson Farmstead



KR-6-05

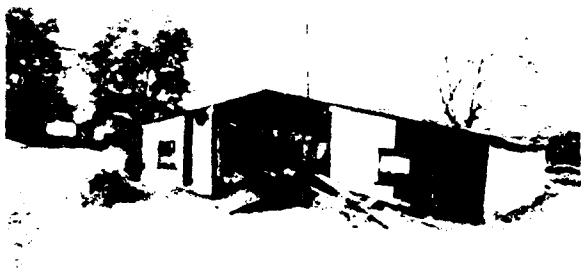


Vicinity of Study Area 8 (Smoky Hill #2/SH-2)

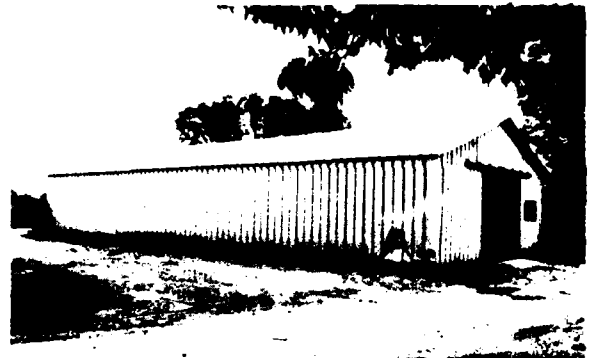
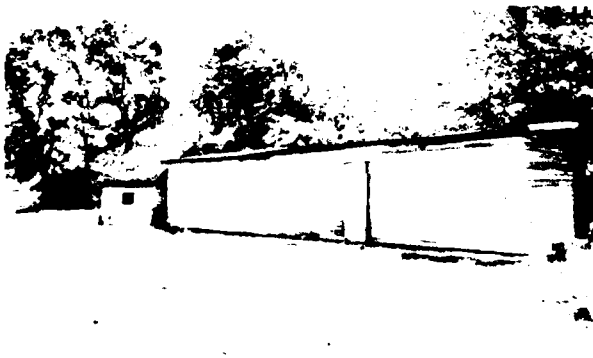
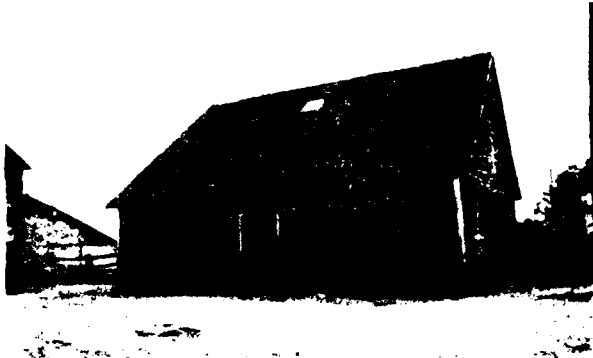
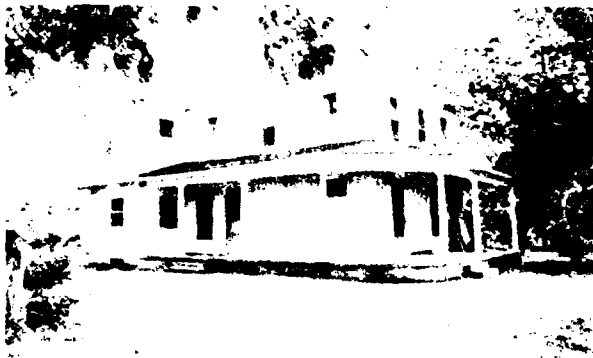


Stony Point School

Vicinity of Study Area 8 (Smoky Hill #2/SH-2)



SH-2-01: Harold Jackson Farmstead



SH-2-03: Stirtz Farmstead

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APPENDIX A
SCOPE OF WORK

4 October 1979

HISTORICAL AND ARCHITECTURAL RECONNAISSANCE
KANSAS AND SMOKY HILL RIVERS BANK STABILIZATION STUDY, KANSAS
Scope of Work

1. INTRODUCTION

a. The Government is currently engaged in a study to develop plans to correct problems associated with bank erosion and channel migration on the Kansas and Smoky Hill Rivers, Kansas. Eight (8) zones of severe erosion and migration totaling approximately 3,900 acres have been identified and are designated the study area. This study area, in eight non-contiguous parcels, totals approximately 32 miles in length and is limited to an area 1,000 feet from the bank in the erosion areas outlined on the inclosed map (Incl 1).

b. A reconnaissance shall be performed to locate historical and architectural resources within the study area. Historical and architectural resources identified will be investigated to determine their potential eligibility for listing on the National Register of Historic Places and their significance relative to the bank stabilization study.

c. To date, the following cultural resources reports are results of work funded by the Corps of Engineers.

1979 White, R. Gail. "Preliminary Assessment, Historic Sites and Architecture, Kansas River and Tributaries, Kansas."

Witty, Thomas A., Jr. "Preliminary Archeological Literature Search, Eastern Portion of Kansas River and Tributaries, Bank Stabilization Study, Kansas." (Draft)

O'Brien, Patricia J. "Preliminary Archeological Literature Search, Western Portion, Kansas River and Tributaries, Bank Stabilization Study, Kansas." (Draft)

Martin, Larry D. "Survey of Fossil Vertebrates from East-Central Kansas." (Draft)

d. The work defined herein to be performed by the Contractor is required by the National Environmental Policy Act of 1969 (PL 91-190) and the National Historic Preservation Act of 1966 (PL 89-665) and is authorized for funding under Public Law 86-523 as amended by Public Law 93-291.

2. SCOPE

a. This study encompasses historical and architectural reconnaissance of 15 percent (approximately 580 acres - the reconnaissance area) of the identified zones described in 1.a. The field reconnaissance for this study will consist of an on-the-ground surface examination of the reconnaissance area to obtain preliminary, predictive data on the distribution and nature of historical and architectural sites, to provide a general impression of the value of the sites, and the probable impact of future plans on the sites.

b. A recently completed literature search and records review will provide some background data for the reconnaissance (See 1b). The contractor shall conduct this study in a professional manner, using accepted methodology in accordance with 33CFR305 and the proposed 36CFR66. The Contractor shall be responsible for the preparation of a report of findings, fulfilling the requirements stated below.

3. STUDY APPROACH

The Contractor shall perform the following activities to the requirements of the contract:

a. Preliminary Work.

(1) Prior to development of the research design, the Contractor shall review previous reports, survey forms, records and pertinent library sources concerned with cultural resources within the study area for historical and architectural information.

b. Reconnaissance. The reconnaissance for historical and architectural resources shall be accomplished by scientific investigation based on a research design as stated in 33CFR305.18. The Contractor's research design shall be approved by the Government before initiation of field work. Recovery of data shall be in accordance with 33CFR305 and the proposed 36CFR66. Proper documentation of data is vital.

c. Problem Orientation. This study is to be oriented toward a 15 percent reconnaissance of the study area to locate and evaluate historical and architectural sites that may be threatened by erosion, channel migration, or future plans for stabilization of the river. Existence and condition of sites tentatively identified or predicted from the literature search will be verified. Areas where sites are lacking will be identified and a model predicting distribution of sites in the study area will be developed.

d. Methodology. In performing the site investigations the Contractor shall, in accordance with the research design, use accepted and appropriate field methods described in the proposed 36CFR66 including, but not limited to, the following:

(1) Conduct a historical and architectural reconnaissance of the areas listed below, and outlined on the inclosed maps (Incl 2).

<u>Area (River Miles)</u>	<u>Appendix "F" Plate No.</u>	<u>River Distance (Ft.) of Ero- sion Areas</u>	<u>Total Study Area in Acres</u>	<u>(Reconnaissance Area in Acres)</u>
1. Ludora-Fall Leaf Schaaak Bend (34.8-49.6)	5, 6	44,000	1010	(151)
2. Lawrence Lakeview (51.9-61.0)	6, 7	13,000	298	(45)

3. Tri Co. St. Marys (106.8-115.6)	10, 11	19,000	436	(65)
4. Belvue (115.6-120.0)	11, 12	13,000	298	(45)
5. Wabaunsee (129.0-135.0)	12	13,000	275	(41)
6. Swamp Angel (139.0-146.0)	13	22,400	514	(77)
7. Smoky Hill #1 (12.0-16.0)	32	15,600	351	(53)
8. Smoky Hill # 2 (30.2-42-5)	33	30,000	690	(104)
TOTAL	170,000	(32.2 mi)	3902	(582 acres)

(2) Examine the physical appearance and condition of historic and architectural properties to discover if the property -

a. retains enough of its potentially significant design to be recognizable,

b. has identifiable relationships to historical events, and

c. is unusually associated with its location.

(3) Identify temporal placement of sites, objects, districts and structures including types, styles or periods of architecture represented.

(4) Record location and surface evidence of newly located sites on inventory forms. Forms should contain the following information:

a. Areal extent, verbal boundary description, street, property line or geographic features,

b. Location by county, city, state, river mile,

c. Site name, type site, and date of construction,

d. Description including its surroundings, condition, composition and unique features,

e. Potential significance for eligibility to the National Register and justification for this determination.

f. Site number. Each site to be studied shall be numbered. The numbers shall be obtained from the Kansas State Historical Society.

(5) Photograph each historical or architectural feature by black and white photography to obtain diagnostic information on the site.

(6) Review titles and other pertinent information of sites that may be considered potentially significant.

(7) Perform any measurements using the surveying instrument.

(8) Determine which known and new sites require further work of any kind and indicate relative significance or ranking and times in accomplishing recommended work.

(9) Identify and outline a plan of intensive survey for the study area lands. Construct a predictive model for cultural resources in the unsurveyed portion of the study area. Indicate which parts of the study area should have priority for future studies, if any, and why.

4. SCHEDULE OF WORK

a. Coordination and Meetings. The Contractor shall pursue the study in a professional manner to meet the schedule specified. All work to be performed by the Contractor shall be closely coordinated with the appropriate Corps of Engineers cultural resources coordinator.

(1) The Contractor shall review progress of the work performed with representatives of the Corps of Engineers and the State Historic Preservation Officer (SHPO).

(2) The Contractor shall attend one meeting in the Kansas City District Office to discuss the review of the draft of the report.

(3) By written request, the Contracting Officer may require the Contractor to furnish the services of technically qualified representatives to attend coordination meetings in addition to the one specified above. Payment for such services will be made at a rate per hour for the discipline(s) involved plus travel expenses computed in accordance with Government Joint Travel Regulations in effect at the time travel is performed.

b. Report Content and Schedule

(1) A report of findings shall be prepared by the Contractor. The main text of the report shall be written in a manner suitable for reading by persons not professionally trained as historians and architects. Detailed presentation and discussion of data of interest to these professions shall be included in a second part of the report or as appendices. The report is intended for use of and interest to the general public as well as of value to the profession. Use of illustrations is encouraged.

(2) The report of findings shall be authored by either the principal investigator or project director. The principal investigator is the person

responsible for day to day activities including field supervision, analysis of work, and write-up of the initial draft of the report. The project director is that person who oversees and administers the contract or purchase order and who does the final editing of the report. The historian or architect (regardless of title) whose credentials are used to justify the assumption of professional work being performed preferably should be the author or at least co-author of the report.

(3) Thirteen (13) copies of a complete draft of the report shall be submitted to the Contracting Officer for purposes of Governmental review within eight (8) months after receipt of notice to proceed. If excessive inclement weather or other delays occur, this date may be extended to one mutually agreed upon between the Government and the Contractor. In addition to standard review procedures, the Government may (at its discretion) send the draft report and Scope of Work to three qualified professionals not associated with a State or Federal Governmental agency for peer review of the merits and acceptability of the report. After a review period of approximately two (2) months, the Government will return the draft to the Contractor. The Contractor then shall complete necessary revisions and submit the final report, which shall be professionally edited, within two (2) months after receipt of the reviewed draft. The Contractor shall submit one set of originals and two copies of the final report of findings to the Government. The copies shall include all plates, maps, and graphics in place so that they may be used as patterns for assembling the final report. The Government will edit the final report and after approval, will reproduce this report and provide the Contractor ten (10) copies for personal use, plus two (2) copies for each major contributing author. Total time shall not exceed twelve (12) months from the date of receipt of notice to proceed.

(4) The report shall include the following:

(a) An abstract and a brief narrative summary of the work performed in this study;

(b) Description of the study area;

(c) A discussion of each type of historical and architectural resource encountered or which may reasonably be expected to occur within the study area;

(d) A detailed description of the methods used in field work;

(e) A discussion of each site investigated by this study and past studies conducted within the study area and identification of data mentioned in 3. Study Approach. A detailed description of each resource encountered, presented both in support of the discussion in the text and also as valuable data for professional use of the report including:

1. General analysis of architectural styles or periods,
2. General characteristics of historical remains,
3. Significant people or events associated with the site,
4. Effects of intrusions on the integrity of the site,

5. if architectural resource is in original location; if not, did its relocation affect historical integrity of the property,

6. any alterations that could sacrifice its integrity and character,

7. unique or unusual features, if any, that distinguish each resource from similar surrounding properties

8. information which the property has yielded or is likely to yield.

(f) A site specific discussion of recommendations with justification for protection and management of known sites including:

1. Brief narrative describing the relative significance of sites located and priorities for work to be done at a later date including an intensive survey outline;

2. Statements of potential eligibility for nomination to the National Register of Historic Places, if any;

3. Action, if any, to be applied to all sites; if no action is to be applied to a site, so state with justification in the body of the report.

(g) Illustrations, photos, maps, tables, and graphic representations of data appropriate to the text, such as illustrations of diagnostic features of sites;

(h) One map showing those areas that were examined for cultural resources during this study and also those areas which were investigated within the study area in past studies. This map shall include all sites and show which sites were investigated in each study and indicate areas investigated in which no sites were found. Map for inclusion in the report must be presented in such a manner that exact site locations are not disclosed.

(i) A glossary of terms;

(j) Reference section with all sources referred to in text or used for report, personal communications, interviews, bibliography, etc.;

(k) Copies of all correspondence pertaining to review of the draft report. These are to include the comments of the State Historic Preservation Officer, Heritage Conservation and Recreation Service, peer reviews (if applicable) requested by the Government, together with responses to each of the comments given. The Scope of Work is to be included in this section; and

(l) List of principal investigators and field and lab personnel, with their qualifications, as an appendix.

(5) The final originals and two copies of the report shall be typed single-spaced on one side of paper with the margins set for reproduction on both sides of 8 x 10½ inch paper. One of the copies shall be assembled in accordance with the attached style sheet.

c. Other Information. Five copies of materials not suitable for publication in the report shall be submitted with the draft. These materials include feature maps, large amounts of specialized statistical analysis data, repetitious photographs, a complete listing of all materials recovered, where records are maintained, and other documentation.

d. Materials Not for Release. Materials dealing with exact site locations are considered confidential and are not to be published or released. Materials which shall accompany the report but which are not to be included in the report consist of:

(1) Five (5) copies of 7½ minute USGS base maps indicating exact locations of all architectural and historical resources and areas which were physically surveyed, including two of which are to be furnished directly to the SHPO. (If 7½ minute USGS maps are not available, 15 minute maps shall be used).

(2) Five (5) copies of survey forms for newly recorded sites discovered incidental to this contract, including two copies which will be furnished directly to the SHPO.

(3) Tables, showing approximate location of each site, site designation, relation to study features, types of threats, and recommended actions, if any.

(4) Photographs of representative cultural resource sites and collections from this study, if any.

5. FURTHER RESPONSIBILITIES OF THE CONTRACTOR AND GOVERNMENT.

a. Additional Work. The work identified in this document shall be complete in itself. There will be no assurance from the Government that additional work will follow, nor should such work be anticipated.

b. Data Availability. The Government shall provide the Contractor with available background information, maps, remotely sensed data reports (if any), and correspondence as needed. In addition, the Government will provide support to the Contractor regarding suggestions on data sources, format of study outline and report, and review of study progress.

c. Right-of-Entry and Crop Damages. Compensation for damages to crops shall be the responsibility of the Contractor. It will be the responsibility of the Contractor to obtain right-of-entry on lands not in Government ownership.

d. Publication. It is expected that the Contractor and those in his employ, may during the term of the contract, present reports of the work to various professional societies and publications. Outlines or abstracts of

those reports dealing with work sponsored by the Corps of Engineers shall be sent to the Kansas City District Office for review and approval prior to presentation or publication. Proper credit shall be given for Corps of Engineers' sponsored work, and the Corps of Engineers shall be furnished six (6) copies of each paper presented and/or published report.

e. Court Testimony. In the event of controversy or court challenge, the Contractor shall make available, as appropriate, expert witnesses who performed work under this contract and shall testify on behalf of the Government in support of the report findings. If a controversy or court challenge occurs and testimony of expert witnesses is required, an equitable adjustment shall be negotiated.

f. Safety Requirements. The Contractor shall provide a safe working environment for all persons in his employ as prescribed by EM 385-1-1, "General Safety Requirements," a copy of which will be provided by the Government.

g. Evaluation for National Register. The Contractor shall assess all sites within the study area to determine if they are potentially suitable for nomination to the National Register of Historic Places and shall make recommendations to the Government for the preservation, management, and nomination of those sites which appear to qualify. In those cases where the Contractor does not feel that the site is potentially eligible for the National Register, he will support his decision by facts and give his rationale justifying the decision.

6. STAFF AND FACILITY REQUIREMENTS.

a. Project Director and Historian/Historic Architect. Minimum qualifications are set forth in the proposed 36CFR66, Appendix C, which is provided on page 5381 in the Federal Register, Volume 42, No. 19 - January 28, 1977.

b. Consultants. Personnel hired or subcontracted for their special knowledge and expertise must carry academic and experiential qualifications in their fields of competence.

c. Equipment and Facilities. The Contractor also must provide or demonstrate access to adequate office space for proper treatment, and storage of records likely to be obtained from the project.

APPENDIX B
INTERVIEWS AND CORRESPONDENCE

<u>Date</u>	<u>Source</u>
12 May 1980	Ollie Anderson - Linwood, Kansas
14 May 1980	Mrs. Robert B. Morgan - Wabaunsee, Kansas
15 May 1980	Jean C. Dallas, Director, Riley County Historical Society and Museum - Manhattan, Kansas
15 May 1980	Mrs. Ralph C. Parks - Rural Riley County, Kansas
16 May 1980	Helen Dingler, Dickinson County Historical Society - Enterprise, Kansas
16 May 1980	Tom Branigar, Archivist, Eisenhower Library - Abilene, Kansas
17 May 1980	Grace Muilenburg - Manhattan, Kansas
17 May 1980	Mrs. Clarence Stadel - Manhattan, Kansas
19 May 1980	Douglas County Historical Society, Elis M. Watkins Community Museum - Lawrence, Kansas
7 August 1980	Kansas State Historical Society, Topeka, Kansas (see attached correspondence)
8 August 1980	Heritage Conservation and Recreation Service, U.S.D.I., Denver, Colorado (see attached correspondence)

Kansas State Historical Society

120 West Tenth • Topeka, Kansas 66612 • 913/296-3251

FD 13R

August 7, 1980

Paul D. Barber, Chief
Engineering Division
Kansas City District, Corps of Engineers
700 Federal Building
Kansas City, Missouri 64106

Attn: MRKED-BR

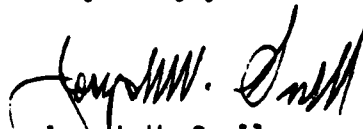
Dear Mr. Barber:

We have reviewed the draft report entitled "Historical and Architectural Reconnaissance, Kansas and Smoky Hill Rivers Bank Stabilization Study, Kansas," by R. Gail White of Fischer Stein Associates. It appears that the reconnaissance survey specified in the scope of work has been properly completed and that the report properly presents the results of that survey.

There were several minor items which our review detected. In the "Historical Context" on page 10, 17th century was twice used where it should have read 19th century. In the "Architectural Context" on page 31 a work by Trewartha was cited; however, it was not included in the bibliography on pages 51 to 54. The list of principal investigators, etc., and their qualifications, which was required by the scope of work, was not included.

Other than that we have no further comments at this time.

Very truly yours,



Joseph W. Snell
State Historic Preservation Officer

JWS/maw



JOSEPH W. SNELL, Executive Director
ROBERT W. RICHMOND, Assistant Executive Director
PORTIA ALBERT, Librarian
EUGENE D. DECKER, State Archivist
MARK A. HUNT, Museum Director
THOMAS A. WITTY, State Archaeologist
PATRICIA A. MICHAELIS, Curator of Manuscripts
FORREST R. BLACKBURN, Director of Publications
RICHARD R. PANKRATZ, Director, Historic Preservation Dept.
THOMAS P. BARR, Historic Properties Supervisor
LARRY JOCHIMS, Research Historian
M. D. KIDWELL, Fiscal Officer

OFFICERS: President, Sr. M. Evangeline Thomas, Selma; 1st Vice-President, William E. Unrau, Wichita; 2nd Vice-President, Donald R. McCoy, Lawrence; Secretary, Joseph W. Snell, Topeka; Treasurer, Robert W. Richmond, Topeka

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NYLE H. MILLER, Executive Director Emeritus
EDGAR LANGSDORF, Executive Director Emeritus



United States Department of the Interior
HERITAGE CONSERVATION AND RECREATION SERVICE
INTERAGENCY ARCHEOLOGICAL SERVICES—DENVER
P.O. BOX 25367, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

IN REPLY REFER TO:

1201-05(((W530)

AUG 08 1980

Mr. Paul D. Barber
Chief, Engineering Division
Department of the Army
Kansas City District
Corps of Engineers
700 Federal Building
Kansas City, MO 64106

Attention: Mary Lucido

Dear Mr. Barber:

We acknowledge receipt of the draft technical report entitled, "Historical and Architectural Reconnaissance, Kansas and Smokey Hill Rivers Bank Stabilization Study, Kansas." We regret that we are unable to review this report in response to your request of July 24, 1980. The impending regionalization of Interagency Archeological Services has curtailed our capabilities for peer review and coordination activities. However, lack of review does not constitute our agreement with any or all parts of the report. Enclosed please find a copy of the subject report.

Sincerely yours,

Chief, Interagency
Archeological Services - Denver

Enclosure

APPENDIX C

RESUME

ROGER GAIL WHITE

University of Illinois - 1973 - Bachelor of Architecture (with honors)
Boston University, Graduate Studies in American Vernacular Architecture
and Folklife
Smithsonian Institution, Museum Programs Workshop in Horticulture in
Museums and Historic Houses and Sites

EXPERIENCE:

- | | |
|-------------|--|
| 1980 | Entered private practice as historic buildings consultant. |
| 1976 -1980 | Historic architect on staff of Fischer-Stein Associates, Carbondale, Illinois. Responsibilities included conducting historic structures analysis, restoration/rehabilitation planning, and completing historic/architectural surveys and assessments for public and private agencies in the midwest and upper south |
| 1973 - 1976 | Technical assistant to Ministry of Public Works, Venezuela, through Peace Corps program. Responsibilities included working with architectural/urban planning team in preparing master plans for three communities and a development plan, including guidelines and policies for restoring the historic central city area |

PROFESSIONAL AFFILIATIONS:

Licensed Architect, State of Illinois, Certificate No. 001-0009578;
professional memberships in: American Institute of Architects, Society of Architectural Historians, The Victorian Society in America, The National Trust for Historic Preservation, and The Society for the Preservation of New England Antiquities

PUBLICATIONS: (Selected)

- | | |
|------|--|
| 1977 | <u>Historical-Architectural Evaluation of Vernacular Architecture in the Meramec Park Lake Area.</u> A report prepared for the University of Missouri, Columbia. Fischer-Stein Associates, Carbondale, Illinois |
| 1978 | <u>Vernacular Architecture of Early Southern Illinois. In A Cultural Resources Overview of the Shawnee National Forest.</u> Prepared for the U.S. Forest Service, Eastern Region, Milwaukee, Wisconsin. Fischer-Stein Associates, Carbondale, Illinois |
| 1978 | <u>Preliminary Assessment -- Historic Sites and Historic Architecture, Kansas River and Tributaries, Kansas.</u> A report prepared for the U. S. Department of the Army, Corps of Engineers, Kansas City, Missouri |

Resume of Roger Gail White (continued)

- 1978 (Co-author) Cultural Resources Survey and Assessment -- West Broadway Widening Project, Columbia, Boone County, Missouri. Fischer-Stein Associates, Carbondale, Illinois
- 1979 (Co-author) A Cultural Resources Overview and Assessment, City of Perryville, Perry County, Missouri. Fischer-Stein Associates, Carbondale, Illinois
- 1980 A Preservation Plan; Aaron G. Cloud Home/Mary E. C. McCoy Memorial Library, McLeansboro, Illinois. Fischer-Stein Associates, Carbondale, Illinois

END

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