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United States Department of the Interior
National Park Service

National Register of Historic Places Multiple Property Documentation Form

This form is for use in documenting multiple property groups relating to one or several historic contexts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. For additional space use continuation sheets (Form 10-900-a). Type all entries.

A. Name of Multiple Property Listing

Rural Finnish Log Buildings of St. Louis County, Minnesota, 1890-1930s

B. Associated Historic Contexts

The Iron Range, Minnesota, 1880s-1930s
Northern Minnesota Lumbering, 1870s-1930s
Finnish Log Architecture, Rural Finland and Minnesota, 1880s-1930s

C. Geographical Data

Boundaries of St. Louis County, Minnesota

☐ See continuation sheet

D. Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of the Interior's Standards for Planning and Evaluation.

Signature of certifying official Ian R. Stewart — Date 1/25/90

Deputy State Historic Preservation Officer

State or Federal agency and bureau Minnesota Historical Society

I, hereby, certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

Beth Boland — Date 4/9/90

Signature of the Keeper of the National Register

E. Statement of Historic Contexts

Discuss each historic context listed in Section B.

Introduction

The Rural Finnish Log Buildings of St. Louis County, Minnesota, 1890-1930 Multiple Property Documentation Form consists of a variety of sites, all of which are located in the east-central part of the county. The sites comprise four property types which represent the settlement patterns of this ethnic group during the late nineteenth and early twentieth centuries. These buildings and farmsteads, although dispersed over several miles, form one of the most conspicuous collection of hewn timber buildings associated with a single ethnic group assembled in one area of the United States. The multiple property group is directly related to three historic contexts: 1) The Iron Range, 1880s-1930s; 2) Northern Minnesota Lumbering, 1870s-1930s; and 3) Log Architecture, 1880s-1930s. Finnish emigres initially were drawn to northeastern Minnesota due to employment opportunities in the iron ore mines, lumber industry, and later by the potential for settling rural cutover lands following turn-of-the-century clear cutting. The log farmsteads are tangible products of these developments, as well as outstanding examples of Old World building technologies in a New World setting.

The multiple property group for St. Louis County includes properties in several townships and was derived from the parameters of an intensive level survey. Additional sites representing the same historic contexts and located within the county may be identified in future surveys.

Geographical Background

St. Louis County is located in northeastern Minnesota and occupies an area extending from the western tip of Lake Superior north to the Canadian border. The largest county in the state, it was established in 1855 and includes 6,661 square miles -- more land area than Connecticut and Rhode Island combined. Iron ore deposits underlying St. Louis County, among the world's richest, were formed from about 1.8 to 2.7 million years ago. Glacial activity during the Ice Age exposed the bedrock while leaving a variety of soil deposits. Pre-settlement vegetation primarily included pine forest mixed with bogs and swamps, while today the major forest types are almost exclusively aspen-birch with small pockets of spruce and fir. Dozens of rivers and streams wind through the landscape, and numerous lakes within the Quetico Provincial Park-Boundary Waters Canoe Area blanket the northern third of the county.

[X] See continuation sheet

HISTORIC CONTEXT: The Iron Range, 1880s-1930s

Historically, iron ore has been extracted from three areas or "ranges" in the state: the Vermilion, the Mesabi, and the Cuyuna Ranges. Ore was shipped from Minnesota's first iron mine on the Vermilion Range in 1884, and soon after the first shipment of ore was made a variety of settlers began to populate the new settlements of Tower and Soudan. In 1890 ore was discovered on the more extensive Mesabi Range, and two years later the first ore was shipped from Mountain Iron. Extending in a northeast-southwest direction for approximately 100 miles across all of St. Louis County and into Itasca County, the Mesabi Range was destined to become the nation's largest iron ore producer. Extraction of ore began on the Cuyuna Range in 1911 with an open pit mine near Crosby.

The opening of the Vermilion and Mesabi Ranges in the 1880s and 1890s was the fundamental reason Finns settled in northeastern Minnesota. Finnish immigrants already had experience working in underground mines in northern Wisconsin and the Upper Peninsula of Michigan. Many of these Finns emigrated to Minnesota while others traveled directly from Finland, and all of them came because of economic opportunities. As the largest mining area in the state, the Mesabi Range offered Finns perhaps the greatest potential for employment in the region. Transportation from Duluth and other ports was simplified by the construction of railroads used to transport ore, and the sheer size of the Range all but guaranteed at least a temporary job for any able-bodied person. Between 1895 and 1905 the number of active mines on the Mesabi grew from 16 to 63 and the amount of iron ore shipped increased from 2.8 million to 20.2 million gross tons. To meet this increasing demand for iron ore, thousands of Finns and other immigrants traveled to St. Louis County in search of work. In 1880 there were only 71 Finns in St. Louis County, but by 1900 that same figure had increased to 5,617. By 1905 the Finnish population was the largest of the six major foreign-born immigrant groups on the Mesabi Range, and they comprised some 40% of the total foreign-born population in twelve of its largest communities. In 1920 St. Louis County's Finnish population peaked at 17,342 people.[1]

Despite claims that the landscape of northeastern Minnesota resembled Finland,[2] economic opportunity was by far the most important factor influencing Finnish settlement patterns. Immigrants were naturally attracted to areas dominated by a major industry such as northeastern Minnesota's iron mines, which needed large numbers of unskilled laborers. Yet a majority of the arrivals had traditional, agrarian backgrounds and came from the landless or small landowning

classes. Because they traveled to Minnesota with few resources and arrived relatively late in comparison to other European immigrants, Finns were forced to take low-paying, dangerous, and physically demanding jobs on the Iron Range. Many immigrants found working in mines -- with the long hours, unhealthy and dangerous conditions, and paternalistic, company organization -- to be less than desirable. In addition to being confined to low level labor positions, Finns were at the mercy of an industry that was highly sensitive to the general business climate of the nation. As a result, they had to endure economic depressions (such as in 1893, 1904 and 1905) and work slowdowns which often led to mine closings and layoffs. "Even in good season employment was often irregular as mines were temporarily deserted and others opened without apparent purpose or design..."3 Furthermore, the occupational structure of the Iron Range severely restricted the types of jobs available to Finns: the overwhelming majority worked as common laborers at unskilled positions. In 1905 in the Mesabi Range town of Eveleth, 90% of the total Finnish male labor force was employed as day laborers and miners.4 Finns frequently moved from one mine to another, but they continued to hold the lowest level jobs, in part because they were one of the last ethnic groups to come from Europe and thus were not displaced by later arrivals.

These employment circumstances inspired discontent among Finns, and resulted in drastic alternatives like the 1907 and 1916 strikes by miners on the Mesabi Range. As a result of such industrial strife, hundreds of Finns were blacklisted by mining companies and forced to find employment in other occupations, leave the Iron Range, or take up land in the rural areas. One writer has suggested that the movement to the land by Finns was essentially caused by labor problems on the Range. "In the aftermath of the 1907 strike, the Oliver Mining Co. developed the infamous blacklist and systematically denied Finns reemployment... Oliver's repression forced over 1,200 Finnish workers out of their major source of employment in northern Minnesota."5 The titles of Finnish books written in America during the early twentieth century such as "From Mine to Grave," "Life in Perpetual Night," and "Slaves of Horn" indicate the negative attitude caused by the mining environment. Inevitably, the dangerous and depressing working conditions underground, as well as concern for the health of families led many Finnish immigrants to reconsider their well-being in the mining and industrial towns. One Finnish immigrant, a quarter of a century after leaving the mines, expressed his anger toward the mining industry by proclaiming that "no Finn in Embarrass will ever go back to the mines. Many have come from the mines with bad lungs and got healed here....We do not want hospitals, we want farms."6 Despite an interest in establishing farms

and an expanding transportation network around Duluth, few Finns, according to cultural geographer Matti Kaups, attempted to settle in northeastern Minnesota until after the turn of the century because the area was still a largely unpopulated wilderness beyond the agricultural frontier.[7]

HISTORIC CONTEXT: Northern Minnesota Lumbering, 1870s-1930s

At the time of the first permanent white settlement in Minnesota in 1819, about 40 per cent of the state -- essentially the entire north half except the western area of the Red River Valley -- was covered by virgin forests of pine, spruce, and fir. The shallow, acidic, and infertile soils in many parts of northern Minnesota were ideal, and continue to be better suited, for the growth of coniferous timber than for agricultural production.

Systematic removal of lumber in east-central Minnesota originated in the 1830s by Yankee entrepreneurs who used the Mississippi, Rum, and St. Croix Rivers to transport logs to mill sites along the southeastern border of the state. Known as the "St. Croix lumber triangle," logging activity in this area gradually gave way by the late-1880s to timber extraction in northern Minnesota, which extended north from the east banks of the Mississippi to the Canadian border. The commercially valuable softwoods of northern Minnesota formed the base for the state's lumbering industry in the late nineteenth and early twentieth centuries, and served as a primary attraction for early Finnish immigrants who populated northeastern Minnesota. This latter phase of lumbering was considerably more extensive in scale than initial efforts, primarily because of transportation developments and technological innovations that contributed to its rapid growth after 1870.[8]

Railroad construction in the Upper Midwest played an important role in northern Minnesota's lumber industry. As was the case throughout the state, with the railroad came rapid settlement and an able work force. In 1870 land north of the Twin Cities was accessed by the completion of the Lake Superior and Mississippi Railroad, a line that linked St. Paul with the fledgling community of Duluth. The first Finns reached Duluth in 1868, apparently arriving from the Keweenaw copper mines of Michigan's Upper Peninsula. St. Louis County had only 71 Finns, and just 127 Finnish-Americans populated the six counties (Aitkin, Carlton, Cook, Itasca, Lake, and St. Louis) of northeastern Minnesota in 1880.[9] It was not until 1892, however, that the Duluth and Iron Range Railroad (later the Duluth, Mesabi and Iron Range) laid tracks north from the shore of Lake Superior through the hamlet of Embarrass to its terminal

in Tower. Embarrass gradually became a popular travel route for Finns, and by the early twentieth century this small community had grown into one of many enclaves for Finnish settlement in the area.

Prior to massive emigration, the lumber industry in Finland experienced dramatic growth coupled with a great demand for sawyers and other workers. The industry continued to expand during the turn of the century, when thousands of Finns came to Minnesota. This experience allowed Finnish immigrants to assume a variety of mostly unskilled positions in Minnesota's growing lumber business. Some of these Finns found work in Duluth's sawmills, as the port city had become a bustling lumber center in the late 1880s. But the industry's structural organization around the mid- to late nineteenth century ensured that Finns would work only as common laborers. Because of their skill with the axe and experience in Finland, however, they were highly regarded woodsmen. The importance of Finns in one lumber company is illustrated by the comments of a former camp stock clerk who, in recalling his time at Elbow Lake, said "we anticipated a large Finnish element in the winter crew and we built a special Finnish bathhouse there..."[10] Similar comforts were reported at other lumber camps where Finns worked.

The introduction of the logging railroad was the most important development in the evolution of Minnesota's timber industry after 1890. The advent of the railroad opened previously inaccessible timberland to logging activity, and provided easier, faster movement of large amounts of lumber to local markets. The Duluth and Northern Minnesota Railroad, for example, was constructed in 1906 to haul logs from the forests to various Lake Superior ports for shipping and milling. Generally speaking, the railroad proved to be a boon and a burden to the Finns by creating and eliminating jobs in undeveloped areas of northeastern Minnesota. At its peak, the Virginia and Rainy Lake Lumber Company operated up to fourteen camps with 4,000 men working in the forests;[11] numerous logging businesses such as the St. Croix Lumber Co., the North Star Timber Co., and the Alger-Smith Logging Co. regularly employed Finnish immigrants. John and Jacob Saari, two Finnish brothers, operated a number of lumber camps in St. Louis County, and during the winter of 1914-1915 they employed an estimated 2,500 men, many of whom were undoubtedly natives of Finland. In the early 1900s many Finns bought or rented cutover lands as timber contracts from the Duluth and Iron Range Railroad, selling timber to area sawmills.[12] The railroad also encouraged the opening of new sawmills north of Duluth in towns closer to the source of timber such as Virginia, Ely, McKinley, Mesaba, and Tower. The construction of these and other sawmills further assisted Finns, and was indicative of a trend based on the development of iron ore mines north of Duluth which had created an increased demand

for timber. For those Finnish immigrants who had already been hauling trees for the lumber companies, however, the railroad drastically reduced the need for transporting lumber by horse, thereby eliminating a large part of the Finn's revenue.

Although the first Finnish immigrants settled in Minnesota in the late 1860s, they comprised only a small percentage of the total Finnish immigrant population which came to America between 1864 and 1914. The largest number of Finns, about 270,000, or 82 percent of the total, emigrated to this country between 1893 and the beginning of World War I.[13] Since Minnesota had been opened to settlement for nearly half a century, the most desirable agricultural land was taken by earlier immigrant pioneers. Thus, for the former Finnish miner or new arrival with few financial resources, mediocre cutover lands (land previously logged by lumber companies) surrounding the Iron Ranges held the greatest opportunity for establishing a farm or homestead. The idea of owning even marginal land was appealing to most Finnish immigrants, because their prime objective was to establish themselves as small independent farmers. Agriculture had been their livelihood in Finland, and the agrarian lifestyle attracted them even more in Minnesota. One historian suggested that "probably no other group could take over stump land, perhaps also burned over, and make successful farming country of it."[14] The 1920 Federal census figures showed that 47 percent of the 149,824 foreign-born Finns lived in rural areas, including nearly 15,000 farm operators of which 4,703 resided in Minnesota.[15]

Procuring land was difficult for most Finns, since few had sufficient funds to acquire land when they arrived in the New World. The majority had to work in the mines or woods before they could afford to buy a parcel of property. Alec (Alex) Palo, for example, originally was employed in an iron mine near Virginia, but by 1898 he had applied for a homestead in Embarrass Township, settling on the land about two years later. Some Finns labored underground or in the pineries only during the busy season, while their wives and children worked the land during the summer.[16]

Developing the cutover lands into productive, agricultural farms proved to be an arduous task requiring considerable labor from each member of the family. Second-growth trees, boulders, stones, and stumps were cleared by hand or with the help of a horse. Stumps especially were a nuisance since they had to be chopped or pulled out with chains or a machine; if the farmer could afford it, he used dynamite to blast them out of the ground. An Embarrass Township pioneer described a typical scene involving a homesteader attempting to clear a swamp-covered landscape: [The] "settler stood up to the knees in water, among the stubborn stumps and charred stems of dead trees."[17] One home-

steader's wife, who recalled how her family worked their farm, said she "hacked away at wild hay between bushes with a sickle while my husband cut down trees and cleared away underbrush. Our children carried the hay into open spaces to dry."[18] Cutover lands also tended to have acidic, rocky, and infertile soil that proved to be largely unsuitable for agricultural purposes. The original 1882 Surveyors Report for Embarrass Township provided the following landscape description:

> This township lies on the Embarrass River, which runs through the southeastern part of the township, and the Pike River, which flows through the western part of the township, and on the division between the two rivers. The land along the river is very marshy with swamps running nearly across river to river. The upland in most of the township is covered with coarse granite boulders of all sizes and shapes. The timber on the upland is nearly all fire killed and the land is covered with dense growth of young timber and brush. The soil is generally third rate.[19]

Original Tract Book accounts describe many parcels of land in the settlement area simply as "swamp land." Furthermore, the growing season of northeastern Minnesota was at best short, with the first fall frost coming between September 6-15, and the spring thaw delayed sometimes as late as the end of May. In spite of these less-than-ideal conditions, Finns remained attracted to the land.

Historical records indicate that a majority of Finns in the cutover area obtained their land from railroads, logging companies, and real estate agents. Salesman frequently lured the Finnish pioneer by associating independence and land ownership, and with assertions of economic security and improved social standing. Newspapers such as the Virginia Enterprise (as well as numerous Finnish language papers) also touted the benefits of having property in the area: "The cut-over lands of the region which can be purchased on easy terms at prices ranging from five to fifteen or twenty dollars per acre, offer opportunities to men of limited means to become owners of farms which can be improved and paid for largely through their own labor."[20] In 1907 the Duluth and Iron Range Railroad required a down payment of only fifty cents per acre and allowed the buyer to pay off the balance over a ten year period. As late as 1916 the railroad owned nearly 6,200 acres of land scattered among 28 sections in Waasa Township; over 7,200 acres were claimed by the company in adjoining Embarrass Township, much of it on either side of the Embarrass River. Other private land development companies held property in this part of the county. The Schussler Co. controlled 3,444

acres and the Minnesota Land and Dairy Co. owned 960 acres in Waasa Township. Mining interests such as the Oliver Mining Co., the Neville Iron Co., and the Tubal Iron Mining Co. also controlled various parcels in the county.[21] One mining company in Michigan sold 40-acre plots to prospective farmers with an understanding that all but two-and-one-half acres of the timber cut by the settler (for which he was paid) was owned by the company.[22]

Other emigres secured property through the Homestead Act of 1862. This Congressional Act allowed any adult citizen to purchase up to 160 acres of land for a token fee provided they settled on the land for at least five years, and improved the parcel by constructing permanent buildings and cultivating crops. To secure title or obtain a "final proof" of the property, at least two witnesses who usually lived nearby authenticated that the homesteader had truthfully abided by the law.[23] Not all homesteaders successfully "proved up" and secured a patent for their land, and many of those who did succeed went beyond the five year period before they could take ownership. This was caused, in part, by the fact that settlers frequently had to leave the farm to provide a cash income for their families. Many homesteaders worked as loggers in the woods during the winter, often leaving their claims for several months at a time.[24] Others earned extra money by selling cedar and tamarack poles for use in the mines, and cross-ties to the Duluth and Iron Range Railroad.[25]

In order to gain insight into the development of Finnish homesteads in St. Louis County's cutover region, data from 25 final proofs -- thirteen from Embarrass Township, eight from Waasa Township, and four from Pike Township -- were compiled as shown in Table 1. These homestead proofs contain a variety of important information including the types of structures erected on the claim (some with specific details such as size and number of interior rooms), as well as the number of acres of land cleared, the type and yield of crops grown, and other references to improvements that were made.[26]

While the Homestead Act allowed settlers to claim as many as 160 acres of land, many Finns in the cutover region instead selected 40- or 80-acre parcels. The average size of a homestead in the three townships was 122 acres. Clearing the property of stumps, rocks, and trees was extremely time-consuming; although not tabulated due a lack of data, of those proofs in which it was recorded, Finns were able to clear only one or one-and-one-half acres of land annually prior to securing their patent. After five to six years of farming, the typical homesteader had cleared a total of ten acres of land, of which almost six acres were plowed or cultivated. Typically the land was cultivated for one of several varieties of grass (hay, timothy, or rye), or for potatoes,

which were a staple for the Finns in the early twentieth century. Other crops included oats, wheat, and an assortment of vegetables such as rutabagas, turnips, and onions. Homesteaders were able to file their final proof after almost six years, and many spent between a few weeks and several months each year off the farm in search of other work. The average Finn was just over 40 years of age when he filed his final claim, with the range being from 27 to 55 years. Seventy-eight percent of the homesteaders were married when the final patent was obtained.

TABLE 1

Characteristics of Finnish Homesteads in
Embarrass, Pike, and Waasa Townships, Minnesota,
Six Years After Filing Initial Claim: 1897-1919

Characteristic	Average
Size of Holding	122 acres
Total Land Cleared	10 acres (N=24)
Total Land Plowed/Cultivated	5.9 acres (N=14)
Time Between Filing Claim & Final Proof	5.7 yrs
Age of Homesteader When Filing Final Proof	40.8 yrs
Married Homesteaders at Time of Filing F.P.	78%
Homesteads With a Sauna	72%
Homesteads With Hay Barns	76%
Number of Major Buildings on Homestead	4.8
Size of Dwelling Unit	381 sq. ft. (N=17)
Value of Property and Improvements	$702

Unless otherwise noted, these averages were determined from 25 homesteads in the three townships.

Source: Copies of Homestead Proofs (National Archives and Records Administration, Washington, D.C.)

Finnish homesteaders erected an average of about five major buildings on their land during the initial period of settlement. The most common structures were a house, sauna, barn (for either horses or cattle), hay barn, and root house. Homestead proof records did not provide details about the barn so it is not known what kind of animals may have been sheltered in such a building. Just over three-fourths of

the Finns had at least one field hay barn or lato (several homesteaders had two or more), indicating the importance of this agricultural building. The homesteader's house had an average of about 380 square feet and typically contained a minimum of two interior rooms. Finally, the average Finnish homestead in the three townships was worth a total of approximately $700 when the final claim was filed. A number of variables potentially influenced this figure. Estimates of value were highly subjective and often depended on the discretion of the appraisor. The quality of land varied somewhat from one homestead to another, and poorly-drained or marshy property obviously held less value than a parcel on higher ground with more suitable soil. Other homestead improvements such as fencing and a greater number of outbuildings also may have boosted the assessment.

HISTORIC CONTEXT: Finnish Log Architecture, 1880s-1930s

In order to understand fully the historic context and significance of the log buildings in St. Louis County, it is necessary to provide an overview of the built environment in rural Finland, and to examine in detail the antecedents of farmstead patterns and buildings the Finnish immigrants constructed in Minnesota. While the following discussion is in reference to Old World building forms and construction techniques, most of this material is equally applicable to those farms and buildings found in northesatern Minnesota. A discussion of these latter resources in relation to Continental building types, forms, and construction techniques can be found in Section F, Associated Property Types.

Traditional Finnish Farmsteads

In Finland, two basic types of farmstead arrangements have been distinguished. In the western parts of the country early farmsteads typically were arranged with buildings on four sides to form a tightly enclosed courtyard. The inner yard was frequently divided into two areas by a fence or building containing a roofed passageway. In the double courtyard, one space was designed for domestic use ("man-yard" or miespiha), while the other area was delineated by buildings that sheltered livestock ("animal-yard" or karjapiha). Buildings grouped to form the domestic area included the house; grain storage buildings or aittas; another storage structure with summer sleeping quarters above called a luhta-aitta; a woodshed; and a shed for storing implements. Clustered around the animal yard were stables, barns, and sheds for

cattle, horses, sheep, and pigs, and at least one lato, a small hay storage building. Because horses were of vital importance, the stable was sometimes located by the domestic yard. Other buildings that posed a fire hazard to the farmstead such as the sauna, blacksmith shop, and riihi (for drying, threshing, and winnowing grain), were naturally located a safe distance from the center of activity.[27]

The second major type of farmstead layout, found more frequently in central and eastern Finland, followed a looser arrangement in which buildings were scattered on the property around the house. One scholar, in referring to farmstead arrangement in Finland's interior, suggested that "the way of grouping the many small buildings varied so much that no general rule can be observed for the whole area."[28]

Domestic Buildings

In rural Finland, the first wooden dwelling was the pirtti, a simple, one-room log structure which utilized a chimneyless stone hearth or kiuas to provide heat and light. Popular among the Baltic-Finnic peoples near the end of the Pre-Roman Iron Age, the pirtti was also known as a smoke hut because it had no windows; ventilation occurred through an opening in the ceiling or wall, or through the door. Nearly square in shape, it typically measured between 13' x 16 1/2' to 18' x 23'. Round logs were joined at the corners with saddle notches, and gaps between the logs, called interstices, were filled with clay and moss chinking. Although the pirtti became the dominant house form through the 1500s and remained in use in remote regions of central and eastern Finland into the 20th century, it was not constructed by settlers in Minnesota.[29]

The evolution from the pirtti to a larger house occurred with the introduction of a chimney above the hearth. By the 17th century the two-room Nordic pair house or paritupa had become the most popular dwelling form among rural Finns; it continued to be constructed up to the late-1800s, although only in a few areas. The paritupa was distinguished in form by two rooms of about equal size (essentially two pirtti, one with a chimney), aligned on the same axis and separated by a breezeway. The second room, or tupa, in the pair house was not always identical in dimension or built at the same time as the first room. Typically the original room was used as a multi-purpose dwelling space and the second tupa served as a guest room or for storage, although baking, grain drying, bathing, and other functions were also performed in the latter.[30]

A similar but more significant house form evolved from the paritupa. This building consisted of a pair house and enclosed breezeway,

resulting in a three-bay plan in which the two end bays were divided by an unheated hallway or porstua which typically provided storage space. Both forms of the pair house were common in Finland during the 19th century, and because they enjoyed widespread use the paritupa had a major impact in shaping the country's cultural landscape.31 At the end of the 17th century a large, symmetrical, two-story house type (kaksikerroksinen asuinrakennus) that originated in Sweden had become popular in Finland's western urban areas. Later, these expansive houses were constructed by wealthy farmers and pastors, particularly in central Finland and south Ostrobothnia, an area associated with a period of prosperity from the end of the 18th century to the late 19th century. Measuring up to 30' wide and 90' long and with as many as ten interior rooms, these formal houses were usually covered with sawn boards and painted red, light brown, or light yellow. Although a 1750 record of buildings in the city of Waasa, Finland indicates the presence of 34 two-story dwellings, this form comprised just a small minority of total houses in the country in the late 19th century.32

Another house type borrowed from Sweden was the rectangular-shaped, one-and-one-half-story dwelling or puolitoistakerroksinen asuinrakennus, which first appeared in Finland in the 18th century. These houses were characterized by distinctive, slit windows located just under the eaves that provided light to an unheated loft which served as storage space or a summer sleeping room. A wood frame porch, either open or enclosed, sometimes covered the main entrance.33

The fourth major type of house in rural Finland consisted of a one-room structure, rectangular in shape and one-story in height (yksitupainen asuinrakennus). Usually built by tenant farmers from western Finland after 1750, the one-room dwelling was also found in urban areas. The interior was actually subdivided into two or three spaces that contained either a heated multi-purpose room and unheated porch (porstua), or a central room with a bisected porch, the back half of which served as a heated bedroom.34

The final dwelling form was known as the Karelian house, a two-story structure with the house and barn linked together under a single roof. Named for the area of northern Russia from which it was commonly found, the Karelian house had an open first floor that sheltered cows and other livestock, while the upper floor served as living quarters and storage area for hay and wagons (the latter of which was accessible by ramp). If a farmer had a large family and could afford to, he sometimes built a fully enclosed, two-story dwelling which provided additional living space. Inside the main room, in a corner opposite the hearth, was the most honored place in the house known as God's corner or suurtsuppa, an area where orthodox families hung their religious icons.35

In St. Louis County, the survey did not attempt to identify specific types of domestic buildings, although one house form was recorded more often than others. This dwelling is similar to the third type discussed above, but without the characteristic slit windows in the loft.

Agricultural Buildings

The granary (aitta) is one of the earliest and perhaps the most important of all the Finnish farmstead buildings. First recorded in southwestern Finland in 1400, the aitta primarily functioned as a storage facility for grain, but also held other household food and belongings as well as valuable farm tools. The aitta was a small but sturdy building with a raised platform floor to protect against food spoilage. A variant form of the aitta is the luhta-aitta, a two-story building which combined grain storage below and summer sleeping quarters on the upper floor.36

Of the buildings used to shelter animals, the stable or talli served the most important function because the horse historically was the main source of power on the Finnish farm. Frequently located near the farmhouse, the stable was typically a one-story building with small windows flanking the door. The interior had a wooden floor and ceiling, both of which were laid across log joists. A small hinged door in the ceiling near the entrance provided access to the loft in which hay was stored to aid in heat retention.37

According to Heimonen, until about 1920, when the dairy industry expanded, cattle in Finland received little serious attention by farmers. As a result, the cow barn or navetta was not as well constructed as the stable.38

The field hay barn (lato), always located some distance away from the farmstead, was a distinct element within the Finnish farm. It was known to exist in western Finland as early as 1411 and its use corresponds to the Medieval concept of housing crops in separate buildings. In his explanation for the prevalence of the lato, Heimonen concluded that "each farmer's fields were exceedingly numerous and scattered [thus] it was impossible for him to take the time during the busy hay-harvest to haul his hay to the farmstead for storage."39 As a result, a small lato was built on nearly every field to provide at least temporary hay storage. A shortage of farm labor also contributed to the construction of these unique buildings because most farmers had to rely on their immediate family during the harvest, and with few workers it was difficult to transport large quantities of hay long distances to a central location.

The lato was a small and simply constructed building. It was built

of saddle notched, round logs, and distinguished by walls that sloped inward from top to bottom. The logs were spaced a short distance apart and the wood floor was raised slightly above ground; all of these features promoted better air circulation to more effectively dry the hay. Hay was often stored against the walls while the center was left open. In this technique the hay created less downward pressure and thus dried more quickly to prevent spoilage.40

The ubiquitous steam bathhouse, or sauna, was the most characteristic of all the Finnish farmstead buildings. In 1937, about 80 percent of the farms in Finland had their own sauna. Its use and tradition dates well before the Middle Ages. Originally it was constructed as an integral part of the farmstead and carried more prominence than today. In addition to functioning as a bathhouse, the sauna served as a washroom for clothes, it was used for threshing grain, as a smokehouse and drying facility for meat and fish, and as a birthing room. In Europe the sauna was revered by Finns as a unique, nearly ritualistic place in which one was calm and did not swear, sing, speak loudly, say God's name, or exhibit rowdiness. As late as the 1940s, bathing by any other means was unknown in rural Finland, and in Helsinki only a small number of apartments and hotels offered bathroom facilities.41

The sauna was a small, one-story building constructed of tightly hewn log walls with two interior rooms and a door in the gable end. Bathers entered a small dressing room and then passed through a low door into the steam room. The steam room contained a stove (kiuas) built adjacent to the door made of indigenous unmortared stones piled about two feet high. The remaining space was occupied by a raised platform (lavo) and several steps leading to it. In a traditional smoke sauna (savusauna), the stove fire was lighted many hours prior to entering the building, after which a single vent in the ceiling or back wall was opened to allow smoke to escape. Later, the kiuas was constructed with a stovepipe and a small glass pane was installed in the previously windowless steam room.

The last major outbuilding that in the past was considered as an integral part of the Finnish farmstead was the riihi, a combination grain drying, threshing, and winnowing building. Originally located within the courtyard plan, the riihi, like the sauna, was eventually removed from the farmstead because as farms grew in size and value the risk of destruction by fire also increased. It dates to the Middle Ages and remained in use among small farmers into the twentieth century in western Finland.42

One type of riihi that became common during the 16th and 17th centuries had a raised threshing floor (luuva) and a separate work room.

Another variation which originated in western Ostrobothnia and western Finland utilized a kiuas outside the drying room; heat entered the riihi through small openings. A third design, and perhaps the most frequently used, was built with a stove inside the structure.

Finnish Construction Techniques

Nearly all early folk houses in Finland were built using horizontal logs which had saddle notched corners that protruded at the ends. Builders typically felled one of several coniferous softwoods such as pine, fir, or spruce during the winter, when farm work was limited and trees could be more easily transported on snow. The precise time to cut a tree was determined by phases of the moon, with the most favorable schedule occurring during the last quarter. A calender of the Finnish National Enlightenment Society has a drawing of a tree being felled early in 1895, while the symbol of a house under construction is placed in the month of April. Builders customarily allowed the building frame to dry during the summer and finished construction in the fall.[43]

Houses, saunas, animal barns, and other structures in which heat retention was necessary were built with a 2,000-year-old method of wall construction that resulted in the distinctive technique of fitting logs together so as to render obsolete the use of chinking.[44] Known as the north European log construction technique, this method involved using a double-pointed metal vara or scribe to trace the outline from the top of each log to the underside of the log immediately above. The scribed wood was then hewn to match the adjoining log creating a smooth, parallel wall surface. In addition to shaping the top and bottom of the log, a longitudinal groove was carved into the underside for the full length of each log, resulting in a narrow gap that was typically filled with a moss insulation. Finally, the interior and exterior wall surfaces were hewn flat to allow for the application of mud plaster or similar material on the inside, and board sheathing on the outside.[45] The major advantage of this system was that all logs fitted snugly together, thereby eliminating the need for chinking. The method also resulted in tighter, warmer buildings -- an important consideration in both Finland and Minnesota.

The north European technique (which probably originated in Sweden and was used in other Scandinavian countries), created structures that were significantly different than log buildings constructed elsewhere in Europe. The method allowed Finns to erect buildings with all exterior walls of logs, and to carry them for the full height of the gable up to the ridge. This created a solid building mass that was ideally suited to the local climate.

Structural stability was gained by joining the horizontal timbers at the corners by a variety of interlocking joints. The corner notch is essential because it serves to prevent lateral slippage of the beams and bears a substantial part of the structure's total weight. A faulty corner notch results in a faulty building and usually indicates the overall quality of construction.

The earliest known evidence indicating Finnish use of interlocking horizontal logs as a permanent building type is from about 800 B.C. - 200 A.D.[46] Since the Middle Ages, wood has played a major role in the construction of buildings throughout much of Finland and Scandinavia. Its use corresponds with a coniferous forest area[47] above 55 degrees north latitude where timber structures are common.

The simplest and oldest type of corner notch employed in Finland is the saddle notch (ladonurkka, koirankaulanurkka). Although it was no longer used in nineteenth century Finland for building houses, the saddle notch was commonly found on hay barns, woodsheds, and structures with walls of round logs spaced apart to encourage air circulation. Perhaps the most common corner joints were the full dovetail (kirkkonurkka, sinkkanurkka), and the common block or double notch (ristinurkka, sahanurkka), two notches frequently used on houses and outbuildings in which protection from the elements and conservation of heat were important. The final method of joining logs at the corners is called the tooth or lock notch (lukkonurkka, hammasnurkka), probably the most difficult to fashion, and hence the notch used the least by builders.

Finnish craftsmen also made frequent use of wooden pins to stabilize walls and keep logs from sliding out of place. Resembling large pegs, the dowels were crafted from the same wooden building materials as the house. Driven vertically into holes (salavuurna) bored by augers, they are most often found near door and window openings and sometimes at the corner of a building. The gable ends of hay barns often exhibit pins from the sill to the ridge. The builder's basic tool, a broadaxe (piilu), came to western Finland from Sweden and had a wide, beveled surface which allowed walls to be hewn flat into a plank shape.

Agricultural buildings generally were constructed directly on the ground or upon vertical posts with large stones placed at each corner, while houses were built low to the ground to prevent drafts. By the mid-1700s upper class citizens began using full stone foundations with large corner stones and loose rocks packed under the logs to provide additional support for their dwellings. The earliest floor in a house was simply compacted earth. This was eventually replaced with split logs that had hewn upper surfaces and round bottoms supported by joists. Later, logs were sawn or hewn into planks laid tightly together and

secured with wooden pegs.[48]

A variety of traditional roofing materials have been used in Finland over the centuries. Common in the 1600s, moss was among the earliest and was used as a layer on top of birch bark. The moss roof was popular in western Finland into the nineteenth century, perhaps because it was a practical deterrent against fire. The most frequent roofing material was birch bark, a substance which was stripped in June, piled on top of branches, and covered with round or split fir tree poles. Another type of roof which came to use in the 1700s was called a kouru; it consisted of hollowed half logs with thin edges placed with the ridges and valleys in alternating, overlapping rows. Straw or thatch roofs also became common in the 1600s for covering hay lofts, animal shelters, and some dwellings. In these buildings a row of tightly-spaced poles was laid under the thatch, while in saunas and grain driers a supplemental roof provided extra protection. Other roofs were covered with hand-split fir shingles which measured about one foot in length. The shingle roof became popular by the mid-1880s after hand-powered shingle lathes were introduced in Finland. The most recent roofing material was made of mill-sawn birch boards (originally hand-sawn), of which two layers were placed tightly together.[49]

ASSOCIATED PROPERTY TYPES

Introduction

In St. Louis County, the construction by Finns of log dwellings, agricultural buildings, and entire farmsteads represents the continuation of the Medieval tradition of building in wood, coupled with the simultaneous introduction of Finnish-American folk (or vernacular) construction techniques and forms. The use of other mainstream, popular building materials such as balloon frame with weatherboard and masonry generally were rejected by the first Finnish immigrants, who instead chose to use indigenous and readily-available pine, fir, tamarack, spruce, poplar, and other kinds of timber to fashion their farms (as well as some of their religious, educational, and commercial buildings). Like their counterparts in western Finland, the St. Louis County buildings are at the same time rather simple, functional log structures, as well as an aesthetic expression of the builder's skill and expertise in working with wood. Particular types of wood created distinctive patterns and shades in the log walls, and timbers left in the round weathered differently than trees hewn with a broadaxe. As it aged, tamarack became nearly black, while poplar turned silver-gray; other logs displayed reddish-brown color.

The full repertoire of construction techniques available to Finnish builders is evident even in a seemingly simple, diminutive sauna. Buildings show a wide variety of corner timbering techniques, including the saddle notch, which was usually limited to hay barns, the double notch, full dovetail notch, and ocassionally the square, "V", and tooth notches. If the retention of heat was an important consideration, extremely tight walls were constructed with the aid of a unique scribing device known as a vara. The survival of several varas in St. Louis County and the recognition of this tool by second generation immigrants indicates a deliberate attempt to duplicate the north European technique of corner timbering found in Scandinavia and Finland. Using a vara, Finns were able to match the contour of each successive log by rounding the upper surface to shed water and carving the lower surface to fit over the log below. Small amounts of moss, oakum, wool rags, or some other material were then packed between each layer to provide an airtight seal.

Several other features relate to the construction techniques of St. Louis County Finnis buildings. Wood stabilizing pins resembling large dowels were fashioned from the same building materials used in constructing the farmstead buildings. They measure 5 inches to 9 inches in length and about 1 1/2 inches in diameter. Driven vertically into

holes bored into the logs for stability and to prevent shifting, they are frequently found near door and window openings, and sometimes near the corners of buildings. Such pins can also be found in log structures built by Norwegians, Swedes, and Germans in the Upper Midwest. Another traditional characteristic of the Finnish buildings is the widespread use of full log gable ends on a variety of building types including saunas, hay barns, stables, and houses.

Roof systems of St. Louis County buildings further reflect traditional Scandinavian construction techniques. While the use of such early roofing materials as birch bark, rye straw for thatch, and hollowed logs was not found in this study, one structure displayed an ancient method that made use of two layers of vertical planks. (Historic photographs indicate that at least two buildings on another farm utilized an identical technique.) One Finnish-American resident described in detail pine and cedar roofing materials made of "shaved shingles." He said that six men pulled a heavy draw knife inserted in a 16-foot sweep to make shingles 5/16 of an inch thick from a block wedged between two tree stumps.[50] Contemporary roofing materials include cedar and asphalt shingles, rolled asphalt, and corrugated metal; the latter three are frequently laid over the top of the original wood shingles. It is important to note that several kinds of metal roofing materials were available to and used by rural residents by the 1920s and 1930s. These materials can thus be considered a compatible addition in many cases. Buildings consistently have round or hewn purlins, timbers placed horizontally under the rafters parallel with the roof ridge to provide additional stability.

ASSOCIATED PROPERTY TYPES

I. Name of Property Type: Finnish Log Farms

II. Description

With the movement of Finnish-Americans to northern Minnesota at the turn of the century, the largely uninhabited area of rural St. Louis County was transformed into a productive agricultural landscape. The immigrants settled on cutover land following exploitation by lumber and timber companies during the late nineteenth and early twentieth centuries. In order to utilize the area for agricultural purposes, the land had to be cleared of the scrub trees, stumps, boulders, and shrubs which remained. Such a process was slow and extremely labor intensive because many Finns could not afford to purchase blasting dynamite, mechanical devices to pull stumps, or even animals to assist in the effort. Since the work was so time-consuming and laborius, the Finnish farmstead evolved rather slowly in comparison to other agricultural areas in Minnesota. In addition, the farms were less developed, in part because of the difficult landscape, but also because many immigrants started with smaller 40- and 80-acre parcels, gradually clearing only one or perhaps two acres each year for cultivation. The cutover landscape, even after years of toil, appeared much different than elsewhere in the state since the soil was most suitable for only a limited number of crops such as hay, potatoes, and a few other vegetables.

As discussed in Section E (pp. 7-8), homestead records indicate that Finnish settlers constructed an average of five major buildings soon after acquiring their land. The site generally consisted of several buildings erected within relatively close proximity to one another, each of which served a specific but related function. A farm may include any number of buildings, structures and sites such as a house, sauna, hay barn, and cultivated land. (For a more detailed description of the house, sauna, and hay barn, see the associated property types later in this section.) One of the most important buildings was the cattle barn or navetta, which could be freestanding or attached to a hay barn. Most Finnish farmers, regardless of their economic standing, had at least one or two cows to furnish the family's milk and butter. The cow was an extremely valuable commodity to the Finn, thus the cattle barn was commonly built of plank-shaped, tightly-fitted hewn logs with vertical double notches to protect the animal from inclement weather. If a hay barn was constructed adjacent to the cow barn, it was often added at a later date and the two buildings were linked by a roofed passageway that

could be open or closed. Unlike the cow barn, the hay barn had round log walls that were spaced some distance apart to facilitate air circulation, and were joined at the corners with saddle notches. Barns were built on unmortared fieldstone foundations, usually located only at the corners. Additional log buildings that may be found on the Finnish farmstead include a wood shed; a granary/storage facility, or aitta, which could also be used to house younger family members in warmer weather; a distinctive grain thresher and drier, known as a riihi, that had its own stove for supplying heat; and a horse barn, or talli.

Generally the various farm buildings are organized according to traditional patterns of use similar to the two types of farmstead arrangement discerned in Finland and discussed on pages E9 and E10. In the western parts of the country, from where the majority of Minnesota's Finnish immigrants came, early farmsteads typically were arranged with buildings on four sides to form a tightly enclosed courtyard. The courtyard may have been further divided into two areas by a building or fence, creating one yard for domestic use (miespihaa), and the other space for holding livestock (karjapihaa). The layout of farmsteads in central and eastern Finland, however, followed a more loose arrangement in which buildings were scattered on the property.

In St. Louis County, a few sites exhibit characteristics of an enclosed arrangement, but a greater number of farmsteads have structures that are dispersed on the landscape. Since one of the basic reasons for the use of an enclosed, one or two courtyard farmstead in Finland -- protection from thieves -- did not apply in Minnesota, farmers were less inclined to adhere to a formal arrangement of buildings. The option of obtaining up to 160 acres of property through the Homestead Act also led to greater dispersion because each farmer simply had more space than in land-hungry Finland.

Homesteaders did, however, tend to build many small agricultural buildings, each bearing a specialized function, as they did in the Old World. A writer in 1918 even suggested that "one may very safely identify a Finnish farm from a distance by its number of buildings."[51] But it is important to note that farms built by non-Finns also contained numerous buildings; thus one cannot assume that Finnish settlers were unique in this respect.[52] Regardless of the number of buildings on each farm, the system employed was traditionally Scandinavian, and well suited to the Minnesota Finnish pioneer existence. Because of financial constraints, a farmer could more easily construct a small log building (by himself or with little assistance), rather than buy milled lumber to build a large structure requiring paid help. As time and resources permitted, some buildings such as houses and cattle barns were enlarged by adding another room or hay barn on the gable end. This practice was

usually the result of careful planning on the part of the farmer rather than a simple accident, and was frequently employed in Finland as well.[53] The cutover farm was especially slow to develop since there were stumps and boulders to clear; thus immense storage buildings were not immediately necessary. Because of the dense concentration of Finns in some areas, farmers commonly helped each other clear the land and erect buildings through "a kind of spontaneous cooperation on the part of the people of a rural neighborhood which goes by the name of talkoo."[54]

III. Significance

The difference between life in rural central St. Louis County in the years before and after the onset of iron ore extraction and major lumbering is evident in the degree to which the area had been settled at these two times. Prior to about 1885 when the Vermilion Range -- the first of the three major ore veins -- was actively mined, the hinterlands above the north shore of Lake Superior were virtually unsettled and populated only by fur trappers and a few itinerant lumber/timber companies. After the extensive ore fields of the Mesabi Range were discovered in 1890, townships grew dramatically around the mining activity, in both the number of Finnish settlers and the development of farms on the cutover landscape. With the introduction of the logging railroad, additional immigrants begin to populate the region in search of suitable land for homesteading.

The farms surviving from the iron ore mining and lumbering era, distinct from other non-Finnish farms, are historically significant under National Register Criterion A as associated with the agricultural way of life that characterized the county during the late nineteenth and early twentieth centuries. They are also architecturally significant under Criterion C for embodying the distinctive folk forms, functions, materials, and methods of construction, and the occasional traditional arrangement of farmstead buildings based on Finnish archetypes of the settlement era. The farmsteads included within this property type are among the finest grouping of agriculture-related buildings and structures in St. Louis County. They are significant as the centers of agricultural production where crops were grown which fueled the lives of the Finnish-American residents. These farms, coupled with the arable land and numerous outbuildings constructed to shelter animals and store and dry grains, are at the center of the county during the period of economic growth and development.

The people who constructed the houses, saunas, barns, and other

agrarian outbuildings comprising the farmstead were continuing the lifestyle they had in Finland. Like their forebears, they established small farms on marginal land and raised a few crops and animals. Most lived at or just above subsistence level during the early settlement period, growing only enough staples for their families. Others were able to sell their surplus food, particularly potatoes and some dairy products, to local and regional cooperatives and markets.

For many of these immigrants, however, the rural way of life was preceded by employment in the iron ore industry or lumber/timber companies. Most Finnish-Americans had to work for one of these industries when they first arrived in the area because they had little capital. Upon earning enough money to buy a parcel of land, many Finns settled on their property but regularly returned to the mines or woods each season to bolster their income.

These properties are also significant as traditional types of Finnish-American farms. Few of the farms, particularly those with each major building extant (house, sauna, stable, cattle barn, and hay barn), survive intact in the area. Representing an important part of the cultural landscape, the farms provide an insight into agricultural life throughout much of the county's history. The larger, more complete farms with a variety of outbuildings are representative of the life of the more successful immigrant farmer. Perhaps due to higher quality land, a larger family, greater wealth, or simply more hard work, these people were able to clear a greater number of acres, grow more crops, and construct a more diverse assortment of buildings.

Architecturally, the farms can reveal much about the geographic and cultural background of the farmers, as well as provide information regarding the design principles utilized by the builders and owners. Each cluster of buildings illustrates a variety of construction techniques which indicate the types of vernacular construction prevalent in Finland at the time of immigration. Centuries-old Scandinavian craftsmanship is exhibited in the hewing and squaring of timbers with axes, the scribing of logs with a vara, and the fashioning of exceptional corner notches. The various log houses, saunas, latos, and navettas thus show a purposeful desire by the Finnish settlers of St. Louis County to avoid cultural assimilation, and in some ways, to perpetuate the lifestyle they had known in Finland. Collectively, these buildings represent a transfer of folk architectural traditions and cultural forms from Finland to America, both of which had a significant impact on the development of the cultural landscape.

Although most Finnish farmsteads may initially appear plain and simple, they frequently exhibit an aesthetic component and quality of log construction which is unsurpassed in this country. As Alanen

suggested in 1981, "they often displayed a strongly organic functional relationship with the land and landscape..."[55] All of the buildings demonstrate, to some degree, the transference of folk architectural practices from the Old to the New World. These ethnic building traditions blend the experience and memory of centuries-old technologies within an entirely new setting to create a distinctive cultural landscape.

IV. Registration Requirements

Many Finnish-American log farms survive in the county from the late 1800s to the beginning of the Depression. However, not every farmer successfully transformed the harsh cutover into productive agricultural land. Consequently, some farms developed quite slowly and have a minimum number of buildings and cleared land; a few others contain not only the basic farmstead cluster, but a variety of accessory buildings to complete the farm complex. Not all sites that meet the requirements of the property type will have all or even most of these outbuildings. In general, properties should meet registration requirements if they retain sufficient functional, structural, and design features to identify them as having been built during the period of settlement and to evoke that period. Farmstead buildings meeting registration requirements must have been constructed or originally owned by a Finnish immigrant, and they must be built of logs. Like the other property types, it is required that they retain their traditional forms and construction techniques. They must be at least 50 years old, and directly relate to one or more of the historic context statements outlined in Section E.

Given the fact that buildings were frequently moved from one location on a farmstead to another, were transported to another nearby farm, or were destroyed altogether, the total number of structures on each site will vary considerably. Eligible sites may have as few as two or three log buildings or as many as fifteen or sixteen. Farms may also contain a limited number of non-log (wood frame, concrete, etc.) buildings if they do not seriously impact the overall design, feeling, setting, and integrity of the site. Depending on the date and reason it was moved, a building not in its original location may be considered eligible, unless it has no direct association with the site. The buildings should retain sufficient architectural integrity in order to be eligible, although some changes may have occurred with time; these alterations should be reviewed in order to evaluate the impact on the character of the structure and overall farmstead.

Some farms have been abandoned for years while many remain in active use. In the case of vacant farmsteads, it is not necessary for the original farmland to retain its historic integrity or continue to have a direct association with the farmstead. Thus, it is possible to list in the Register farmstead complexes without the accompanying agricultural land.

ASSOCIATED PROPERTY TYPES

I. Name of Property Type: House

II. Description

Known by Finns in Minnesota as the tupa, the house was the first building to be erected on the farmstead. The early dwellings were small, single-room, one- or one-and-a-half-story log dwellings designed to shelter a single male resident or perhaps a small family. Some of these were hastily constructed and later enlarged with a log or frame section; in other cases, this basic structure was converted to use for storage, or replaced altogether with a larger, more permanent home. Regardless of the speed with which it was built or the number of inhabitants it was intended to shelter, the log house was always constructed according to the north European technique using the basic tools to properly shape the logs. Each timber was hewn with a broadaxe on the internal and external surfaces and measured approximately five or six (but sometimes as much as eight) inches in width. The vertical dimension varied considerably from five to as much as fourteen inches, but generally most logs were slightly larger in height than width. Using a hand-forged iron tool known as a vara, the logs were scribed to match the outline of the timber underneath. A narrow groove cut the length of the log on its underside was packed with an insulator such as sphagnum moss or similar material, and the log was placed on top of the slightly rounded log below.

The most common house form is the two-room, one-and-a-half-story building, although no specific data relative to St. Louis County are available (Figure 1). Historical photographs and interviews with informants reveal that many St. Louis County Finns originally built a one-room house and within just a few years added another single cell to one gable end. Glanville notes that the practice of expanding a building along its longitudinal axis was common in Finland, and this characteristic can be found as well in Finnish-American buildings.[56] The two-room, one-and-a-half-story house is not unlike one form of dwelling described by Kaups. Based on a sample of 200 Finnish log houses in Michigan, Minnesota, and Wisconsin, he determined that five types were constructed by Finns, four of which were based on traditional forms used in Finland after 1850.[57] These include the small, one-room, one-story house; the two-bay, one-story house (which accounted for one-half of the sample); the three-room, one-story Nordic pair house; the one-and-one-half-story house (which made up 14% of the houses examined); and the two-story house.

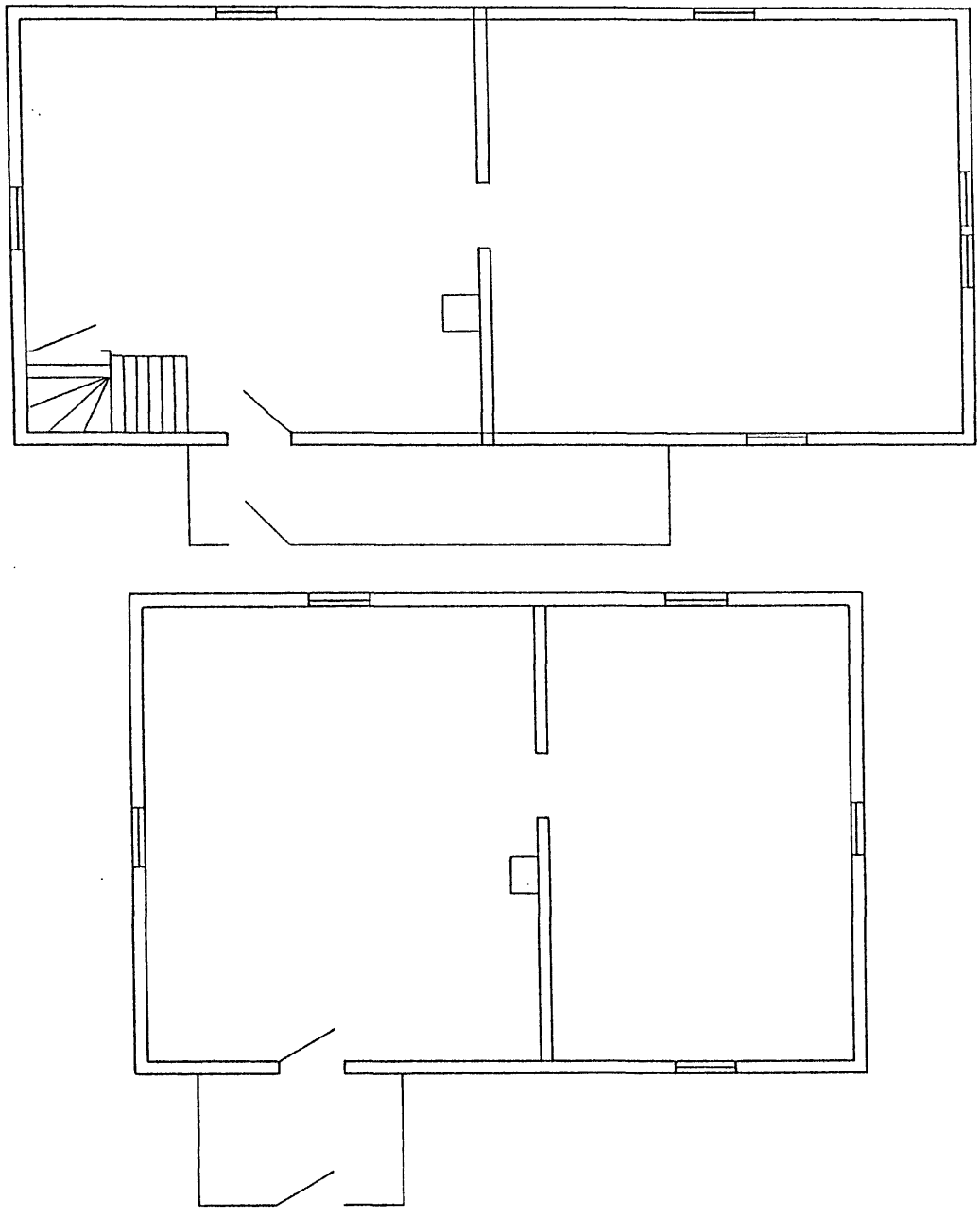

Figure 1. These two floor plans illustrate the most common arrangement of interior space for the Embarrass area dwellings. In both cases the door provides access into the kitchen; opposite a log partition is the living room which also may function as a bedroom.

Regardless of which house form a builder chose to use, the log walls were always left unpainted and devoid of weatherboard for at least a brief time after settlement. An inability to obtain milled lumber due to a lack of capital and inadequate transportation routes had much to do with the Finns' leaving their log houses exposed to the elements. As the settlers acquired more money and the desire increased to remove the stigma associated with a frontier log cabin, horizontal wooden siding became a popular addition by the early 1920s. Other materials such as rolled asphalt and metal for the walls and roof were regularly applied by the early 1930s. Indeed, while these kinds of materials are often viewed as intrusive alterations which compromise the integrity of a building's exterior appearance, it is not appropriate to make such generalizations with the St. Louis County Finnish log structures. In many cases, these "additions" were made just a short time after the structure was completed; thus the weatherboard, asphalt, or metal can be seen as a significant phase in the history and evolution of the building.

III. Significance

Finnish log houses in St. Louis County are historically significant under National Register Criterion A because they serve as a tangible link to turn-of-the-century settlement and development by the most culturally distinctive ethnic group in the northern Great Lakes region. These buildings were the homes to Finnish immigrants who originally worked in the iron ore mines and lumber/timber industry, but chose to pursue a life in the country as they had in the Old World. The houses are architecturally significant under Criterion C as outstanding examples of rural Finnish folk architecture, perhaps unsurpassed in the state, and even the nation, for their excellent display of log craftsmanship. A careful analysis of these dwellings provides insight not only into the settlement patterns established by the Finns, but more importantly, it reveals much about the cultural background and ethnic traditions these immigrants transported from the Old World.

Always built out of log using the north European construction technique, the houses display outstanding cratsmanship in their style. Typically they conform to traditional house forms based on types known in Finland: either the one- or two-room plan, usually one-and-one-half-stories high with some variation in size and room arrangement. These are excellent examples of folk buildings in that each house was often designed and constructed by its owner. The immigrants had no formal training in architecture or design; rather, they relied on common

knowledge accumulated through the years in Finland. This body of information was shared among neighbors and the St. Louis County houses represent a manifestation of this mental code. The buildings function as rather complex symbols of Finnish ethnicity and are inextricably tied to the history of immigration to northeastern Minnesota during the late nineteenth and early twentieth centuries.

The Finns who settled in northeastern Minnesota maintained a pioneer existence far later than most immigrant groups, and built their homes with traditional forms and methods long after other immigrants had made the transition to American balloon frame architecture. Their adherence to customary ways was due, in part, to their poverty when they came to Minnesota: they built their own houses and farm buildings because they generally could not afford to pay someone else for the work. The proclivity toward conventional ways may also be a reflection of their late arrival, since they came to Minnesota in large numbers some fifty years after other major ethnic groups such as the Germans, Norwegians, and Swedes, who had already begun to assimilate into American society. Finns also tended to settle together, creating separate ethnic enclaves within St. Louis County. This cultural reinforcement allowed them to live independently and create a milieu that has had a distinctive impact on the cultural landscape.

IV. Registration Requirements

For a house to be eligible for National Register listing it must be an outstanding example of a particular Finnish-American dwelling type (see Section E, pp. 10-11), constructed of logs, be built by or for a Finnish immigrant, and be at least 50 years old. It must exhibit traditional use of building materials and construction techniques, and these features must be readily apparent on either the interior or exterior of the structure.

Not all houses constructed by Finns were intended to have exposed log walls. Some kinds of siding which have generally been considered as incommpatible -- asphalt shingles, rolled asphalt, and metal -- often were applied over the logs a short time after the house was constructed. Because they sometimes appear as early as the 1920s and 1930s, these materials cannot necessarily be considered as an incompatible addition. Similar circumstances apply for houses and especially outbuildings which had corrugated metal applied over the original wood shingle roof. In these cases, it is imperative to determine when the siding was added, and then consider the overall historic and architectural integrity of the building. Weatherboard also was applied soon after the house was completed, but it is viewed as a compatible addition as on any twentieth century farm building.

ASSOCIATED PROPERTY TYPES

I. Name of Property Type: Sauna

II. Description

The traditional steam bathhouse, or sauna, was usually built immediately after the house. Some historical accounts suggest that the sauna was constructed first to serve as a temporary house, after which a larger, more permanent dwelling was built. Because it was considered to be a fire hazard, the sauna often was placed away from the other farmstead buildings. All but one of the inventoried saunas were built of logs, and of these, each one exhibited traditional construction techniques and form.

These small buildings stand one story high and are rectangular-shaped with one (and occasionally two) interior partition(s), which is nearly always made of logs. The saunas usually ranged from nine to twelve feet in width and from about twelve to fifteen feet in length, although many were larger. Most saunas rest on wooden sills placed directly on the ground, or have an unmortared stone foundation, often covered with a veneer of concrete. Like other farmstead buildings in which heat retention is an important consideration, the sauna walls are extremely tight fitting, with logs extending for the full height of the gable wall. The double notch is most frequently employed to join the corners, although the full dovetail notch is utilized as well. Nearly all examples have round or hewn log roof purlins and a ridge pole, which are common features in other outbuildings of similar construction.

This diminutive gable roofed building has one door in either the gable end or near the corner of an axial wall, which leads into a small dressing room. In some cases, the dressing room is made of weather-board over a log frame. The hewn interior wall separates the dressing room from the bathing room, the latter being accessible through a small door. Each room frequently has its own fixed window. The earliest type of sauna to be built in Minnesota, called a savusauna or smoke sauna, was constructed with a single small vent hole in or near the ceiling to allow smoke to escape from the chimneyless room. In one corner the heating stove was built of fieldstone; opposite the stove one wall was lined with wooden benches.

III. Significance

Saunas are an integral component of every Finnish farm and closely

associated with the development of rural St. Louis County around the turn of the century. They are historically significant under National Register Criterion A as associated with the domestic and agricultural way of life that characterized the county during the settlement period. They are also architecturally significant under Criterion C for embodying the folk forms, method of construction, and use of materials that characterize these buildings in Finland and America.

Saunas were commonly used by Finns in the county's "Range" communities, as well as in logging camps. As Finnish immigrants transformed the cutover into productive agricultural land, they constructed a variety of farm buildings that were vitally important to their livelihood. Homestead records reveal that the sauna was consistently one of the first buildings erected on the farmstead along with the house, stable, and cattle barn. Local tradition holds that in some cases the sauna was built first to serve as a temporary dwelling, although this has not been substantiated through field work.

The sauna has been the focus of attention in numerous scholarly and popular articles, and is perhaps the most well known ethnic tradition associated with the Finns. The sauna has been described as the "sign of the Finn," it has been used to indicate patterns of Finnish-American cultural settlement in the Lake Superior region, and "as a physical object," it is said to be "a characteristic feature of Finnish-American material culture."[58]

The sauna is architecturally significant because it characterizes the transference of a traditional Finnish farm building to St. Louis County. Crafted out of hewn logs with tightly-constructed walls, these small buildings utilize the full dovetail or double notch corner joint to provide for the best retention of heat. The form consistently features two rooms, one of which serves as an entrance and is sometimes made of wood frame covered with weatherboard.

IV. Registration Requirements

To be eligible for listing in the National Register, a sauna must be built of hewn logs, be at least 50 years old, and have been originally owned or built by a Finnish-American immigrant. The size of these buildings vary, although they are diminutive in proportion. It must retain its traditional form and construction techniques and clearly demonstrate an association with one or more of the three historic contexts discussed in Section E. Saunas are significant cultural resources when they contribute to a larger farmstead complex, but the sauna does not need to be located within a farm in order to qualify for

the National Register. In some cases the sauna may be the only log building that exhibits traditional materials and form; in these cases, it can be considered for inclusion in the National Register as an individual resource if it meets all other registration requirements.

Like some other farmstead buildings, the sauna may be sheathed with a material such as weatherboard, metal, or asphalt. In these cases, it is important to determine when the siding was added in order to assess its impact on the building's overall integrity. Design, workmanship, and materials are elements of integrity that are essential in defining the importance of historically and architecturally significant properties. The other qualities of integrity, feeling, location, and setting, will be present if the more fundamental integrity of design, workmanship, and materials exist.

ASSOCIATED PROPERTY TYPES

I. Name of Property Type: Field Hay Barn

II. Description

Finnish immigrants also built a separate field hay barn, or lato, right in the hay field, and this structure might serve several adjacent fields. Constructed of saddle notched, round logs, the lato is usually, but not always, distinguished by its inward-sloping walls, slightly-spaced logs, and raised wooden floor on log sleepers, features which collectively enhanced air circulation to aid in drying the hay more efficiently. Vertically-driven wooden dowels always appear in the walls, particularly in gable ends and around door openings. Some have full log gable walls, while others feature vertical or horizontal siding from the eaves to the ridge. The gable roof is invariably stabilized by round or hewn purlins and a ridgepole. An opening in one or both gable ends provides access inside the building, and this is sometimes covered with one or two hinged wooden doors. The interior is typically undivided and devoid of partition walls. The field hay barn varies considerably in its overall dimensions, ranging from a small, low building, to a large, tall structure.

III. Significance

Agriculture was central to the lives of the Finnish immigrants who

populated rural St. Louis County around the turn of the century. The field hay barns that served the farmer's needs are important architectural manifestations of the development of an agricultural landscape by those Finnish families who returned to a lifestyle which they had become accustomed to in Finland. The surviving latos follow traditional forms, display traditional construction techniques, and stand in locations away from the farmstead proper, just as they did in Finland. These hay barns of the St. Louis County Finnish farms are therefore historically and architecturally significant under Criteria A and C for their association with the agricultural way of life that characterized the county, and because they embody the designs, forms, and methods of construction of traditional Finnish farm outbuildings.

The significance of the field hay barns is supported by the fact that few of these buildings remain in the county. It is important to remember that on the American frontier Finnish farmers had ample land on which to grow their crops, and the need to construct a hay barn in a distant field was no longer a necessity as it had been in Finland. In 1941 Heimonen noted that one of the most striking contrasts between the rural landscapes of South Ostrobothnia in Finland and Finnish settlement areas in the Great Lakes region was the paucity of field hay barns in this country. He attributed this to "the fact that farms in [the] latter area are compact, and rarely have distant outer plots which are cultivated. Consequently, it is a relatively easy matter to haul the hay to the farmstead if the barn there is large enough to store it all."[59] Because the St. Louis County hay barns stand some distance from the farmstead, they are more likely to be neglected and thus susceptible to natural deterioration.

Architecturally, the field hay barns follow the same form as those found in Finland. The use of these traditional architectural details - unhewn, saddle notched logs; wide spaces between each tier; raised wooden floors; and occasionally the V-shaped walls - indicates the cultural transference of significant features. The few surviving field hay barns are the last link to the way of drying hay that was common in rural St. Louis County as well as in rural Finland.

IV. Registration Requirements

The field hay barns are primarily important because of their traditional forms and functions, and for their association with the transformation of the cutover area into productive agricultural land. In order to be eligible for inclusion in the National Register, they should be at least 50 years old; they should retain enough physical

features to identify their traditional form and construction techniques, and have a direct association with the Finnish-American agricultural landscape of St. Louis County.

Because these buildings are sometimes located a great distance from the house and other agricultural structures, the original farmstead with which the hay barn is linked need not be intact or even extant in order for the barn to retain sufficient integrity of location and setting. Each barn should, however, be located a minimum number of feet from the farmstead cluster in order to convey these aspects of integrity. Because every farm has a different arrangement of buildings, this distance will vary considerably and thus requires a case-by-case evaluation within the relevant context. Design, workman-ship, and materials are elements of integrity that are essential in defining the importance of historically and architecturally significant hay barns. To meet the requirements for integrity of these elements, the hay barns must be built of unhewn logs, with saddle notched corners, and designed to store hay. They may or may not have inward- sloping walls and a raised wooden floor. These features must be outwardly visible and not obscured by any kind of siding. The aspects of integrity known as feeling and association will be present if the more fundamental elements of integrity of location, design, setting, workmanship, and materials exist.

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3. Clarke A. Chambers, "Social Welfare Policies and Programs on the Minnesota Iron Range, 1880-1930," Unpublished Manuscript, University of Minnesota, 1963, 2; see also Mrs. Andrew Aho and Mr. and Mrs. William J. Heikkinen, eds. "Pioneers of the Wilderness: Souvenir Number, Alongo - Sturgeon - "Korvenkyla" - Field Region Trail Blazers, Souvenir Day, 25 September 1938 (n.p.).

4. Kaups, "The Finns in the Copper," 71-73.

5. Albert J. Gedicks, "Working Class Radicalism Among Finnish Immigrants in Minnesota and Michigan Mining Communities," Unpublished Ph.D. Dissertation, University of Wisconsin-Madison, 1979, 152.

6. Conrad Bercovici, On New Shores. (New York and London: The Century Co., 1914), 114.

7. Kaups, "The Finns in the Copper," 71-72.

8. The standard source for information about lumbering in the area is Agnes M. Larson, History of the White Pine Industry in Minnesota. (Minneapolis: University of Minnesota Press, 1949).

9. Kaups, "The Finns in the Copper," 73.

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11. Oehler, Time in the Timber, 3, 35, 41.

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14. Grace Lee Nute, Lake Superior. (Indianapolis: Bobs-Merrill, 1944), 258.

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17. Duluth News-Tribune 13 July 1929, n.p., in the Embarrass Vertical File, Northeast Minnesota Historical Center, University of Minnesota-Duluth.

18. Aho and Heikkinen, "Pioneer of the Wilderness," n.p.

19. George Stuntz, "Surveyors Report of Township 60, Range 14-15, October 30 to November 30, 1882."

20. Iron Ranges of Minnesota: Historical Souvenir of the Virginia Enterprise. n.p., 1908; and Alanen, "In Search of," 80.

21. Data on railroad, mining, and land companies was taken from original township plat maps located at the Iron Range Research Center Library and Archives, Chisholm, MN., and from Original Land Tract Books found in the Manuscripts Collection of the Minnesota Historical Society.

22. J. Russell Whitaker, "The Relation of Agriculture to Mining in the

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23. Thomas Donaldson, The Public Domain: Its History with Statistics (Washington, D.C.:, 1984), 1023-1030; Alanen, "In Search of," 72-92; and Hoglund, "Flight from Industry," 1-21.

24. Oehler, Time in the Timber, 41; and Aho and Heikkinen, "Pioneer of the Wilderness," n.p.

25. Richard Lamppa, "Embarrass Today and Yesterday," (n.p.): 9; and Norha, "Embarrass Townshipin Historiaa," 4.

26. This table is modeled after one which described Finnish homesteads in two townships in Wisconsin and Minnesota; see Alanen, "In Search of," 84.

27. Henry S. Heimonen, "Finnish Rural Architecture in South Ostrobothnia (Finland) and the Lake Superior Region (U.S.) - A Comparative Study," Unpublished Ph.D. Dissertation, University of Wisconsin-Madison, 1941, 146-69; Toivo Vuorela, Suomalainen kansankultturi (Porvoo, Finland: Werner Soderstrom Osakeyhtio, 1975), trans. Sylvia Torma, 297-300; Arnold R. Alanen and William H. Tishler, "Finnish Farmstead Organization in Old and New World Settings," Journal of Cultural Geography 1 (Fall/Winter 1980): 67; and Nils E. Wickberg, Finnish Architecture (Helsinki: Otava Publishing Co., 1959), 16.

28. Wickberg, Finnish Architecture, 16, 53.

29. Vuorela, Suomalainen, 304-05; Matti Kaups, "Log Architecture in America: European Antecedents in a Finnish Context," Journal of Cultural Geography 2/1 (Fall/Winter 1981): 138-39; and Wickberg, Finnish Architecture, 16.

30. Kaups, "Log Architecture," 140; Wickberg, Finnish Architecture, 16; and Vuorela, Suomalainen, 306-09.

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32. Kaups, "Log Architecture," 144; and Vuorela, Suomalainen, 309-12.

33. Kaups, "Log Architecture," 144; and Vuorela, Suomalainen, 309.

34. Kaups, "Log Architecture," 144; and Vuorela, Suomalainen, 312-14.

35. Kaups, "Log Architecture," 144; and Vuorela, Suomalainen, 314-16.

36. Vuorela, Suomalainen, 359-63; and Heimonen, "Finnish Rural," 154-59.

37. Vuorela, Suomalainen, 365-69; and Heimonen, "Finnish Rural," 166.

38. Heimonen, "Finnish Rural," 167; and Vuorela, Suomalainen, 369-70.

39. Heimonen, "Finnish Rural," 165.

40. Vuorela, Suomalainen, 377-79; and Heimonen, "Finnish Rural," 163-66.

41. Here and one paragraph below, see Vuorela, Suomalainen, 378-84; Heimonen, "Finnish Rural," 154-61; and Cotton Mather and Matti Kaups, "The Finnish Sauna: A Cultural Index to Settlement," Annals of the Association of American Geographers 53 (December 1963): 494-97.

42. Here and one paragraph below, see Vuorela, Suomalainen, 385-89; Heimonen, "Finnish Rural," 161-63; and Matti Kaups, "A Finnish riihi in Minnesota," Minnesota Academy of Science 38/2 and 3 (1973): 66-71 for a complete description and analysis of one such building in Minnesota.

43. Vuorela, Suomalainen, 407.

44. Kaups, "Log Architecture," 139.

45. Sigurd Erixon, "The North European Technique of Corner Timbering," Folkliv 1 (1937): 14-16; Kaups, "Log Architecture," 138-39; and Thomas Paulsson Scandinavian Architecture (Newton, MA.: Charles T. Branford Co., 1959), 18-23.

46. Kaups, "Log Architecture," 136.

47. Guthorm Kavli, Norwegian Architecture, Past and Present (Oslo: Dreyers Forlag, 1958), 78-9.

48. Vuorela, Suomalainen, 409-10.

49. Vuorela, Suomalainen, 410-14.

50. Cook News-Herald 11 January 1965, 8.

51. Van Cleef, "The Finn in America," 192.

52. See Mather and Kaups, "The Finnish Sauna," 500-02 for a discussion of this assertion; and Alanen and Tishler, "Finnish Farmstead Organization," 75 for results of their research on Finnish farms in Wisconsin.

53. Ranulph Glanville, "Finnish Vernacular Farmhouses," Architectural Association Quarterly 9/1 (April 1977): 45-6.

54. Heimonen, "Finnish Rural," 238.

55. Alanen, "In Search of," 89.

56. Glanville, "Finnish Vernacular," 46.

57. Matti Kaups, "Finnish Log Houses in the Upper Middle West, 1890-1920," Journal of Cultural Geography 3/2 (Spring/Summer 1983): 13.

58. Van Cleef, "The Finn in America," 210; Mather and Kaups, "The Finnish Sauna," 494-504; and Yvonne R. Lockwood, "The Sauna: An Expression of Finnish-American Identity," Western Forum 36/1 (January 1977): 72. See also Matti Kaups, "A Finnish Savusauna in Minnesota," Minnesota History 45 (Spring 1976): 11-20.

59. Heimonen, "Finnish Rural," 261.

G. Summary of Identification and Evaluation Methods

Discuss the methods used in developing the multiple property listing.

See Continuation Sheet G 1

[X] See continuation sheet

H. Major Bibliographical References

See Continuation Sheet H 1

[X] See continuation sheet

Primary location of additional documentation:

- [X] State historic preservation office
- [ ] Other State agency
- [ ] Federal agency
- [ ] Local government
- [ ] University
- [ ] Other

Specify repository: _____

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G. Summary of Identification and Evaluation Methods

The multiple property listing of rural Finnish log buildings of St. Louis County, Minnesota, is based upon a comprehensive historical and architectural resources survey and National Register nomination project of Embarrass Township and parts of adjoining Pike and Waasa Townships from October, 1987 through July, 1988. The survey was conducted by Michael Koop under contract to the Minnesota State Historic Preservation Office and the SISU Heritage Group of Embarrass. The survey identified 60 sites with at least 185 log buildings. In Embarrass Township, every passable road, public and private, leading to a known or suspected log building was driven during the inventory. In Pike and Waasa Townships the majority of the roads were driven to locate, identify, and map any log buildings for possible inclusion in the survey or for future documentation. All log buildings in Embarrass Township, regardless of age, condition, or alterations, were recorded. In Pike and Waasa Townships log buildings known to exist from public meetings or conversations with informants were included in the inventory, as well as a representative selection that were identified during the actual survey. Each log building (or group of buildings on a single farm) was recorded on a Minnesota Historic Sites Inventory form and its location noted on a township highway map. Black and white photographs were taken at every site of each log building which had exposed timbers, with emphasis given to important or distinctive construction characteristics including notch type, evidence of purlins, pegs, log floors, etc. After determining which sites would be documented for National Register status, a minimum of six color slides were taken for each property. Approximately one-half of the log buildings in the entire survey were measured on the exterior, and where a farmstead contained a sufficient number of original buildings, a site plan was drawn indicating building relationships. During the inventory historical and architectural descritpions were written and a variety of research materials including original Homestead proof records at the National Archives and Records Administration, and primary and secondary sources were reviewed. At appropriate times, oral interviews were conducted with family descendants or knowledgeable informants. The property type statements were based upon the individual inventory forms and a variety of literature sources relating to each property type.

The properties are grouped under three historic contexts which conform with the three major themes that best define the county and its properties: 1) the impact of the iron ore mining industry during a period between the 1880s and 1930s; 2) the influence of growth and expansion of the lumber and logging industries in the county from the

1870s to the 1930s; and 3) the emigration of Finns to St. Louis County, the movement of immigrants into rural areas in the county, and the development of cutover lands by Finns who brough with them a distinctive architectural legacy.

Because the inventory concentrated on identifying only log buildings, a limited range of structures both temporally and in type were encountered. A number of factors were considered in determining which sites would be potentially eligible for National Register listing. Properties which represented the activities of the settlers, such as those who claimed land under the 1862 Homestead Act or purchased it directly from other sources, were selected for inclusion. Entire farms with a range of buildings and intact landscape features were included because they most clearly represented typical turn-of-the-century settlement patterns. Well-preserved buildings and sites which illustrated examples of folk architecture forms and traditions were also chosen. Thus, the nominated properties included with this document were selected because they are outstanding examples of important construction types and building forms in the county, and exceptional illustrations of an agricultural way of life in St. Louis County during the late nineteenth and early twentieth centuries. The nominated properties were limited to a relatively small selection of inventoried sites because of budget and time constraints. This Multiple Property Documentation Form has been written to include all identified property types in the county, in order to facilitate the addition of individual buildings, districts, and sites to the National Register in the future. An appendix in the final survey report lists a number of properties worthy of future documentation and research. These and other possible sites in the county can be added to this form as time and resources allow.

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