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National Register of Historic Places Multiple Property Documentation Form

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X New Submission ___ Amended Submission

A. Name of Multiple Property Listing

South Dakota's Round and Polygonal Barns and Pavilions

B. Associated Historic Contexts

(Name each associated historic context, identifying theme, geographical area, and chronological period for each.)

Round and Polygonal Barns and Pavilions in South Dakota, 1900-1945

C. Form Prepared by

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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 Archaeology and Historic Preservation. (___ See continuation sheet for additional comments.)

Jim Wilson, Acting SHPO 11/7/95
Signature and title of certifying official Date

State or Federal agency and bureau

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.

Linda McClelland

Signature of the Keeper

12/14/95

Date of Action

E. STATEMENT OF HISTORIC CONTEXT

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SOUTH DAKOTA'S ROUND AND POLYGONAL BARNS AND PAVILIONS

THE ROUND BARN IN SOUTH DAKOTA-INTRODUCTION

As in all other states, the round barn in South Dakota is an oddity. Only approximately one-tenth of one percent of the state's 34,000 farms and ranches have or had a round barn. Current research indicates 36 or 82% of South Dakota's estimated original 44 round barns are still standing. This is a relatively high percentage of extant structures compared to the available data for North Dakota (42% extant), Nebraska (44% extant), Indiana (49% extant) and Iowa (79% extant).

The term "round barn" as used in this document includes general use barns, dairy barns, hog houses, sale barns and agriculturally related exhibit pavilions usually found at county fairgrounds. Buildings in the study are true round or polygonal with 8, 10, 12, 13, 14 or 20 sides. These are concentric structures built to shelter, sell or show livestock. Polygonal machine sheds, usually smaller in diameter than these round and polygonal barns, were not included in this study because they were not originally constructed for these purposes.

Aspects of the South Dakota round barn phenomenon examined to discern patterns and categories were geographic distribution, construction date, plan form, construction material, presence or absence of an interior silo, roof construction and original use. See the Appendix for a data summary chart, a graph of construction dates and a map of known round barn locations, construction dates and forms. Ethnic background of the builders and natural features such as the topography of the building site were noted but do not reveal any distinctive patterns. Architectural elements and original use proved to be the most important items in developing property types and undertaking a thorough analysis of these cultural resources. These resources are historically significant because they embody the characteristics of the seven property types associated with round barns in South Dakota. They are eligible for listing on the National Register of Historic Places under Criterion C in the area of architecture.

Analysis of the raw data indicates that round barn distribution coincides with South Dakota's historic settlement patterns and agricultural development. Most of South Dakota's round and polygonal barns, 36 out of 44, are found east of the Missouri River. The northeast quadrant has the earliest and greatest number of barns in locations roughly parallelling the rail lines constructed around 1880. Most of the southeast

quadrant barns date from around 1920 and are clustered around the Sioux Falls area. The six West River barns have relatively late construction dates.

These findings echo basic historical facts about South Dakota's settlement. The area east of the Missouri (East River) was permanently settled by 1890, one to two decades before the majority of the land west of the Missouri River (West River), was permanently occupied. The Black Hills and the immediate area, settled beginning in the mid 1870s, are the only West River exceptions. As explained in the South Dakota *Homesteading and Agricultural Development Context*, "The majority of West River South Dakota was settled during the first decade of the twentieth century. The most intense settlement activity occurred during the second half of the decade when the West River population more than doubled in five years (Brooks and Jacon 1994:20). Settlement in both East and West River followed the railroad. New towns established along the rail lines grew rapidly and permanent settlement extended out from these centers.

STUDY OVERVIEW AND PROPERTY TYPES

South Dakota has 44 round barns built between 1903 and 1946. Unlike Indiana, Iowa and North Dakota (states with readily available round barn construction date statistics), South Dakota has no known pre 1900 round barns. This is mainly because large portions of the state were unsettled or just newly settled before 1900. The 1910 to early 1920s South Dakota peak corresponds with similar peaks in these three other states. Indiana experienced its peak in 1910 with the majority of round barns built from 1900-1920. Iowa's peak years were approximately 1909-1922. North Dakota's peak years were 1910-1916.

Seven property types emerged from the study of South Dakota's round and polygonal barns: Early Period Polygonal/Round Barns, Middle Period Polygonal/Round Barns, Final Period Polygonal/Round Barns, Final Period Southeastern SD Hollow Clay Tile Round Barns, Sale Barns, Polygonal Hog Houses and Polygonal Exhibit Pavilions. Buildings grouped in the Early, Middle, Final and Final Southeastern property types are general, dairy or cattle feeding barns. As the names indicate, the remaining property types are grouped according to function. The terms "Early, Middle and Final" reflect the barn's place in the relative development of the round barn form rather than the actual construction date. Because most of South Dakota's round and polygonal barns were built within ten years of each other during a time when many advances in round barn technology were made, there is some chronological overlap in the Early, Middle and Final periods. For the most part, however, the construction dates of the barns match the "Early, Middle and Final" terminology.

Early Period Polygonal/Round/Barns were originally built as general/specialized livestock shelters other than hog houses. Known examples include a dairy barn and barns with space for both dairy cows and horses. This property type is found in East River South Dakota, especially in the northeast. These barns have roofs requiring support and no interior silo.

Known examples of Middle Period Polygonal/Round Barns were originally built as general livestock shelters other than hog houses. These barns have space for several different types of livestock. Undocumented examples of this property type originally built as specialized barns may exist. This property type appears in the northern half of the East River region. These barns have polygonal plans, sectional conical roofs and interior silos.

Final Period Polygonal/Round Barns are general/specialized livestock shelters other than hog houses. Most of these barns are found in the northern two-thirds of East River South Dakota. The two known West River examples were built in Jones County near Draper. These are true round barns except for one example with 14 sides. These barns have self supporting two and three pitch gambrel roofs.

With one exception, Final Period Southeastern SD Hollow Clay Tile Round Barns were originally built as specialized livestock shelters for cattle feeding and dairying. These barns appear in McCook, Lake, Minnehaha and Lincoln counties, all located in southeastern South Dakota around the Sioux Falls area. These are true round barns built of hollow clay tile with round interior silos. The majority have two pitch self-supporting gambrel roofs.

Sale barns housed cattle and hog sales. With one exception, these barns appear in East River South Dakota. The majority have octagonal plans, sectional conical roofs and plentiful light provided by a cupola, skylights and windows.

Polygonal hog houses sheltered hogs. Except for one true round exception, these structures are polygonal with 8,10,13 or 20 sides and have sectional conical roofs. These buildings have large numbers of windows and skylights, especially on southern facades, for light, ventilation and warmth.

Fair boards built Polygonal Exhibit Pavilions to show livestock and exhibit agricultural products. Pavilions are found at South Dakota fairgrounds. These polygonal buildings usually have numerous windows, large cupolas and finished interiors.

OVERVIEW OF ROUND BARN CONSTRUCTION BEFORE 1900

The round barn is a rare structure in the United States; one historian estimates its "numbers may never have exceeded 1000 nationally (Perry 1986:#7, page 1.) Although the round barn appeared as early as 1793 in the United States (Soike 1983:5), it was not until the last quarter of 19th century that the form received the publicity and study which led to its peak popularity nationwide from approximately 1905-1920.

Most round barns built in the United States before 1900 are octagonal. Elliot Stewart, a Cornell University lecturer and editor of the Buffalo, New York, based agricultural publication *Live-Stock Journal,* is "credited with the initial design and promotion of the octagonal barn in the United States" (Hanou 1993:9). After building an octagonal barn with a self supporting sectional conical roof on his New York farm in 1874, Stewart publicized it in the journal he edited. Publicity about his barn appeared in several other periodicals and books over the next ten years. "In 1884 a pleased Stewart noted his satisfaction not only with his own octagon barn but also with the fact that 'some 30 or 40 have been built in various parts of the country-among them five in Pennsylvania, three in Indiana, four or five in Illinois, two in Minnesota, and several in Kentucky'" (Stewart quoted in Soike 1983:11). Stewart maintained his creation was superior to rectangular barns because it was cheaper to build, contained more space, had a self-supporting roof, was more wind-resistant and had a shorter distance between any two points in the barn (Soike 1983:11).

Another noted octagonal promoter built his barns much closer to South Dakota. Lorenzo Coffin, described by Iowa barn historian Lowell Soike as "one of Iowa's leading agricultural improvement spokesmen of his day" (Soike 1983:12), built an octagon barn on his farm near Fort Dodge, Iowa in 1867. Unlike Stewart, Coffin built a barn needing interior supports for the roof (Soike 1983:12,15). Although Coffin did not immediately promote his barn, details and pictures of it did appear in Iowa agricultural papers and journals in the early 1880s (Soike 1983:17-18).

The octagonal form was popular among South Dakota's early round barn builders and became a standard feature of sale barn plans. As in many other upper Midwest states, South Dakota's octagonal barns usually predate their circular counterparts. Unlike these states, however, all of South Dakota's octagonal barns have post 1900 construction dates. Several of the state's early octagonal barns resemble the exterior of Stewart's prototype but require roof supports like Coffin's barn.

Michigan barn historian Carrie Scupholm concluded the following about the two major octagonal barn promoters, "Elliot Stewart and Lorenzo Coffin epitomize "practical farmers" that promoted ideas for

improved farming practices in agricultural journals. Both men achieved some success in convincing a few of their fellow farmers to copy their innovative barn designs, however most of the credit, and much of the glory for instigating the round barn "boom" of the 1890s and 1900s would lie with men more closely tied to academia."(Scupholm 1994:144)

The most prominent of these academics was Franklin King, a professor of Agricultural Physics at the University of Wisconsin. King did pioneering work on silo construction in the 1880s and by 1891 published his conclusions that the cylinder was the preferred form for the silo. Drawing and expanding on his silo research, King designed a true round barn with a circular interior silo in 1889. The major disadvantage of King's barn was that its roof required support. Despite this fact, "So successful was this plan that King promoted it in numerous agricultural publications between 1890 and 1900, including all six editions of his own popular textbook on agriculture." (Hanou 1993:14) The silo and true round form became standard features in round/polygonal barns nationwide.

The self-supporting roof, clay tile construction and the rise of mail order plans, barn design services and precut kit barns, all post 1900 innovations that impacted South Dakota's round/polygonal barns, are all discussed below. Readers wanting more information on the history of the round barn should consult two excellent sources: Lowell Soike's *Without Right Angles* and John Hanou's *A Round Indiana.*

SOUTH DAKOTA'S FIRST ROUND/POLYGONAL BARNS

Only four South Dakota round barns predate 1910: the 1903 Nold Polygonal Hog House in Potter County, the 1905 Lillebridge Round Barn in Brookings County, the 1907 Drolle Sale Barn in Yankton County and the 1907 Horticulture Pavilion at the State Fairgrounds in Huron. Little is known about the history of the Drolle Sale Barn and Horticulture Pavilion. The Drolle Sale Barn was built for hogs and has an octagon plan and sectional conical roof. Its appearance is very similar to the Svien Barn discussed below. The cruciform, 16 sided Horticulture Pavilion predated, and may have been an inspiration for, other concentric exhibit pavilions built around 1920 and discussed below.

Like the earliest round barns in the United States, the Nold Hog House was the product of an innovative builder willing to experiment. John Nold built his 20 sided hog house with a sectional conical roof in 1903, approximately 15 years after proving his homestead claim. He used hollow tile, considered a non-traditional material at the time, for the walls. The building had its own scale, pit silo, grain elevator, gravity feed system, grinder and movable hog pens. In addition to the hog house, Nold built a 16 sided house for

his family. Besides his architectural abilities, Nold was also a blacksmith, agricultural equipment inventor, rancher and gardener.

Little information exists about the history of the Lillebridge Barn, a true round barn with a conical roof. Although its exterior resembled the barn designed by University of Wisconsin professor Franklin King and first published in the agricultural press in 1890, the Lillebridge Barn did not have an interior silo, one of the key features that made the King barn an important prototype.

The Lillebridge Barn along with two 1910 barns, the Svien Barn in Day County and the Emminger Barn in Codington County make up the First Period Polygonal/Round Barn property type, the precursor to the Middle and Final Period Polygonal/Round property types associated with South Dakota's round barn building boom. The defining features of the First Period property type are the roof requiring support and the absence of an interior silo. These barns are true round or octagonal in plan with conical, sectional conical or gambrel sectional roofs. Early Period barns have smaller diameters than Middle and Final Period barns. Because the Early Period barn cupolas do not top a silo, they tend to be much smaller than those on later barns with silos.

THE 1910 TO EARLY 1920S BARN BOOM

The South Dakota boom in round barn building especially in East River regions from 1910 to the early 1920s was aided by several factors including the changing needs of established operators, the rise of new, specialized agricultural industries, increased interest and promotion of agricultural education/research and a healthy farm economy caused by the increased food demands of the World War I years. By 1910, the East River region had been permanently settled for 20-40 years. Well established farmers and ranchers needed bigger structures for their expanding operations. In addition to light truss gambrel and gothic arch barns, these operators built round barns as second generation agricultural buildings, usually to replace original, smaller livestock shelters.

Many of these successful operators expanded and diversified into livestock in the late 1890s and early 1900s in direct response to drought and low prices that plagued South Dakota crop farms during the Great Dakota Bust of 1889-1897. Cattle and hog raising and dairying emerged as major South Dakota industries at this time. Increased livestock numbers created a demand for larger, more efficient barns.

Round barn manufacturers and agricultural experiment station bulletins promoted the round barn as an ideal way to meet these new requirements. Firms such as the Louden Machinery Company of Fairfield, Iowa; Sears, Roebuck and Co. of Chicago; the Chicago House Wrecking Company of Chicago and the Gordon-Van Tine Company of Davenport, Iowa, offered plans and precut kit barns for sale. Silos, a convenient way to store large amounts of feed for long periods of time, were also promoted as important components of the round barn package. As the round barn data table indicates, specialized round barn uses such as dairying and cattle feeding appear more frequently in the later years of the round barn boom years, especially after 1917. As in other states, most of South Dakota's later barns (excluding the sale barn, hog house and exhibit pavilion property types) have true round plans, a change from the octagonal plans found in many earlier barns. Eleven of twelve South Dakota round barns built in 1914 or later for which plan form data is available have circular plans. In commenting on this later generation of true round barns in Iowa, Lowell Soike stated, "...barn uses became more specialized. Strictly dairy barns appeared more often, as did barns that held special registered stock. Others served as farm sales barns for marketing rather than for raising and housing animals"(Soike 1983:32). A discussion of the emergence of the sale barn property type in South Dakota appears below..

Another special use property type that emerged during the boom period was the polygonal hog house. Four of the six known polygonal hog houses were built between 1910 and 1913. Three of the four, the 1910 Brevik Hog House in Deuel County, the 1911 Anderson Hog House in Hand County and the 1913 Haider Hog House in Faulk County echo basic features of the Nold Hog House such as the polygonal plan, sectional conical roof, central roof ventilator/cupola, abundant windows and skylights and a pen arrangement along the outer walls with a central open space. These features indicate the builders were aware of the latest recommendations from sources such as agricultural experiment stations regarding hog houses and the need for adequate light and ventilation. The concentric form also provided extra warmth for the hogs, especially important for newborn piglets.

Successful operators also needed a place to sell their livestock. Some operators built their own sale barns on site for this purpose while others brought their livestock to sale barns in town. The polygonal form proved efficient for presenting the livestock to the buyers and conducting a sale. Three sale barns constructed during this era, the Pettigrew Sale Barn (c 1918) in Moody County, the Gregory Sale Barn (1922) in Gregory County and the Brevik Sale Barn (1923) in Deuel County mimic the polygonal plan and concial sectional roof with cupola style of South Dakota's oldest sale barn, the Drolle Sale Barn in Yankton County and one of the First Period barns, the Svien Barn in Day County. One sale barn, the Peterson Sale

Barn (1915) in Moody County has a round plan and conical roof similar to the state's earliest known true round barn, the 1905 Lillebridge Barn in Brookings County.

A building type closely related to the polygonal sale barn, the polygonal agricultural exhibit pavilion, also appeared at this time. These buildings were a product of increased interest and promotion of agricultural education, research and products and the corresponding rise in organizations such as the South Dakota Agricultural Extension Service. Although institutions such as the State College of Agriculture and Mechanical Arts (now South Dakota State University) and the State Fair date from the 1880s, the years 1910-1920 saw the creation of the Extension Service in 1915 and permanent sites for county fairs such as the Butte-Lawrence County Fairgrounds in 1920. In addition, "Agricultural operators formed their own local groups to exchange technical information and assist each other in the cooperative marketing of products such as cream, butter and eggs which were produced on a fairly small basis by a number of people" (Brooks and Jacon 1994:25). Builders of the 1919 Alfalfa Palace at the Pennington County Fairgrounds and the 1921 Butte-Lawrence County Fair Exhibit Pavilion both chose octagon plans. A 14 sided structure in Philip, Haakon County, now used for 4-H events, may also date from this era of communities promoting their agricultural products and education.

The healthy farm economy in the last half of the decade, due to increased food demands of the World War I years, was probably the most important factor in round barn development. Prosperous times meant more money in every operator's pocket. With more disposable income, farmers and ranchers could afford to expand their operations. Because the round barn was a relatively new and experimental concept to most South Dakota agricultural operators, building one of these structures represented somewhat of a gamble on the part of the farmer or rancher. Prosperous times made it easier for these operators to take a risk and try the round barn form, promoted in the agricultural community and press as the latest in efficiency and convenience. As the graph of round barn construction dates illustrates, South Dakota round barn construction peaked at 12 in 1916-1920 before dropping off to 4 in 1921-25 and 1 in 1926-1930. The primary reason for the rapid drop off was the farm depression of the early 1920s. "When the wartime demands disappeared as the European agricultural economy recovered, farm prices plummeted, creating a farm depression. ...By 1924 South Dakota had 'the highest per-capita state debt in the nation'" (Brooks and Jacon 1994: 25-26). Also contributing to the drop-off was the decreasing popularity of the round barn concept in the agricultural press in the late 1910s into the 1920s.

TECHNOLOGICAL ADVANCES AND BOOM PERIOD BARNS

Although information on important developments in the history of round barn building such as the interior silo was available as early as the 1890s, South Dakota round barn builders did not take advantage of this advance until after 1910. Farmers and ranchers in other states such as Iowa, Indiana and North Dakota were also slow to adopt this new technology. Although there is always a lag between the time a concept is first introduced and the time it gains mainstream acceptance, it may have taken longer in this case because the round barn itself was a foreign concept to most potential builders and the initial (approximately pre 1910) distribution of the information did not reach nearly as many people as later advertisements.

In his National Register nomination for North Dakota's round barns, L. Martin Perry observed that although the Dakota Farmer promoted the silo concept as early as 1888 (the first known silo in South Dakota was built in 1894), it wasn't until a number of manufacturers began offering prefabricated silos by mail that the concept really caught on with farmers and ranchers. Perry writes, "By 1909 no fewer than eight manufacturers offered ready-made silos or portable steel grain bins in Dakota Farmer ads. By 1909 the silo had ceased existence as an individual creation or folk phenomenon, it had become part of a newly emerging industry"(Perry 1986:#7, page 9).

An interior silo is a key difference between Early and Middle/Final Period barns. The first South Dakota round barn with an interior silo may be the Crane Round Barn in Brown County. The Crane Barn has a round interior silo and an estimated construction date of 1910. The Crane Barn, however, bears a strong resemblance to a 1918 Sears catalog design and may date from this later period. The polygonal interior silos in the 1911 Anderson Polygonal Barn in Hand County and the 1913 Haider Polygonal Barn in Faulk County, both from the Middle Period property type, are more likely candidates for the earliest interior silos in South Dakota round barns. These are the only two polygonal silos in South Dakota's round barns. The circular interior silo is a regular feature in the two Final Period barn property types. Circular interior silos are found in three of six Final Period barns for which silo data is available and all seven of the Final Period Southeastern Hollow Clay Tile Round Barns.

The Final Period Barns exhibit another technological advance widely adopted during the boom period, the self supporting gambrel roof. Like the interior silo, the self-supporting gambrel roof concept had been around for a while but took several years to become widely publicized and adopted as a standard round barn feature. Its first documented appearance is on a Warren County, Indiana, barn built by prolific Indiana builder Benton Steele and his crew in 1901. One of Steele's crew members, Horace Duncan,

supervised the 1902 construction of a three pitch gambrel roof barn in North Dakota, just across the state line from Artis, South Dakota (Hanou 1993:18). No evidence exists to suggest either Steele or Duncan ever worked in South Dakota. Steele and his partner, Frank Detratz, approached Professor C.B. Dorsey of the Illinois Agricultural Experiment Station in 1903 in an attempt to gain "authoritative support" (Hanou 1993:25) for their barns with gambrel roofs. Professor Dorsey apparently liked what he saw and had Steele and Detratz build him a barn. This contact was the impetus for other staff at the Experiment Station to construct three round barns on campus beginning in 1908 (Hanou 1993:25-26). This led to the 1910 publication of *Bulletin No. 143: Economy of the Round Dairy Barn* by the Experiment Station. This popular publication "incorporated the self-supporting roof as an integral and necessary element of round barn design"(Soike 1983:29). This design feature was widely used in South Dakota after 1915. All Final Period and five of seven Final Period Southeastern Hollow Clay Tile Barns have this type of roof. These roofs are all two pitch except for the Plant Barn in Grant County (now demolished) which had a three pitch gambrel roof.

A third innovation with a distinct and well documented effect on South Dakota's round barns is the use of hollow clay tile as a building material. Clay tile was relatively affordable and was easier to clean, more sanitary and more resistant to deterioration than wood. The overwhelming majority of South Dakota's round barns are wood frame structures except for the Final Period Southeastern Hollow Clay Tile Round Barns, clustered around the Sioux Falls area and built between 1917 and 1921. Iowa, by far, has the most hollow clay tile barns in the region with a total of approximately 50 (Soike 1995:personal communication). North Dakota has only one (Perry 1986:34), Nebraska has three (Ahlgren 1995:#8,page 3) and South Dakota has seven.

The use of clay tile as a building material started in Iowa. "In 1908 Professor J.B. Davidson and Matt King of the Iowa Experiment Station at Ames, working with a local tile manufacturer, had pioneered the use of clay tile in a round silo. The engineers first used rectangular drain tile for the wall of the silo and then encouraged the local tile works to make hollow curved tile. Once achieved, the curved clay tile gave Ames station engineers the means to suggest a plan for a round clay-tile barn" (Soike 1983:30). Several clay tile manufacturers in Adel, Mount Pleasant and Mason City, Iowa went into the business of making curved tiles for barn construction. Soike identifies the Johnston Brothers Clay Works of Fort Dodge, Iowa, as the leaders in the construction of the hollow tile barn in Iowa. They built their first barn in 1910 and constructed fifteen more hollow tile barns in Iowa, approximately 33% of the total number of Iowa clay tile barns. The majority were built between 1914-1918 and the last one in the 1920s. All the Johnston Barns in Iowa are easily identified by a smaller size dark color tile used in the lower part of the exterior walls and

larger size dark color tile used in the remainder of the wall. Soike reports that one farmer in east-central Iowa "acted as a salesman for the Johnston Brothers Clay Works, which supplied at a minimum the materials and general plan for the barn" (Soike 1983:53).

Four of South Dakota's hollow clay tile barns are directly traceable to the Johnston Brothers firm. Two, the Angel (1920) and Stark (1921) Barns in McCook County have the distinguishing two size tile construction. The Goff Barn (1918) in Lake County has a Johnston Brothers patent plate on the silo ladder and the Stevens/Winters Barn (1920) in Minnehaha County has an inscription in one of the tiles that identifies "Johnston" as the barn builders. No information is available about the builders of the Angel and Goff Barns. The Stark barn was built by a local crew using tile that came from Sioux City. The owners of the Stevens/Winters Barn report that the barn contractor was from Iowa. The inscription on this barn identifies George Irvine Clay Works as the probable tile suppliers. This information suggests that Johnston offered farmers a number of options for building their barns. A farmer could order the plans and possibly the materials from Johnston and erect it using either locals or a crew supplied by Johnston. Soike also reports the existence of a travelling crew based in Sioux City that erected a Johnston Brothers barn in Tama County, located in central Iowa, in 1917 (Soike 1983:53). Considering the proximity of Sioux City and known construction dates, this crew may have built one or several of the South Dakota barns. It is unknown whether this crew worked exclusively for the Johnston Brothers. Two hollow tile barns not directly linked to the Johnston Brothers are located in the vicinity of the four barns described above. The Dickens (1917) and Haverhals (date unknown-1920?, demolished c 1990) Barns in Lincoln County may be Johnston Brothers or a similar firm's designs and/or may have been constructed by the Sioux City crew or a similar group. Informants report the tile for the Dickens Barn came from Mason City, Iowa, perhaps from the Mason City Brick and Tile Company mentioned by Soike. The only other tile barn in South Dakota, the Throop Barn (1919) in Lake County, was, according to the owner who has the original plans, designed by the Louden Company of St. Paul, Minnesota. This may be a reference to the Louden Machinery Company of Fairfield, Iowa, a well known firm that sold round barn plans.

As the above discussion of hollow clay tile barns indicates, during the boom period many South Dakota round barn builders took advantage of a fourth innovation: mail order plans, barn design services and precut kit barns. Excluding the sale barn, hog house and exhibit pavilion property types, ten of the eighteen South Dakota round barns built between 1910-1921 are directly linked or bear a strong resemblence to precut catalog barns. In addition to the four Johnston Brothers and one Louden Company hollow tile barns discussed above, the known/likely catalog designs in South Dakota are: a 1914 Grant County barn, the Anderson Barn (1911) in Hand County and the Crane Barn (reported 1910, probably

later-1918) in Brown County that appear to be Sears, Roebuck designs; the Sturdevant Barn (1918) in Jones County that is a Gordon-Van Tine Company of Davenport, Iowa, design and the Bartholamue Barn (1919) originally located in Jones County and now located in Jackson County that is a Chicago House Wrecking Company design. Except for Sears, Roebuck, examples of all these companies' barns are also found in Iowa, Indiana and North Dakota with the earliest examples dating from 1910 and 1911. Vicki Cwiok of the Sears Archives in Chicago reports that Sears offered precut barn designs from 1911-1917 at the back of their precut homes catalog. Starting in 1918, barns and other outbuildings were marketed in a separate catalog (Cwiok 1995:personal communication).

THE END OF AN ERA:SOUTH DAKOTA'S LAST ROUND BARNS

Along with catalog barns, the interior silo, self-supporting gambrel roof and use of hollow clay tile as a construction material were all improvements that made round barns more efficient, convenient, structurally sound, and as a result, more popular in South Dakota from 1910-1921. Sale barns and hog houses were the only South Dakota round barn property types built after 1921. The last true round barn built was the 1921 Stark Barn in McCook County. A depressed farm economy and the decline of the round barn's image in the agricultural press after approximately 1920 were the causes of this rapid decline in construction.

Barn historian Carrie Scupholm offers the following account of the round barn's decline in the agricultural press.

> Many of the initial supporters of round barns, especially farm journal writers and authors of agricultural texts, turned against them. University of Minnesota professor of dairy husbandry, Clarence H. Eckles introduced a section on round barns in the initial version of his textbook *Dairy Cattle and Milk Production.* However by 1923, a revised edition of Eckles' book noted that "The round barn has not won its way in popular favor. Its disadvantages are difficulty in filling the silo, and the impracticability of increasing its size by building additions."(Eckles 1923:543) The most noteworthy attacks came from C. F. Doane, a former student of Franklin H. King. Although initially supporting King's point of view as a student, Doane's subsequent experience led him to reject it (Doane 1914). Even King's place of research, the Wisconsin Agriculture Experiment Station, turned its back on the round barn in 1916. Researchers F. M. White and C. I. Griffith found rectangular barns to be more satisfactory than round ones and cited seven reasons why they did in *Bulletin No. 266: Barns for Wisconsin Dairy Farms* (White and Griffith 1916:6)(paragraph from Scupholm 1994:163-164).

Scupholm goes on to comment on practical reasons for the rapid decline in round barn construction nationwide after early 1920s. Although her comments are specifically geared to dairying, her observations are relevant for all round barns used to house livestock.

> To farmers and barn builders alike, compared to rectangular balloon-frame barns, round barns were more complicated to build. Many carpenters were uncertain how to construct a round barn and preferred to simply stay with rectangular convention. Realizing the extra difficulty involved in circular construction, carpenters frequently charged more for their labor if asked to build a round barn. At times the added cost of labor was enough to offset the farmer's savings in the lower cost of building materials. Adding to the round barn's demise was the fact that its main selling point--the fact that it was arranged to conserve valuable manual labor became less of a concern as more and more machines and labor-saving devices became standard. When round barns were being touted as models of labor-efficient design, the care of dairy cattle was labor intensive. As the number of farmers choosing to specialize in dairy farming rose during the early twentieth century, the number of labor--saving devices for the handling of dairy cattle increased. Consequently, the supposed efficiency of the round form became comparatively less important and its higher construction cost was unjustifiable (Scupholm 1994:164-165).

Only four of the state's round barns with known construction dates were built after the boom period-the 1926 Laurenz Hog House in Dewey County, the 1941 Blair Sale Barn in Meade County, the 1941 Bones Hereford Ranch Sale Barn in Turner County and the 1946 Blunt Sale Barn in Hughes County. Because builders had few, if any, round prefabricated buildings available to them and the agricultural press rapidly abandoned its promotion of the concentric form for farm and ranch buildings, some builders became more innovative and used locally available materials such as rubblestone and logs as construction materials. No real design innovations emerged from this era as builders used forms and features developed during the boom period.

Like the Nold Hog House, the 1926 Laurenz Polygonal Hog House was the product of an inventor and features several innovative features. August Laurenz began construction of the hog house during the middle of the farm depression of the 1920s. He used locally available rubble stone and hard cement mortar to complete the north walls. Laurenz's structure utilized features commonly found in earlier hog houses such as the polygonal plan, sectional conical roof, central roof ventilator/cupola, adequate light and ventilation provided by skylights and windows and pens arranged along the outer wall. An innovative feature of this

structure not found in any other South Dakota round barns is that this northern wall is completely banked into the surrounding hillside. This kept the building warm in the winter and cool in the summer. August Laurenz's son Frank completed the remaining walls with poured concrete during 1927-1928. In another instance of using available resources in a creative way, Frank Laurenz used corn cobs and barbed wire as reinforcement for the concrete walls and a sickle blade for the main door lintel.

Of the three sale barns constructed in this era, the Blair Sale Barn is the most innovative. The Blair family used vertically placed logs for the walls. These logs were available just up the hill from the building site. The Blairs also fashioned a custom saw to shape the logs so they fit together snugly. The form and features of this sale barn and the other two from this era, the 1941 Bones Hereford Ranch Sale Barn and the 1946 Blunt Sale Barn, mirror those of earlier sale barns such as the 1907 Drolle Sale Barn, the 1918 Pettigrew Sale barn and the 1922 Gregory Sale Barn. The Bones Sale Barn is an almost exact reconstruction of the first sale barn on the site that burned down in 1941. The construction date of this earlier sale barn is unknown, but the fact the Bones family did not change any of the features of the earlier barn indicates their satisfaction with and the success of the polygonal form for livestock sales. This helps explain why there are few changes in the sale barn property type from the earliest to latest examples.

Carrie Scupholm's comments about round barns after the Great Depression and World War II are highly accurate for all round barns even though her comments specifically mention dairying (Scupholm 1994:165-166).

> By the time farmers could afford to build again round barns--and traditional barns in general--had ceased being practical. Many of the disadvantages of round barns became major obstacles with respect to the changes that the industrialization of dairying was having on the old practices, especially the need to comply with state regulations regarding milk production. For farmers to stay operative they had to enlarge their herds. It was difficult to expand the size of a round barn, it did not adapt well to the new technologies being introduced into dairying, and those same technologies made operational efficiency based on the circular plan seem unimportant in comparison to the wonders of mechanization. Often, prefabricated one- story pole-barns were built, rather than attempting the remodeling of the round barn. It is ironic that round barns, born of a desire for efficiency, were outdated by increasing efficiency.

CONCLUSION

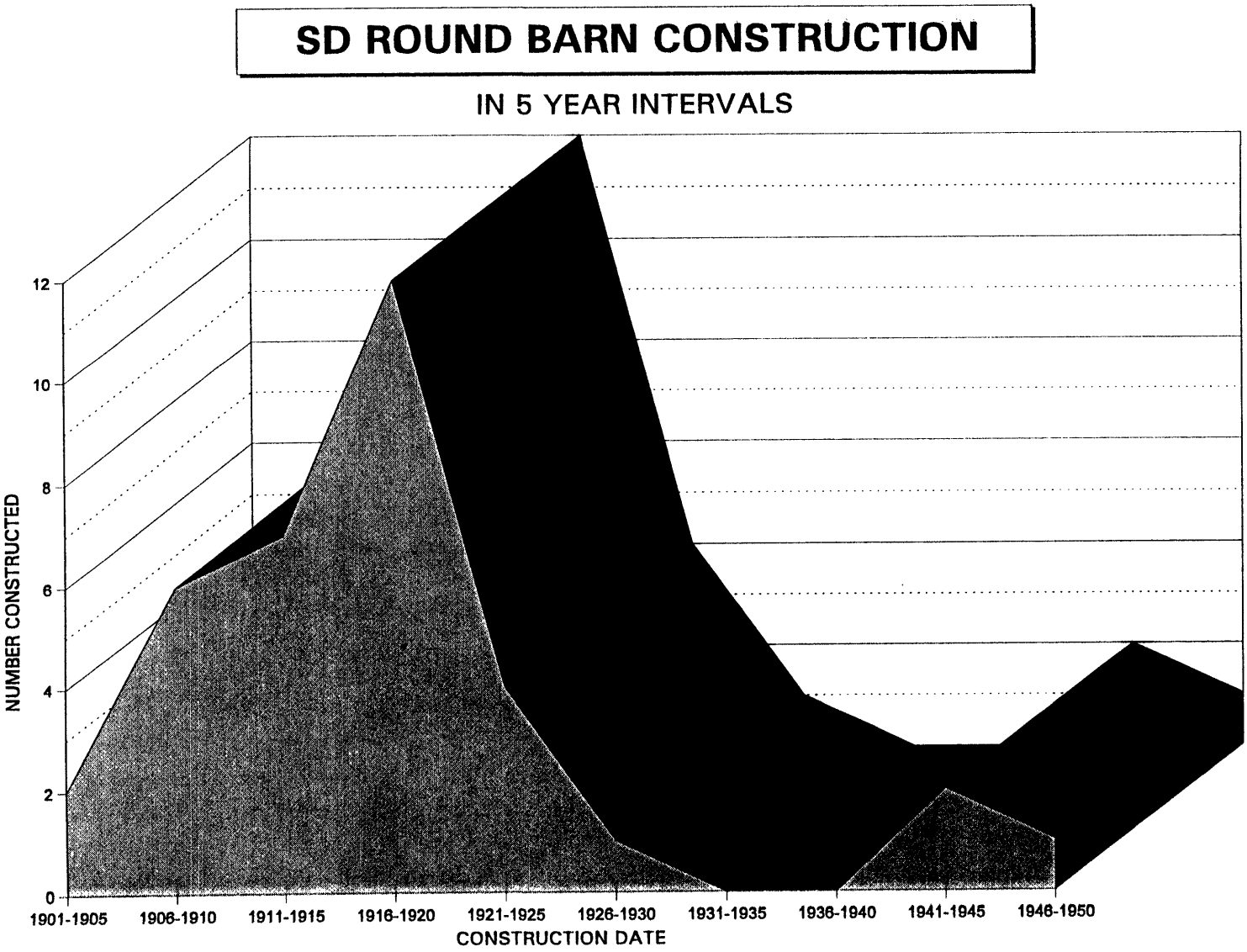
Although some of the early developments in the round barn's evolution were slow to reach South Dakota, the state's collection of these barns provides an accurate example of this building type's development nationwide. Major developments originated in the round barn hotbed states to the east of South Dakota and eventually filtered west. The small number of rounds in South Dakota compared with states to the east and the small number of West River barns underscores the fact that the state is one of the western borders of the large concentration of rounds in the upper Midwest. The extremely low number of round barns west of the Missouri River emphasizes these buildings were more suited to smaller farming East River operations than large scale West River ranch operations.

Compared to other states, South Dakota has a large number of these barns still standing. More importantly, most of these buildings are currently being used and/or maintained. Most South Dakota round barn owners take special pride in their buildings and take steps to preserve this unique part of South Dakota's agricultural history.

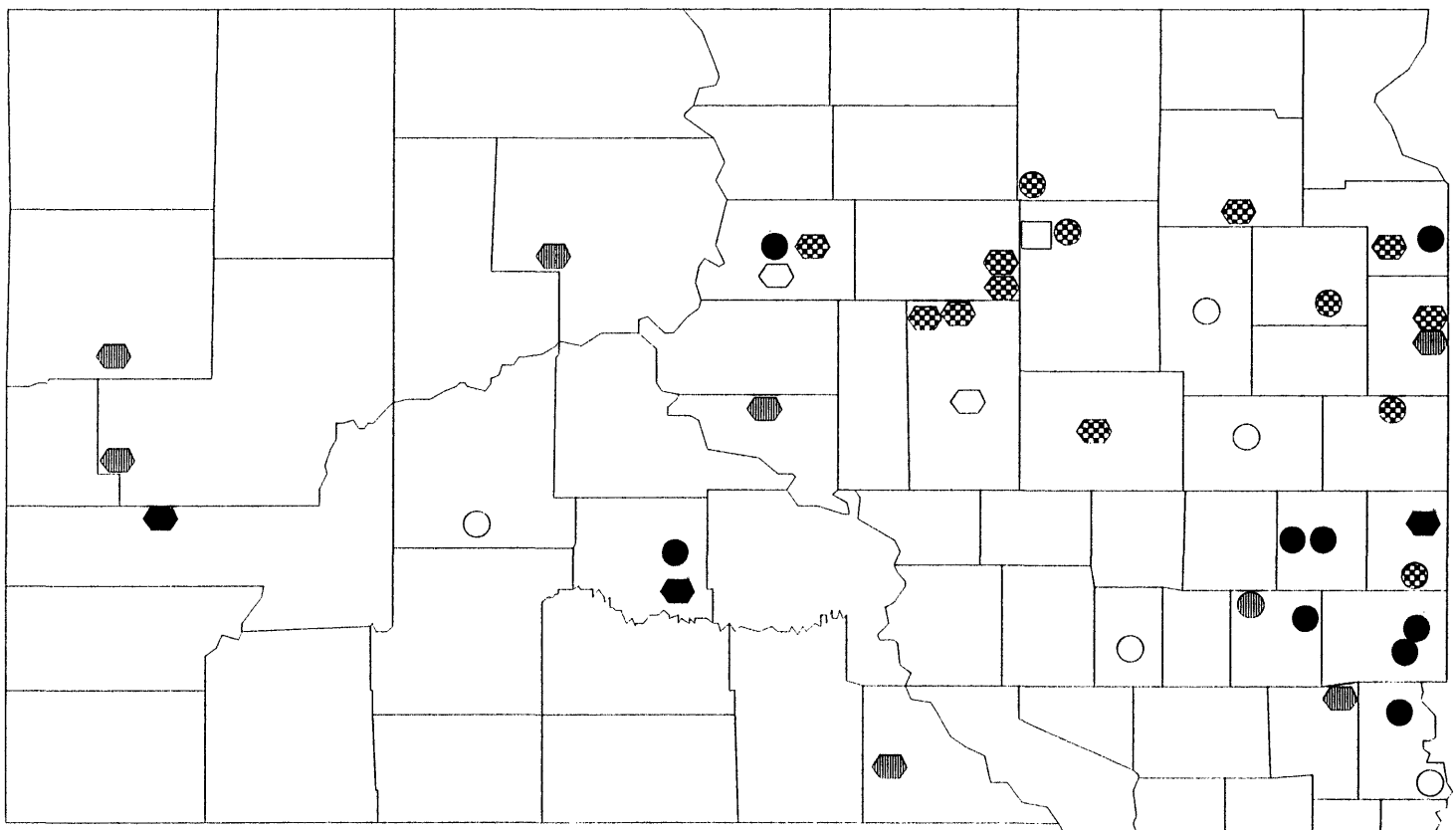
DATA SUMMARY CHART

Date	Original owner-County located	Form	Structure	Silo	Original use
1903	Nold-Potter	20 sides	Hollow tile	N/A	Hog house
1905	Lilliebridge-Brookings	Round	Wood frame	No	General barn
1907	Drolle-Yankton	8 sides	Wood frame	N/A	Hog sales
	State Fair-Beadle	16 sides	?	N/A	Exhibit pavilion
1910	Svien-Day	8 sides	Wood frame	No	General barn
	Brevik-Deuel	8 sides	Wood frame	No	Hog house
	Crane-Brown	Round	Wood frame	Yes	General barn
	Emminger-Codington	Round	Concrete block	No	Dairy
1911	Anderson-Hand	8 sides	Wood frame	Yes	General barn
	Anderson-Hand	8 sides	Wood frame	N/A	Hog house
1913	Unknown-Faulk	12 sides	Wood frame	Yes	General barn
	Unknown-Faulk	13 sides	Wood frame	N/A	Hog house
1914	Unknown-Grant	8 sides	Wood frame	Yes	?
	Norwood-Spink	Round	Wood frame	No	General barn
1915	Peterson-Moody	Round	Wood frame	N/A	Hog sales
1916	Sloat-Potter	Round	Wood frame	No	General barn
1917	Christensen-Minnehaha	Round	Concrete block	Yes	Dairy
	Dickens-Lincoln	Round	Hollow tile	Yes	Cattle feeding
1918	Goff-Lake	Round	Hollow tile	Yes	Cattle feeding
	Sturdevant-Jones	Round	Wood frame	Yes	General barn
	Pettigrew-Moody	8 sides	Wood frame	N/A	Cattle sales
1919	Bartholamue-Jackson	14 sides	Wood frame	?	General barn
	Rapid City Commercial Club-Pennington	8 sides	Wood frame	N/A	Exhibit pavilion
	Plant-Grant	Round	Wood frame	No	General barn
	Throop-Lake	Round	Hollow tile	Yes	Dairy
1920	Stevens/Winters-Minnehaha	Round	Hollow tile	Yes	Cattle feeding
	Angel-McCook	Round	Hollow tile	Yes	Dairy
1921	Stark-McCook	Round	Hollow tile	Yes	General barn
	Butte/Lawrence Co Fair Board-Butte	8 sides	Wood frame	N/A	Exhibit pavilion
1922	Unknown-Gregory	8 sides	Wood frame	N/A	Cattle sales
1923	Brevik-Deuel	12 sides	Wood frame	N/A	Hog sales

Date	Original owner-County located	Form	Structure	Silo	Original use
1926	Laurenz-Dewey	10 sides	Poured concrete/rubble	N/A	Hog house
1941	Blair-Meade	12 sides	Vertical log	N/A	Cattle sales
	Bones-Turner	8 sides	Wood frame	N/A	Cattle sales
1946	Unknown-Hughes	8 sides	Wood frame	N/A	Cattle sales
Unknown	Straight-Kingsbury	Round	Wood frame	?	?
	Unknown-Clay	Polygonal	Wood frame	No	?
	Unknown-Spink	?	?	?	?
	Haverhals-Lincoln	Round	Hollow tile	Yes	Cattle feeding?
	Unknown-Potter	8 sides	Wood frame	N/A	Cattle sales
	Unknown-Hand	Polygonal	Wood frame	N/A	Cattle sales
	Unknown-Clark	Round	?	N/A	Cattle sales
	Unknown-Davison (c 1910)	Round	Wood frame	N/A	Hog house
	Unknown-Haakon	14 sides	Wood frame	N/A	Exhibit pavilion


SD ROUND BARN CONSTRUCTION
IN 5 YEAR INTERVALS
NUMBER CONSTRUCTED
0
2
4
6
8
10
12
1901-1905
1906-1910
1911-1915
1916-1920
1921-1925
1926-1930
1931-1935
1936-1940
1941-1945
1946-1950
CONSTRUCTION DATE

GEOGRAPHIC DISTRIBUTION OF SOUTH DAKOTA'S ROUND BARNS
WITH DATE OF CONSTRUCTION AND FORM NOTED



=TRUE ROUND

=POLYGONAL

=FORM UNKNOWN

CHECKER FILL=PRE 1916
SOLID FILL=1916-1920
LINED FILL=1921 AND BEYOND
NO FILL=DATE UNKNOWN

F. ASSOCIATED PROPERTY TYPES

Early Period Polygonal/Round Barns

The defining features of this property type are the roof requiring support and the absence of an interior silo. These wood frame barns are true round or octagonal in plan with conical, sectional conical or gambrel sectional roofs. Interior stall arrangement may be linear or circular. Early Period barns have smaller diameters than Middle and Final Period barns. Because the Early Period barn cupolas do not top a silo, they tend to be much smaller than those on later barns with silos. Expect examples in this property type built as general use facilities around 1910. The three known examples of this property type are the 1905 Lillebridge Barn, Brookings County (demolished early 1980s); 1910 Svien Barn, Day County(good condition) and the 1910 Emminger Barn, Codington County (good condition-National Register listed). Based on the known examples, Early Period barns will likely be found in East River South Dakota, particularly in the northeast quarter of the state. Primary threats to these resources are abandonment and inappropriate alterations.

Little information exists about the history of the Lillebridge Barn, a true round barn with a conical roof. Although its exterior resembled the barn designed by University of Wisconsin professor Franklin King and first published in the agricultural press in 1890, the Lillebridge Barn did not have an interior silo, one of the key features that made the King barn an important prototype.

The Svien Barn is an octagonal, wood frame structure with a sectional conical roof built as a general use barn. It has no interior silo. Reportedly, the barn's original stall configuration was linear rather than concentric, a common feature of many early octagonal barns. Although the Svien Barn resembles the type of octagonal barn first built in 1875 by Elliot Stewart in plan, roof shape, original stall arrangement and relative size, it does not have a self-supporting roof like the Stewart type barn.

Originally built as a general use barn to house horses and dairy cows, the Emminger Barn is a true round masonry structure with a two pitch gambrel sectional roof requiring support. It has no interior silo. Ramps used to lead to two large doors located on the second floor. At 45 feet in diameter and three stories high, it has a distinctive vertical profile.

The Early Period barns are significant under National Register Criterion C in the area of architecture as examples embodying the distinctive characteristics of the first stage of round barn building in South

Dakota. These resources illustrate how and when South Dakota farmers and ranchers first embraced this new form and which details and features from the available literature they selected to incorporate into their barns. This property type is the first embodiment of the round barn phenomenon in South Dakota, providing the base for and helping define boom period resources.

To qualify for listing, these resources must have been used as general/specialized livestock barns, except hog houses, during the round barn building era in South Dakota, circa 1900-1945, and must retain the majority of distinctive design characteristics of a concentric plan, roof requiring support and no interior silo. The barns should retain a rural setting.

Middle Period Polygonal/Round Barns

The defining features of this property type are the polygonal plan, sectional conical roof not requiring extra support except for the silo, interior silo (usually polygonal) and wood frame construction. Known examples were originally built as general livestock shelters other than hog houses. Two of three known South Dakota examples have a matching polygonal hog house on site. These barns usually have space for both dairy cows and horses. Undocumented examples of this property type built as specialized barns may exist. Based on known resources, expect examples to date between 1910-1915 and be located in the northern half of the East River region of the state. Because this property type covers the time period when mail order plans, barn design services and precut kit barns began to appear, examples should be compared to known mail order plan/precut barns to possibly identify the manufacturer. Primary threats to these resources are abandonment and inappropriate alterations.

The earliest known example of this property type in South Dakota is the octagonal Anderson Barn (1911) in Hand County (good condition), originally built to raise thoroughbred horses, a plan that never materialized. A matching 1911 octagonal hog house is also found on site. The wood frame barn has a sectional conical roof topped by a large octagonal cupola and an octagonal interior silo capable of holding 9,000 bushels of oats. Stalls arranged around the silo were used for spring calving, milking cows and bedding horses. A previous owner estimated the barn housed between 20-25 horses. The Anderson Barn resembles a barn from the 1914 Sears catalog. Future research of earlier Sears catalogs may find a closer match for this structure.

Like the Anderson Barn, the 1913-1915 wood frame, 12 sided Haider Barn in Faulk County (fair to good condition) has a matching polygonal hog house built at the same time. The Haider Barn has a 12 sided interior silo. Stalls for horses and dairy cows are arranged around the silo. This may be a catalog or mail order plan barn, but no manufacturer has been identified.

The 1914 Grant County barn is Barn No. 65 from the 1914 *Sears Modern Homes Catalog*. This octagonal plan, wood frame building has a sectional conical roof and interior silo. This barn is in good structural condition but has modern siding and an inappropriate door replacement.

The Middle Period barns are significant under National Register Criterion C in the area of architecture as examples embodying the distinctive characteristics of the second stage of round barn building in South Dakota. The Middle Period Barns are the first round barns built during the South Dakota round barn boom of 1910 to the early 1920s. These resources illustrate the acceptance and incorporation of the interior silo as an important element in South Dakota round barn designs. Also, these resources embody the initial appearance of catalog and mail order plan barns that became even more popular in the later years of the South Dakota barn building boom.

To qualify for listing, these resources must have been used as general livestock barns during the round barn building era in South Dakota, circa 1900-1945, and must retain the majority of distinctive design characteristics of a polygonal plan, sectional conical roof not requiring extra support except for the silo, interior silo and any distinctive features of a catalog or mail order plan barn. The barns should retain a rural setting.

Final Period Polygonal/Round Barns

The defining features of this property type are the true round or more than 8 sided plan, self supporting two or three pitch gambrel roof and either a circular interior silo or no silo at all. Most of these barns were built as general use facilities, but specialized use facilities are possible. Expect these barns to be found in the northern two-thirds of East River South Dakota and built from 1914-1919. Expect examples to generally have larger diameters than Early and Middle Period barns. Because this property type covers the height of the mail order plans, barn design services and precut kit barns phenomenon, examples should be compared to known mail order plan/precut barns to possibly identify the manufacturer. Primary threats to these

resources are abandonment, inappropriate alterations, and relocation because their large size makes them more feasible for adaptive use than other property types.

The earliest known barn in this property type is the 1910 Loney Crane Barn in Brown County(fair to good condition). This construction date is an estimate and is likely to be incorrect. This true round barn with a circular interior silo bears a strong resemblance to Barn 2071 from the 1918 *Sears Barn Catalog*.

Chronologically the next two barns are the 1914 Norwood Barn (National Register listed until demolition in late 1980s) in Spink County and the 1916 Sloat Barn (fair condition) in Potter County. Neither of these round barns had an interior silo. The Norwood Barn had three levels with the bottom used for feeder cattle, the middle used for cattle, horses, dairy cows and grain storage and the top used for up to 100 tons of hay. At 96 feet in diameter, the Sloat Barn is the largest round barn in South Dakota. It had space for feeder cattle, dairy cows and horses in addition to a pit silo for feed. Ben Sloat designed this barn after he graduated from SDSU in 1911. The barn had running water and electricity from the time it was built.

The 1917 Christensen Barn (fair to good condition) in Minnehaha County was built as a dairy barn. The oversize concrete blocks used to build it were made on site by Mr. Christensen. This is one of only two (Emminger Barn in Codington County is the other) masonry round barns in South Dakota.

Built in 1918 and 1919 respectively, the Sturdevant Barn (good condition) in Jones County and the Bartholamue Barn in Jackson County (good structural condition but moved from Jones County and altered so historic integrity lost) are both catalog barns and the only West River examples in the Early, Middle and two Final Period property types. The Sturdevant Barn is Barn 214 from the 1917 Gordon-Van Tine Company catalog. The distinctive 14 sided Bartholamue Barn is from a Chicago House Wrecking Company catalog. The Bartholamue Barn was originally located in Jones County near the Sturdevant Barn. Perhaps Mr. Bartholamue saw the Sturdevant Barn and was impressed enough to order one.

Two demolished barns round out the description for this property type. The 1919 Plant Barn (blown down by a windstorm) in Grant County is the only known barn from this property type that had a three pitch gambrel roof. Little information except a photo is available on the Straight Barn in Kingsbury County (demolished at unknown date). It is included here because of its gambrel roof shape.

The Final Period barns are significant under National Register Criterion C in the area of architecture as examples embodying the distinctive characteristics of the last stage of round barn building in South Dakota. These barns are one of two types built at the height of the round barn building boom. These resources illustrate the acceptance and incorporation of the self supporting gambrel roof as an important element in South Dakota round barn designs. Also, these resources represent the height of catalog and mail order plan barns in South Dakota.

To qualify for listing, these resources must have been used as general/specialized livestock barns, except hog houses, during the round barn building era in South Dakota, circa 1900-1945, and must retain the majority of distinctive design characteristics of the true round or more than 8 sided plan, self supporting two or three pitch gambrel roof, either a circular interior silo or no silo at all and any distinctive features of a catalog or mail order plan barn. The barns should retain a rural setting.

Final Period Southeastern South Dakota Hollow Clay Tile Round Barns

The defining features of this property type are the hollow clay tile wall construction, true round plan, round interior silo, self supporting roof not requiring extra support except for the silo and the location in McCook, Lake, Minnehaha and Lincoln counties, all in southeastern South Dakota around the Sioux Falls area. The majority have two pitch self-supporting gambrel roofs. Other roof shapes within the property are cone and dome. With one exception, Final Period Southeastern SD Hollow Clay Tile Round Barns were originally built as specialized livestock shelters for cattle feeding and dairying. Expect construction dates of 1917-1921. Primary threats to these resources are abandonment and inappropriate alterations.

These barns are described in detail above toward the end of the "Technological Advances and Boom Period Barns" section. Of the seven known examples, one was demolished in the early 1990s, one is in fair to poor condition, two are in fair condition and three are in good condition.

These barns are significant under National Register Criterion C in the area of architecture as examples embodying the distinctive characteristics of the last stage of round barn building in South Dakota. These barns are one of two types built at the height of the round barn building boom. These resources illustrate the acceptance and incorporation of hollow clay tile construction as an important element in South Dakota round barn designs. These resources represent the unique manifestation of catalog and mail order plan barns in a specific area of South Dakota.

To qualify for listing these resources must have been used as general/specialized livestock barns, except hog houses, during the round barn building era in South Dakota, circa 1900-1945, must be located in southeastern South Dakota in counties such as McCook, Lake, Minnehaha and Lincoln that surround the Sioux Falls area and must retain the distinctive design characteristics of hollow clay tile wall construction and a majority of the following characteristics: true round plan, round interior silo, any distinctive features of a catalog or mail order plan barn and a gambrel, dome or cone self supporting roof not requiring extra support except for the silo.

Sale Barns

The defining features of this property type are a concentric plan, sectional conical or conical roof, center exhibit area, bleachers or another seating arrangement surrounding the exhibit area and plentiful light provided by means such as a cupola, skylights and windows. The typical form is an octagonal plan with a sectional conical roof topped by a cupola. Six of the eleven examples in this property type have rectangular plan wing(s) that housed the livestock extending out from the sale barn. The mammoth Bones Sale Barn even has its own lunch counter/refreshment stand for sale patrons. With one exception, these barns appear in East River South Dakota. Expect examples to date from throughout the round barn building era of 1900-1945. Known examples date from 1907 to 1946. Sizes range from approximately 35 feet in the Drolle Barn to the mammoth Bones Sale Barn measuring 80 by 50 feet with the attached wing measuring 85 by 110 feet. Primary threats to these resources are abandonment, modern additions that dwarf the original concentric form and adaptive uses requiring alterations that destroy historic fabric. Within the property type two examples are in poor condition, seven are in good condition and two are in excellent condition.

The 1907 Drolle, 1941 Blair, 1941 Bones and 1946 Blunt Sale Barns are discussed above. Chronologically following the Drolle Barn is the Peterson Sale Barn in Moody County, built in 1915 as a hog sale barn. It is one of only two round plan structures within the property type-the other is the Clark Sale Barn in Clark County (date unknown- irreversibly altered by adaptive use). The Peterson Sale Barn is also unique within the property type because it has a raised central platform, originally used as the exhibit stage for the swine. The platform originally had two spiral ramps on opposite ends of the platform for access and egress.

Another swine sale barn is the 12 sided 1923 Brevik Sale Barn in Deuel County. The attached wing is a rectangular plan hog house with a monitor roof with windows facing south. Also on site is an octagonal 1910 hog house.

The remaining barns in the property type all have the standard octagonal plan, sectional conical roof and large cupola. These examples also all have attached wing(s). The 1918 Pettigrew Sale Barn (deteriorating and vacant) in Moody County was built by Giles Pettigrew to house his prize Polled Hereford cattle. The 1922 Gregory Sale Barn in Gregory County and the Miller Sale Barn (date unknown) in Hand County are still operating as sale barns. The final example, the Gettysburg Sale Barn (date unknown) in Potter County has a distinctive appearance because of two symmetrical wings that extend out in opposite directions from the octagonal center. It is no longer used as a sale barn.

Sale barns are significant under National Register Criterion C in the area of architecture as examples embodying the distinctive characteristics of round/polygonal sale barn building in South Dakota from 1900 to 1945. These resources illustrate how and when farmers, ranchers and business people utilized a new form for a new industry, the buying and selling of livestock. The consistency in the building form from approximately 1900 to 1945 and beyond shows the success of this form for selling livestock to a large audience.

To qualify for listing these resources must have been used for livestock sales during the round barn building era in South Dakota, circa 1900-1945, and must retain the majority of distinctive design characteristics of a concentric plan, sectional conical or conical roof, center exhibit area, bleachers or another seating arrangement surrounding the exhibit area and plentiful light provided by means such as a cupola, skylights and windows. Additions must not obscure the original concentric form. The barn should retain an appropriate setting based on its original location on a rural farm/ranch or in town.

Polygonal Hog Houses

The defining features of this property type are the concentric plan, sectional conical roof , low one story profile and a large number of windows and skylights usually on the southern facades for light, ventilation and warmth. Other common features are pie shaped pens arranged around the outside wall, small doors leading out of each pen, a central feeding/watering space, a source of heat such as a stove piped to a central chimney and ventilation controls such as hopper windows, awning skylights and center ventilators. These resources are usually found in East River South Dakota and have construction dates ranging from 1903 to 1926. Of the six known examples, two are in poor condition, two are in fair condition and two are in good condition. The primary threat to these resources is abandonment.

The earliest and latest examples from this property type, the 1903 Nold Hog House and the 1926 Laurenz Hog House are discussed above. Two early examples from this property type are the 1910 Brevik Hog House in Deuel County and the Davison County (c 1910) example just south of Mitchell. Both of these structures are approximately 30 feet in diameter. The Brevik Hog House is octagonal with a sectional conical roof with a roof dormer. The Division Hog House is an unusual true round example with a conical roof and a roof dormer.

The remaining two examples from this property type, the 1911 Anderson Hog House in Hand County and the 1913 Haider Hog House in Faulk County, have matching polygonal barns on site. The Anderson Hog House with room for 24 sows has a central feeding area for the swine. The Haider Hog House has room for 12 sows. The Haider Hog House has a number of prefabricated features such as galvanized awning style windows and skylights and a number of convenient features such as pulley operated swine doors and central ventilator.

Polygonal Hog Houses are significant under National Register Criterion C in the area of architecture as examples embodying the distinctive characteristics of concentric hog house building in South Dakota from 1900 to 1926. These resources illustrate how and when farmers and ranchers utilized a new form for a new industry, hog raising. Builders developed a number of features such as small, individual doors from the interior pens to the outside to make the concentric form convenient and efficient for raising swine. The consistency in the building form from approximately 1900 to 1926 shows the success of this form for hog raising.

To qualify for listing, these resources must have used to house swine during the round barn building era in South Dakota, circa 1900-1945, and must retain the majority of distinctive design characteristics of a concentric plan, sectional conical roof , low one story profile, a large number of windows and skylights usually on the southern facades for light, ventilation and warmth, pie shaped pens arranged around the outside wall, small doors leading out of each pen, a central feeding/watering space, a source of heat such as a stove piped to a central chimney and ventilation controls such as hopper windows, awning skylights and center ventilators. The hog house should retain a rural setting.

Polygonal Exhibit Pavilions

The defining features of this property type are a polygonal plan, numerous windows and a relatively finished interior. Examples were built to show livestock and exhibit agricultural products and are usually part of a fairgrounds complex. These buildings were often used as assembly spaces during the fairs and as meeting space for agricultural groups when the fair was not in session. Of the four known examples, three are located in West River South Dakota. Of the four known examples, one example was demolished in 1965, one example is in good condition and two examples are in excellent condition. The primary threat to these resources is demolition as fair boards look to replace older buildings with modern structures.

The cruciform 1907 Horticulture Pavilion at the State Fairgrounds in Huron is the earliest known example of this property type. It was demolished in 1965 and replaced with a hexagonal building. Limited information exists about its history.

The next example, the 1919 Alfalfa Palace at the Pennington County Fairgrounds was an impressive two story octagonal structure with a large octagonal domed cupola. It measured 80 feet across and had a mezzanine level approximately 12 feet from the ground level. The Pavilion was open in the center. Events held at the Alfalfa Palace included exhibits and dances. It served as a dormitory during the Western Junior Livestock Show and a coffee shop during the Black Hills Stock Show. The main portion of the building was destroyed by the massive 1972 Rapid City Flood. The octagonal dome was salvaged and now serves as the Horticultural Building.

The 1921 Exhibit Pavilion at the Butte-Lawrence County Fairgrounds is listed on the National Register. It is a two and a half story octagon with cast iron stairs leading to the second floor. The pavilion has a large windowed octagonal cupola. The interior is painted and has a hardwood floor. President Calvin Coolidge toured the home economics exhibits in the pavilion when he visited the fairgrounds on September 1, 1927.

The only remaining example in the property type is the 4H Pavilion in Philip, Haakon County. The history and construction date of this 14 sided, conical roof building are unknown.

Polygonal exhibit pavilions are significant under National Register Criterion C in the area of architecture as examples embodying the distinctive characteristics of polygonal exhibit pavilion building in South Dakota from 1900 to 1921. These resources illustrate how communities and agricultural organizations adapted the

concentric form for the central exhibit and assembly space at their fairgrounds. This property type embodies the early 20th century rise of events and organizations designed to promote agricultural products and agricultural education.

To qualify for listing, these resources must have used to publicly show livestock and exhibit agricultural products during the round barn building era in South Dakota, circa 1900-1945, and must retain the majority of distinctive design characteristics of a polygonal plan, numerous windows and a relatively finished interior. Pavilions originally built as part of a fairgrounds should retain original location and setting.

H. SUMMARY OF IDENTIFICATION AND EVALUATION METHODS

In the 1992 planning and research stages of the South Dakota *Homesteading and Agricultural Development Context*, the SHPO staff examined materials gathered as part of an earlier attempt to create a context document for agricultural resources. Included in these files was substantial research material relating to round and polygonal barns, most importantly a preliminary site list for remaining round and polygonal barns in South Dakota. During the 1992 and 1993 survey seasons SHPO staff and contractors made a concerted effort to positively identify the entries on this list. In addition, numerous inquiries were made to institutions such as the State Agricultural Heritage Museum and the State Archives regarding historical evidence of additional structures. Public information inquiries were also made to *South Dakota* magazine over various radio programs and at several public lectures. All county agricultural extension agents were also contacted.

In the spring of 1994, University of South Dakota history graduate student Deirdre McPheeters began a systematic inventory of confirmed round and polygonal barns. She completed a South Dakota Historic Sites Inventory form for 24 of 36 existing round and polygonal barns and wrote a draft thesis that was submitted to the SHPO.

In the winter of 1994-95, SHPO staff conducted additional archival research at the University of South Dakota Library to complete individual survey files and gather information for a statewide context document.

There is only one context for this Multiple Property nomination. It is defined by a particular building form, round and polygonal barns and pavilions. This unique and easily identifiable building form can be found throughout the state of South Dakota. The temporal boundaries of this context were determined by the construction dates of these resources, approximately 1900-1945.

The significant property types are based primarily on style variations within the round/polygonal barn resource group. Function was a limiting factor at the beginning of the classification process because machine sheds and other polygonal agricultural outbuildings not used to shelter, show or sell livestock were not included. Within this broad framework, various stylistic, functional and temporal factors have been used to produce the seven property types.

Because of the scarcity of these resources, use and basic physical characteristics such as plan, roof shape and building mass were chosen as registration requirements. Selection of these particular characteristics was based on a knowledge of exisitng properties and research on round barn development nationwide.

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