NPS Form 10-900-b
(Jan. 1987)

OMB No. 1024-0018

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

Round and Polygonal Barns of Indiana

B. Associated Historic Contexts

Agriculture in Indiana 1730-1940
Indiana Round and POlygonal Barns 1850-1936

C. Geographical Data

The boundary of this context is the political boundary of the State of Indiana.

☐ 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.

Patrick R. Rabbitt — 2/10/93

Signature of certifying official — Date

Indiana Department of Natural Resources

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.

Patrick W. Andrus — 4/2/93

Signature of the Keeper of the National Register — Date

Agricultural History of Indiana 1730-1940

Since pioneer days, farming has been an important and vital aspect of life in Indiana. Beginning on a subsistence level, farming evolved from mere survival to a way of life, and, more recently, into large-scale business. Along with the evolution of the science of agriculture and the corresponding improvements in farming practices, innovations have occurred in farm buildings that have aided farmers. One such innovation was the round/polygonal barn. With 219 round and polygonal barns being built in the state from 1874 to 1936, Indiana may deserve the distinction of having more round and polygonal barns than any other state in the Union.[1]

Within the broad time span of 1850 to 1936, there were two overlapping periods of round/polygonal barn construction: the Octagonal Era - 1850-1900 and the True-Circular Era - 1889-1936. Indiana contains a variety of examples from these eras, ranging from small, one-storied barns to huge, two and three-storied structures. Round and polygonal barns had a great impact on farming practices in the state of Indiana and helped mark the sophistication and technological advancement of agriculture in Indiana.

To fully understand the importance of round and polygonal barns, a brief agricultural history of Indiana must be explored. Geologically, Indiana was comprised of the southern region (southern one-third of the state), typified by rolling hills and thick hardwood forests and the northern region (northern two-thirds of the state), typified by much richer, silty soil and numerous lakes formed by retreating glaciers. The northeastern and central areas were also covered with hardwood forests and swampland while the northwest was a flat, treeless and often swampy prairie. The early settlers, mostly upland southerners, came first to the forested regions of the state and engaged in farming on a subsistence level. This is not to say that surpluses did not exist. On the contrary, there were some surplus crops in the early days that were traded, but the trade network at the time tended to be very limited in extent.[2]

Subsistence farming continued throughout the 18th century but three important acts of government in the late 1700s had an indirect affect on agriculture. The first was the Land Ordinance of 1785 which imposed a rectangular survey system on the Northwest Territories and thereby provided an orderly and regulated system of development for farms and farm communities. The second was the Northwest Ordinance of 1787, which gave the Northwest Territories a basis of government. This was followed by the Treaty of Greenville in 1795 which reduced the threat of attack by American Indians. As a result of these acts and increased governmental stability between 1795 and 1820, the population of Indiana burgeoned from 5,461 in 1800 to 147,178 in 1820. Contributing to the expansion were greater numbers of mid-Atlantic and New England farmers who migrated to Indiana during the first half of the nineteenth century, bringing their experience with well-organized, efficient

[X] See continuation sheet

and commercially successful farming. Eventually, large amounts of forest land were cleared to provide shelter and to make way for farming. The increased amount of tilled land yielded surplus crops which were shipped down the Ohio River and elsewhere.[3]

During this same period, transportation networks improved tremendously. The construction of the National Road, begun in Maryland in 1811, reached Terre Haute in 1833. The Michigan Road was completed in the 1840s and the final leg of the Wabash and Erie Canal to Evansville was completed in 1853. During the 1840s railroads also began to appear in Indiana. These improvements opened more areas of the state to other parts of the country so that surplus products could reach the marketplaces of the U.S. By 1850 Indiana was fourth in America's corn production and third in hog production, yet only half of the state's arable land (arable by today's standards) was actually under cultivation or used for livestock. The other half remained wooded or laid fallow as swampland. In 1850 the U.S. Congress ceded federal rights on the northwest quadrant of the state, with proceeds from the sale intended to improve the land. This acreage was purchased largely by cattle speculators who raised livestock on the property and increased settlement in the region. Still, the productivity of the soil was minimal.[4]

By the mid 1850s, a decade of agricultural prosperity began in Indiana that delivered the state out of pioneer existance and into an era of expansion that would continue through the second half of the nineteenth century. Farm products rose in value over two and one-half times. Land values increased and most of the state entered the farm business. By 1900 the total number of farms doubled, the average farm size decreased and over three fourths of Indiana's arable land was improved as cropland--even the previously livestock-oriented northwest. Also in 1900, energy booms of natural gas and coal led to increased industrial operations. Even the swampland was drained and made productive.[5]

Developments in technology, agricultural education, farming practices and dissemination of information were equally important between 1860 and 1900. Several factors led to the creation of organizations, schools and societies that educated and shared innovations with farmers. In 1851, the Indiana General Assembly established the State Board of Agriculture, followed in 1852 by the first Indiana State Fair. By 1859, seventy-five percent of Indiana's counties had County Fairs. In 1874 the Indiana State Board of Agriculture began publishing the Indiana Farmer which updated farmers on important new trends in Indiana agriculture. The information included, but was not limited to, new implements (reapers, wheat drills, corn planters, threshers, Oliver chilled steel plow), crop rotation, fertilization, new livestock breeds and

the benefits of fencing. The year 1862 saw the passage of the Morrill Act by the U.S. Congress, whereby colleges of agricultural and mechanical arts would be established in each state. In 1874 Purdue University was created under this act. An eventual off-shoot of these colleges was the creation of agricultural experiment stations which carried out research relative to agriculture. This makes evident that farming was now not only a means of making a living but a science that could be investigated and improved. Finally, the Grange or Patrons of Husbandry was founded in Vigo County in 1869. The Grange was a fraternal organization dedicated to the promotion of social, cultural, educational and economic advancement for farmers. All of these groups contributed enormously to the progress and development of farming practices in Indiana.[6]

The increased efforts of these groups and certain world events made farming extremely profitable from 1900 to 1920. The twenty year time span, termed the "Golden Age" was so called because the value of farm property increased 89.4% between 1900 and 1910 and 66.4% between 1910 and 1920, all without a substantial increase in cultivated acreage. The horse-drawn machinery that advanced agriculture in the late 1800s was eventually replaced by steam and gas-powered machinery after 1910. Additionally, the new machinery that was touted in the farm journals meant that more land could be more efficiently and productively cultivated. With the new cultivation equipment, a day's work accomplished more than in prior years. The advent of steam and gas equipment meant that fewer animals were needed for cultivating and harvesting.[7]

Farming required less labor yet the new equipment required more of a capital investment. When product prices skyrocketed after the outbreak of World War I, increased capital was needed to buy more acreage. Farmers began to mortgage heavily to acquire more land, seed and equipment, unaware that the close of the war would result in a huge surplus of products. This surplus sparked a depression in the American agricultural community in the early 1920s, some ten years before the Great Depression struck the American economy. Farmers did not see any relief from low prices until the mid 1930s and even then, change was slow in coming.[8]

A change that was not slow in coming was the evolution of farm buildings, in particular the barn. When farming existed on the subsistence level in Indiana, few if any farm outbuildings were required. Most farms consisted of the house, a smokehouse, possibly a summer kitchen and maybe a small barn. As agriculture expanded and farming became profitable, farmers began to build more farm buildings. These buildings tended to be small and built for a single function with examples ranging from corn cribs to hay barns to

livestock shelters to storage sheds.

By the late 19th century, farmers were urged to construct large multi-purpose barns. It was best summarized by Byron D. Halstad in Barn Plans and Outbuildings (1881 text):

> With the increase of wealth, and we may add of good sense and enlarged ideas, among the farmers of the country, there is a gradual but very decided improvement in farm architecture. The old custom was to build small barns, to add others on three sides of a yard, perhaps of several yards, and to construct sheds, pigpens, corn houses, and such minor structures as might seem desirable. Compared with a well arranged barn, a group of small buildings is inconvenient and extremely expensive to keep in good repair.[9]

Farmers were being called upon by Halstad and other writers to combine their numerous, single-function barns into one barn--a necessary departure from the past in order to accommodate the new equipment and bolster the efficiency of the farmer. Efficiency could be increased because instead of several buildings to maintain and travel between, all functions could take place under one roof, thus freeing up the farmer for other pursuits such as attending Grange meetings or reading his current issue of farm journals. This trend continued well into the 20th century and even though some specialized barns, such as dairy barns, came back into vogue in the second decade of the 20th century, many farmers followed thm multi-purpose precedent.[10]

After World War II, changes in farming forever changed the face of the farm's built environment. Large tractors and planting/harvesting equipment completely eclipsed the productivity and efficiency of horse-drawn and early gas and steam-powered implements. Consequently, traditional barns that had served the farmer well and represented his new stature in the American mainstream economy became obsolete. Fewer animals were needed and the new, large equipment did not fit into the old structures.[11] This trend continues today and historic barns and other agricultural outbuildings are disappearing off of the Indiana landscape at alarming rates.

Indiana Round and Polygonal Barns 1850-1936

Round and polygonal structures, in spite of being prominent landmarks, are not safe from this destruction which is why it is critical to discuss their development and history. Furthermore, the importance round and polygonal barns had in the history of agriculture has often been obscured by erroneous explanations of their existence, ranging from a builder's "flair for mathematics" to a desire to "keep the devil from hiding in corners" to a

quest for "cyclone-proof barns".[12]

As farming grew more into an economically-based business, innovations were sought that could help the farmer increase efficiency, productivity and profits. The farm journals were full of new ways to achieve these ends, with many of the ideas promoted as the solution to everyone's problems. One of the first heralders of such an idea was Orson Squire Fowler. Fowler, of Fishkill, New York, began a campaign in the 1850s to inform people of the virtues of octagonal buildings. Fowler's main thrust was for octagonal housing but he felt that the beauty and versatility of the form would transcend to every aspect of the built environment, including agricultural outbuildings. In his book, The Octagon House, A Home for All, Fowler proclaimed that the circle was nature's perfection and the octagon approached the perfection of the circle in a practical way. Furthermore, the octagon allowed the economy of space, increased natural light to the interiors, eliminated square corners and facilitated communication between rooms.[13] As a result of Fowler's efforts, numerous octagonal houses were built throughout the country, including Indiana.

Many writers, such as Soike, maintain that Fowler's work must have had an impact on the earliest era of round and polygonal barns. In Upstate New York, 1874, Elliot W. Stewart lost four of his rectangular barns to fire. Stewart, an eccentric individualist, lecturer at Cornell University and editor of the Livestock Journal decided to replace the four barns (totalling 7000 square feet) with one 5350 square foot octagonal structure. Stewart built the barn and then publicized his accomplishment in the Livestock Journal. He listed the advantages of the octagonal barn: 1. They were cheaper to build because fewer materials were needed to enclose the same area as a rectangular barn with the same wall height. 2. The roofs were very strong and self-supported, thus freeing up interior spaces from poles and purlins. 3. They were much less affected by wind and could be built taller than rectangular barns in windy locations. 4. For feeding, square or circular barns had shorter lines of travel than oblong ones. Soon the Cultivator and Country Gentleman of Albany, New York and the American Agriculturalist of New York City took notice of Stewart's article and reprinted it. Further, the idea continued to flourish as evidenced by two books, Dairy Farming by J.P. Sheldon (c.1885), outlining the advantages of octagons to dairy farmers and Feeding Animals written by Stewart (1883).[14]

Equally important to the development of octagonal barns was the fact that the barn could combine several functions under one roof. The new multi-purpose barn was very efficient and economical because the storage of animals, feed and equipment was now under one roof. Compared to single-function barns,

the farmer no longer had to travel between the different structures and had only one building to maintain as opposed to several. Additionally, although the octagon was decidely different from the traditional barn, it lent itself well to the same post and beam construction which farmers had used for building oblong barns. The straight sides of the octagon were joined at an angle so that the walls could easily be built with post and beam. The only differences in construction between the octagon and the oblong barn was the angle at which the walls met and the roof structure that required far fewer posts and purlins. The octagonal barn seemed to be a logical step toward increased efficiency while using a familiar construction method.[15]

Iowa agriculturalist, Lorenzo S. Coffin, was attracted to the octagonal barn in the late 1860s, some eight years previous to Stewart. Coffin constructed an octagonal barn in 1867 for the same reasons that Stewart built his, but did not publicize his work until after Stewart. The differences between Coffin's and Stewart's designs revolved around two main points: entries and roofs. Coffin built his barn in a natural depression so that both the lower and upper entries were on natural grade while Stewart accessed his upper level with a ramp. Stewart's roof, on the other hand, was far superior with his sectional cone virtually free of support posts. Coffin's modified hip roof design required posts which were continually in the way, clogging up the floor area of the hay mow.[16]

Indiana's first octagonal barn was built in 1874 using the Stewart model. Built by Nathan Pearson Henley in the Greensboro Township of Henry County, the barn was copied from Stewart's design and was described as having a self-supported sectional cone roof covered in slate, vertical wood siding, a large rectangular annex and a ramp providing access to the upper level. Unfortunately, the roof collapsed in 1973 and shortly thereafter the barn was razed. This barn was followed by a nine-sided example in LaPorte County, Indiana, built in 1878 by Marion Ridgeway (extant). The nine-sided model was considered a derivative of the octagon, and a rather odd derivative at that since the extra side made the geometry of construction more difficult. By 1900, at least 18 polygonal barns were built in Indiana. However, their popularity was never fully established as they were eclipsed by a new innovation--the true-circular barn.[17]

An interesting aspect of the early polygonal barns was that the interior lay-outs tended not to be circular but remained rectangular. Certainly, the overall circular form of the exterior walls helped to shorten feeding lines, yet the arrangement of pens and stalls was often rectangular. One reason was that the method of post and beam construction made the lower level more conducive to a rectangular layout and often rendered circular designs

cumbersome since the support posts, easily accommodated in rectangular forms, often obstructed radial layouts. Additionally, circular plans made little sense to the 1880s farmer because they predated the invention of the circular silo which would prove to be one of the turning points in the acceptance of the circular plan. Stewart maintained that the central drive running through the barn with feeding and pen areas on both sides was a far more efficient use of space than a drive running around the barn's perimeter as in a circular plan. And even when farmers began thinking of putting a silo in the center, there was the difficulty of filling the silo, a problem that would not be solved until the invention of the elevator devise for lifting silage.[18]

By the 1890s, the early polygonal barns' popularity began to wane, largely because of the advanced technological example of the true round barn. Born of engineering and not carpentery, the true rounds soon eclipsed the early polygonals in terms of popularity and acceptance. Several factors led to the acceptance of the round barn. These factors are: one, the use of balloon framing on agricultural buildings; two, engineering research involving the balloon frame that created truly self-supported roofs; three, the adoption of the circular interior layout made possible by the circular silo with elevator;[19] and four, the financial means to construct barns and an information network that informed the farmer of the new innovations.

Prior to the 1830s, virtually all wood construction in the U.S. was completed with the post and beam method. Although very strong and durable, the post and beam method required the carpenter to be skilled in hand-hewing the mortise and tenon joints of massive timbers (4x4, 4x6, 4x8, 6x8, 8x8, etc.). In the 1830s, the balloon frame was invented in Chicago whereby carpenters were able to manipulate pre-cut, light-weight, flexible pieces of lumber into new shapes with the same durability and stability of post and beam construction. Additionally, the invention of the high-speed ciruclar saw meant that sawmills could quickly produce the new lumber. Furthermore, the modern wire cut nail provided an effective, expedient and inexpensive means of joining the framework. However, the new balloon frame techinque was not used widely on agricultural buildings until the late 1880s for several reasons. For instance, the relative isolation of the rural areas from new innovations at a time that predated most farm journals, isolation from the products, probably some adherence to past forms in less progressive areas and finally, neither seeing the need nor having the money to build new agricultural outbuildings at the time.[20]

Along with the development of the balloon frame came engineering research that helped round barns gain acceptance. Various experiments carried out at agricultural stations led to the creation of the totally self-supported roof

that allowed interior spaces on all levels to be virtually post free. As a note, Stewart sold his octagonal barns as post free, which they were relative to their predecessors. The new model eliminated even more of the interior supports, particularly on the upper level, and thus freed up more area for storage and equipment.[21]

As mentioned previously, the circular interior layout made little sense to farmers before the invention of the circular interior silo with an elevator. The storage of fodder without significant spoilage had always been a problem that had plagued the early farmer, especially dairy farmers who needed the green fodder to keep cows producing milk during the winter months. Breakthroughs in silo research began in the 1860s and 1870s when Adolph Reihlen left the U.S. for his native Germany, taking with him American large dent corn. Faced with a shorter growing season that would not adequately mature the corn, Reihlen began experimenting with pit silos. Pit silos are underground pits lined with masonry and sealed with a heavy cover to eliminate water and air infiltration. Reihlen's work was soon published in French and German agricultural journals and then expanded upon by Frenchman Auguste Goffart and American Manly Miles of the University of Illinois. However, the early pit silos had many problems, including an imperfect building technology that allowed seepage of water and air into the fodder, the build up of toxic gasses on the bottoms of the pits, cumbersome covers and an enormous investment of time, energy and money. Furthermore, some were not sure that cows would eat fodder preserved in such a way.[22]

Skepticism in the new silo technology was evident in an 1882 Department of Agriculture survey whereby 91 farms in the U.S. were identified as having silos with eighty percent of these examples located in the New York/New England area. The reason for the concentration along the northeastern seaboard can largely be attributed to two main factors: one, the change to an urban setting in the area from 1875 to 1900; and two, because of the urban shift, the need for an expansion of the area's dairy industry which imported dairy products to the cities and needed the green fodder to keep cows "wet" or producing milk throughout the year.[23]

Due to the problems with pit silos, the subterranean structures evolved into square tower silos that were often added at the end of an existing barn. Although an improvement over pit silos, tower silos were still difficult to load and unload and the square corners allowed air pockets to form which eventually led to spoilage. Finally, a low cost and practical design for a circular silo was perfected at the Wisconsin Agricultural Experiment Station in the early 1890s. This model was then improved in 1894 with the introduction of the wood-stave silo, characterized by tongue-in-groove boards

placed in a narrow trough at the silo's concrete foundation. The boards were stabilized by iron bands or staves, a technique based on barrel construction. Shortly thereafter, the elevator for loading and unloading silage was invented, freeing up the location of the silo to anywhere the farmer might desire--such as in the middle of a round barn's circular interior layout. As a footnote to their development, silos were constructed with masonry, glazed tile and poured concrete after World War I, followed in 1945 by the Harvestone silo, with fiberglass coated metal sheets.[24]

Circular silos were indeed revolutionary in the way they reduced spoilage and the ease of operation afforded by the elevator. Likewise, the circular interior layout with feed areas located around the silo's base to facilitate feeding finally made sense to the farmer. Without the invention of the circular silo, the round barn may have never gained acceptance.

Finally, there was an abundance of information and financial resources available to the farmer, particularly after 1900. Never before had agriculture been studied and perfected as it was in the late nineteenth and early twentieth centuries. Farmers had a broad network of information and resources courtesy of the farm journals, experiment stations, colleges and orginizations. More importantly, twentieth century farmers had the financial means to build farm buildings and the journals were over-flowing with ways for the farmer to spend his money, bolster his efficiency and increase his net profits. After all, the balloon frame, engineering research and circular silo would have meant little to the development of round barns if the farmers could not have afforded to build the structures.

Another facet of round and polygonal barn development that must be explored in more detail is the importance of farm journals and agricultural experiment stations to the contemporary farmer. Farm journals were established as clearinghouses of information, much in the same way a newspaper is intended to objectively and honestly edify the public. In some instances however, farm journals issued a virtual endorsement of trends. Such was the case with Stewart, editor of the Livestock Journal, who gained notariety with his octagonal barns. Likewise, Benton Steele would come to have great impact on the Indiana Farmer, possibly because of the large advertizing budget that he maintained with the publication. Experiment stations, on the other hand, were considered by most to be the final authority on agricultural innovations. These stations, set up in most states, were extremely influential. People were interested in what the stations had to say in regards to such things as fencing, fertilization, soil conditions, soil erosion, crop rotation, new barn designs and a host of other topics. They were often run in conjunction with a local Agriculutural and Mechanical College and the research and information

disseminated to the local and regional farmers contributed greatly to the advancement of agriculture in America. The experiment stations were often so highly respected that their endorsement could mean the difference between the success or failure of a new agricultural innovation.[25]

Certain agricultural experiment stations played an important role in promoting the construction of round barns, noteably the stations in Iowa, Wisconsin and Illinois. Franklin H. King, a professor of physics at the Wisconsin Agricultural Experiment Station in Madison was one of the early engineering researchers of round barns. In 1889, C.E. King contacted his brother Franklin to design a barn that would economically house eighty cows and ten horses under one roof. The barn was to contain feeding and cleaning alleys, a silo, a granary and sufficient storage space for dry fodder. The resulting 92 foot diameter round barn with centralized silo and balloon frame construction would become the prototype of round barns, even though the roof was not self-supported. King then published his plan, worthy of imitation, along with an explanatory text in the 1890 Annual Report of the Wisconsin Agricultural Experiment Station. This article was reprinted in an 1895 issue of Hoard's Dairyman, J.H. Sander's 1893 Practical Hints About Farm Buildings, and the Chicago Breeder's Gazette and their book Farm Buildings.[26]

This publicity effort was then picked up by the Illinois Experiment Station where, between 1900 and 1910, H.E. Crouch of the Dairy Department planned and constructed three round barns on the campus of the University of Illinois at Champaign. Crouch's barns were improvements to King's model because he added more windows to light the interiors and most importantly, a self-supported roof that freed the interior of posts. The Illinois Experiment Station then began publicizing its efforts by publishing plans and detailed instructions in the 1910 Bulletin (revised in 1918). The final innovation was the development of vitrified clay tile for constructing silos and even the walls of the barns, considered to be more sanitary for dairy operations than wood construction. The practice of using clay tile was developed in Iowa by Professor J.B. Davidson and Matthew King of the Iowa Experiment Station.[27] The new building material was quite popular in Iowa, and although many Indiana examples have tile silos, only one glazed tile barn was built in the state (the Cornish Griffin barn in Steuben County, Indiana, extant).

According to Soike:

> Aside from their obvious differences in shape, four features distinguished the true-round barn generation from its older octagonal forbearers. First and foremost, the interior space was arranged differently. Interiors of octagons had been

> arranged the same as rectangular barns. True-round barn plans, on the other hand, called for mangers, feeding and cleaning alleys, box stalls and other functions to be arranged in a circle, usually around a centrally placed silo. Second, the self-supported roof completely supplanted the older hip-roof design. Third, new materials characterized the post-1890 true-round barns. Curved vitrified clay tile assumed decided leadership in farmer acceptance over all wood construction even though wood barns more easily accommodated later additions. A few farmers sided their round barns with sheet or corrugated metal, while others tried concrete, cement blocks or concrete staves. Last, barn uses became more specialized (once more). 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.[23]

Therefore, even though the clay tile never fully caught on in Indiana, the interiors of Indiana's round barns did change to incorporate circular layouts and self-supported roofs. Some barns did become more specialized, a tie to the growing national trend for more dairy facilities. Although Indiana has never been considered a dairy state, there were dairy barns built in Indiana, along with barns to house hogs, chickens and show animals.

However important the dairy industry was becoming, a more prominent reason for the construction of round/polygonal barns was the need for efficiency--a need that transcended specialization within agriculture because efficiency was appropriate for every farmer, not just the dairymen. The round barn with the circular layout was extremely efficient when compared to traditional forms. The traditional single-function oblong barn was laid out in a linear fashion, often with pens dispersed along either side of a central drive. If feed were stored in the same barn, which was not often the case, the farmer had to carry the feed from one end of the structure to the other, often making several trips to retrieve more hay or grain.

With the new round barn, those examples with central silos had a feed alley around the base of the silo and the animals faced inward in a radial fashion. From the feed alley, the farmer could access the fodder in the silo as well as hay and straw in the hay mow, which was delivered to the main floor through drop chutes. The farmer only needed to walk in a circular area, sometimes as small as ten feet in diameter, to complete his feeding tasks. Additionally, the floors of the barns were sloped down to the outer edges so that when the animals' waste was expelled, it could easily be washed to the

manure trough at the barn's perimeter, collected and then moved to the fields as fertilizer.

Other examples in the state have a central drive in place of the central silo. These examples are also designed with efficiency in mind whereby one or both sides could be arranged into inward facing pens like the circular silo example. The difference here is that the feed alley is located off to the side of the drive, often near an off-center silo or corn crib. The other side, if not composed of small pens, could be used as a large holding pen for animals such as pigs or sheep. However, regardless of the presence or absense of a central silo, both examples had efficiency as their main theme.

Although Iowa, Wisconsin and Illinois were instrumental in the development of the round barn, certain Indiana builders "spread the gospel". In 1900, Professor William Hill of the University of Chicago hired Isaac McNamee and his son Emery to construct a true-circular barn on his Rush County farm near Carthage, Indiana. The McNamees followed King's model and the completed barn (now razed) was one of the first in the area to have an interior silo. Desiring to increase their round barn business, the McNamees spread the word on the barn and soon received numerous inquires from Rush, Hancock, Henry and Wayne County farmers. It was while working on the Whisler barn in Hancock County in 1901 (now razed) that the McNamees met a young carpenter and architect from Warrington, Indiana, Benton Steele.[29]

Later in 1901, Steele established a name for himself by building an 80 foot diameter barn for a Warren County banker (now razed). Steele's next commission would be the design and construction of a 100 foot diameter barn for Congressman Wymond L. Beckett of Indianapolis. This Dearborn County barn (extant), the largest round barn in the state at the time, along with the previously mentioned Warren County barn were the first known true-circular barns with double-pitched, self-supported roofs. After his initial success, Steele began a 1902 advertizing campaign in several agricultural newspapers and journals, including a long and consistent association with The Indiana Farmer.[30]

In 1902, the McNamees, Steele and a young carpenter from Knightstown, Indiana, named Horace Duncan designed and built a 102 foot diameter barn in Hancock County, Indiana. The owner was Frank L. Littleton, a prominent Indianapolis attorney and State Legislator, who, in a friendly rivalry with Beckett, wanted the largest round barn in the state. When completed, the 102 foot structure would remain the largest ever constructed in Indiana and still stands today in near perfect condition on its original site. From this association, Littleton, Isaac McNamee and Horace Duncan submitted the

documentation for a patent on their Improvements to the Self-Supported Conical Roof which they were granted in 1905. Interestingly, Steele was not included in the patent. Even more interesting, many farmers began building multi-sided (6, 8, 10, 12, 14 and 16-sided) barns to skirt the infringement.[31]

Meanwhile, also in 1902, Steele met Samuel "Frank" Detraz, a woodworker employed at a Pendleton, Indiana lumberyard. The two formed a partnership and opened an office in Pendleton in response to the strong demand for round barns in the area. In June of 1902, tornadoes devastated the Warrington and Pendleton areas but the Whisler barn that Steele built in Hancock County (1901) survived, and thereafter round barns were dubbed "Cyclone-proof". In 1903, a Professor Dorsey of the Illinois Agricultural Experiment Station met with Steele and Detraz to review their round barn designs and construction techniques. Later, Dorsey had one of their barns built on his own farm in Illinois. In the same year, Steele and Detraz developed what they termed the "Ideal Circular Barn" and promoted it extensively in The Indiana Farmer. However, after the patent was issued without Steele and Detraz, Detraz left the business (1905) and Steele's relationship with Duncan deteriorated to the point that Steele left Indiana for Kansas in 1909. Consequently, Steele's advertisements in The Indiana Farmer abruptly stopped.[32]

In 1910, after Steele's departure along with his advertizing budget, The Indiana Farmer lost interest in round barns. The Farmer's Guide of Huntington, Indiana then began publicizing information and plans and the occurrence of new round barns shifted from central to northern Indiana. Also in 1910, the Kindig builders of Fulton County built their first round barn and followed with at least 23 others in northern Indiana, thus extending the round barn era in the area until 1923. In 1911, Horace Duncan began compiling a list of round barn owners in Indiana and elsewhere to watch for patent infringements and potential law suits. It was also in 1911 that, for the first time, round barn starts declined. Soon thereafter, Duncan abandoned his family to build round barns in other parts of the Midwest. This action was followed by Emery McNamee moving to Canada in 1913, before finally settling in Red Lodge, Montana.[33]

The University of Illinois, publisher of the Economy of the Round Dairy Barn in 1910, reprinted the edition in 1918 but it was too late to renew interest in the round structures. The movement was obviously near death, evidenced by Horace Duncan's return to Indiana in 1918, not to build round barns but to sell washing machines. By 1934, Purdue University claimed that round barns were a peculiarity, were built to suit the whims of owners and, to mince no words, were obsolete. The last round barn using the techniques of Steele, et. al. was built in Grant County, Indiana (extant) in 1936, built to

replace a 1915 round barn that had burned. However, of the 219 round and polygonal barns built in Indiana, 69% or 152 were true circles. This demonstrates the overwhelming popularity of the true-circular barn compared to polygonal barns.[34]

In reading this round/polygonal barn history and learning of some of the individuals that promoted the movement, some might feel that the development was almost faddish or whimsical. On the contrary, nothing could be further from the truth. Many non-agricultural factors arose within the round and polygonal barn movement that affected the course of development. First off, there was the devotion of men like Steele who, although forced from Indiana, spent the rest of his life building round barns in Kansas. Then there are individuals such as Duncan and Littleton who were almost opportunistic in their pursuit of round barn construction, seeing the demand and capitalizing on it. This was followed by the patent in 1905 and successive patent infringement accusations and disputes which not only forced some from the business but also spawned a vernacularization of plans to include multi-sided barns of 6, 8, 9, 10, 12, 14 and 16 sides. Round and polygonal barns were not whimsy or faddish but rather were engineered models that were created to service the farmer, increase his efficiency and his profits.

Numerous reasons could be cited for the decline of the Round Barn Movement. One could claim that the lack of champions for the cause led to the downfall. More importantly, the collapse of the farm economy in the 1920s left farmers without the means to construct any type of farm building. By the time the economy rebounded in the mid 1930s and farmers could afford new structures in the 1940s, agricultural technology had changed drastically, rendering round and polygonal barns obsolete in the minds of the experts. The round and polygonal barns along with traditional oblong barns were totally supplanted by modern pole barns that were inexpensive, easy to build and completely devoid of character. Unfortunately, the pole barn's popularity has never waned.

From 1874 to 1936, numerous round and polygonal barns were constructed in Indiana. These structures are important to the history of agriculture in the state because they exhibit the increased sophistication and technological advancement made in farming during that period. As economics and science increasingly affected agriculture, farmers began to look for ways to decrease overhead and labor hours and increase productivity and profits. These barns help us comprehend the evolution of farming from a means of survival to small family business to large scale enterprise. Round and polygonal barns are one of the best landmarks of this evolution.

ENDNOTES

1. This assumption is based on Lowell Soike's inventory of Iowa in which he identified 160 structures in Iowa, 154 in Indiana [erroneous], and 180 in Wisconsin. These results can be found in Without Right Angles, The Round Barns of Iowa, p. 3. In deference to Mr. Soike, he cites Doris Hood's work in Fulton County Indiana which was completed in 1971. A great deal of research on Indiana examples was carried out in ensuing years, largely by John Hanou in the mid 1980s, and the early numbers of 154 Indiana examples were expanded to the current number of 219.

2. Jane R. Nolan, Agricultural Development in Seventeen Counties in Southwestern Indiana, 1730-1900 (Indianapolis, IN: Indiana University/Purdue University at Indianapolis, Department of History, 1988), pp. 1-3.

3. Ibid, pp. 3-7.

4. Ibid, pp. 7-11.

5. Ibid, pp. 9-12.

6. Ibid, pp. 12-15.

7. Jane R. Nolan, Agricultural Development in Sixteen Counties in Southwestern Indiana, 1900-1940, (Indianapolis, IN: Indiana University/Purdue University at Indianapolis, Department of History, 1989), pp. 3-18.

8. Ibid, pp. 3-18.

9. Reprinted as Barns, Sheds and Outbuildings (Brattleboro, VT: Stephen Greene Press, 1977), p. 15.

10. Nolan, Agricultural Development in Sixteen Counties in Southwestern Indiana, 1900-1940, pp. 3-18.

11. Ibid, pp. 18-25.

12. Eric Arthur and Dudley Witney, The Barn, A Vanishing Landmark in North America, (New York, NY: Arrowood Press, 1988), pp. 147-149.

13. Orson S. Fowler, The Octagon House, A Home for All, with a new introduction by Madeleine B. Stern, (New York, NY: Dover Publications, Inc., 1973 reprint), pp. v-xii.

14. Lowell J. Soike, Without Right Angles, The Round Barns of Iowa, (Des Moines, IA: Iowa State Historical Department, Office of Historic Preservation, 1983), pp. 10-11.

15. Ibid, pp. 10-12.

16. Ibid, pp. 12-16.

17. John Hanou, Chronology of Round Barn Construction, (Research compiled on Indiana's round and polygonal barns from 1986 to present. Archived at Historic Landmarks Foundation of Indiana, 340 West Michigan Street, Indianapolis, IN), p. 1.

18. Soike, pp. 23-24.

19. Soike, p. 26; Hanou, p. 2.

20. Virginia and Lee McAlester, A Field Guide to American Houses, (New York, NY: Alfred A. Knopf, 1986), pp. 33-35; Soike, p. 26.

21. Soike, p. 26.

22. Allen G. Noble, Wood, Brick and Stone, Volume 2: Barns and Farm Structures, (Amherst, MA: University of Massachusetts Press, 1984), pp. 69-72.

23. Noble, p. 72.

24. Noble, p. 72-74.

25. Soike, pp. 2-69.

26. Ibid, pp. 26-29.

27. Ibid, pp. 26-30.

28. Ibid, pp. 31-33.

29. Hanou, p. 2.

30. Ibid, pp. 2-3.

31. Ibid, p.3.

32. Ibid, pp. 3-4.

33. Ibid, p.4.

34. Ibid, pp. 4-5.

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F. ASSOCIATED PROPERTY TYPES

I. Name of Property Type: Polygonal barns

II. Description:

Agriculture has always been an important part of the history and development of Indiana. Beginning as subsistence farming, agriculture eventually grew into a large-scale business. Concurrently, farmers started thinking of efficient farm practices and built new multi-purpose barns. Such barns incorporated several farm functions (ie crop, animal and equipment storage) into one structure which could replace the numerous buildings that previously served the needs of the farmers.

One part of the increased sophistication of agricultural practices and barn construction in particular was the phenomenon of polygonal and round barn construction, which can be divided into two phases: the Octagonal Era of 1850 to 1900 and the True-Circular Era of 1889 to 1936. This property description deals with polygonal barns built during both phases.

Early polygonal barns of the Octagonal Era usually had eight sides, although other polygonals were built. The earlier barns were soon superceded in importance by the later true circles which were very popular because of the acceptance of balloon framing techniques for barns, the invention of the circular silo and the development of the truly self-supported roof. Oddly enough, the roof developments and patent issued on the improved roof in 1905 probably led to renewed interest in polygonal barns in the early 20th century. Apparently, many farmers built polygonal barns to skirt patent rights and so Indiana has polygonal barns built during the height of the True-Circular Era.

In Indiana, there were 219 round and polygonal barns built between 1850 and 1936 and their numbers break down as follows:

True circles	152 built	(77 extant)
Six-sided	3 built	(2 extant)
Eight-sided	32 built	(14 extant)
Nine-sided	3 built	(2 extant)
Ten-sided	2 built	(2 extant)
Twelve-sided	18 built	(10 extant)
Fourteen-sided	6 built	(3 extant)
Sixteen-sided	3 built	(1 extant)

Sixty-seven of the 219 round and polygonal barns built in Indiana between 1850

and 1936 were polygonal. Indiana had six polygonal structures built before 1889 and eighteen before 1900. The six before 1889 included five 8-sided and one 9-sided barn while the other twelve barns (built between 1889 and 1900) included ten 8-sided, one 12-sided and one 16-sided barn. The remaining 49 of the 67 polygonal barns, (three 6-sided, seventeen 8-sided, two 9-sided, two 10-sided, seventeen 12-sided, six 14-sided and two 16-sided) were all built after 1900 during the True-Circular Era (see Table 1 for more specifics). For the purposes of this discussion, the Octagonal Era polygonal barns will hereafter be referred to as early polygonals and the True-Circular Era polygonal barns will be referred to as late polygonals.

With the exception of interior layout and construction technique, all polygonal barns can be discussed collectively. However, in regards to interior layouts and construction techniques, the differences are markedly apparent. Many of the early polygonal barn interiors tended to remain rectangular, often with a central drive cutting through the structure with support posts lining the sides of the drive and square or rectangular pens placed off to the sides. A reason for the adherence to the old layout was that the rectangular plan allowed for the incorporation of support post that were critical to the post and beam. Spans tended to be short by today's standards and the posts that braced the beams would obstruct the circular plan. Finally, there tended to be no interior silo but there could often be grain bins on the upper hay mow level.

In the late polygonals, constucted with the balloon frame, the interior layout tended to be much more circular and even though many had central drives, the layout radiated outward from the center. In central drive examples, often there was a circular feed alley off the drive, followed by pens and then a manure alley at the outer reaches of the barn. Both sides might be finished this way or one side might be left open as a large holding pen. Other later polygonals were characterized by a circular or polygonal silo (with a circular interior). The circular silo revolutionized agriculture because farmers were, for the first time, able to store grain without significant spoilage. The shape of the circular design improved air circulation and made rotten silage a thing of the past. The invention of the elevator devise meant that the silo no longer had to be placed near the outside edge for ease in loading. The elevator allowed silos to be placed in the center of the barn where they were most needed to truly create a circular and more efficient feeding arrangement. The typical centralized arrangement beginning at the central silo and moving out, included a feed alley (area for the farmer to retrieve the grain from the silo or hay from the drop chutes to the upper level) followed by a feed trough, then a series of pens (the pens tended to be wedge-shaped to accommodate the circle and faced inward to the

feed trough) and finally a manure alley at the outer edge of the barn (a small depression that the manure was washed into and then collected and removed). There could be variations on this theme whereby only one side of the barn was constructed as described and the other left open as a large pen. As a note, these late polygonal characteristics tend to mirror the development of the true-circular barns because it is felt that most of the later polygonals were built as a way to skirt the 1905 patent that was issued for the improved, self-supported roof of the true circles.

Another main factor that led to the acceptance of the late polygonals was the use of the balloon frame in agricultural buildings, a factor that also distinguishes early and late examples. Many of the early polygonals were constructed using the post and beam, a familiar technique whose posts could easily be incorporated into the rectangular layout of the interior. Basically, the only difference between an early polygonal barn and a traditional barn form were the angles at which the wall sections met and the reduced posts and purlins in the hay mow. However, when the balloon frame and circular interior layout became popular, the interiors changed radically. It should be noted that the circular layout constructed with the balloon frame was not post free. On the contrary, there were posts but the spans tended to be wider and the built-in pens could incorporate the necessary posts for the structure. Also, central elements such as silos provided a natural bracing point for additional support. Often structures were built around the silos and braced at the center by the silo, the outer edge by the exterior walls and intermediately by a laminated beam that was supported by posts buried in the walls of the feed alley, feed trough or pens.

In both the early and late polygonals, the functions of the interior typically were very similar. The lower level generally housed farm animals and contained pen and feeding areas. Sometimes there could be smaller grain storage areas in addition to the silo (if a silo were present). The upper level, referred to as the hay mow, was devoted to the storage of hay and straw. Typically there was access to the mow by either an upper level door reached by a ramp or a hay dormer or an opening to the lower level located near the main door. In these examples, the main door is of extra height. Additionally, there were doors that hay and straw could be dropped through to service the feeding on the lower level and some barns had additional grain bins in the hay mow. Finally, equipment could be stored in either the upper or lower level, depending on available space and access to ground level.

Other design elements that are prominent on early and late polygonal barns include several divided-light windows (the number of windows increased in the later polygonals) and solid wood doors that sometimes contained smaller

openings such as windows or small doors. These elements helped to increase the light and air circulation in the barns making them more pleasant and airy. Construction of both the wall and roof surfaces was almost always wood. Furthermore, poured concrete foundations were common on the late polygonals while early barns often used wood sills on grade. Circular hay tracks were developed in the late polygonals and along with manure troughs, materials and waste could be efficiently and easily handled. Elements that were prominent but not always present include cupolas with windows for even more ventilation and light, interior water tanks and hay dormers to increase access to the upper level. Less common elements include window dormers, poured concrete wall construction, slate roofs and foundations of brick, concrete block or stone. Lastly, some polygonal barns have been added to over the years, especially those that were used for dairy operations, with milk sheds and other buildings added to accommodate changing needs.

Two design elements, wall materials and roofs (design and materials), warrant closer scrutiny. As mentioned previously, most Indiana polygonal examples were constructed of wood. The walls of these barns were typically composed of either vertical or horizontal wood siding (vertical was most common) that infilled between the support system of either the balloon frame or post and beam barn. One polygonal example is unique among others due to its construction material of poured concrete. The Menno S. Yoder (Prough) barn of LaGrange County's Newbury Township (extant) is the only polygonal barn in Indiana that is constructed of a material other than wood.

The roof form design element also requires discussion. Consulting Figure 1, there are eleven basic roof systems. The five self-supported examples are the Dome, Gambrel 2-pitch, Gambrel 3-pitch, Sectional and Gambrel with wind. These models date from 1900 on and thus are associated with the later polygonal barns. Models that sometimes were self-supported include the Conical, Sectional Cone and Polygonal with wing. Finally, support was required on the Modified Hip, Flat Roof and Monitor examples. With Indiana's polygonal barns, the roof styles are as follows:

* Six-sided barns--all 3 built with Sectional Cone roofs
* Eight-sided barns--31 of 32 examples built with Sectional Cones
  1 example has a 2-pitch Gambrel (Tippecanoe County, Fairfield Township, extant)
* Nine-sided barns--all 3 built with Sectional Cone roofs
* Ten-sided barns--1 Sectional Cone (Madison County, Union Township)
  1 2-pitch Gambrel (Montgomery County, Sugar Creek Township)

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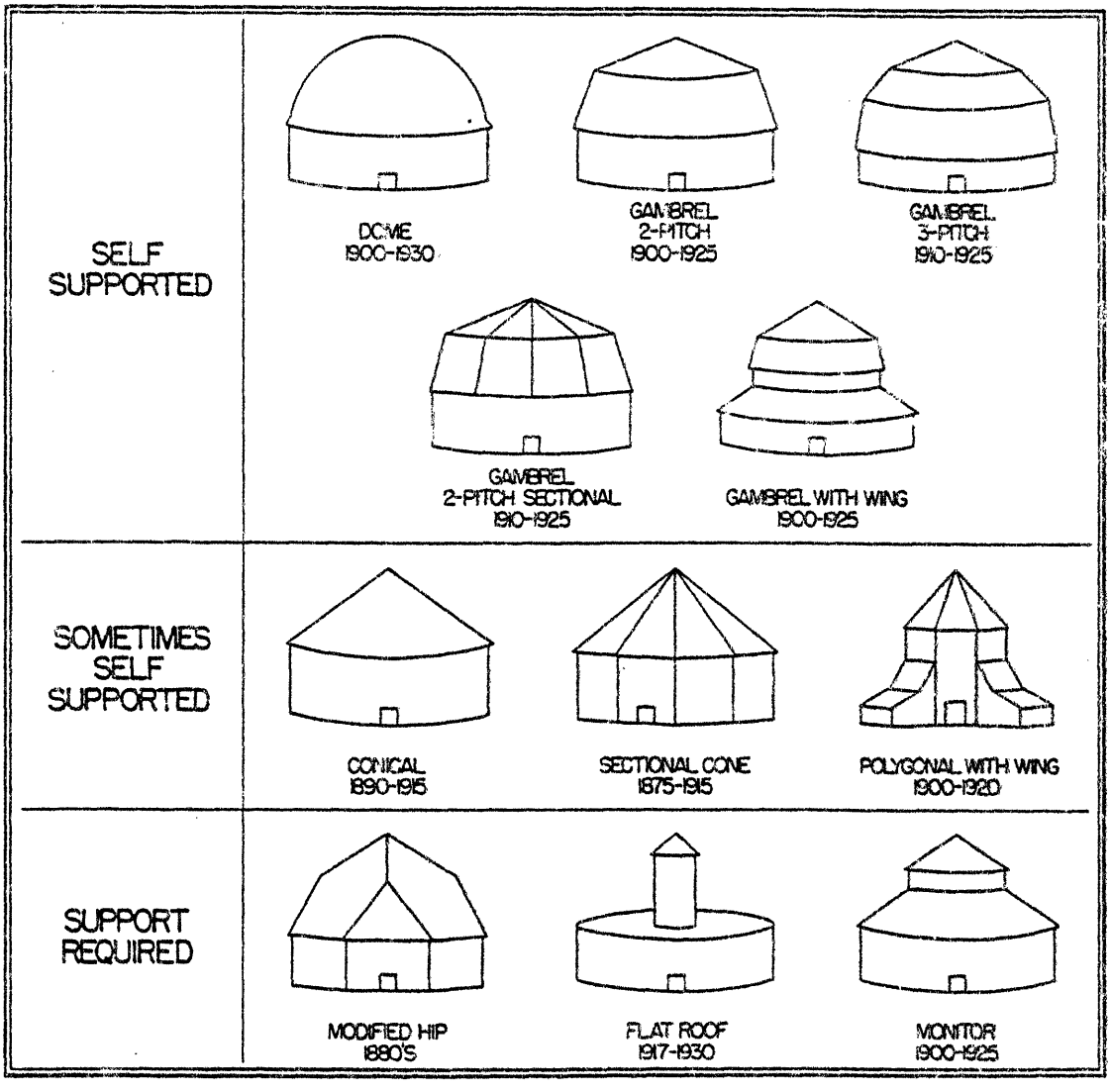
FIGURE 1--BASIC ROOF SHAPES. Rerpinted from:
Lowell J. Soike, Without Right Angles, The Round Barns of Iowa, (Des Moines, IA: Iowa State Historical Department, Office of Historic Preservation, 1983), p. 42.

Basic Roof Shapes



* Twelve-sided barns--3 built with Sectional Cone roofs
  12 built with 2-pitch Gambrel roofs
  3 built with 3-pitch Gambrel roofs
* Fourteen-sided barns--3 built with Sectional Cone roofs
  3 built with 2-pitch Gambrel roofs
* Sixteen-sided barns--1 Flat roof (St. Joseph County, German Twnshp)
  1 2-pitch Gambrel (Newton County)
  1 3-pitch Gambrel (Noble County, Perry Twnshp)

Wood was the roofing material that originally covered most barns. Most of these have in turn been covered by asphalt replacement shingles. Four wood shingled roofs remain in Fulton County (Newcastle Township), LaPorte County (Scipio Township), Owen County (Harrison Township) and Rush County (Posey Township). Further, three polygonal barns were constructed with slate roofs. They are or were located in Henry County (Greensboro Township, razed), Jay County (Jackson Township, razed) and Jay County (Wayne Township, extant, slate replaced with asphalt shingles). Finally, six polygonal barns were constructed with metal roofs are or were located in Jefferson County (Madison Township, razed), Knox County (Palmyra Township, razed), two in Marshall County (both in Greene Township, both extant), Montgomery County (Sugar Creek Township, extant) and LaGrange County (Newbury Township, extant).

The natural setting for polygonal structures varies widely. Some structures were located to take advantage of natural topography with lower and upper level entries on grade, while others have ramps to access the upper level. Typically, there are no associated buildings although some barns do have historic structures such as corn cribs nearby. No historic districts were discerned, with the possible exception of the Fulton County examples.

The expected condition of the property likewise varies. Those self-supported roofs that were not partially braced by a central silo tend to sag and could collapse if additional supports are not added. Most of the interiors have been at least partially altered to accommodate larger equipment and many of the structures converted to hog barns often have poured concrete or concrete block added to the first four feet of the barn's base. Finally, some examples have lost their original cupolas and/or dormers.

III. Significance:

In Indiana, polygonal barns are significant in the areas of agriculture and architecture. Engineering contributed to their development as well. An evolution of thought about polygonal structures transformed them from a way to increase efficiency into the latest innovation to aid the farmer and boost profits.

Polygonal structures were first developed to increase the efficiency of the farmer while utilizing traditional construction techniques. However, the barns did not fulfill their fullest potential since interiors were often rectangular and partially obstructed with support posts. The obstructions of open space did not deter innovators from singing their praises in local and national farm journals. Despite early design limitations, the farmers could dispense with several single-function barns by combining several functions under one roof. As agricultural practices increased in efficiency, the potential for greater and greater profits increased.

With the invention of the new true-circular barn, the early polygonal structures were soon eclipsed. The round barn was an engineered model that employed the flexible and efficient balloon frame that provided new shapes and a truly self-supported roof system. Further, the new round barns were designed with a circular interior layout, made possible by the invention of the circular silo with an elevator.

The next significant step in polygonal barn construction can largely be attributed to the frugality of the farmers who chose not to patronize the newly patented round barns of McNameee/Duncan/Littleton. Many farmers pirated or vernacularized the published plans of the day but added their own mark by making the structures multi-sided instead of round. The distinction was clear enough to ward off potential lawsuits for blatantly stealing the round barn plan. These innovative farmers were able to build a state-of-the-art barn without paying the "entrance fee".

The number of polygonal structure rose as farm profits increased and times were good. However, by the end of World War I, the surplus of farm products led to an end of the "Golden Age" of agriculture in America. Farmers no longer had the capital to build any type of barn at all for many years. It was not until the mid 1930s when World War II broke out in Europe that there was any substantial increase in the need for U.S. agricultural products and the stockpiles began to be whittled away. By the time World War II ended, new technological advances like large, modern gasoline-powered tractors reduced the need for work animals and replaced early

gas and steam-powered equipement. Consequently, the large, multi-purpose barns of years past were often obsolete, being too big for the animals that remained and too small for modern, large-scale equipment.

Through time, polygonal barns evolved into an efficient structure, helping farmers bring agriculture into the mainstream U.S. economy. Advances in engineering, building materials and farm practices coupled with soaring farm profits during the "Golden Age" of agriculture helped to bolster the development of polygonal structures around the state of Indiana as well as in other parts of the Midwest. It could be said that the round barn invention supplanted the early polygonals and then after the round barn patent, a new polygonal movement came into being. Polygonal barns became locally significant and today have significance on both a local and state level due to their construction, design, evolution concurrent with agriculture and the relative scarcity of extant examples. Unfortunately, the very factors of innovation and advancement that aided the polygonals' development would eventually lead to the obsolescence of these great markers of agricultural history.

IV. Registration Requirements:

In order to be listed in the National Register of Historic Places, a polygonal barn must possess significance and meet most of the criteria for integrity as specified in Bulletin 16. The criteria for integrity are setting, location, design, workmanship, materials, feeling and association. Agricultural properties such as polygonal barns are often modified over time to conform to technological and market changes. Such alterations may not detract from their integrity. Generally, polygonal barns must still retain those elements of integrity that clearly convey its historic agricultural function in order to be listed in the National Register.

In order to possess integrity of location, a barn must remain in the same place it was during its period of significance. However, in some cases polygonal barns have been moved to save them from demolition. If a barn has been relocated, it must be found within the geographical area on which it had its greatest impact. Although a moved structure will not possess integrity of its original location, a new site consistent with the old should not jeopardize the eligibility of the barn.

Setting refers to the character of the place in which a barn was located during the period of significance. The setting is likely to have changed for many polygonal barns because of urban or suburban encroachment. However, enough of the original setting should survive, such as ramps to entries, that give some indication of the historic relationship between the barn, the site and the natural environment.

In order for a barn to possess integrity of design, evidence of the agricultural function should be readily apparent. One of the most critical aspects of the barn is that of windows. The multi-light windows were of utmost importance in the design to provide natural light to the barn's interior, particularly important to dairymen. The same can be said of silos and circular hay and manure tracks which were important to the efficient operation of the structure. Other design elements that should be respected include cupolas, roof type, construction type (post and beam, balloon frame), and interior configurations. However, in instances where new support posts have been added to brace a weakened roof, the alterations should not jeopardize the eligibility of the barn.

Workmanship and materials should also possess integrity. Steps can be taken to preserve historic building materials such as horizontal and vertical wood siding, glazed tile and laminated beams. It is critical that the barns maintain a sizable portion of historic workmanship so that it is not largely a

reconstruction. Evidence of the use of this craftsmanship and materials should be visible while some new materials, such as asphalt replacement shingles, should be deemed acceptable alternative materials. Finally, a truly unique specimen could be given some latitude with regard to workmanship and material in order to preserve the structure as a whole. Unique specimens would be those barns that represent the last remaining or only example of a building material, barn type (round, 6, 8, 9, 10, 12, 14 or 16-sides) or those significant because of size or use.

Feeling and associations are the most intangible of all of the aspects of integrity because feeling relates to the historic aura evoked by a given barn and association refers to the evidence that links this barn to the larger historic trends. Farmers have likely made changes to the polygonal barns through time to keep up with advances in their business. This does not necessarily compromise the integrity of a barn. If several of the other elements of integrity are present, the alterations should not detract from the barn's integrity. It is at this point that the preservationist must examine the total barn structure to determine if the barn, either in an inactive or modified state, still possesses the elements that call to mind the associations and feelings of the importance of agriculture in the area.

TABLE 1
Listing of Polygonal Barns in Indiana

Six-sided examples: Adams County (St. Mary's Township, 1907) extant
Morgan County (Washington Township, c.1905) extant
Putnam County (c.1910) razed

Eight-sided examples: Allen County (c.1915) razed
Boone County (Jefferson Township, 1894) extant
Clinton County (Union Township, c.1914) razed
Floyd County (Greenville Township, c.1910) razed
Grant County (Monroe Township, 1887) extant
Hancock County (Brown Township, c.1880) extant
Harrison County (Harrison Township, c.1890) extant
Henry County (Greensboro Township, 1874) razed
Jackson County (c.1907) razed
Jay County (Jackson Township, 1890) razed
Jay County (Wayne Township, 1891) extant
Jefferson County (Madison Township, c 1880) razed
Knox County (Palmyra Township, 1904) razed
Knox County (Vigo Township, c.1905) extant
Kosciusko County (Franklin Township, c.1899) extant
Noble County (Swan Township, c.1910) razed
Owen County (Harrison Township, 1912) extant
Parke County (Penn Township, c.1905) extant
Pike County (Lockhart Township, 1914) razed
Pulaski County (Monroe Township, c.1890) extant
Rush County (Walker Township, 1897) extant
Rush County (Posey Township, c.1910) extant
St. Joseph County (Harris Township, 1900) extant
Scott County (Lexington Township, 1920) razed
Scott County (Vienna Township, c.1916) razed
Tippecanoe County (Fairfield Township, c.1905) extant
Tippecanoe County (Wabash Township, c.1910) razed
Tippecanoe County (c1910) razed
Wabash County (Lagro Township, c.1876) razed
Warrick County (1898) razed
Wayne County (Greene Township, c.1890) razed
White County (Princeton Township, 1915) razed

Nine-sided examples: Fulton County (Newcastle Township, c.1920) extant
LaPorte County (Scipio Township, 1878) extant
Wabash County (Chester Township, 1901) razed

Ten-sided examples: Montgomery County (Sugar Creek Township, 1914) extant
Madison County (Union Township, 1914) extant

Twelve-sided examples: Allen County (Adams Township, c.1908) razed
Clinton County (Michigan Township, c.1900) extant
Huntington County (Huntington Township, c.1906) extant
Huntington County (Huntington Township, 1880) extant
Huntington County (Polk Township, c.1910) razed
Kosciusko County (Washington Township, 1911) extant
LaGrange County (Newbury Township, 1908) extant
Marshall County (Greene Township, 1913) extant
Marshall County (Greene Township, 1912) extant
Marshall County (Greene Township, 1913) razed
Miami County (Washington Township, 1890) razed
Parke County (Raccoon Township, 1910) razed
Parke County (Greene Township, 1921) razed
Ripley County (Jackson Township, 1915) extant
Shelby County (Noble Township, 1910) extant
Tippecanoe County (Randolph Township, c.1915) extant
Wabash County (Lagro County, c.1903) razed
White County (1915) razed

Fourteen-sided examples: Decatur County (Salt Creek Township, 1913) razed
Dekalb County (Fairfield Township, 1910) extant
Franklin County (Ray Township, 1915) razed
Huntington County (Polk Township, 1907) extant
Montgomery County (Union Township, 1912) extant
Washington County (Pierce Township, 1906) razed

Sixteen-sided examples: Newton County (c.1905) razed
Noble County (Perry Township, 1911) extant
St. Joseph County (German Township, c.1890) razed

F. ASSOCIATED PROPERTY TYPES

I. Name of Property Type: Round Barns

II. Description:

Agriculture has always been a vital part of the history and development of Indiana. Beginning as subsistence farming, agriculture eventually evolved into a large-scale business. At the same time, farmers started thinking of efficient farm practices and built new multi-purpose barns. These multi-purpose barns incorporated several farm functions into one structure which could replace the numerous buildings that previously served the needs of the farmers.

One part of the increased sophistication of agricultural practices and barn construction in particular was the phenomenon of round and polygonal barn construction, which can be divided into two eras: the Octagonal Era of 1850 to 1900 and the True-Circular Era of 1889 to 1936. This property description pertains to the True-Circular Era. Barns of the True-Circular Era are typified as having balloon frame construction, circular silos with elevators, circular interior layouts and self-supported roofs. Because of these innovations, the round barns soon eclipsed the early polygonal barns in terms of popularity and acceptance. Furthermore, roof developments and the patent issued in 1905 probably led to new polygonal trend, called late polygonals, in the early twentieth century. Many farmers built polygonal barns to skirt patent rights and as a consequence, Indiana has polygonal barns that were built during the height of the True-Circular Era.

In Indiana, there were 219 round and polygonal barns built between 1874 and 1936 and their numbers break down as follows:

True circles	152 built	(77 extant)
Six-sided	3 built	(2 extant)
Eight-sided	32 built	(14 extant)
Nine-sided	3 built	(2 extant)
Ten-sided	2 built	(2 extant)
Twelve-sided	18 built	(10 extant)
Fourteen-sided	6 built	(3 extant)
Sixteen-sided	3 built	(1 extant)

This table shows the overwhelming popularity of the true-circular barn with 69% of the Indiana examples being round.

The interior layouts of the true-circular barns varies from barn to barn but two basic patterns were discerned in a survey of Indiana's round barns.

These patterns are the true circle with the centralized interior silo and the true circle with the central drive. In the first model, the circular silo is located in the barn's middle, typically on the lower level. It should be noted that the silo could then extend all the way to the roof, stop just short of the roof or not penetrate the upper level at all. Moving from the silo to the exterior walls, there would be a feed alley that was wide enough for the farmer to walk and move grain from the silo or hay from the drop chutes of the upper level. This grain and hay was moved to the feed trough which was the next feature on the layout and where the animals ate. The feed trough was followed by pens that faced the barn's middle and tended to be wedge-shaped to accommodate the circular form. Lastly, there was a manure alley and often a drive of some sort (either narrow or wide) that continued around the outer perimeter. The manure alley was a depression in the floor whereby manure could be washed and then collected to be taken outside. The drive was for the moving and handling of animals and equipment. Lastly, the pens could go around the entire perimeter or only on one side, with the remaining space used as a large holding pen.

In the second example, the drive traversed the barn's middle thus eliminating the main level silo. However, there could be a silo or grain storage bin on the other level. Off to the side of the central drive, pens were often constructed in the same manner as the central silo model, complete with feed alleys, feed bins and manure troughs. Typically, the need for a drive at the perimeter was eliminated but some retained a small walkway for moving of animals. The middle of the barn just off of the drive could often contain a small, crescent shaped grain storage bin or corn crib to facilitate feeding. Like the other model, the central drive had drop chutes for hay and straw and might have a large holding pen in place of some of the smaller pens.

In both models, the upper level hay mow was devoted to the storage of hay and straw. Some barn have additional grain storage bins in the hay mow as well. Some barns were constructed with the upper level as a loft while others had upper level entries, reached either by earthen ramps or on natural grade. As a note, the models that did not have grade level access (loft arrangements) have a cut-out in the upper level floor that is open to the lower level with either a hay loft door or an extra height main door. This floor opening, always near the main door, facilitated the handling and storage of hay, a task made easier with the invention of the circular hay track. The hay tracks were often located high in the upper level and ran around the perimeter so that hay and straw could be picked up and moved anywhere the farmer desired.

The structural layout of round barns also deserves discussion. The balloon frame meant many things to the development of round barns but it did

not spell the end to support posts. On the contrary, posts were still used but fewer large posts were needed and those that were required were carefully incorporated into the design. For instance, the barns with central silos typically used the silo to brace at least the upper level floor joists if not the roof structure as well. Further, laminated beams divided the span between the exterior walls and the silo with the beam being braced by posts that were buried in the walls of the feed trough or alley or the walls of the pens. Barns without the central silo typically had a laminated beam in the same region of the feed trough and could also have laminated beams along the sides of the drive with posts helping to define the areas off of the main drive. Upper level supports were usually accomplished with laminated beams at the juncture of differing roof pitches (in the gambrel-roofed examples) and at the apex and midpoints of other roof styles. Additional support could be given these beams by a few posts or by angled struts or knees that extended from the beams to the exterior walls at sharp angles. Therefore, many of the barns are not post-free but when contrasted to their post and beam predecessors, the balloon-framed circles were a marked improvement.

Other design elements that typify the round barns include several multi-light windows and solid doors (often with small windows and human-sized doors in the large sliding doors) that increased light and ventilation. Furthermore, poured concrete foundations prevailed, although brick, stone and concrete block foundations can be found. The previously mentioned overhead hay tracks were also common and manure tracks as well to ease the mundane and laborious tasks of the farmer. Typically, the walls and roofs of the barns were constructed of wood and many examples had cupolas and dormers with windows to increase light and air circulation. Elements that are less common include interior water tanks, poured concrete wall construction and specialty materials such as slate or metal roofs and glazed tile walls. Some round structures have been added to over the years, especially those that were used for dairies with milk sheds added to accommodate storing and processing of milk and dairy products.

Two design elements, wall materials and roof design, warrant closer scrutiny. As mentioned previously, most Indiana examples were constructed of wood. The walls of these barns were typically composed of either vertical or horizontal wood siding, with vertical being the most common. Other wall materials were less common and include brick, glazed tile, concrete block and poured concrete. In Indiana, only one brick barn was constructed, known as the Edward D'Ath barn of Richland Township, Fountain County. Unfortunately, this barn was razed in 1989. The Cornish Griffin barn is Indiana's only glazed tile round barn. This Steuben County barn, built in Steuben Township, is still extant and in excellent condition. Boone County's Center Township

has the only remaining concrete block barn, the Andrew B. VanHuys barn, although three were originally built. THe other two, the Hollingsworth barn (Howard County, Harrison Township) and the Gallaham barn (Miami County, Erie Township) were both razed. Finally, one Indiana round barn was constructed of poured concrete. The William Easter barn (Greene County, Jefferson Township) is still extant.

The roof form design element also requires discussion. Consulting Figure 1, there are eleven basic roof systems, of which at least six are present in Indiana. Referring to Table 2, of the 219 round and polygonal barns that were built in Indiana from 1850 to 1936, 152 were round (with 77 remaining today). Within the round barn subgroup, 77 were built with 2-pitch gambrel roofs, 29 with 3-pitch gambrel roofs, 24 with conical roofs, 5 with dome roofs, 3 with gambrel with wing roofs and 1 with a sectional cone roof. Finally, 13 razed barns have unidentified roof types.

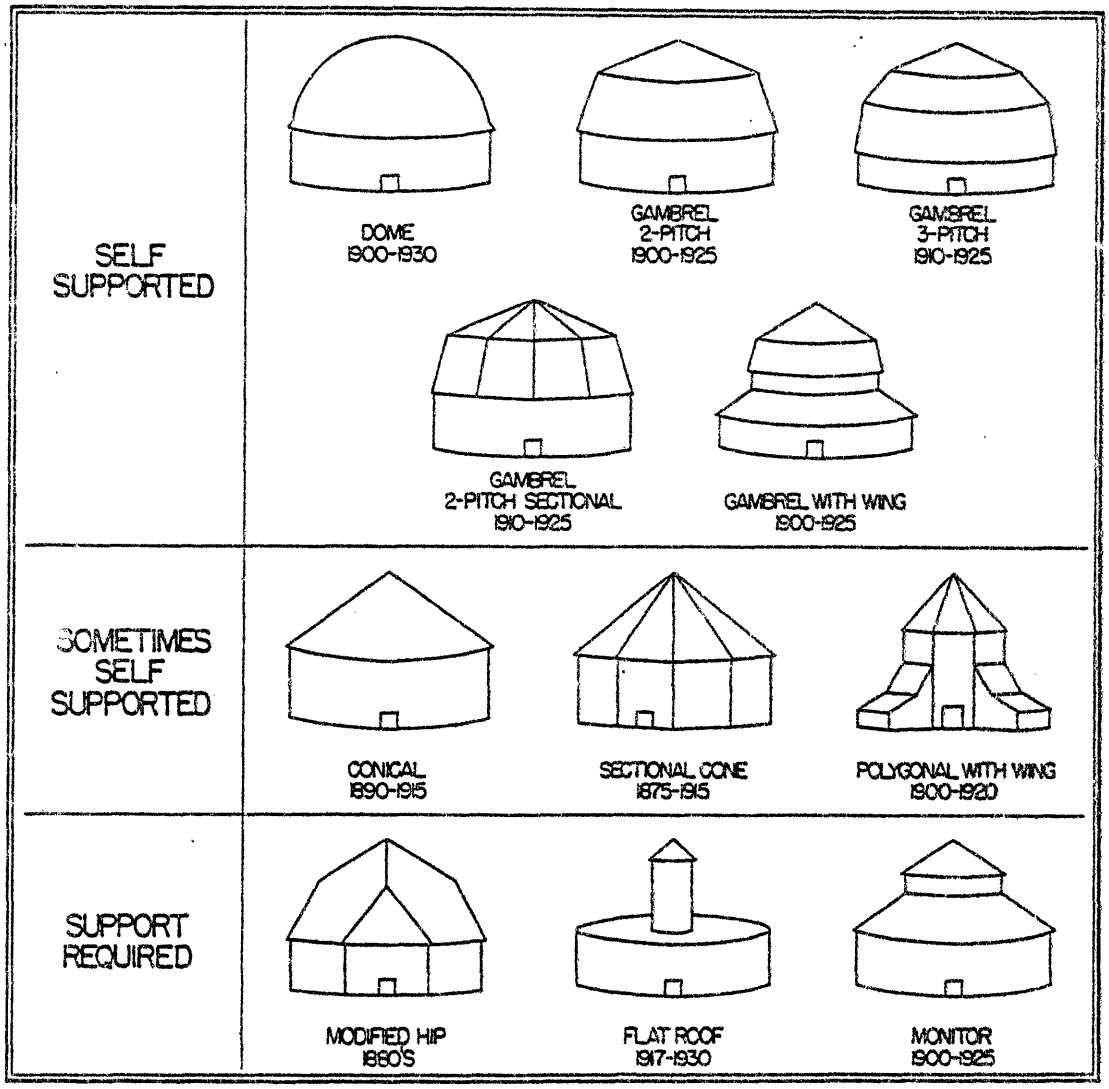
Wood originally covered most of these barns' roofs with the majority now covered in asphalt replacement shingles. Twenty-one Indiana round barns presently maintain wood shingles. These barns are in the following counties (with the Township in parentheses): Fulton (Richland, reconstruction), 2 in Grant (VanBuren and Richland), Howard (Taylor), Jackson (Driftwood), Johnson (Union), 2 in Lake (Hanover), LaPorte (Johnson), Marshall (West), Parke (Liberty), Randolph (Washington), 2 in Rush (Washington and Rushville), 2 in Steuben (Steuben and Millgrove), Switzerland (Posey), Tipton (Jefferson), Union (Center), Vermillion (Eugene) and Washington (Washington). Furthermore, at least 2 Indiana round barns were built with slate roofs in Boone County (Center Township, now covered with asphalt shingles) and Wabash County (Liberty Township, razed). Finally, one Indiana round barn was built with a metal roof and can be found in Randolph County (Washington Township).

The natural setting for round barns varies widely. Some structures were located to take advantage of natural topography and are built as bank-type barns with lower and upper level entries on grade. Still others have upper level entries that are reached by large earthen ramps and a few examples have no ground level access to the upper level at all (loft arrangement). Typically, there are no associated buildings although some barns do have historic structures such as corn cribs nearby. No historic districts were discerned, with the possible exception of the Fulton County examples.

The expected condition of the property likewise varies. Those self-supported roofs that were not partially braced by a central silo or support posts tend to sag and could collapse if additional supports are not added. Most of the interiors have been at least partially altered to accommodate

FIGURE 1--BASIC ROOF SHAPES. Rerpinted from:
Lowell J. Soike, Without Right Angles, The Round Barns of Iowa, (Des Moines, IA: Iowa State Historical Department, Office of Historic Preservation, 1983), p. 42.

Basic Roof Shapes



larger equipment and many of the structures that have been converted to hog barns often have poured concrete or concrete block added to the first four feet of the barn's base. Finally, some examples have lost their original cupolas and/or dormers.

III. Significance:

In Indiana, round barns are significant in the areas of agriculture and architecture. Engineering contributed to the development as well. Born of engineering research, these barns were built to increase the efficiency and economic capabilities of farmers.

With the knowledge of the increased efficiency of octagonal barns behind them, engineers such as Franklin H. King, H.E. Crouch, J.B. Davidson and Matt King set out to perfect the circular barn form through engineering research. The first major step to the acceptance of the round barns was the use of balloon framing on agricultural buildings whereby light-weight, pre-cut, flexible and durable lumber could be used to create a variety of shapes and configurations with the stability of post and beam construction. Secondly, engineers were able to effectively design a self-supported roof that would essentially free the interior of posts. Lastly, the invention and development of the circular silo with an elevator led to the acceptance of the round barn and its circular interior layout.

The Round Barn Movement began in earnest when builders such as McNamee, Duncan and Steele started to advertize in agricultural newsletters and journals. Agriculture was quickly becoming more of a business that needed to be efficiently run to maximize potential profits. The "Golden Age" of agriculture and the dramatic increase in farm prices helped to provide the necessary capital to build round barns.

After Horace Duncan, Frank Littleton and Isaac McNamee received a patent on the round barn roof in 1905, the round barn business began to change. Many industrious yet frugal farmers began to build multi-sided barns of 6, 8, 9, 10, 12, 14 and 16 sides that were based on the patent model but whose multiple sides clouded the patent infringement legal waters.

The number of round and polygonal structures rose as farm profits increased and times were good. However, by the end of World War I, a surplus of farm products led to the end of the "Golden Age" of agriculture. Farmers no longer had the money to build any type of barn. It was not until the mid 1930s when World War II broke out in Europe that there was any substantial increase in the need for U.S. agricultural products and the stockpiles began to be whittled away. By the time World War II ended, new technological advances like large, modern gasoline-powered tractors reduced the need for work animals and replaced early gas and steam-powered equipment. Consequently, the large multi-purpose barns were obsolete, being too big for the animals that remained and too small to hold the modern equipment.

Through time, round barns evolved into an efficient structure that helped farmers bring agriculture into the mainstream U.S. economy. Advances in engineering, building materials and farming practices in addition to soaring farm profits during the "Golden Age" of agriculture helped to bolster the development of round barns in Indiana and the Midwest. These barns became locally significant and today have significance on both a regional and state level due to their construction, design, evolution concurrent with agriculture and the scarcity of examples that are extant. Unfortunately, the very factors of innovation and advancement that propelled the round and polygonal barns' popularity would eventually lead to the obsolescence of these great markers of agricultural history.

IV. Registration Requirements:

In order to be listed in the National Register, a round barn must possess significance and meet most of the criteria for integrity as specified in Bulletin 16. The criteria for integrity are setting, location, design, workmanship, materials, feeling and association. Agricultural properties such as round barns are often modified over time to conform to technological and market changes. Such alterations may not detract from their integrity. Generally, round barns must still retain those elements of integrity that clearly convey its historic agricultural function in order to be listed in the National Register.

In order to possess integrity of location, a barn must remain in the same place it was during its period of greatest significance. However, in some cases round barns have been moved to save them from demolition. If a barn has been relocated, it still must be found within the geographical area on which it had its greatest impact. Although the moved barn will not have integrity of original location, a new site consistent with the original should not jeopardize the eligibility of the barn.

Setting refers to the character of the place in which a barn was located during the period of significance. The setting is likely to have changed for many round barns because of urban and suburban encroachment. However, enough of the original setting should survive, such as ramps to entries, that give some indication of the historic relationship between the barn, the site and the natural environment.

In order for a barn to possess integrity of design, evidence of the agricultural function should be readily apparent. One of the most critical aspects of the barn is that of windows. The multi-light windows were of utmost importance in the design to provide light and ventilation to the interior, critical in dairy operations for example. The same can be said of the silos and circular hay and manure tracks which were essential to the efficient operation of the structure. Other design elements that should be respected include cupolas, roof type, construction type (post and beam, balloon frame) and interior configuration. However, if a self-supported roof were to require new support posts to save the structure, the alteration should not jeopardize the eligibility of the barn.

Workmanship and materials should also possess integrity. Steps can be taken to preserve historic building materials such as horizontal and vertical wood siding, glazed tile and laminated beams. It is critical that the barns maintain a sizable portion of historic workmanship so that it is not largely a

reconstruction. Evidence of the use of this craftsmanship and materials should be visible while some new materials, such as asphalt replacement shingles, should be deemed acceptable alternative materials. Finally, truly unique specimens could be give some latitude with regard to workmanship and material in order to preserve the structure as a whole. Unique specimens are those that represent the last remaining or only example of a building material, barn type (round, 6, 8, 9, 10, 12, 14 or 16-sides) as well as those significant for size or use.

Feeling and associations are the most intangible of all of the aspects of integrity because feeling relates to the historic aura evoked by a given barn and association refers to the evidence that links this barn to the larger historic trends. Farmers have likely made changes to the round barns through time to keep up with advances in their business. This does not necessarily compromise the integrity of a barn. If several of the other elements of integrity are present, the alterations should not detract from the barn's integrity. It is at this point that the preservationist must examine the total barn structure to determine if the barn, either in an inactive or modified state, still possesses the elements that call to mind the associations and feelings of the development of agriculture in the area.

TABLE 2
Listing of Round Barns in Indiana by Roof Type

2-pitch Gambrel:
Boone County (Center Township, 1912) extant
Carroll County (Democrat Township, 1912) extant
Carroll County (Carrolltown Township, 1915) extant
Carroll County (Jefferson Township, 1904) razed
Carroll County (Tippecanoe Township, 1911) extant but roof modified with rectangular, gambrel roof
Clinton County (Sugar Creek Township, 1910) extant
Daviess County (Veale Township, 1908) extant
Daviess County (Elmore Township, c.1900) extant
Delaware County (Perry Township, 1908) extant
Delaware County (Liberty Township, c.1909) extant
Delaware County (Delaware Township, 1908) extant
Fulton County (Richland Township, 1917) razed
Fulton County (Richland Township, c.1910) razed
Fulton County (Rochester Township, 1914) extant
Fulton County (Newcastle Township, 1911) extant
Fulton County (Henry Township, 1909) razed
Fulton County (Henry Township, 1910) extant
Fulton County (Henry Township, 1910) extant
Fulton County (Rochester Township, 1915) extant
Fulton County (Wayne Township, 1907) extant
Grant County (VanBuren Township, 1912) extant
Hamilton County (Jackson Township, 1906) razed
Hamilton County (Jackson Township, 1906) razed
Hamilton County (Fall Creek Township, 1904) razed
Hancock County (Vernon Township, 1916) extant
Hancock County (Vernon Township, 1910) razed
Henry County (Dudley Township, 1903) razed
Howard County (Taylor Township, 1909) extant
Howard County (Harrison Township, 1913) razed
Howard County (Harrison Township, 1909) razed
Jackson County (Driftwood Township, 1910) extant
Jackson County (Driftwood Township, 1909) razed
Jay County (Knox Township, 1913) extant
Jay County (Penn Township, 1908) extant
Jefferson County (Graham Township, c.1911) razed
Jefferson County (Madison Township, c.1880) razed
Johnson County (Union Township, 1904) extant
Lake County (Hanover Township, 1909) extant
Lake County (Hanover Township, 1910) extant

2-pitch cont'd:
Lake County (Center Township) extant
LaPorte County (Johnson Township, 1917) extant
Madison County (Greene Township, c.1902) razed
Madison County (Stoney Creek Township, 1903) extant
Madison County (Boone Township, 1903) extant
Madison County (Lafayette Township, c.1905) extant
Marshall County (West Township, 1911) extant
Miami County (Allen Township, 1914) extant
Miami County (Erie Township) razed
Miami County (Perry Township, c.1915) extant
Montgomery County (Coal Creek Township, c.1910) razed
Parke County (Washington Township, 1906) razed
Putnam County (Franklin Township) razed
Randolph County (Washington Township, 1906) extant
Randolph County (Washington Township, 1908) extant
Rush County (Washington Township, 1927) extant
Rush County (Rushville Township) extant
Rush County (Rushville Township, 1906) extant
St. Joseph County (Union Township, 1910) extant
Scott County (Vienna Township, 1916) razed
Steuben County (Jackson Township, 1917) extant
Steuben County (Steuben Township, pre 1920) extant
Switzerland County (Posey Township, 1908) extant
Tippecanoe County (Fairfield Township, c.1912) razed
Tipton County (Jefferson Township, 1911) razed
Tipton County (Jefferson Township) extant
Tipton County (Cicero Township, c.1906) extant
Tipton County (Wildcat Township, c.1906) razed
Union County (Brownsville Township, 1904) razed
Vanderburgh County (Union Township, 1906) razed
Vermillion County (Eugene Township, 1916) extant
Vigo County (Linton Township, c.1905) extant
Washington County (Washington Township, 1914) extant
Wayne County (Center Township, 1906) razed
Wayne County (Jefferson Township, 1903) razed
Wells County (Liberty Township, 1911) razed
White County (LIberty Township, 1906) extant

3-pitch Gambrel:
Elkhart County (Union Township, 1908) razed
Elkhart County (Harrison Township, c.1908) razed
Fulton County (Richland Township, 1924) extant
Fulton County (Rochester Township, 1916) razed

3-ptich cont'd:
Fulton County (Henry Township, 1915) extant
Fulton County (Newcastle Township, 1912) razed
Grant County (Richland Township, c.1915) extant
Hancock County (Vernon Township, c.1903) extant
Jackson County (Driftwood Township, 1909) extant
Jackson County (Carr Township, c.1910) extant
Kosciusko County (Franklin Township, 1913) razed
Kosciusko County (Scott Township, 1910) razed
Marion County (Lawrence Township, 1909) razed
Marshall County (North Township) extant
Marshall County (German Township, 1911) extant
Marshall County (Unlocated, 1912) razed
Miami County (Allen Township, 1912) razed
Orange County (French Township, 1907) razed
Parke County (Sugar Creek Township, 1910) razed
Parke County (Howard Township, c.1904) razed
Putnam County (Greencastle Township, 1910) razed
Randolph County (Washington Township, 1905) razed
Rush County (Orange Township, 1912) razed
Union County (Center Township, 1907) extant
Wabash County (Pleasant Township, 1918) extant
Warren County (Unlocated, 1901) razed
Wells County (Harrison Township, 1907) extant
Wells County (Liberty Township, 1910) razed
Wells County (Chester Township) razed

Conical:
Carroll County (Jackson Township, 1910) extant
Decatur County (Washington Township, 1911) extant
Fountain County (Richland Township, 1907) razed
Fulton County (Newcastle Township, 1918) razed
Fulton County (Union Township, 1910) razed
Greene County (Jefferson Township, c.1907) razed
Greene County (Jefferson Township, 1914) extant
Hancock County (Brown Township, 1901) razed
Henry County (Fall Creek Township, c.1895) razed
Kosciusko County (Washington Township) extant
Kosciusko County (Etna Township, c.1896) razed
Madison County (Duck Creek Township) razed
Madison County (Jackson Township, c.1898) razed
Marion County (Decatur Township, 1908) razed
Parke County (Liberty Township, 1895) extant
Randolph County (Washington Township, pre-1905) extant
Randolph County (Stoney Creek Township, pre-1910) extant

Conical: Randolph County (Union Township) razed
cont'd Ripley County (Shelby Township, pre-1915) extant
Rush County (Ripley Township, 1900) razed
Rush County (Posey Township, 1911) extant
Scott County (Lexington Township, 1920) razed
Vigo County (Pierson Township, 1905) extant
Wayne County (Perry Township) extant

Dome: Clinton County (Madison Township, 1912) extant
Dearborn County (Clay Township, 1901) extant
Delaware County (Mt. Pleasant Township, 1904) extant
Marion County (Pike Township) razed
Steuben County (Millgrove Township, 1914) extant

Gambrel with wing: Bartholomew County (Clifty Township, c.1903) razed
Clinton County (Kirkland Township, 1909) extant
roof collapsed
Fayette County (Waterloo Township, 1904) extant

Sectional Cone: Henry County (Franklin Township, 1902) extant

Unidentified: Carroll County (Washington Township) razed
Cass County (Boone Township) razed
Clinton County (Michigan Township, pre-1911) razed
Kosciusko County (Etna Township, c.1920) razed
Marshall County (German Township) razed
Miami County (Allen Township, 1914) razed
Parke County (Greene Township) razed
Pike County (Jefferson Township) razed
Sullivan County (Turman Township) razed
Tipton County (Prairie Township) 1914
Wabash County (Liberty Township) razed
Wabash County (PawPaw Township, 1911) razed
White County (Cass Township) razed

G. Summary of Identification and Evaluation Methods

Discuss the methods used in developing the multiple property listing.

see continuation sheet

☐ See continuation sheet

H. Major Bibliographical References

see continuation sheet

☐ See continuation sheet

Primary location of additional documentation:

- ☒ State historic preservation office
- ☐ Other State agency
- ☐ Federal agency
- ☐ Local government
- ☐ University
- ☒ Other

Specify repository: Historic Landmarks Foundation of Indiana
340 West Michigan Street, Indianapolis, IN 46202

I. Form Prepared By

name/title Jerry McMahan, graduate assistant
organization Historic Landmarks Foundation of IN date October 18, 1991
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The multiple property nomination, "Round and Polygonal Barns of Indiana", is based upon research conducted in primary and secondary sources. The research proceeded systematically and logically from the general to the specific. Primary research included field notes from the statewide survey completed in the Summer of 1991. Secondary sources ranged from consultant John Hanou's research notes (unpublished) to published sources that examined both agriculture and round and polygonal barns on the state and local level. From the general research, McMahan identified agriculture and architecture as the primary historic context, along with engineering. Additionally, he designated the legal boundaries of Indiana as the place and 1850 to 1936 as the historic period of significance for the nomination.

At present, 219 round and polygonal barns were identified as being constructed in Indiana in the prescribed time period of 1850 to 1936. Of these, 111 remain and 19 are being nominated to the National Register. Coupled with the three barns already in the National Register and the pending nomination on the Delaware County barn, this will bring the total to 23 National Register round and polygonal barns. The examples selected for inclusion with this form are considered to be representative of configuration, age, size and/or building materials. Finally, of the remaining 88 properties not yet nominated, the vast majority are deemed eligible for inclusion to the National Register and should be added at a later date.

The survey was conducted using the "Indiana Historic Sites and Structures Inventory" form. This form is the one used in all Indiana surveys and is judged in comparison to other property types in the state to reflect good, comprehensive survey coverage.

The typology of significant property types was based on function and association with the development of agriculture in the state of Indiana. The two property types are associated with the historic theme of agriculture in Indiana, 1600 to 1940, for the study of farming from its subsistence level through the development of regional market agriculture.

The standards of integrity were based on the National Register standards for assessing integrity. Information from research literature and survey data was also used to assess the relative condition and scarcity of each property type and to determine the degree to which allowances should be made for alteration and deterioration.

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