# NEW YORK STATE 4-H BARN PROJECT

## *A 4-H Leaders' Guide*

*Including Members Worksheets*

*Maple Shade Farm - Delhi, NY - late 19th Century*

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New York State 4-H Foundation

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*Cover Photo: Tyler Barn, Walton (Delaware County). Late 19th Century.*

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# Introduction

Old barns throughout New York State are important and threatened icons of our rural heritage. They are some of the most finely crafted buildings still in existence today. Unfortunately, without human care, their roofs, foundations and framing are no match for the forces of Mother Nature. As the state shifts away from its agricultural roots, its barns succumb to rain, snow, wind and fire. With each barn's demise, part of New York's glorious rural heritage is lost forever.

Few comprehensive barn records exist. Tax roles provide a count of barns but do not indicate barn type, age or function. The fact that barns are rapidly disappearing, combined with the fact that records are scarce, makes it very important that we act quickly to document the barns that do still exist in New York State.

This manual is designed to familiarize readers with the history of barn construction and use, and the different materials used in barn construction. Illustrations are also provided to facilitate field identification.

This project's goal is to teach 4-Hers about the history of barns and different barn types. When the students have finished this project they should be able to identify different types of barns and have an idea of what they are used for. This project will also give the children an idea on how information is gathered for a survey and why surveys are so important from a historical aspect.

This manual will give some suggestions on how to get the 4-Hers interested in barns, teach them about barn types and how to survey barns.

# BEFORE AND AFTER.....

*Photo: Spring of 1999*

*An example of why we need to become interested in preserving, studing and photographing old barns - they won't last forever!*

*Photo: Fall of 1999 After collapse*

*Harby barn, Route 10, Walton, NY (Delaware County)*

# Brief History of New York State Barns

The early European settlers in New York State used the abundance of trees, which blanked the landscape, to build barns out of logs. These barns consisted of a frame and siding like a log cabin, rafters of saplings and a roof of wooden shingles. They were almost always intended as temporary structures to be used only until a farmer was able to build a framed barn. Usually he was able to do so within two to three years of settling. The completion of a framed barn was cause for great celebration among a farmer and his neighbors.

"To the farmer to today, the early barn has become as useless as a pair of oxen or a kerosene lamp. The farm has become so changed that within the next few years not one of the old architectural features will have remained. But as long as man farms, which is as long as the world eats, there will still be the smell of hay and the sounds of farm life and with them a great respect for the farmer of the past who was poor equipment-wise, but so rich in having lived the American life to its fullest. Ruskin said that one cannot love art better than to love what it reflects; while there are still farmers who find sentimental attraction in the early barns, you may be sure that the typical farmer still lives. And as long as there is an urge to preserve the personality of the people who created these things, the typical American still lives."

*American Barns and Covered Bridges* by Eric Sloane

# Dutch Barns

Because settlers came from different places, regional variation in barn types exist in our state. The type of framed barn that a farmer built depended largely upon what was traditional where he came from. Eastern New York State was settled before the rest of the state. Dutch and Palatine Germans brought their building traditions to the Hudson, Mohawk, Schoharie Valleys, and to Long Island, as early as 1640. They quickly replaced their log barns with a type of framed barn called a *Dutch* barn. These barns are almost square, commonly 40' x 45', and have double doors on both gable ends allowing wagons to pass through. They are built either on stone foundations or on simple stone piers. *Dutch* barns are framed with hand-hewn timber, trees which have been shaped into large square posts or beams, approximately 12"x12". These beams divide the interior of the barn into three bays or aisles. The widest of the three is the center bay, which has a heavy wooden plank floor, used for threshing grain. Stalls and mangers for oxen, horses and cows are in side aisles. The sides are low and the roof is very steep, providing extra room for hay storage in a loft above the bays. *Dutch* barn construction spanned a period of about two hundred years beginning in the mid 1600s (long before the Revolutionary War) and ending in the mid 1800s.

*Dutch Barn - near Middleburgh on the west side of the river, off Route 30, corner of Schoolhouse Road, Schoharie County. Note ghost of door at gable end - rustic.*

# Dutch Barns (Cont'd)

*Restored Dutch Barn - raised a few feet, doors moved to sides, evidence of gable end doors visible on inside. Village of Middleburg, River Street.*

*Back of Dutch Barn on River Street*

# English Barns

People from the British Isles and New England settled Central New York in the late 1700s and brought with them the tradition of *English* barn building.

*English* barns are typically single level rectangular structures, approximately thirty feet by forty feet with double doors on the long sides of the barn rather than on the gable ends. As with *Dutch* barns, *English* barns are usually divided into three bays. The center bay is accessible via the double doors and is used as a threshing floor. One side aisle is used to store hay and grain, and the other to house animals.

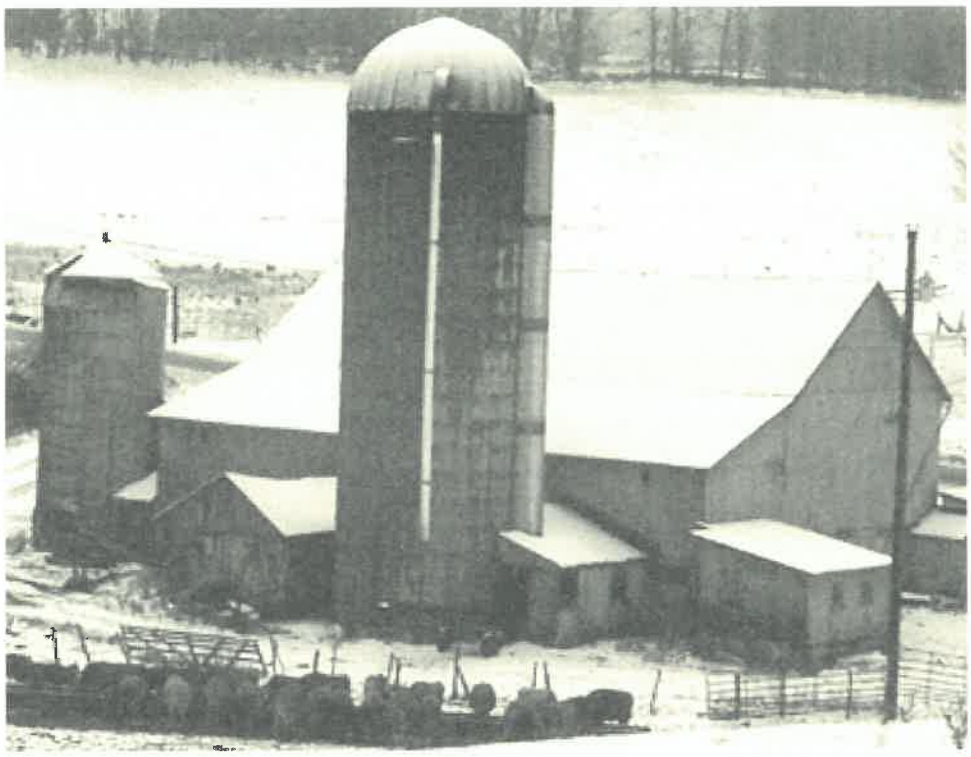
> "The English barn was usually gable-ended with three interior bays, spaces enclosed by two framing bents; later versions sometimes included more bays. Generally a central door led to the threshing floor or "driveway" (drive-through), with a bay or mow (rhymes with "cow") on either side. A team could draw a wagon loaded with loose hay or unthreshed grain sheaves into the center of the barn, the load often just clearing the door opening, and from this central position the load could be "mowed away" with pitch-forks. The empty wagon was driven out the doors on the opposite side of the barn to fetch another load". (Fink 1987:97-98).

*English* barns were built between 1780-1850 and were the most popular type of barn in the state.

Both *English* and *Dutch* barns fall under the category of threshing barns because their primary original function was that of grain processing and storage. Until the mid 1800s, most farmers kept only enough milk and beef cows to meet the needs of their families.

*English Barn varition*

# English Barns (Cont'd)



*Wilson Farm - English barn with attachments and shed - wood silo (left), Concrete slab silo (center). Corner of County Route 12 & 13, Jefferson (Schoharie County)*

# Round and Polygonal Barns

For a period of approximately forty years, from 1850-1890, some farmers experimented with building round and polygonal barns. They were inspired by the famous round Shaker barn at Hancock, Massachusetts which was featured in the August 1831 *Genesee Farmer*, a widely read agricultural magazine. This barn was built in 1826 and was seen as a masterpiece of grace and efficiency.

> "Round and Polygonal Barns functioned like the traditional basement barns with the usual labor saving ways of handling hay. A ramp led directly into the upper story where hay was unloaded. The stalls were in a circular arrangement on the ground floor, with the animals' heads facing inward toward the hay storage shaft in the center. Round and Polygonal barns allowed very efficient unloading, delivery and storage of hay" (www.nysha.org/barns/types.html).

Round and Polygonal barn construction was never very prevalent in New York State because it was expensive.

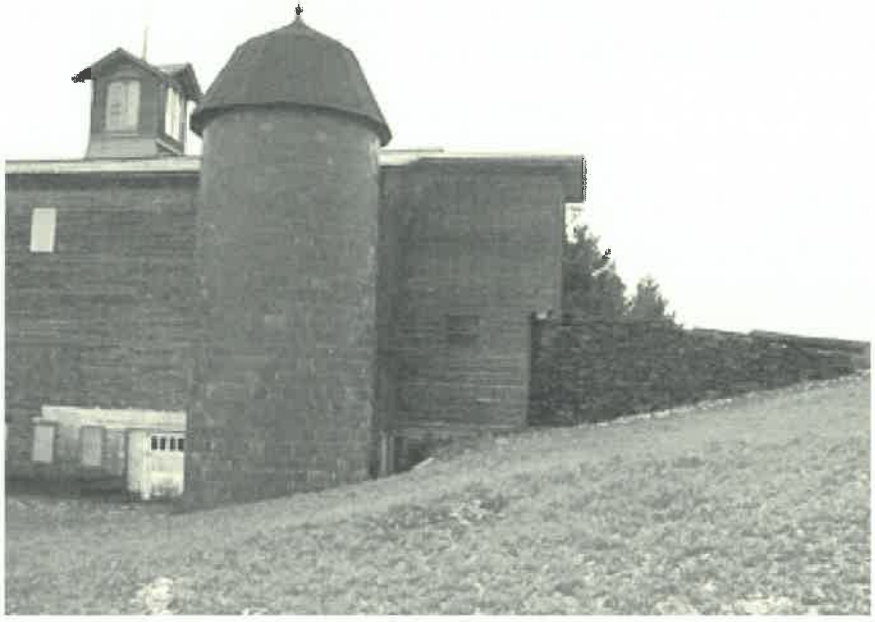
*Round Barn - Pines Brook Road, Walton (Delaware County).*
*In poor state of repair - entrance to bay storage by ramp. Cows housed in basement - heads faced in towards central hay storage.*

# Ramp and Bank Barns

Major improvements in transportation networks were made during the second half of the 1800s. The arrival of railroads made rapid transportation of milk, butter and cheese possible. Before the railroads, local sales were farmers' only option. The railroads made new and distant markets accessible to farmers. In response, farmers steadily increased dairy production, which meant that they needed bigger barns to house their growing herds of dairy cows. Rather than inventing an entirely new type of barn to meet this need, most farmers modified their *English* barns. They had a masonry basement constructed and then moved one or more *English* barns onto the basement resulting in what is called a Ramp Barn. These barns are two or three level rectangular structures, with the higher levels accessible by ramps. The basement level has doors in the gable ends that open to aisles with rows of stanchions. The upper levels are for hay storage. In locales where the terrain was hilly, the basement is built into the hillside, creating a Bank Barn"

*Ramped Barn- Impressive stone ramp at Haynes Farm, Kortright, NY ( Delaware County) Barn Built in 1900.*

# Ramp and Bank Barns (Cont'd)

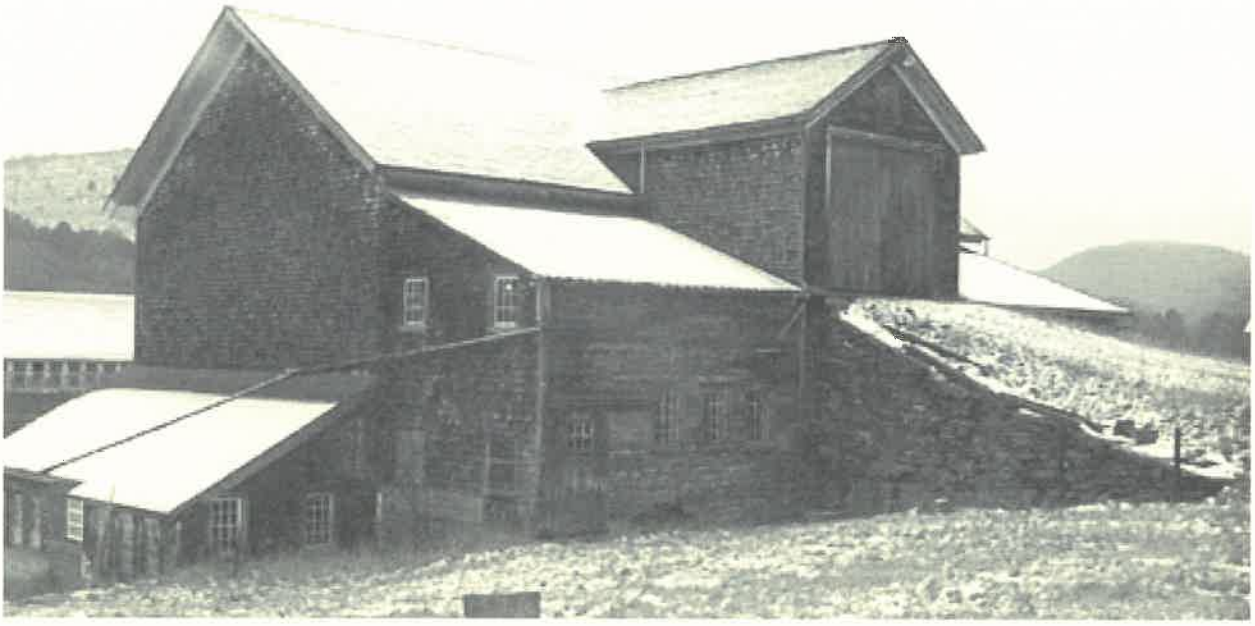


*Banked and Ramped Barn at Maple Shade Farm, Delhi, NY (Delaware County). Note tile silo and stone ramp.*

# Setting

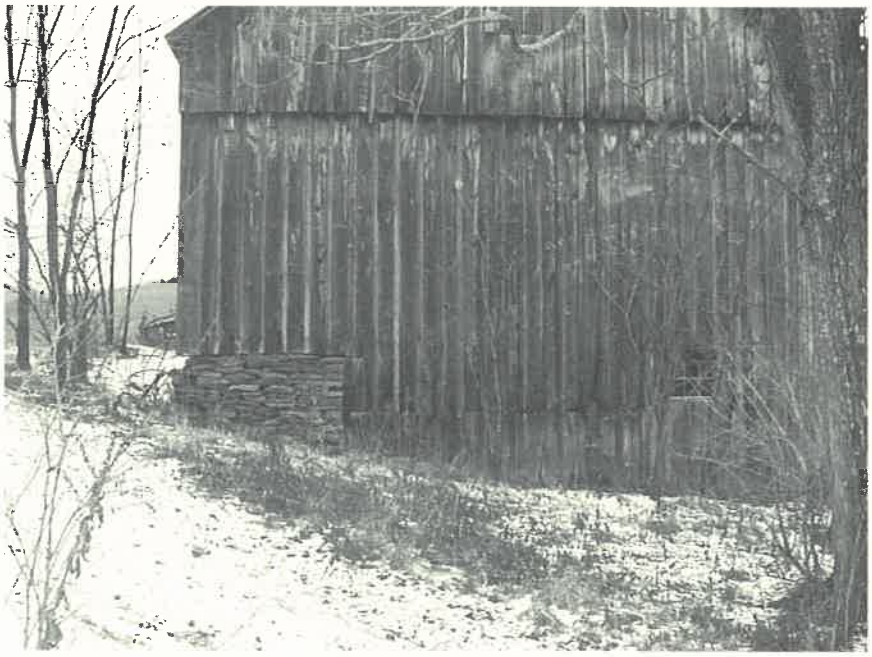
Barns are positioned in different ways in relation to their landscapes. Their setting is worth noting.

**Ramped**- the second floor of the barn is reached by way of ramp made of stone and dirt.



*Stone Ramp on a steep bank - Delaware County*

**Banked**- the barn foundation is set into the side of a hill or bank in such a way that two floor levels are accessible directly from the two different grade levels. No ramp is necessary.



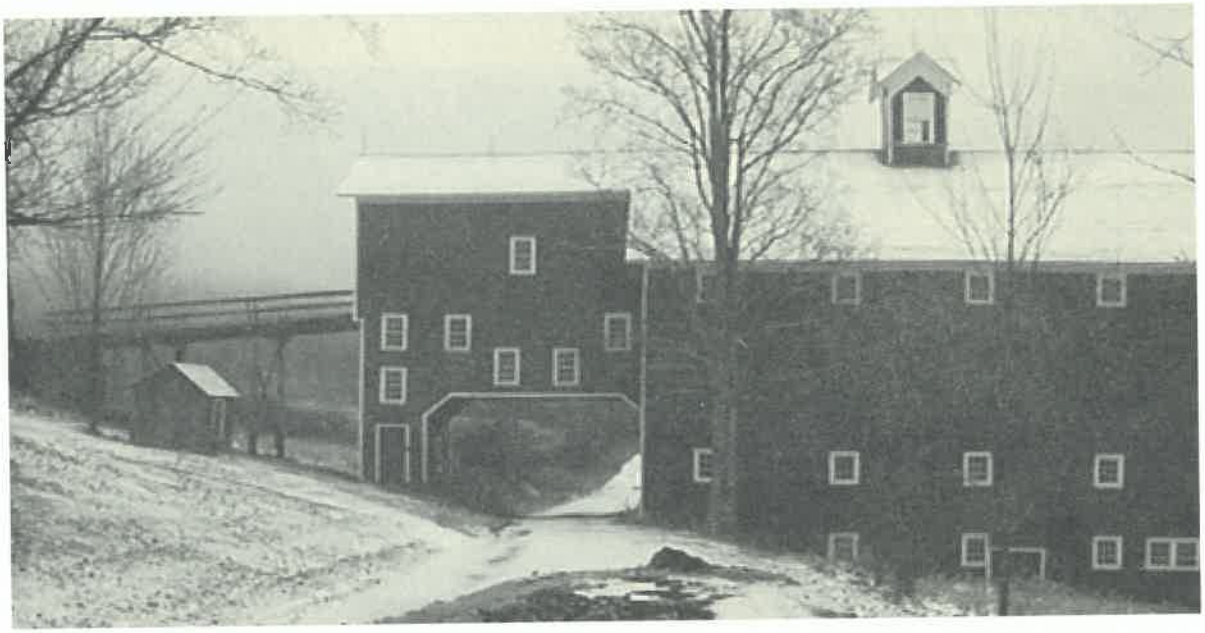
*Small Banked Barn - Fresbee Barn (c1800) at Delaware County Historical Association, Route 10, Delhi*

## Settings (Cont'd)

**On grade**- the barn is set on level ground

*On Grade - Tyler Barn, Walton, NY (Delaware County).*
*Barn built on grade with double earthen and stone ramp to 2nd floor.*

**Bridged**- Similar to a ramped barn, except that the portion of the ramp which connects to the barn is made of wood or concrete. Sometimes the area below the bridge is enclosed.



*Bridged/Ramp over road. Olaf Starheim Barn, Decker Road, Jefferson/Gilboa Town Lines (Schoharie County). Barn built in early 1900's.*

# Modern Barns

In the early part of the 1900s, farmers experimented with steel frame barns. But this experiment was quickly abandoned because steel frame construction was too expensive. By World War II plank frame barns with low roofs were more common. With the invention of the tag along baler in the 1930s, barn roofs no longer needed to be as high because hay could now be compressed and stored in much less space.

The most common barns being built today are pole barns. These barns are long, low and wide. They look like long open sheds and make very efficient dairy barns. They are roofed and sided with a variety of different materials, the most common is metal.

In recent years, the advent of agricultural bags for storing hay and silage has resulted in a decrease in the use of hay lofts and silos, further fueling the decline of these once vital farm structures. While it is impossible to save most of these precious buildings, we can preserve their characteristics through a process of careful documentation, including photographs.

*Old barn adapted to modern usage. Harvestor silo at right. Slurry storage for manure in foreground. Holley Farm, Walton, NY (Delaware County)*

*Modern one-story barn with hay storage behind barn and modern calf greenhouse at left. Boyd Farm, Walton, NY (Delaware County)*

# Ventilation

The livestock housed in the barn's basement needed fresh air to stay healthy. To meet this need, cupolas were added to the roof. The cupola was connected to an airshaft which lead to the basement, thus supplying the herd with adequate ventilation. In addition to being functional, cupolas were often decorative. They presented an opportunity for farmers to show their relative wealth by making ornate eye catching additions. In the early1900s the more economical and efficient metal ventilator replaced the cupola as a source of ventilation though decorative cupolas continued to be built.

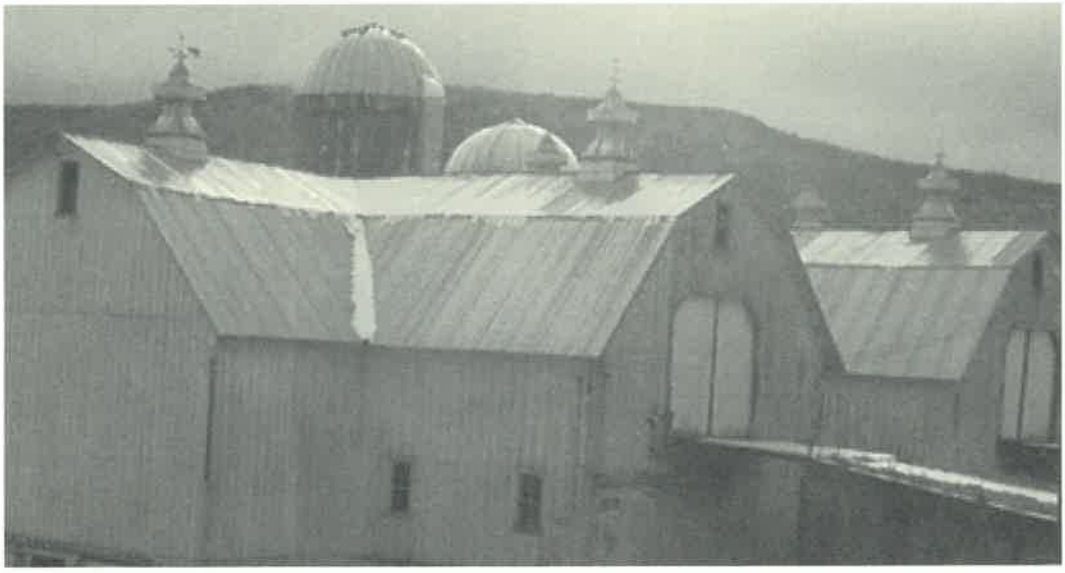
*Cupolas (right), Ventilator (left) with weathervanes and lightning rods*
*Maple Shade Farms, Delhi, NY (Delaware County)*

**Weathervanes**- helped farmers forecast the weather by telling them which direction the wind was blowing. They were made of light wood, which responded readily to changes in wind direction. Today, many barns display elaborate weathervanes often in the shape of a rooster, a horse or a fish. These weathervanes are made of metal and are actually too heavy to respond properly to wind. They are simply decorative, adding grace and beauty to a barn.

# Ventilation (Cont'd)

**Ventilators**- Factory-made metal devices designed to provide air exchange. They increase the amount of fresh air that comes into a barn, important in keeping the animals healthier.

**Cupolas**- A dome or tower-shaped ventilator made of wood. Sometimes they are only decorative and not functional.



*Lamport's double ramp barn with gambrel roof and multiple ventilators. Route 10, Stamford, NY (across from McMurdy Brook Road) (Delaware County)*

# Siding

One of the first things you notice when looking at a barn is its siding, or the material that its walls are made of. There are many different kinds of siding including wood, stone, brick, cement block and metal sheeting. Types of siding that you are likely to see on barns in your area include:

**Clapboard**- Boards which have one edge that is thicker than the other. They overlap one another horizontally and are nailed to a barn to form an outside wall. This type of siding is commonly used on houses, too.

**Vertical board**- Boards are of uniform thickness and are nailed to the barn vertically.

**Board and Batten**- Vertical board construction with narrow strips of wood nailed on vertically where the sides of the boards run parallel to one another.

**Sheet metal**- Large sheets of metal nailed to the barn framing vertically. Often used on newer barns to form outside walls, it is also sometimes added to old barns to cover older board walls.

**Brick**- A block of clay baked by fire and used commonly in building and paving. Bricks in New York State are usually reddish in color.

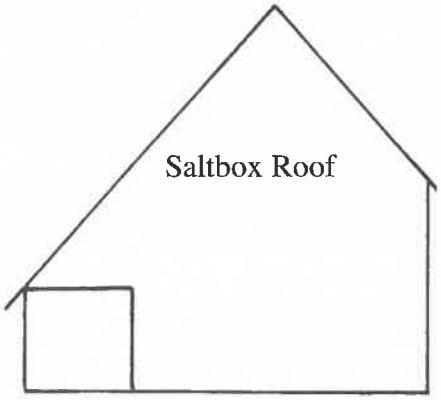
**Stone**- Both fieldstone and cobblestone are occasionally used to construct barn walls in New York State. Fieldstone was often taken from fields surrounding a farm and stacked in such a way as to make mortar unnecessary (dry laid wall). Cobblestone requires the use of cement mortar to hold the stones together. Stone barn walls can be up to three feet thick.

# Roofs

The roof is one of the more prominent features of a barn. There are lots of different roof shapes and there may even be more than one shape on a single barn. If more than one is present it is because the original barn has been added onto. Farmers often built additions onto their barns as their needs changed.

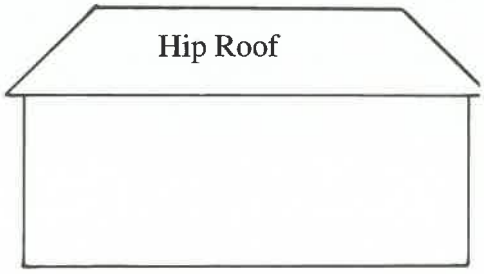
Here are the common roof shapes that you are likely to see in New York State.

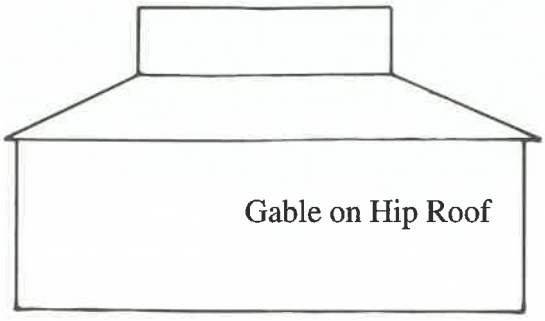
**Saltbox**- The most prominent characteristic of this roof is its asymmetrical shape. One side of the roof is longer than the other side. The longest slant in the roof usually faces the direction from which the strongest wind blows. A gable roof with an addition added to one side can easily be mistaken for a saltbox roof.




**Round**- This type of roof is shaped like an archway and was constructed most commonly shortly after WWII using surplus laminated beams. (See Page 10)

Other Roof Types:

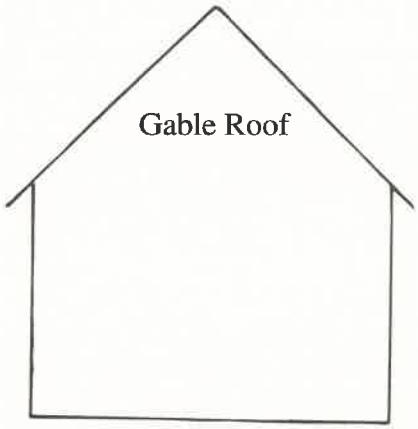


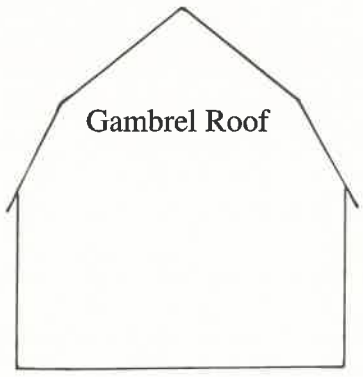



## Gable and Gambrel Roofs

After the Civil War, a horse-powered hay track was invented which ran the length of the barn on the top ridge of the rafters. Attached to it was a large claw that grabbed hay. A horse would pull a rope that raised and moved the claw to where the hay was to be dropped. This allowed hay to be stacked much higher than if pitched into the barn by hand, the only method available until then. Hay tracks can still be found in some barns today. Barns underwent yet another modification to accommodate this revolutionary device. Sides were heightened and the roof raised to allow hay to be stacked higher. In many cases, roof shape was changed from gable to gambrel. Gambrel roofs allowed for up to 50% more mow space and quickly became the most popular roof type in the state.

**Gable**- The gable roof is best described as an upside down "V" shape. It is one of the earliest types of roofs.




**Gambrel**- A roof having two slopes on each side the lower usually being steeper than the upper. The gambrel roof creates more loft space then the gable roof; thus gable roofs were often replaced by gambrel roofs.

Roofs often have weathervanes, lightning rods and ventilators or cupolas on them.

# Roof Materials

Not only is it important to be able to identify roof shape, it is also essential to be able to recognize what a roof is made of. Below is a list of roofing materials found in New York State.

**Slate**- A bluish-gray or reddish rock that splits easily into thin smooth layers. It is cut into squares and nailed to the roof much as shingles are. Slate was the most common original roofing material used on early New York State barns.

**Wood Shingles**- Pieces of wood, usually cedar, that were between 3-12" wide and 12" long, thinner at the top and thicker at the bottom. They were some of the earliest roof coverings and are not commonly seen today.

**Asphalt Shingles**- Shingles made of asphalt and covered with mineral granules. These shingles vary in size, shape and color.

**Corrugated Steel**- Steel sheets, usually galvanized, shaped in parallel furrows and ridges. They are often applied over a leaking wood or asphalt shingle roof but were also used as the original roof coverings in some later buildings.

**Ribbed Steel**- The most modern of the roof coverings, similar to corrugated steel but with parallel furrows spaced 8"-12" apart. It too is often used to cover old roof shingles.

**Rolled Roofing** - 36" wide asphalt impregnated felt paper. 60 or 90# per 100 sq ft may be mineral coated - in horizontal rows from bottom to ridge of barn. Can also be used as an under layment for shingles.

**Standing seam** - A standing seam roof is most often seen as a second (or third) generation roof covering. It is made of sheet metal and may have been originally galvanized (zinc plated). They may appear to be dull gray color if the galvanizing is still intact or they may appear as a rust color, or they may have been painted. It has seams 1" tall running perpendicular to the eaves and ridge lines.

## Foundations

In addition to the parts mentioned thus far, almost all barns have a foundation. The foundation is the base of the barn, the part on which the structure rests. Follow the outside walls down to the ground in order to see what type of foundation the barn is resting on. Here are some possibilities.

**Cement or Concrete Blocks**- The standard size is 8" x 16". Some cement blocks are molded to look like stone.

**Rock Plinths (Piers)**-Short piles of large rocks placed under the main supports of the barn.

**Concrete**- One of the more modern types of foundations. It is grayish-white in color and seamless. Concrete is poured into a wood or metal form and left to dry. When the form is removed, the foundation is left.

**Fieldstone** - Stone cleared from the fields would be fit together so tightly no adhesive would be needed to hold them in place.

**Coblestone** - Stones that have been held together with some kind of adhesive, like cement.

## Doors

The placement of door(s) may help to identify what type of barn you are looking at and what it may have been used for. Door(s) may be located on the gable end, the short side of the barn, or the long side of the barn. Doors to the upper levels of the barn are generally located on the long side of the barn.

The first barns did not have hinged doors. The door would be removed in the summer time and replaced in the wintertime. The roller door was introduced around the 1840's. This type of door was originally used on freight cars.

## Windows

Barns did not have windows until the early 1800s. Before then, light came in through cracks in the siding or through the doorway. Window placement offers a clue to barn use. Windows also help give an idea as to what a barn was used for. For example, dairy barns often have lower windows than horse barns.

The appearance and function of farm buildings changes to meet the changing needs of their owners. The evolution of farming practices, technological advances and different crops and animals require changes in farm architecture. New additions are built onto existing barns and outbuildings are added. Because of this, it is often difficult to identify the original function of a barn.

## Owl Hole

A round hole, 4-6 inches in diameter, usually in the barn peak. Owl holes allow easy owl access - Barn Owls help rid the barn of mice and other rodents.

# Out Buildings

Most farms consist of more than just a solitary barn. There are usually other out buildings like a spring house, a sap house, a chicken coop or a piggery. Some of these building may have been added directly onto the barn as the farm grew; some may be free standing. Below are some buildings you are likely to see on a farm.

**Chicken Coops** - Range in size from 5' x 5' for a few birds, home production use to 30' x 100' for larger flocks, commerical use.

*Large 2-story chicken coop for commercial use.*

*Small chicken coop for small home flock.*

**Outhouse**- A small building which housed a pit with a seat over top of it that served as a toilet.

*Unique 4 seater lath & plaster outhouse at Delaware County Historical Associaiton, Route 10, Delhi, NY Early 19th Century.*

# Out Buildings (Cont'd)

**Milkhouse**- A small house that was used to store milk. Milkhouses were built to keep dairy products cool, thus they were often made out of stone and have a large over hanging roof to keep the sun off the walls. Inside, the milk was often kept in a concrete trough filled with cold water.

*Milkhouse at Maple Shade Farm, Delhi, NY, late 19th Century. The spring usually floods through a vat in the milkhouse where milk was cooled.*

**Spring house/Spring Reservoir**- A small storehouse built over a spring or part of a brook for keeping meat, dairy products and other perishable foods cool and fresh. This house is best built out of brick or stone, and needs good ventilation. It often has one or two small windows.

*Small Spring House- No reservoir*

*Large Spring House with reservoir*

**Pump house**- A building positioned over a well.

# Out Buildings (Cont'd)

**Ice house**- A building used for storing ice. These houses were built out of brick or wood and have no windows because sunlight would melt the ice. Blocks of ice were packed in straw and sawdust, sometimes underground, to keep the ice cold so that it would last into the spring and summer months. Blocks of ice were used in iceboxes as an early form of refrigeration.

*Ice House at Livingston Manor, NY (Scholarie County)*

**Carriage house/Barn**- A building in which carriages and harnesses were stored.

*Carriage Barn, adaptive use as a home, Back River Road, Bloomville, NY (Delaware County)*

# Out Buildings (Cont'd)

**Corn crib**- A small building in which corn is dried and stored. These buildings are designed for maximum ventilation and are commonly built on posts to help keep rodents out. Often, the walls slope out as they reach the roof, and there are slats in the sides to increase ventilation. Modern corncribs are round wire cages with roofs. They are set on posts or concrete slabs.

*1900 - Corn Crib at Delaware County Historical Society, moved to Delhi from Woodin Farm in Andes, NY (Delaware County)*

*Corn Crib - adaptive reuse at Livingston Manor, NY (Scholarie County)*

**Greenhouse**- A building made chiefly of glass, in which the temperature is maintained within a desired range. Greenhouses are used for growing tender plants.

# Out Buildings (Cont'd)

**Smoke house**- A building in which meat and fish were treated with smoke to preserve them. In the smoke house meat was hung from the rafters and a fire would be built in a small pit in the center of the house. Residue from the many fires that burned in these structures is always present, thus helping to identify them.

**Sap house**- (Sugar House) A building in which maple syrup is made. These buildings became common in the early 1800s.

*Sap House - Bryden Farm, Hamden, NY (Delaware County)*

**Blacksmith Shop**- Many farms had early blacksmith shops and wagon barns. Today farms have farm shops and machinery storage sheds.

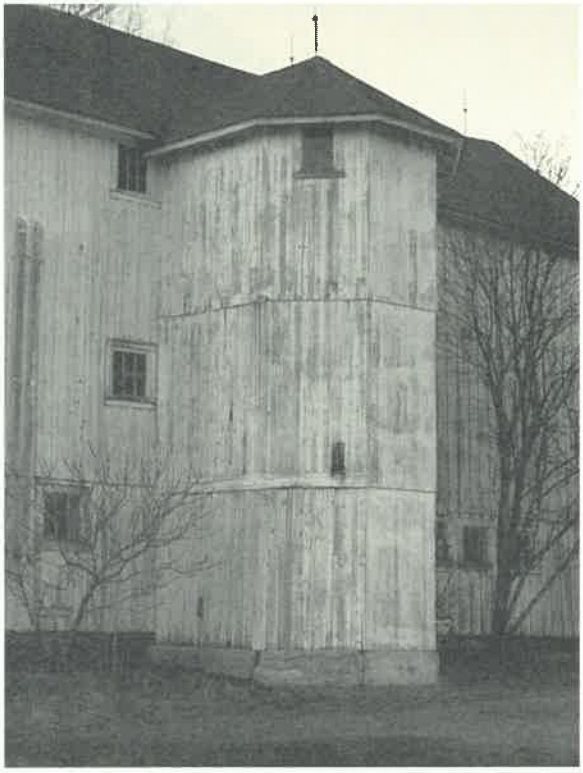
*Woodin Blacksmith Shop - Moved from Woodin Farm in Andes to Delaware County Historical Association - Built 1900.*

# Out Buildings (Cont'd)

**Silo**- A cylindrical structure used for storing silage. Silos were made of many different materials including wood, concrete and metal. Today, agricultural bags (large white bags filled with silage and left outside) are replacing silos.

*Hidden Silo - Two 16' x 16' square silos are hidden in the end of this barn.*
*Rice Homestead.*

*Woodin silo on County Route 12 in Jefferson, NY (Schoharie County)*



*Silo- Square, included as a major structure when barn was built.*

## Suggested Readings/Bibliography


Arthur & Witney *The Barn,* 1972; *Barn Plans and Outbuildings,* 1904

Fink, Daniel *Barns of the Genesee Country*, 1790-1915 Genesce: James Brunner 1987

Gabler, Mirko and Ann Gourlay Gabler, *The New York Barn Book,* The Farmers' Museum, Cooperstown, NY

Klamkin, Charles *Barns: Their History, Preservation and Restoration,* Bonanza Books, NY

Leasher, Evelyn *Isabella County Barn & Farmstead Survey Training and Field Manual,* 1993-1994

NYS Dept of Taxation & Finance TSB-M-97(1) I and TSB-M-97(5) I Form I & 212-ATT

Noble, Allen G. *The Old Barn Book: A Field Guide to North American Barns and Other Structures,* Rutgers University Press, Newbrunswick, NJ 1995

Radford *Framing: House, Barn & Roof*, 1913

Schaefer, Vincent J *Dutch Barns of New York: An Introduction,* Purple Mountain Press, 1994

Sloane, Eric *An Age of Barns*, Henry Holt & Company, NY 1965

Sloane, Eric *American Barns and Covered Bridges*, Funk & Wagnalls, NY 1954

# LEADER SUGGESTIONS:

## Meeting # 1: Getting interested.

To get the 4-Hers interested in barns first have them read their guide on the history of barns and the different parts of barns. The students could read this before they come to the first meeting or you could take 15 minutes at the beginning to the meeting and have them read it then. After they have finished the reading they could do some of the word games at the back of the manual.

Before this meeting you could make up some games.

**Ideas for games:**

*Pictionary*: If you have a blackboard or a large drawing pad the students can take turns going up and drawing a certain part of a barn they learned from the reading. One person draws while everyone guesses. Or they can split into two teams and play against each other. Each team takes 5 minutes to write up 10 things that the other team has to draw and guess. Time each drawing, they only have 3 minutes each, keep track of the time and which ever team has the lowest time at the end wins.

*Jeopardy*: Before the meeting, come up with 5 or 6 categories, for example 1. Roof types, 2. History of barns, 3. Siding types, 4. Foundation types, 5. Roofing types, 6. Barn types. Make up 4 or 5 questions for each category. The students must answer in the form of a question. Example: Question: A barn that is built into the side of a hill for easy access to the 2nd floor. Answer: What is a banked barn?

You could use index cards, have one question on each card, and tack the cards to the wall having the easiest questions worth the lowest. You can set this game up while the students are reading the history at the beginning of the meeting.

**For next time:**

To set up a trivia game for the next meeting. Break up the students into two teams and have them come up with barn trivia questions. At the next meeting the students will get back into these teams and ask each other the questions they have come up with. They must also have the answers to the questions they come up with.

You could also suggest a kind of scavenger hunt. Tell the students to watch for barns as they are driving around, going to school. They should try to keep track of what types of barns they have seen, or how many of a certain type they have seen.

## Meeting #2: More fun with barns.

- If the students did the scavenger hunt see what everyone has found. Try to figure out what type of barn was identified the most.
- Play trivia with the questions the students came up with. Have the two teams ask each other the questions they have come up with.
- You could also take a trip out to a barn and see how many parts of a barn the students can identify.

## Meeting #3: Learning how to survey.

In beginning to teach the students how to survey a barn you may want to explain how surveys are important because they help preserve this information before it is lost. You could go to your local historical association and see if any surveys have been done locally. Surveys are important to help show people in the future how we lived now because once the barns have fallen down they are gone. Ask the students: How many barns have they seen falling down? How many barns have they seen torn down just in their lifetime?

In filling out the survey form the students should be as neat as possible and use a pen so that future copying will be easier. It is important to keep track of what picture goes with what barn. When the students are taking the pictures they should keep a list of what each picture in the roll is too. This will make it easier to match the pictures to the correct survey form. Each roll of film should also be labeled to match them to the list of photos taken.

## How to take the pictures:

When taking pictures you should try to get as much of the barn in the frame as possible. Try to get a picture from all four sides. Some times you may have to stand far away from the barn to get a good picture. Take a compass reading and mark down which side of the barn is facing north. If there are any out buildings try to get a picture of them too. If it is possible try to get the main barn in the shot to show where the out building is in respect to the barn. The best time to take pictures is in the fall and spring before all the leaves come out. This will give you a good picture with no extra foliage in the way.

## Meeting #4: Preparing to go out into the field.

Have the students pair up to work together. It is easier if there is one recorder and one photographer. The students can take turns being the recorder and photographer. To really survey properly someone should go out into the field before the students to mark down on a map where each barn is and assign a number to each barn so no barn will be missed in the survey. Assign specific barn numbers to each team to survey. It would be easier to have each team to survey all the barns on one road.

Only assign two barns to each team at this time.

## Meeting #5: Problem solving.

After the students have surveyed two barns get together and see how they did. Did they run into any problems? Are they filling out the surveys correctly? Are they keeping track of what pictures go with what survey? Do they have any questions?

If the students seem to be doing well, assign the rest of the barns to them.

## Meeting #6: Finishing up.

- Gather all the surveys together. Get the students to match the photos with the correct barns and make sure they have labeled the back of the photo correctly so if the photo is separated from the survey form it can easily be matched up. Make sure you have all the negatives for all the photos.
- When all the paperwork is done you could play the trivia game again to see how much the students have learned.
- The students can compare each others barns. Can they see any pattern? Which barn type appears to be the most common? Does any one have a favorite barn that they surveyed? Let them share it with the other students and tell what they like most about it.

## Potential Problems:

- Keeping track of each photo as it is taken and labeling the roll so it will correspond to the list of photos taken. If this is not done it will be very hard to match up the photos with the correct survey form.
- Labeling of the photographs is very important. If the photograph is not labeled well it may be impossible to match the photo up with the right survey if they ever get separated.
- Talking to the barn owners. It may be difficult to find time to talk to the barn owners.
- Trying to find a good time to go to the farm when the owner is around to get permission to take pictures of the barns.
- Skipping barns: to avoid skipping barns someone most go out before the students with a map and mark down where each barn is and give each barn a different number so it would be easy to tell what has been done and what has been missed.
- Need a consistent way of documenting the address.
- Make sure you keep track of all the negatives. They are very important for the end of the project to make duplicate photos when compiling all this information together for historical associations.
- Surveys should be written in pen to make better copies when the information is compiled together for historical associations.

**Equipment needed when going on a survey:**

-pens(always have a back up)
-survey forms
-camera and film
-compass
-letter of introduction
-extra paper or a notebook to keep a list of all the photos taken
-tape recorder if you are going to interview the barn owner

## Safety tips:

- When the students are out surveying the barns they should be careful.
- Make sure the students have an adult with them, never go alone.
- Make sure to have permission from the owner to take pictures of their barn.
- Do NOT go into the barn unless you have permission and the owner says it is safe.
- Watch where you are walking. Farms have many dangerous areas ie: ditches, barb wire, woodchuck holes, and large farm equipment.
- Do not run.
- Dress appropriately, if it is cold dress warmly, wear gloves and a hat.

## Parental Involvement:

The parents need to be willing to get involved. The students will need their parents help to get around to all of the barns they need to survey.

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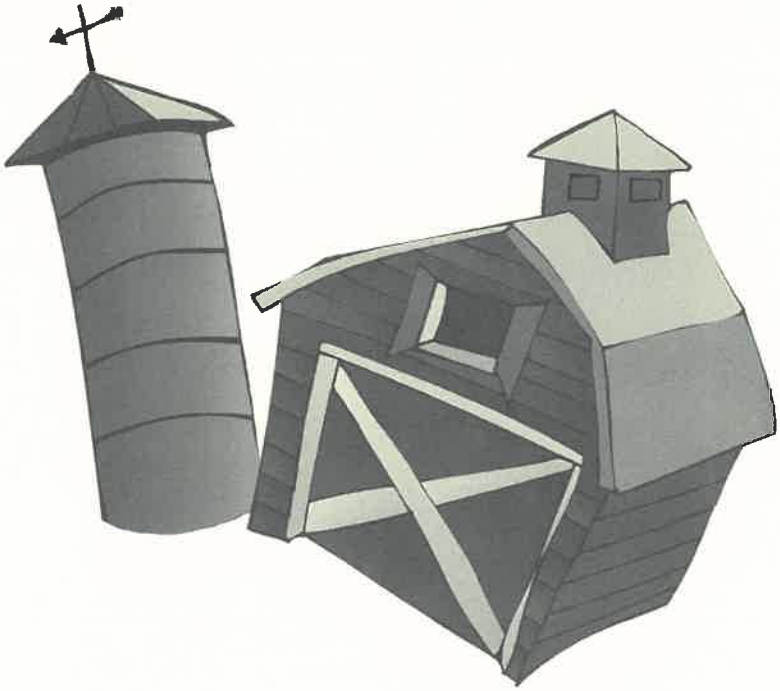


**Example of a letter of introduction:**

To whom it may concern,

I am a member of the _____4-H club and we are currently learning about barns and surveying them. In doing this project we are taking pictures of all the barns in this area and studying their construction. This information will be compiled and kept at the Historical Association to be used by researchers.

Please sign the form below authorizing the publication of any photos we take. Your cooperation is greatly appreciated.

Thank you for your time.

Sincerely,

_____

**Photograph Publication Authorization Form**

Date _____

I, _____, hereby authorize _____ to publish the photographs of my farm taken today.

Signature _____

Address _____

_____

# Barn Survey Form

Surveyor's Name_____ Form #_____

Owner's Name_____ Barn #_____

Mailing Address_____ Date of Visit _____

Barn Location_____ Date of Barn _____

What was the barn used for in the past? _____

What is the barn currently used for? _____

## FEATURES: (Circle appropriate type)

***Roof Types:***
Gable
Gambrel
Saltbox
Round
Other_____

***Roof Materials:***
Wood shingles
Asphalt shingles
Corrugated steel
Ribbed steel
Slate
Standing seam
Tar paper
Other _____

***Siding:***
Vertical Board
Board & Batten
Clapboard
Sheet metal
Brick
Stone
Shingles
Other _____

***Foundation:***
Cobblestone
Cement blocks
Fieldstone
Concrete
Rock Plinths
Other_____

***Roof Features:***
Weathervane
Ventilator
Number:_____
Cupola
Number:_____
Lightning Rods
Number:_____

***Position:***
On Grade
Ramped
Banked
Bridged

***Structural System:***
Timber Frame (Early 19th Century)
Timber Frame (Late 19th Century)
Laminated Truss
Unadilla Truss
Roof Truss
Plank Truss
Other _____

***Other Farmstead Structures:***

| | | | | |
|---|---|---|---|---|
| Spring House | Outhouse | Pump House | Corn Crib | Green House |
| Smoke House | Carriage House | Silo | Milk House | Ice House |
| Sap House | Chicken Coop | Pig/Hog Building | | Machine Shed |
| Granary | Windmill | House | Silo | |

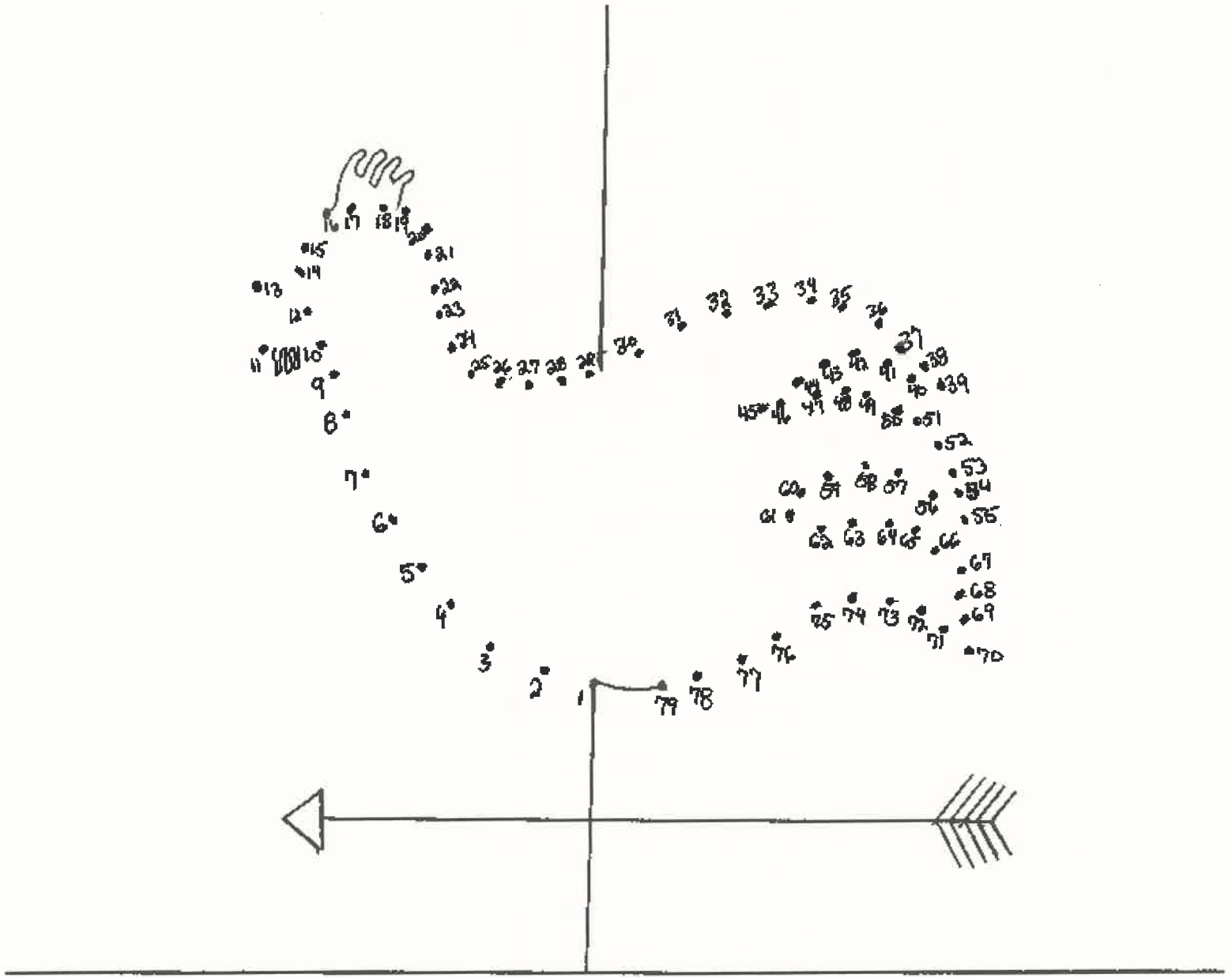
# PLACE PICTURE ON REVERSE SIDE

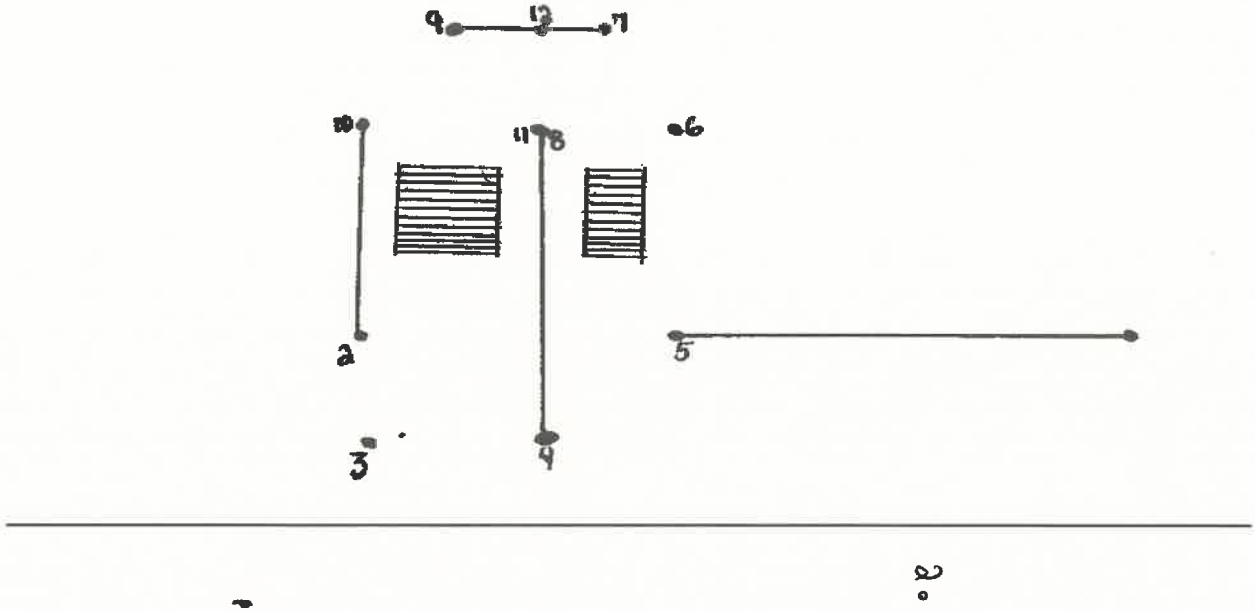
**INSERT PHOTO(S) HERE:**

ROLL # _____ CIRCLE PICTURE # _____

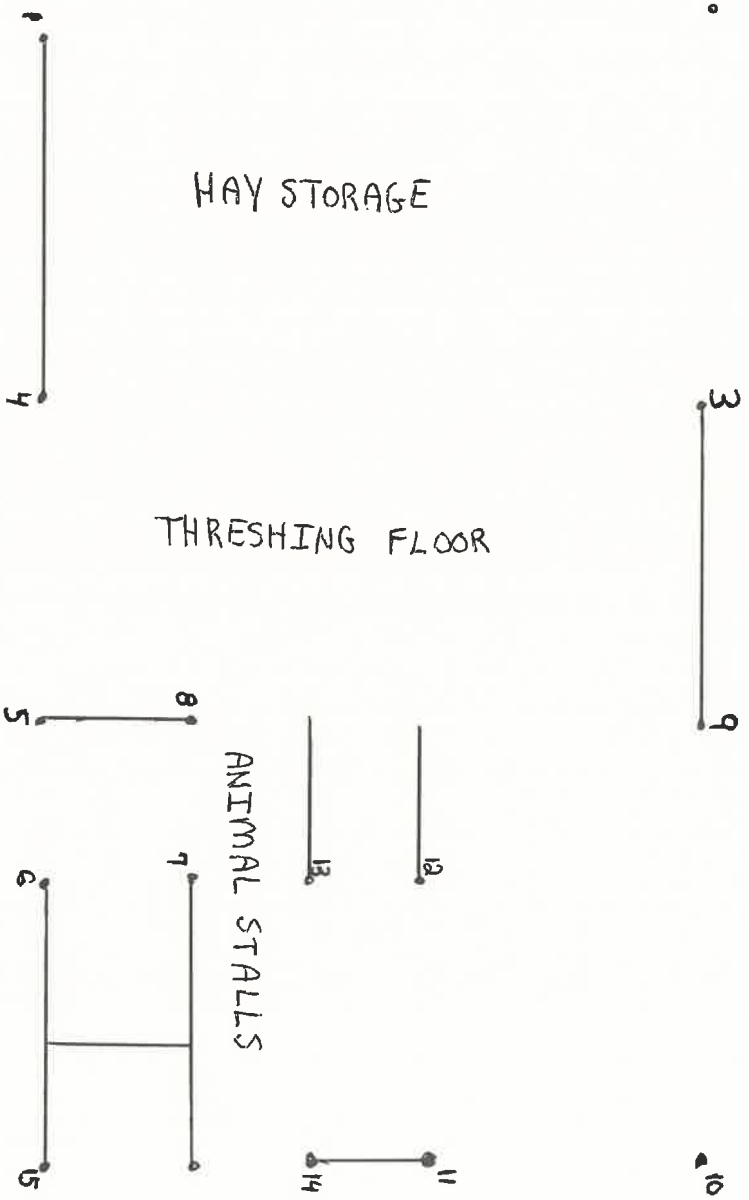
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15,16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36

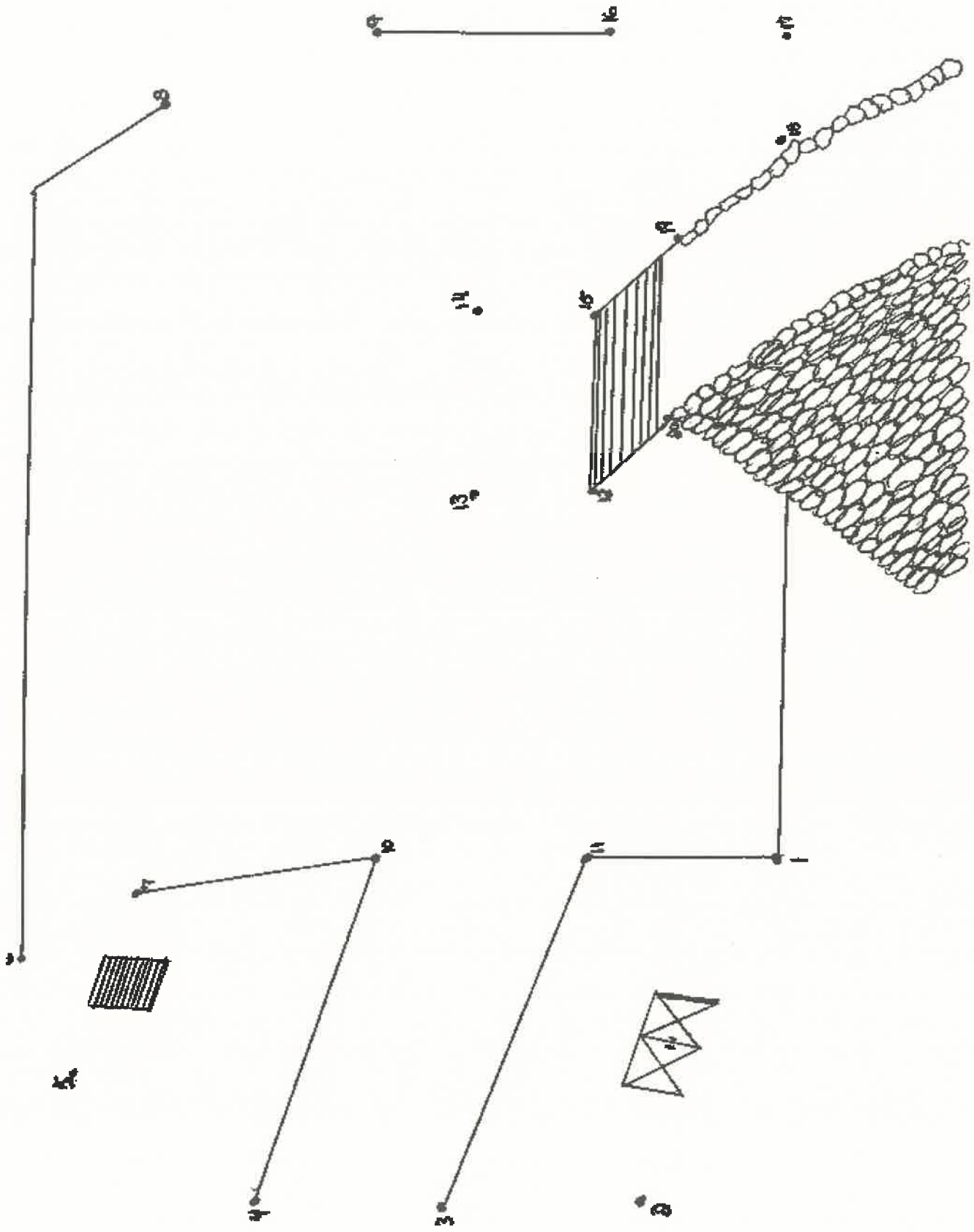
Which facade(s) are we looking at in this picture? N S E W




9
12
7
10
11
8
6
2
5
3
4

2.


1
4
HAY STORAGE
3
THRESHING FLOOR
9
5
8
ANIMAL STALLS
13
12
6
7
15
14
11
10



# Scramble

1. INSDGI _____

2. TETNBA _____

3. TOFUODNANI _____

4. LTEAHEMSTE _____

5. EOOLLHW _____

6. OURGAEIRCSEAH _____

7. LAOENBRP _____

8. FORO _____

9. LBEDIESTEBR _____

10. AEMRBGL _____

11. OOESBLCEBOT _____

12. SLIHKUEMO _____

13. EURVSY _____

14. GSTRLEEORCAUDET _____

15. TRNIAOLEVT _____

16. GBNAEIHNSRL _____

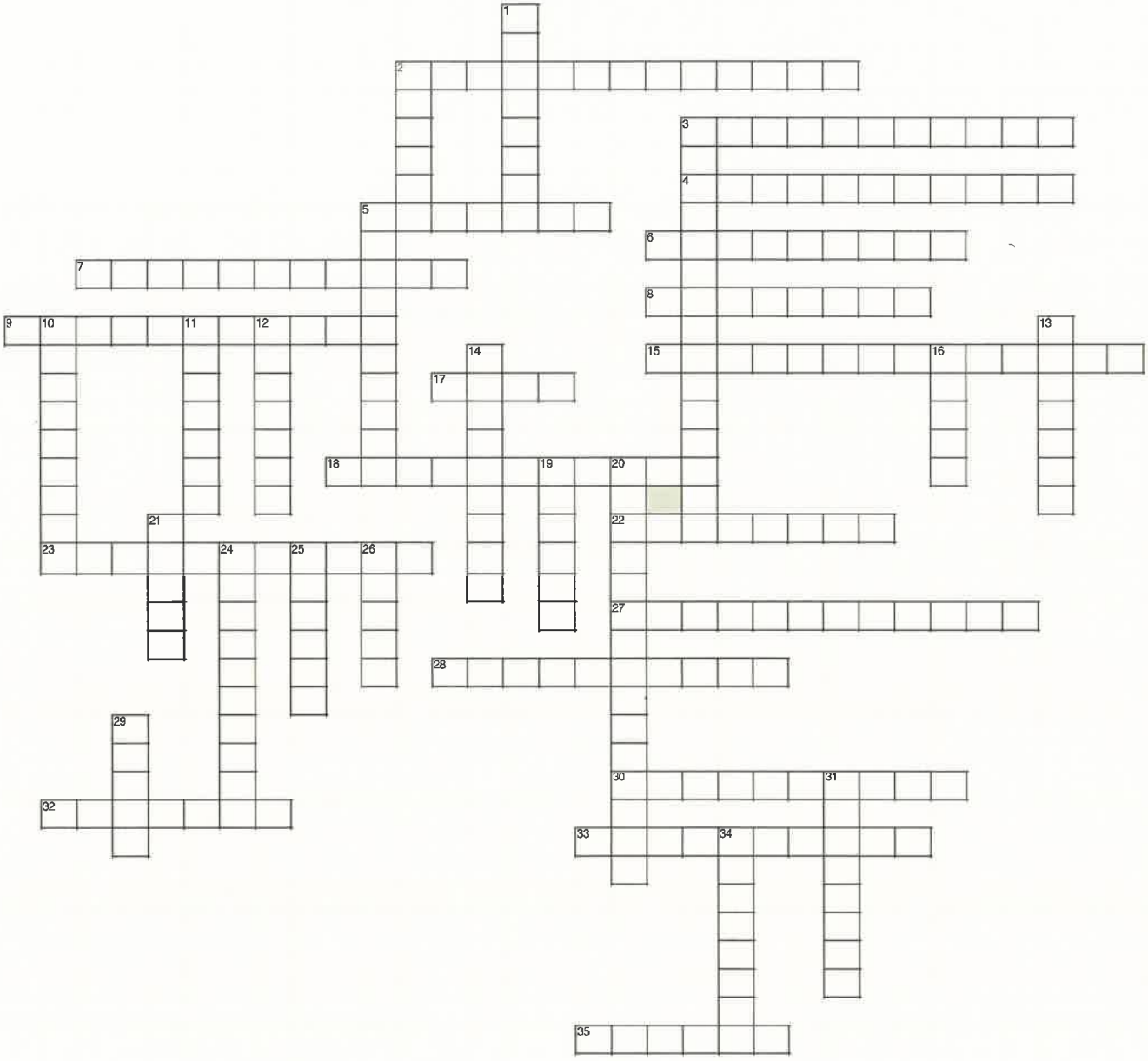
17. HHRIENSTG _____

18. NHTEAEAWVER _____

19. EAKDBN _____

20. DDENRAAOBTABTN _____

# 4-H BARN PROJECT -CROSSWORD PUZZLE



**Across**

2. housed wagons and harnesses
3. foundation type-block 8" x 16"
4. most modern roofing type
5. roof type-one side longer then the other
6. one of the earliest barns
7. poultry house
8. place to make maple syrup
9. early form of refrigeration
15. sometimes used with battens
17. holds silage
18. tell direction of wind
22. modern barn/most common barn built today
23. built soon after Dutch barns
27. protects barn from electricity
28. early foundation with no adhesive
30. helps plants begin to grow
32. helps reduce rodents in barns
33. helps air flow
35. occasionally used with vertical boards

**Down:**

1. storage for corn
2. small dome or tower on barn
3. rippled looking roof covering
5. preserves meat with smoke
10. keeps dirt out of well
11. double sloped roof
12. barn on level ground
13. ramped with a short bridge
14. keeps dairy products cool
16. sun baked clay
19. barn with an earth ramp
20. roofing of mineral granules
21. rock type roofing
24. roofing, and/or siding
25. set into the side of a hill
26. also called gothic
29. upside down "V" shaped roof
31. rustic toilet
34. for storage of frozen water

# 4-H BARN PROJECT-WORD SEARCH

| | | | | |
|---|---|---|---|---|
| asphalt shingles | chicken coop | foundation | on grade | roof | slate |
| banked | corn crib | gable | outhouse | round | smokehouse |
| batten | corrugated steel | gambrel | owl hole | salt box | spring house |
| brick | cupola | greenhouse | polebarn | sap house | ventilator |
| bridged | dutch barn | icehouse | pump house | sheet metal | vertical boards |
| carriage house | english barn | lightning rod | ramped | siding | weathervane |
| cement block | fieldstone | milkhouse | ribbed steel | silo | |

## Answers to scramble:

1. siding
2. Batten
3. Foundation
4. Sheet metal
5. Owl hole
6. Carriage house
7. Pole barn
8. Roof
9. Ribbed steel
10. Gambrel
11. Cobblestone
12. Milk house
13. Survey
14. Corrugated steel
15. Ventilator
16. English barn
17. Threshing
18. Weathervane
19. Banked
20. Board and batten

## Answers to crossword:

**Down:**

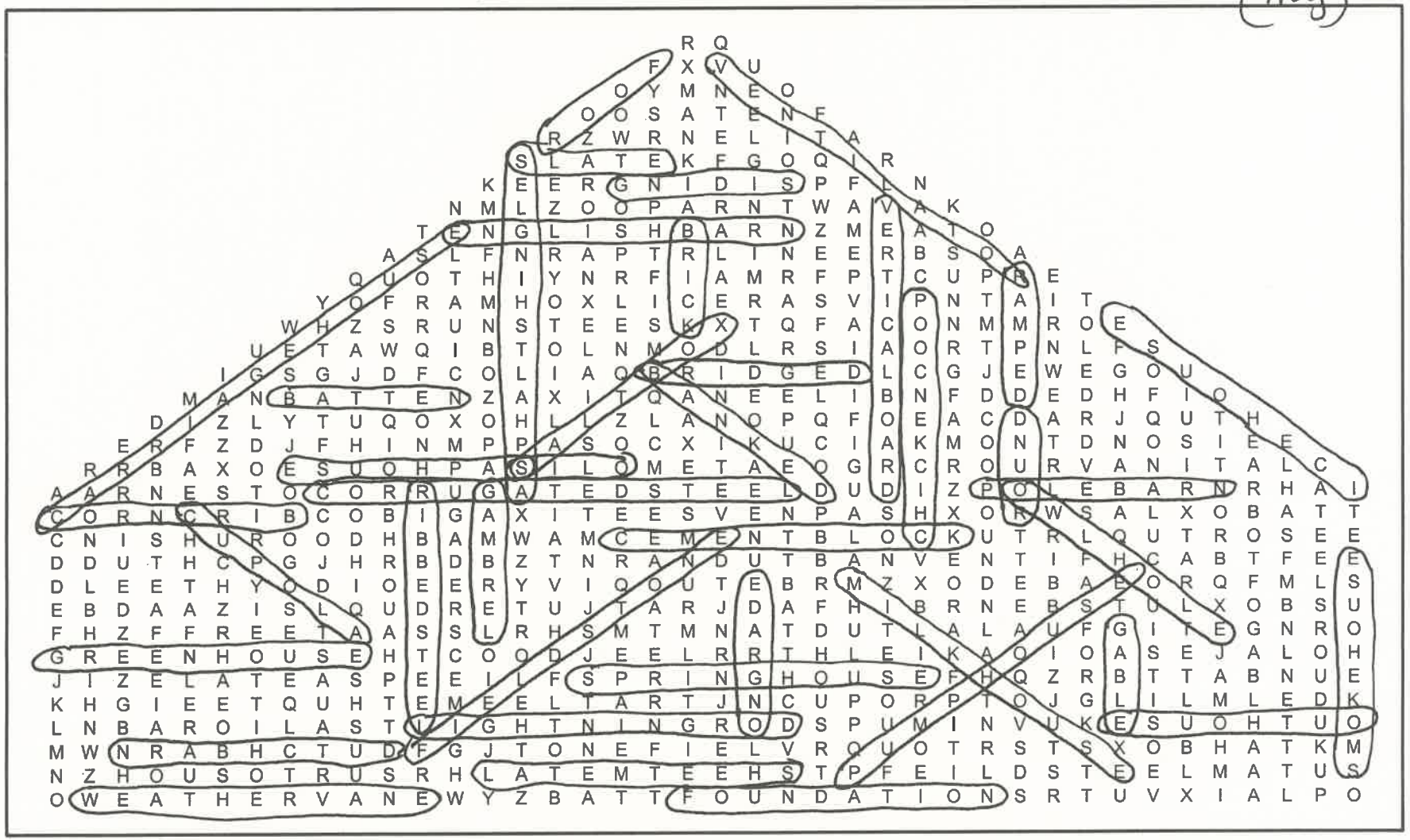
1. Corn crib
2. Cupola
3. Corrugated steel
5. Smoke house
10. Pump house
11. Gambrel
12. On grade
13. Bridged
14. Milk house
16. Brick
19. Ramped
20. Asphalt shingles
21. Slate
24. Sheet metal
25. Banked
26. Round
29. Gable
31. Out house
34. Ice house

**Across:**

2. Carriage house
3. Cement block
4. Ribbed steel
5. Saltbox
6. Dutch barn
7. Chicken coop
8. Sap house
9. Spring house
15. Vertical boards
17. Silo
18. Weathervane
22. Pole barn
23. English barn
27. Lightning rod
28. Fieldstone
30. Green house
32. Owl hole
33. Ventilator
35. Batten

# 4-H BARN PROJECT-WORD SEARCH

(Key)



asphalt shingles
banked
batten
brick
bridged
carriage house
cement block
chicken coop
corn crib
corrugated steel
cupola
dutch barn
english barn
fieldstone
foundation
gable
gambrel
greenhouse
icehouse
lightning rod
milkhouse
on grade
outhouse
owl hole
polebarn
pump house
ramped
ribbed steel
roof
round
salt box
sap house
sheet metal
siding
silo
slate
smokehouse
spring house
ventilator
vertical boards
weathervane