

FARM BARN.

Raymond D. Harrison.

FARM BARNES.

In the construction of farm buildings, the barn stands second in importance, and in writing this treatise upon the subject it has been my intention to draw the plans of several barns and write the specifications for one barn which would meet the general requirements of the modern and scientific farmer.

The one for which the following specifications are written is a general farm barn, in which is included a carriage and implement shed and ^{which is} arranged to accommodate both horses and cattle.

One feature quite advantageous to its floor plan is that the horses and cows may be easily separated by simply closing the door joining the two stables ^{which will} ~~and yet~~ not affect the ventilation of either.

The roof extending over the carriage room gives an abundance of hay room which is a very desirable feature.

The carriage room is furnished with a carriage and horse wash so that each may be easily and economically cleaned while the mud is yet soft.

One of the most important questions in building is the choosing of a site.

A location to be ideal must have at least three qualifications: proper surface drainage, nearness to water, and convenience

to the house and road.

Of these three important features, proper surface drainage stands first. If possible the drainage should be away from the road and by all means away from the house and well. Convenience to water is next in importance. In case the well is so far away that the water needs to be piped it is very inconvenient to regulate the wind mill as it must be left running all the time which is not a good idea unless the overflow can be used for the irrigation of the garden and shrubs, and even then it is a continued wear and tear on the mill.

Convenience to the house and road is the last important feature and this is not only important but necessary.

With a well kept barn fifty yards is not too close for the house and if the drainage and location are favorable it may even be closer than that.

In the planning of a farm barn the owner should first know his needs both for the present and also the probable future.

It is in the barn where the farmer does nearly half of his chores both morning and evening and for this reason alone the floor plan of the barn should be as convenient as possible. Many barns are simply an inclosure of space having nothing convenient about them and the space is not fully utilized.

SPECIFICATIONS

For the construction of a Farm Barn
after drawings made for same

by

Raymond D. Harrison

Jewell City, Kansas, June 13, 1906.

General Remarks.

This contract includes the furnishing of all materials and labor, of each and every kind required to build and complete the farm barn. The Owner will furnish only those articles that are specified to be furnished by him, such as hardware, haytrack, pulley, rope, and fork, all of which are to be properly hung and affixed by the contractor. The supports of the track must not be more than 2'6" apart.

Alterations.

The owner may at any time require alterations, additions or omissions from the contract and the same shall not affect the validity of the contract or render it void, but the price of such work shall be added to, or be deducted from, the contract price, as the case may be, such price being in such proportion to the entire job as the changes may affect the same.

Should any dispute arise relative to such charges they shall be settled by a disinterested and competent party chosen and approved by both the contractor and Owner. All orders for alterations that will affect the contract price will be in writing, and no claims will be allowed at the final settlement for which no written orders can be shown by the contractor.

The Contractor.

The contractor is to give his supervision to the work, to furnish all labor and materials necessary to make a complete and workman like job, according to the drawings and spirit of the specifications, to the entire satisfaction of the Owner who will have full power to reject all work and material not first class and of the kind specified.

Drawings.

The specifications and drawings referred to are intended to include everything requisite and necessary to the proper and entire furnishing of the whole job notwithstanding every item required by the work is not particularly mentioned.

Inspection and Acceptance of Work.

The contractor must understand that all material and labor furnished by him, at any and all times during the progress of the work, and prior to the final acceptance of, and settlement for the same shall be subject to the inspection of the Owner, who shall have the right to accept or reject any part thereof; and that the contractor must, at his own expense, within a reasonable time remedy any defective or unsatisfactory materials or work; and in the event of his failure to do so, after notice, the Owner shall have the right to have same done, and to charge the cost thereof to the contractor, to be taken from the contract price at final settlement.

Responsibilities.

The contractor shall be held responsible for all damages to

the building, whether from fire, water, wind or other causes during the progress and prosecution of the work, and until same is finally accepted.

Drawings.

It will be understood that the dimensions, such as are given in the specifications shall be taken as correct, but in case such dimensions in question are not referred to in the specifications then the figures shall be taken as they appear on the blue prints and not according to the measurements of same.

MASON'S SPECIFICATIONS.

Foundation.

All foundation and stone supports shall be at least 1'6" wide and shall extend in all places at least 6" above the natural surface of the ground and in no case must they extend less than 2'6" below the natural surface of same.

The bottom of the trench shall be level and the external surface of the wall perpendicular and flush with the external edge of the wall plate. The stone of ~~same~~ shall be laid in cement mortar composed of one part fresh burned lime, two parts of Kansas Portland cement, and clean sharp sand eight parts, stone to be laid as closely as possible and all joints to be slushed full of mortar.

Cement Floors.

The cement floors shall consist of 4 1/2" of concrete and 1" of cement facing.

The concrete shall be mixed as follows: 1 part best Kansas Portland cement, 3 parts clean sharp sand, and 4 parts broken stone or coarse gravel. The broken stone used must be free from dirt and of a solid composition, and no piece to be larger than a 2" cube.

Mixing Concrete.

All concrete to be mixed as follows: The cement and sand will first be thoroughly mixed dry after which water will be added and the mortar mixed to the proper consistency, then the stone shall be dumped on top and the whole worked over into a homogeneous mass. This concrete shall be tamped in place by suitable tools until the moisture flushes to the surface, and it must be deposited as fast as it is mixed, and covered with a cement facing of 1 part best Kansas Portland cement and 1 1/2 parts sharp sand, trowelled true and smooth. All measurements for cement and sand must be done with bucket and not with shovel.

All floors, including finishing coat, to be laid in strips 3 feet wide leaving spaces between strips of the same width. As soon as the strips have set the alternate spaces are to be filled in with concrete as outlined above. This method is adopted so as to avoid walking on, or soiling base which would prevent the finish coat from properly adhering.

All concrete floors to be marked off into blocks about 3 feet square. The joints to be cut through to top of base.

SPECIFICATIONS FOR THE CARPENTER.

Timber.

All dimension lumber of the building, and all rough lumber where no particular timber is specified shall be of good quality of yellow pine surfaced on one side and one edge, sound, and free from large, loose or dead knots or other imperfections liable to impair the durability or otherwise weaken the timber.

Framing Timber.

Wall plate	2" x 8"	Main studs	2" x 6"
Top "	2- 2" x 6"	Partition "	2" x 6"
Corner posts	3-2" x 6"	Granary "	2" x 4"
Stud to harness room			2" x 4"
Corner studs of harness room			2-2" x 4"
Rafters			2" x 6"
Rafters of	"	"	2" x 4"
Floor joists			2" x 10"
Ceiling joists			2" x 8"
Purline Plate			3-2" x 6"
Ridge pole			2" x 8"

Framing.

The sills shall be properly cut and framed to fit the foundation, and set perfectly level. The corner posts shall be set plumb, to a line and well braced while other framing is in course of erection and framed according to the details of the "Perfect" horse barn.

The floor joists and other important timbers shall be so framed that there will be no more cutting than is absolutely necessary.

Build partitions where shown in the plan, setting them straight and plumb. Make all corners and angles solid by blocking well spiked together.

Block all partitions in such a manner as to make them vermin proof where they run down to the sill.

Siding.

Cover the entire sides of the barn with 6" white pine drop siding leaving such openings for doors and windows as are shown in plans. Cut all joints of same in a workman like manner and nail properly every 24" with eight penny wire nails.

Roof.

The carpenter shall frame and construct, according to the drawings the roof in the most thorough and workman like manner. The

roof to be covered with No. 2-6" roof sheathing laid 2" apart.

Shingles.

Shingle the entire roof with 6" to 2" best quality of Washington red cedar shingles laid 4 1/2" to the weather and nailed with extra heavy wire shinglesnails.

Partitions.

The partition of buggy shed shall be lined with 6" matched flooring nailed properly at each joist. The insides of all partitions communicating with the horse and cow stables, and back of same, shall be lined up at least four feet with 2" stuff and between all studs eight inches from the top shall be placed a 1" x 6" making tight and vermin proof boxes between all studding. The partition between cow stable and granary and box stall and granary shall be sheathed for four feet with 2" yellow pine and the remainder shall be sheathed with 6" matched flooring. On the inside of the granaries the sheathing shall be of 6" matched flooring and extending up four feet high at which place it shall be made tight with the outside sheathing by placing a piece between it and same, and between all studding.

Floors.

The floors to the horse stable shall be of 2" yellow pine, that

part behind the stalls being of 2" x 12" and laid tight leaving no cracks and at right angles to the stall partitions. The floor of stalls shall have a two inch drop in 10' and shall be 2" x 6" yellow pine laid leaving a 3/8" crack between each plank and these plank must be beveled at the back end to a 45° angle.

The floors of the stalls shall be built the same as details of the convenient horse barn and the partitions in this case shall be the same as those shown in the details for the "Model" horse barn.

The hay mow shall be floored with 6" matched flooring.

Doors.

The double doors shall be ^{12' x} 8' in the clear and made of 4" matched cedar flooring well braced.

The other doors shall be 4' x 7' in the clear and made of siding, the same as on the barn, laid perpendicular. These doors shall be made in two sections each being 3'6" high. The joist shall form the inside frame work of the doors but they shall be cased up on the outside with 7/8" x 4" white pine, leaving no large cracks.

Windows.

The glass for windows shall consist of 7" x 12" pane, set in a skeleton frame without weights. All double windows to slide up and down and single ones to slide to right or left as is most convenient according to their location.

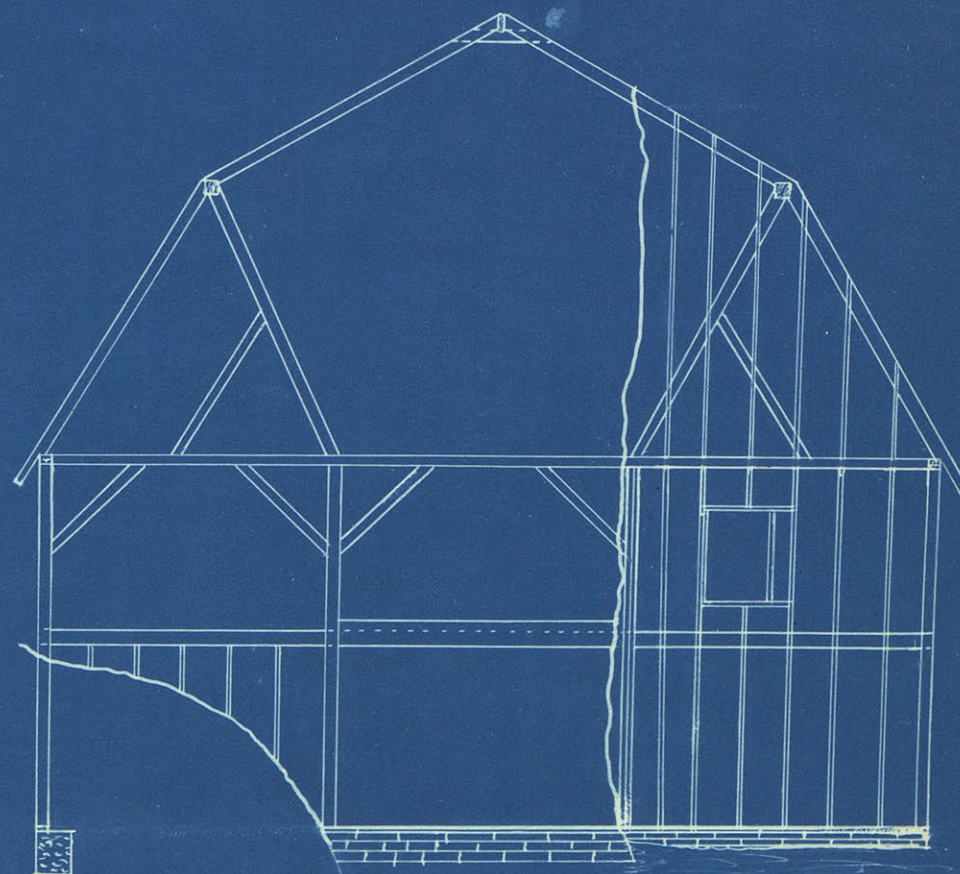
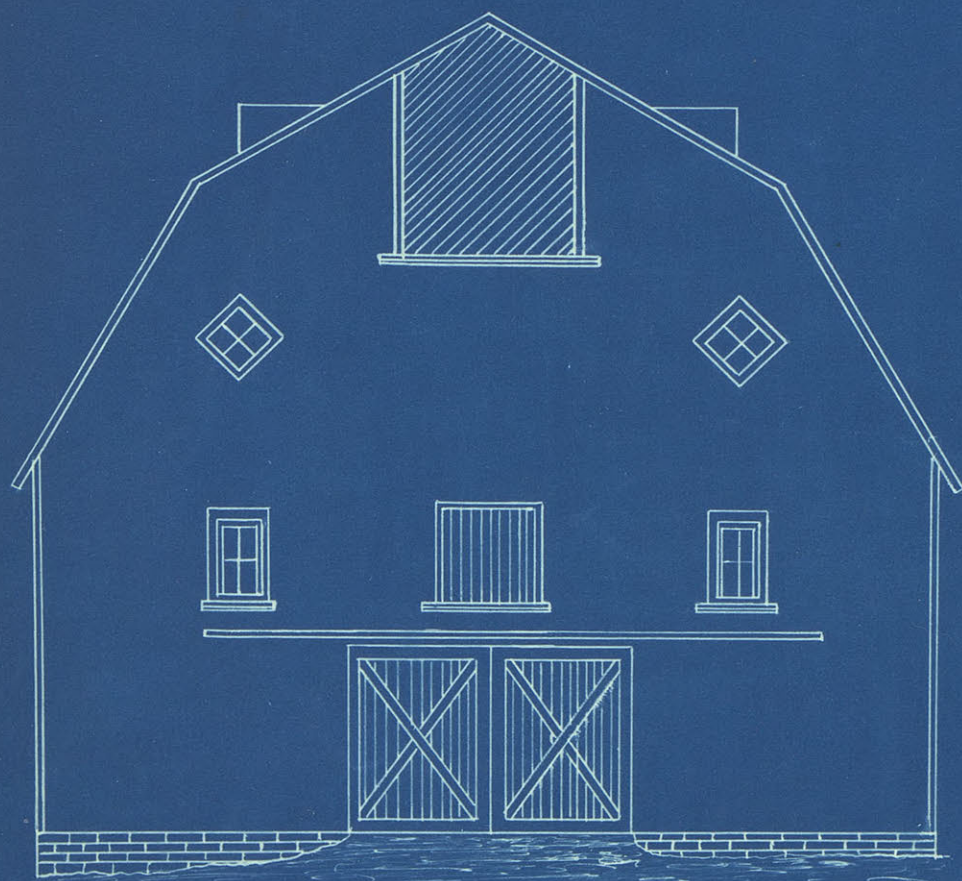
Hardware.

All hardware is to be furnished by the Owner, but, is to be put in place and affixed by the contractor in the most workman like manner.

Painting.

Paint the whole of the exterior woodwork of the barn with three coats of "All oil" Sherman and Williams Outside Paint of such colors as the Owner shall select. Paint the window sashes with two coats of the same paint and of any color as the Owner may select.

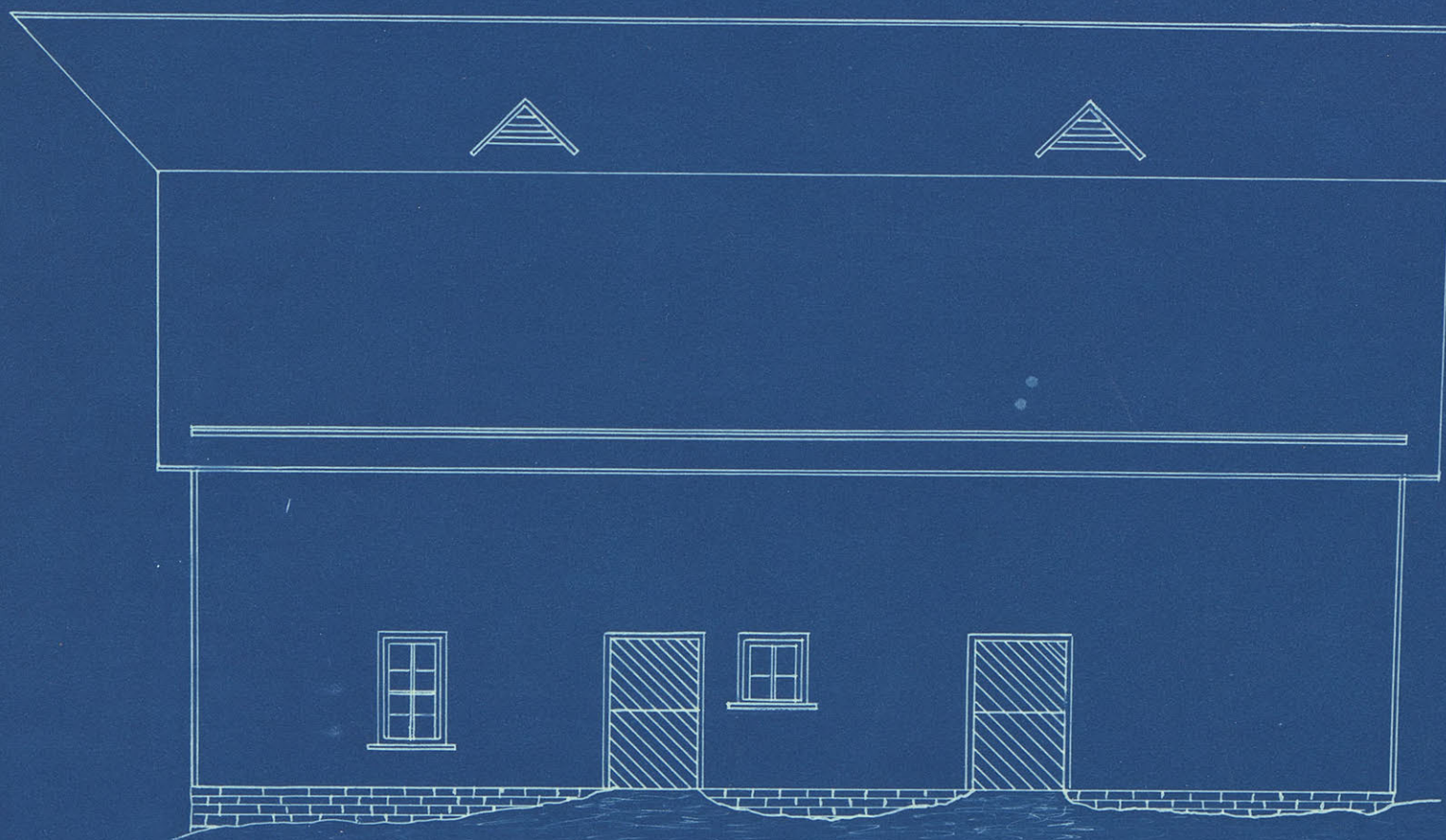
Putty all nail holes, cover all knots with shellac, varnish, clean the surfaces properly before applying the paint and do not paint in dusty weather. Paint the shingle roof with two coats of "All Oil" Sherman and Williams roof Paint.



CONVENIENT HORSE BARN.

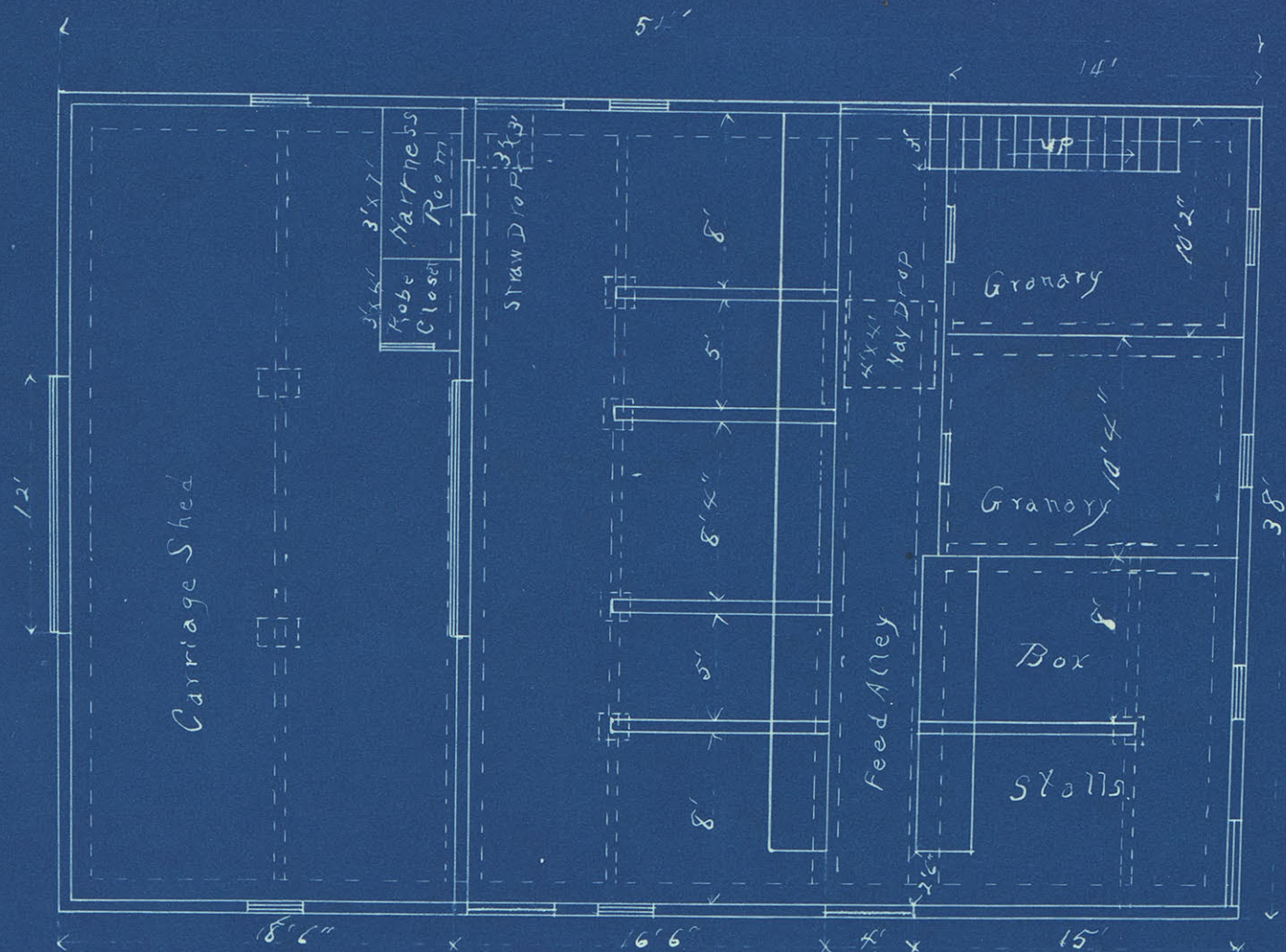
FRONT ELEVATION AND CROSS-SECTION.

Scale $\frac{1}{4}$ inch for Foot.
Scale $\frac{1}{8}$ inch for 1000.



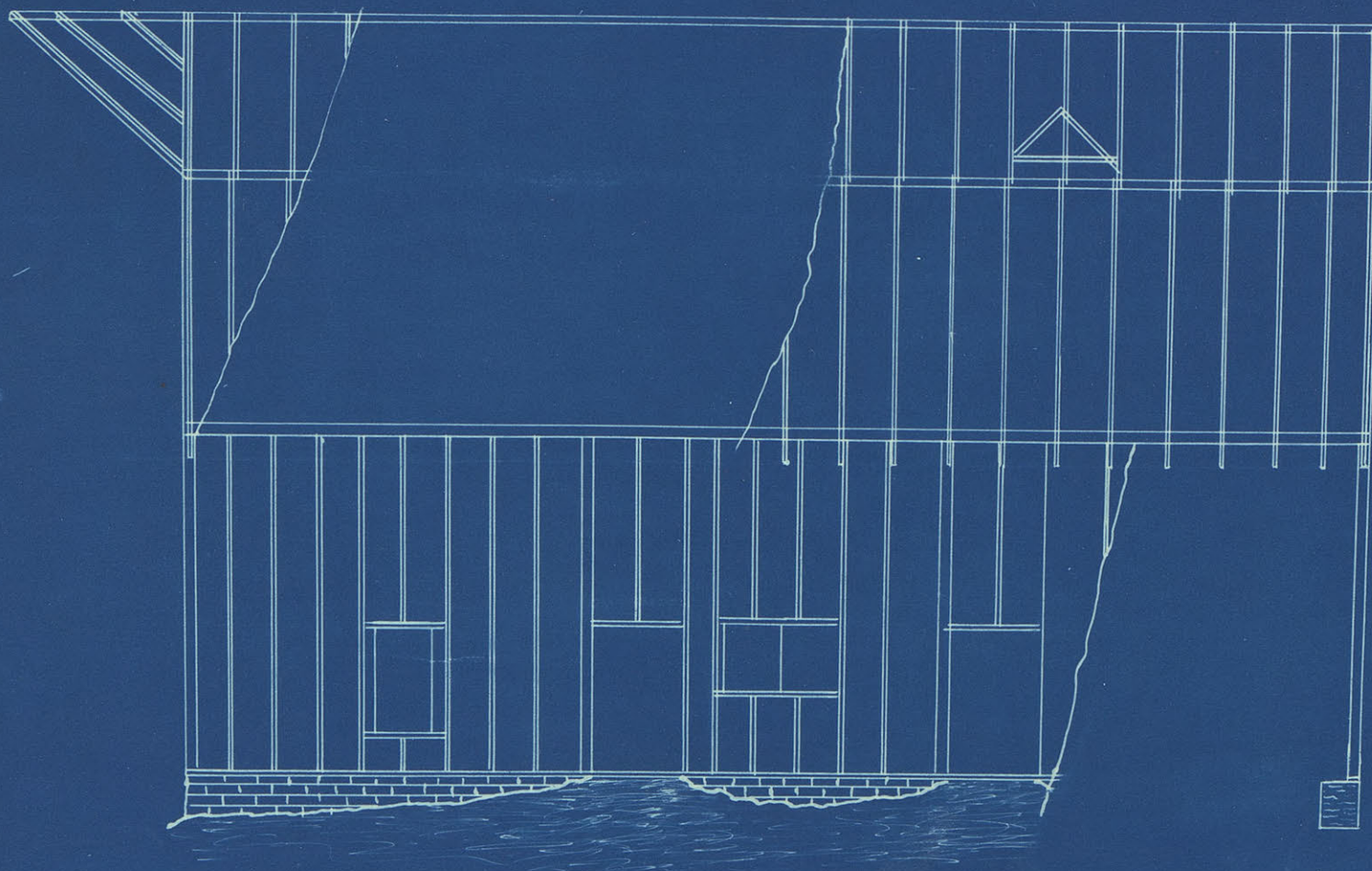
CONVENIENT HORSE BARN.
SIDE ELEVATION.

Scale $\frac{1}{8}$ Inch Per Foot.



CONVENIENT HORSE BARN.
GROUND PLAN.

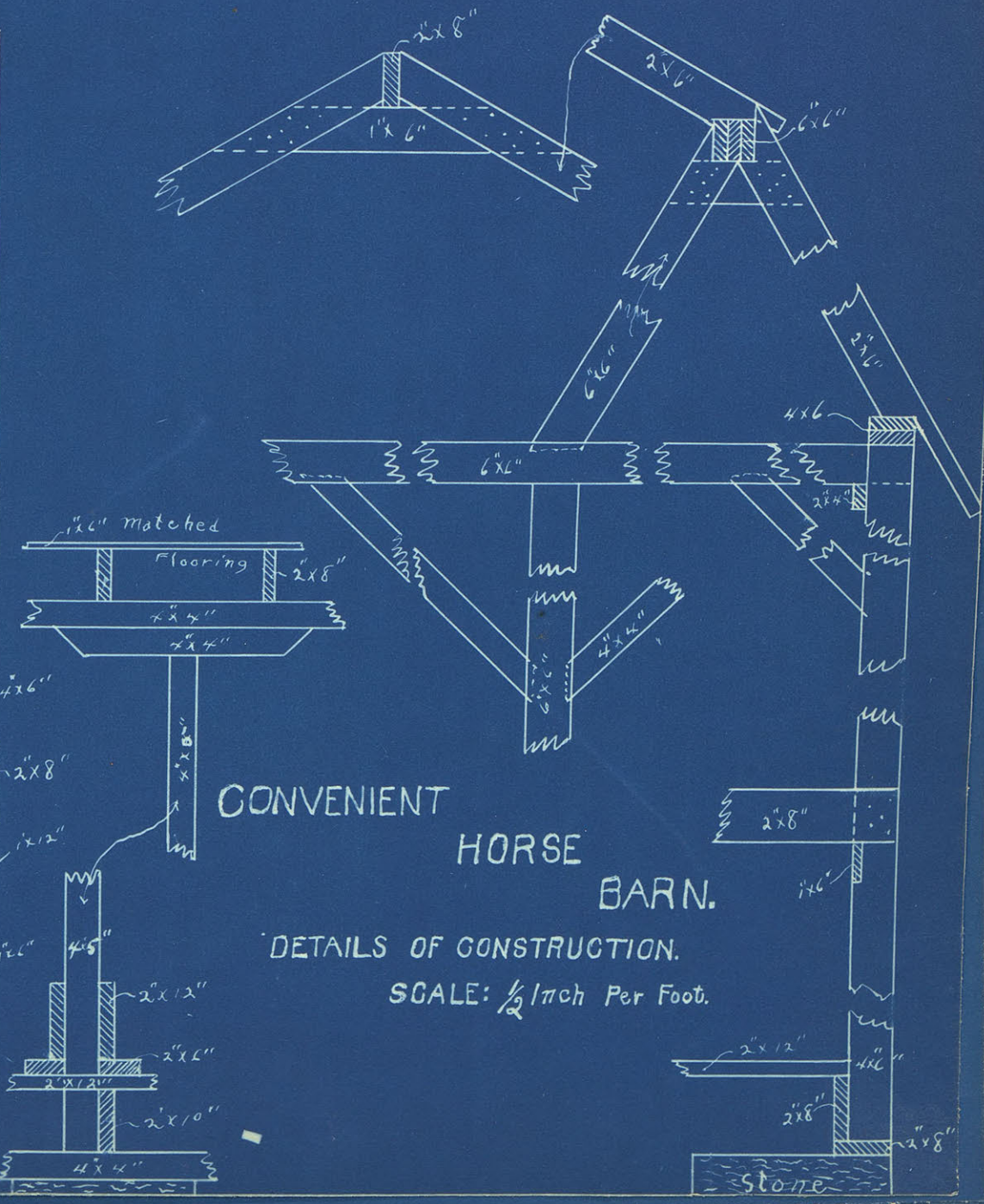
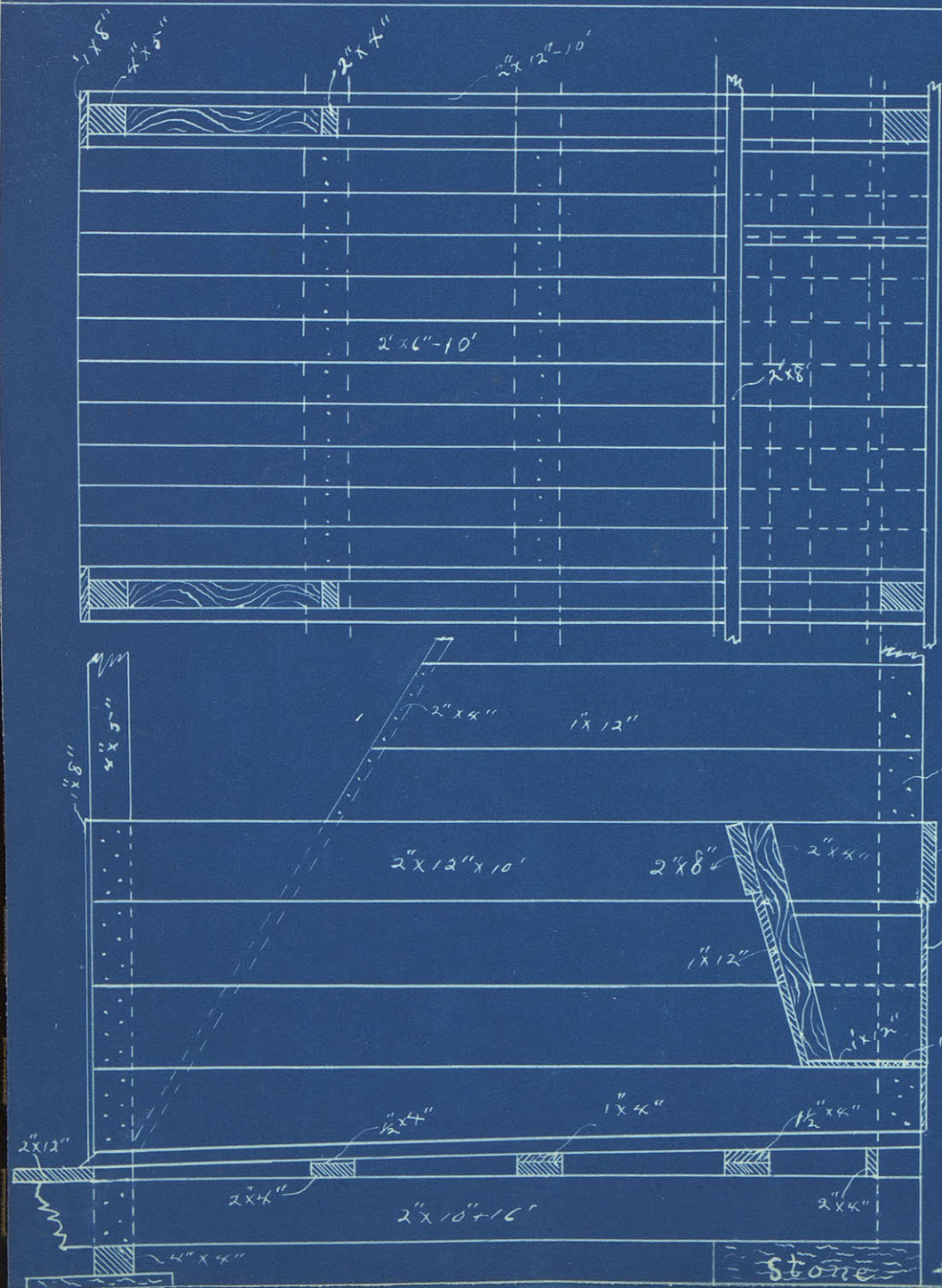
Scale $\frac{1}{8}$ Inch Per Foot.

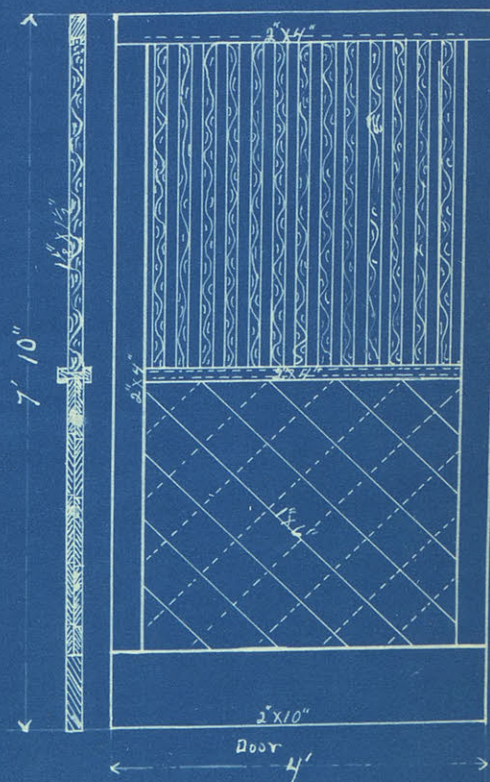
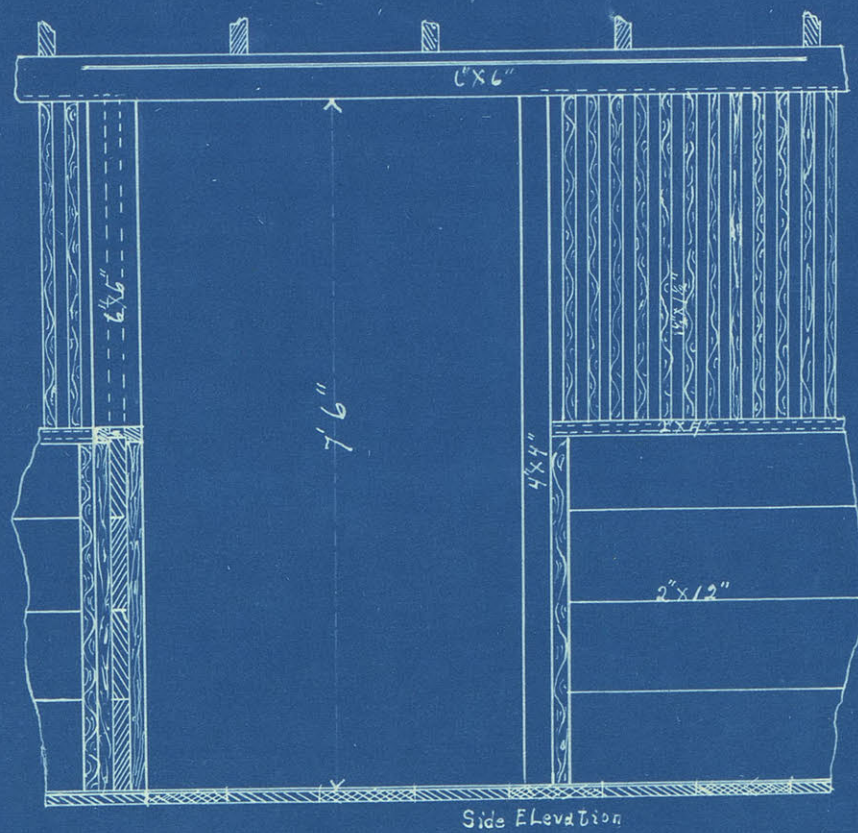


CONVENIENT HORSE BARN.
LONGITUDINAL SECTION.

Scale $\frac{1}{2}$ inch Per Foot.



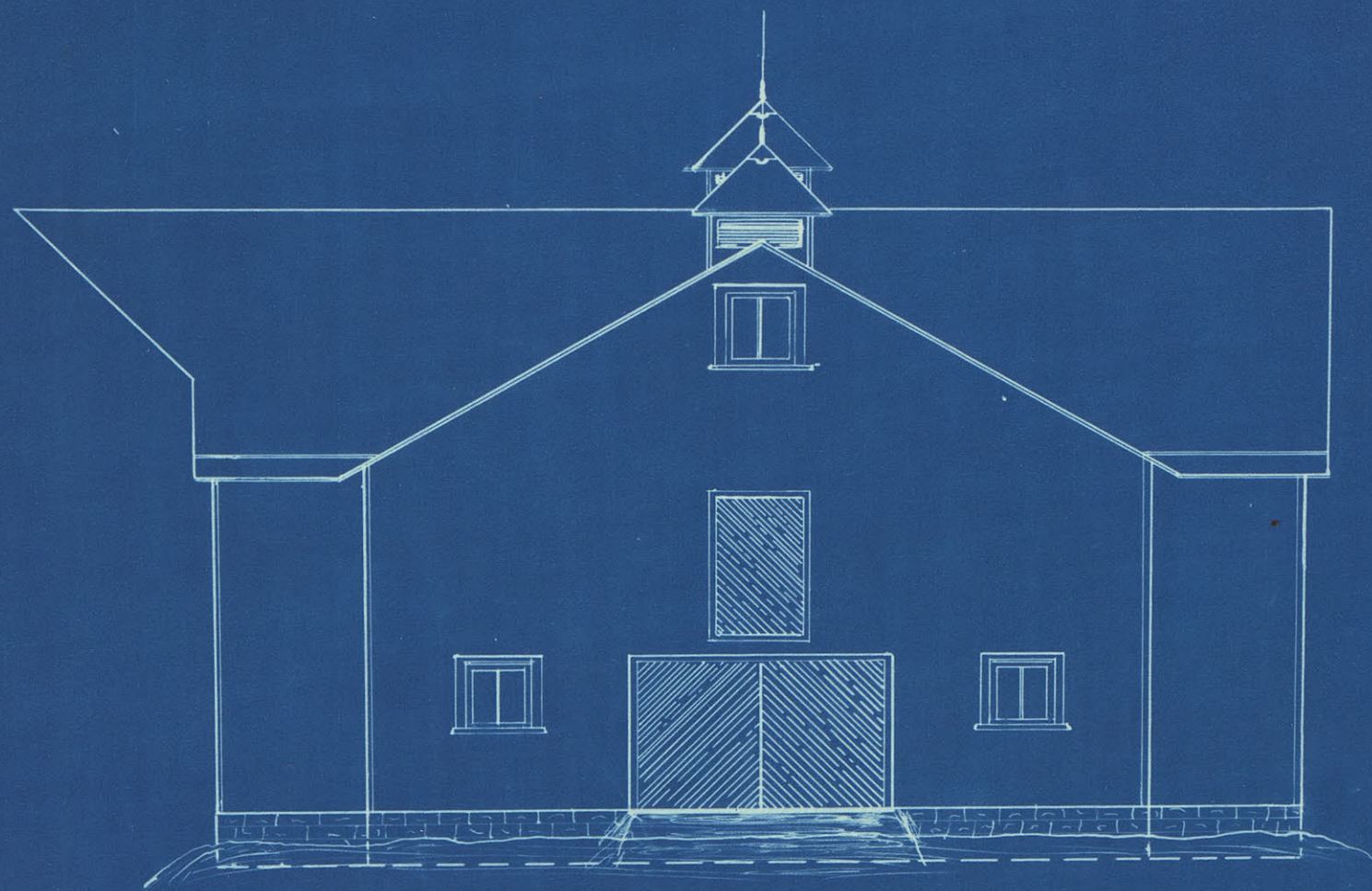




DETAIL OF BOX STALL.

SCALE - $\frac{1}{2}$ " = 1'

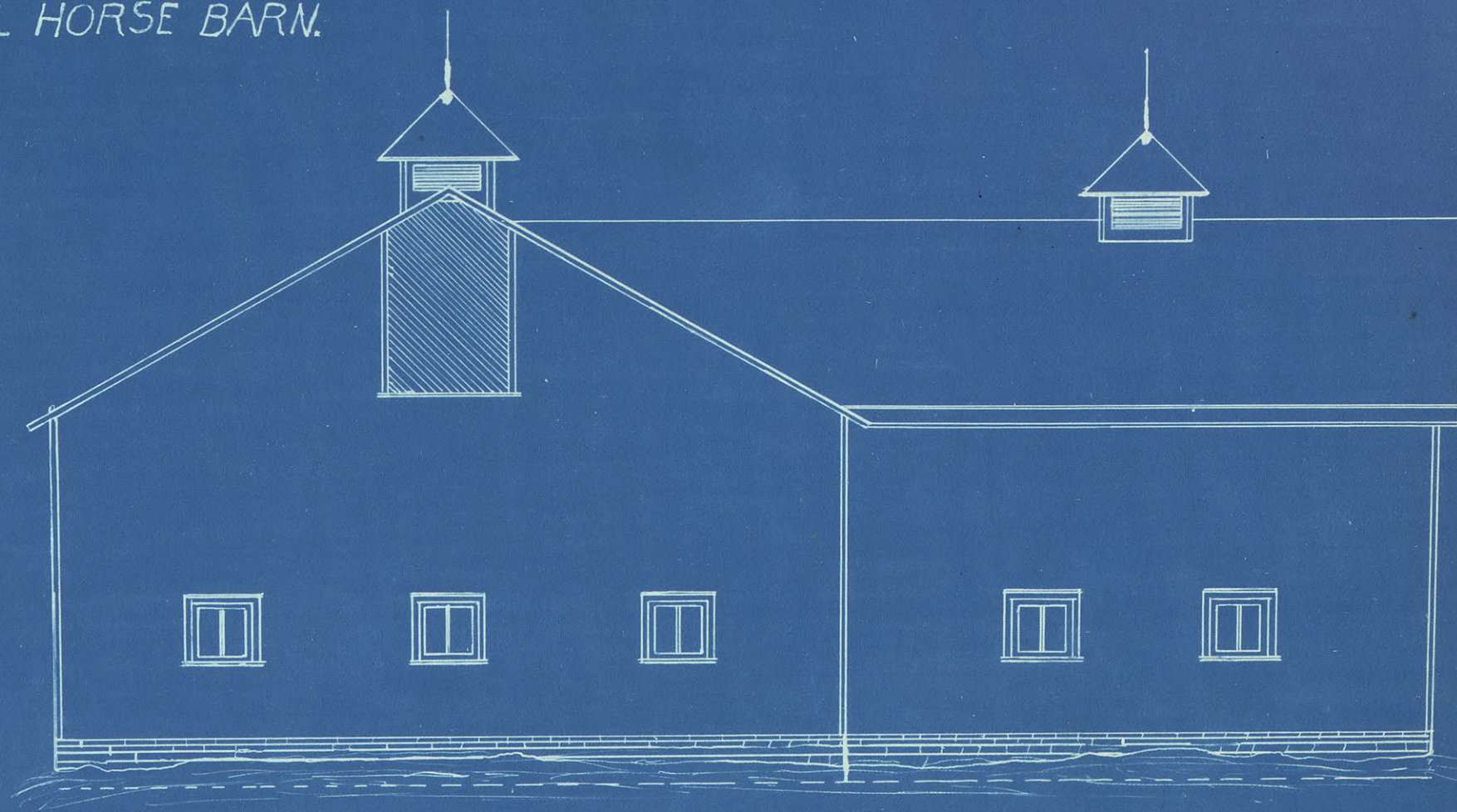
MODEL HORSE BARN.



FRONT ELEVATION.

Scale $\frac{1}{4}$ Inch Per Foot.

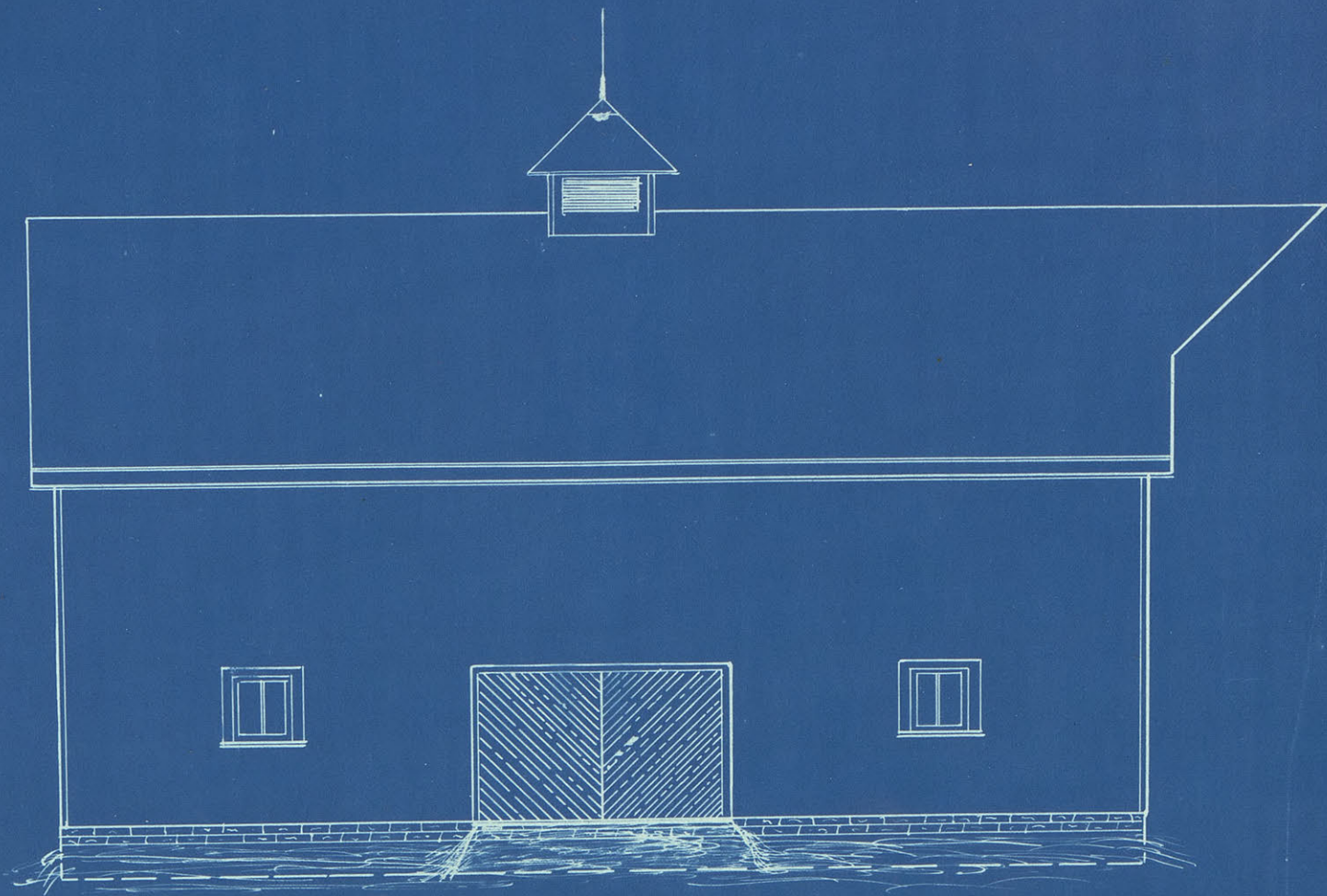
MODEL HORSE BARN.



SIDE ELEVATION.

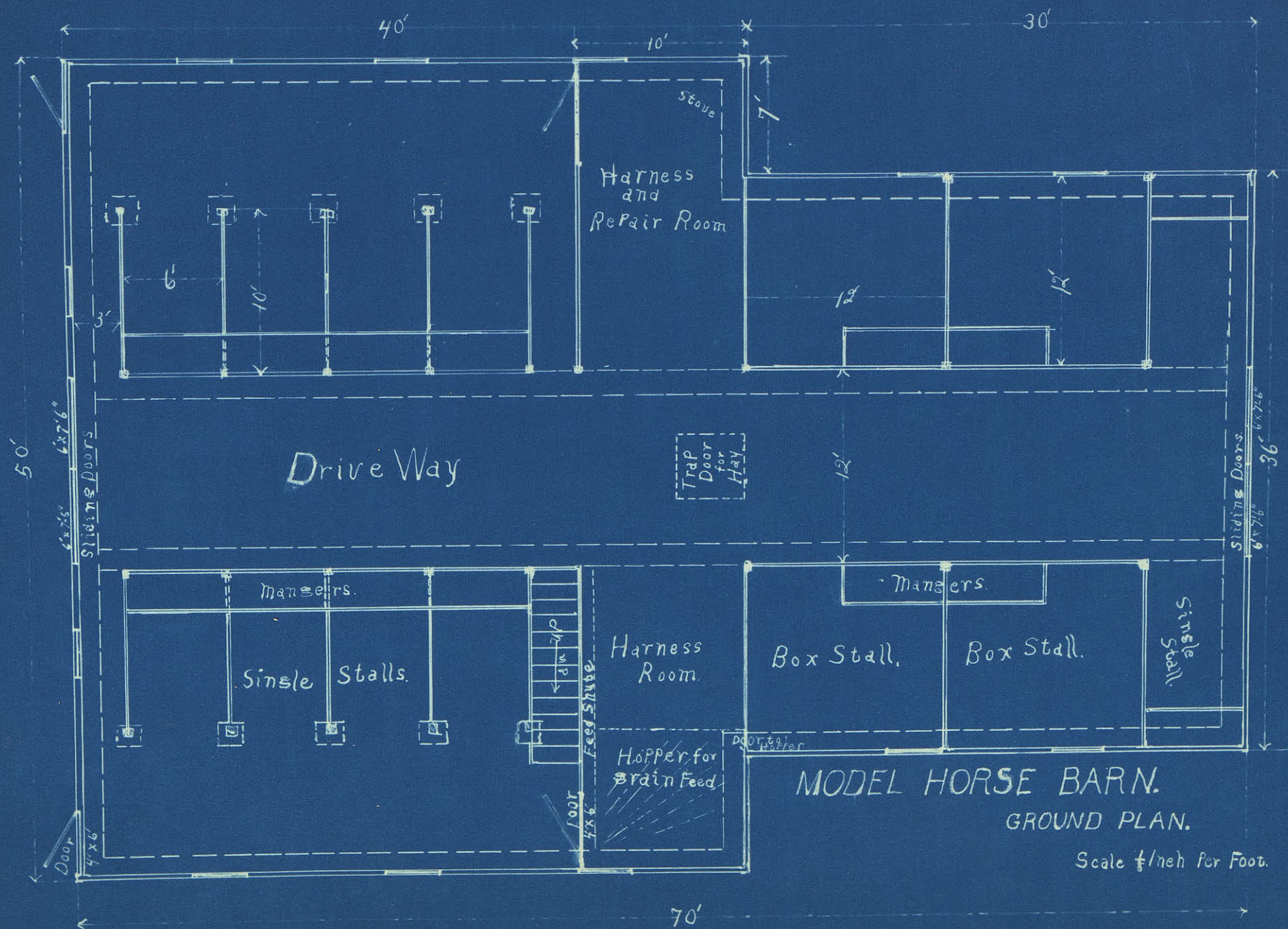
Scale $\frac{1}{4}$ inch for Foot.

MODEL HORSE BARN.

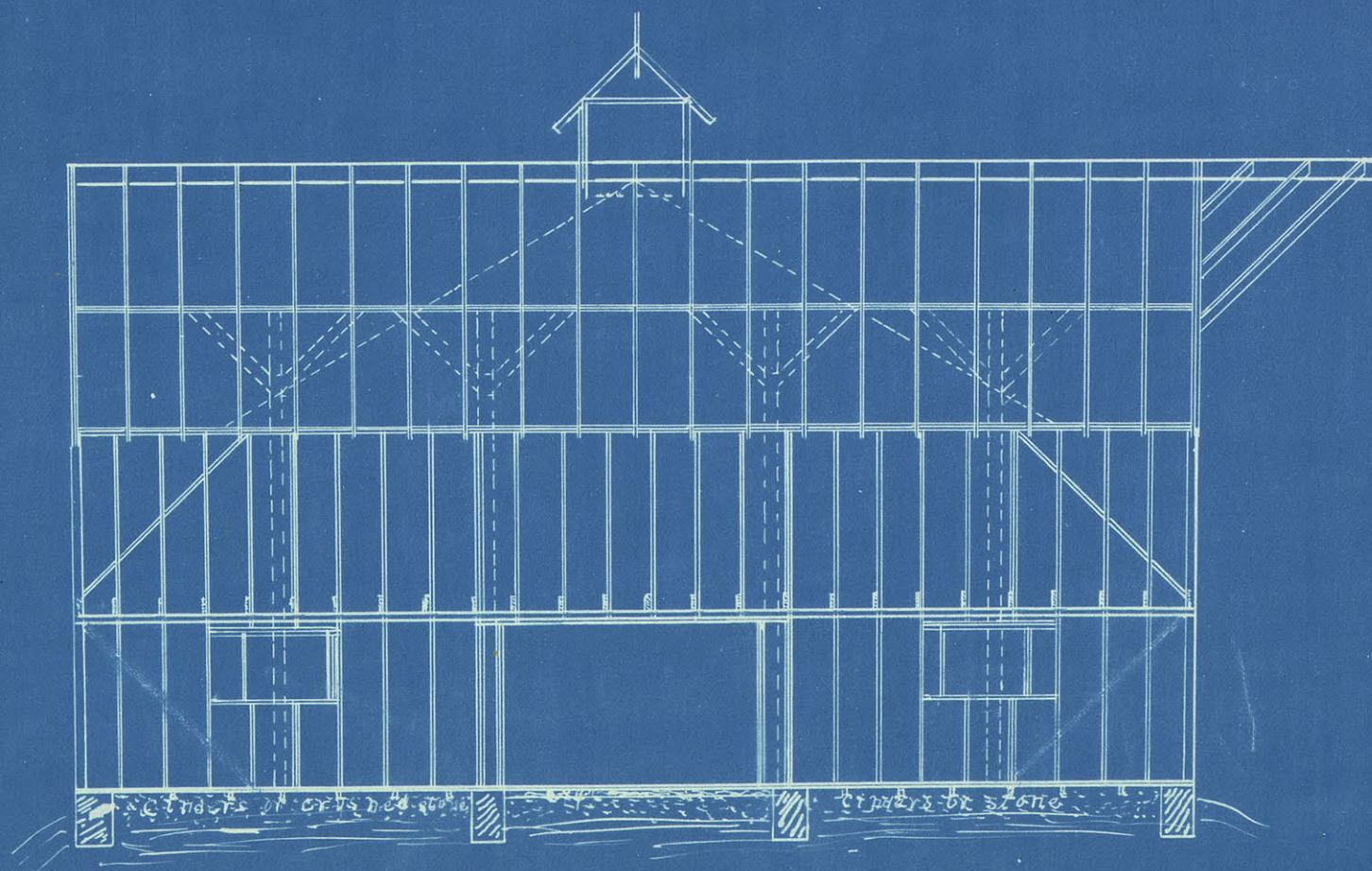


REAR ELEVATION.

Scale $\frac{1}{8}$ Inch Per Foot.



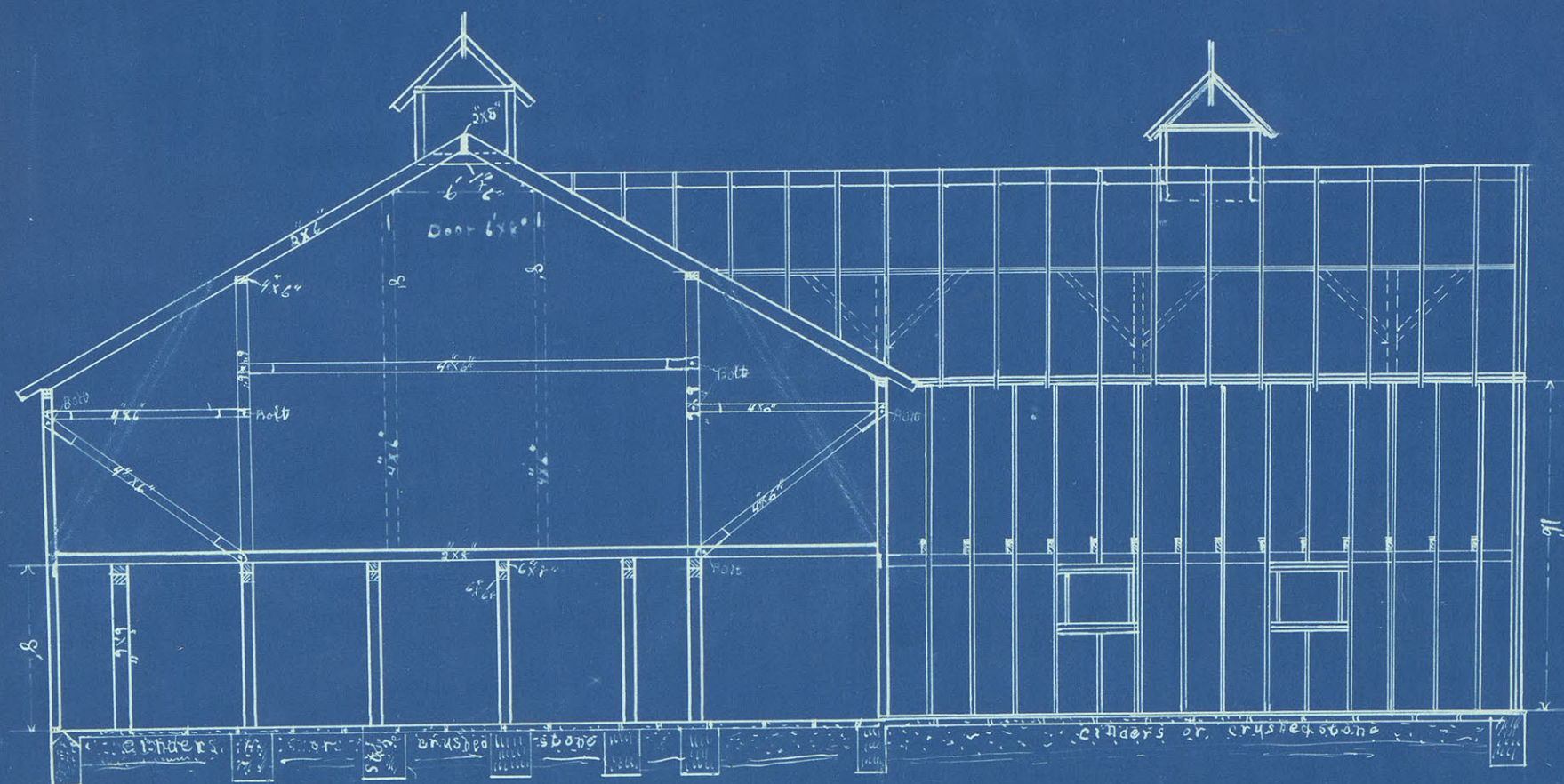
MODEL HORSE BARN.



CROSS SECTION.

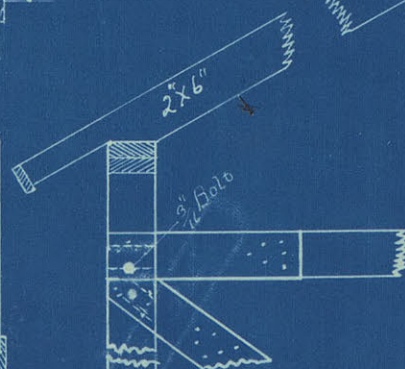
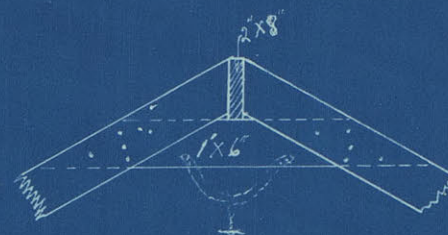
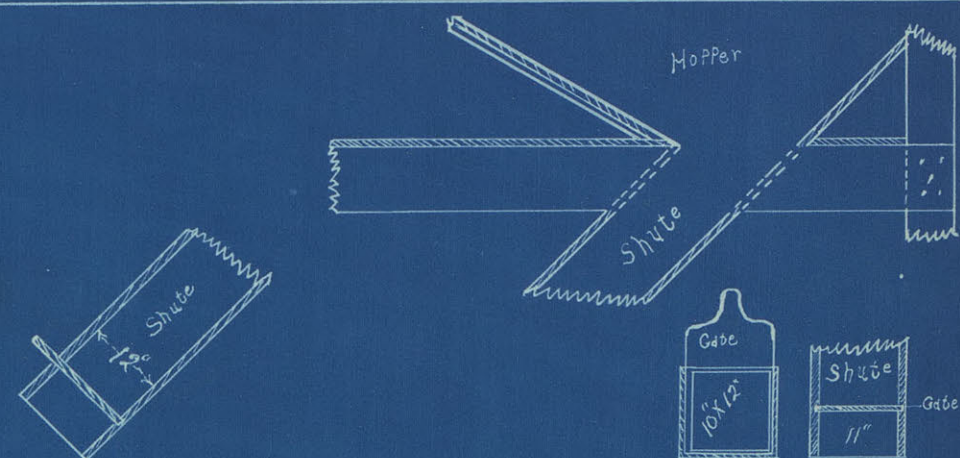
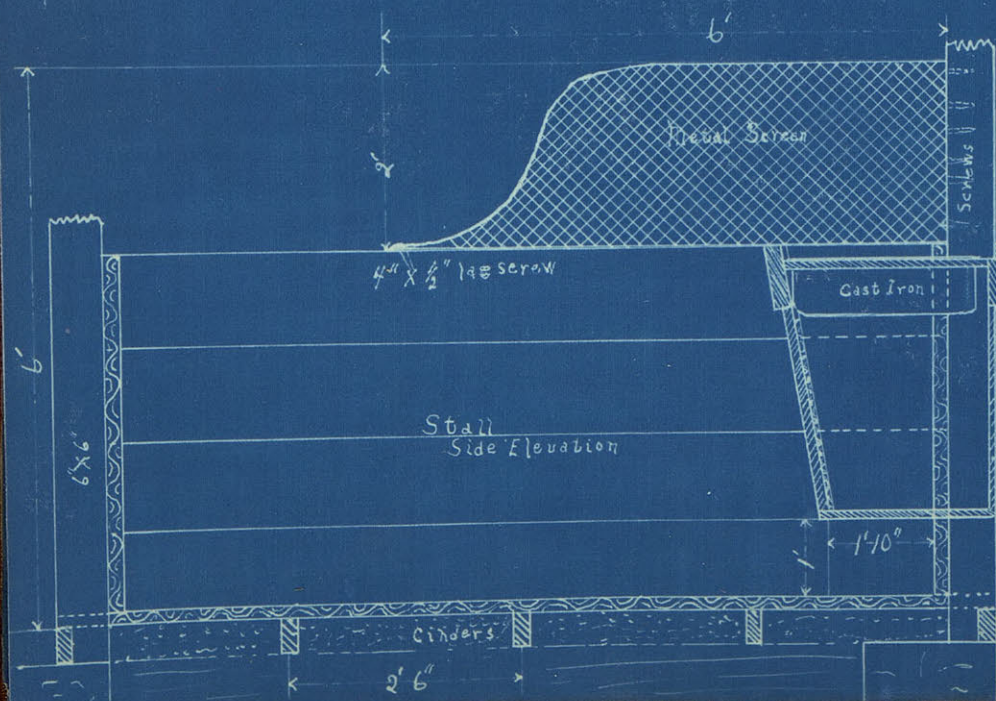
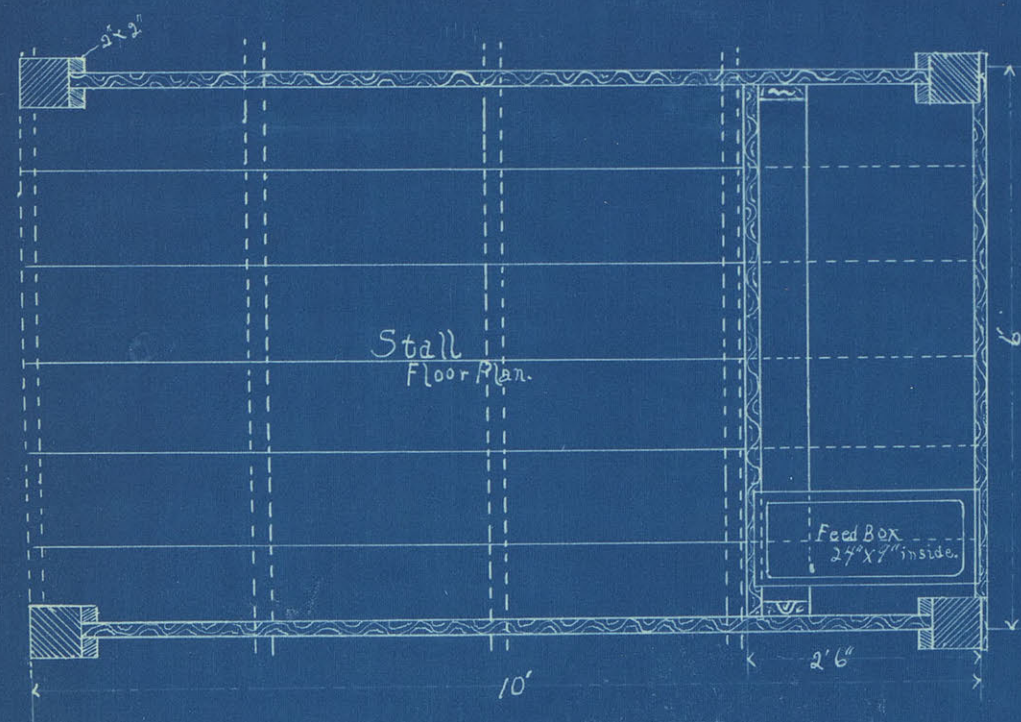
Scale $\frac{1}{8}$ Inch Per Foot.

MODEL HORSE BARN



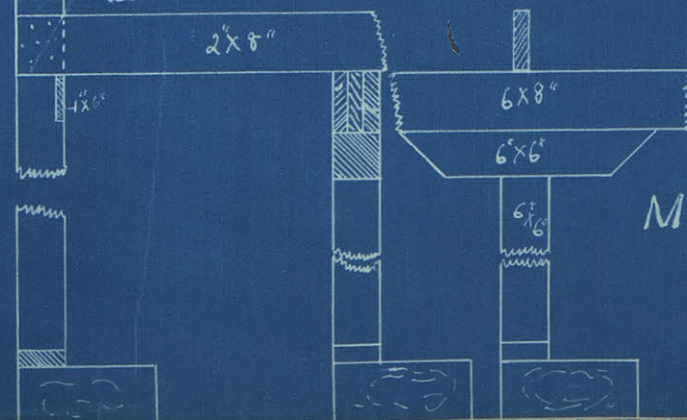
LONGITUDINAL SECTION.

Scale $\frac{1}{8}$ Inch Per Foot.



DETAILS OF CONSTRUCTION.

Scale 1/2 Inch Per Foot.

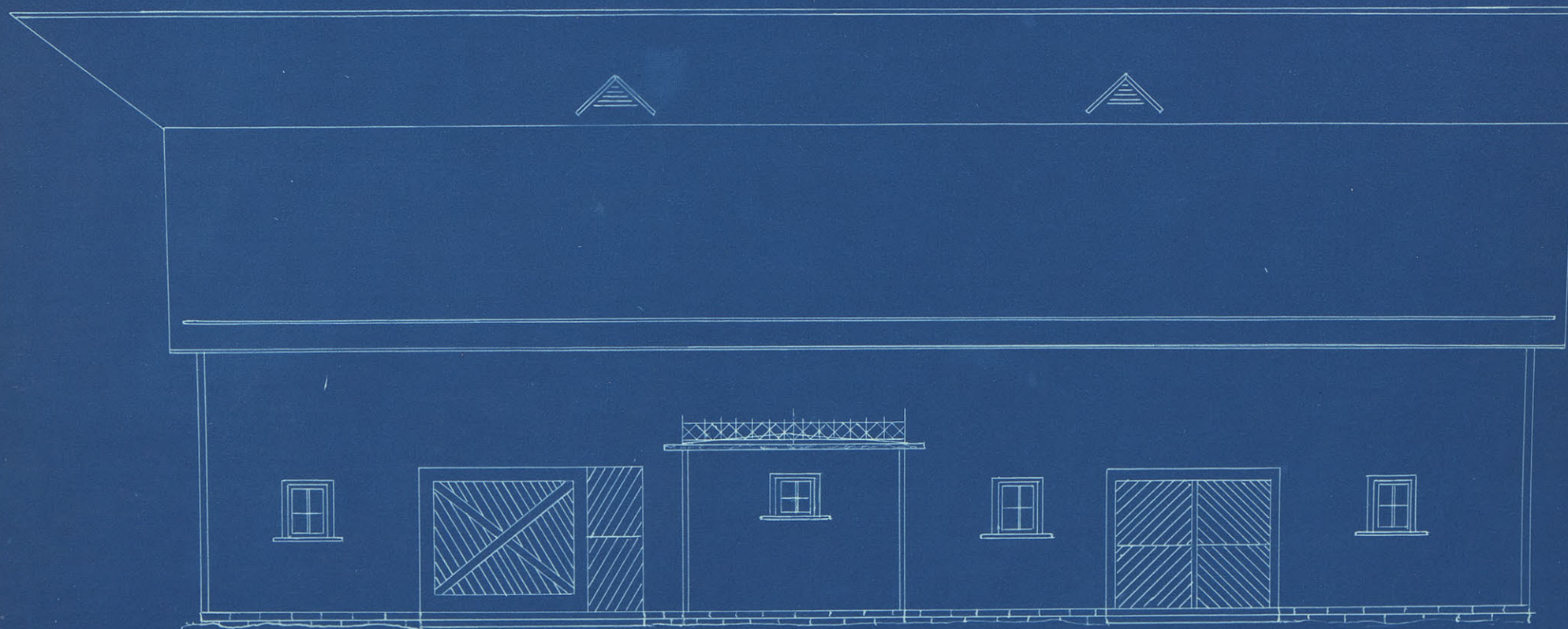


MODEL
HORSE
BARN.



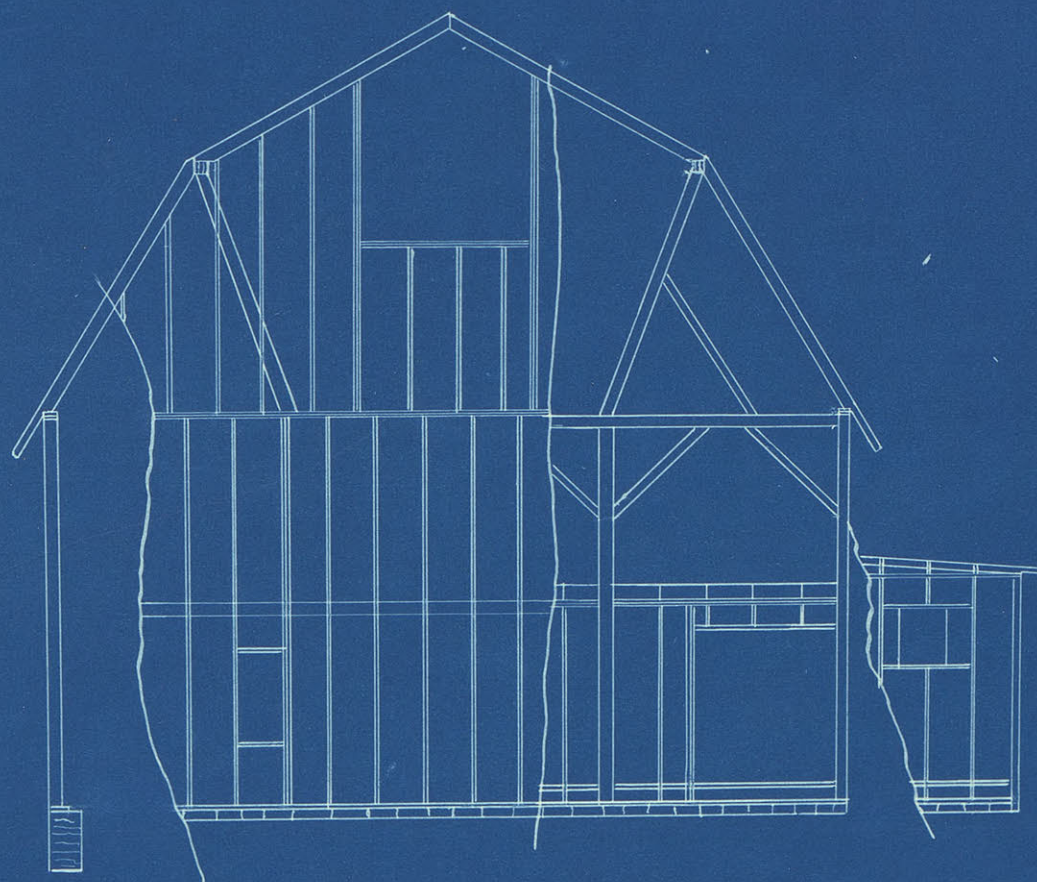
PERFECT FARM BARN.
FRONT ELEVATION.

Scale $\frac{1}{8}$ Inch Per Foot.



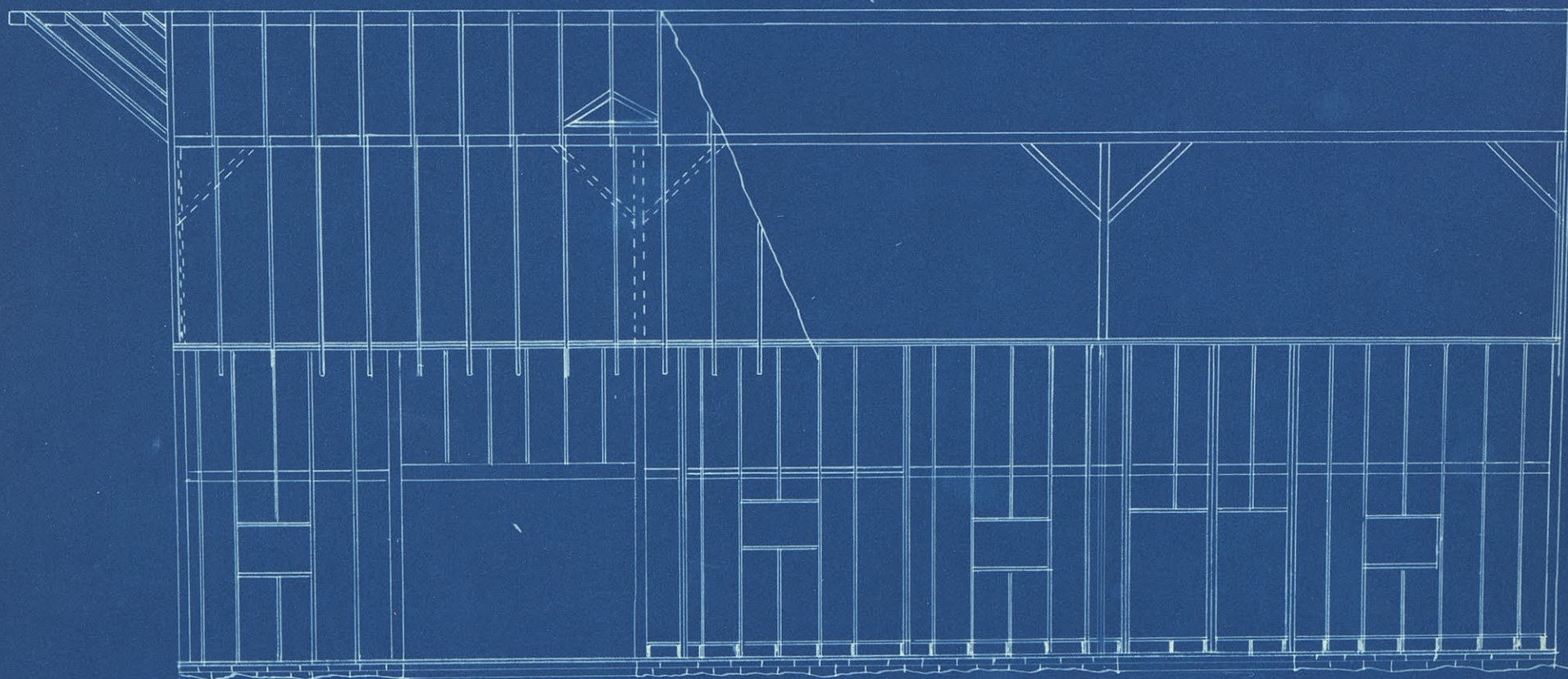
PERFECT FARM BARN.
SIDE ELEVATION.

Scale $\frac{1}{8}$ Inch Per Foot.



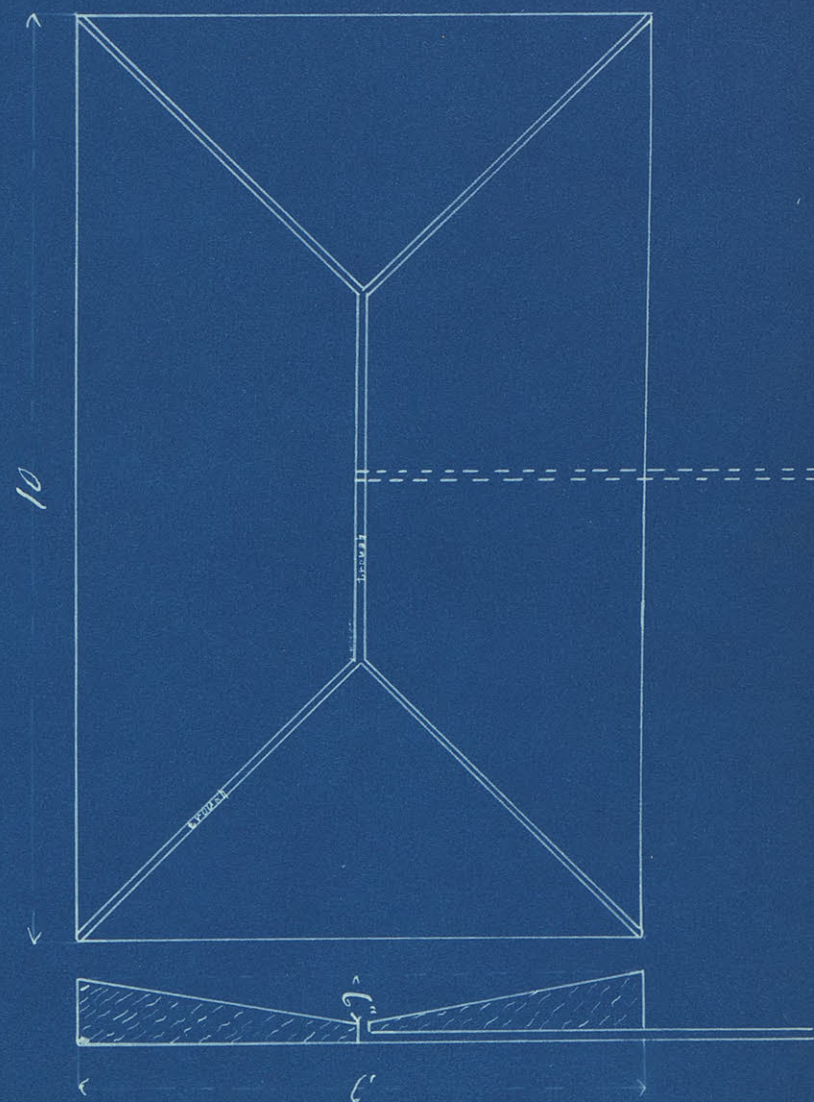
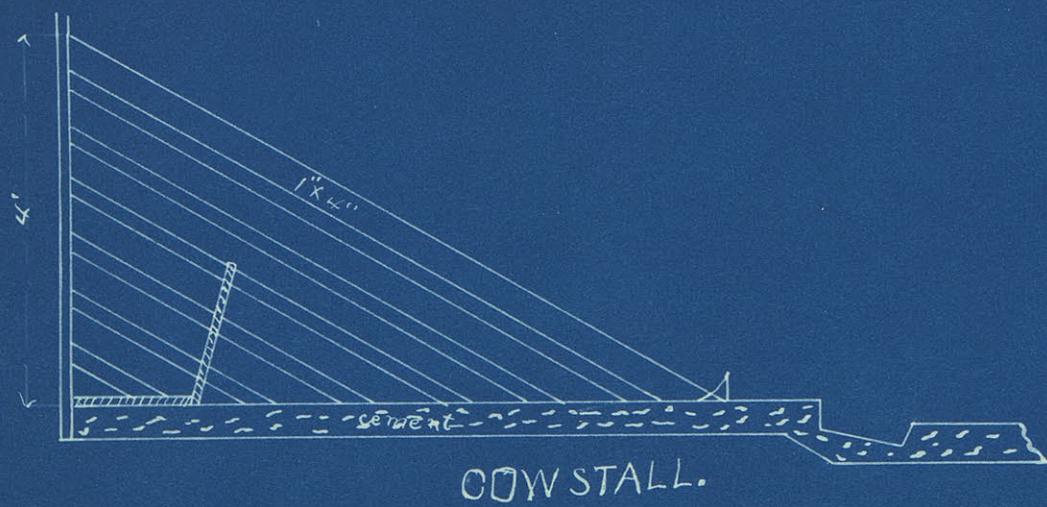
PERFECT FARM. BARN.
CROSS-SECTION.

Scale $\frac{1}{8}$ Inch Per Foot.

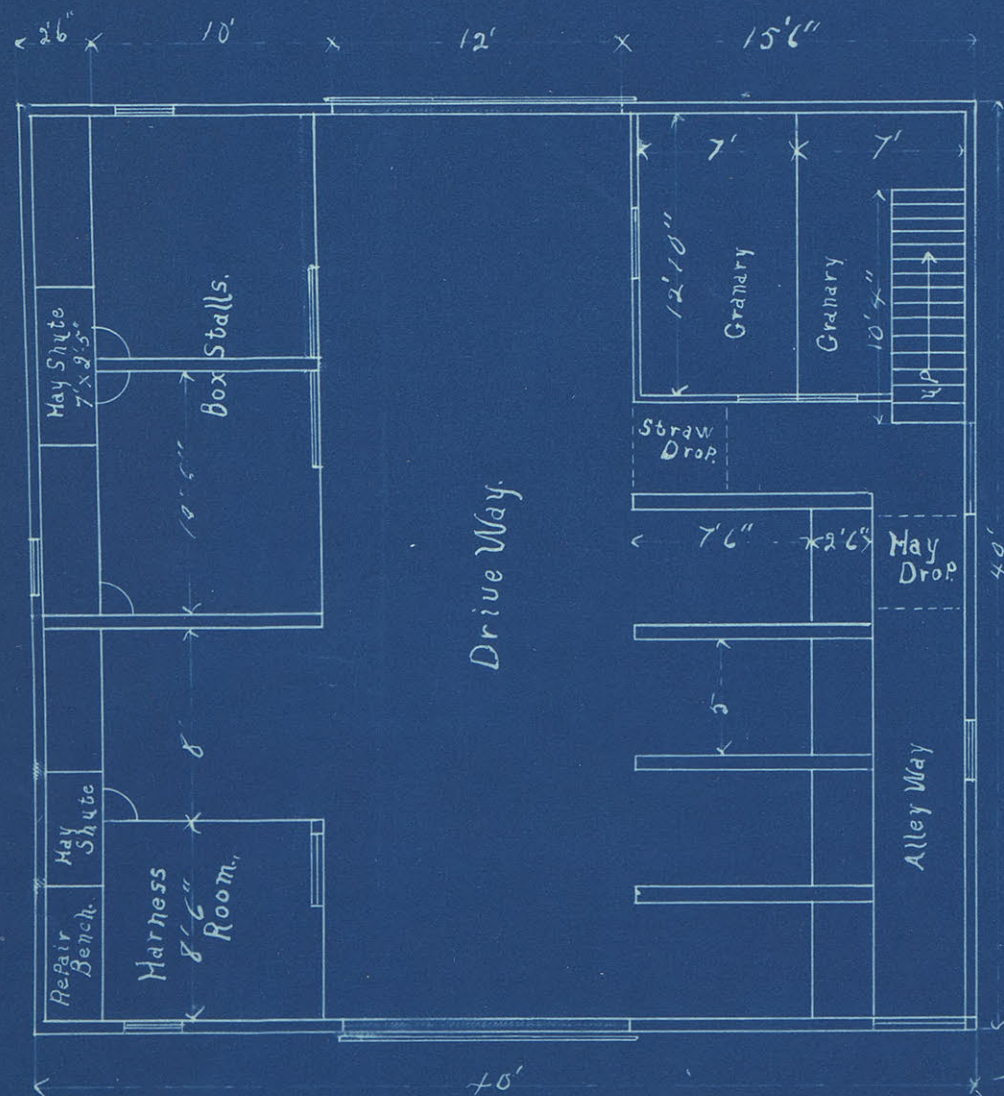


PERFECT FARM BARN.
LONGITUDINAL SECTION.

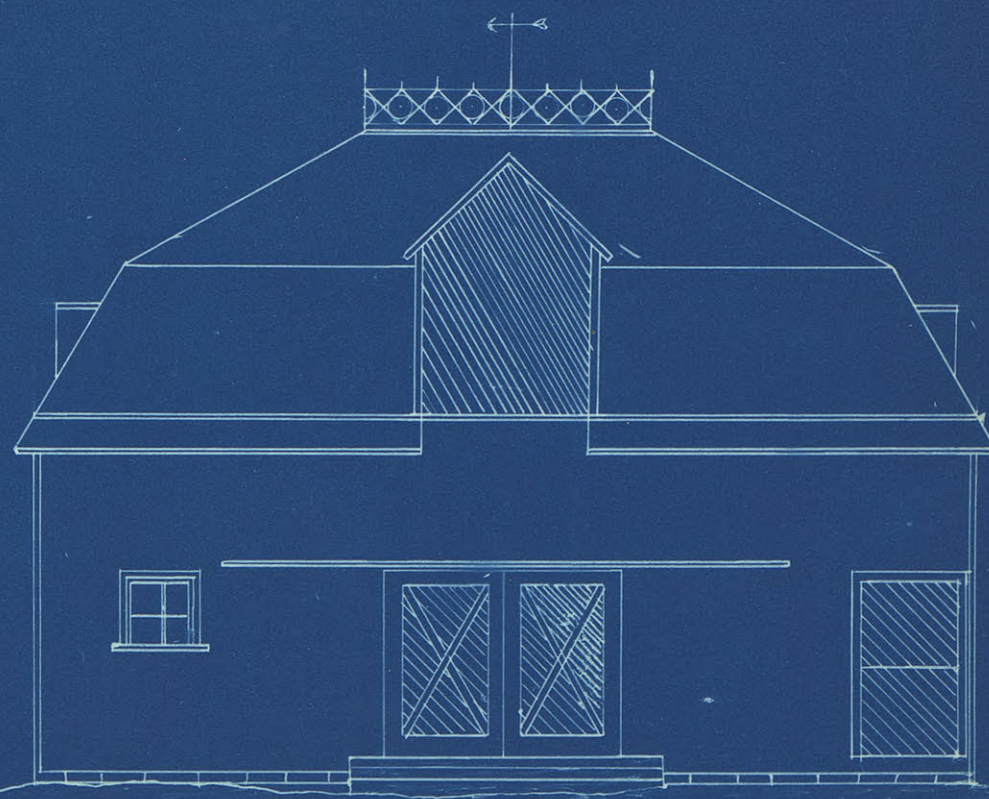
Scale $\frac{1}{8}$ Inch Per Foot.



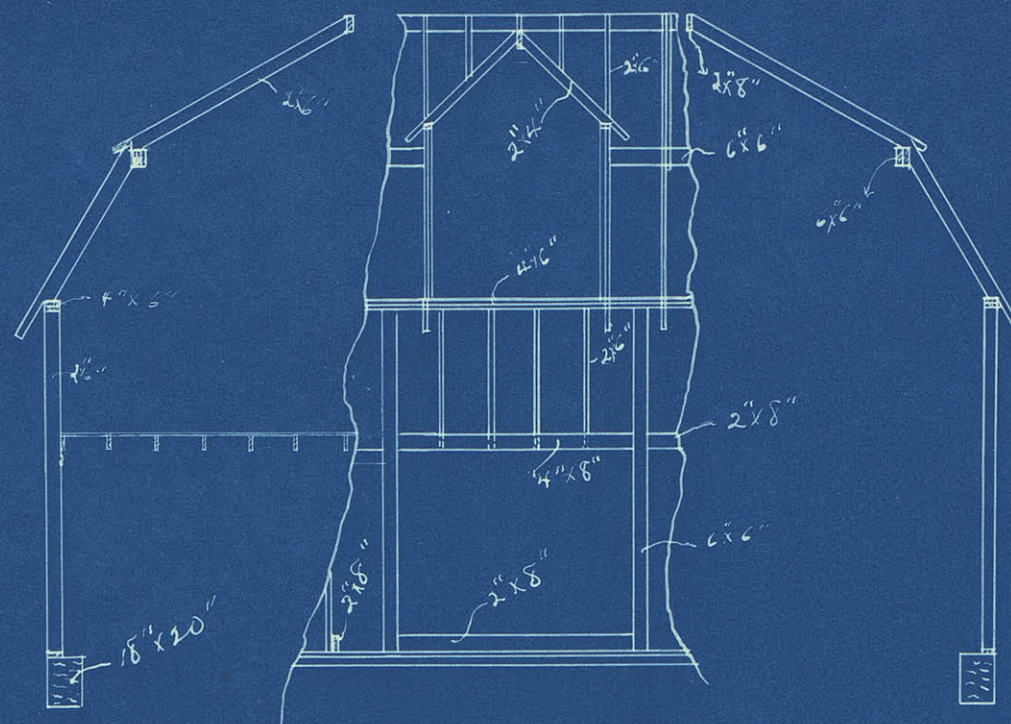
DETAILS.
SCALE $\frac{1}{8}" = 1'$



NOVEL HORSE BARN.
FRONT ELEVATION AND
GROUND PLAN.



Scale 1/4" = 1' Per Foot.

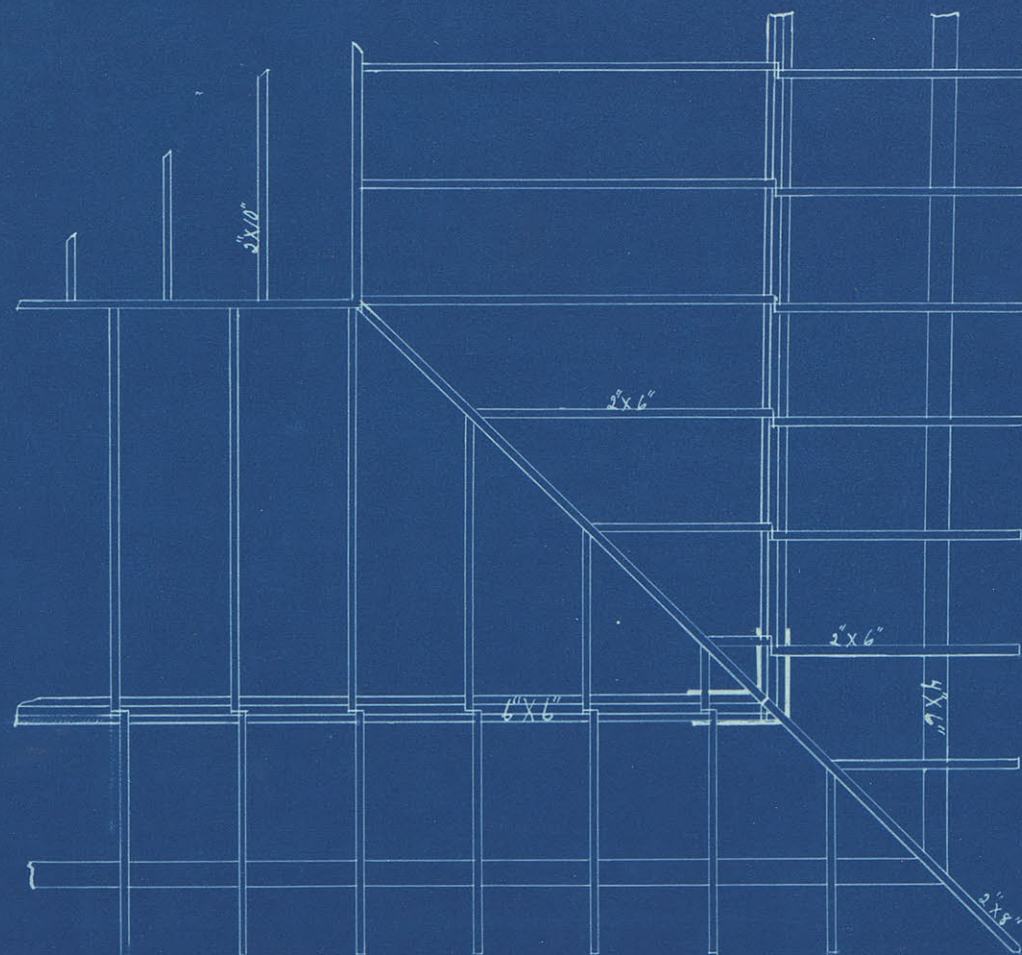
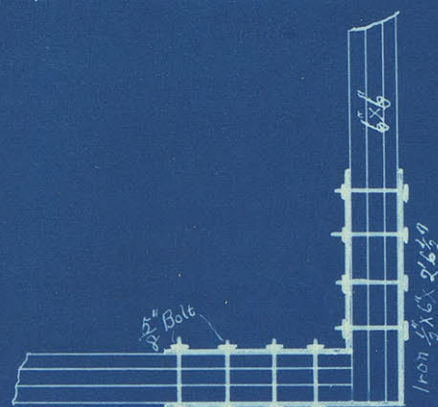


NOVEL HORSE BARN.
CROSS-SECTION.

Scale $\frac{1}{4}$ Inch Per Foot.



DETAIL OF PURLINE PLATE
SCALE - $\frac{1}{2}$ " = 1'-0"



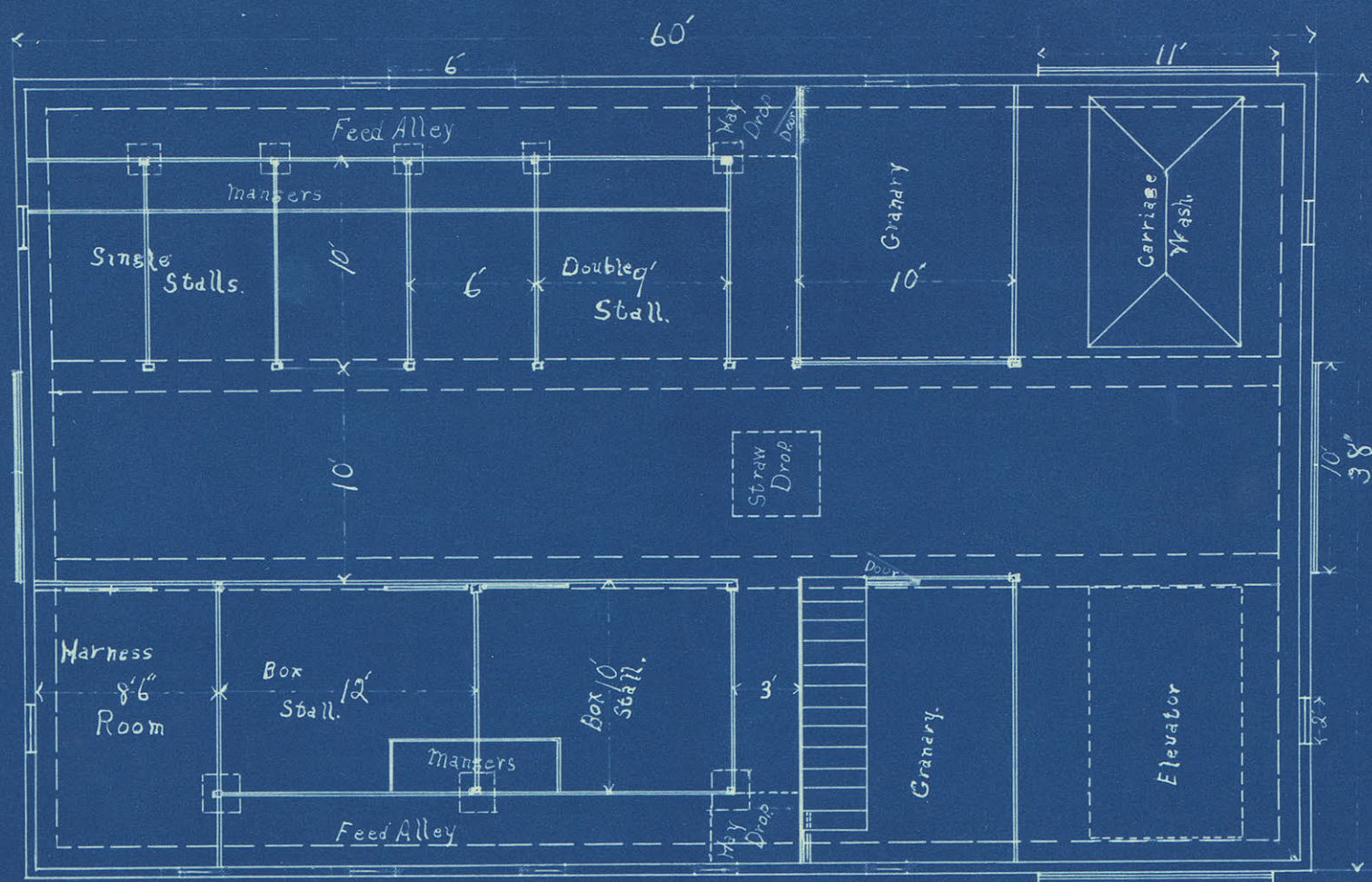
DETAIL OF ROOF
SCALE - 1" = 1'-0"



MODERN HORSE BARN.

SIDE ELEVATION.

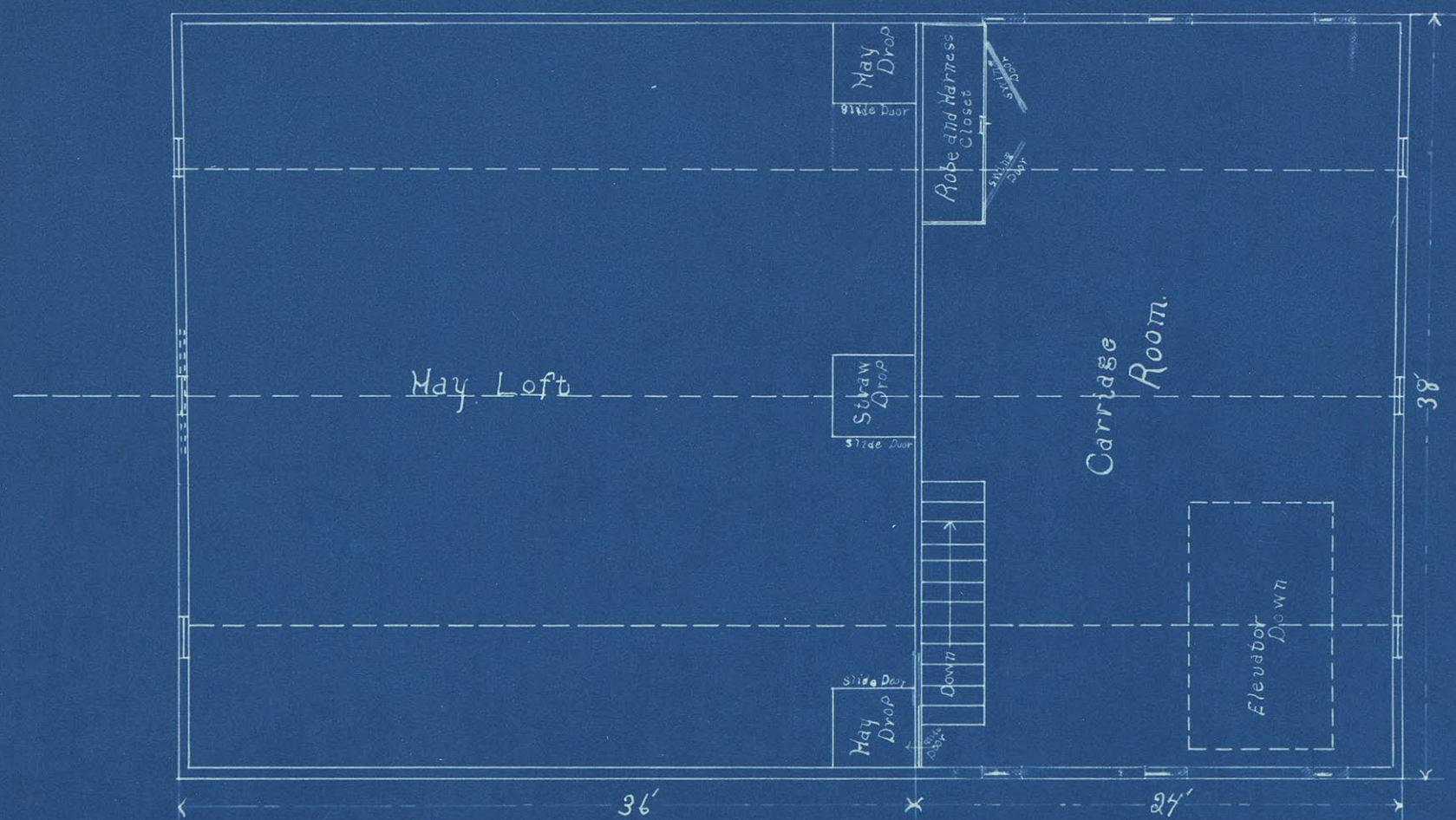
Scale 1/4 inch per foot.
Scale 1/2 inch per foot.



MODERN HORSE BARN.

GROUND PLAN.

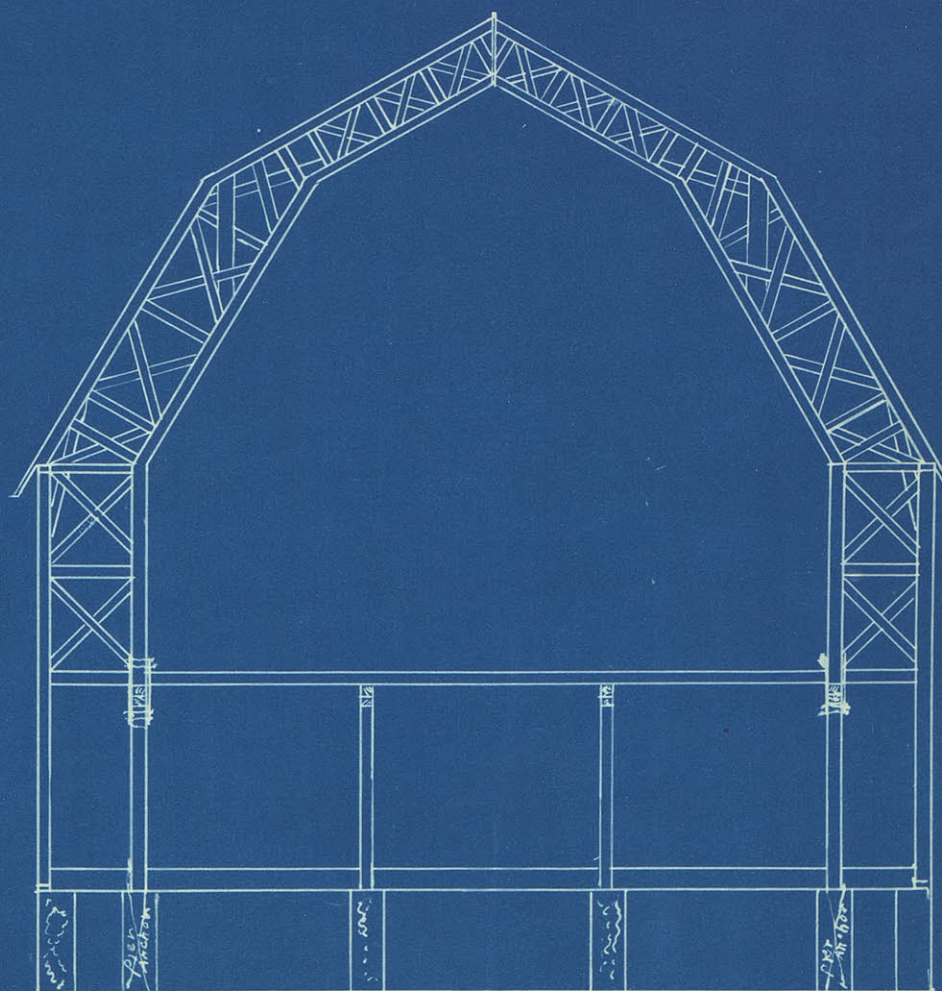
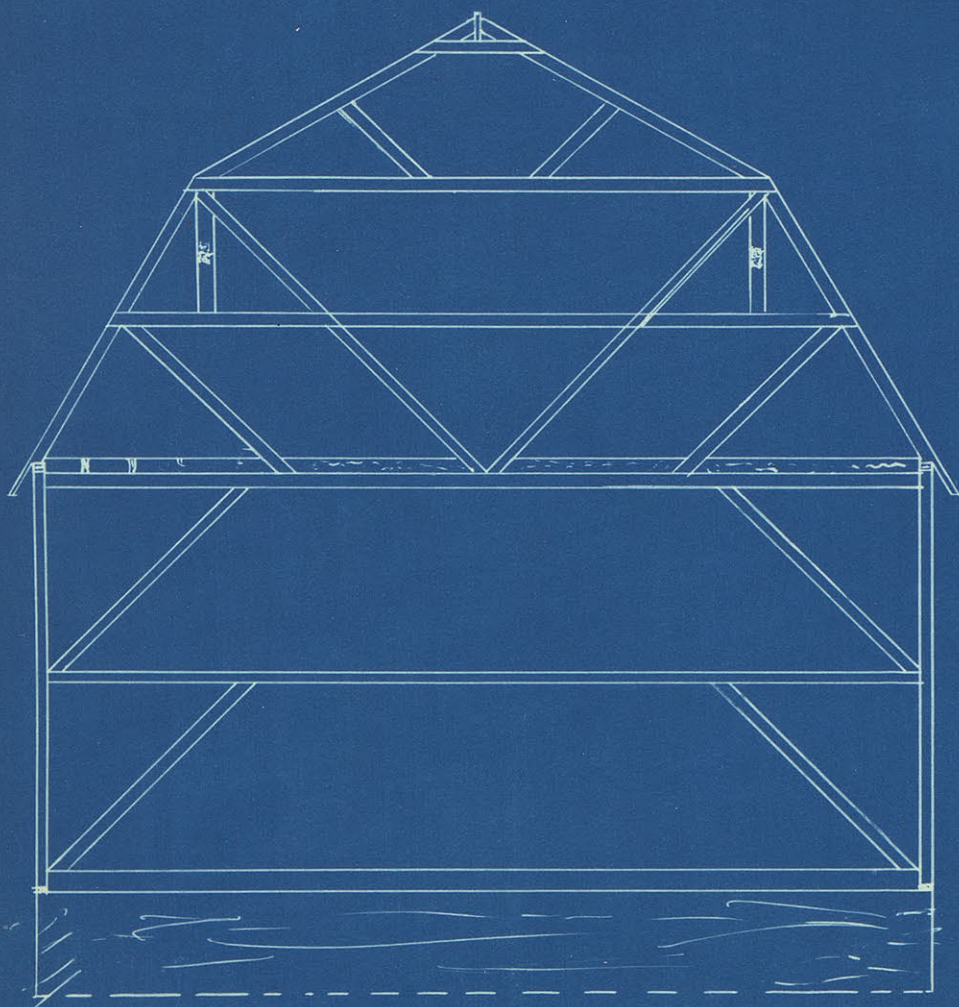
Scale 1/4" = 1' Per Foot.
Scale 1/8" = 1' Per Foot.



MODERN HORSE BARN.

SECOND FLOOR PLAN.

Scale 1/4 inch per Foot.

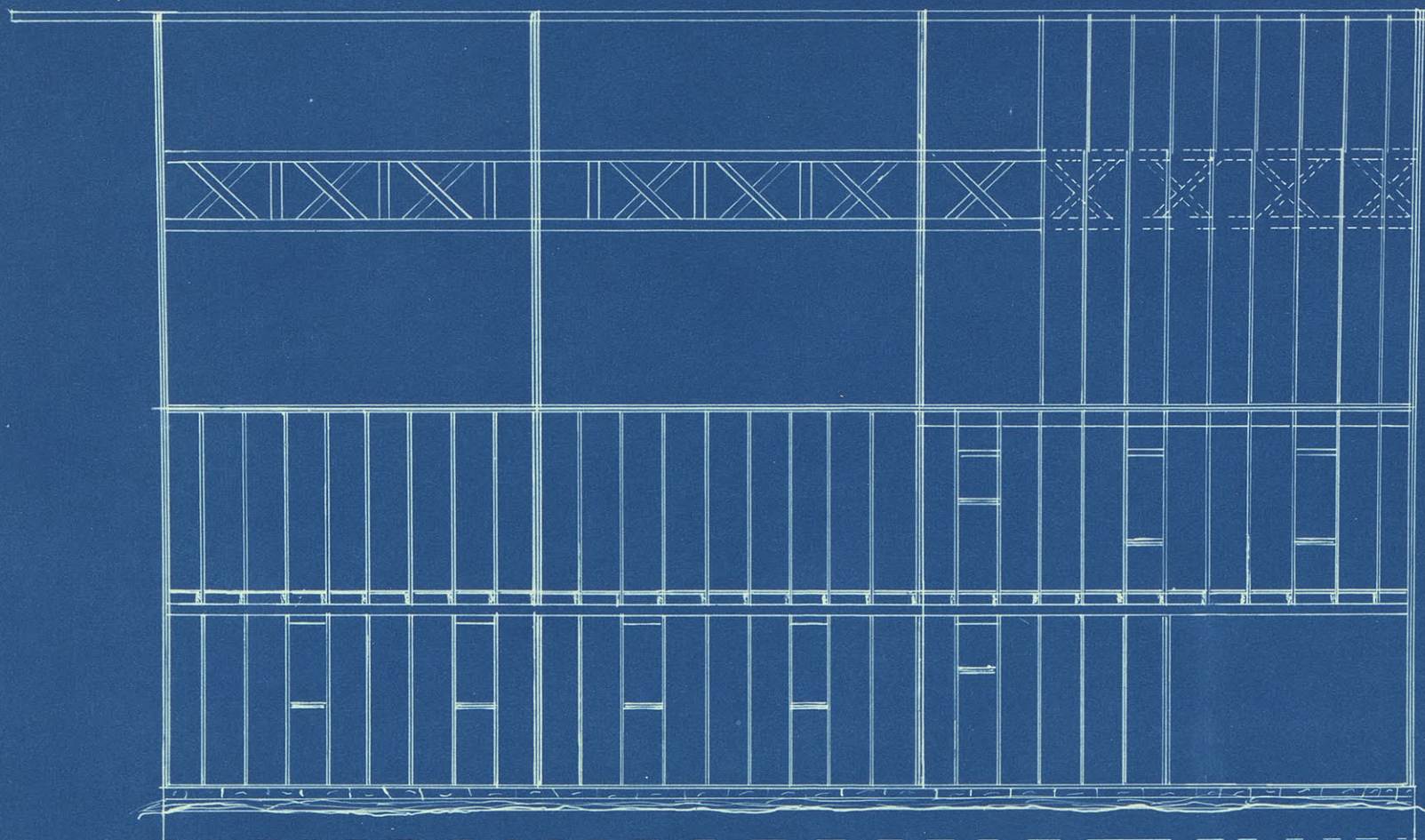


MODERN HORSE BARN.

END AND CROSS SECTION.

LONGITUDINAL SECTION.

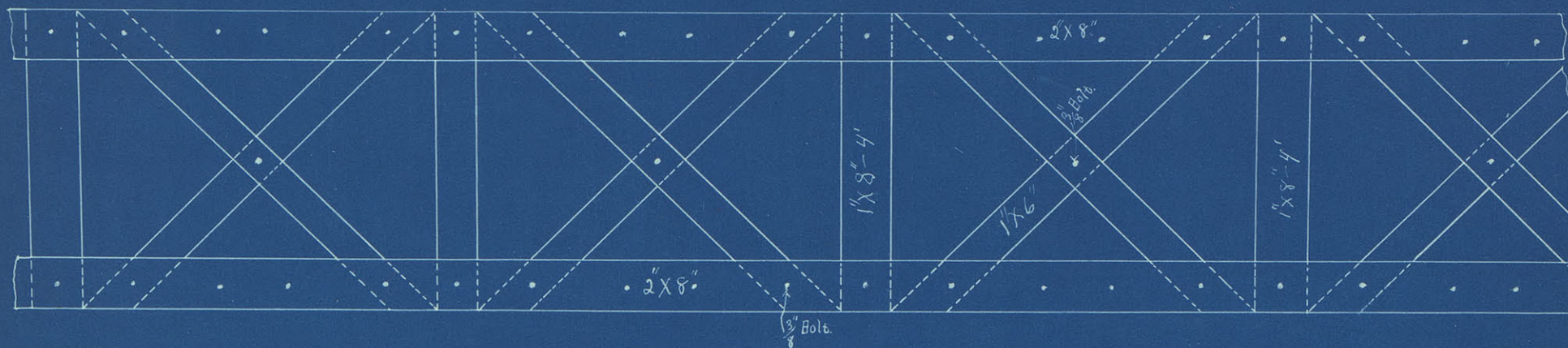
Scale 1/4 inch Per Foot.



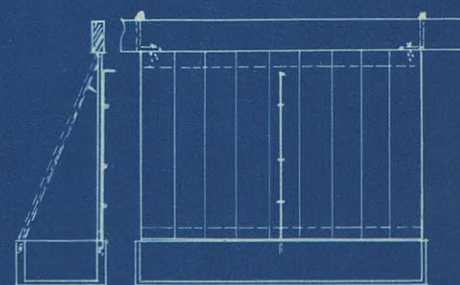
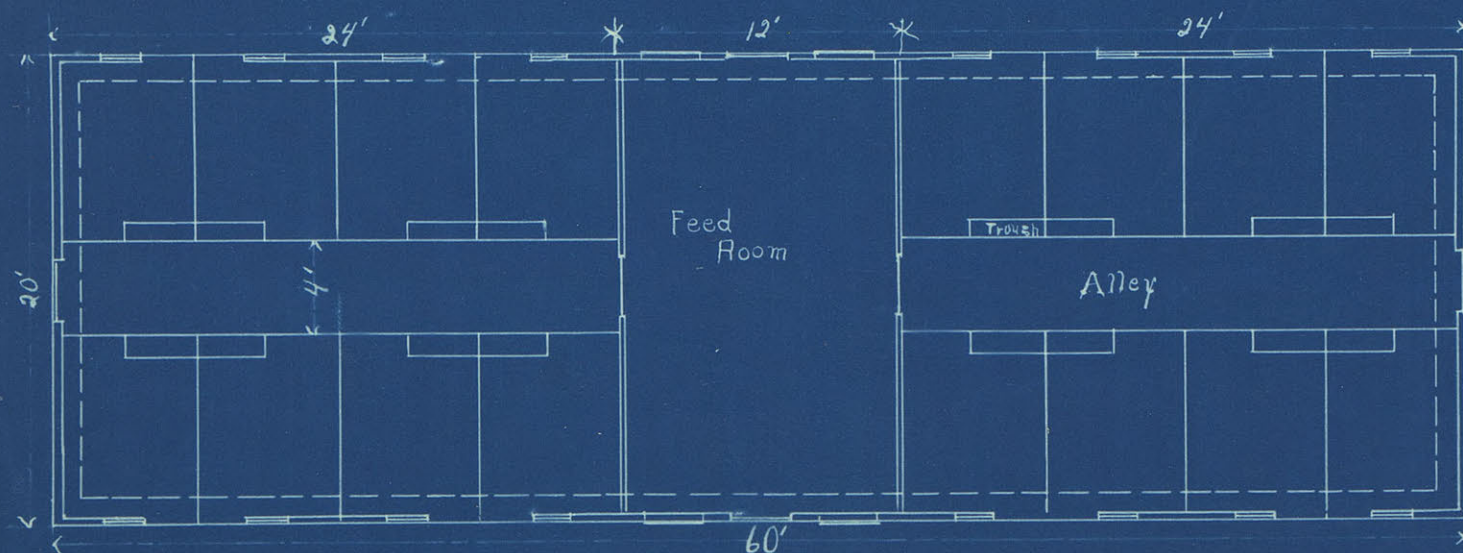
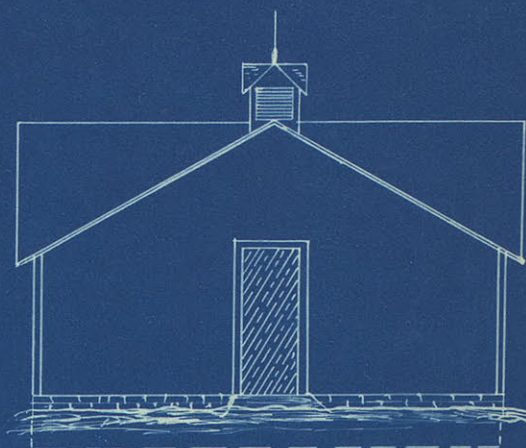
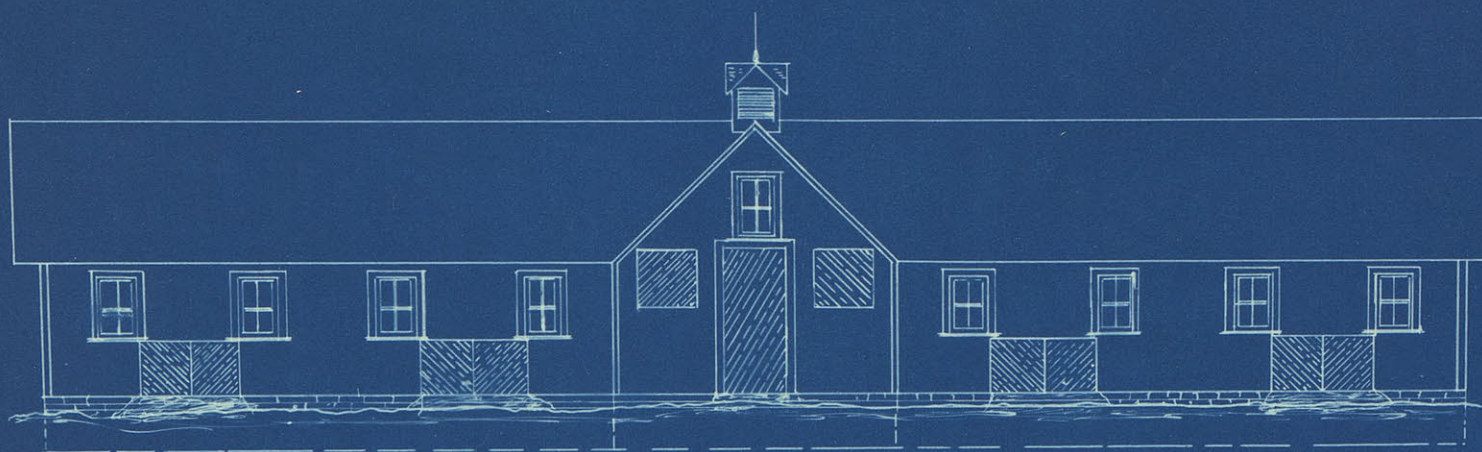
MODERN HORSE BARN.

LONGITUDINAL SECTION.

Scale 1/4" = 1' Per Foot.



DETAIL OF HORIZONTAL TRUSS.
SCALE $\frac{1}{2}'' = 1'$



DETAIL OF PEN FRONT
SCALE $\frac{1}{2}$ " = 1'

A FIGGERY.
SCALE $\frac{1}{8}$ " = 1'