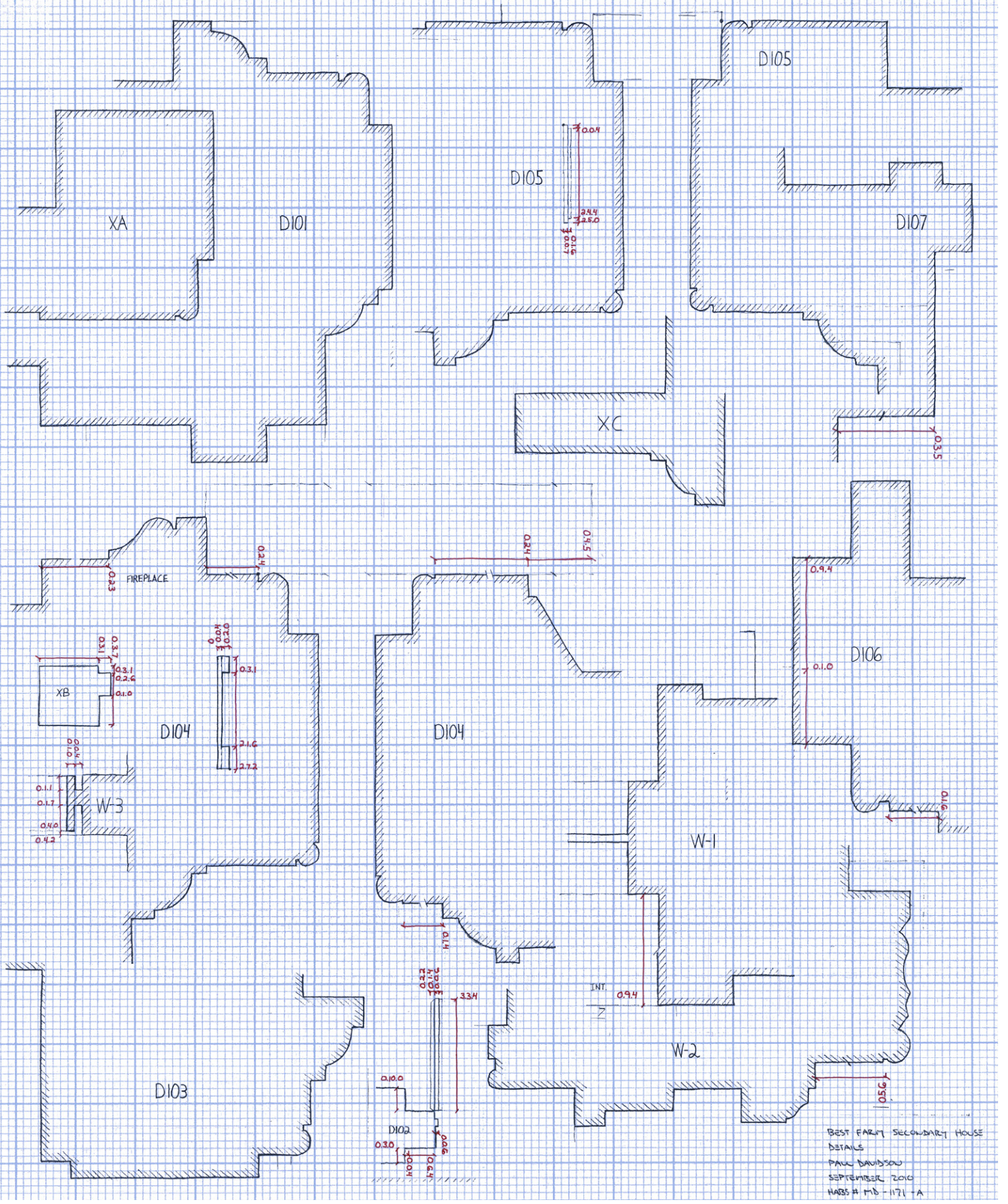
Historic American Buildings Survey
Guide to Field Documentation



INTRODUCTION AND CONTENTS

This Field Guide offers step-by-step instructions about how to observe, take field measurements, and create field notes and a short-form report about a historic site or structure to HABS standards. These guidelines are intended for use by those without professional experience and/or training in the production of drawings and the undertaking of field work. They address floor plans, elevations, and details to help develop basic note taking and delineation skills. Once these skills are mastered, recorders can refer to the HABS Guidelines for Measured Drawings to learn about site plans, sections, axonometric, and other more complex types of drawings. The Secondary House at Best Farm was selected as the case study because its relative simplicity encourages the development of basic skills and the establishment of realistic goals, while still offering thought-provoking interpretation. This guide is supplemented with a "Field Observations" and "Short-format Report" sections, as applied to the Secondary House, to assist the recorder with learning to "read" a building and to report on their findings. The Field Observations are applicable to both the preparation of informed drawings and to the analysis put forth in the accompanying historical report. The field analysis should be combined with preliminary research into primary and secondary sources for a concise report of a few pages in length. As with the drawings component, further investigations of the historical and architectural context of a site or structure can be expanded to produce a full outline report according to HABS Guidelines for Historical Reports.

The project was sponsored by the HABS office in coordination with Monocacy National Battlefield, Susan Trail, Superintendant, working with Joy Beasley, Cultural Resources Program Manager. The measured drawings guidelines, and the field notes and drawings, were produced by HABS architects Paul Davidson and Daniel De Sousa; and the Field Observations and short-format report by HABS historians Catherine Lavoie and Virginia Price.

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Appendix B: Full Scale Field Notes . . . . . **See Separate File**

GETTING STARTED

The Team:
A measuring team should minimally consist of three people: two to take measurements and a third to record them. When drawing a large or complex structure, or when more people are involved the most efficient approach is to “divide and conquer” with multiple teams breaking up the work by floor, wing, or elevation. A supervisor, instructor or project leader should coordinate the multiple efforts to provide consistency and quality control.

Permission:

Be Safe:
Regardless of the size, type, or condition of the building, all participants on a HABS documentation project should adhere to the standards and regulations of the Occupational Safety and Health Administration (OSHA). This can be as simple as bringing along a flashlight or making sure to wear durable hiking shoes or steel-toed boots, or as demanding as wearing hard hats and respirators.

Necessary Equipment:
- Metal measuring tapes in 35' and 50' (or 100') lengths; ideally one tape for each team member (fiberglass and cloth tapes stretch over long distances and are therefore unreliable)
- 17" x 22" graph paper (bond), eight divisions per inch, non-reproducible grid
- Oversized clipboard
- Pencils (HB or harder) and erasers
- Molding comb/profile gauge (fine-toothed)
- Digital camera

Recommended Equipment:
- Red pens with archival ink (for writing dimensions)
- Large 30˚-60˚-90˚ drafting triangle
- Flashlight / headlamps
- Plumb bob
- Line level and string
- Ladders
- Directional compass

SKETCHING FIELD NOTES

General Rules:

Field sketches, dimensions, and notes are drawn on archival quality (bond) graph paper with eight divisions per inch, with grid lines printed in non-reproducible blue. Only one side of the paper should be used. HABS typically uses 17" x 22" sheets, which can then be folded into 8-1/2" X 11" in order to fit into standard HABS field note covers. All field notes are transmitted to the Library of Congress for future reference.

Legibility is important. Everyone on a team should be able to read everyone else's field notes. Sketches should be drawn large enough to accommodate long strings of dimensions neatly. This may require complex elements be simplified or the scale exaggerated so that there will be enough room to write dimensions legibly. Extremely complicated spaces, such as staircases and areas with built-in cabinetry, may have to be drawn on a separate field note at a larger scale than the rest of the plan and should be clearly referenced back to the master plan.

Details, such as door and window jambs, should be sketched separately at larger scale (see: Details).
For large or complicated buildings, it may be necessary to lay out one drawing (a plan or elevation, for example) over multiple sheets of field notes. Be careful to locate your match lines logically, and make sure each sheet is clearly referenced to the others.

Each field note must be labeled in the lower right corner with the name of the building or structure, the identification of the sketch, the name of the delineator, the date, and the HABS number (if it has already been assigned). For example:

Best Farm, Secondary House
Second Floor Plan
Daniel J. De Sousa
September 2010
HABS No. MD-1171-A

Divide the tasks of sketching and field-noting a building by floor, elevation, or, if a large building, by wing. For the sake of consistency and in order to avoid repetition, assign one team member to a particular set of details (i.e., doors, windows, fireplaces, staircases, etc.)

SKETCHING PLANS

When you are ready to sketch a building's plan, a good way to begin is by drawing the exterior shell first. There are two reasons for this: First, by beginning with the outside you can be sure that your drawing fits on the sheet, with enough room along the edges for dimensions. (Or, if your building is large, starting this way can help you determine if you need more than one sheet.) If you begin by field-sketching from the inside out, you may find that you drew things too large and part of the building does not fit on the sheet, or that there is not enough room between the outside wall and the edge of the paper, forcing you to write outside dimensions inside (usually illegibly). Second, if you're fairly accurate about the location of doors and windows when drawing the shell, it makes it easy to place rooms when you sketch the inside.

Start by walking around the outside of the building to get a feel for the general shape. Is it a single rectangular block? Is it divided into bays? Does it have an ell? Wings? Irregular additions? Porches or exterior stairs? Remember to think about the location of windows and doors.

As you are walking, think about your cut-line. Plans are typically drawn and measured at approximately 4'-0" above the floor. However, the height at which measurement strings are taken may jog to pick up important features. Think about what and where you will measure, and begin to pay attention to things below the cut-line that you may not normally notice. Window sills: do they protrude, or are they flush with the wall? Is there a belt course? A water table? Hand rails? These things should appear in your sketch.

Once you know the basic shape of the building, see how it would best fit on your paper. Using the grid, lightly block out where you think the building's corners should be (and don't forget to mark porches or stairs!). Make sure to leave at least an inch and a half all the way around for writing exterior dimensions.

Now walk around the building again, but this time take your clipboard and sketch the outline as you go, being mindful of where you marked your corners.

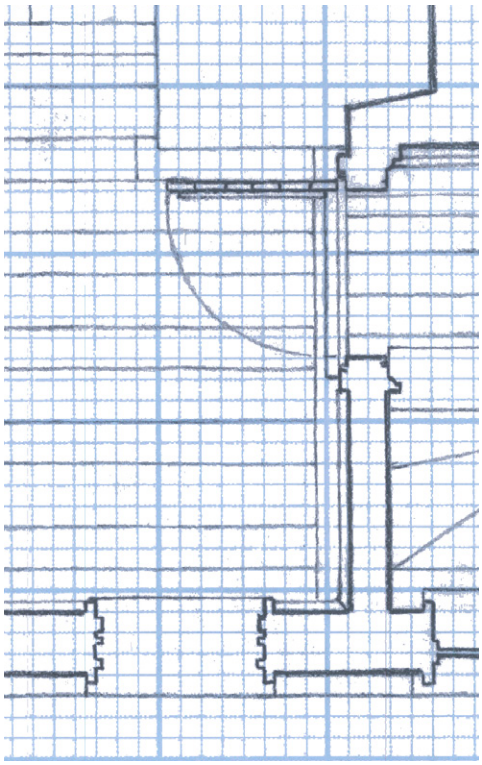
In order to maintain a decent sense of scale, it can be helpful to create rough units out of parts of the building. Windows are handy for this, since they tend to be uniform and a size that is easily understood. And since they are present on both the outside and the inside, you can continue using them as a unit of measure when you begin to lay out the rooms on the plan.

> Tip: First decide how many squares long a typical window will be on your field note, and then use this relationship to estimate longer and shorter distances. ("Hmm, this wall looks about nine windows long; if a window is six squares, then the wall should be 54 squares, or 6.75 inches.") You can estimate using larger or smaller parts, too, and even relate them back to your basic unit, the window. Perhaps a building's entire length is five times the length of its ell (which is itself three windows long). Or maybe a column or chimney block is about three bricks wide (where said brick might be about one-sixth of a window).
>
> Tip: For estimating small distances, if you hold your middle and ring fingers toward your palm with your thumb ("throwing the horns"), the distance between your extended index and pinky fingers should be about four inches, give or take.
>
> Tip: For window and door frames, it is not necessary to draw every ogee, flute, and quarter-round return, but you should at least indicate the jambs and where the frame begins and ends so that you have places to mark dimensions later.

Remember that your field note will never be perfectly proportional, and as mentioned in the General Rules section, there will be times when you should simplify or exaggerate parts of the sketch so that it is clearer and easier to dimension.

The process for drawing the interior of the plan is similar. Begin by walking through the building and seeing how the different rooms relate to each other and to the outline you just drew. Take note of where the cut line should be, and what you will see below it. Plans are typically measured through the lower sash of double-hung windows and above chair rails, but cut lines are usually dropped to show fireplace openings at their maximum depth. Remember to look for sills, chair rails, baseboards, thresholds, plinth blocks at the bottom of doorframes, etc.

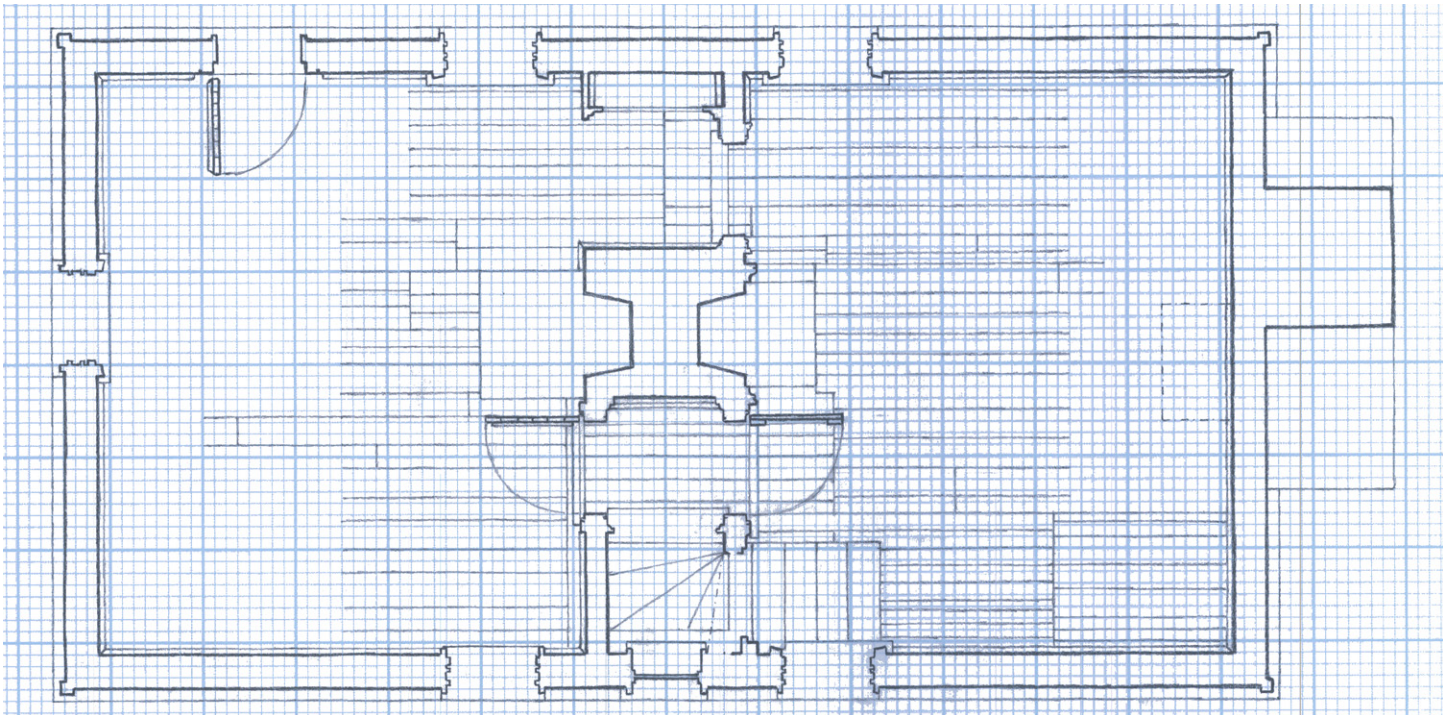
Certain kinds of overhead lines should be shown, too, so remember to look up! These are drawn on the plan using a dash-dot line, and include ceiling hatches, stair openings, beams, joists (if exposed), arches and vaulting or other indications of a change in ceiling height. Things that are typically ignored include dropped ceilings, plumbing and mechanical systems. Features that are hidden or missing should be indicated by a dashed line. For example, a missing door should be drawn with its swing (if known), with a dashed line.



Level of detail typically required for a floor plan field note.

Beginning with areas that have windows or doors to the outside, start sketching, keeping in mind proportions and your rough unit of measure (if you used one).

> Tip: In the sketch phase, it is important to mind your line weights. Make the lines of the walls and anything else being cut through darkest. Things below the cut line, such as chair rails and baseboards, should be drawn more lightly.

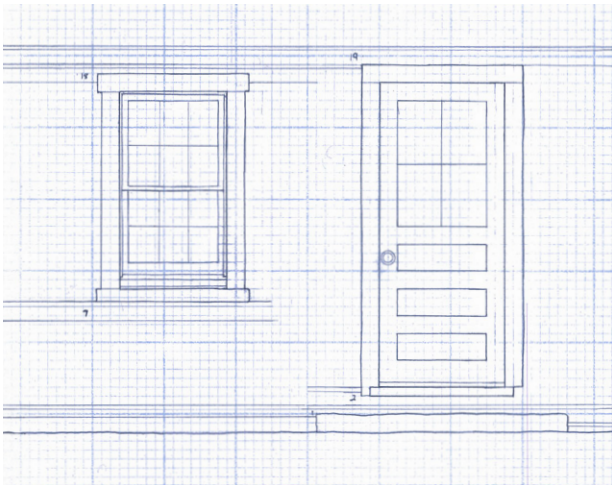


Completed sketch of the first floor plan, Secondary House

SKETCHING ELEVATIONS

Sketching elevations is similar to drawing the plan. When sketching, it is useful to exaggerate the scale of complicated features, like windows and doors, as they require the most dimensions later. It is not necessary to draw every line of a profile in elevation, only the outermost edge needs to be drawn as this is the edge that will be measured (see Measuring Elevations). A profile of the molding is a better way of capturing the remaining edges (see Measuring Details).

North Entry, Farm House

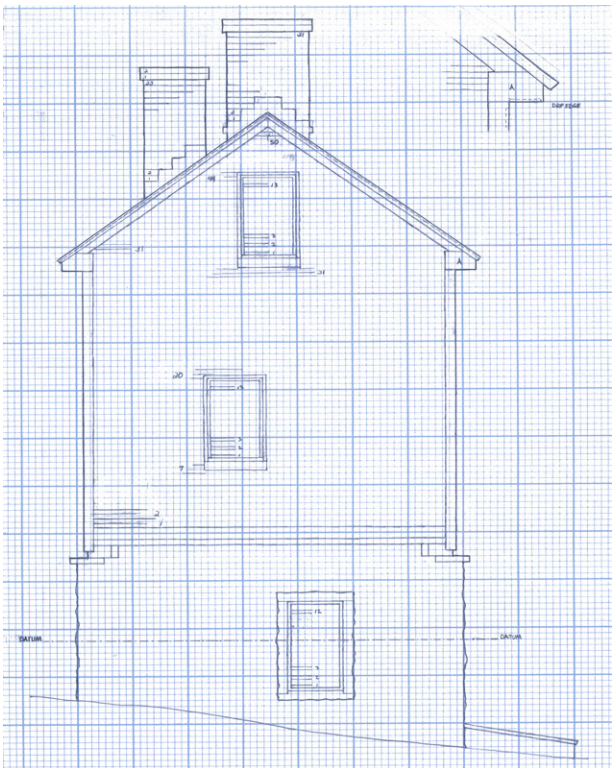


Field Sketch

It usually is not necessary to draw each brick course or row of siding, unless they are determined to be uneven. Instead, draw and number the courses that line up with significant features of the elevation (such as window sills and lintels), and divide the courses evenly when you are creating the final drawing. Also, remember to count and note the rows of shingles on the roof.

Pay particular attention to eave and soffit details, as they provide the foundation for determining the slope of the roof (see: Measuring). Sometimes these need to be drawn separately at a larger scale as a detail. Gutters and downspouts are typically omitted from elevation drawings unless the gutters are built into the eaves.

South Elevation, Secondary House



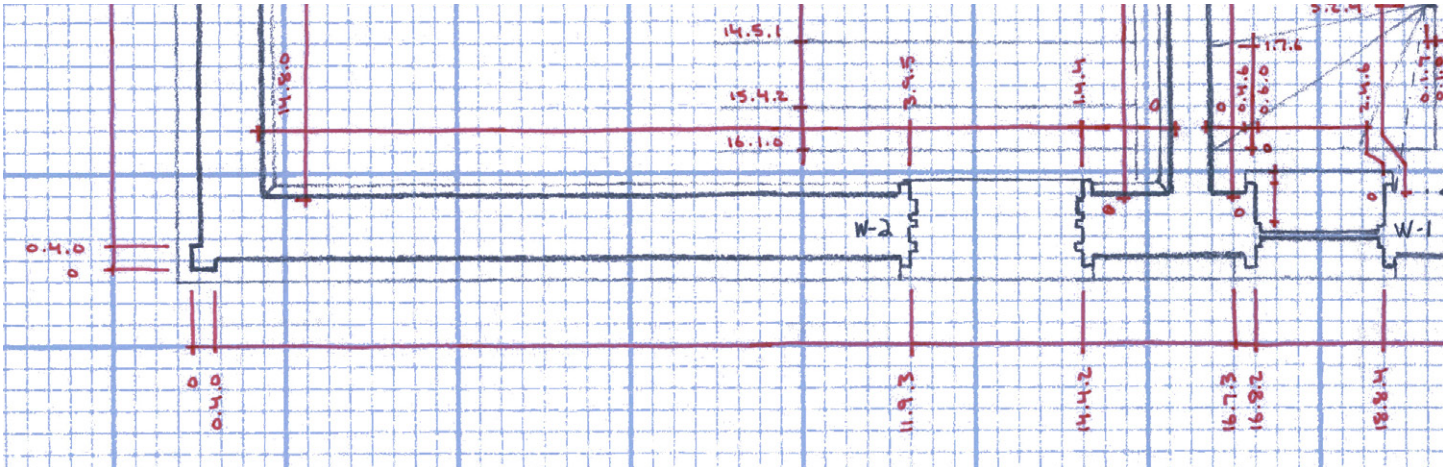
Field Sketch

MEASURING PLANS

Orient the plan so the principal entrance is at the bottom of the sheet. This is how the finished drawing will appear, so you might as well get used to thinking of the building this way now. Dimensions can be written in red pen with archival ink. Take measurements along walls in one continuous string whenever possible. Measuring a wall in pieces leads to accumulated error over long distances. Dimensions are taken to the nearest ⅛th of an inch. HABS records each measurement with three numbers, separated by periods, representing feet, inches, and eighths of an inch. This eliminates fraction lines and provides greater clarity. For example:

Three-feet, one and one quarter inch = 3'-1 ¼" = 3.1.2

Measurements should be written perpendicular to the dimension line and next to the appropriate tick mark, rather than between two tick marks. It is important to mark the zero on the field note for each dimension string.



First floor plan, Secondary House

Ideally, a measuring team should consist of three people: one person to hold “zero”, one person to pull the tape and call out dimensions, and one person to record them on the field note. The recorder should be the person who drew the field note being measured.

The person recording might find it helpful to mark out dimension lines on the plan before the team begins measuring. As you are doing this, keep in mind that the floor plan field note is intended to locate significant building features. Door and window openings should be measured to the inside of the jamb.

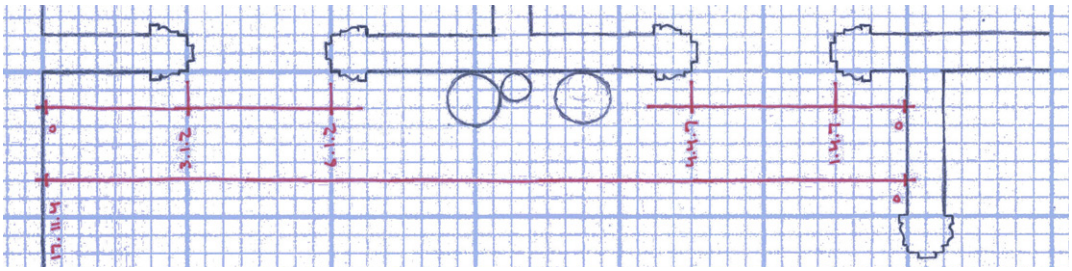
When you are ready to begin measuring, place the zero end of the tape in the most convenient corner and pull the tape to the first feature. Make sure the tape is taut and, where possible, chest height.

Measuring the first floor plan, Secondary House

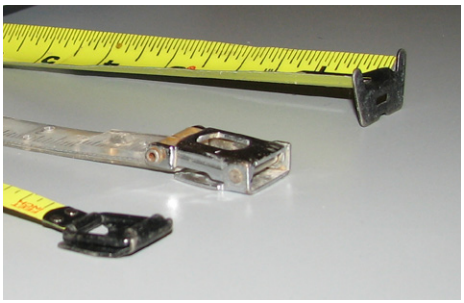
Measuring the second floor plan,Secondary House.

Tip: The recorder can help make sure the tape is level, and over long strings can hold the tape in the center to prevent sagging. Resting the tape on building projections such as window sills and hardware can help to prevent the tape from sagging, provided they line up with the plan's cut line.

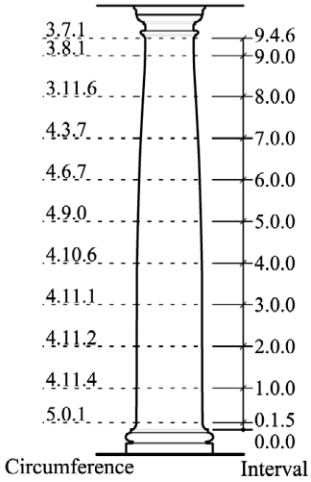
When there are numerous obstructions along a wall (pipes, conduits, ducts), do your best to keep the tape as close to the wall as possible by threading it behind these features if you can. If this is impossible, then stand the tape out from the obstructions to get an overall measurement, and then measure any openings or other features from the most convenient zero.



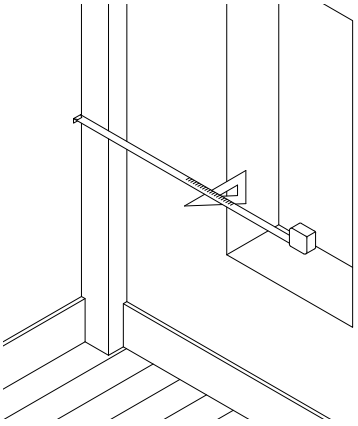
Tip: If the flat hook-end of a standard 35' tape measure does not fit through the gap behind a barrier, try using a 50 or 100' tape, which usually has a much thinner end. The zero on a tape measure with a folding hook is at the end of the hook not where it attaches to the tape.



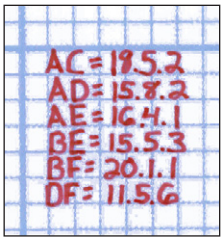
Tip: A 50' tape can also be used to take circumferences of columns and other circular objects. To determine the entasis of round columns in elevation take the circumference at regular vertical intervals.

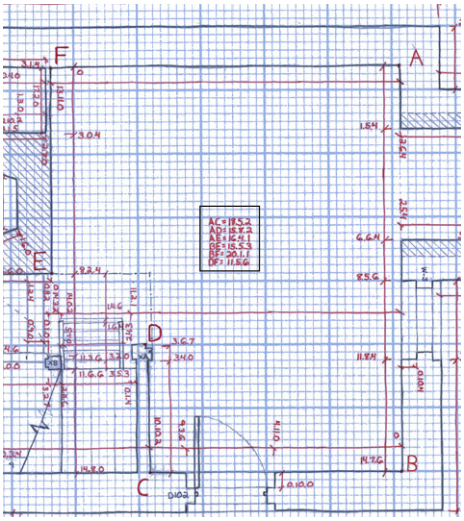


Tip: Triangles are helpful in measuring edges that are set back from the line of the tape.



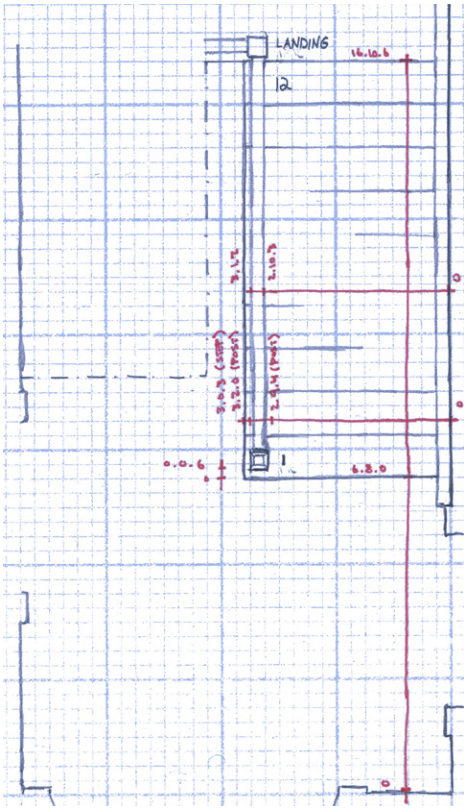
Wherever possible, take confirming dimensions from one room to another through door openings. These will help determine wall thicknesses and link the rooms together in plan later on. If a room is clearly out of square--that is, if opposite walls are not equal in length--then it can be helpful to take diagonal measurements from corner to corner. If you are taking many diagonals it is better to label them with lettered points and create a list rather than draw the dimension strings.





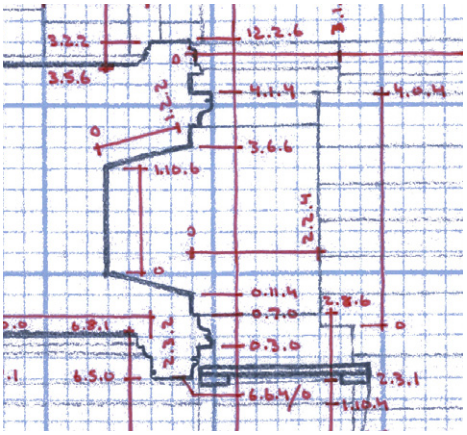
Ground floor plan with diagonals, Secondary House

When measuring stairs, measure both the first step and the highest step possible from the same zero. Then divide evenly by the number of treads. It is not necessary to measure individual steps unless they are obviously irregular. Always measure to the nosing and not to the riser underneath. Be sure to locate any newel posts and hand rails.



Typical first floor stair dimensions, Farm House

When measuring fireplaces, be sure to first locate the opening of the fireplace in a general string of dimensions. Then measure the perimeter of the firebox at its deepest point. Locate and measure the hearth in relation to the firebox opening. Remember to measure the mantel.


Fireplace dimensions, Secondary House

When measuring flooring that is determined to be regular, the number of floorboards or tiles can be counted and then evenly spaced in the final drawing. A vignette is generally sufficient for most buildings. If the flooring is irregular, each floorboard or tile should be measured on strings separate from those used to measure the walls. These dimension strings generally are taken from the baseboard and should be noted as such.

Using a plumb bob: A plumb bob can be used to tie ceiling or floor features into a string of dimensions taken at chest height, such as the edge of a stair tread or a ceiling hatch. After unstringing the plumb bob, allow it to come to a complete rest. If you are measuring up from the floor (figure 1), make sure the point is aligned with the feature you are measuring. If you are measuring down from the ceiling (figure 2), hold the string of the plumb bob on the edge to be measured.

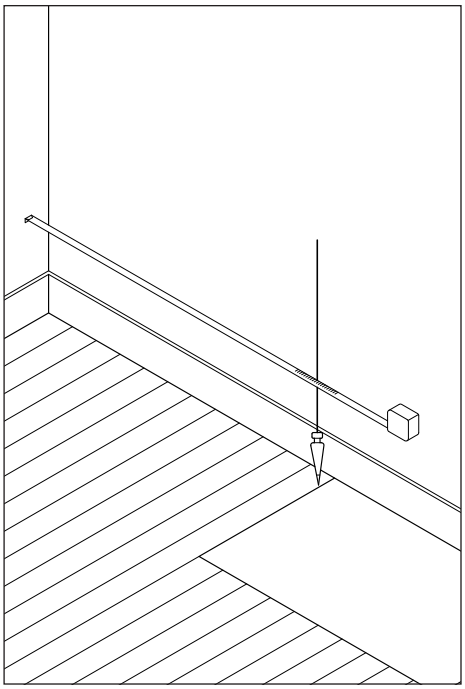


Figure 1

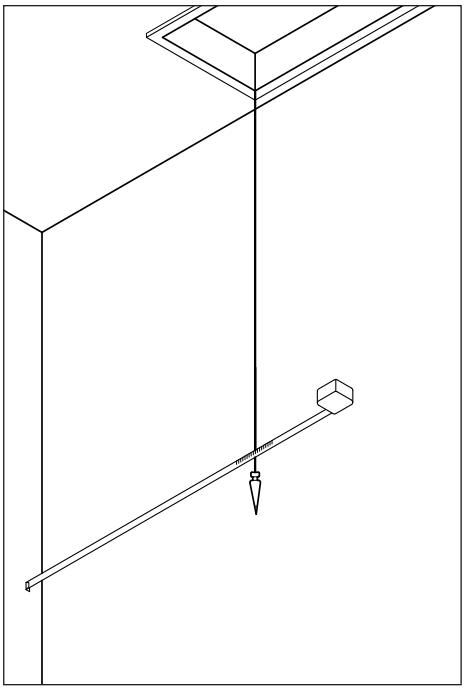
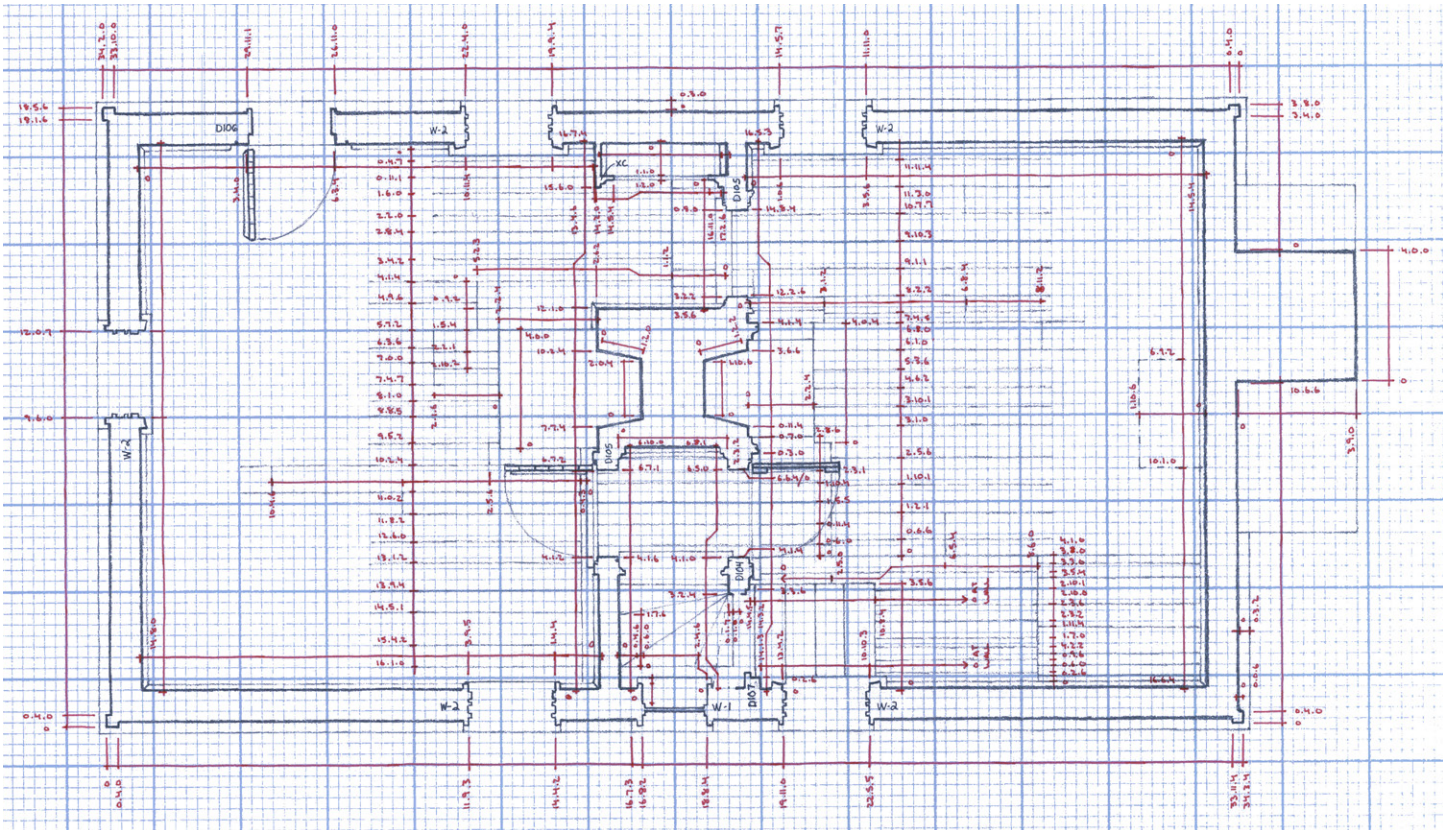


Figure 2

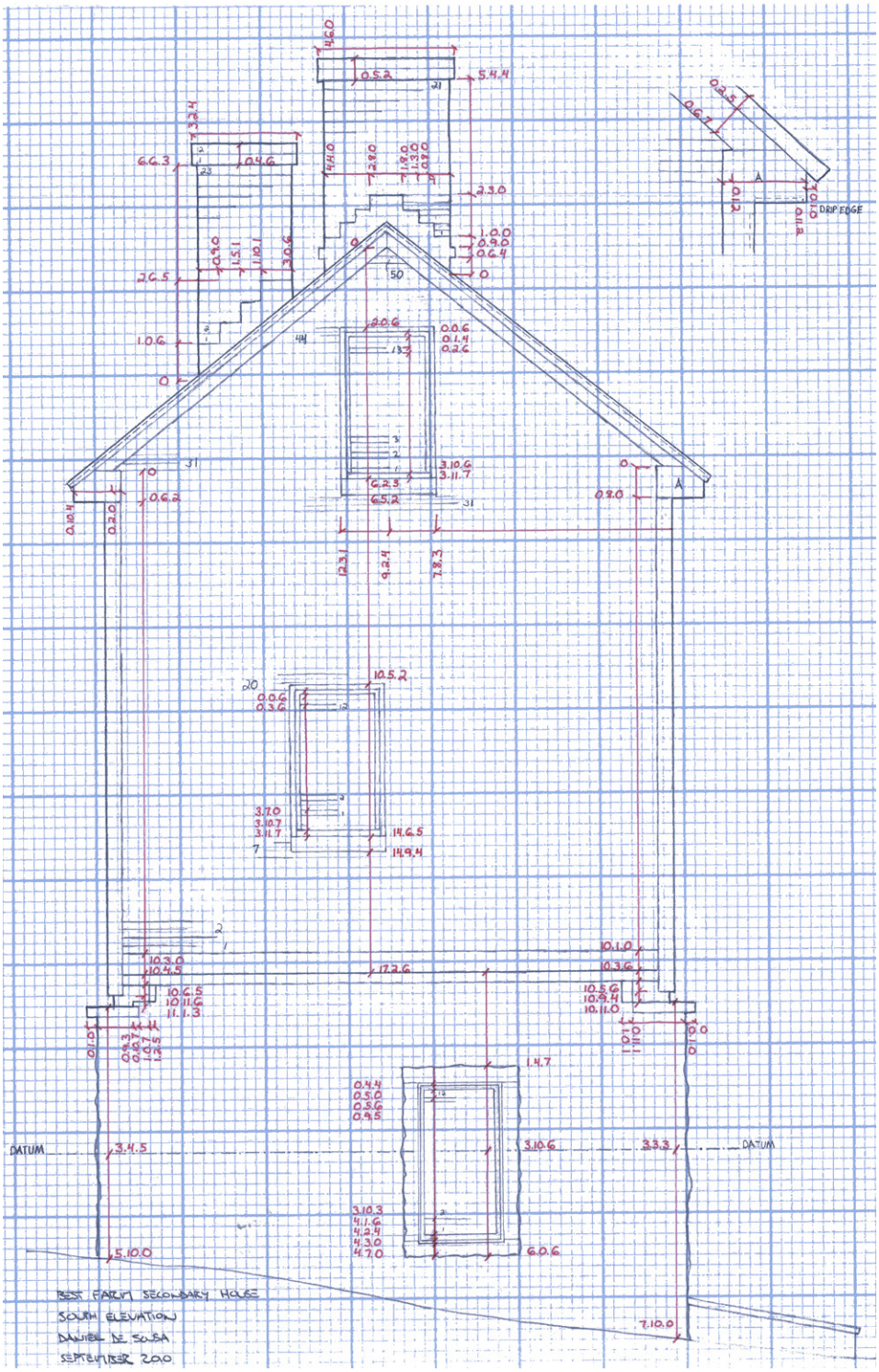
Using a plumb bob to locate the first floor newel post, Farm House



Dimensioned field note, first floor plan, Secondary House

MEASURING ELEVATIONS

Elevations are measured with continuous vertical dimension strings. It is important that all vertical strings be located in reference to a horizontal datum. The datum may be an actual feature of the structure, such as a horizontal brick course or the bottom edge of a siding board, as long as the feature is consistently level around the entire building. Otherwise, it may be necessary to create a datum (a horizontal reference) using a string and line level. Dimensions that tie into the datum are generally taken at the corners of the building and at each opening. These define the overall geometry of the building. Remember to measure to grade.



Dimensioned field note,with Datum North Elevation, Secondary House

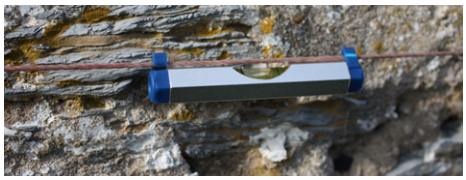
Measuring to the datum, Secondary House

Chimney dimensions, Secondary House

Using a line level: Decide where you would like to cast the datum; often this is done along a sill, though in the absence of any convenient features it may be arbitrary. The point can be marked with a pencil or tape according to building material. On your sketch, draw in the datum with a dash-dot line.

It takes three people to use a line level. The first person holds one end of the string at the mark, while the second person runs the string to the first door or window, pulling it taut. The third person centers the line level between the two ends and determines if any vertical adjustments are needed by the second person. Once the string is level, draw a second mark at the door or window frame and take any vertical dimensions to it.

Creating a datum using a line level, Secondary House



Marking the datum.

When measuring doors and windows make sure that the profile at the head of door or window is identical to the profile in plan, if not additional measurements may be required. At this point, only the outermost edge of the profile for the window or door needs to be measured.

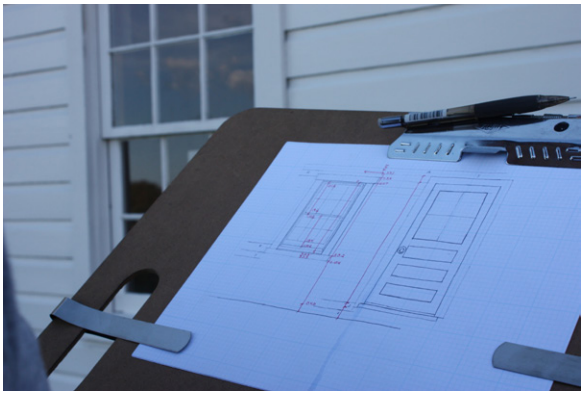
Windows must be measured with the sashes completely closed so the meeting rails are in line with each other. There are generally three sets of dimensions that are required to measure a window for an exterior elevation. The first set of dimensions places the window opening in relation to the datum (Photo 1), the second set locates the upper sash (Photo 2) and finally the lower sash is measured (Photo 3).

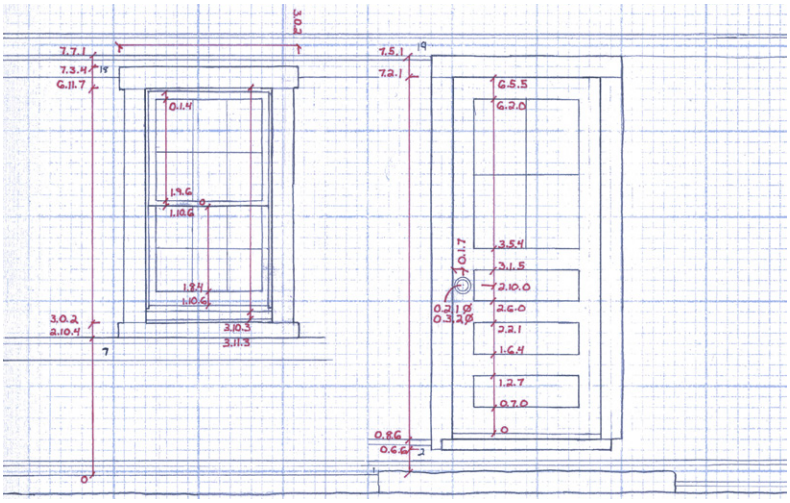
Photo 1, Farm House

Photo 2

Photo 3

When measuring doors, do not measure them independently of the frame. Always place zero either at the top of the frame or at the threshold. It usually takes two sets of dimensions to measure a door. The first set locates the door opening in relation to the datum and the second set picks up door panels and hardware. Remember to take the panel profile of the door if it was not taken for plan details (see Measuring Details).



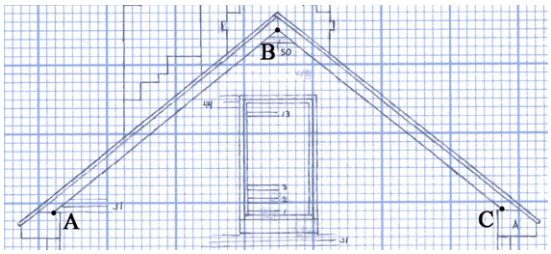


Dimensioned door and window field note, Farm House

Measuring Roofs:

Generally speaking a laser transit is the most accurate way to obtain roof measurements particularly on hipped roofs. The techniques described below for measuring roofs are based on the assumption that a laser transit is unavailable for measurement data.

The slope of the roof can be determined by measurements taken at the gable end. It is best to visualize the gable end as a triangle where the three corners need to be located horizontally and vertically in order for the elevation to be drawn. If the roof peak is off center, a plumb bob can be used to locate the peak horizontally.



If the roof is hipped, the roof slope and height will be more difficult to obtain. A measurement along the slope of the roof from shingle edge to the ridge as well as a horizontal length of the ridge can provide some accuracy (Figure 1). If the roof rafters are exposed in an attic space, measuring them in section may enhance the accuracy of the exterior roof dimensions as it will be possible to obtain the rise and run of the roof over a greater distance (Figure 2). Dormers, chimney and other relevant roof information should be measured horizontally from the roof edge as well as vertically.

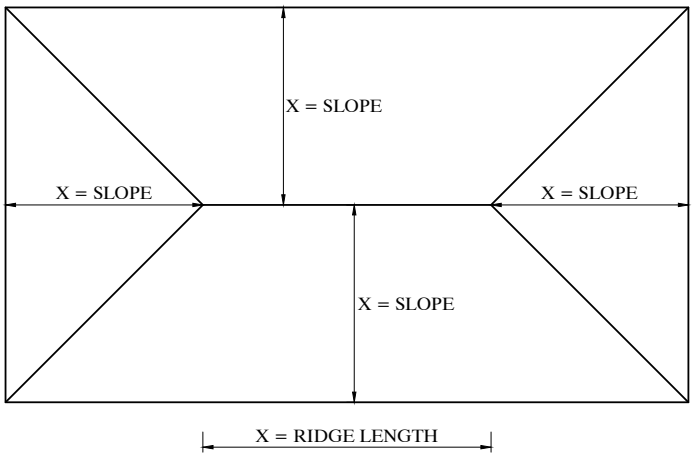


Figure 1, Roof plan

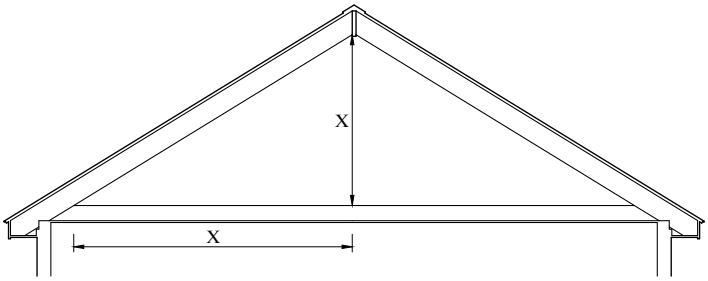


Figure 2, Roof section

MEASURING DETAILS

Window and door details should be keyed to the plan. It is helpful to use a W or D prefix; for example, the first window that you detail would be labeled W1, the first door D1. As you go around the plan, doors and windows that repeat should have the same label.

When capturing a door or window detail for the plan, it is best if you draw all profiles relating to that door or window together on the same sheet. For example, a door detail set should contain profiles of the door frame, the door panels (if any), and the threshold. A window detail set should contain profiles of the window frame, the sash and muntins (if any), and the interior and exterior sills. This prevents confusion over what has and has not been detailed.

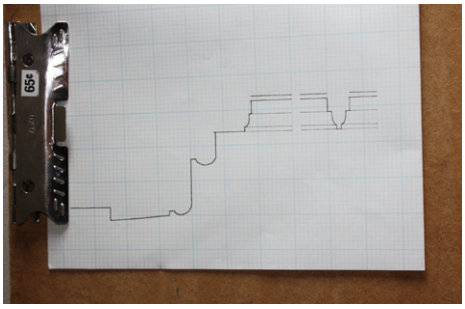
Be sure to capture the overall dimensions of a door (thickness and width) and locate any panels. Windows should be measured for the overall width of the sash; if the lights are regularly spaced it is not necessary to measure to each muntin.

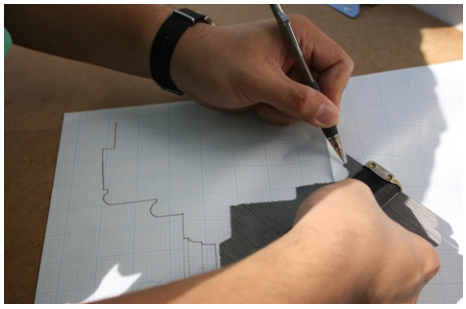
Other details that you should capture include any trim elements (crown moldings, picture rails, chair rails, baseboards, wall paneling, wainscot, etc.). These details should also be keyed to the plan.

A molding comb or profile gauge is the best bet for recording moldings like door and window frames, balusters, hand rails, baseboards, and chair rails. To use a profile gauge, first straighten it by pressing it against a flat surface so all of the pins extend out of one side in a neat row. Then, position it against the surface you want to capture, and apply steady pressure. Do your best to make sure the pins don't slide out of alignment and bunch in a crevice or a corner; this can be tricky on smooth surfaces like glass or over-painted wood, and may require you to occasionally pull and straighten pins while you're taking the profile.

Once you have the outline captured, place the comb flat against a sheet of field note paper to trace it, making sure the profile is aligned with the grid. Profiles larger than the comb should be taken with multiple, overlapping impressions.

Lightly trace the profile and remove the comb. You will notice that the profile is not as defined as it should be due to layers of paint coupled with the limitations of the comb. That is why it is important to refine the profile with a heavier line making sure to sharpen edges and smooth the curves. This is best done in the field as it can be compared against the actual profile.

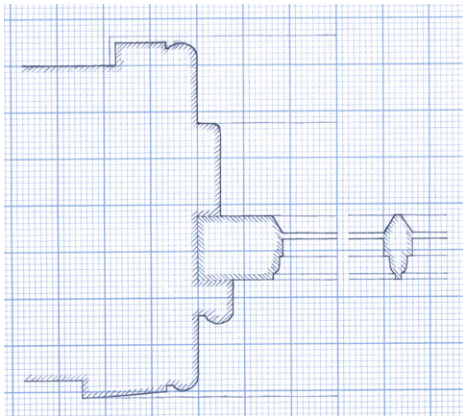




Tip: Record profiles from areas that are the least worn or painted.

Tip: To save space on a sheet, flat sections of large profiles can be shortened, as long as you provide the actual dimension.

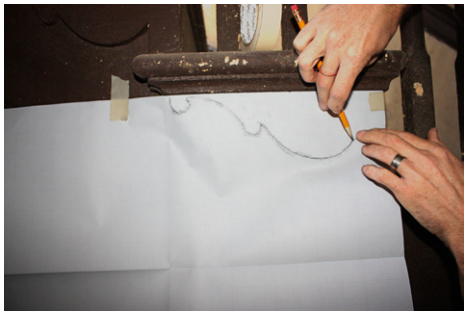
Tip: Be sure to trace along the side of the comb that you recorded the profile! If the pins skewed slightly while you were taking the profile and you trace the wrong side of the comb, the sketch may come out distorted.



Window profile, Farm House

Tip: You will begin to lose pins from your comb after a while, either because they fall out or because they bend while you are taking a profile. This is a fact of profile comb life, and it usually does not detract from the comb's usefulness until a great many have gone missing.

For some flat details, such as "gingerbread" decoration, it may be easier to create a rubbing by laying a piece of paper on it and sketching over any defined edges with the side of a pencil.



Stair bracket rubbing, Farm House

Digital photography can also be useful in capturing details that a profile comb can not. Be sure to take overall dimensions of the detail you are photographing so that the image can be scaled correctly later. Alternately, you can use a reference scale (as pictured below right).

To reduce distortion when taking a photo of a detail:

- Make sure the camera is held parallel to the surface.
- Center the detail and leave ample room toward the edges as this is where the most distortion occurs.
- Stand away from the detail and zoom in so that you are not using lowest end of the camera's magnification or the wide-angle portion of the lens.

Detail photography using a scale square, Farm House

Detail photograph, Farm House

Note: While in the field taking measurements, it is a good idea to write a basic description of the structure, and to record your observations. It is through just such an exercise that characteristic elements are identified, patterns of use determined, and discrepancies in construction that hint at changes over time are observed. Keep in mind that sometimes the significance of various features are not readily apparent now, but may be revealed through later insight or research, so take note of them. It may be helpful to have a checklist of the various building elements to ensure that you have considered them all. (For a checklist see HABS Historian's Guidelines, Outline At-a-Glance.)

Exterior:

When walking around the Secondary House, first take notice of the general shape, fenestration pattern, materials, chimney placement, and detail elements, all of which are clues to its period of development and stylistic origins and to its use and change over time (Fig. 1-5).

Its small, rectangular, three-bay-by-one-bay configuration and center chimney suggest a simple two-cell structure (two adjoining rooms on each floor).

Likewise, the center chimney further suggests that the two rooms share a common wall, on each side of which is located a fireplace for heat, thus containing no intervening space (hall) between.

The fenestration of the west front elevation is unbalanced, and it appears that a bay has been removed from the northern end. It is also clear that a porch or stoop(s) was once present, as the door is no longer accessible. Check for clues as to their former existence, looking for elements such as post holes or footings in the ground or porch roof supports in the eaves (Fig. 3).

Notice the high, raised basement which is unusual for this rural, more northern setting. Coupled with the large stone end chimney it is possible that this was used as a domestic service space. Note the traces of whitewash on the (randomly laid) stone (Fig. 4).

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

The house is sided in wood, although the depth of the bays (best visible at the doorway on the first floor due to the installation of the ventilation panels in the window openings) hints at a different form of construction and, in fact, the building above the stone foundation is log (Figure #6-9).

Figure 6

Unfortunately, the windows have been removed and ventilation panels inserted in their place to "mothball" the house, but it is still worth noting their location and size (while looking for clues as to the type and style of the former windows in the existing framing). What is the function of the small portal cut into the center of the rear elevation (Fig. 5 & 10)?

Likewise, note the doors and doorways (although largely rebuilt). Why are the first floor and the ground level doorways each on one side only? Is the lack of ground level doorways to the west front evidence that a porch or gallery once appeared along the front that would have blocked access to that level? Is it to orient the kitchen functions towards the fields and away from the main house?

Figure 7

The rear bulkhead entry indicates a sub-basement, likely for (food) storage (or later installation of utilities).

Based on the small size, humble materials (rubble stone and log) and stylistic elements (or lack thereof), it is likely that the original occupant was an early settler to this area, someone of limited means, or that it was intended for use by a tenant, overseer, laborer(s) or slave(s). In fact, similarly built duplex building forms are common to slave quarters. The large stone chimney at the north end wall suggests that this building may also have served in some capacity as a farm dependency for use in food preparation or other form of domestic service.

Figure 3

Because this is the "Secondary House" it is worth noting its relationship to the main house and to the rest of the farm, noting that the front faces the main house, and that it is located between it and the fields. In fact, in these fields, evidence exists of a row of slave quarters, indicating the Secondary House's placement within a social hierarchy with the main house to the west and the slave quarters to the east (Fig. 2).

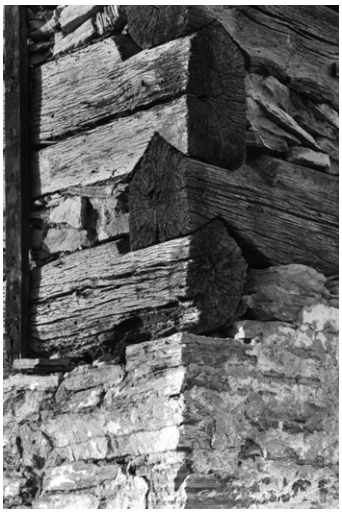


Figure 9

Figure 10

Interior, Basement (Ground) Level:

Currently, the secondary house is entered via the raised basement or ground level. Entering from the northern doorway, the oversized fireplace/hearth in this room suggests use as a kitchen, or at least some form of domestic use associated with food preparation, laundry, etc. (Fig. 11 & 12).

Figure 11

Figure 12

Despite the deteriorated state—including missing flooring and falling plaster—clues about interior treatment can be read. On the rear wall, variations in paint color between the top and bottom portions, along with nailing blocks in the upper portion, indicate that wainscoting and/or cabinets were once situated here. The location of the missing floor can also be read in the paint marks and placement of extant beams.

The beams or floor joists of the first floor can also be viewed overhead, due to missing ceiling plaster, providing an opportunity to observe the construction method/technology that give clues as to the age of the structure. The joists are hewn rather than sawn, indicating that the house was built before the mid-nineteenth century and potentially much earlier (Fig. 13).[1]

Figure 13

Also note remnants of whitewash on the ceiling and joists, signifying that they were originally exposed and that the lath and plaster (on the walls as well) were added later. Was the upgrade a matter of style or increased wealth? Or does it indicate a transfer in occupant from, for example, slave to farm overseer?

The falling plaster on the walls also provides an opportunity to view other clues as to age. Note that the plaster was applied to split, rather than sawn, lath and that it contains animal hair.[2] Also note that the lath is held by nails with irregular heads, not machine made (Fig. 14).[3] Such features suggest construction prior to ca. 1825.

Figure 14

[1] A round log was made into a square timber by first making diagonal cuts the length of a side and then using a broad axe to slice off the scored portions of the outer layer. The opposing side was treated in the same manner (for use in framing, sometimes left partially unhewn for use as joists, etc). The log was turned 90 degrees and the process repeated on the two remaining surfaces. This method of preparing timber was used from colonial times, until the 1840s or 1850s (might still be found later, particularly in outbuildings) when technological advances made possible the mass producing of circular sawn lumber. Pitt sawn lumber was also used prior to the advent of circular saws, creating vertical (rather than circular) saw marks. For hewn timber, look for the marks of lumber split along the grain and inter-dispersed by perpendicular axe marks.

[2] Much like hewn versus sawn timbers, early lath was split along the grain rather than cut with a saw. Split lath usually appears in lengths of up to 4' while sawn could be twice as long. Metal lath rivaled wood lath by the end of the nineteenth century, and rock lath—the precursor to sheetrock and plaster board or drywall—was used by the early twentieth century.

[3] Nail chronology can be confusing, as with other building technologies, in that the popular use of various types overlaps, and nails for framing versus finish, etc. meant that many different nails types were needed and thus can be found in a single historic structure, particularly during the early part of the nineteenth century. Generally speaking, before about 1790, nails were wrought by hand and were irregular, particularly the heads, which were T-shape or multi-faceted to create a "Rose (shaped) head." Early machine cut nails were developed about 1790, but until the mid-1820s still had a wrought head (usually two faceted). About 1825, machine cut heads were developed. By the late 1830s, machine cut nails with uniform heads (and length) were popularly used. Wire nails of sufficient size for use in construction were developed in the third quarter of the nineteenth century and are used to the present day. (Lee H. Nelson, "Nail Chronology as an Aid to Dating Old Buildings," National Park Service, Technical Leaflet 15, published in *History News* (December 1963).

Note that the center wall contains the chimney block (although there is no fireplace on this side). The chimney block is flanked by plastered walls and a doorway on one side, to separate the space into two same-sized rooms.

Little remains of the window and doorway surrounds or other moldings in this room, as these openings have been rebuilt and the doors and windows replaced.

Turning to the stairway area, there are indications of a former partition wall/enclosure with a doorway (see hinges in extant frame) located at the base of the stair (Fig. 15). The wide planks used to form a partition wall are visible under the stairs, but are plastered on the side facing outward into the room. It raises speculation as to why the owners felt the need for this enclosure within such a small space. Was it to create a buffer between this room (kitchen) and the next, used as a more formal parlor or dining room? Does it suggest use as a duplex or other form of shared use, particularly of the "kitchen" by unrelated individuals? Was it merely for heat conservation?

Moving into the adjoining (southern) room, it appears that this was once a more formal space, containing a fireplace with a cabinet/closet to the side opposite the doorway, and moldings around the openings. While the mantel is now gone its outline is visible, and the hole above indicates the later installation of a stove for heating (Fig. 16).

Note the molding profile of the doorway—a simple surround with a bead along the inner edge and back-band along the outer (Fig. 17). Check this profile against others in the house; differences may reveal changes, or a hierarchy of function/formality in the house, public versus private spaces.

The floor is missing here, clearly revealing the purpose of the bulkhead found outside—to provide entry into a root cellar or storage area located under this room only. Seams in the stonework on the interior wall, however, suggest access may have once been provided to a crawl space under the adjoining room (Fig.18)

Returning to the stairway, it is a partially enclosed boxed winder located to the center of the rear exterior wall of the house, providing access from both rooms and thus allowing for some privacy and sense of formality. The need for the portal window on the exterior wall is now obvious; it was inserted to light the stairway, perhaps made dark by the addition of the enclosure at its base (Fig. 19 & 20).

Figure 15

Figure 16

Figure 17

Figure 18

Figure 19

Figure 20

Interior, First Floor (main) Level:

Coming from the ground level, the stairway terminates in a small hall, providing a buffer between it and the two rooms entering from it. The variations in the door sills and flooring suggest that the doorways may not have been original, and/or that the stair "hall" may have once been open to one or both rooms (Fig. 21).

Figure 21

The first (main) floor contains the same basic floor plan; two equal size rooms sharing an interior wall and center chimney block. Containing the same molding profiles, the two rooms differ slightly, probably a result of varying use and to later changes.

The north room differs most significantly in that it no longer has its own exterior entry, thus rendering this room more private, and that it contains the stairway to the attic as well as a previous mode of access to attic through a hatch in the ceiling (Fig. 22).

Figure 22

Cracks in plaster indicate the location of a former exterior doorway, but the best evidence is provided by photographs taken prior to the most recent application of exterior siding that clearly show the entry closed over by the application of lath and plaster to the interior walls. Was this change made at the time that the walls were plastered, thus, occurring fairly early in its history?

Also, located on the ceiling against the center of the exterior side wall is a framed opening for access to the attic that was later covered over (Fig. 23). Presumably a ladder stair was once positioned against the side wall, as there is no evidence of (or space for) a more formal stair. Also visible are glimpses of the overhead floor joists that, like those below, appear to have been whitewashed.

Figure 23

The presence of this opening suggests that the current stairway to the attic is not original, but was added later to provide easier access to the attic. It includes a straight run to a doorway, beyond which the stair winds around 90 degrees and continues in a tight run to the attic level (Fig. 24). Other indications that the current attic stair is not original include significant differences in the size, style, and materials from those of the main stairway. Also note the walls in the enclosed portion of the stairway are plastered to the height of the attic floor where it would originally have been open to the room and to the main stairway. In addition, visible beneath the exterior siding (see Fig. 6-10) is an earlier portal opening, just above the current one, that is blocked by the current stairs to the attic.

Figure 24

Cracked plaster on the walls also reveals that the house is constructed of logs with chinking and galleting (in the form of stone slabs/chips) between the logs (Fig. 25).

Figure 25

The north room also contains the only surviving mantel piece, a fairly simple surround with a back band, although the shelf is missing (Fig. 26 & 27). As with the south basement room, note the hole above for a stove pipe. Also note the brick pattern in the hearth that appears to have been truncated (Fig. 28). The same holds true for the hearth in the adjoining room. It also appears that some of the floor boards around the hearth have been replaced (as also witnessed from the basement level by the lack of whitewash on those boards). Was the chimney rebuilt and reduced in size? Was it reduced to accommodate the small stair "hall" that allows for the separation of the two first-floor rooms? Note that in the attic space, the chimney is canted to the side near the top of the stair and it may have been that extra space was needed to accommodate access from it, once it was added to replace the earlier hatch and ladder stair (Fig. 29).

Note that molding profiles for the doorway and window surrounds do not match (Fig. 30 & 31). The molding profile of the doorway surround does, however, correspond to that of the fireplace (Fig. 27). The window surrounds were likely changed at a later date, either as a stylistic upgrade or the result of changes to the windows.

A look in the adjoining south room, where more plaster is missing, shows that the window openings were originally larger, and have been filled in with additional framing and brick nogging (Fig. 32). The new size is not too significant, so it may have been a simple matter of making standard-sized replacement windows fit, rather than a conscious effort to create smaller openings for, perhaps, energy efficiency.

In the south room, the falling plaster reveals that the exterior entrance received a similar treatment as the windows, reducing the opening slightly (Fig. 33 & 34). The plank and batten door is a replacement (but the one that it replaced, currently stored in the house, is of the same type).

There is a fireplace that corresponds to that in the north room, but it is missing its mantel (Fig. 35).

Figure 26

Figure 27

Figure 28

Figure 29

Figure 30

Figure 31

Figure 32

Figure 33

Figure 34

Figure 35

There is a built-in floor-to-ceiling cabinet in the south room against the front wall where it joins with the interior wall near the doorway between the two rooms (Fig. 36). The cabinet doors are missing but notches for hinges indicate that the cabinet was divided into upper and a smaller lower space. The molding profiles matches that of the interior doorways suggesting that it may be an original feature.

Somewhat awkward is the fact that the section of the interior partition wall that abuts the cabinet is of wood frame rather than lath-and-plaster as elsewhere (Fig. 37). Was the cabinet originally deeper, calling for infill? Was the cabinet originally located along the interior partition wall where the doorway is now found and these two rooms not accessible to one another (as in a duplex)? Is this the remnant of the original dividing wall before the lath-and-plaster walls were added?

It is also interesting to note that the molding around the doorway to the other side, where the wall is plastered, indicates that the plaster was applied *after* the molding.[4] The same is true of the baseboards (Fig. 38). The attic is one open, unfinished space, bisected somewhat by the central chimney block, which is canted slightly to appear centered along the roof ridge, and possibly to accommodate access to the later stairway (Fig. 29, 39 & 40). The roof structure is exposed to reveal an open rafter system with rough-hewn principal rafters joined by mortise and tenon and held by pegs (Fig. 41 & 42), and then notched at the bottom end into the sill plate (Fig. 43).[5] Simple planks have been added to create supporting "tie beams." Narrow planks serve as common purlins to hold the roofing material.

Figure 36

Figure 37

Figure 38

Figure 39

Figure 40

Figure 41

Figure 42

Figure 43

[4] This was an early plastering technique. The moldings were held by nailing blocks and the door or window surround and the plaster applied round them, rather than plaster first and cover the intervening spaces between the openings and walls with the molding afterwards.

[5] This was a common joinery technique prior to the introduction of ridge boards upon which rafters were attached as part of the techniques of Balloon Framing, introduced by about 1840 and used almost exclusively for residential construction by about 1850.

Other Resources on Site:

The main house, while very different in construction and overall style, reveals a few similarities in materials and details that suggest it was built at the same time or close in period to the Secondary House. These elements include the log kitchen wing to the rear of the main house that resembles the construction technique of the Secondary House, including the V-notch joinery. Also, the mantels on the second floor of the main house—that are much more plain than those on the first—appear to be the same as those used in the Secondary House (based on the partial mantel still extant in the latter structure). Likewise, the molding surrounding the doorways in the second floor of the main house matches those in the Secondary House. Also, wide-board partition walls appear in the Secondary House (under the stair) and in the service wing of the main house. Archeological (and written) evidence also reveals that there was a row of slave quarters located in the fields just beyond the Secondary House, that would suggest that this structure was not constructed as a residence for slaves, but as an overseer's house or as a dependency for the main house.

Brief Historical Information:

There are two theories about the origins of the Secondary House. The first is that it—or at least the stone-constructed, ground level of it—was erected by a tenant farmer, George Beckwith, who occupied some portion of this property from 1761 until about 1794, along with his sons Charles and Basil. According to Beckwith's lease from absentee landholder Daniel Dulany, he was obligated to "keep in good tenantable repair the house already erected on the said devised premises, and to erect or build others of equal goodness." Likewise, his contract called for the construction of a dwelling with a stone or brick chimney and a barn.[6] However, it is not certain what that house consisted of, or even if it was on this portion of Dulany's substantial tract, other parts of which were also tenanted.

The more likely theory is that this house, along with the main house and the stone barn, were erected by/for the Vincendiere family, who emigrated just before the turn of the nineteenth century from St. Dominigue (Haiti), and formerly from France. They relocated to the Frederick area as early as 1792 and accumulated the parcels of land that formed their plantation of over 700 acres, between 1795 and 1798. A June 1798 account of a traveler through this area described on the property (as seen from the road) "a row of wooden houses and one stone house with upper stories painted white" that would appear to be this house and the former row of slave cabins known to exist in the fields between this house and the Frederick Road.[7] The fact that he mistakenly described the upper stories as stone painted white is an indication that the log walls of the upper story were sided rather than left exposed, and he assumed that the upper stories were of the same construction as the basement. Tax assessment records from 1798 likewise indicate "new improvements" to the property at that time. The main house, which also contains a log section of similar construction (believed to have been built as a free-standing kitchen incorporated into the main house in the 1860s) to the Secondary House, was erected soon thereafter. By 1800, the census indicates that the property accommodated a household of eighteen persons (family and fellow refugees) and ninety slaves.

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[6] Paula Stoner Reed, Cultural Resources Study, Monocacy National Battlefield. Washington, DC: U.S. Government Printing Office, 2004 (updated), 92. According to Reed, the text cited was part of the standard contract that Delany issued. Dulany Legal Papers, Maryland Historical Society, MS#1562[a].

[7] Julian Ursyn Niemcewicz, *Under Their Vine and Fig Tree, Travels through America in 1797-1799, 1805*; Vol. XIV in the Collections of the New Jersey Historical Society at Newark (Elizabeth, NJ: The Grassmann Publishing Company, Inc.,), 111.

Although the log construction of the Secondary House is fairly typical for this region, the raised, stone, ground level with kitchen is somewhat unusual. One explanation is that its unusual form is a factor of the blending of vernacular building traditions of both of this region and of the French and French Colonial regions from which its owners originated. Elements influenced by French and St. Dominique building traditions include the raised basement, the combination of a stone first floor and log upper stories with chinking (manifested in the French colonies as "bousillage," or timber framing with Spanish moss infill), and a "salle-and-chambre" plan (although the rooms of the Secondary House are of equal size rather than a slightly larger "salle" and adjoining "chambre"), that is also common in American Creole house forms. The original use of the structure is not known; some accounts suggest that the Vincendiere family first erected it as their own dwelling while constructing the main house, then used it for extended family and fellow refugees. Evidence of a former row of slave houses further suggests that this structure was part of a social hierarchy within their plantation complex. The fact that the kitchen entry in the Secondary House faces towards the slave row may indicate that it was available for the use of their slave population as well. The Secondary House was used as a tenant house by the Best Family who owned the property beginning in about 1843.[8]

[8] Their ownership and presence here during the Civil War, Battle of Monocacy is reason why NPS has named this the "Best Farm" property.