

Appendix E—Log Building Origins and Styles

Plan and Form

As they moved westward, European-American settlers successfully adapted log construction techniques to regional materials, climates, and terrains (figures E1 and E2). The floor plan and shape of log buildings constructed in the 1700s and early 1800s sometimes can provide clues to the ethnic origin or route of migration of the original inhabitant or builder. Because the settlers often borrowed and copied techniques used successfully by their neighbors, don't infer too much about the ethnic origins of a cabin's builders from the way they constructed the cabin.



Figure E1—The two-story Gladie pioneer cabin, built around 1900, was restored as part of the Gladie Visitor Center pioneer homestead interpretive site in Kentucky (Daniel Boone National Forest, Southern Region). The builders constructed it of large diameter, hewn hardwood logs with half-dovetail notching and set it on elevated piers. It has a moderate pitch, hand-split shake roof, two full stories, and a stone fireplace on one end. The front and back doors are located under shed-roof porches on the long sides of the building.

Historians have identified a number of traditional cabin plans and forms as prototypes. People often repeated these prototypes with simple variations. Settlers across the country built one- and one-and-a-half-story versions of most of these plan types.



Figure E2—The builder of this cabin at the mouth of Big Timber Creek Canyon on the Big Timber Ranger District in Montana (Gallatin National Forest, Northern Region) used a stone foundation with massive, battered stone corners and porch piers, and moderate diameter, round, softwood log walls. The cabin has a steep cedar shingled roof and a rock chimney for a wood stove near the center of the building. The entry is on the gable end under a gabled porch. It was sold and removed from the site in the early 1980s.

The basic unit of each of these types is the one-room enclosure formed by four log walls joined at their corners, called a single pen or crib (figure E3). People sometimes divided the single pen by interior partitions or enlarged them by adding another log pen. The typically mid-Atlantic “continental”



Figure E3—The original one-and-a-half-story Slate Creek Ranger Station, built in 1909 on a tributary of the Salmon River in central Idaho, is a single pen style cabin. It has a single room on the ground floor that served as an office and kitchen. The inhabitants used space under the rafters, accessed by a steep stairway, for sleeping. It was moved several miles from its original location after a new ranger station site was acquired in the late 1950s. The cabin is now used to interpret the life of early forest rangers of the Nez Perce National Forest in the Northern Region.

plan consisted of a single pen subdivided into three rooms organized around a central hearth. This plan originated in central and eastern Europe. Eighteenth-century German immigrants probably brought it to Pennsylvania. The interior partition walls were not constructed of logs.

The saddlebag, or double pen plan (figure E4), was composed of two side-by-side log pens that usually shared a central chimney. Saddlebag buildings often resulted from adding a second pen onto the chimney end wall of a single pen.

The dogtrot plan (figure E5) had two pens separated by an open passageway (sometimes enclosed later), all covered by a continuous roof. People built variations of dogtrot buildings in many parts of the country, although the style sometimes is considered typically southern because its covered passageway provided air circulation and shelter from the heat.

The distinctive Rocky Mountain style cabin evolved in the West around the middle of the 19th century. Although the builders usually placed the entrance doorway to most early log cabins beneath the eaves, they placed the entrance to



Figure E4—Builders constructed the saddlebag style Pole Creek Ranger Station in 1905 with post corners, posts at the junction of the two pens, and small diameter log infill walls. The characteristic central chimney serves a wood stove, rather than a fireplace. The cabin is located in southeastern Idaho's Sawtooth National Recreation Area in the Intermountain Region.



Figure E5—Builders constructed the two-story, dogtrot style Wolf House of hand-hewn yellow pine logs in 1829 on Wolf family land as a county courthouse. It is the oldest public structure, and possibly the oldest standing building, in Arkansas. It has served many purposes over the years. The building, restored from 1999 to 2002, now serves as a museum. It is located across the White River from the Southern Region's Ozark-St. Francis National Forest Sylamore District in the town of Norfolk.

Rocky Mountain style cabins in the gable end, probably as a means of adapting to the greater snowfall in the Rockies. A porch created by extending the roof beyond the gable wall usually protected the entrance. Two corner posts (figure E6) usually supported the porch roof, but sometimes intermediate posts also helped support the roof.

From the late 18th century, Americans built many substantial two-story log houses in towns throughout the country. In rural areas, they sometimes built two-story log houses to replace earlier cabins. Just as often, they added a second

story to a single-story hewn-log house (figure E7). They accomplished the addition by removing the roof and gables, constructing a second floor, laying additional courses of logs, and building a new roof, or reassembling the old one. Sometimes, each generation of owners expanded a log building by adding on new log pens or masonry or wood frame extensions. They often added a rear “ell” or infill construction to link a formerly freestanding outbuilding, such as a kitchen, to the main house. Such a layering of alterations is part of the evolution of many log buildings.



Figure E6—The Pretty Prairie Station, built in Montana in 1924 on the Lewis and Clark National Forest in the Northern Region, is a classic Rocky Mountain style double pen log cabin.



Figure E7—This substantial building in Frisco, CO, began as a small log cabin. Over time, the owners constructed a two-story addition above and beside the original cabin and added a wing behind it.

Foundations

Most builders set their log cabins on foundations of some sort. To save time, some builders set their cabins on bare dirt. Cabins set directly on the ground usually had dirt floors and were intended as temporary shelters. Logs rot much more quickly when in contact with soil (figure E8) than when supported above the ground.



Figure E8—The builders constructed this cabin directly on the ground. The lowest logs of the cabin are rotting because the ground holds moisture against the logs, which enables fungi to invade the wood.

Log building foundations varied considerably in quality, material, and configuration, depending on when and where they were built, the climate, the builder's skill and knowledge, and the intended use of the structure. Builders frequently constructed the earliest log cabins on log pilings or log sleepers set directly on or in the ground (figure E9). If they intended to build a more permanent structure, they frequently used stone or brick piers that allowed air to circulate beneath the sill logs. Piers could be as simple as a large rock with a relatively flat top and bottom under each corner of the cabin (figure E10), or could consist of several courses of mortared or dry laid stone or brick. In warm, humid climates where wood decays more quickly, piers tended to be taller than in cooler or dryer climates. In cooler and drier climates, builders sometimes constructed mortared or dry laid rock walls to fill the spaces between the piers and discourage animals from crawling under the buildings.

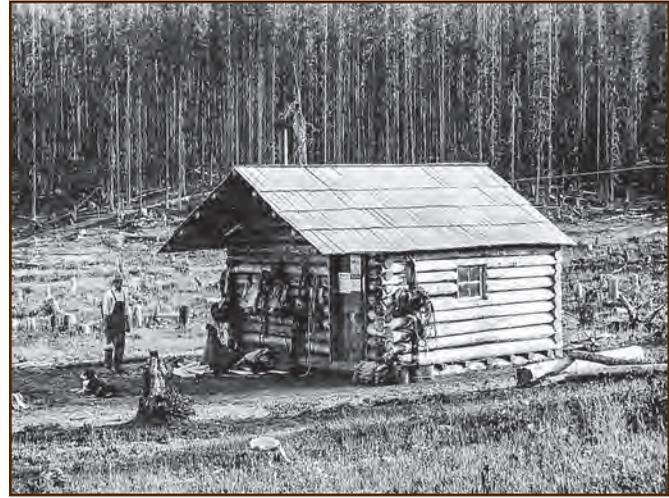


Figure E9—The log sleepers that support the Clearwater Springs Ranger Station cabin are clearly visible under the log floor joists in this photo. The builders constructed the cabin in 1913 and used it as a summer station in the Blue Mountains (Pomeroy Ranger District, Umatilla National Forest, Pacific Northwest Region).



Figure E10—The builders constructed the assistant ranger's house at the Landmark Ranger Station on rock piers in 1936. The Landmark Ranger Station now is a seasonal-use guard station on the Cascade Ranger District in central Idaho (Boise National Forest, Intermountain Region).

Builders also commonly set log cabins on rock foundation walls, though the foundations seldom had footings and didn't usually extend very far under the surface of the soil. Builders generally didn't include full cellars in the original construction of most of the earliest log buildings, but later dug root cellars under a portion of some buildings. Concrete foundations and basements under log structures didn't become common until the early 1900s.

Corner Notching and Other Fastening Techniques

Corner notching is a characteristic feature of log construction. Most notching methods provide structural integrity by locking the log ends in place, providing rigidity and stability. Like the floor plan, the type of corner notching sometimes can be a clue to its age and the ethnic origin of a cabin's builders, but don't draw conclusions based only on notching details.

Builders used several corner-notching techniques throughout the country. Simple saddle notching (figure E11), which demands minimal time and hewing skill, may be the most common. "V" or steeple notching (figure E12) also

is common. Full dovetail notching (figure E13) is one of the sturdiest notching techniques, but also is the most time-consuming to accomplish and requires a high level of craftsmanship. Half dovetail notching (figure E14) is more common because it provides nearly as secure a joint as full dovetail but is easier to craft. Square notching (figure E15) was secured with pegs or spikes because the logs did not interlock. A variation of square notching, called step and lock notching (figure E16), provided some stability. Historically, builders seldom used butt and pass corners. These corners require evenly sized or milled logs stacked in level rows, which alternately butt against and protrude past the perpendicular log, and must be fastened using pegs or spikes.



Figure E11—A saddle-notched cabin corner.



Figure E12—A steeple- or V-notched, cabin corner.



Figure E13—A full-dovetail-notched cabin corner.



Figure E14—A half-dovetail-notched cabin corner.



Figure E15—A square-notched cabin corner.



Figure E16—A step-and-lock-notched cabin corner.

Some of the earliest eastern cabins and most 19th-century western cabins (particularly those with saddle notching) had an extended log end or crown (figure E17) beyond the corner notches. The builders sometimes left the crown ends ragged, but often shaped them. Chopper-cut crown ends were wedge-shaped and oriented horizontally, vertically, alternately horizontally and vertically, or randomly (figure E18). The builders sometimes gave crown ends a conical or beaver-chewed shape. Rustic style structures, in particular, had pronounced or exaggerated crowns that people sometimes cut progressively shorter toward the top of the wall, creating a buttress effect at the corners of the building (figure E19). Builders frequently sawed ends evenly for a “Lincoln Log” look (figure E20). Builders seldom used extended crowns on buildings with dovetail or square notching and, of course, couldn’t use them on buildings with corner posts or boards.

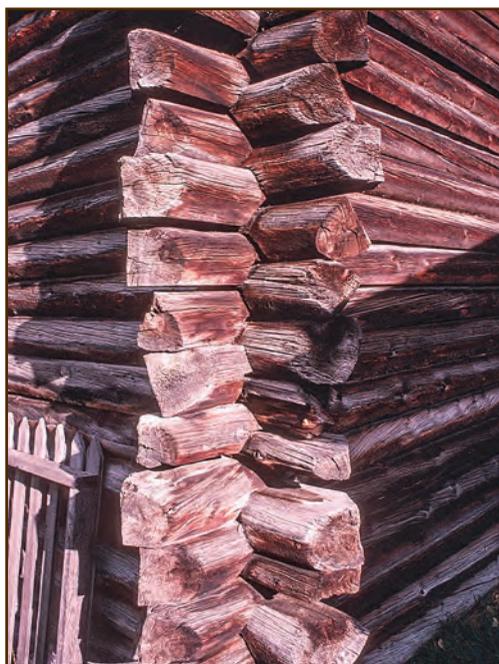


Figure E17—Irregular, wedge-shaped crown ends that extend beyond the corner notches.



Figure E18—The random length and orientation chopper-cut crown ends extend beyond the corner notches on the Horse Prairie Guard Station (Beaverhead-Deerlodge National Forest, Northern Region).



Figure E19—The crown ends of the logs at the corners of the rustic style Elk Creek Ranger Station Office are sawn longer near the ground for a buttress effect. The 1934 office is now a work station of the Lowman Ranger District (Boise National Forest, Intermountain Region) in southwestern Idaho.



Figure E20—The evenly sawn crown ends impart a “Lincoln Log” look to the porch of the 1907 Upper Mesa Falls Lodge. This two-story log structure with a veranda was closed in the 1930s. It reopened after the Targhee National Forest (Intermountain Region) partnered with the Idaho Department of Parks and Recreation to renovate the building in 1993.



Figure E21—The stage stop in Virginia Dale, CO, has a post and beam structure with stacked log infill walls. The original roof was cedar shingles.



Figure E22—The builders drove pegs through the corner posts into tenons of each wall log on the 1843 Zeigler House in Dalmatia, PA.

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Some post and beam-supported buildings had stacked logs as infill walls between the posts (figure E21). Usually, builders pegged or nailed the log ends into the corner posts.

Builders sometimes carved tenons into the log ends and inserted them into grooves or mortise holes in the posts. They often drove pegs or nails through the corner post into the tenons of the wall logs (figure E22). These methods are referred to as post and beam or *pièce sur pièce* (log on log).

When the builders were in a hurry and not concerned about making the building last a long time, they sometimes used spikes, nails, or pegs to attach logs to vertical corner planks. This corner-fastening method is called hog trough (figure E23).



Figure E23—The nails are visible where the builder nailed this hog trough board corner to the stacked log walls.

In an even less common log construction method, builders positioned wall logs vertically, and usually secured them at the top to a roof plate and at the bottom to a sill plate. This method is called palisade or stockade construction (figure E24). If the wall logs are oriented vertically with wide straw- or horsehair-reinforced daubing, the construction may be referred to as poteaux sur sole (post on sill).

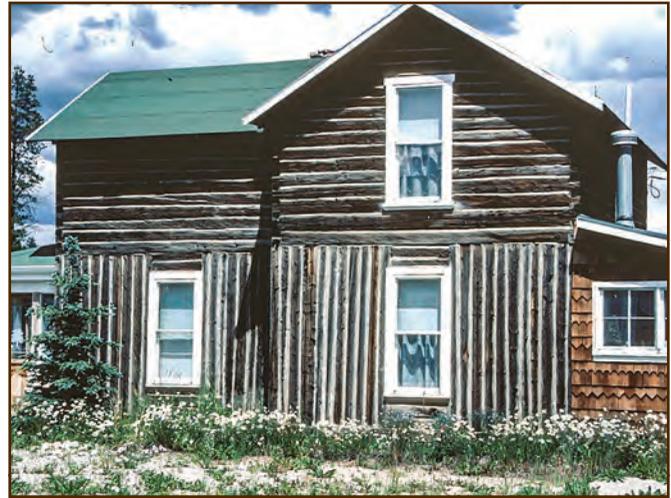


Figure E24—The builders constructed the first floor of this home in Frisco, CO, using stockade style log construction, except at the windows, where they stacked the logs horizontally.

Selecting Logs

Although availability was the main factor influencing the species of trees settlers selected for use in historic log construction, they usually preferred long, straight, rot-resistant logs. In the East and Midwest, they commonly chose chestnut and white oak. Cabin builders also used northern white cedar, fir, and pine in areas where those species were plentiful. In the Southeast, people used cypress where it was available. West of the Cascade Mountains in the Pacific Northwest and in coastal Alaska, people chose western red cedar, yellow cedar, or Port Orford cedar because these species were rot resistant. People sometimes preferred Douglas fir because its long, straight trunk had little taper. Settlers chose redwood in northern California for both its rot resistance and straight trunks. Cabin builders chose Douglas fir and larch (sometimes called tamarack) in the inland Pacific Northwest and Rocky Mountains where the trees were available. They chose Ponderosa pine and lodgepole pine where Douglas fir or larch weren't available.

When people were in a hurry and didn't intend to stay in a cabin for more than a few years, they tended to be less picky about log species. They often used whatever trees were closest at hand, including aspen and cottonwood. Aspen, cottonwood, and other poplar species deteriorate quickly if they're not kept dry, but are relatively easy to shape. Nondurable species choices were particularly typical of miners' cabins during gold rush periods.

Builders sometimes constructed cabins using more than one species. They used harder, heavier, rot-resistant wood, such as white oak, for the foundation and sill logs, but might use lighter, more easily hewn wood, such as yellow poplar, for the upper log courses.

Tools and Shaping the Logs

One reason builders commonly constructed pioneer cabins of logs is that a log cabin doesn't require many different tools to construct. If necessary, a log cabin could be built using as few as two tools: a felling axe and a crosscut saw.

A log cabin builder used a felling axe or crosscut saw to chop or saw down the tree and cut the logs to length. If the builder didn't cut trees immediately adjacent to the cabin location, he used horses to skid the logs to the cabin site (figure E25). Builders debarked logs using a drawknife, but if they had no knife or were in a hurry, they could use the logs without removing the bark.



Figure E25—Builders used a team of horses to drag logs to the location where they constructed the original Slate Creek Ranger Station (Nez Perce National Forest, Northern Region) in 1909.

Most builders constructed cabins of round logs (figure E26), but they sometimes sawed logs into thick planks, or used a broadaxe or adz to hew one or more sides of the logs flat (figure E27). Similarly, most builders used round logs for roof framing and floor joists, but sometimes hewed or sawed them from larger logs.

Builders found log dogs handy to keep logs in place while working on them. They used an axe, hatchet, or saw to make notches. Sometimes they used a log scribe (figure E28) to mark the notch and a chisel to make the cuts more precise. To



Figure E26—The builders constructed the Stolle Meadows Guard Station on the Cascade Ranger District (Boise National Forest, Intermountain Region) in central Idaho using round logs carefully selected for similar size and little taper.



Figure E28—An assortment of older log scribes.



Figure E27—The builders constructed the Switzer House in Nevada City, MT, using hewn logs. This building is one of just a few log duplexes ever built.



Figure E29—This crew of three men used ropes and skid logs to raise the logs into place on the upper portions of the walls of the Slate Creek Ranger Station (Nez Perce National Forest, Northern Region) during construction in 1909.

make a tight cope, they sometimes used a log scribe to mark the contour of the lower log on the upper log.

Using skid poles and ropes, only a few people are necessary to raise logs into position (figure E29). Although people usually notched the logs at the top and bottom of windows and doors as they set them, they usually sawed out the rest of the logs for these openings after setting all the logs into place.

Sometimes the builders allowed the log structure to season and settle for a year before cutting window and door openings. After cutting the openings, they immediately framed them to help hold the logs in place.

Whether builders used two, eight, or more tools to build a log cabin, log cabin construction was far less complex than the post-and-beam, masonry, or balloon framing practices that builders commonly used in urban areas.

Chinking, Daubing, and Coping

Builders usually filled the horizontal spaces or joints between logs with a combination of materials, called chinking and daubing. Chinking and daubing seal the gaps between the logs in the exterior walls, protecting the building interior against driving wind and snow, blocking the entry of vermin, and helping the walls shed rain. Chinking refers to filler materials and daubing refers to the material used to seal out weather and provide a finished surface. People used chinking and daubing between logs because it was faster and easier than hewing or coping the logs to fit tightly together.

Builders filled and finished the spaces between cabin logs in many ways (see figure 192). Methods depended on available materials, the determination of the builder to seal the gap, the desired appearance of the joint, and the builder's skill. Historical chinking and daubing generally consisted of materials the builder could find nearby or obtain easily. The size of the joints between the logs dictated the amount of chinking and daubing necessary. If the joint gaps were significant, the builder needed both chinking and daubing. If the joint gaps were small, it is likely that the builder only used daubing.

If the gaps between the logs were large, chinking could be a two-part system. First, the builder stuffed a dry, bulky, rigid blocking, such as wood slabs or stones (figure E30), into the joint. Next, the builder used soft packing filler, such as oakum (figure E31), moss, clay, fabric, newspaper, or dried animal dung, to fill the cracks between the blocking. Sometimes the builder tacked nails in on the lower log to hold the blocking or filler in place before applying the daubing to cover both the chinking and the nails.

Daubing, which completes the system, is the outer finish layer (figure E32). Daubing traditionally was a wet-troweled mixture of some combination of sand, clay, and lime (figure E33) and, after 1900, sometimes included Portland cement in addition to or completely replacing the lime. Builders often sloped daubing to protect the tops of logs and shed rain.

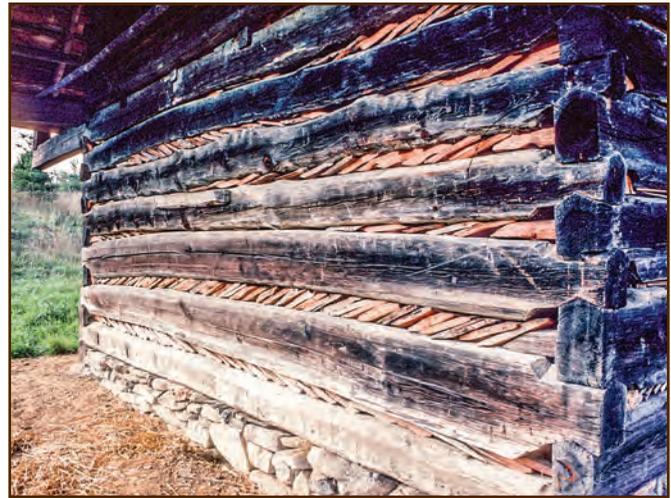


Figure E30—The builders used slate as chinking between the logs on this cabin. They laid the pieces of slate on wood blocking to angle them toward the outside of the building to help shed rain.



Figure E31—The builders used oakum for chinking on the office/cookhouse building at the Moose Creek Wilderness Station (Nez Perce National Forest, Northern Region), built in 1921.

Sometimes builders used narrow wood strips as an edging for the daubing (figure E34). Occasionally, they used more inventive methods, such as wire tacked to the logs, as reinforcement for the daubing (figure E35). Builders often used nails only partially driven into the logs as a sort of reinforcement to help keep the daubing in place.



Figure E32—The builders sloped the finely crafted daubing on this hewn log home to shed rain and protect the tops of the logs.



Figure E34—The builders used small pieces of wood trim as edging for the sloped daubing on this hewn log cabin. Preservation crewmembers replaced some of the edging (brighter colored wood) when they repaired the daubing.



Figure E33—The daubing on this cabin in Sunlight Basin in Wyoming has an unusual texture. It probably was made using local limestone or sand that contained the fossilized remains of small sea creatures. The cabin originally was part of a homestead ranch, but now is part of a Wyoming Game and Fish field station.



Figure E35—The builders tacked smooth wire to the logs in a zig-zag pattern to provide reinforcing for the daubing on the Fritz Cabin (Dubois Ranger District, Caribou-Targhee National Forest, Intermountain Region).

On some cabins, builders used wood strips or split log poles to cover the gaps between logs (figure E36). They daubed some cabins using tar instead of a mortar-like mix, creating a black line between logs (figure E37) rather than a white line.



Figure E36—The builders used carefully shaped and fitted quartersawn poles instead of daubing on this cabin.

Daubing mixes are sturdy but are, by design, the least durable part of a log building. Logs expand and contract with changes in temperature and humidity and, like all buildings, log cabins settle a little over time. When cabins settle, part of the structure has to give. Fortunately what gives normally is something that is easy to replace: the daubing. Daubing is also susceptible to cracking because of freeze-thaw cycles.

Sometimes, when daubing cracks and falls out from between the logs, chinking also falls out. Inspect chinking and daubing regularly and patch or replace it whenever you observe damage.

Tight-fitting plank-hewn or scribed-fit round logs have little or no need for chinking and daubing. People usually refer to scribed-fit round logs as “coped” or “Swedish coped” logs (figure E38). Coping was more typical of Swedish or Finnish techniques, and was not as common in American log construction until the 1900s.



Figure E37—The tar daubing on the 1935 Horse Prairie Guard Station (Beaverhead-Deerlodge National Forest, Northern Region), a fairly common daubing material choice in the Northern Region during that time period, has the effect of accenting the joints between logs.



Figure E38—The builders coped the logs of this workshop, providing a tight fit between the logs. They used small wood inserts to more completely seal the space between logs at the crown ends, but daubing was not necessary. The workshop originally was a small barn built in 1936 on the Crandall Ranger Station (Shoshone National Forest, Rocky Mountain Region).

To provide ventilation, people constructed some log buildings with intentional gaps between logs and didn't use chinking or daubing. Corncribs, barns (figure E39), and other storage buildings often have intentional gaps between the logs.



Figure E39—The builders intentionally spaced the logs of this barn to provide ventilation at the Moose Creek Wilderness Station (Nez Perce National Forest, Northern Region) in north central Idaho.

Exterior Wall Treatments

The builders didn't cover the exterior logs of most early cabins with siding materials when they originally constructed them. Owners eventually covered many 18th- and 19th-century log houses, especially those east of the Mississippi, with exterior wood lap siding, shingle siding, or stucco. The owners felt the siding provided a more finished, fashionable, or prosperous appearance. The siding or stucco also helped insulate and protect the logs from weather and insects. The owners generally nailed vertical wood furring strips to the logs before applying siding or stucco. The furring provided an even base on which to nail the siding or wood lath for stucco. Builders could adjust furring thickness so the finished wall surface would be plumb.

Siding and trim could disguise the cabin's simple construction beneath Georgian, Federal, and other architectural styles (figure E40). To harmonize the whole, owners frequently covered—or recovered—log houses with siding when they erected an addition, especially if the addition was wood frame construction. Owners gave some log buildings, especially those used as businesses, framed and sided fronts (figure E41), usually with an extended height that hid the gable end of the roof (called a false front), to make the building appear more imposing and conform to current styles.



Figure E40—The owner added frame window bays and trim to this log home in Breckenridge, CO, to achieve a Queen Anne style.

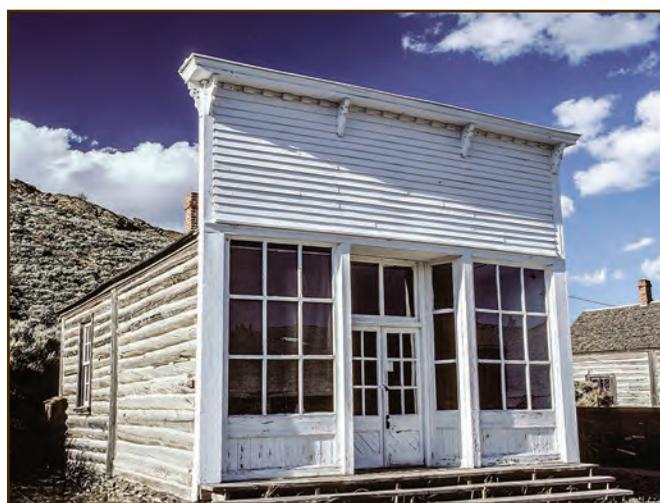


Figure E41—The owner added a false front consisting mainly of windows and clapboard siding to this log building in South Pass City, WY, to make it look more substantial and prosperous. *Photo © Andrew Gulliford; used with permission.*

In some instances, owners whitewashed the surface of the logs on the outside (figure E42) or the inside of the cabin. Whitewash is a very low-cost type of paint made from slaked lime (calcium hydroxide), chalk (whiting), and sometimes coloring agents or other additives. Whitewash discourages insects and seals hairline cracks in the daubing and between the daubing and logs. Whitewash is not a very durable paint; like daubing, it must periodically be reapplied.

Owners didn't usually cover 20th-century rustic-style log buildings with siding, because the logs were intrinsic to the desired appearance of the buildings. Owners frequently oiled, varnished, or stained the logs to emphasize the rustic appearance and to protect the logs.

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Figure E42—The logs of the Ryburn House at Bannack State Park in Montana are whitewashed. The L-shaped building has a cross gable roof.

Roofs

Builders framed the roofs of historic log buildings with a variety of different systems. Like log house plans and corner notching styles, the roof-framing systems often were variations on ethnic and regional carpentry traditions. Purlin-framed roofs are more typical of Scandinavian construction, western cabins, and 20th-century rustic styles. Rafters are more common east of the Mississippi River. Trusses also are more common east of the Mississippi River, and in wide buildings. People made earlier trusses with wood mortises, tenons, and pegs, but iron or steel rods and tie plates became more common after the mid-1800s. Purlins, rafters, and trusses for log cabin roofs usually are round logs, but sometimes are hewn or sawn. All three roof-framing methods are found throughout the country.

Builders nearly always used logs to construct the upper gable walls of log cabins if purlins supported the roof. They commonly used vertical or horizontal siding to cover pole-framed or sawn wood-framed gables when they framed roofs with rafters or trusses.

Although simple gables (figure E43) are the most common roof shape for log cabins, the shapes of log building roofs are as diverse as those for any other kind of building. Cross

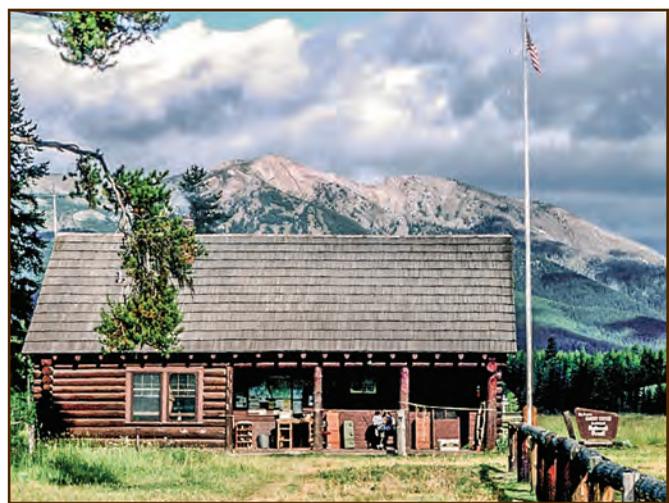


Figure E43—The Big Prairie Ranger Station in northwest Montana (Flathead National Forest, Northern Region) has a simple gable roof covered with cedar shakes.

gables (see figure E42), gambrels (figure E44), jerkin head (or clipped gable) (figure E45), hip (figure E46), shed, and pyramid (figure E47) roofs all can be found on log buildings.



Figure E44—This barn at Shennago Creek Ranger Station (Gallatin National Forest, Northern Region) in Montana has a gambrel roof with a shed roof extension on one side.



Figure E46—The Big Creek cabin (Gallatin National Forest, Northern Region) in Montana has a hip roof (and a broken window that was later repaired).

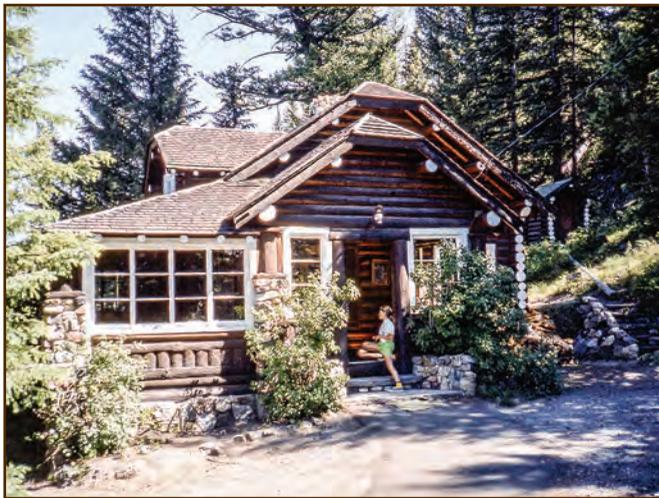


Figure E45—The Johnny Sack Cabin at Big Springs in southeast Idaho has a jerkin head (or clipped gable) style roof. The owner constructed it in the early 1930s on land leased from the Forest Service. It now serves as a visitor information center jointly managed by the Caribou-Targhee National Forest (Intermountain Region), Fremont County Parks and Recreation, and the Island Park Historical Society.



Figure E47—The two-story Judith Ranger Station (Lewis and Clark National Forest, Northern Region) in central Montana has a pyramidal roof covered with cedar shingles.

Builders used wood shakes installed directly on purlins or on lath or shingles on solid or skip sheathing as the original roof covering for most log cabins. They preferred cedar shingles (see figure E42) or shakes (see figure E43) where cedar was available; cedar is rot-resistant and easier to split into shingles or shakes than most other species. As wood shingle roofs deteriorated, some owners replaced them with standing seam or ribbed metal roofs (figure E48), many of which continue to provide good service today. Later settlers west of the Mississippi were likely to roof their log buildings with metal or asphalt rolled roofing (figure E49). Settlers sometimes constructed sod roofs (figure E50) on log cabins built in grassland areas. Owners reroofed some older log buildings in the 20th century with asphalt shingles. For some rustic log buildings in the West and for some Great Camps in the Adirondacks, builders used asphalt shingles for the original roof material.

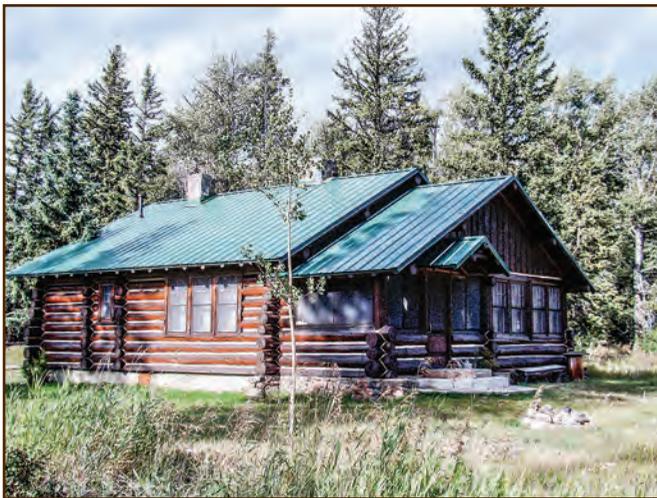


Figure E48—The owner replaced the original roofing on this log cabin in Sunlight Basin in Wyoming with ribbed metal roofing at some point during its history. Replacing historic roofing materials with modern materials usually is not recommended. The cabin originally was part of a homestead ranch that operated as a dude ranch during much of the early and mid 20th century. It now is part of a Wyoming Game and Fish field station.



Figure E49—The Hogback cabin (Lolo National Forest, Northern Region) has unusual vertically applied asphalt rolled roofing. This photo shows new roofing that is identical to the original roofing.

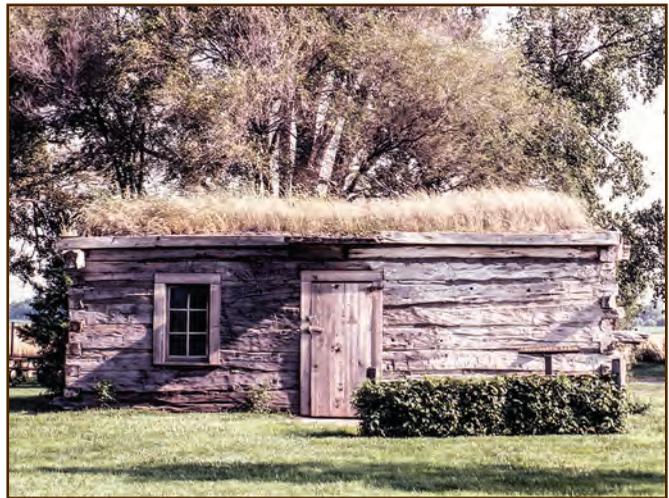


Figure E50—This log cabin at Fort McPherson in Nebraska has a sod roof. “Buffalo” Bill Cody built the cabin for his family while he served as a scout for the U.S. Army’s 5th Cavalry; they moved there in 1870. Photo © Andrew Gulliford; used with permission.

Chimneys, Fireplaces, and Wood Stoves

Ethnic tradition and regional adaptation also influenced fireplace and chimney construction and placement. Builders usually constructed chimneys in early log cabins of stone or brick, a combination of the two, or even clay-lined, notched logs or smaller sticks. Later builders frequently installed metal flues and wood stoves instead of fireplaces. The chimneys or flues of log buildings erected in cold climates tended to be located entirely inside the house (figure E51) to maximize heat retention. In the South, where winters were less severe, builders typically constructed the chimney outside the log walls (figure E52) to minimize the heat added to the building interior during summer cooking. With the advent of more efficient heating systems, owners frequently demolished interior chimneys or relocated and rebuilt them to maximize interior space.

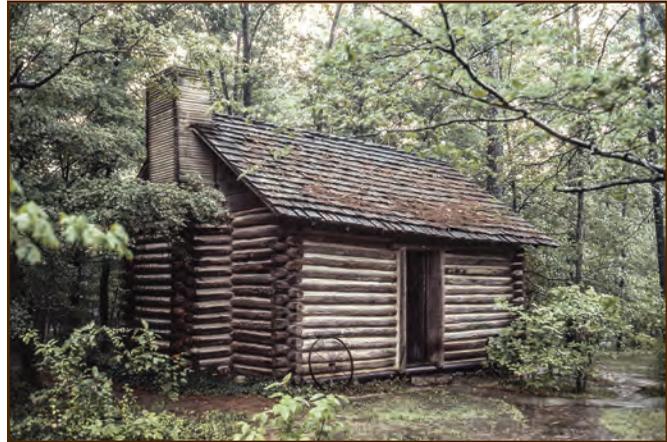


Figure E52—This small cabin, built shortly after the Civil War, was the original structure for the school that eventually became Berry College in Rome, GA. The log exterior surface of the fireplace and flue is unusual. *Photo © Andrew Gulliford; used with permission.*



Figure E51—Ranger James Cayton built the Cayton Ranger Station in 1909 as a combination house and office. The house had an internal chimney. Cayton was one of the original 75 Forest Service rangers. *Photo © Andrew Gulliford; used with permission.*

