PARK STRUCTURES *and* FACILITIES

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prepared by the

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FOREWORD

In any area in which the preservation of the beauty of Nature is a primary purpose, every modification of the natural landscape, whether it be by construction of a road or erection of a shelter, is an intrusion. A basic objective of those who are entrusted with development of such areas for the human uses for which they are established, is, it seems to me, to hold these intrusions to a minimum and so to design them that, besides being attractive to look upon, they appear to belong to and be a part of their settings.

For some years, the National Park Service, State Park authorities and other agencies which administer natural park areas have been attaining a constantly improved technique of design and execution for the structures that are required for safe, convenient and beneficial public use of these parks. Progress in this field has been especially marked since the inception of the Emergency Conservation Work program, with its steadily increasing and sound emphasis on development of recreational facilities, particularly in State Parks. Stimulated by the problems this work has presented, competent architects have produced designs—and seen them converted into reality—that denote a real advance in this somewhat specialized field.

Herein are presented some of the successful natural park structures,—a group by no means limited to those produced during the past two years or to those designed and erected under National Park Service supervision. Since tastes differ and since varying experience produces varying conclusions, it is hardly to be expected that there will be unanimous agreement as to the wisdom of including certain of the selected designs, or that no one will take issue with any of the points raised in the discussions that form an important part of the work. Selection and discussion alike, however, are the result of most careful and conscientious study.

This book is certain, I believe, to prove of exceptional value to all those who are concerned with the design of park structures. It should be immensely helpful in stimulating still further improvement in this special field of design. The interest manifested in it in advance of publication indicates a widespread conviction that there is a real place and a real need for such a compilation.

ARNO B. CAMMERER, *Director*
National Park Service

ACKNOWLEDGMENT

Though it is hoped that this volume will be widely used and that it will exert a beneficial influence on the design of park structures everywhere, its preparation was undertaken primarily because of a pressing need in connection with the Emergency Conservation Work now under way in National and State Parks throughout the country. Few architects had had any very extensive experience in meeting the special demands of park structure design as applied to natural areas; nor did any volume such as this one exist anywhere. For this reason, Emergency Conservation Work funds, sufficient to defray the cost of publication, were allotted for the purpose by Robert Fechner, Director of that popular and successful undertaking, whose sympathetic understanding of the major problems of park and recreation development has been an immensely helpful and encouraging factor of the work since its inception.

The task of collecting and sifting the mass of available material was undertaken by a committee from the administrative and professional staffs of the National Park Service. The membership was as follows:

Albert H. Good, *Architect, State Park Division, Chairman and Editor;* Paul V. Brown, *Regional Officer, Fifth Region;* Herbert Maier, *Regional Officer, Seventh Region;* Norman T. Newton, *Landscape Architect, Second Region;* Oliver G. Taylor, *Deputy Chief Engineer, Eastern Division, Branch of Engineering;* Thomas C. Vint, *Chief Landscape Architect, Branch of Plans and Designs;* Dorothy Waugh, *Landscape Architect and Artist, Second Region.*

It is felt that the National Park Service was especially fortunate in having available the services of Mr. Good as chairman and editor. To his already heavy duties as Architect for the State Park Division of the National Park Service, Branch of Planning, was added responsibility for actual performance of the bulk of this very large task. He it was who assembled the photographs and plans and submitted them to the scattered and busy members of the committee. He also wrote the general discussions and the comment on individual designs, which give the whole product its individuality and character. The intelligence and enthusiasm with which he carried on his work fully deserve this brief acknowledgment.

For the National Park Service, I also wish to express gratitude and appreciation to the many others who have in any way assisted in this undertaking, and especially to Herbert Evison, Supervisor of the State Park Division, whose helpful counsel, generously given, and based on wide experience in State Park work, has been of immense value.

Conrad L. Wirth, *Assistant Director*
National Park Service

APOLOGIA

LAMENTABLE IS THE FACT that during the six days given over to Creation, picnic tables and fireplaces, foot bridges, toilet facilities, and many another of man's requirements even in natural surroundings, were negligently and entirely overlooked. This grave omission, his persistent efforts have long endeavored to supply, with varying success, or lack of it, as one may choose to view it.

Confronted with this no less than awesome task assuming to supply these odds and ends undone when the whistle blew on Creation, man may well include, pending achievement of greater skill and finesse, that only the most persistent demands for facility shall trap him into playing the jester in nature's unspoiled places. He may well realize that structures, however well designed, almost never truly add to the beauty, but only to the use, of a park of true natural distinction. Since the primary purpose of setting aside these areas is to preserve them as nearly as possible in their natural state, every structure, however necessary, can only be regarded as an intruder. Confronted with the so-called development of such areas for his own greater use and enjoyment, he has on occasion recognized these first principles, to the masterly accomplishment of rejecting, sometimes with a semblance of consistence, the temptation to embellish nature's canvas. He has sometimes even confined himself to building only such structures as long and thoughtful consideration demonstrates he cannot do without. The success of his achievement is measurable by the yardstick of his self-restraint.

In frequent cases his artistry has almost matched his developing repression. He has come slowly to sense that, if the trespass is unavoidable, it can be done with a certain grace. The need proved, his undertaking is somehow legitimatized, or not, by harmony or the lack of it. He is learning that harmony is more likely to result from a use of native materials. He shows signs of doubting the propriety of introducing boulders from a distance into a setting where nature failed to provide them, or of incorporating heavy alien timbers into structures in treeless areas. He sometimes even indicates a faltering of faith in the precision materials produced by his machines, and so evidences, along with a creditable humility, his growing understanding of the fitness of things.

As he comes vaguely to sense that he cannot improve on Nature, but rather can only facilitate the way to his understanding and enjoyment of her manifestations, he tends to a kindred humility toward the remote past. He becomes aware of the unvoiced claims of those long gone races and earlier generations that tracked the wilderness, plains or desert before him. In fitting tribute he graces his encroachments by adapting to his structures such of their traditions and practices as come within his understanding. In consequence, the heritage from the early settlers, English and Dutch, still points the way along the Atlantic seaboard; something of the influence of Old France lingers along the trail of Père Marquette and the fur traders who followed him. Reaching up from the mouth of the Mississippi, from Florida, and Old Mexico, Spanish traditions and customs rightfully flourish. Over the covered wagon routes the ring of the pioneer's axe is echoed in the efforts of today. The habits and primitive ingenuity of the American Indian persist and find varied expression in park construction over wide areas. All these influences contribute to a growing variety in expression promising eventual high attainment.

The style of architecture which has been most widely used in our forested National Parks, and in other wilderness parks, is generally referred to as "rustic." It is, or should be, something more than the worn and misused term implies. It is earnestly hoped that a more apt and expressive designation for the style may evolve, but until it appears, "rustic," in spite of its inaccuracy and inadequacy, must be resorted to in this discussion. Successfully handled, it is a style which, through the use of native materials in proper scale, and

through the avoidance of rigid, straight lines, and over-sophistication, gives the feeling of having been executed by pioneer craftsmen with limited hand tools. It thus achieves sympathy with natural surroundings and with the past.

In high, mountainous and forested regions the various structural elements of rustic construction —logs, timbers, rocks—must be reasonably overscaled to the structure itself to avoid being unreasonably underscaled to surrounding large trees and rough terrain. In less rugged natural areas, the style may be employed with less emphasis on oversizing. For pleasing harmony, the scale of the structural elements must be reduced proportionately as the ruggedness and scale of the surroundings diminish. When this recession in scale reaches a point at which there is any hint of "twig" architecture masquerading under the term "rustic," the understanding designer will sense immediately its limitations and take refuge in some widely different style.

That the so-called "rustic" style offers, if anything, more pitfalls to failure than do the more sophisticated expressions, is not widely enough understood. And while generally speaking it lends itself to many semi-wilderness regions perhaps better than the others, its use is by no means appropriate to all park areas. This is instantly demonstrated by recalling the wide range of dominant characteristics of our parks. Spectacular snow-covered mountain peaks, dramatic primeval forests, open expanses of arid desert or limitless prairie, shifting sand dunes, gently rolling woodland and meadow, semi-tropical hammock, are not to be served appropriately by a single structural expression. A range of architectural styles as varied as these backgrounds must be employed before our park architecture will have come of age.

Nothing is more indicative of lack of a proper sense of values in park technique than the frequently expressed determination to "make a feature" of a shelter or other park structure. The features to be emphasized and stressed for appreciation in parks with which we are here concerned are the natural features, not the man-made. After all, every structural undertaking in a natural park is only a part of a whole. The individual buildin or facility must bow deferentially before the broa park plan, which is the major objective, never t be lost sight of. The park plan determines th size, character, location and use of each and ever structure. Collectively, these should be properl interrelated; at the same time they must be closel and logically related to the park plan to insure it workability and harmony. Otherwise, there wil result, as someone has expressed it, a costly but in effectual collection of "spare parts."

Although a park structure exists solely for th use of the public, it is not required that it be see from some distance In its most satisfying expre sion, the park structure is designed with a view t subordinating it to its environment, and it is lo cated so that it may profit from any natural screen ing that may exist. Suitable signs marking th way to a particular park building which has bee appropriately retired are to be preferred to th shock of finding a building intruding at a foca point or visible for great distance.

The subordination of a structure to enviro ment may be aided in several ways. One of thes is to screen the building by locating it behin existing plant material or in some secluded spot i the terrain partly screened by some other natur feature. In the absence of such screening at a sit otherwise well suited for the building's functio an adequate screen can be planted, by repeatin the same plant material which exists nearby. Pre erably, structures will be so located with referen to the natural features of the landscape that it unnecessary to plant them out.

The color of the exteriors, particularly th wooden portions of park structures, is another mo important factor in assimilation. Naturally suc colors as occur in, and are commonest to, the imm diate surroundings serve best. In general, war browns will go far toward retiring a wooden buil ing in a wooded or partly wooded setting. A lig driftwood gray is another safe color. Where co trast is desired to give architectural accent to min items, such as window muntins, a light buff stone color may be sparingly used. Strange enough, green is perhaps the hardest of all colo

o handle, because it is so difficult to get just the orrect shade in a given setting and because it almost invariably fades to a strangely different hue. A green roof might be expected to blend with the green of the surrounding trees, yet because a mass of foliage is an uneven surface, intermingling other olors, and broken up by patches of deep shadow nd bright openings, and because a roof is a flat plane which reflects a solid continuous color, anything but harmony results. Brown or weathered gray roofs, on the other hand, blend with the colors of earth and tree trunks to much happier results.

While structures should be so designed and so ocated that it will not be necessary to plant them ut, the proper introduction of vegetation along he foundations will gracefully obliterate the otherwise unhappy line of demarcation between building and ground. Rough rock footings artfully contrived to give the impression of natural rock outroppings, are a means of blending the structure o the site. A batter to a stone wall, with skillful buttressing of the corners, if done with true finesse, will often bring to the building that agreeable look of having sprung from the soil. Park structures giving that impression are of the elect.

Some park structures give hint of their designers' ong dalliance in cities, where architectural design as become a matter of one façade. It should be remembered that park buildings will be viewed from ll sides, and that design cannot be lavished on one levation only. All four elevations will be virually front elevations, and as such merit careful tudy. Admittedly, one side of major park buildngs will always provide for service, and while enlosures on park areas are to be deplored and only nstalled where necessary, a palisade or some other uitable enclosure on this side of the building hould completely screen all service operations.

As a rule, park structures are less conspicuous nd more readily subordinated to their settings vhen horizontal lines predominate and the silouette is low. Verticality will therefore be voided wherever possible. This usually calls for roof low in pitch, perhaps not more than onehird. Too frequently, roofs needlessly dominate oth structure and setting.

The degree of that sought-for primitive "character" in park structures that native materials can contribute depends entirely on intelligent use. The quality, not the fact, of "nativeness" of materials is of value. Local stone, worked to the regularity in size and surface of cut stone or concrete block, and native logs fashioned to the rigid counterpart of telephone poles or commercial timber, have sacrificed all the virtue of being native.

Rock work needs first of all to be in proper scale. The average size of the rocks employed must be sufficiently large to justify the use of masonry. Rocks should be placed on their natural beds, the stratification or bedding planes horizontal, never vertical. Variety of size lends interest and results in a pattern far more pleasing than that produced by units of common or nearly common size. Informality vanishes from rock work if the rocks are laid in courses like brick work, or if the horizontal joints are not broken. In walls the larger rocks should be used near the base, but by no means should smaller ones be used exclusively in the upper portions. Rather should a variety of sizes be common to the whole surface, the larger predominating at the base. Rock should be selected for its color and hardness.

Logs should never be selected because they are good poles. There is nothing aesthetically beautiful in a pole. Logs desirable in the park technician's viewpoint are pleasingly knotted. The knots are not completely sawed off. The textural surface of the log after removal of the bark is duly appreciated and preserved. Strong as may be the immediate appeal of structures built of logs on which the bark is left, we do well to renounce at once this transitory charm. If the bark is not intentionally stripped, not only will this process naturally and immediately set in, but the wood is subjected to aggravated deterioration through the ravages of insects and rot. It is in the best interests of the life of park structures, as well as in avoidance of a long period of litter from loosening bark, and of unsightliness during the process, that there has come about general agreement that the bark should be entirely sacrificed at the outset.

This outline of the factors which make for the

desirable and appropriately rugged, handcrafted character of park structures would be woefully incomplete if consideration of roof texture were left unconsidered. The heavy walls of rock and timber which are urged as fitting to a natural environment are assuredly created in vain unless crowned with roofs having related character. Surmounted with roofs trivial in aspect and thin in fact, the heavy walls appear robbed of justification. Verge members in gables should tend to be oversized, eave lines to be thick, and the roofing material to appear correspondingly heavy and durable. Where wood shingles or shakes are used on a roof, these should be fully an inch in thickness if possible, and the doubling of every fifth course or so, unless the building is quite small, will bring the roof texture into more appropriate scale with the structure itself and with the other materials that compose it. The primitive character we seek to create is furthered tremendously if we shun straight rigid eave and course lines in favor of properly irregular, wavering, "freehand" lines. The straight edge as a precision tool has little or no place in the park artisan's equipment.

The structures necessary in a park are naturally less obtrusive if they are reasonably unified by a use of one style of architecture, limited construction methods, and not too great variety in materials. When a truly inappropriate style of architecture already exists in a park in which new work is contemplated, it is urged that the new buildings do not stubbornly carry on the old tradition. The best judgment available should be consulted to determine upon the style most appropriate to the area, and this then frankly and courageously launched. If the new style is the more appropriate one, it will prevail. In course of time the earlier, inappropriately styled buildings, will, in the very fitness of things, be eliminated.

Since structures exist in parks through sufferance, it follows that it is highly desirable in every area to keep down the number of them. A small area can be ruined by a clutter of minor buildings which, however necessary their purpose, seem to have been forced into every vista to inflict a consciousness of the hand of man. Two functions, or even more, where closely related at a given location, should be combined under one roof. This is not in defense of excessively large buildings. It is sound practice only within reasonable limits. It is based on a belief that a localizing of infection is preferable to an irritating rash of trivial structures all over an area. The grouping of two or more facilities under one roof tends to bring welcome variety to park structures generally. The limited range of expression of any simple, one-purpose building is vastly widened as other purposes are combined with it.

Confronted with the privilege of presenting examples of representative structures and facilities that have found place in our natural park areas, many decisions have been necessary in determination of a proper approach. Should such a compilation assume in the reader no fundamental knowledge of the subject, and become a park primer treating the subject "from the ground up" literally and figuratively? Should it seek to embrace in all detail every subject of possible interest to the park-minded, from the many linked but varied viewpoints of the architectural, landscape and engineering professions, assuming in the reader a consuming appetite for knowledge—in bulk? Need it concern itself with formulae and tables, diagrams and charts, rules of thumb and rules of fact? Should it become a repository of material, both technical and aesthetic, elementary and advanced, and already available, albeit from scattered sources?

The conclusion of the editing committee is that the call is for none of these things. It is firmly of the opinion that the aim should be toward a comprehensive presentation of structures and appurtenances in which principles held in esteem by park planners, landscape designers, engineers, and architects, have been happily combined in adequate provision for man's needs with minimum sacrifice of a natural setting.

By avoiding any tendency to be a primer, an encyclopedia, or a handbook of the subject, it has been hoped to focus more directly on the current trend in park structures and facilities. It is be

ieved that by making the subjects herein widely vailable for comparative study, the influence endered by each in itself will be widened to nerge into a forceful composite, to the advancement of park technique.

The structures and facilities shown are usually xistent in, or suited to, natural parks, as distinuished from naturalistic or formalized city parks. These latter are considered to be a field in themelves, very different in major concept, and better eated independently of the natural park areas as xemplified by our National and many of our State arks. Examples, however, from Metropolitan nd County Parks, which in their expression would e equally at home in a completely natural environment, are in some instances included for the ompleteness of the collection.

The subject matter has suggested three varieties f presentation. There are minor facilities, developed to a pleasing and thoroughly satisfying expression within certain utilitarian or technical mitations, which might with propriety be duplited in many localities. In such instances, it has een the endeavor to provide information in such omplete detail that close adaptation is made possible. This is by no means so much an invitation o indiscriminate copying, as a suggestion that little ojects once well done are often a more satisfactory olution to a recurring problem than a new creion claiming the sole and debatable distinction originality.

Another group embraces subjects eminently ited to particular locations, but promising little ccess with outright transplanting into another vironment. Detail of such subjects is purposely mited, and they are included simply in the hope hat they may exert an influence by conveying the arm and fitness of the subjects in their specific ttings and expressions, while flying a warning gainst too literal translation where some other diect, or an entirely different language, might better be used. It is intended to offer the spirit but ot the letter of such examples. Only reliance on e best professional advice can reasonably insure gainst structures appropriate in one locality beming hideous caricatures elsewhere. Only consummate skill and rare good judgment in adaptation can limit the spread of half-caste offspring, the very counterfeit exactness of which is pathetic testimony of the bar sinister relationship.

The third presentation is of successful accomplishments of highly individual problems, the factors fixing which are unlikely ever to be approximated in another problem. These are included in recognition of worthy attainment, to inspire in those to whom the more complex park structures may be entrusted in the future, a high purpose to approach their specific problems with equally refreshing individuality, ingenuity, and forthrightness. Plagiarism, subtle or obvious, in structures within this category would be a crowning stupidity.

It is felt that inclusion of examples of extraordinarily complex structures in parks would bring little to the practical usefulness of this collection. The more involved and extensive the structure, the more evident that it is the result of an altogether unique interplay of needs, topography, traditions, materials and many other factors. Beyond the borders of utter simplicity lie innumerable possible patterns, complex in varying degree. The duplication of any one such pattern is without rime, the approximation of it without reason. Readers will note the absence of many well-known and admired large-scale buildings of incontestable park character. These are held to be sanctified in a sense by their very success. They are omitted to avoid possible inference that they are imitable material.

The placing of some of the combination structures herein presented, within the chapter classifications established, may stand in need of explanation and defense. Such combination buildings are so numerous, that to create a separate classification for them would result in one very bulky and but loosely related group, at the expense of, and out of reasonable balance with, most of the other classifications. For this reason the allocation of a so-called combination structure to that heading which seems best to define the apparently dominant use of the building is the chosen alternative.

On one major point in the selection of material the editing committee failed to agree. The question, long debated, centered around honesty in the

use of materials in that wide-ranging style in park structures which we loosely identify, and as loosely term, "rustic" or "pioneer." One opinion insisted that park buildings should not appropriate the semblance of primitive structures without appropriating as well all the primitive elements and methods of the prototypes. It was held that there is no allowable compromise with true log construction; it must be rigidly adhered to in every detail if employed at all. Contrary opinion argued that there are not at hand today the seemingly inexhaustible resources of pioneer days, that to insist on the use of logs in today's park structures in the spendthrift fashion of our forefathers, might be logic in the aesthetic abstract, but in practice wastes those resources the conservation of which is at the very roots of the impetus toward park expansion. A straddling pacifist proposed that only the more important park structures should faithfully reproduce pioneer log construction, with the objective of preserving for observation and study the fast-disappearing frontier construction methods. Minor and oft-repeated units such as cabins, he argued, might well utilize some more economical, even though less picturesque and durable, method.

Here was an age-old controversy in a new setting. Taking into account the demands of present day economy and conservation principles, how far might we properly recommend departure from the forthright but prodigal construction of the pioneers? Dared we urge recourse to substitutes as a recommended or even acceptable wall surface finish for park buildings? Is there justification in the fact that the amount of timber stock required for one true log structure will provide material for three or four more or less adequate and pleasing structures to bloom or blight (the partisan reader may choose his own verb) in its place?

Only threats to turn the key on the jury until a verdict would be reached moved the proponents of the several schools of thought. Beyond all doubt every member of the committee was coerced through sheer horror at the prospect of enduring longer the enforced company of six others of heretical belief. At any rate, the perfect settlement was suavely reached by unanimous agreement to leave the matter unsettled. The committee remains stubbornly off the record on this controversial point. In offering herein examples that provoke argument and supply rebuttal for every viewpoint, it tosses the debate to partisan readers in the remote hope of an eventual conclusive opinion.

The intent in publication of this collection will be misconstrued if it is interpreted as providing source material for park structures, denying need for competent professional assistance in the creation of park buildings that may follow. The intent is the very opposite. The most completely satisfying subjects included herein are so, not as a result of chance, but because training, imagination, effort and skill are conjoined to create and fashion a pleasing structure or facility appropriate to a particular setting. Who then, but those of professional training and experience are equipped to decide that a perfect structural interpretation for one setting will sanction adaptation for another, and in what detail or degree modification will make the most of the conditions presented by another environment? If an existing structure is so admired that it persuades duplication, careful analysis will inevitably demonstrate that admiration springs from a nice perfection of the subject within one circumstantial pattern. As that pattern changes so must the structure change. To venture in translation without benefit of technical idiom foredooms to mediocrity if not to failure.

In connection with the subjects illustrated will be discovered a varied practice in the matter of credit lines. This proceeds, not from conscious intent to withhold credit where credit is due, but from a lack of enabling information. The editing committee regrets that the names of countless artisans, technicians and agencies whose talents and cooperation have brought distinction to the structures, and to the National Park Service the privilege of compiling this collection, go unrecorded. To all contributors, who with high purpose may have produced an entire park system, a skillful planting, well-fashioned log, a photograph of character, a salute is offered. To those who herein must remain anonymous, an extra salvo!

ENTRANCEWAYS

IN ITS SIMPLEST and, theoretically, its most desirable expression, the park entranceway is merely a trail or a roadway taking off from a highway and leading into an area dedicated to public use and enjoyment. But it is not long permitted to retain so simple a form. Immediately, demands for traffic safety, through elimination of the hazards of steep grades, sharp turns, narrow rights of way, and obstructions to vision, assert themselves, and the simple unobtrusive entranceway is doomed.

To increase the safety factor for automobiles leaving or entering the main traffic flow at the entrance take-off, the highway is first widened, then the entrance road. The intersections are transformed into sweeping curves. Tree and plant growth, and perhaps a hillside, which interfere with sixty-mile-speed vision are eliminated. A road parking area is created. All, doubtless, necessary and inevitable "improvement," but the unself-conscious park entranceway, bleeding from the many wounds, expires.

It will be gloriously reborn, having sacrificed only its naïve innocence for a myriad of more worldly values. Prompt to admit that the entranceway is more sinned against than sinning, we can but hope that artificiality and sophistication will not be too brazenly flaunted.

The intersection of the approach road with the main highway has become so prominent that the entranceway is forced to take measures in self-defense. It must strive to overcome the travelling public's quick conclusion that here is a new speedway, a relief route to a metropolis, or the gateway to some optimistic suburban subdivision.

A mere sign fails to clarify the impression. Pylons are resorted to in the hope of standing off the onrush of trucks and speeders. Gates are proposed. More often than not these succeed rather in bespeaking the modern "burial park" than the kind of park it is hoped to typify. There results confusion worse confounded; solution seems beyond each. Is it then any wonder that flanking walls, lodges, towers, lights, concessions, arches—anything looks reasonable as an appendage that gives promise of proclaiming beyond question just what the entrance does, or failing this, does not, serve? The temptation is hardly resistible, and the entranceway, complex, impressive, institutional, evolves.

Once fully aware of the factors that deny this desired simplicity to the park designer, while concurrently hampering the success of the complicated alternative, it is well to take stock of just what, in spite of all unfavorable limitations, a park entranceway can be and convey.

It should at once invite and deter, encouraging use while discouraging abuse of the park by the public. It should be all things to all men, tempting the respecter of nature and of the past, while warding off and detouring that bloc of the public primarily bent on a greater and speedier gasoline consumption. A kind of semaphore simultaneously reading "stop" and "go," yet somehow avoiding accidents—to traffic and to temperament. Surely no easy accomplishment, perhaps unattainable.

The simple appeal and mystery of the rural lane denied us, we can seek to beckon by means of an approach road of inviting width. But the speeder bent on getting nowhere in particular with all possible haste must somehow be diplomatically urged in another direction. An island dividing the in and out traffic will promote safety and restrain recklessness without suggestion of inhospitality. If an admission fee is to be collected, an island kiosk is a very practical station point for collecting admissions and for the attendant duties of checking and providing information. From a kiosk so located, a guard can conveniently give information to departing patrons without undue interruption to the business of admissions. By recalling the familiar toll bridge entrance, it serves to suggest to the entrant that a fee is to be collected, and saves time that with any other arrangement might be consumed in query and explanation. The checking station, lodge, or sentry box to one side

of the entranceway is sometimes preferred, especially when the traffic flow is not heavy. There are shown herein some successful examples of these several arrangements.

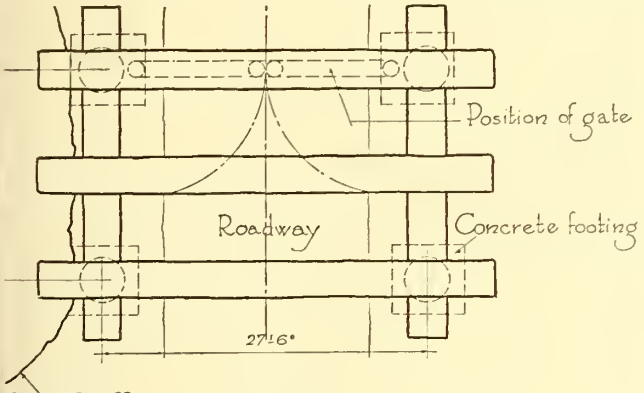
For a proper control, entranceways to many parks must serve as barriers during certain hours. Gates become a practical necessity. A pretentious rendering is apt to suggest an institution. Probably the low gate, related in appearance to the familiar log barrier of the parking area, and pivoting at one end for operation, is the happiest solution. It serves adequately as barrier and does not obscure, nor presume to compete with, the landscape beyond. Among examples of this type, the gate of the checking station at Turner Falls, Oklahoma, is of exceptional merit. A chain barrier is an even simpler solution, but should always be equipped with a conspicuous sign or otherwise be made readily visible under automobile headlights.

In specific instances, a custodian's dwelling or lodge may necessarily and logically be incorporated with the entranceway. The connotation of gate lodge guarding a country estate is then to be avoided. When any portion of the using public is transported to the park by common carrier, a sheltered waiting space, as an adjunct of the entranceway, has a real function.

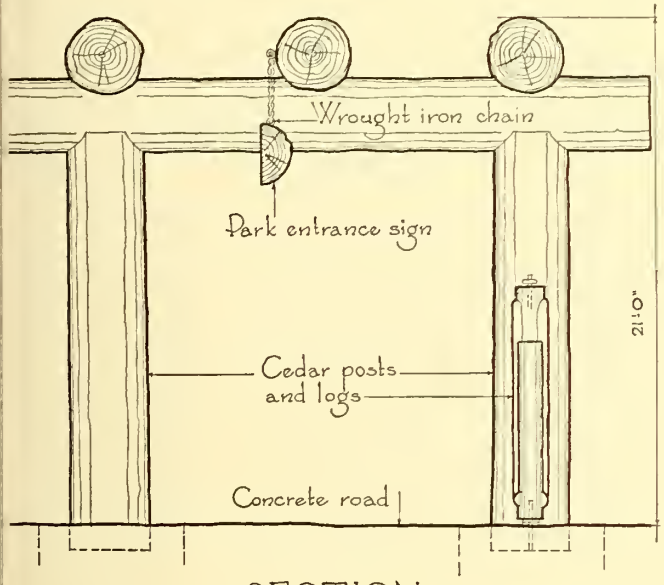
Overhead construction, utilizing arch or lintel, perhaps overdone in an earlier era, seems not to find wide current favor. Doubtless this results from a worthy desire to avoid any feeling of confinement, or any subconscious recall of the triumphal arch and staff creations long associated with street parades and carnivals.

The speed and conditions of present day traffic in which the car is quicker than the eye, dictate that the public be given timely warning and vision of its approach to the park entranceway. In order that brakes may be applied effectively at prevalent, popular speeds, a considerable stretch of highway border is affected. While conservation of all possible forest cover may be the primary and praiseworthy objective of the natural park enthusiast, it is urged that it yield precedence outside the entrance gate to the demands for safety. The practical advantages to be derived from the placement of any entrance features well back from the main highway, and the maintenance of suitably cleared sight lines, must be acknowledged by all as paramount.

The park entranceway may meet all the requirements of function and many of the standards of beauty and yet fall far short of its potentialities. As the outpost of a reserved area offering certain distinctive recreational opportunities to the public, it can with subtlety and grace, project the promise and lure of the region and its offered recreation to the very public highway. The truly successful entranceway will be contrived to be the simple essence of the park's characteristics to no resultant interference with the basic and material functions of ingress, egress and barrier.



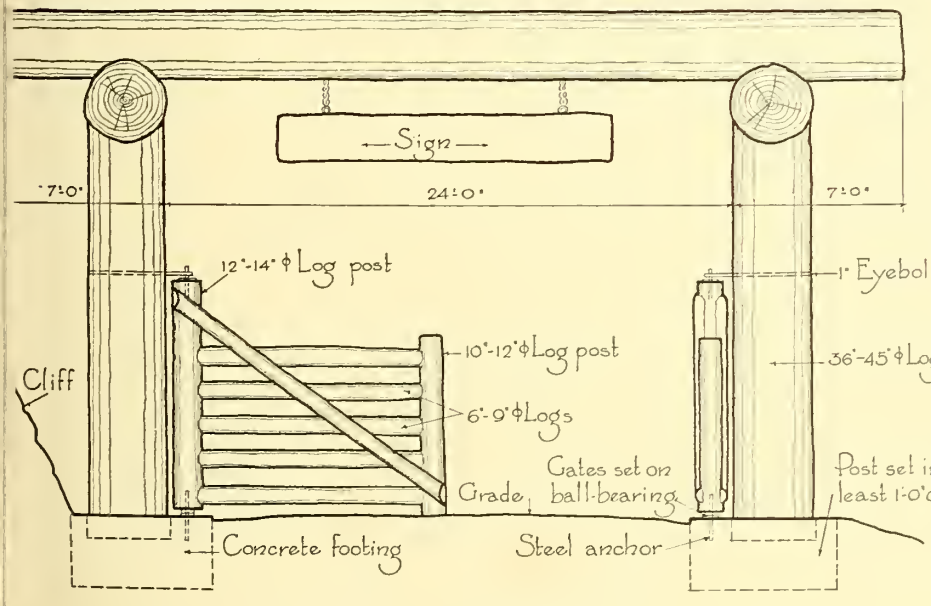
PLAN



SECTION

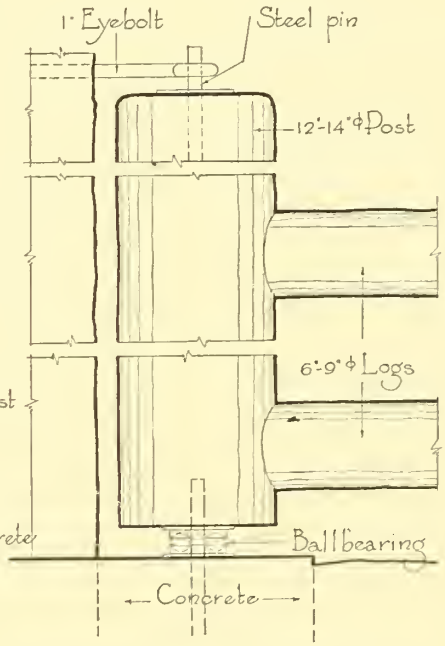
Entrance Way — — Mt. Rainier National Park

Entrance gates with overhead construction do not have their one-time popularity in our natural parks. This example has vigorous proportions and the huge cedar logs used are doubtless representative of the size of the timber that features the region. A ball bearing pivot is highly desirable when gates are of this great size and weight.



FRONT ELEVATION

Scale ⅛"-1'-0"

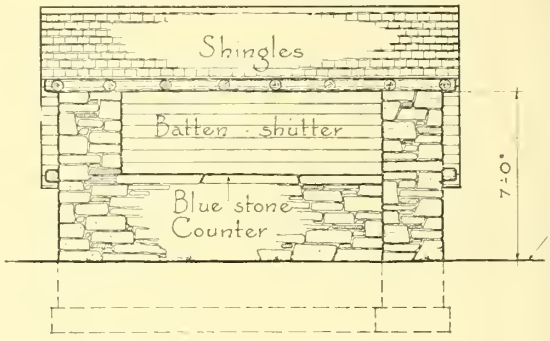


GATE POST DETAIL

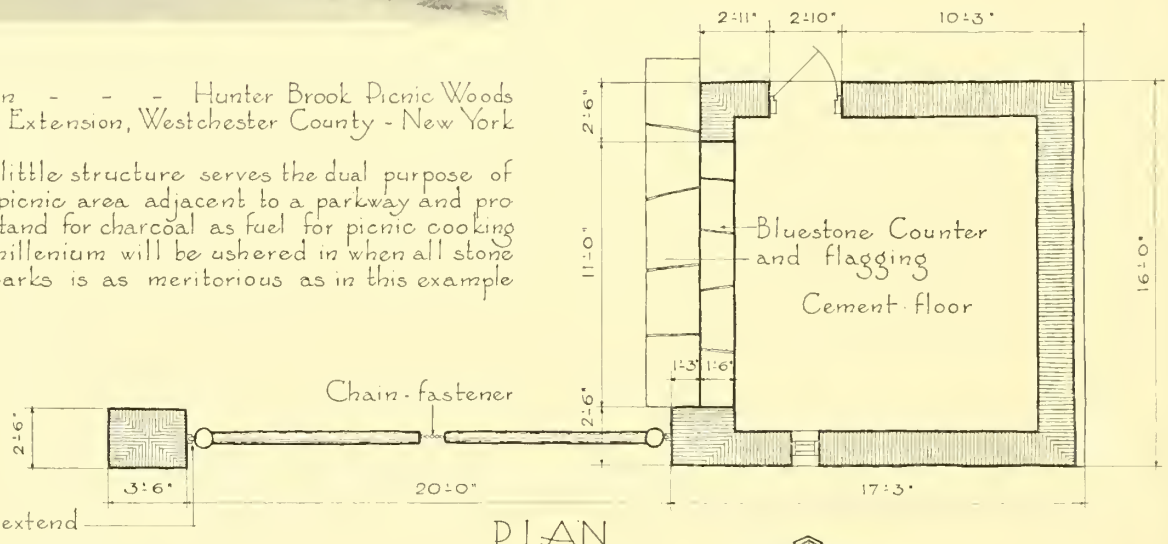
Scale ¾"-1'-0"

Contact Station - - - Hunter Brook Picnic Woods
Bronx Parkway Extension, Westchester County - New York

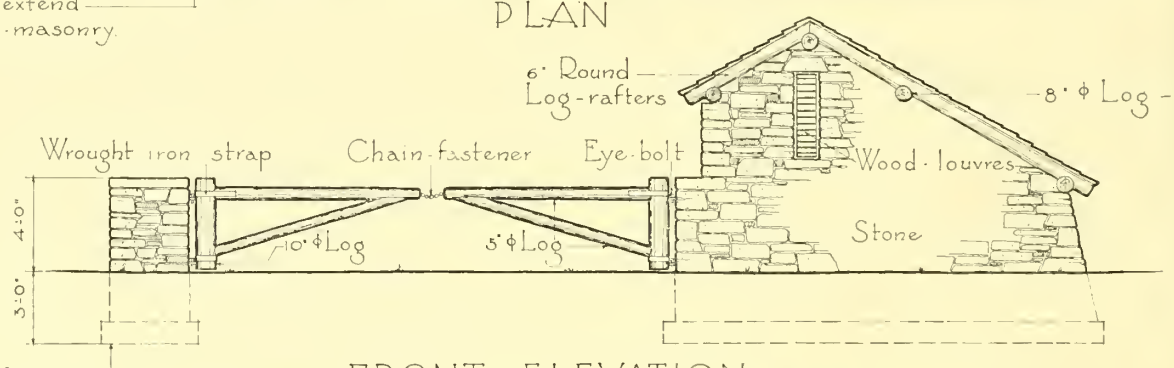
This pleasing little structure serves the dual purpose of controlling a picnic area adjacent to a parkway and providing a salesstand for charcoal as fuel for picnic cooking Perhaps the millenium will be ushered in when all stone masonry in parks is as meritorious as in this example



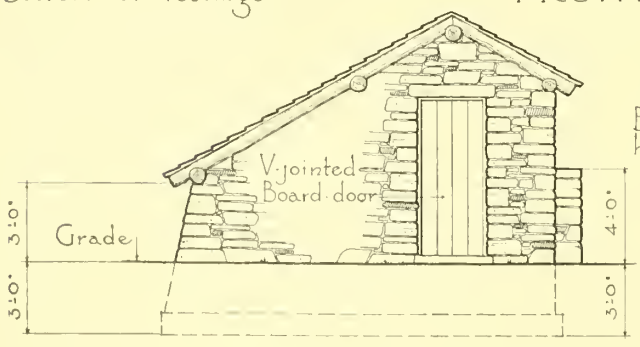
SIDE ELEVATION



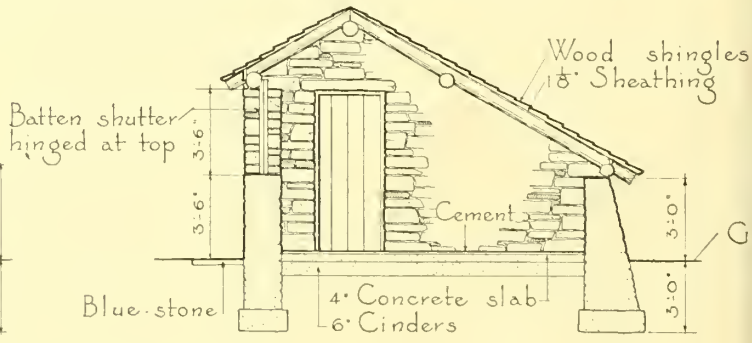
PLAN



FRONT ELEVATION



REAR ELEVATION

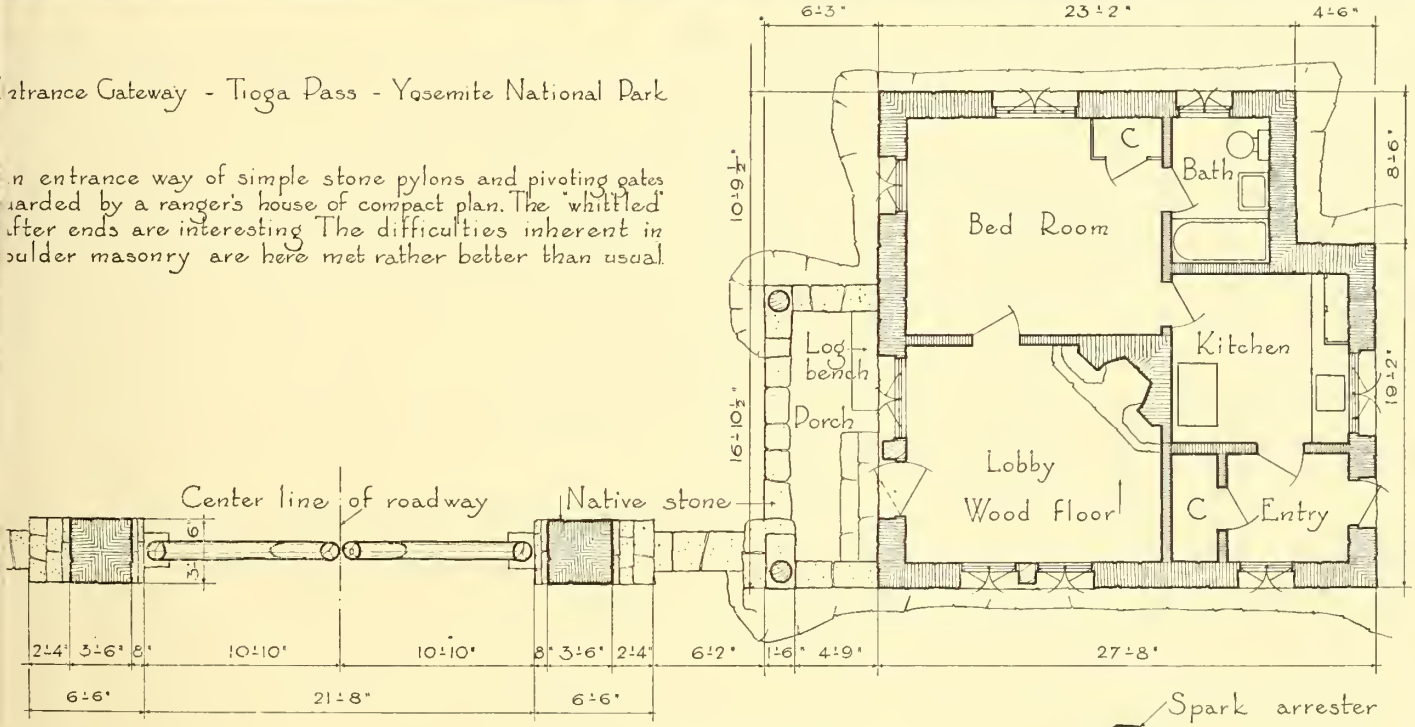


Scale 3/8"=1'-0"

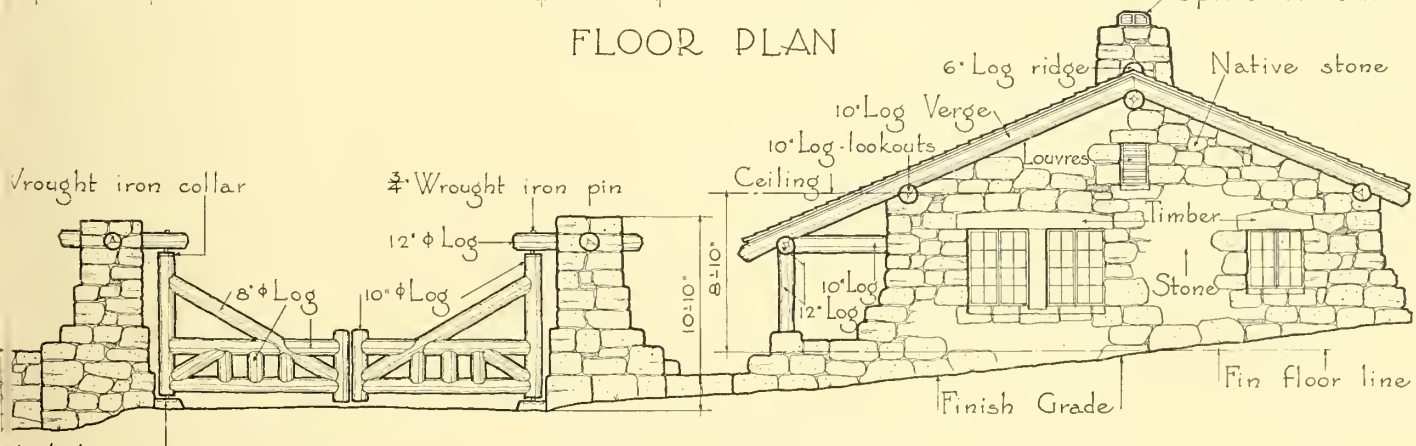
SECTION

Entrance Gateway - Tioga Pass - Yosemite National Park

An entrance way of simple stone pylons and pivoting gates guarded by a ranger's house of compact plan. The "whittled" rafter ends are interesting The difficulties inherent in boulder masonry are here met rather better than usual.

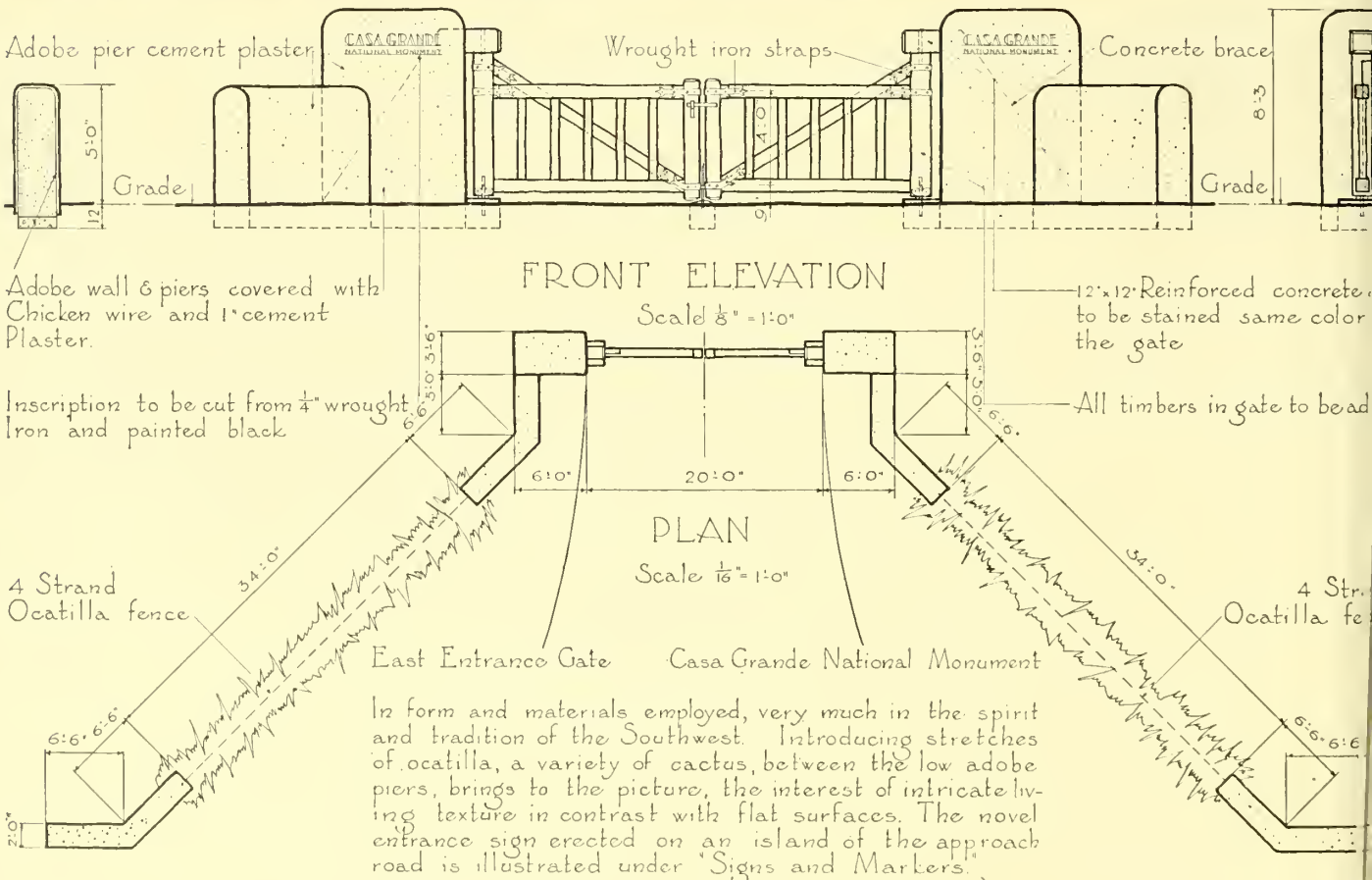


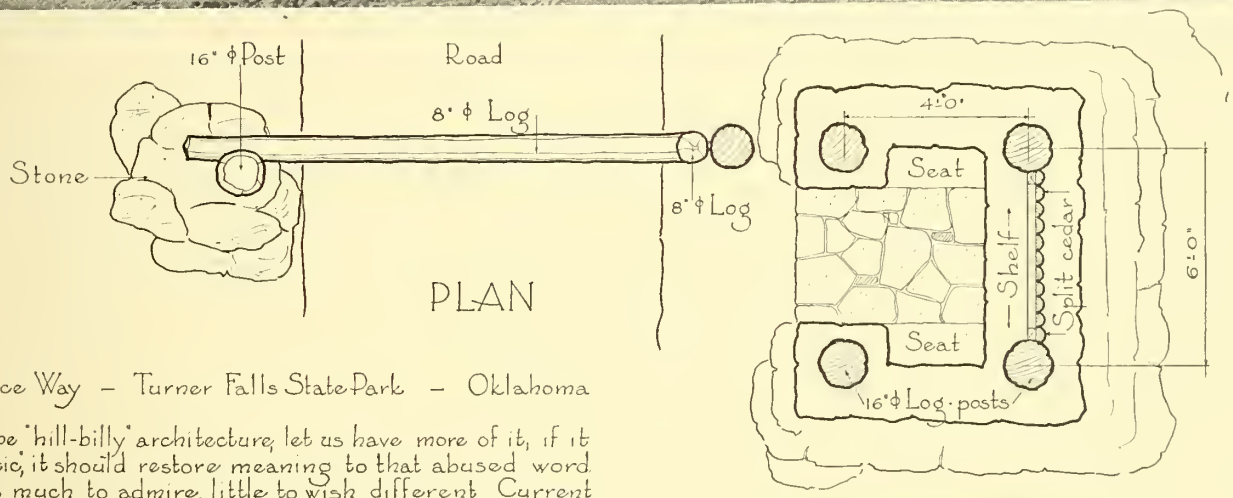
FLOOR PLAN



FRONT ELEVATION

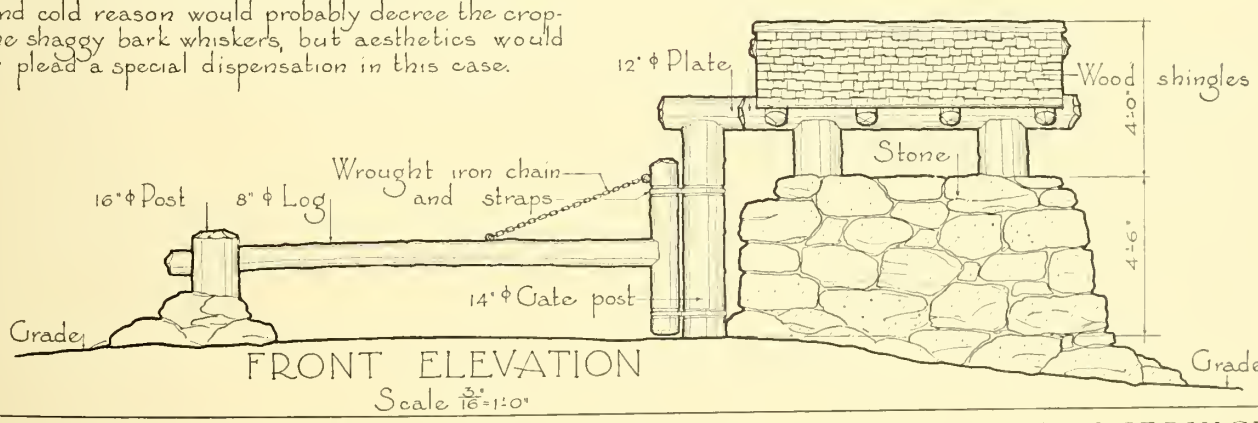
Scale $\frac{3}{32}$" = 1'-0"


Adobe pier cement plaster
CASA GRANDE NATIONAL MONUMENT
Wrought iron straps
CASA GRANDE NATIONAL MONUMENT
Concrete brace
5'-0"
Grade
12"
4'-0"
8'-3"
Grade
FRONT ELEVATION
Scale 3/8" = 1'-0"
Adobe wall & piers covered with Chicken wire and 1" cement Plaster.
12"x12" Reinforced concrete
to be stained same color
the gate
Inscription to be cut from 1/4" wrought Iron and painted black
All timbers in gate to be ad
6'-6"
5'-0"
3'-6"
6'-0"
20'-0"
PLAN
Scale 1/16" = 1'-0"
4 Strand Ocatilla fence
34'-0"
East Entrance Gate
Casa Grande National Monument
4 Str
Ocatilla fe
In form and materials employed, very much in the spirit and tradition of the Southwest. Introducing stretches of ocatilla, a variety of cactus, between the low adobe piers, brings to the picture, the interest of intricate living texture in contrast with flat surfaces. The novel entrance sign erected on an island of the approach road is illustrated under "Signs and Markers."
Location of sign
HIGHWAY



Entrance Way – Turner Falls State Park – Oklahoma

If this be "hill-billy" architecture, let us have more of it, if it be "rustic," it should restore meaning to that abused word. Here is much to admire, little to wish different. Current opinion and cold reason would probably decree the cropping of the shaggy bark whiskers, but aesthetics would as surely plead a special dispensation in this case.

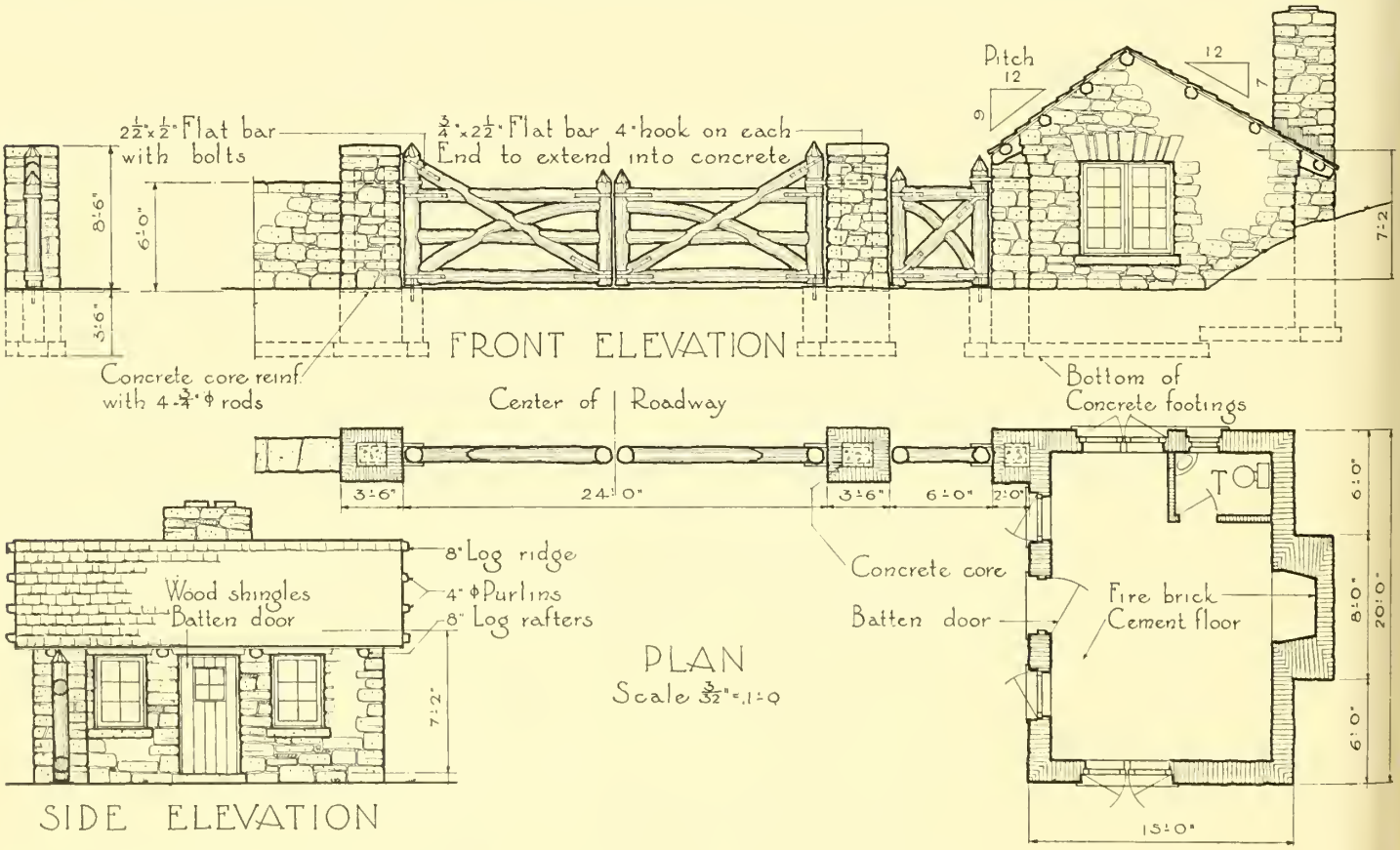


FRONT ELEVATION

Scale $\frac{3}{16}$"=1'-0"

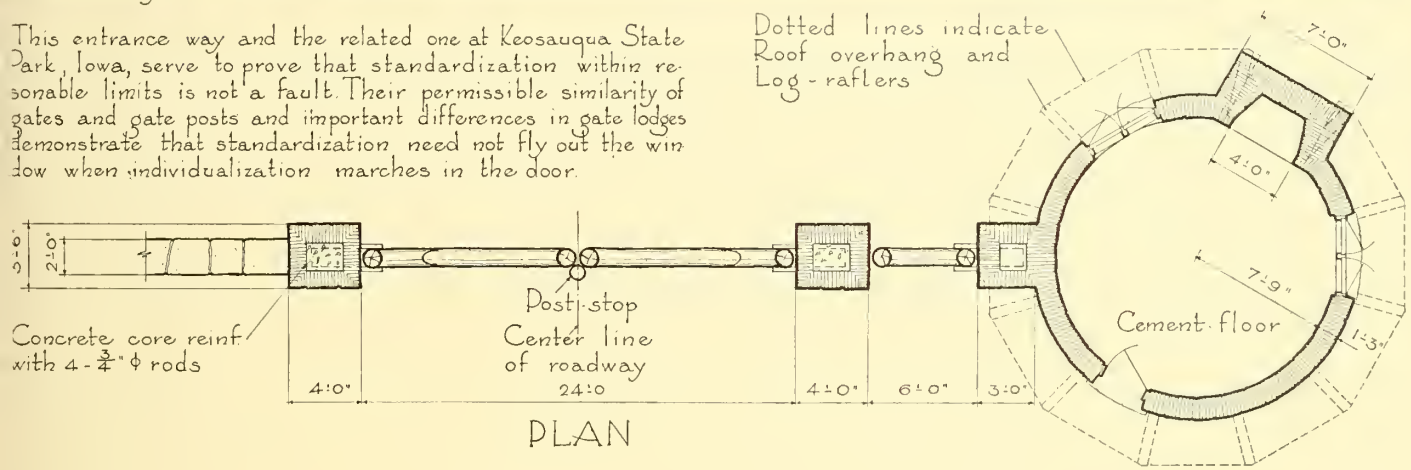
Entrance Way Keosauqua State Park Iowa

An entrance way which at once proclaims itself as of the State of Iowa, yet specifically as of Keosauqua State Park by virtue of the plan of the lodge and its relationship to the gateway Where an admission fee to the park is to be collected, the small lodge structure is almost essential as shelter for the attendant. It should be equipped wherever possible with fireplace and toilet facilities as here The photograph does not include the proposed gates

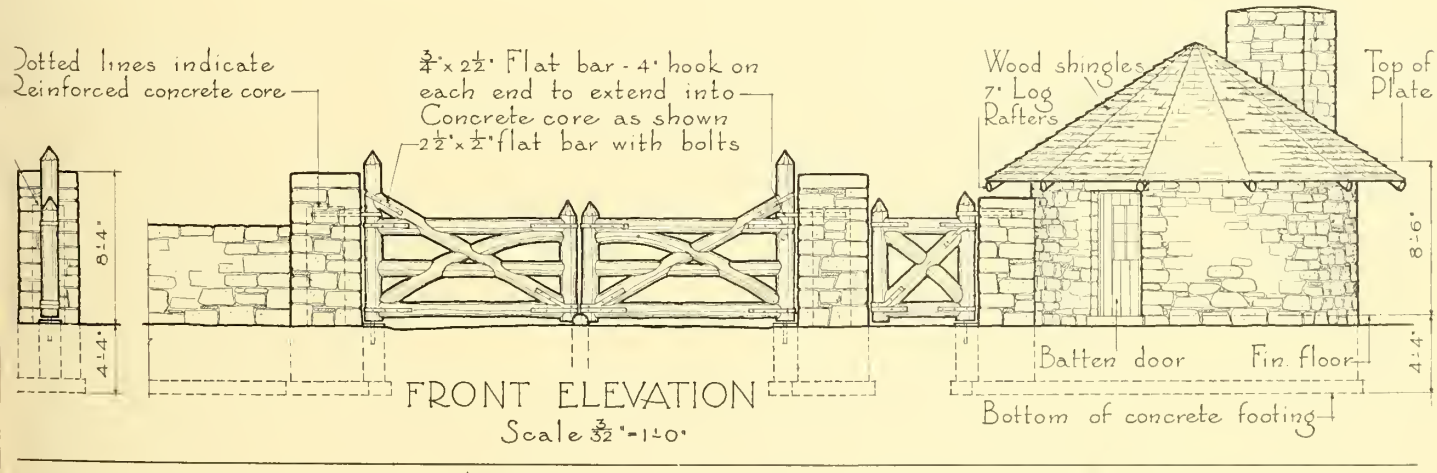


Entrance Way - Dolliver Memorial State Park - Iowa

This entrance way and the related one at Keosauqua State Park, Iowa, serve to prove that standardization within reasonable limits is not a fault. Their permissible similarity of gates and gate posts and important differences in gate lodges demonstrate that standardization need not fly out the window when individualization marches in the door.



PLAN

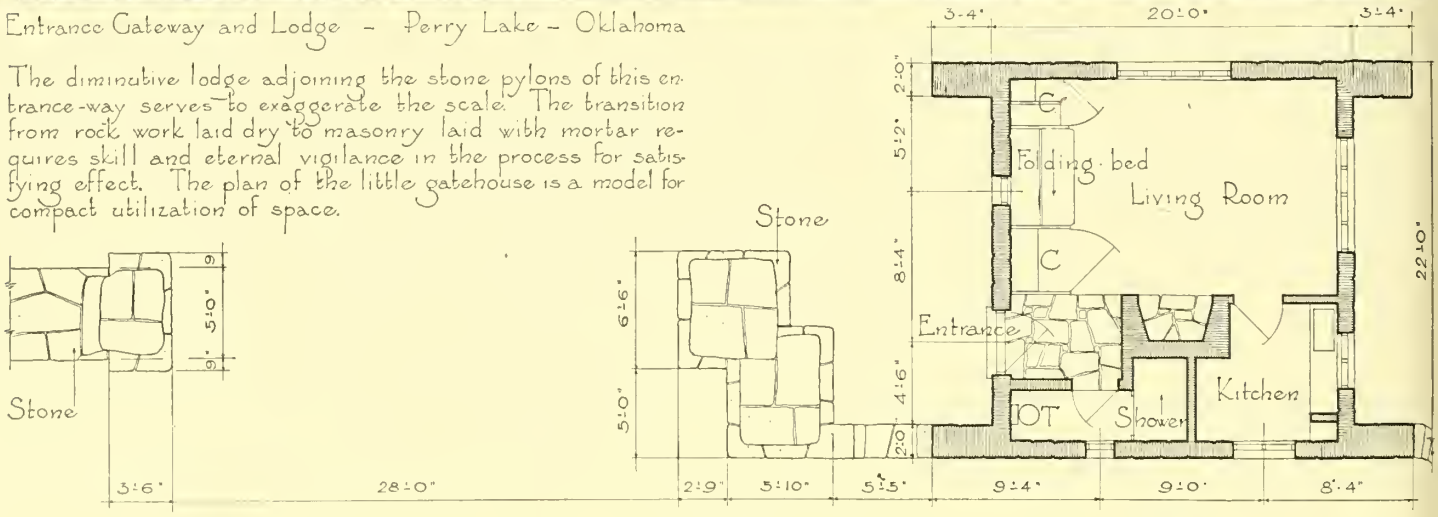


FRONT ELEVATION

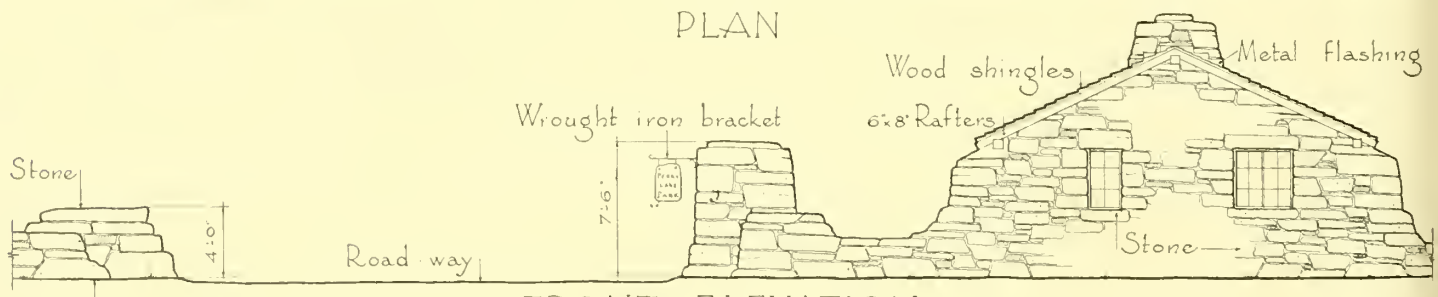
Scale $\frac{3}{32}$"-1'-0"

Entrance Gateway and Lodge – Perry Lake – Oklahoma

The diminutive lodge adjoining the stone pylons of this entrance-way serves to exaggerate the scale. The transition from rock work laid dry to masonry laid with mortar requires skill and eternal vigilance in the process for satisfying effect. The plan of the little gatehouse is a model for compact utilization of space.

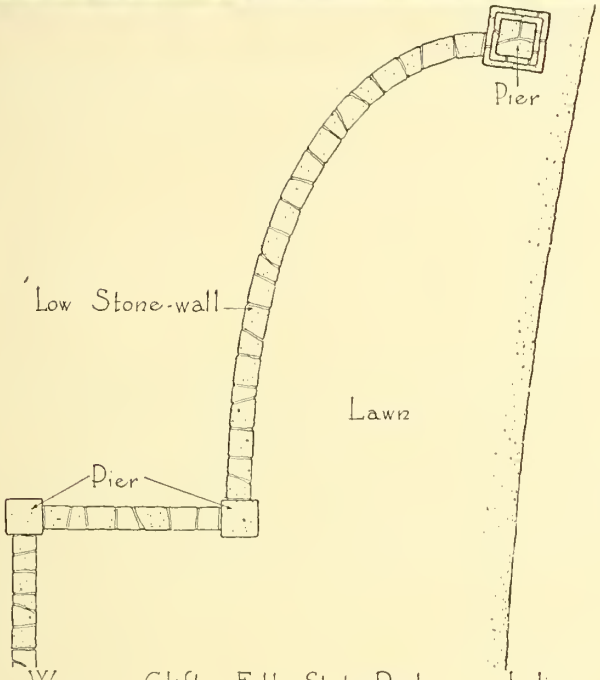


PLAN



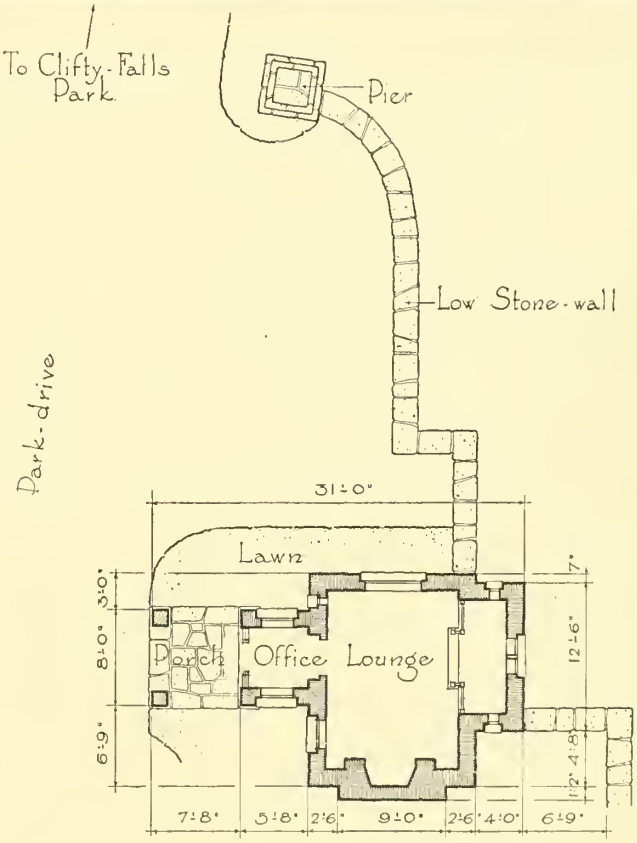
FRONT ELEVATION

Scale $\frac{3}{32}$"=1'-0"



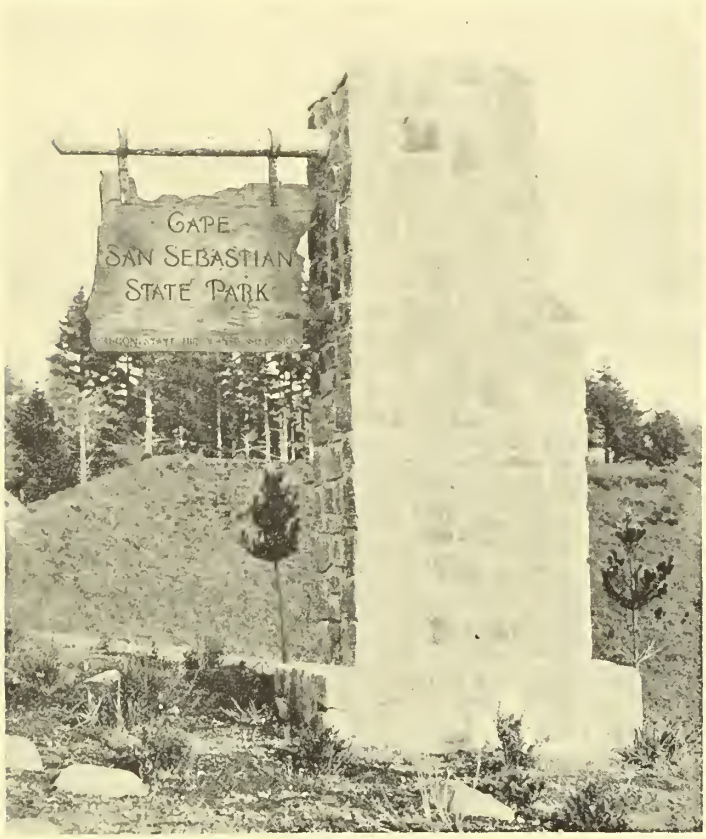
Entrance Way – Clifty Falls State Park – Indiana

The stage is here well-set for the softening influence of time and that process of assimilation of structure that only planting will accomplish. The need for a large window in the vestibule has resulted in a slenderness of stone pier that is in unfortunate contrast with the heavy wood post of the porch. The massive chimney, the shake roof with interesting ridge termination are pleasing details.



FLOOR PLAN

Scale $\frac{1}{16}$"=1'-0"



Cape San Sebastian State Park, Oregon

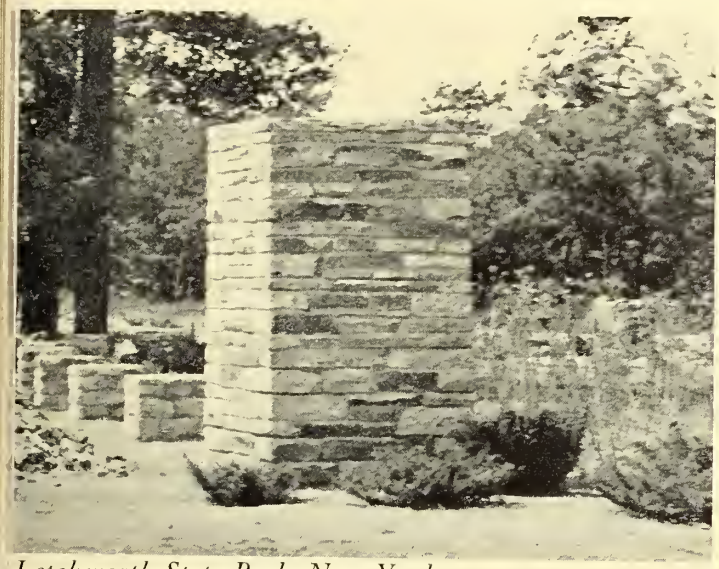
Caddo Lake State Park, Texas

Echo Lake Picnic Area, New York

Stone Pylons

Various and sundry entrance pylons surround this caption. The range is considerable in silhouette, and in formality and technique of masonry as well. The tall pylon having extended wooden arm with suspended sign designating the park is a popular arrangement. Again, a panel carrying the name

Lake Brownwood State Park, Texas



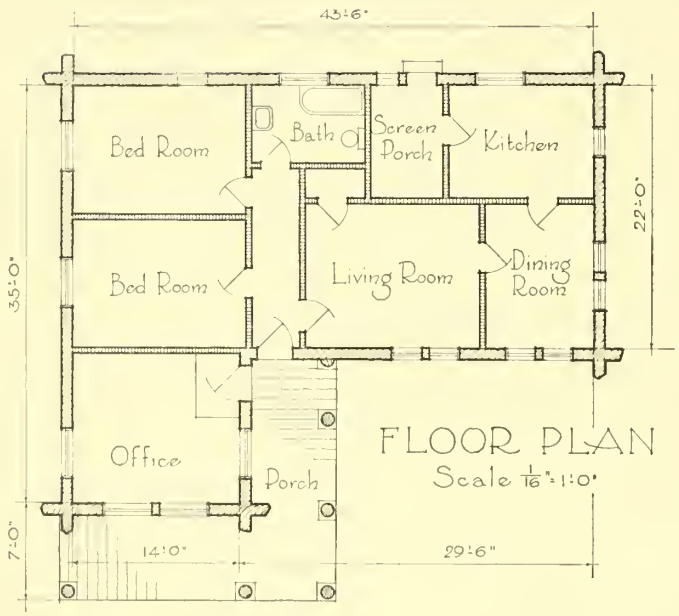
Letchworth State Park, New York

Pilot Knob State Park, Iowa

of the park is built into the face of the pylon. There are many possibilities for novelty within the bounds of good taste that are by no means exhausted by the few examples it is possible to show in this limited space. Important as agreeable mass and well-built stone work, is the appearance of stability, adequate bulk and permanence in pylons.

Taconic State Park, New York

Raker Memorial, Lassen Volcanic National Park



Entrance Checking Station, Mt. Rainier National Park

A splendid log structure deserving of the impressive background it enjoys. Only the trivial chimneys fail to register to the high standards all other details maintain. The log work and the scale of the rafters, purlins and shake roof with pole-capped ridge, are excellently handled. The low log barrier in addition to practical purpose serves to link the log construction with the surroundings. There is a well-tended neatness about this structure and setting untypical of wilderness areas generally, yet somehow not discordant here.

SIGNS *and* MARKERS

THE CLASSIFICATION "Signs and Markers" is not concerned with entrance signs alone. It embraces a broad range of devices for facilitating use, enjoyment and understanding of a park by the public. As development of any area proceeds there is bound to be coincident multiplication of kinds and numbers of required signs and related objects—directional, designative, regulatory, cautionary, or merely informative of natural or historical fact.

Nothing in parks, unless it be the entranceway, offers wider legitimate scope for individuality in conveying the characteristics or background of a particular area than do the signs and markers. These can be the embodiment of those rare and distinguishing features that have dictated the establishment of the park—the motifs in miniature of the park motif.

A visitor on pilgrimage to the reconstructed village of Lincoln's young manhood in New Salem State Park, Illinois, is subtly put in receptive and reverent mood for the illusion of a mid-western backwoods village of the eighteen-thirties by the very character of the stylized signs and markers. The black, uncertain lettering on white background, in its hand-made irregularity and wavering course lines, recalls the crude typography of the newspapers and handbills of the period and place. Instantly imagination is in pitch, and understanding in tune, with the melody about to be re-sung for us.

The signs and markers of those parks whose glory is some unique or unusual outcome of natural forces can often clearly echo these characteristics to a welcome avoidance of the trite. Witness the nature shrine at Obsidian Cliff in Yellowstone National Park, formed of basaltic columns of hexagonal section in their natural relation to one another, which formation is a conspicuous phenomenon of this area. There are as well other markers herein presented, which through clever and skillful recall of a local feature, are neither banal nor fantastic, but succeed in achieving great individuality and distinction.

The day when the quintessence of naturalism for park signs was to paint them on boulders and cliffs is within the memory of many of us. Happily our developing sense of fitness has had a swing away from this sort of thing. The utter inappropriateness of nailing signs to trees is also better understood in the light of today's park-mindedness. Perhaps a warning note should be sounded against a noted recent tendency to bring to the park sign something of modern commercial eye-arresting technique. By no means need the park entrance sign seek to compete with the twenty-four-sheet cigarette poster further down the road nor is there merit in three or four messages conveyed by as many different signs, wherever all might logically be accumulated to one sign. Several such groupings that successfully exemplify these points are illustrated on the following pages.

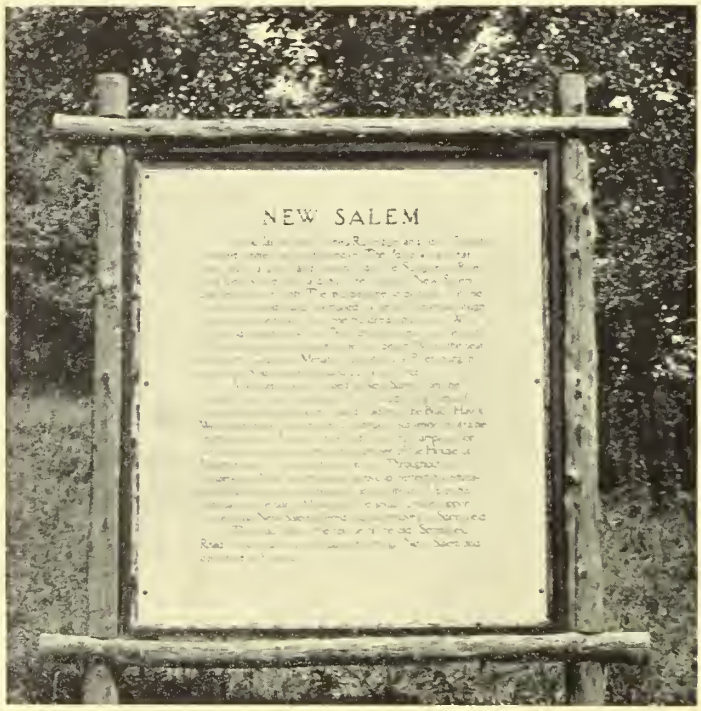
There is an interesting and growing movement to acquaint the using public with the details of a park area through the medium of maps. The routes of foot or horse trails, the locations of points of historical or scenic interest, the relationship between notable features and areas of intensive or specific use are graphically told to great advantage. Such informative devices, provided at strategic points, can offer a wealth of fact with wide appeal to varied interests, and make possible a broader understanding of an area than endless tramping over the actual terrain could give.

Informative or educational maps may take the form of simple painted signs showing the course of a particular trail, the route to an historic spot, or the reconstruction of remains of military earthworks or Indian mounds. They may become elaborate, decorative cartograms or cartographs arranged under glass, visualizing geological cross sections, military maneuvers, subterranean caverns, or topography.

Lately the educational value of the relief model

reproducing at small scale the terrain of an entire park area has come to be more fully appreciated. Created of plaster, such models are already on exhibition in nature and history museums within our parks. Proposed of concrete construction, several are now under consideration for outdoor locations. Such models, supplemented with suitable inscriptions, can offer comprehensive visualization of mountain-building movements, and subsequent erosion of the land by water, wind and ice, or convey an understanding of a military engagement or vanished civilization that is unapproached by any other medium.

Often signs of informative or educational purpose tend to be something very like minor museums out-of-doors. These highly developed nature or history shrines serve to bring the recorded fact, theory, or interpretation to the very scene of the prehistoric or historic occurrence, or the actual location of the scientific or natural phenomenon. This is of tremendous value in offering the most complete exposition possible of those things which the park exists to commemorate or to preserve. The more elaborate of these informative devices are actually the transition between the mere sign and the museum that has won legitimate place in a natural park. Some are at once truly glorified sign and museum in embryo.



SIGN, NEW SALEM STATE PARK, ILLINOIS

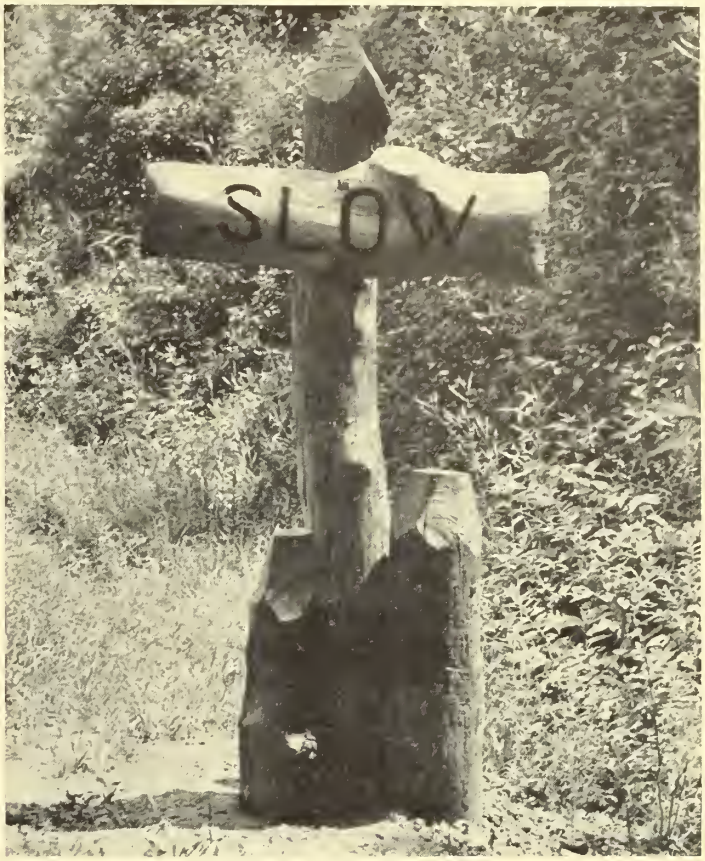
This sign panel is illustrative of the styling of lettering to a particular period conspicuous in the historic past of a site or region. In this instance the era is that of the American frontier, the motif is the primitive and faltering printing press of the newly conquered wilderness, while the interest is the Lincoln legend.

Black Hawk State Park, Illinois

Signs in Control of Traffic

Surrounding are signs intended to function in control of traffic. All are of pleasing, rustic character. The examples at Custer and Dolliver Memorial State Parks serve to demonstrate clearly the decorative quality of logs from which the knots are not entirely obliterated. Very practical because low in height, and therefore causing no interference with vision, are the entrance and exit signs of the parking area at Black Hawk State Park.

Caddo Lake State Park, Texas



Dolliver Memorial State Park, Iowa

Custer State Park, South Dakota

Zilker Metropolitan Park, Austin, Texas

Turner Falls State Park, Oklahoma

Directional Signs

Here are directional signs none the less inspired because they are simple. Outstandingly original is the foot trail sign post, indicating the way by means of a footprint instead of the hackneyed pointing index finger. The failure to remove the bark from the uprights of this sign and the companion sign directly below it, is hardly subject to censure in the case of items so minor in character. Signs are well kept low in height when there is no vegetation threatening to obscure them.

Zilker Metropolitan Park, Austin, Texas

White Pine Forest State Park, Illinois

Caddo Lake State Park, Texas

Mount Nebo State Park, Arkansas

Directional Signs

The urge to capture naïveté and rusticity in park signs should not lead to illegibility in lettering. These qualities are best confined to the form of the sign panel itself and to the upright supporting members. All the lettering on the signs shown in the surrounding illustrations follows familiar forms without prejudicing wilderness character.

Itasca State Park, Minnesota

Custer State Park, South Dakota

Custer State Park, South Dakota

White Pine Forest State Park, Illinois

Entrance or Designative Markers

In the upper examples on this page is more primitive character than in the markers shown below. The sign at White Pine Forest Park illustrates the possibility of combining this facility with a rail fence. The staggering of the letters in the second line of the Kitchawan Tavern sign will have its critics. Signs like this are produced by sheet metal or asbestos templates, a blow torch, and, for the last line, just the right degree of intemperance.

Sand Run Metropolitan Park, Akron, Ohio

Bronx River Parkway, New York

Casa Grande National Monument

Designative Markers and Nature Shrines

These items have little in common to warrant his grouping on one page, beyond being basically signs. The Casa Grande entrance sign is a clever conception, hammered out of sheet copper and filled with concrete. It serves as marker and for separating in and out traffic at the entrance to this park. The specimen at upper right typifies the blow torch technique, with the letters painted for increased legibility. Below are examples of the nature shrine—the link between the mere marker and the trailside museum.

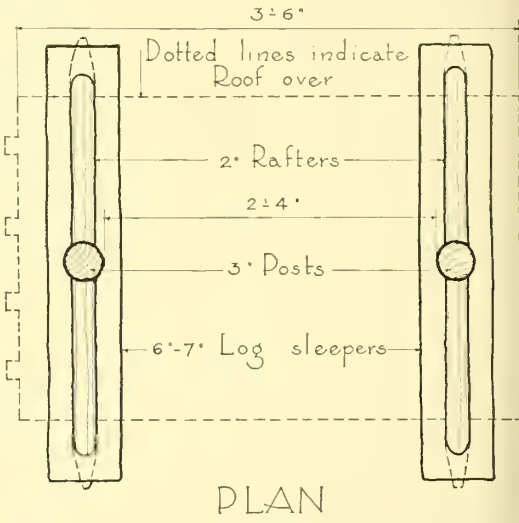
Nature Shrine, Yellowstone National Park

National Park Service Regional Office

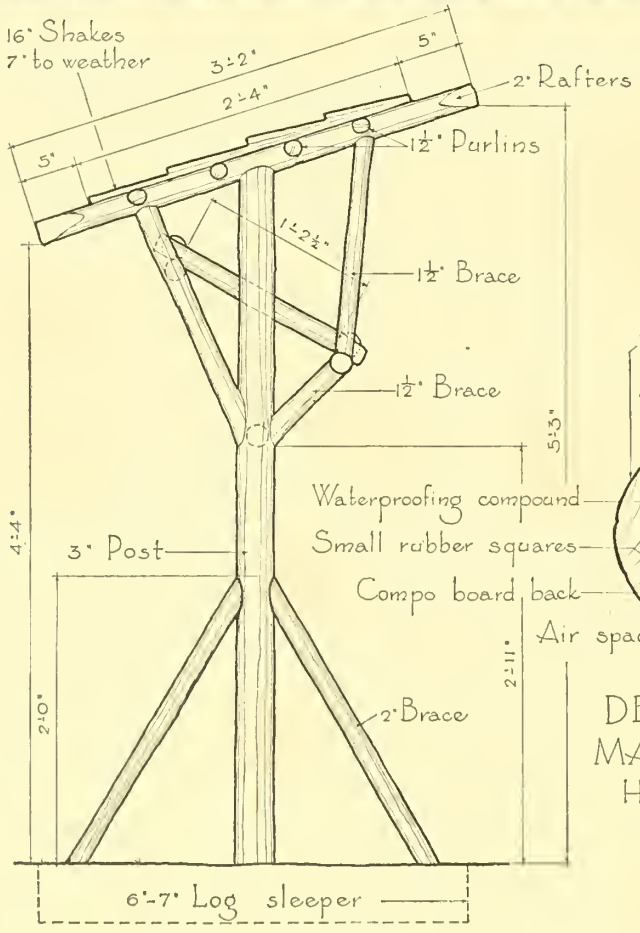
Nature Shrine, Yellowstone National Park

Map Stand Shelter - - Highland Hammock - - Florid

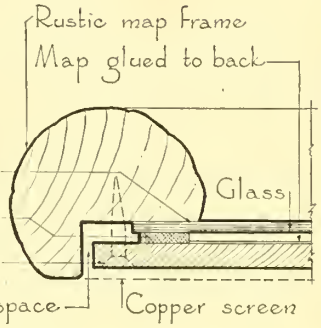
This arrangement for exhibiting a map in the open overcome many of the difficulties usual to similar contrivances. Th lean-to roof eliminates the sun's glare. Waterproofing co pound prevents entrance of moisture above the glass, b neath which rubber blocks permit the circulation of air. Th map is glued to a backing of dense composition board an copper screening excludes insects. In contrast with this hig attainment practically, there is an aesthetic lag. Struc tural members seem spindling in their proportions.



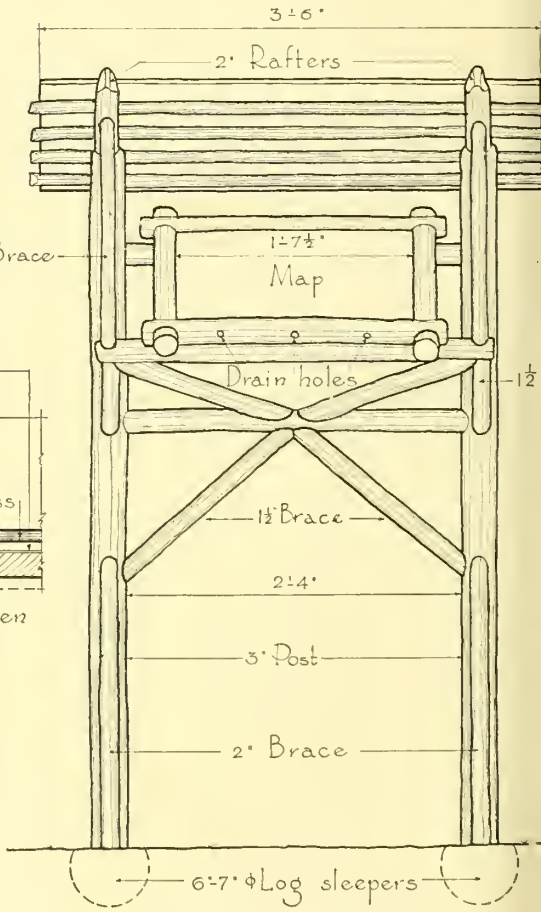
PLAN



SIDE ELEVATION



DETAIL OF MAP FRAME
Half Full Size



FRONT ELEVATION

Scale ¾" = 1'-0"

BARRIERS, WALLS *and* FENCES

If man could bring to his creations in natural parks, the protective coloration that Nature bestows on wildlife, with how much more harmony he would endow his trespasses! One particularly longs for this quality in barriers, herein considered to embrace obstacles and obstructions to automobile travel, stone walls and wood fences, guard rails and retaining walls. These are unavoidable necessities in practically all parks, and are generally so extensively required that any treatment short of the most skillful can become a source of quick contamination to natural beauty into the farthermost reaches of the area.

It is not to be denied that there sometimes exists in natural areas need for barriers that must forego protective coloration to shout immediate and forceful warning of danger ahead, particularly to the motorist. Barriers and obstructions that have as their primary objective being seen for the purpose of preventing traffic accidents, are not to be laughed off. They are an acknowledged if unwelcome necessity even in parks, and our public highways provide innumerable examples of precedent more or less effectual in purpose and construction. To create barriers that shout a warning is no trick at all. It is much more difficult to determine at exactly what locations on park roads a barrier having this function is requisite and tolerable. To provide within a given park area neither one too many nor one too few barriers having this primary function is both the problem and the solution. It should be studied in the light of the accepted tenet that park roads exist for leisurely automobile travel only, and with coincident appreciation of the fact that speed of traffic and need for cautionary and protective barriers relate to each other in some geometric ratio. Resultantly we should find in parks fewer blatant barriers than the public highways require, and a preponderance of the unobtrusive barrier treatment.

Barriers in natural parks can spread the blight of man's destructiveness with greater speed and to greater distances than any other instrument of his devising—save perhaps matches. For this reason they deserve to be planned with thoughtful care, and to be developed and constructed with ever alert willingness to adjust the predetermined treatment to serve best the varying backgrounds and conditions actually encountered in the field. The contrary approach, the attempt to warp conditions of site to some blueprint treatment of barrier or retaining wall, usually leads to disaster. Natural quality is so ready to vanish; artificial quality so prone to persist.

Barriers of stone have one basic advantage over barriers of wood. Stone is the more permanent, a fact which often predisposes its selection as the material for use. The claim of permanence, however, should not alone determine the choice of stone over wood; each must be further considered in the light of its native suitability. Stone imported into park areas to which no stone is native, seems always inappropriate. Stone imported into park areas to which a different and perhaps unworkable kind of stone is native, will demand the most skillful ingenuity in any effort to make the importation appear reasonably at home. There are certain regions where native stone suitable for building is not present, yet the landscape is of definitely stony character. Here barriers of imported stone can be made effective when artfully contrived. But more often than not, unless barriers can be produced from native stone, it is more reasonable to waive the advantage of greater permanence and make use of wood. Timber for barriers in some localities will offset comparative lack of permanence through native abundance and consequent greater suitability and economy. For wooded areas, regardless of stone supply, there are those who cast their votes in favor of wood, usually log, barriers, which can be made sturdy and unobtrusive, and are far from short-lived.

When neither wood nor stone can stake a valid

claim to being native, or appearing to be native to a region, the attributes of the area for park purposes may be logically challenged. This premise allowed, we are assured that either wood or stone will appropriately serve as material for the barriers we may require in any tract of true park potentialities. The problem then becomes one of intelligent use of whichever material Nature's bounty indicates.

Among possible barrier constructions are some which when broken are more easily repaired than others. These will be favored by the park technician wherever the limiting of maintenance costs must be considered. Barriers designed with wood rails that build into stone piers usually require an excessive amount of labor when replacement of a broken rail becomes necessary. It is possible to detail the customary low guard rail of the parking area so that when one rail is broken the adjoining sections are unaffected either by reason of the accident itself or the ensuing operation of replacing the broken member.

Of particular import are the stretches of wall or fence that adjoin the entranceway. Unless these are to be completely planted out, something of the flavor of the entrance structures should be given them. The stone wall so typical of New England, New York, and Pennsylvania, and the rail fence once so widely distributed through the Middle West have the advantage of long familiarity and deep significance to many of us. Because they bring subconsciously to mind the very values that parks seek to recapture—open spaces, unspoiled Nature, release from cramped and artificial existence—they might well serve as a far more useful instrument than they have served to date in the hands of park planners.

In his well-presented "Camp Planning and Camp Reconstruction," issued by the United States Forest Service, Dr. E. P. Meinecke discusses the choice and use of obstacles, obstructions and barriers in relation to the principle of camp planning that has become widely known and accepted as the "Meinecke Plan." So much on the subject of barriers therein contained is applicable to their proper use in parks, beyond the confines of camp sites, that Dr. Meinecke is quoted here in part.

"It must not be forgotten," Dr. Meinecke writes, "that even the best of law-abiding citizens, when he is torn loose from the accustomed and accepted restrictions of town life, does not instinctively know what is permitted and what he is expected to avoid. . . .

"Obstacles and barriers must, therefore, be of such a nature that he immediately reacts to the directions as expressed by the placing of obstacles. Small rocks are too easily overlooked by the driver of the moving car. They do not look dangerous, and they are too easily moved. Logs of small diameter offer no obstruction at all, and their use is a waste of effort and expenditure.

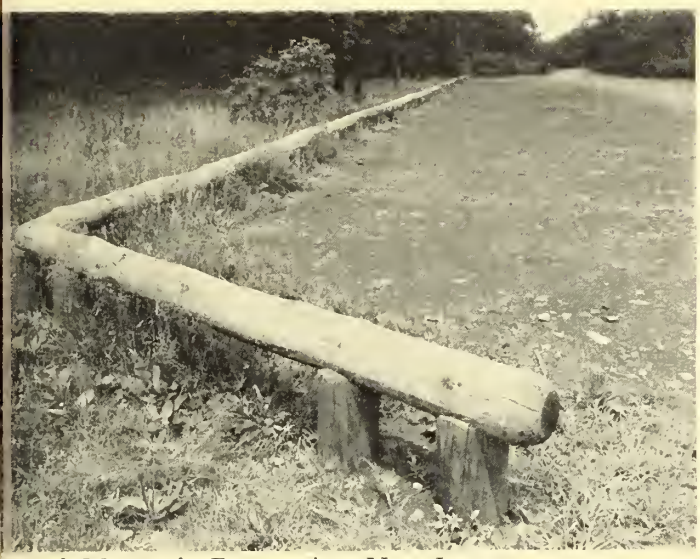
"The size of rocks and logs to be employed is determined by the deterrent effect they produce upon the driver. Rocks should be partially embedded in the soil. They appear more natural and more solid than rocks placed merely on the surface. The size of the visible part of the rock is reduced by embedding, and this decrease in deterring mass must be taken into consideration in the choice of the rock employed. . . .

"It is neither necessary nor desirable to outline roads or spurs with rows of regularly spaced rocks. . . . Regular rows look unnatural. . . .

"The use of logs to serve as barriers and guides along roads and parking spurs is, in general, much cheaper than the hauling and digging of boulders. On the other hand, logs and pole fences are far less permanent. In our wild forests the ground is often strewn with down trees which can be used for this purpose. Large logs lying on the ground will act as barriers for a long time, even if they decay. . . .

"When wood is used for barriers the plain, natural log, placed in such a way that it gives the appearance of having fallen where it lies, is without doubt much preferable to the artificial fence. . . .

"Cedar logs are far more durable than pine. Fir is the least to be recommended. . . . When logs are used at all they must be substantial."



South Mountain Reservation, New Jersey

Mohawk Park, Tulsa, Oklahoma

Parking Barriers of Wood

Here are illustrated simple log barriers in variety for outlining and controlling parking areas. Some are equally well adapted for use as guard rails along roadways. The example at lower left, by virtue of its unjoined units, has the high merit of low maintenance costs.

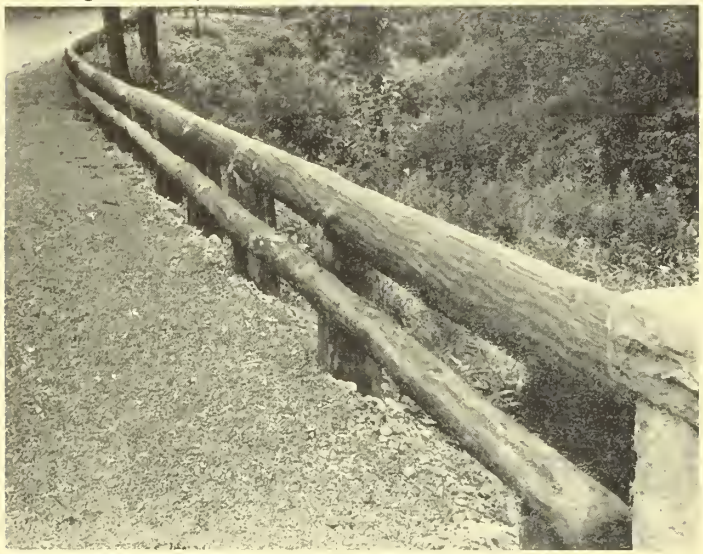
Turner Falls State Park, Oklahoma

Bastrop State Park, Texas

Custer State Park, South Dakota

Du Page County Forest Preserve, Illinois

Cumberland Falls State Park, Kentucky



South Mountain Reservation, New Jersey

Guardrail into Fence

Here is pictured low barrier into rail fence in slow motion. Above are departures from the simplest form—one doubling the supports, the other doubling the rail. To the left is an example having considerable height and an added buffer rail at hub cap height (a very practical provision in limitation of maintenance). Below are heavy two-rail fence with coupled posts and, finally, three-rail example with alternating wood posts and masonry piers.

Caddo Lake State Park, Texas

Mt. Penn Park, Reading, Pennsylvania

Backbone State Park, Iowa

Boulder Mountain Metropolitan Park, Colorado

Rock Barriers

Surrounding are varied examples of rock contrived to serve as guard or barrier along the outer edge of mountain and hillside roads and trails. The curb shown in connection with the rock wall at lower right serves to keep parked cars far enough from the barrier to permit pedestrians to pass between cars and wall.

Rocky Mountain National Park

Turner Falls State Park, Oklahoma

Rocky Mountain National Park

Cook County Forest Preserve, Illinois

Voorhees State Park, New Jersey

Taughannock Falls State Park, New York

Curbs and Walls of Rock

Above are illustrated contrasting low stone curbs for the outlining of a parking area. The more formal example at upper left suggests its metropolitan location—Cook County Forest Preserve. The curb at upper right and the detail of it directly below have the informality that seems more appropriate to a wilderness setting. To the left is shown a dry-laid retaining wall of good character, and below this a splendid example of New England fence laid apparently without mortar.

Greenwich, Connecticut—Eric Gugler, Architect

Voorhees State Park, New Jersey

TRAIL STEPS

DESIRABLE AS STEPS ARE at many points in many trails, by no means are they ever to be created or their own sake. It is perhaps not generally ensed that if as much study were given to trail planning as to modern road planning, lesser grades nd consequently fewer trail steps would result. n any case, only an unavoidably sharp grade not eadily negotiable as such, with no reasonable alernative of an easier grade, will justify resorting o steps at all.

That the first purpose in providing steps along teep trails is to facilitate walking is undeniable. Less obvious perhaps, but not less important is another consideration. This is the safeguarding of he aspect of naturalness in every detail of the construction of trail steps.

Trail steps, to justify their presence in natural reas, must facilitate walking to just such extent as vill not corrupt this natural quality. Conversely, rail steps must strive to emulate nature only to a legree that will not make them extremely hazardous in use. Either approach should result in approximately the same satisfying compromise. The acilitation of walking along trails in natural areas an hardly lay claim to all the considerations of niformity of rise and tread, and relationship beween these, that may be demanded of steps in lmost every other location. It is not unreasonable o assume that nature trails are created for the use f hardy hikers entitled to acquaintance with naure unarrayed with safety treads and handrails.

There are admittedly within most parks, limited reas of concentration used by persons of all ages nd of differing capacities for physical activity. Obviously, for steps within such areas the claim of asy and safe walking should rank in importance bove the claim of complete naturalness, and the ime-proved principles and practices in satisfaction f the former are applicable at such locations in greater degree. But for the trails into areas of less ntensive use, and with these we are here princially concerned, steps will not demand of the natural setting unreasonable and discordant compromise in adaptation to human use.

In park reservations where there are rock outcroppings, and especially where these are of ledge rock, the very background goes far to contribute naturalness to man-made trail steps. Yet even with the most sympathetic collaboration of nature, the execution of steps requires considerable skill for wholly satisfying results. The characteristics of the stratifications of ledge rock can often be utilized or reproduced in the creation of steps to such results that they are almost without trace of the artificial. Where rock outcroppings do not exist to provide liaison with the landscape, the naturalizing of rock steps requires a sculptor's skill and sense of form, if an anomalous creation is to be avoided. Even here the effort should be to give the constructed steps the appearance of natural ledges. To create such aspect it is most important that the width of treads vary. Rocks forming cheeks at either side of the steps should vary in horizontal alignment, as well as in height, and should be tied and blended into the setting by being occasionally and irregularly extended some distance into the vegetation to either side. No mortar should be evident,—greater naturalness will result from dry construction. Width of treads and height of risers will be governed by the natural slope. Treads should be as wide as possible and risers, except under unusual conditions, should not exceed six inches in height. Rock ledges may naturally exist in the trail where the grade is not so steep as actually to require step forms, yet because the rock is present, steps with risers lower and treads deeper than usual become a logical treatment.

For trails where rock is not an indicated characteristic of the environment, and where the attempt to naturalize it will evidence much of struggle, the steep grades of trails can be made more negotiable by forming risers of timbers, and providing treads by filling in with gravel or earth. There are various techniques in the fashioning of

the timbers, and in methods of anchorage, which achieve different degrees of practical and artistic attainment, as the illustrations suggest. Trail steps of this construction cannot be termed naturalistic with accuracy, but it should be possible to claim them harmonious with environment and not hazardous in use. As with all use of logs in park construction, the timber risers should be stripped of bark, not only because this will in time naturally occur, but because in the certain process of loosening, bark will constantly be a source both of hazard and of litter. Sometimes timber risers are roughly squared or carefully hand hewn. Such, while not "going native" to the extent of timbers left in the round, probably boast a higher safety rating in the sprain and fracture statistics. Timber risers should be staked in place to insure against loosening and shift in position. Exposed stakes should be driven well below the tread surfaces so there is no projection in which a heel might catch. Better still are methods that admit of anchorage by invisible stakes.

There are numerous examples of unusual methods or solutions in provision of trail steps. Often the abruptness of grade makes necessary a veritable stairway steeper than the easy rise and tread we know to be ideal. Often a ladder must be built when the grade is precipitous. In a land of giant trees, one that has fallen across a gorge or ravine will provide a picturesque foot bridge which, when out of level beyond a certain degree, can be notched to form steps and equipped with rustic handrail.

A handrail is often a necessary safeguard in connection with trail steps narrowly confined between a rising cliff on the one hand and a precipitous drop on the other. It is vital that a handrail be thoroughly substantial in character and in fact, inviting as it does the reliance of adventurous recreation seekers. Better no handrail in any location, than one that cannot be trusted both in use and abuse. Far too many handrails are probably structurally adequate and safe, but are an offense by reason of flimsy appearance.

Mt. Penn Park, Reading, Pennsylvania

Palmetto State Park, Texas

Trail Steps of Logs

Here grouped for comparative study are shown logs in provision of steps in trails. The practical and aesthetic merits of square timbers and logs in the round, contrived to this purpose, are here on parade. The picturesqueness of the several examples illustrated is apparent at a glance.

Taughannock Falls State Park, New York

Starved Rock State Park, Illinois

Deception Pass State Park, Washington

Humboldt-Redwoods State Park, California

Allegheny State Park, New York

Variety in Grade Negotiation

Above are log risers and treads paved with random flagging; below are simple trail steps of stone well naturalized by means of skillful planting of the trailside.

To the left are illustrated means for negotiating grades too steep for an easy rise and tread. A trail ladder requires careful maintenance, and is a hazard in use. The inclined log serving as foot trail bridge, although something of a "stunt," surely is permissible in parks where huge trees are present. Its picturesqueness, as well as its practicability, recommend it.

Bronx River Parkway, Westchester County, New York

Wintersmith Metropolitan Park, Ada, Oklahoma

Trail Step Sculpturing

The surrounding illustrations prove the truth of the assertion that the naturalizing of artificial trail steps of rock requires a sculptor's sense of form. Here is ample evidence of accomplishment that must have been so approached. The blending to trailside, the variations in height of riser and depth of tread, the sparing use of mortar, are important factors recommended for observation and mental note.

Wintersmith Metropolitan Park, Ada, Oklahoma

Petit Jean State Park, Arkansas

Perry Lake Metropolitan Park, Oklahoma

Turner Falls State Park, Oklahoma

Wheeler Dam Reservation, Tennessee Valley Authority

Trail Stairways of Stone

In all the subjects framing this comment will be sensed a departure from the imitation of nature in the direction of the more frankly man-made. Steeper grades are the problem here encountered and more uniform steps the solution very properly arrived at. Notwithstanding this serving of practical requirement, the results are certainly not unpleasantly conventional and not too mathematically exact.

Taughannock Falls State Park, New York

Palo Duro State Park, Texas

BRIDGES *and* CULVERTS

BRIDGES IN PARKS include foot, bridle trail, and vehicle bridges of widely varying widths, spans, heights, and types of construction. In the interest of limiting the classifications within this compilation, the less frequent underpass and the minor culvert are embraced within this section.

In outward appearance, the bridge calls most importantly for visible assurance of strength and stability. To be entirely successful, it is not enough for the bridge to be functionally adequate within the exact knowledge of the engineer; it must proclaim itself so to the inexact instincts of the layman. In gesture to the lay concept of structural sufficiency, it is pardonable park practice to venture well beyond sheer engineering perfection in the scaling of materials to stresses and strains.

The attainment of "the little more" that is so desired by those who would have an eye-appeal scale brought to the slide-rule, is all too rare in park bridges. Rather is there a too prevalent flimsiness, ocular rather than structural. Considerably fewer bridges fail to satisfy by seeming too ponderous for their function.

After the attainment of a sufficiency in material pleasing to the eye, the next demand to be made upon bridges would be for variety, avoiding the commonplace at one extreme, and the fantastic at the other. The ranges of use, span and height, and the broad fields of materials, arch and truss forms, local practices—among other variety-making possibilities—promise endless combinations and cross-combinations that could make for such individuality among bridges that none need ever appear the close counterpart of another.

This presentation seeks merely to focus on the characteristics that bring to bridges the most promise of compatibility with natural environment. There is elsewhere abundant information, including diagrams, rules and formulae, for the design of structurally enduring bridges. Much more limited is the field of source material that concerns itself with bridges that, by reason of appropriateness to natural environment, truly deserve to endure. There are far too many bridges which, after breaking every commandment for beauty and fitness, seem to have sought to wash away all sins through the awful virtue of permanence. Such penitent bridges should have no place in our parks. The quality of permanence cannot be considered a virtue in itself. Unless every other desirable virtue, big or little, is present, permanence is only a vicious attribute.

In general, bridges of stone or timber appear more indigenous to our natural parks than spans of steel or concrete, just as the reverse is probably true for bridges in urban locations or in connection with broad main highways. Probably there are few structures so discordant in a wilderness environment as bridges of exposed steel construction.

Too great "slickness" of masonry or timber technique is certain to depreciate the value of these materials for park bridges. Rugged and informal simplicity in use is indisputably the specification for their proper employment in bridges.

In no park structure more than bridges is it of such importance to steer clear of the common errors in masonry. Shapeless stones laid up in the manner of mosaic are abhorrent in the extreme. In bridges particularly is there merit in horizontal coursing, breaking of vertical joints, variety in size of stones—all the principles productive of sound construction and pleasing appearance in any use of masonry. The curve of the arch, the size of the pier, the height of the masonry above the crown of the arch are all of great importance to the success of the masonry bridge.

Timber bridges may utilize round or squared members to agreeable results. Squared timbers gain mightily in park-like characteristic when handhewn. A common fault in bridges is the too abrupt termination of the parapet, railing, or wing wall. These should carry well beyond the abutments.

In general disfavor for park use are bridges of

the open wood truss type. There seem to be no arguments to their advantage, while many are raised against them. In spite of most careful detailing to prevent water entering and lying in the joints, this is hard to overcome entirely. Shrinking of the timbers, rack under impact and strain, and rot developing in the opening joints speed the deterioration of this type of construction. It is short-lived and soon unsafe.

The culvert is too often handled as a conspicuous bridge, when in reality it is merely a retaining wall pierced by a drain. The facing of the culvert, like the treatment of almost every other facility in natural parks, should be first and always informal and inconspicuous. Facing and culvert proper should be adequate in materials and in workmanship so that once constructed both can be forgotten and make no demands upon maintenance appropriations.

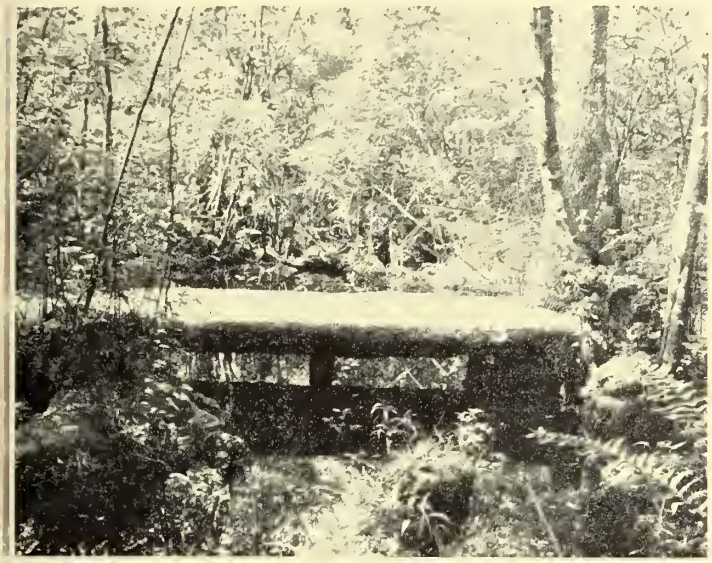
The culvert proper is sometimes of local stone when this is abundant and workable, but if, as is more frequently the case, it is of concrete or of galvanized iron, reasonable concealment of the fact is to be striven for. The retaining wall that is the end wall or facing of the culvert should avoid disclosing that it is a mere veneer by extending well into the culvert opening. Natural rock is certainly the preferred material for the end walls. It may be laid either in mortar, or dry, but the latter method of laying to be lasting should be undertaken only when the available stone is of suitably large size.

If stone is not available locally or from within a reasonable distance, concrete or wood must be resorted to in constructing the retaining wall. Either is an unsatisfactory substitute for the stone wall—concrete because of its harsh surface, and lack of permanence if inexpertly mixed, and wood because of its tendency to deteriorate rapidly under conditions of moisture.

As much care should be given to the design and execution of culvert end walls as to other park structures. Usual mistakes are insufficient care in the handling of mortar, resulting in sloppy joints, and lack of variety in stone sizes, leading to monotony and formality of surface pattern. These faults are common to much contemporary stonework, not limited to park construction only.

BRIDGE, WESTCHESTER COUNTY, NEW YORK

"Top flight" in all details that make a masonry bridge truly a delight to the eye and assimilable in a haunt of Nature. If the information regarding this example is accurate, it is relayed here with some embarrassment. It is said to be an ancient structure—not a consciously produced bridge of park implications. Achievement will be considerable when, purposing to create park bridges of equivalent distinction, actual accomplishment is more the rule and less the exception.



Parvin State Park, New Jersey

Deception Pass State Park, Washington

Minor Bridges

Surrounding are bridges of the most elementary pattern, mere platform bridging an obstacle. The upper three are foot and horse trail bridges, of a type termed in France a *passerelle*. The lower examples are the same basic idea widened to accommodate vehicles and equipped with low curbs.

Parvin State Park, New Jersey

Bear Mountain State Park, New York

Mt. Tamalpais State Park, California

Turner Falls State Park, Oklahoma

Custer State Park, South Dakota

Devil's Den State Park, Arkansas

Minor Bridges with Railings

In four of the bridges illustrated on this page the narrow *passerelle* has been furnished with handrail on one side, low curb on the other. A considerable picturesqueness results, accented by the vigorous rusticity common to all. The fifth bridge, at lower left, borrows the graceful and pleasing segmental arch form characteristic of the oriental bridge, a twice pleasing line if we think to inventory the aesthetic value of the reflection.

Parvin State Park, New Jersey

Grand Teton National Park

Letchworth State Park, New York

I. and M. Canal State Park, Illinois

Minor Vehicle Bridges

Grouped here are five bridges of vehicle width, constructed of wood girders, decks and railings. Only the railing of the example directly to the right hints of inadequacy, but the eye is immediately attracted and diverted by the exposed ends of the puncheons that form the floor. The two lower examples are particularly vigorous in scale.

Saxon Woods, Westchester County, New York

Caddo Lake State Park, Texas

Lassen Volcanic National Park

Bastrop State Park, Texas

Cooper River Parkway, New Jersey

Bastrop State Park, Texas

Wood Bridges

This grouping lumps together foot bridges and vehicle bridges, bridges with component members squared and in the round, and those with support supplied by beams and by truss forms. The two examples below exemplify the decorative but not thoroughly practical open truss construction, not generally favored in park usage. The surfaces of the bridges of squared timbers show a skillfully handhewn texture.

Keosauqua State Park, Iowa

Egg Harbor River Parkway, New Jersey

Bronx River Parkway, New York

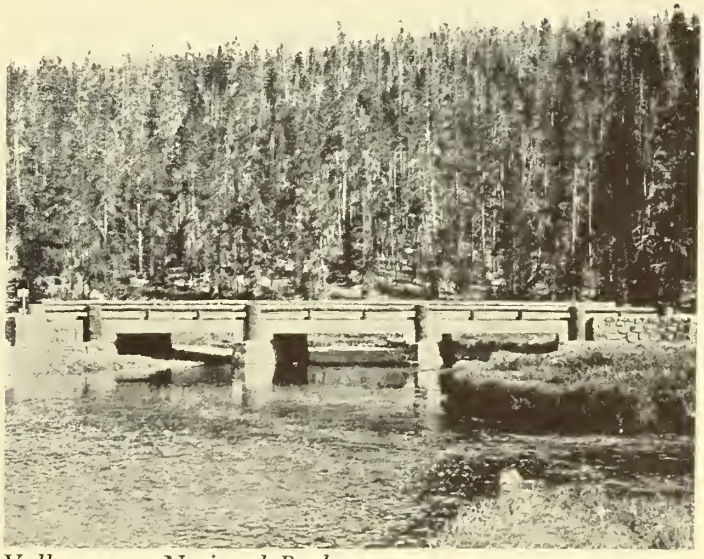
Hutchinson River Parkway, New York

Bridges of Masonry and Wood

Above are constructions in which the stone abutments are so prominent that the impression almost of stone bridge is created, although beams, floor constructions and railings in both cases are of wood. The upper right example is both underpass and bridge. The other bridges are masonry structures, except for wood railings. The bridge shown at lower right is actually of reinforced concrete, but the stone abutments and piers, and the prominent wood railing, cleverly minimize, almost deny, any impression of concrete.

Lake Murray State Park, Oklahoma

Margaret Lewis Norrie State Park, New York



Yellowstone National Park

Canyon Park, Oklahoma City, Oklahoma

Wintersmith Metropolitan Park, Ada, Oklahoma

McCormick's Creek State Park, Indiana

Stone Arch Bridges

Five stone park bridges that exhibit wide variety of stone techniques and arch forms. The latter range from semicircular to the flattened form of the lengthy span at Taughannock Falls State Park. Noteworthy in the example directly to the left is the fact that the stone arch is not mere facing of a concrete arch but extends the full width of the bridge and functions structurally.

Buttermilk Falls State Park, New York

Taughannock Falls State Park, New York

Loveland Mountain Metropolitan Park, Colorado

Bronx River Parkway, New York

Culvert Treatments

The surrounding illustrations picture culvert treatments in wide variety, from the most casual naturalistic treatments of the examples above to the more formal facings of the lower row. Particularly well blended to its site is the example at lower left. Within the range of the culverts shown on this and the following page should be found one to suit almost every possible topographical condition, as well as the inherent limitations of any kind of native rock.

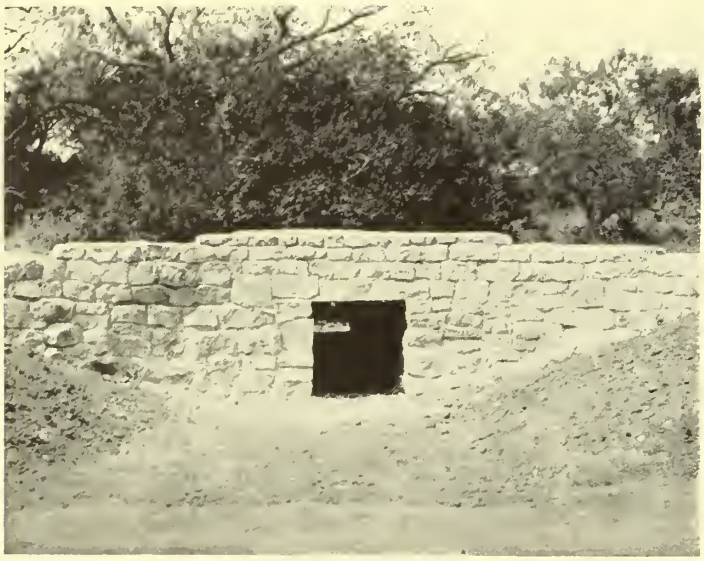
Rocky Mountain National Park

Hillcrest Park, Durango, Colorado

Pere Marquette State Park, Illinois

Arbuckle Trail, Oklahoma

Levi Jackson—Wilderness Road State Park, Kentucky



Lake Corpus Christi Park, Mathis, Texas

Stone End Walls of Culverts

Round about are grouped stone-faced end walls of culverts showing varied stone techniques. Illustrated are several possibilities for blending and tapering off the end walls to the banks by stepping down or curving the coping line and by the employment of wing walls. The climax in this presentation of culverts is the example at lower right—twin culverts that offer a solution where the drainage flow is uncommonly heavy.

Canyon Park, Oklahoma City, Oklahoma

Lake Worth Metropolitan Park, Texas

DAMS *and* CROSSINGS

Although it is an inviolate principle, with respect to National Parks and Monuments, hat artificial control of stream flow is to be rigidly voided, the situation with respect to State Parks somewhat different. While it is felt that in some ases such artificial control has been exerted to the etriment of valuable natural conditions without reating adequate compensatory values, there are ndoubtedly situations, such as that in which a rious regional shortage of facilities for water rec- ation exists, which justify this sort of modifica- on of natural conditions. Those who feel that rimary emphasis should be placed on preservation f really natural scenery and on historic values rnestly urge a careful weighing of all prospective sses and gains before any decision is made to reate an artificial body of water in a State Park. ranting then the occasional wisdom of such un- ertakings, simple naturalistic dams in which the bjective in construction is the appearance of a atural waterfall are considered within the scope f this discussion.

The large dam is strictly an engineering prob- m and will not be considered in the present vol- me. Anything short of the most complete techni- l information—any skeletonized version possible ithin present space limitations—might prove more isinforming than otherwise. Furthermore, the am that is other than miniature waterfall, has ot so far proved very susceptible to coercive ttempt to adapt its stubborn functionalism to harmony with natural environment. As with lephone line and the incinerator, here is proper ccasion for a philosophical counting of blessings, nd for blindness to incorrectible artistic lack. he recreational and scenic benefits of a made lake ust alone be counted on to justify the alien dam, ithout reliance on any feeble efforts to make the am a parklike "feature." This, in a development f any considerable size, it can never be. It is rue that large dams have been faced with stone o some softening of hard, rigid surfaces and lines. But always the failure of the undertaking to register anywhere near a perfect score has shown that the results have not justified the means.

Even the small dam usually has a structural core wall, of concrete or rubble, against and over which the "naturalism" is applied as a veneer. Too frequently the rock veneer follows too closely the regularity of the core wall, and betrays the fact that the dam is artificial. This can be avoided if the veneer strives for irregularity both in plan and in vertical section. The latter is accomplished by building out the lower courses in imitation of natural ledges. Variety in size of the rocks will add much to the natural appearance of the dam. Likewise should construction insure distribution of water, so that as much rock work as possible is screened by flow. To have all or any considerable portion of the dam exposed during low water may unmask an otherwise well-contrived naturalism.

If in our approach to park technique, the primitive has the right of way, the crossing as a picturesque survival has a place. For horse trails and even for secondary motor roads in parks where traffic is leisurely and not too heavy in volume, the ford is a legitimate and economical provision for crossing a shallow stream. This is subject to further reservations if tolerance of its quaintness is not to give way to annoyance on the part of the park user. The low water crossing will not meet with favor if the stream is normally subject to flood levels that make the crossing frequently impassable for automobiles. Equally conducive to public disapproval are a soft stream bed, treacherous holes or other hazards to safe negotiation. The approaches must not incline too sharply, nor may sight lines, as the ford is approached, be completely obscured by planting. Failure to provide these requisites to public acceptance of the ford is apt to provoke clamor of disapproval and lead to demands for its replacement with a bridge, to the eventual voiding of the economy it was sought to effect.

Pittsfield Reservation, Massachusetts

A waterfall so natural in appearance that i brooks denial of all artificiality. The small dam i naturalized with much greater success than th large one.

Palmetto State Park, Texas

Here are rock ledges in series that have but littl trace of other than natural origin. The rock-edge banks are well contrived to tie in with the steppe breaks underlying the water course.

Boyle State Park, Arkansas

When the flow of water over a man-made wate fall promises to be meager, an arrangement of lar rocks, between which the flow can be concentrate at a few points, is a good solution. This is mu more effective than an attenuated dribble of wat the entire length of the dam.

Buttermilk Falls State Park, New York

Skillfully naturalized as this example of artificial barrier to stream flow may be, the choice of location for it is an unhappy one. Backing up water to the base of a beautiful natural falls to create a swimming pool, it depreciates sadly the beauty of the natural falls, although not to such degree that the artificial one adds to its own glory by contrast.

Turner Falls State Park, Oklahoma

The natural aspect of this considerable bit of nature-faking seems very genuine. There is a uniform distribution of water that conceals well any evidence of the barrier being artificial. At low water the origin of the obstruction will probably be revealed, unless the construction is exceedingly clever in every detail.

Bastrop State Park, Texas

The heavy flow of water here pictured screens the rock work of this barrier from the critical eye. Naturalized dams are best photographed at high water stage; their construction best analyzed and appraised during drought. The rockwork terminating the barrier at the banks is effective.

Crossing, Turner Falls State Park, Oklahoma

A dam, built wide enough to provide a crossing and showing a well-naturalized facing wall. The road surface is paved with flagstone laid with wide joints, which accommodate the flow of considerable volume of water and afford more frequently a dry surface for crossing.

Flood-over Type Bridge, Boyle State Park, Arkansas

Here a suggestion of a dam is surmounted by a low stone bridge of somewhat formal design. This illustration and the one that follows demonstrate stages in the evolution of dam into bridge.

Low Water Bridge, Palmetto State Park, Texas

A low-lying structure that is bridge at low water, and ford at flood stage. It is strictly a utility, reflecting nothing of its park surroundings. The scale of the bridge as shown by this illustration is apt to be misleading until the human figure is taken into account.

SEATS *and* TABLES

An average of the dimensional limits of the human frame and uniformity of a sort in the distribution of the hinges thereof, have long since determined certain invariable dimensions for the park seat and park table, and that conventional combination of both which we dub herein the picnic unit. Seat surface should be 16″ to 18″ and table surface 28″ to 30″ off the ground or floor, and for seat and table in combination the front edge of the seat should be from 1″ to 3″ removed from the edge of the table. These limiting dimensions have been held to in practically all successful park seats and tables, and probably in the majority of the unsuccessful ones, the differentiation of the good from the bad resulting from varied numerous other factors, not so easily reducible to rule.

There is great difference of opinion as to whether picnic units fabricated of wood or laid up as masonry are the more suitable in parks. There is lack of wisdom in any statement generalizing on this point. The superior suitability of the one is determinable only by application to a specific area. There are regions in which one is more appropriate than the other, and areas as well in which both are equally at home.

The very first decision to be made by the creator of park furniture of wood is one around which much controversial argument centers. To him it may be only a matter of whim, whether the seat or table or picnic unit be built of dimensioned, commercial lumber, or of native cut material, but he should be warned from the first that, whichever his choice, he will be heartily condemned by approximately fifty per cent of the arbiters of such matters.

On whichever side he may innocently and squarely range himself, it seems only fair that he be fortified and forewarned against all invokable arguments.

If he elects to use commercial lumber for park furniture—

(pro) he has with commendable directness, made honest use of the production facilities of our times to meet a strictly utilitarian human need in all functional requirements of strength, comfort, and economy, or,

(con) he has with unpardonable insolence, desecrated a natural beauty spot, by the introduction of utter incongruities, makeshift, uncompromising in line, ugly.

If he elects to fashion park furniture from native cut timber—

(pro) he has with the skill of the true artist, graced a natural setting with an harmonious facility, not alone of practical usefulness, but of sturdy, handcrafted beauty, or,

(con) he has with the ruthlessness of the vandal, felled trees that were the park's very reason for being, despoiling a glory of nature to produce in an outworn craftsmanship, trivial accessories that were better produced by the logical methods of today's machines.

If, now fully apprised of the barbed horns of his dilemma, the artisan dare to make a choice, the bench, or table, or picnic unit may be undertaken. For his encouragement be it said that after this choice, the further going is comparatively smooth.

If he is not himself definitely of the left or of the right in this issue he can dare moderate scorn to win moderate approval from the extremists of both views, and take a middle course. He can gesture in one direction by deciding that the machine-made product is in truth rigidly uncompromising in line, and in the other direction by abstaining from cutting any trees within the confines of the park to secure material for the more rugged and "freehand" pioneer crafted seats and table. If the required "native" material can be had from some source near at hand without sacrifice of the timber resources of the park itself, the park furniture maker can run for a touchdown with cheering from all sections of the stands.

Illustrated are examples of tables and seating in

wide variety. It is appreciated that differing climates, sectional resources, and habits of use prevailing through the length and breadth of the land, call for diversity in materials, forms, and principles, in this necessary park equipment. Desirable as are the qualities of sturdiness, "nativeness," woodcraft and handcraft in these minor objects in most locations, it must be recognized that in not a few regions, a too conscious effort to acclimate them defeats the end.

In general, it is highly desirable to discourage on the part of patrons, the moving of picnic tables from place to place. Dragging tables around is highly destructive of ground cover. The fixed position, if a good one, is desirable, and is achieved by means of the weight of the picnic unit or table, or better still, by anchoring.

There are conditions however that will dictate that park furniture be mobile, and practical considerations requiring that it be collapsible or knock-down for compact storage. Knock-down units should be designed to be assembled easily, and to be as light in weight as is consistent with the structural requirements. The fewer pieces the better. When parts can be made interchangeable, time is not wasted in sorting them. Cabin or screen door hook fastenings are to be preferred to loose fastenings wherever practicable. Seat and table tops should be of material heavy enough or braced sufficiently to avoid spring or sag.

There are numerous practical refinements in the construction of the picnic unit that are worthy of wide adoption. Regardless of the quality of material and workmanship, the boards forming the tops of wood tables will pull apart in exposure to the weather, and more or less narrow cracks will develop between them in which food particles are apt to lodge and are not readily removable. How much better that the table top be constructed with open joints about one-quarter-inch wide between the boards, from which food particles, which do not pass through, can easily be removed.

Rough edges of seats and tables should be guarded against. The picturesque unit of rustic wood material unfortunately will take high toll in the tearing of silk stockings and light clothing. The unit built of milled materials should have al edges and roughnesses likely to come in contac with clothing or to produce splinters, smoothe and rounded. Much can be done even to the hand crafted type to eliminate the worst hazards with out great sacrifice of rustic character. There is measure of defense against the use and consequen abuse of table tops for uncapping bottles, by fas tening within a recess at the end of a heavy tabl top, a specific device for this purpose.

When benches or tables are placed in fixed posi tion, their wood supporting members often exten into the ground. In most instances these shoul be treated with creosote, tar, or other preservative Where the wood is western red cedar or redwood the use of tar or creosote is considered unneces sary. In most locations exposed wood abov ground should also be treated against weather b oiling, shellacking, creosoting or other tried an proved methods. In the Far West, this is not en couraged; the natural wood color is preferred an the need for preservative treatment of the nativ woods held to be unnecessary. Especially are treat ments carrying color deplored and one is quick t agree once there has been brought to his attentio the surprising number of shades of green and blu that can be bought in paint cans, and how invari ably these clash with the colors of nature.

There are sectional preferences in tables an seating facilities in our parks which veer away fro the usual and prosaic. For example, in Californi round and octagonal tables seem to meet with favo in camp and picnic grounds. It is alleged they ar more useful for playing cards! They are usuall fashioned from cross-sections of the large redwoo and fir trees available on the West Coast. But th cross-sections split as they weather, and are far fro satisfactory as table tops. For this reason none o this type is shown in the accompanying illustra tions. Table tops in which the grain of the woo is parallel to the top surface are longer lived.

In some localities picnic units are cleverly con trived combinations of wood and stone, in other they are built entirely of native stone. It is pos sible that tables and seating built wholly or i part of rock blend into some landscapes more read

y than do those of logs or sized lumber. They ay have advantages, practical and aesthetic, but e permanent to a fault that no end of good points n offset. The stone picnic table, by reason of s immobility and durability, defeats itself. The cnic ground is an area of intensive use, its equip- ent subject to hard wear. It may seem far sighted create picnic units of stone because these will and the gaff over a long period. They meet abun- ntly this requirement, but their potential life is rdly begun before the site, especially the aver- ge picnic site, has lost most of its value as a nat- ral area due to concentrated use, and must be vacuated and left to the healing processes of ature. The most cumbersome wood picnic unit ould be moved under these conditions, but not e stone unit. Ergo, the stone unit, through no ailty of its own, is in "dry dock," and the capital vestment therein "omits the dividend" for the ration of the site's recuperative period.

There are other less formidable factors militat- g against the use of masonry tables and benches. hey are executed with great difficulty, because, e to the freehand lines desired, workmen find it rd to construct them from a blueprint with a ce balance of freedom and accuracy. The units ould be located in almost permanent shade since herwise they become thoroughly heated and ra- ate heat for a long period. Furthermore only e smoothest stone slabs serve satisfactorily as ble tops, and these are not always readily obtain- le. Cement slab tops in substitution seldom, if er, give a satisfactory appearance. Because only broad base looks reasonable for supporting a ne slab table top, there is danger of interference th leg room.

It would seem reasonable that the informality ich is the very spirit of picnicking could be ayed up to by varying the standardized table and nch combination. In the direction of novelty is arrangement of naturalized stone table serving a buffet in the shade near the fireplace with seats nged informally round about through clever nat- uralizing of boulders, flat rocks or large logs, or exposing of natural rock outcroppings.

There are park reservations where the forest cover is limited or the rainfall unusually heavy, and wherein picnic area developments are properly located by reason of other governing dictates than shade. In such instances, picnic units logically in- clude a sheltering roof, or perhaps even require a windbreak against prevalent high winds. Any complication of function tending to increase the size of objects which are desirably kept as incon- spicuous as possible, is unfortunate, but form must ever follow demonstrated need.

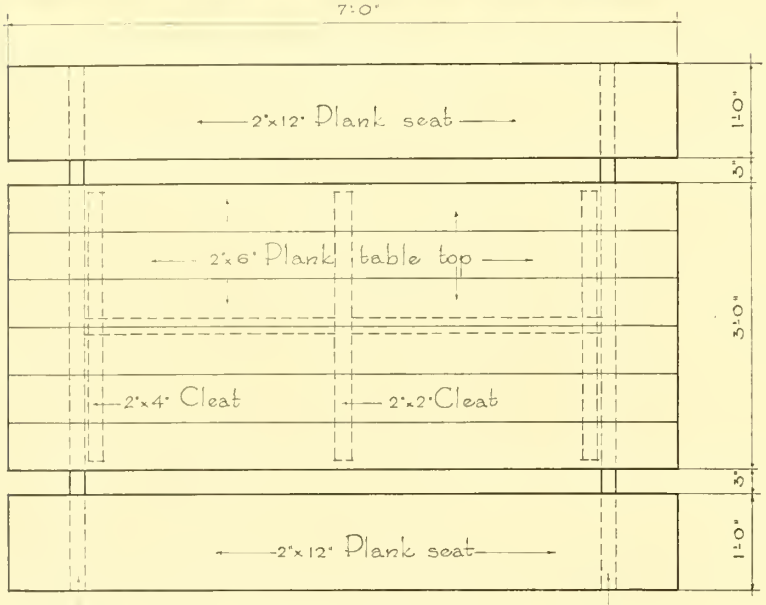
So much for picnic tables and benches in con- nection with them. There are other needs for seating within our natural parks, of more or less casual nature. Particularly along trails are oppor- tunities offered for the resourceful utilization of natural objects or formations as resting places. A ledge of stone, a stump cut and hollowed out to form a seat, and boulders or down logs with slight adaptations provide trailside seating without the introduction of foreign elements. Two stumps in suitable proximity provide supports for split log as a resting place. A huge fallen log is notched to provide seat and back. Almost invariably, an in- genious collaboration with Nature provokes more genuine acclaim than the more pretentious object of which man can claim sole authorship.

With trailside seats on occasion, as with picnic tables, there is a tendency in certain areas to elab- orate the simple unit into something in the nature of a minor shelter, that makes classification as seat or shelter somewhat difficult to decide.

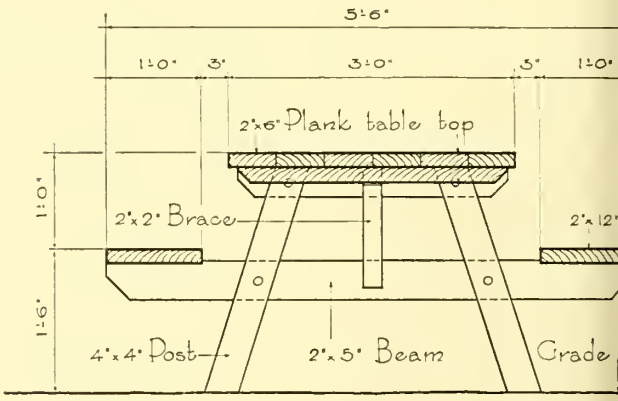
In truth, the dividing line is drawn with diffi- culty and perhaps without pure logic as a perusal of the illustrations under both classifications may demonstrate. It is surely sound to urge for such glorifications of the simple bench, and of the picnic unit as well, a heightening of quality, somehow consistent with their size and pretentions. If a higher quality means a lesser quantity of these pre- tentious objects, it is still a good rule to follow.

Picnic Unit – – Bonham State Park – – Texa

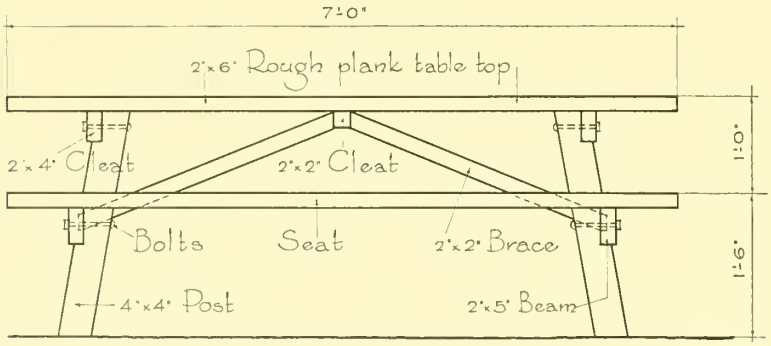
Here is pictured the most appealing of the picnic units co trived from squared lumber of commercial sizes. The we proportioned, splayed legs are the outstanding factor i furthering the superiority of this example to the variants show on the opposite page. There is in this specimen an admirab appearance of being substantially braced against overturnin



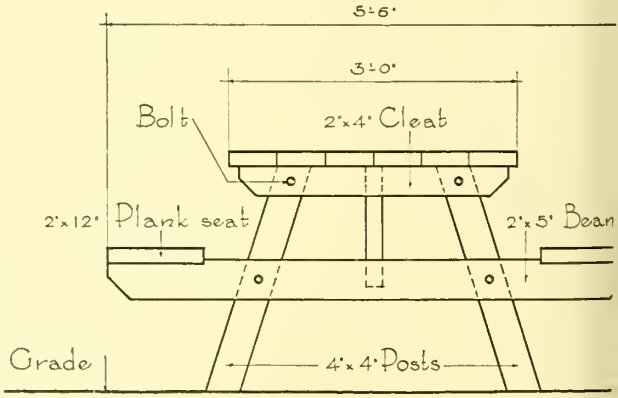
2"x5" Beam PLAN 2"x5" Beam



SECTION



SIDE ELEVATION



END ELEVATION

Scale $\frac{1}{2}$" · 1'-0"

arvin State Park, New Jersey

Quite similar to the picnic unit of commercial ze lumber detailed on the plate opposite. To revent such units being moved about at will by ie public with resulting damage to the site, it is ecommended that the legs be built of such length iat they may be buried not less than twelve inches i the ground or be fastened to a well-buried anhorage by means of heavy steel chain and staples.

and M. Canal State Park, Illinois

Flagrantly practical in line and sturdy construcon, this picnic unit recommends itself for areas concentrated use where the maximum number indestructible units at minimum cost is the rime consideration. While no object in parks is ctually indestructible if exposed to the recreaonal license of the users, this unit would appear be more than a fair risk.

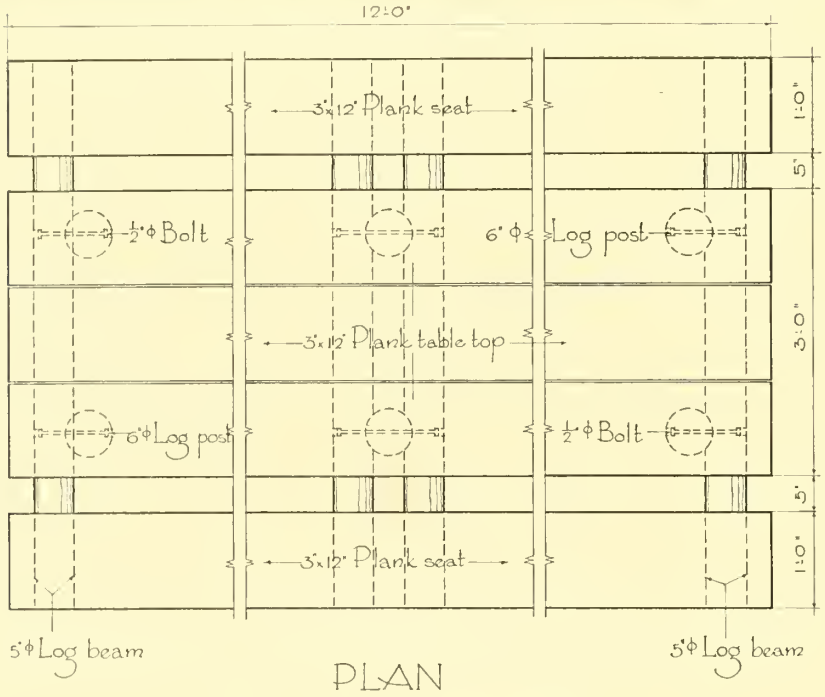
amden State Park, Minnesota

This subject appears well braced to withstand e stresses and strains to which several seasons in cilitation of picnicking are certain to subject it. his is a practical feature of considerable impornce, as the experienced park employee charged ith maintenance will testify.

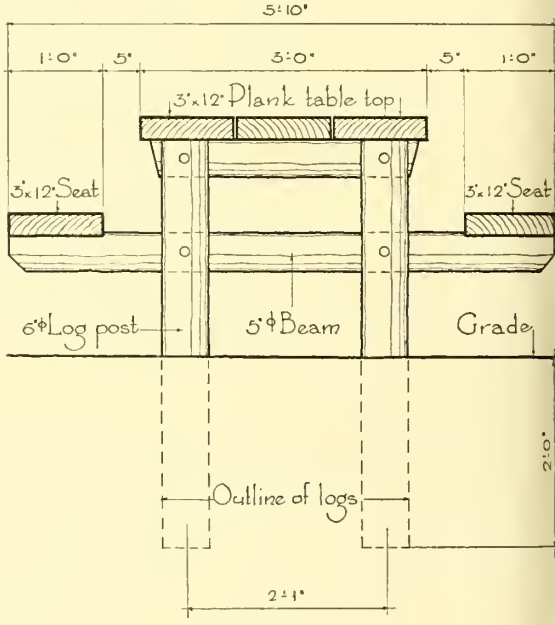
Picnic Unit

South Mountain Reservation – – New Jersey

Squared and round timbers in satisfying combination that is neither too mannered nor too machined in appearance. An excellent compromise favoring equally wilderness setting and the need for great numbers of practical picnic units, appropriate and yet not costly. Present are suitable thickness of seat and table planks, adequacy of cleats to prevent the warping of the table top, and assurance of desirable fixity of location by virtue of the deep-planted supporting members.



PLAN



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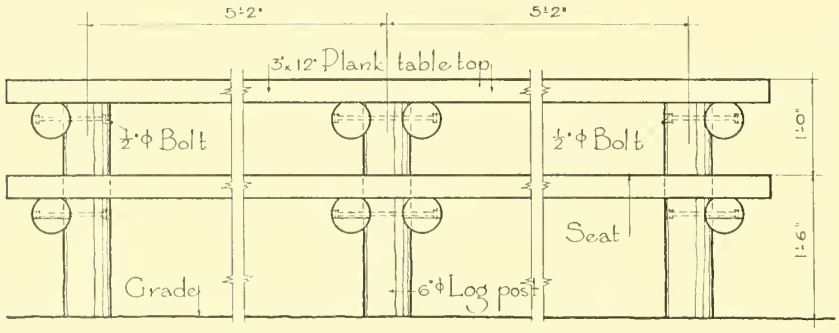
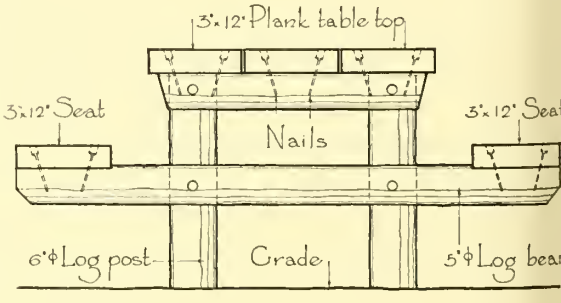


SIDE ELEVATION



END ELEVATION

Scale ½" = 1'-0"

Lassen Volcanic National Park

This picnic unit with husky round posts, deep planted in the ground and supporting seat and table tops of half logs, is a Far Western variety of the type detailed on the opposite page. This is not a facility to be tossed around to the detriment of ground cover by strenuous picnickers, however exuberant.

Deception Pass State Park, Washington

In this second variation of the type, only the table top has the heavy round planted posts. The seats have cantilevered support from the table legs. The substantial slab tops of table and seats are of native cedar and have a lifetime look that is satisfying to the critical eye.

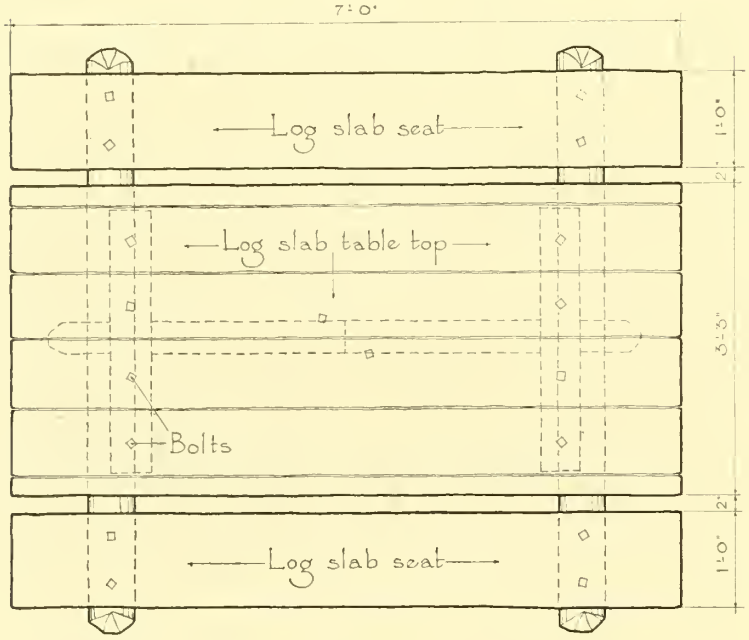
Deception Pass State Park, Washington

This unit will doubtless endure to bear the initials of several generations of picnickers. The magnificent slabs that are table and seat tops compel the instant admiration of all who feel that out-of-door furniture should be conspicuously rugged and native above all else.

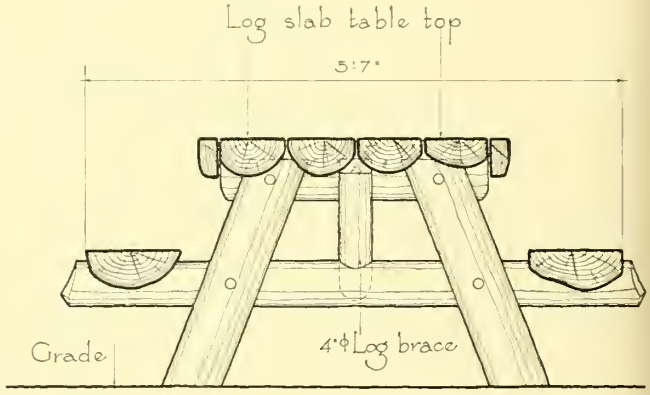
Picnic Unit

Guernsey Lake State Park – – – Wyoming

A heavy rustic type in which the seats are carried on cross-beams bolted to the legs of the table. There is the possibility of extending the length of the legs to allow for planting in the ground to prevent casual moving of the unit. This basic type of table is widely used in the plains and mountain states. Happily the very nature of the rustic material employed serves to save any one unit from appearing to be the exact duplicate of its next neighbor as the opposite illustrations demonstrate.

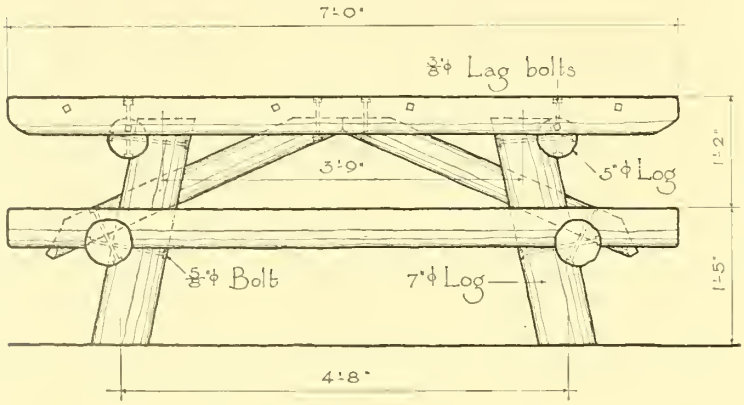


PLAN

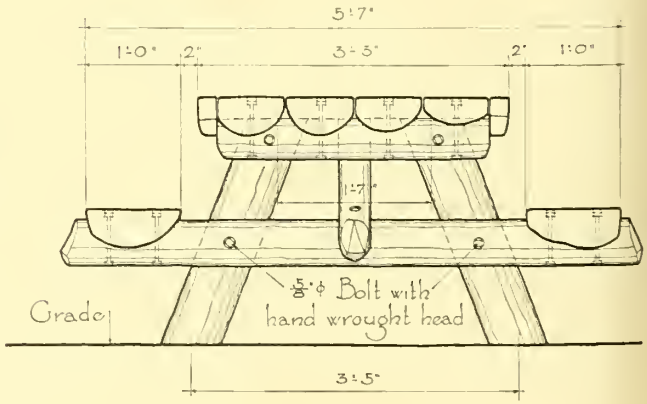


SECTION

All logs and slabs to be peeled



SIDE ELEVATION



END ELEVATION

Scale ½" = 1'-0"

Dolliver Memorial State Park, Iowa

On this page are shown three Iowa variations of the Lake Guernsey State Park picnic unit, detailed on the opposite page. This example departs from complete "nativeness" through the medium of a table top of sized commercial material. Otherwise it exhibits all the desirable points of native handcraft.

Springbrook State Park, Iowa

Here is complete exemplification of the primitive and weather-worn. Rough and raw edges are non-existent in this example. It reeks instead of great age that is of course unauthentic but pleasing withal.

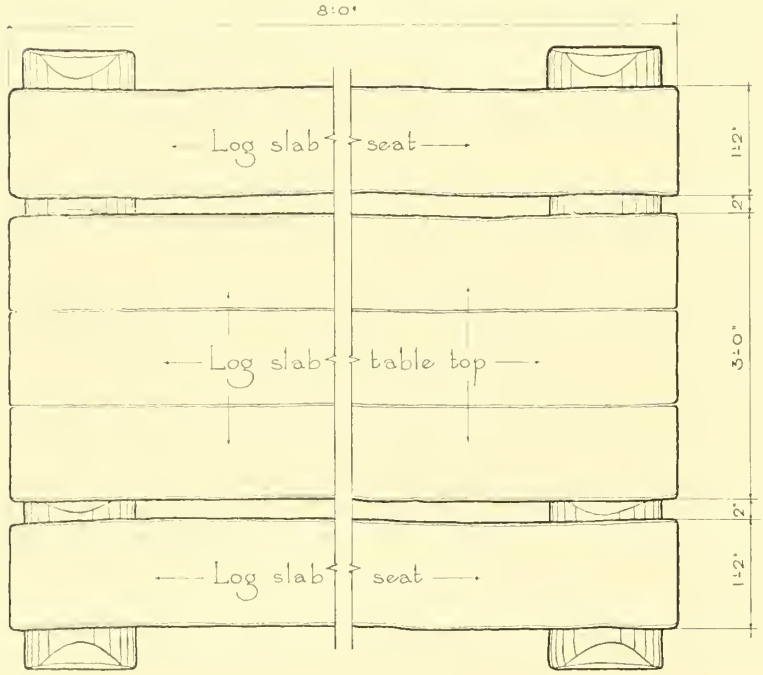
Springbrook State Park, Iowa

Closer in kinship to the Lake Guernsey unit detailed on the opposite page than the variants shown above, here is a raw-boned rendering that is delightful for its very awkwardness. There is affinity with Nature in man-made things in which it is not sought to eliminate all inherent imperfections of line.

Picnic Unit

Caddo Lake State Park – – – Texas

Free from accusation of fragility, yet capable of being relocated if occasion demands, this unit and the variations shown on the plate opposite rate well for primitiveness and practicability. Wood construction of this husky character is only truly appropriate if the surrounding standing timber is in scale with the log members of the table and benches.



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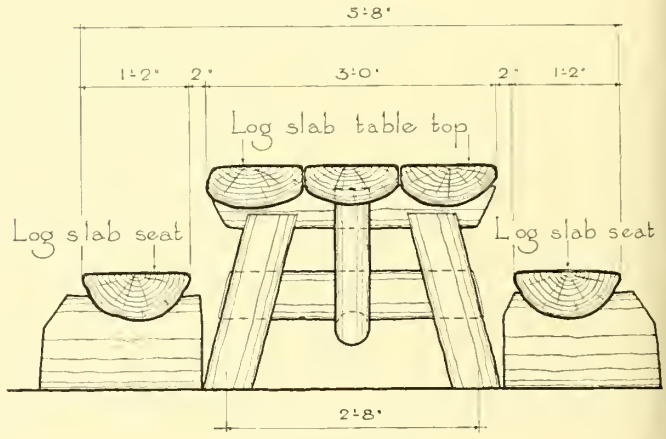
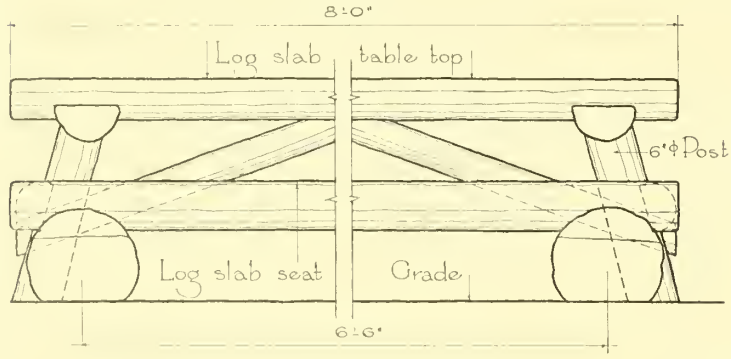


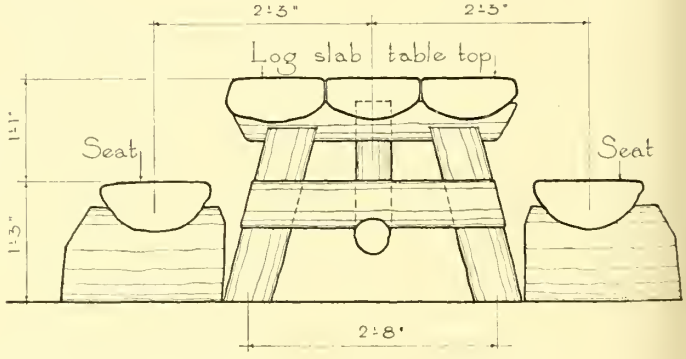
SECTION

All logs and slabs to be peeled



SIDE ELEVATION

Scale $\frac{1}{2}$"=1'-0"



END ELEVATION

Caddo Lake State Park, Texas

So similar to the picnic unit detailed on the opposite page as to suggest mere duplication, yet so possessed of the character that is admirable in these objects as to deny omission. While too weighty to be moved at will, it is still capable of relocation if the picnic area must be rested from intensive use.

Caddo Lake State Park, Texas

Here is merely the foregoing example of picnic unit extended indefinitely for the benefit of family reunions or al fresco foregatherings of the gregarious Rotarian or Elk. The most meager of picnic fare becomes a banquet served on a board so vigorously rustic.

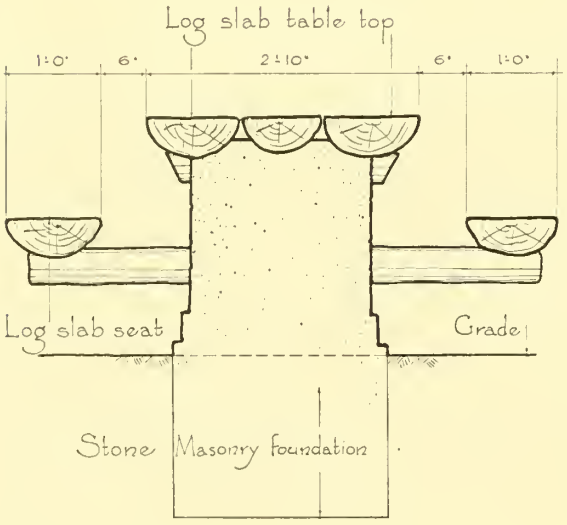
Mohawk Park, Tulsa, Oklahoma

For no better reason than its related sturdiness, this picnic unit is shoe-horned into this group. Picturesque in the extreme, it is very definitely committed to its location, come flood or tornado, or need for recuperation of intensively used area. In the latter situation it becomes a "frozen asset" until the site is renewed.

Picnic Unit

Mississippi Palisades State Park – – – Illinois

Masonry and split logs combined in a unit of extreme durability that has not the practical advantage of ready mobility when the resting of site becomes desirable. The free-hand lines of the split logs are agreeable. The stone masonry has well-related feeling of informality. The disadvantage of the fixed location is perhaps offset by an indicated freedom from maintenance costs. Opposite are shown other picnic units contrived of stone and timber.



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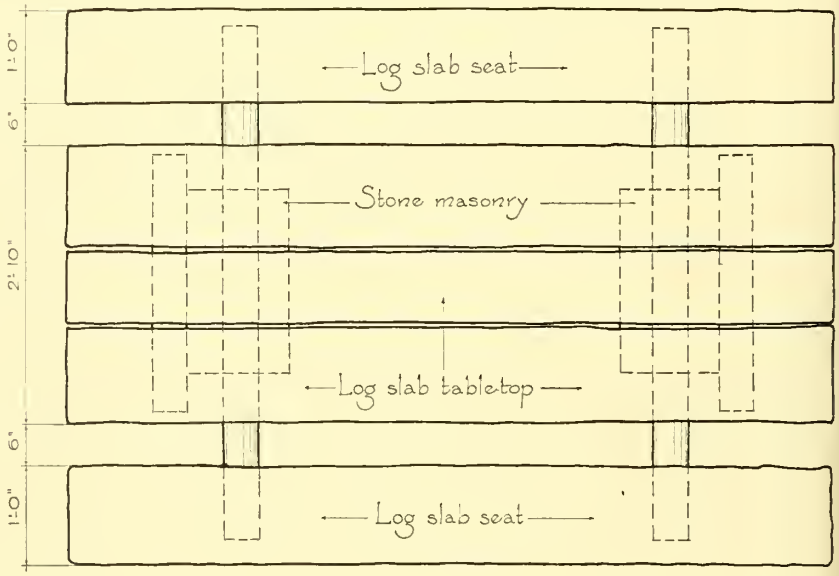

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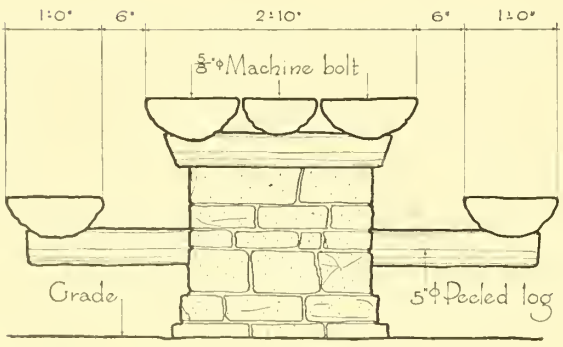

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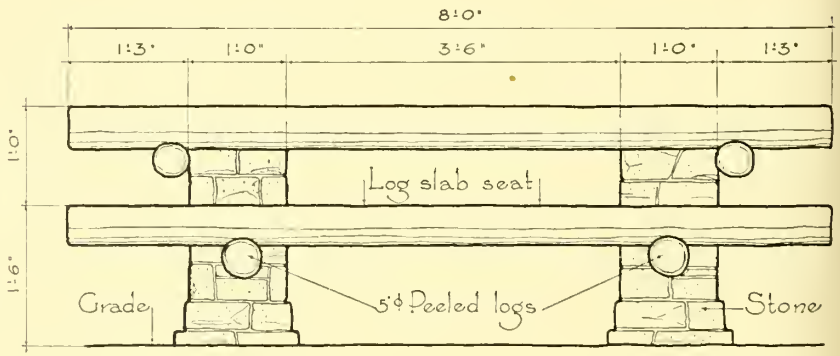


SIDE ELEVATION

Scale ½" = 1'-0"

Saxon Woods, Westchester County, New York

Informal combination of masonry and half logs that accommodates the short-legged (first aisle to the right) and the gangling (next aisle to the left). Thus is a hillside site utilized to practical and coincidentally picturesque advantage. The rock-faced edge relieves the severity of the stone table slab.

Gooseberry Falls State Park, Minnesota

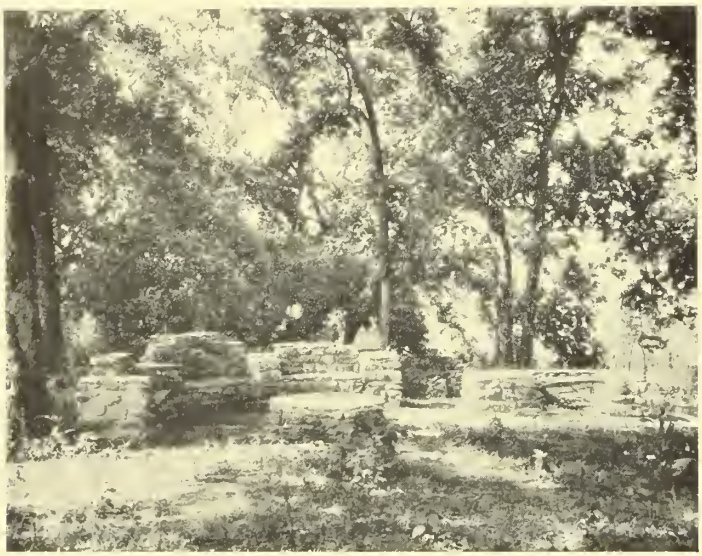
Doubtless, the wood portions of this picnic unit are not enameled white as they appear. Instead they are probably virgin wood awaiting the quick-aging process that the uncapping of bottles and other careless table manners of picnickers will bring. Here is a much more formal rendering of a picnic unit than is shown above or on the opposite page.

Deception Pass State Park, Washington

Only related to the foregoing examples on this page in that the supports of table and seat slabs are in part of stone, quite casually, and it would appear rather insecurely, placed. The beauty of the surroundings and the sheltering tree would probably lead to this potential hazard being risked.

Deception Pass State Park, Washington

This page begs attention to three untypical examples in provision of table and seating accessories to picnicking. This first example evidences opportunism applied in utilization of superlative materials at hand. The conversion of huge half log to table top and exceedingly heavy planks to seats results in a picnic unit of very generous scale.

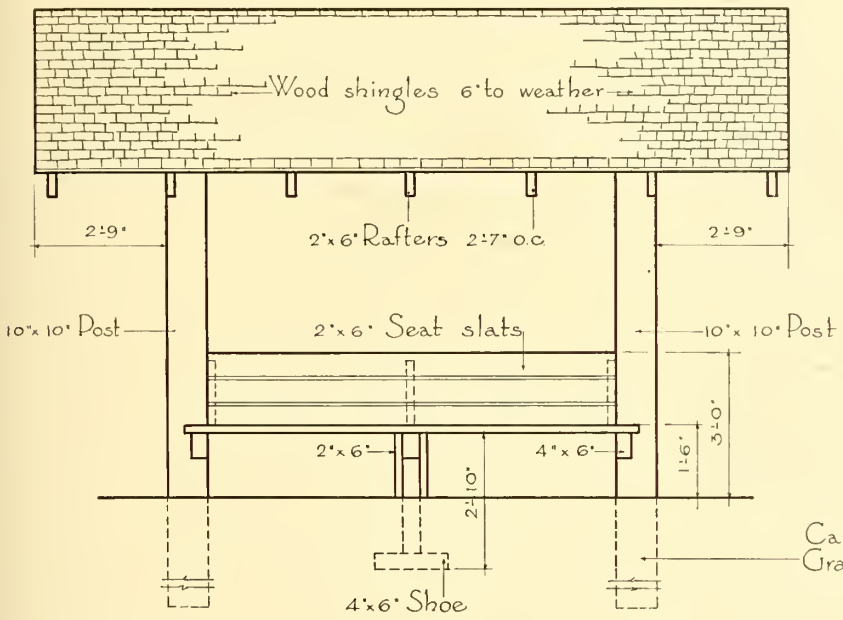


Clifton State Park, Texas

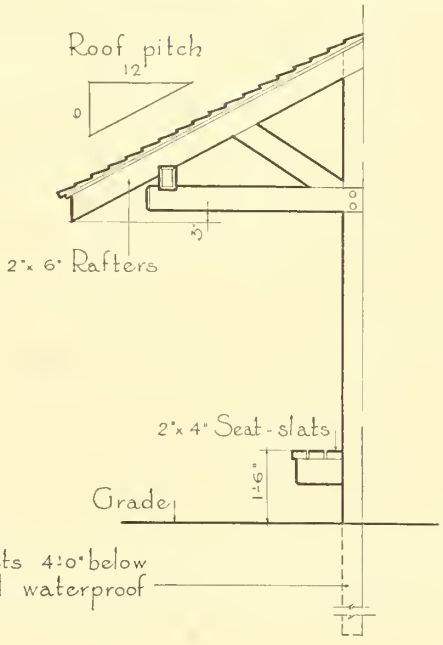
Here is exampled a first step in the direction of promoting buffet picnicking, urged in the preliminary discussion. When the hang-over formality exhibited in the bench can be shaken off, the theory of the truly informal picnic unit will have been put into practice.

Lampasas State Park, Texas

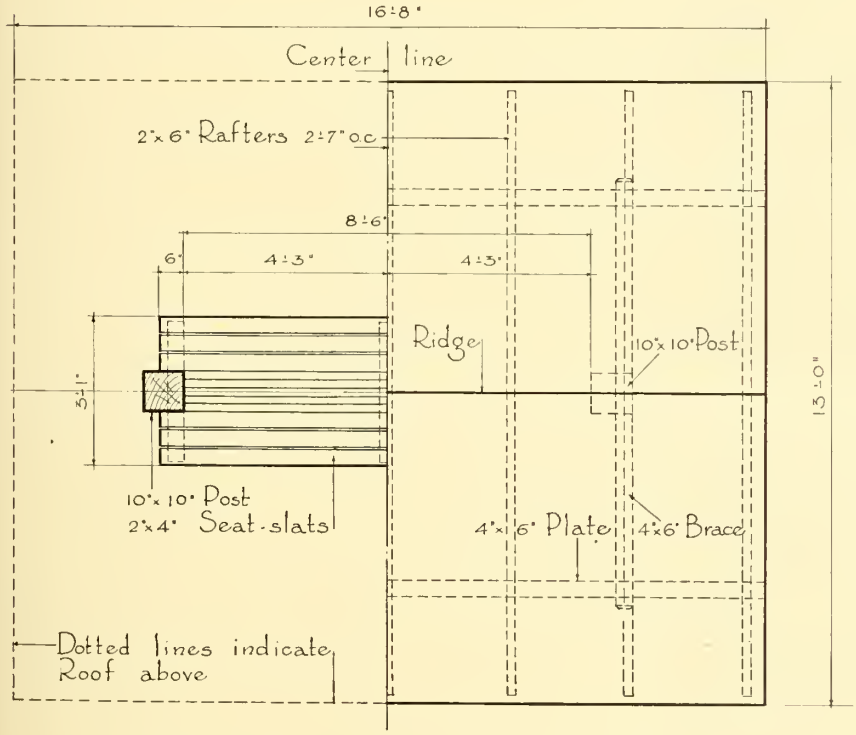
This monumental work is known in Texas as a barbecue table. Starting in Lampasas State Park, it ends we know not where. Its great length is probably in protest against "second table" seating, chicken wings and watered lemonade. The host chair and the extreme permanence of construction should be noted.



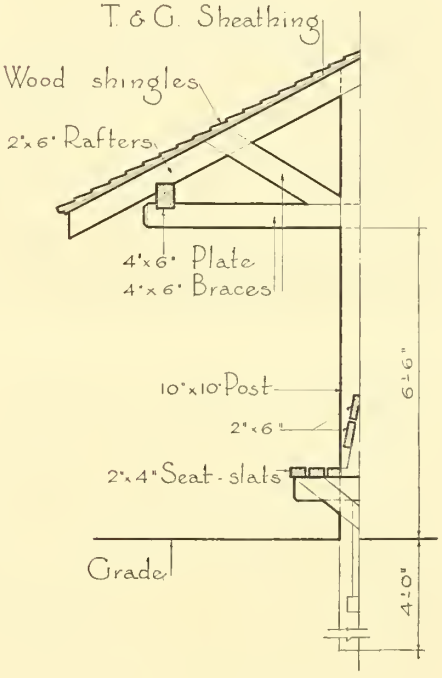
FRONT ELEVATION



HALF SIDE ELEVATION



HALF FLOOR & ROOF PLAN
Scale $\frac{1}{4}$"= 1'-0"



HALF SECTION
Scale $\frac{1}{4}$"= 1'-0"

Sheltered Seat, McKinley Woods, Joliet, Illinois

On the preceding page are detail drawings of this subject, a type of sheltered trail seat popular in Illinois. It is here constructed of sawed commercial lumber. Below and on the following page are shown adaptations and elaborations of this basic form in considerable variety.

Sheltered Seat, Giant City State Park, Illinois

The first of the variants of the Illinois-sponsored trail seat departs only from the rigid severity of the above example in the substitution of hand hewn timbers and a rough shake roof for the commercial materials of its prototype. Although the gain in parklike character is apparent, in form the two examples are practically identical.

Sheltered Seat, Pere Marquette State Park, Illinois

This subject indicates a quickening pace in the direction of the primitive. Here is less precision of form and surface. Striking change is evident in the widely projecting pole rafters, larger shakes, and added arms for the two-way bench. This third generation of the Illinois seat can claim family resemblance largely because it clings in the main to squared timber members.

'heltered Seat, Marseilles State Park, Illinois

Something of a throwback in this fable of family ee to the example that here stands as its grand- ther. There is a mere vestige of the lately added ms, and the recent shagginess of shake roof is issing. Only the use of round timber members ractically throughout evidences that change has ot come to a full stop. There are those who will aim that the strain reaches its zenith in the ember here pictured.

eltered Seat, New Salem State Park, Illinois

Here is acceleration of variety not unmixed with int trace of decadence of a fine old stock. The pporting posts lack the robustness of the ancestral ie, but, as if to compensate for this, are fortified ucturally with braces to the ground. This fea- re is not unpleasing and instances again the tend- icy to supply some kind of arm to the bench. he roof reverts to the ragged informality but one neration removed. Eventual remoulding of the isting grade around this seat will supply a more vorable setting.

eltered Seat, New Salem State Park, Illinois

Four supporting posts in place of two, the roof lge at right angles to that of all foregoing ex- ıples, and the family traits are all but lost. This st of the line can still claim a roof covering that is character and framing members that are ade- iate in size. The arms have been developed to eat prominence. Simple directness that hereto- re distinguished the type has now become so gue that further pursuit of this study in evolu- on would be without point.

Giant City State Park, Illinois

Mt. Penn State Park, Reading, Pennsylvania

New Salem State Park, Illinois

Trailside Seats

Ranging from half log on stone or post supports through benches with several varieties of back, and finally to one that incorporates a directional sign, here is run the gamut of simple trailside seats. Benches elaborate and sophisticated beyond the

New Salem State Park, Illinois

Wells State Park, Michigan

Camden State Park, Minnesota

Letchworth State Park, New York

limitations of the examples here grouped have less measure of justification in natural parks. The surrounding types are capable of infinite variation giving scope for wide differences in detail without violation of reasonable simplicity. It will be observed that a happy choice of location for the seat or bench plays no small part in the effect created.

Wells State Park, Michigan

Dolliver Memorial State Park, Iowa

Deception Pass State Park, Washington

Keosauqua State Park

Dolliver Memorial State Park

Keosauqua State Park

Seats in Iowa State Parks

Variety and individuality have been brought to the seats and benches created for the furnishing of shelters and for outdoor locations in the State Parks of Iowa. There is a quality of naïve handcraftedness about the surrounding examples that cannot but command interest, if failing unqualified

Dolliver Memorial State Park

Springbrook State Park

Springbrook State Park

Keosauqua State Park

ıpproval. From simple seat hewn from a log to complicated fabricated bench with back is a colorful vocabulary of seating furniture. The same primitive note that pervades the benches is to be found in the picnic tables shown within this section, and both in turn relate well to the characteristic shelters in Iowa parks. Typical Iowa shelters are shown elsewhere herein.

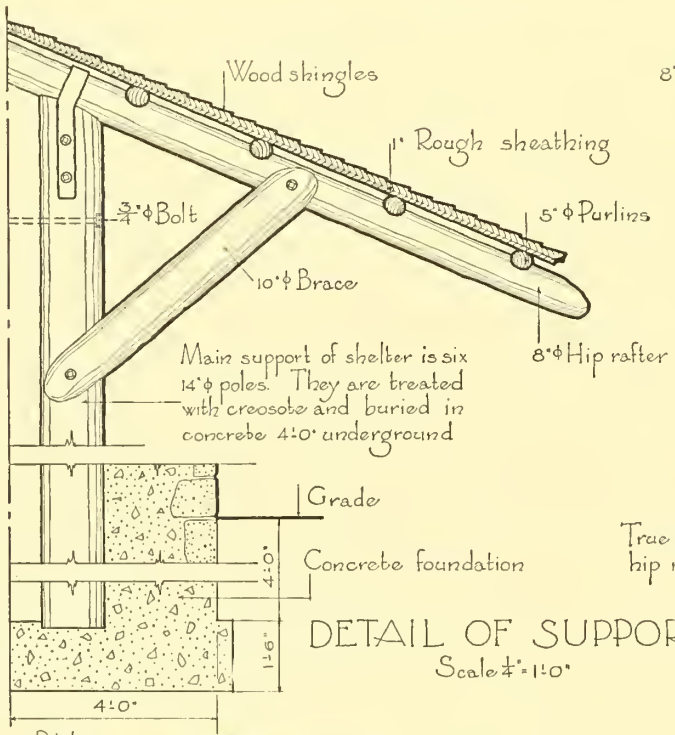
Springbrook State Park

Keosauqua State Park, Iowa

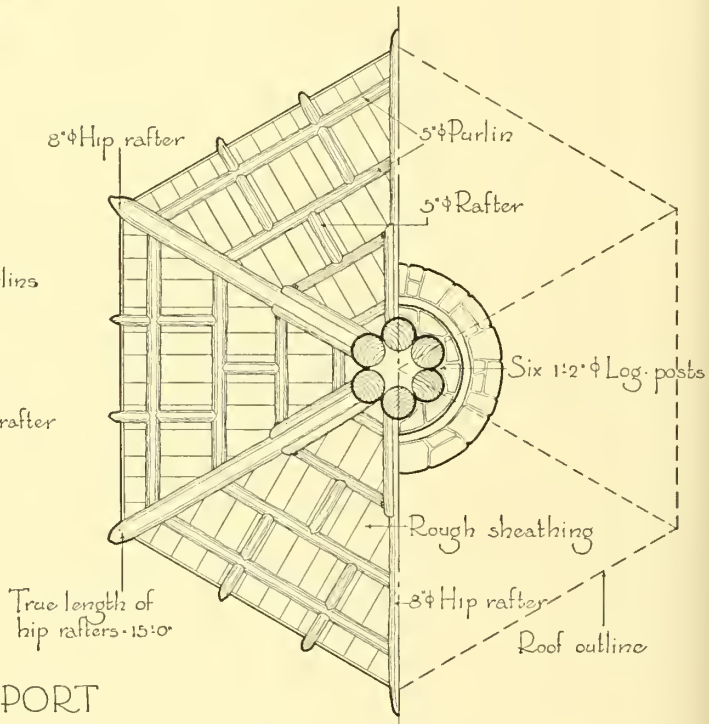
Dolliver Memorial State Park

Sheltered Seat – Dolliver Memorial State Park – Iowa

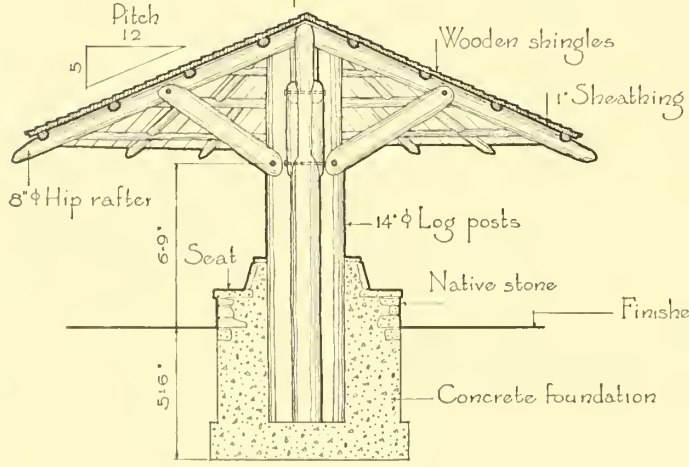
A circular stone seat with umbrella shelter. The implication of this designation should not mean that here is something to be borrowed indiscriminately. Only when the central support is as vigorous as in this example and as well buttressed at the base is this type of shelter seat to be considered. It is a novelty tolerable only if it holds to the canons of sound construction, and beyond the pale when there is economy in its structural members.



DETAIL OF SUPPORT
Scale 1/4" = 1'0"



REFLECTED ROOF PLAN
Scale 1/8" = 1'0"



SECTION

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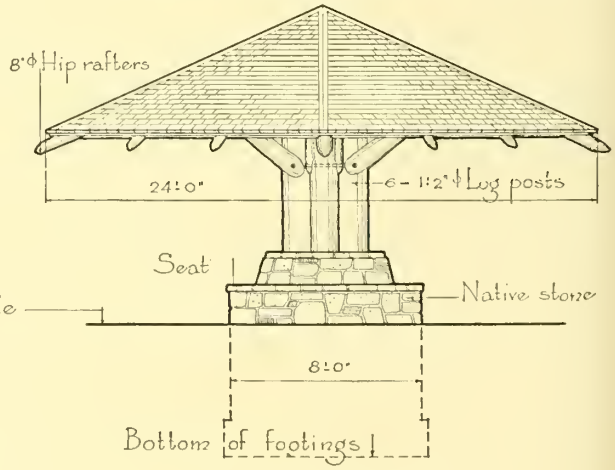


ELEVATION

OUTDOOR FIREPLACES *and* CAMP STOVES

THERE ARE CERTAIN FACILITIES necessary in park areas which must be based on practical considerations largely, and in which aesthetics can play but a minor part. Outdoor fireplaces for picnickers' use, outdoor stoves for campers' use and various other contrivances for cooking in the open are definitely in this category.

To provide abundant hospitality for picnicking —without question the most widely used attraction offered by natural parks—requisite facilities must be scaled to peak attendances which seem to touch new highs with each succeeding summer holiday. This in terms of cooking units means uncounted numbers of them, and in our parks their multiplication has been forced at an alarming pace. Is it then any wonder that critical opinion tends to urge that fireplaces be made to attract the least possible attention, after basic practical requirements have been served?

The fundamentals are not complex. The firebox must be properly sized and proportioned—probably a general average being 18″ for width between cheek walls, 12″ for height from hearth to grate, and 2′-0″ for length from front to back. The dimension stated for average width is seldom varied greatly, but there are practical arguments in support of both lowering and raising of the grate. Grates set higher than 12″ above the ground involve less stooping in use. When the relationship between hearth and grate is reduced to 6″ or 7″, there results economy of fuel. Both considerations are important, and a compromise favoring both can result when the height of the grate is kept 18″ or even more off the ground, and the bed of the firebox is built up from the ground to the desired distance below the grate. But error is piled on error when the firebox is increased in size or widely varied from its tested proportions in any unwarranted experiment of building the fireplace itself beyond the tried and proved desirable maximum limits. Sufficient level shelf space on the cheek walls to either side of the firebox is useful for setting out cooking utensils and for keeping cooked food hot.

The choice of grate is affected by several considerations. The interstices should be small enough to prevent, as one of the editing committee has reasoned, "any but the most emaciated hot dog from dropping through." The Central New York State Parks Commission has developed a cast-iron grate which well meets this specification, but has also contrived, at one-tenth the cost of the cast product, a satisfactory substitute, which can be cut to size with a pair of bolt-cutters from diamond mesh culvert reinforcement. A proper evaluation of the virtue of cheapness will result from a frank recognition of the tendency to "walk away" seemingly inherent in all unanchored park accessories short of "two man" size. Chaining the grate to a staple firmly built into the fireplace wall is an alternative in long-range economy.

Movable grates are desirable, making for convenience in the removal of ashes from the firebox. Grates, subjected to the weather and intense heat, or in event of failure to keep ashes removed, deteriorate and must be replaced periodically, and the disadvantage, when these are built into the masonry, is obvious. If built into the construction, some provision for expansion under heat must be made to prevent the cracking and breaking of the masonry walls, unless these are unjoined by end wall or by foundation. If bars or rods form the grate, sleeves of pipe or tubing built into the walls to receive the grate bars permit expansion.

Fireplaces should not be placed near enough to trees to injure either branches or roots by heat. Orientation in relation to prevailing air currents is important.

Fireplaces with side walls only will take a wider variety of fuel than more enclosed structures, cool more quickly, and are less susceptible to cracking in the process. Because water thrown on all kinds of masonry when heated to high temperatures tends to cause the masonry to fracture, fires should be

extinguished with earth rather than water. It is advisable to maintain a supply of earth near the fireplace for this purpose. Otherwise there may result undesirable prospecting for earth nearby.

Because some rock structures crack when exposed to great heat, it is a common practice to line fireplaces of rock with firebrick. This results in longer life for the unit, and provides a good level bearing for the grate, and is indeed practical, but detracts from the much-favored informality of the fireplace. When firebrick lining is omitted, it should be made certain in advance that the rock is a kind that will not crack or explode in heat.

The thoughtful reader will already have become aware of a hint of evasion and postponement lurking in a failure to touch upon certain details he holds highly pertinent to any discussion of outdoor fireplaces. In admitting his suspicions, it may be said that all the foregoing has been by way of honest rendering unto Practicability those things of which no gestures toward other considerations are asked. There remain to be reviewed some few fireplace practices, in appraisal of which Aesthetics and Good Sense beg to be allowed a cautionary word before Practicability speaks with loud finality.

There is first the question of chimneys as adjuncts of outdoor fireplaces. Their threatening numbers in some parks suggest a paraphrase of the figurative "inability to see the woods for the trees" to the literal "inability to see the trees for the chimneys." The pioneers, the plainsmen, who frequently cooked out of doors on the most primitive of contrivances, needed no chimney for their cooking, which on occasion embraced baking as well. It is held by many that a chimney is functionally non-essential to any fireplace, and that the open flueless fire is adequate for outdoor cooking in any situation. As our park vistas become more and more encumbered with chimneyed eruptions that assume the monumental proportions, and even the appearance, of a dismal mortuary art, the naturophile must devoutly hope that this viewpoint will be proved out to halt their further increase. It is not gross exaggeration to observe that merely topping off with cast-iron statues of military aspect the soaring piles of masonry now elbowing each other in many picnic areas, would create some very typical, and very compact, historic battlefields. This alone should bring about the general acceptance of a major precept—that no chimneyed affair will be constructed unless it shall be found that a flueless fireplace, in some draftless situation, simply will not function. Park authorities and designers should clamor for a picnic fireplace design that permits the initial building of a perfect open unit, to which a functional chimney of minimum proportions can be added, if and when found necessary. If this policy does not practically stamp out the chimney blight, then an aggressive campaign in favor of picnic menus without benefit of cooking is necessary to save many of our parks.

Conditioned upon the most restrained use of chimneyed fireplaces, principles and practices in their construction are set forth. A pronounced draft is produced only by a flue more than 5′-0″ high, and some will claim 12′-0″. A shorter flue will only take care of a portion of the smoke, and much will escape in the open to blacken and disfigure the chimney. The draft of the flue may be improved and the smudging of the chimney reduced by introducing a solid metal plate over or in place of the usual grill.

Chimneyed or chimneyless, the outdoor fireplace invites further discussion in the matter of materials and their manner of use. A skillful manipulation of native ledge rock or boulders in such manner as to meet all practical demands, and yet at first glance suggest a natural outcropping, is the most successful, and can take its bow on Nature's stage without blush or apology. This cannot be said for other *partis*, which are ever more or less ill at ease in a natural landscape. Of these others, the most satisfying in itself is the low stone unit laid up with mortar, and the closer its kinship to a natural formation or casual piling up of rock, the more pleasing it is. One blind to the fact that in some regions neither rock nor boulders are indigenous might fatuously decree that fireplaces of any other materials are still unthinkable and taboo. This view cannot be sponsored here in the face of a firm conviction that park facilities should be provided to supply all proved use-demand, and that such

facilities built of materials "natural" in origin, but not "native" to the general region, are no less than arrant "nature-faking"—labored and dishonest. Fireplaces of brick or concrete are surely to be preferred to this.

Probably outdoor fireplaces of brick or of concrete are not to be seriously judged to be "landscape units." But they can be not inefficient in function, not unskilled in workmanship, not unsightly in form, within limitations of their own. They are economical in the current demand for picnic units in greater numbers, and are somehow unmannered and free of false pretense.

There are those who foresee in the expanding demand for picnic facilities the threat of fireplace units more crowded than gopher mounds on a prairie and propose to meet it by resorting to multiple fireplaces. The close coupling of units limits the sources of smoke annoyance and hazard to tree growth. There is economy of construction. The sole opposing argument, because it is based entirely on human nature, cannot be disregarded. The propelling inspiration behind most picnics is a desire to get away from crowds, to take over a small area in the open affording reasonable privacy. The massing of the cooking units brings in too close contact too many cooks, proverbially not conducive to peace and good will. Confronted with the sound reasoning both for and against multiple fireplaces, one shies at making oracular pronouncement to recommend either one to the exclusion of the other. Some of each in the picnic area may be the solution of the moment.

The discussion to this point has embraced the rather typical outdoor fireplace, and neglected the very simplest provisions for cooking out-of-doors that for some people are the most fun. A mere platform formed by a low square or circular curb of masonry, loose stone or cement, and filled level with gravel, will provide for a fire with minimum danger of its spreading. This type of open fire is satisfactory only for cooking requiring no utensils, such as toasting bread or meat, or roasting potatoes or corn in the ashes. Supplemented by two forked sticks, a cross arm and wire hooks to hold kettles, this simple facility is not necessarily inconvenient and its cooking range is widened. Again the basic hearth type may be furnished with an iron grill with legs to a considerable increase in the variety of cooking possible. In the west an iron stake driven into the ground near the center of the cleared hearth and furnished with revolving arms, adjustable for height, and fashioned to support pot, frying pan and pail, is sometimes favored.

The outdoor fireplace has been discussed herein largely as a facility for the use of picnickers in preparing one or two meals on a day's outing. On this premise, it is reasonable that subordination of the fireplace to its surroundings is to be sought even at some sacrifice of convenience in use. When, on the other hand, cooking facilities are provided within the concentration of a camping area and are intended for day-in, day-out use by camping parties over extended periods, it is equally reasonable that convenience be served at the expense of aesthetic values. Thus is the camp stove differentiated from the outdoor fireplace. Between the two extremes are many hybrids—part stove, part fireplace. The camp stove is legitimately built to greater height for added convenience and more elaborately equipped for a wider range of cooking. Since cooking on a camping expedition is not always a fair weather undertaking, a roof over the camp stove is often justified, and this necessitates a chimney.

Stove units built of cast iron and erected on masonry foundations are used in some localities. Whatever may be their superior and unique advantages for camp cooking, these seem an impropriety somehow akin to outfitting Pan with a frock coat.

In regions where the barbecue is a religion, the details of the pit are probably too much a part of the ritual itself, and too varied in strictly personal interpretations by the high priests thereof, to risk a controversy by more than mention here.

Monument Lake Park, Trinidad, Colorado

Palmer Metropolitan Park, Colorado Springs, Colorado

Mt. Penn Park, Reading, Pennsylvania

Naturalized Picnic Fireplaces

Assembled here from widely separated points are five supremely successful renderings of the simple outdoor fireplace in the construction of which it is striven to suggest a natural origin. The advantage of a gently sloping hillside in achieving such effect is apparent. The kinds of rock in the several examples differ greatly, yet each accomplishes well the natural aspect sought.

Lake Guernsey State Park, Wyoming

Myles Standish State Forest, Massachusetts

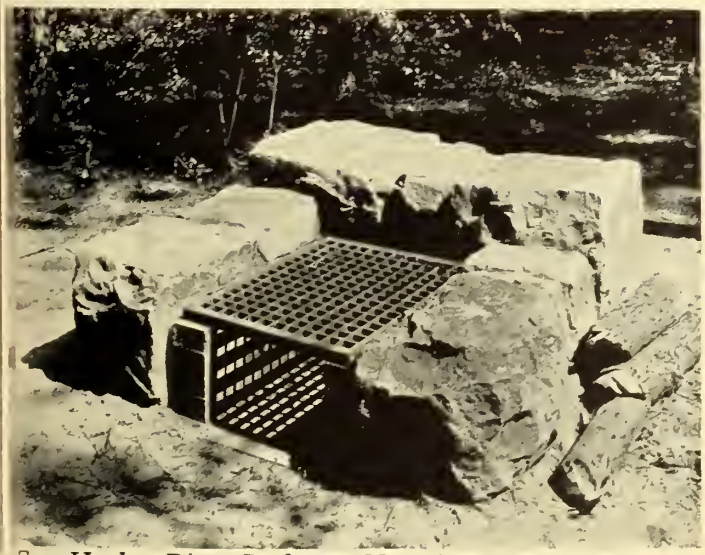
Bastrop State Park, Texas

Sequoia National Park

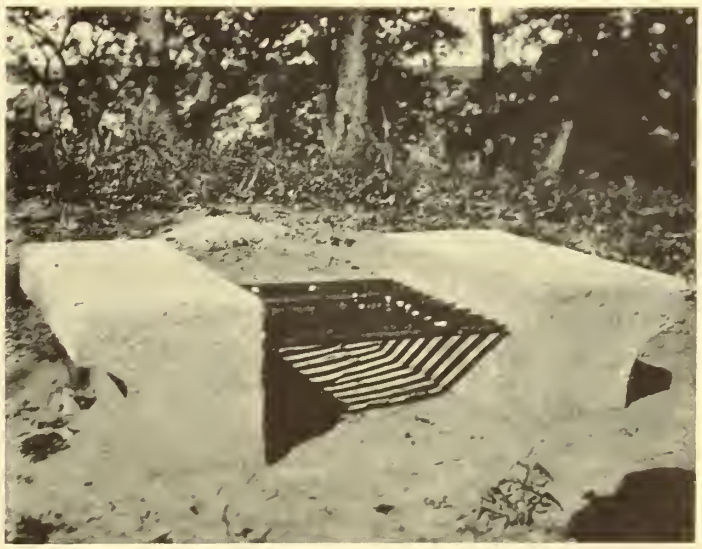
Formalized Picnic Fireplaces

The utmost in naturalizing to the out-of-doors is sacrificed in all the items of this group, yet monumental size and conspicuousness are avoided withal. Distant relative only to the others here shown is the example at the lower right—an out-and-out quantity production unit in concrete, which, however lacking in natural elegance and grace, should broil a steak with equivalent efficiency.

Parvin State Park, New Jersey



Egg Harbor River Parkway, New Jersey



Lake Worth Metropolitan Park, Texas

Turner Falls State Park, Oklahoma

Minnesota State Parks

Lassen Volcanic National Park

Miscellany of Fireplaces and Campstoves

The column to the left presents at the top picnic fireplace with modest chimney, next a typical camp stove, and at the bottom a multiple camp cooking unit. Above at the right is an open fireplace, that anticipates almost any condition of draft and is a typical facility in Minnesota Parks. At the lower right is pictured a simple campfire hearth, bounded by circular stone curb and equipped with iron stake and adjustable arms to carry cooking utensils.

Palomar Mountain State Park, California

Swan Lake State Park, Iowa

DRINKING FOUNTAINS

It is assumed to be unnecessary to dwell more than momentarily on the two absolute essentials in provision of drinking water in park areas. Of these most important considerations primary is the unalterable requirement that the water supply shall be at all times safeguarded against contamination. Hardly second to this is the need for dispensing it at so many points over the park area that it is always easier for the park patron to avail himself of the protected water supply than to seek out brooks and other possible sources of drinking water not policed against pollution. Treatment of the bubbler, tap or spring as an architectural or landscape feature, can hardly claim consideration until these two major demands have been met. Only a firm conviction that a safeguarded and widely distributed water supply may be taken for granted universally in the park-planning thought of today encourages a venture in consideration of the form and character, in an architectural and landscape sense, of the dispensing media.

The cleaning out of a spring and the erection of some suitable enclosure to minimize the danger of pollution, are in the direction of a safe water supply. However, if the public is to have free access to the spring at the source, the human equation enters and renders problematical continuing cleanliness. Poetic in fancy is the cool, clear pool from which one may drink on bended knee, but subject in fact to the careless habits of that not inconsiderable section of the public which can be perfectly unaware that others both precede and follow.

The ungarnished rendering of a facility for the dispensing of drinking water is a vertical pipe terminating with a tap, the tap perhaps inverted to serve as a simple "bubbler." Such a contrivance set out in the open will satisfy thirst, but certainly not the eye. If it is decided to mask its gaunt utilitarianism by locating it amongst low growth or planting, it is not readily discoverable, and a sign must point out its location. If provision is not made for disposing of drip and overflow, the tap is soon the center of a muddy wallow, and only accessible if planks or stepping stones are provided. All of which soon demonstrates that the utterly simple facility suffers from very real disadvantages, and leads logically and necessarily to its being accepted as something of a feature, its functionalism neither so starkly naked as to offend the eye, nor so elaborately draped as to fail to declare itself. With the need for suitable disposal of waste water, and such desirable refinements as sanitary bubbler, steps to accommodate children, tap for the filling of pails, and in some climates or locations even roof protection against the heat of the sun, the feature becomes multi-functional, and demands careful study in any pursuit of satisfying results.

The problem becomes one of knowing how far to go and where to stop in glorification of the drinking fountain. The examples shown herein illustrate various stages of the process. Personal preference alone will dictate at what point and in what particular the bounds of reason and good taste have been overreached.

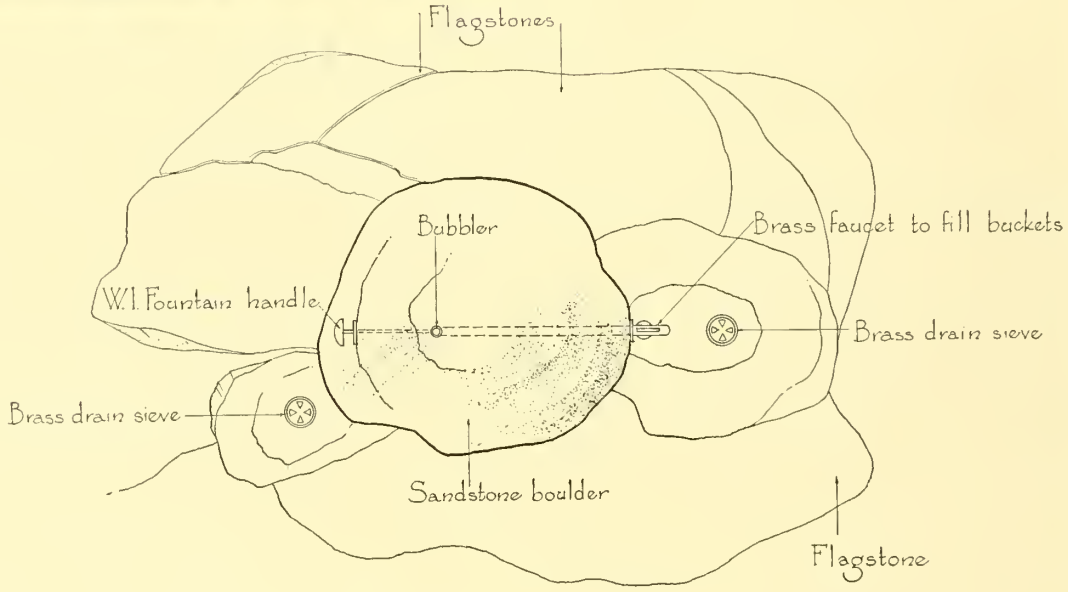
Because the treatment of the drinking fountain or bubbler as an isolated unit is so difficult, every opportunity should be embraced to incorporate this facility within any suitable building situated near the spot where drinking water is a requirement. It is possible and desirable to include bubblers as features of structures erected primarily for other purposes, and thus to eliminate some of the separate installations. Many bubblers have been installed separately that need not have been.

There are instances of pump or fountain protected by a small shelter building—an alliance logical in conception and often pleasing in execution. Important always in connection with a piped water supply out-of-doors is a suitable arrangement for shutting off and draining the pipes in winter weather. This provision should not be overlooked wherever climate would indicate need for it.

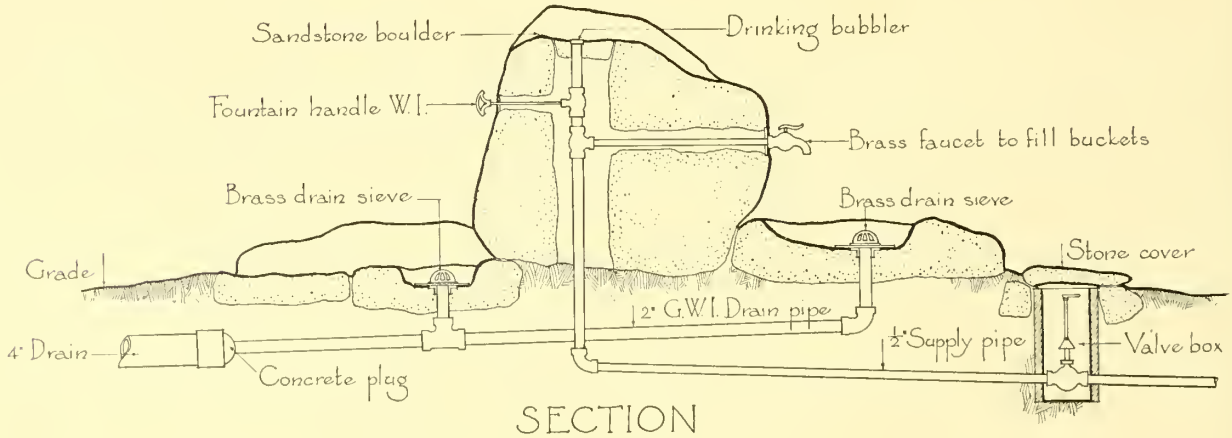
Drinking Fountain

Lake Guernsey State Park – – – Wyoming

Here certainly is the peak accomplishment in naturalistic masking of a provision for bubbler and tap. It is a temptation hardly resistible to state that the rock was smitten with a rod and that the water gushed forth in the best biblical tradition. However the section drawing below evidences too plainly to the contrary - a laborious business of drilling and pipe fitting. Smiting with a rod would have been easier.

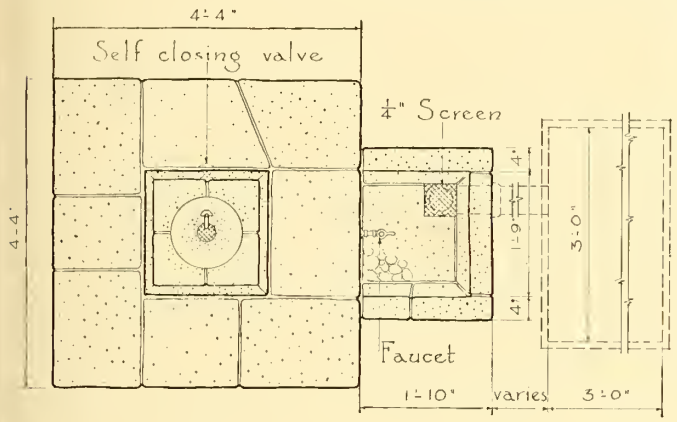


PLAN

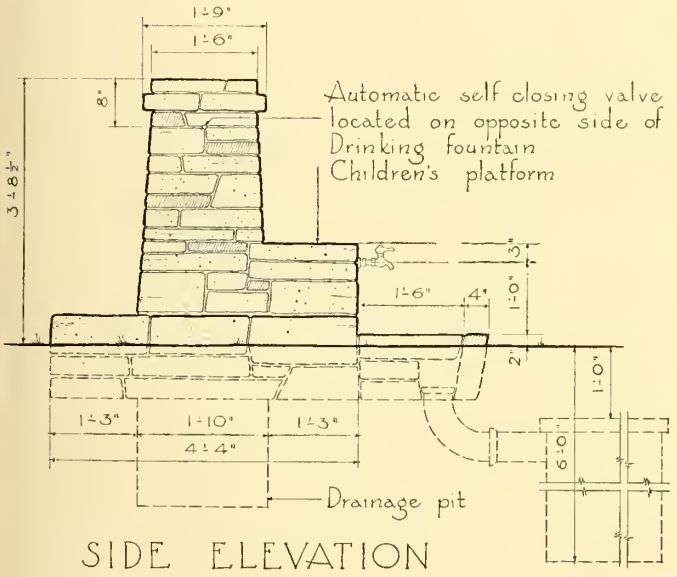


SECTION

Scale ⅜"-1:0"



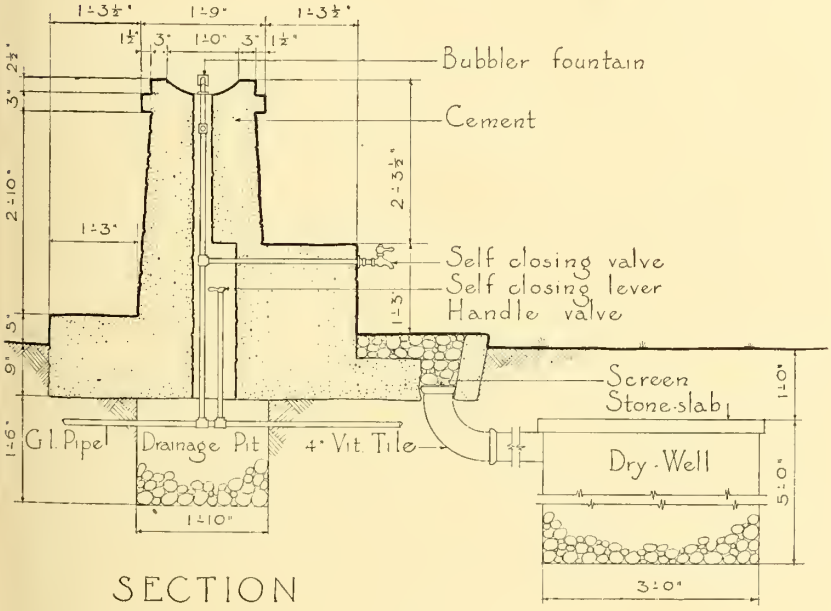
PLAN



SIDE ELEVATION

Bubbler Letchworth State Park New York

This stone drinking fountain is generally typical of this facility as built in many parks through New York State Designed with sanitary bubbler and step to make it accessible to small children, and with low tap for the filling of buckets above the gravel-filled sump receiving the waste, all essential factors are met without over-elaboration.



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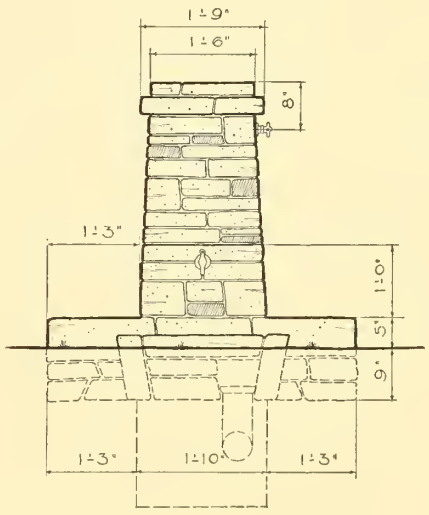
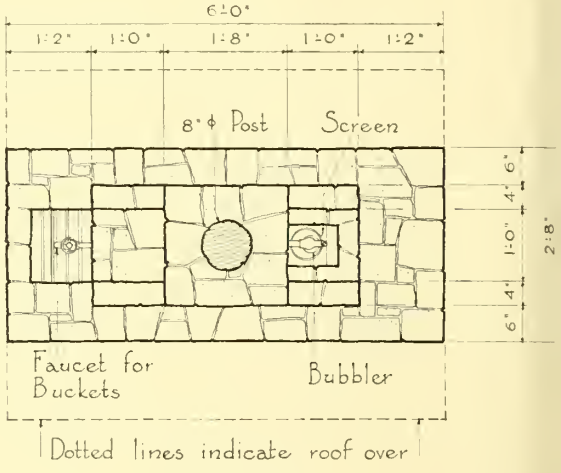


FRONT ELEVATION

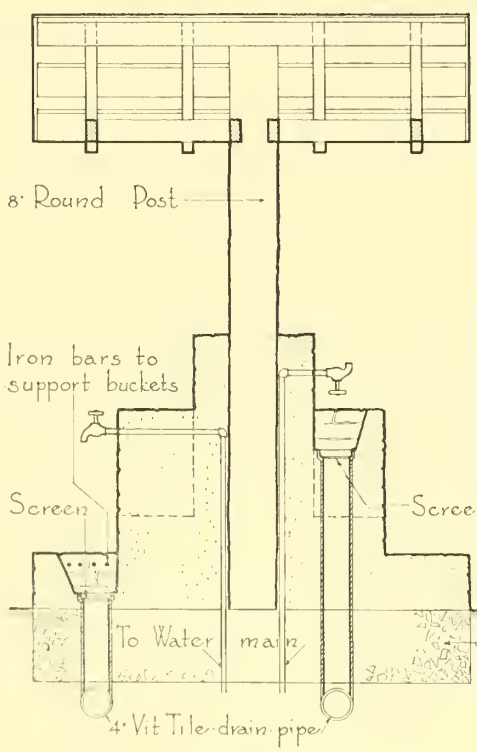
Scale ⅜" = 1'-0"

Bubbler – Cumberland Falls State Park – Kentucky

A facility in provision of drinking water that takes unto itself a roof, perhaps without complete logic but not without a certain charm. To the critic who makes a cult of function is submitted the proposition that the roof tends to announce the presence of the fountain and to keep the water cool



PLAN



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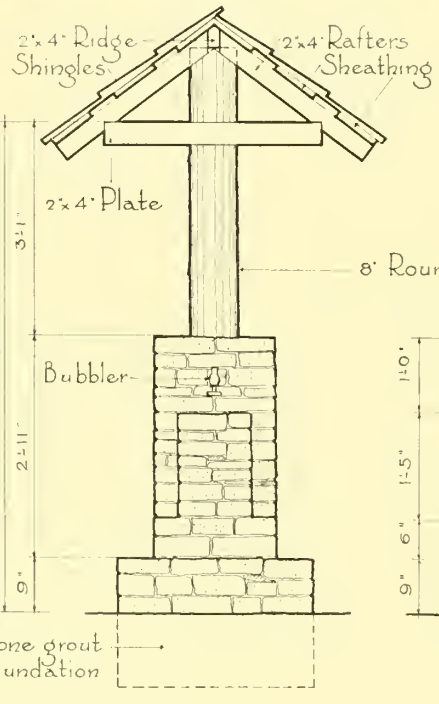
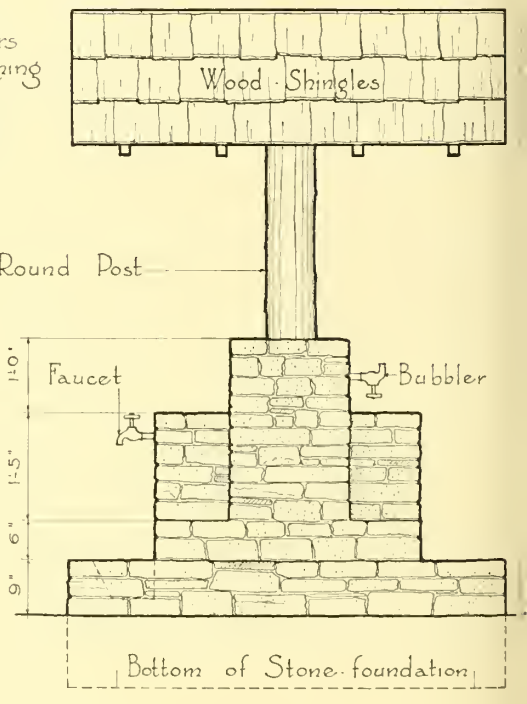


SIDE ELEVATION

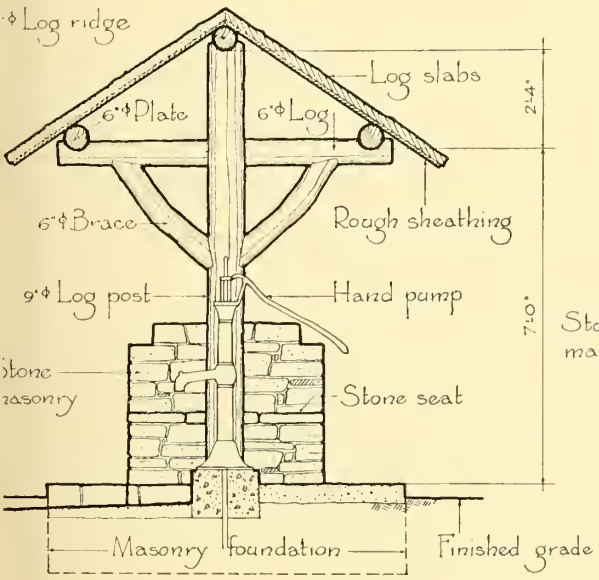


FRONT ELEVATION

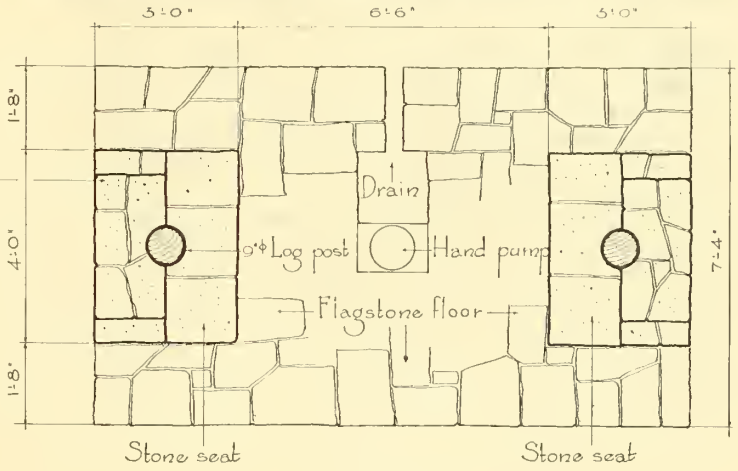
Scale $\frac{3}{8}$"-1'-0"

Pump Shelter – Willow Springs Park – Illinois

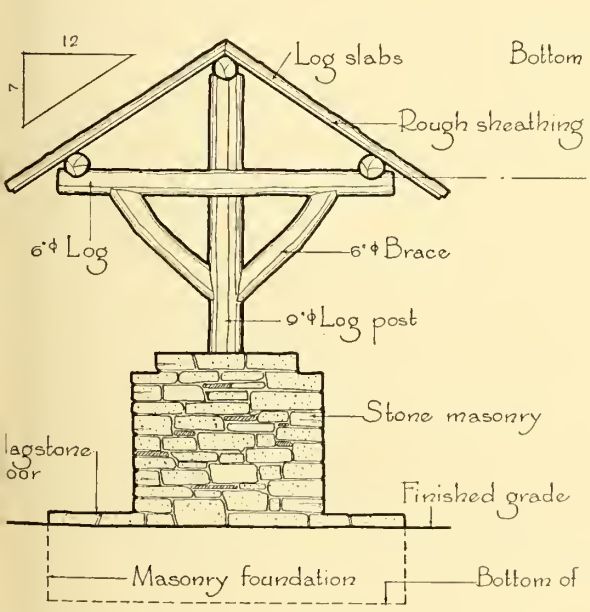
Shade for the arduous business of working the pump handle is a reasonable provision. Stone and timbers are here attractively combined to serve this end. The roof of slabs is in good park character, but is only well chosen when complete watertightness is not essential.



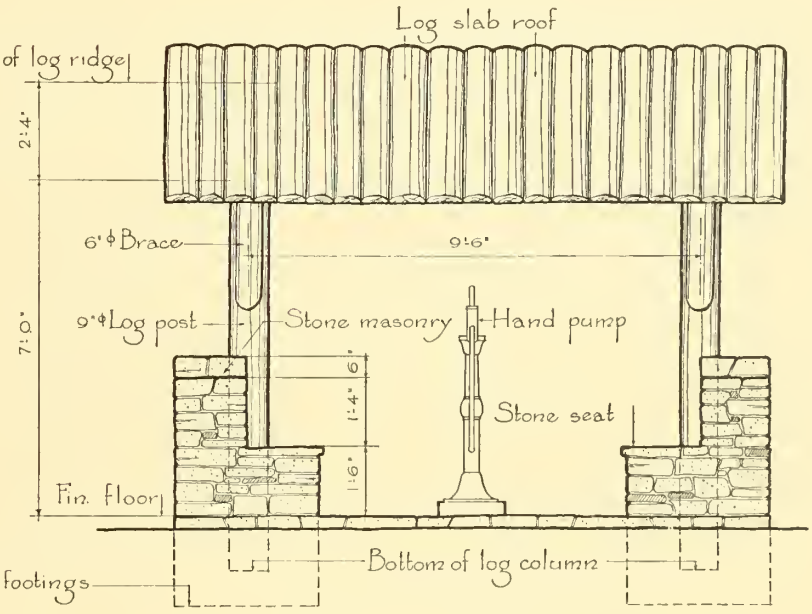
SECTION



PLAN



END ELEVATION

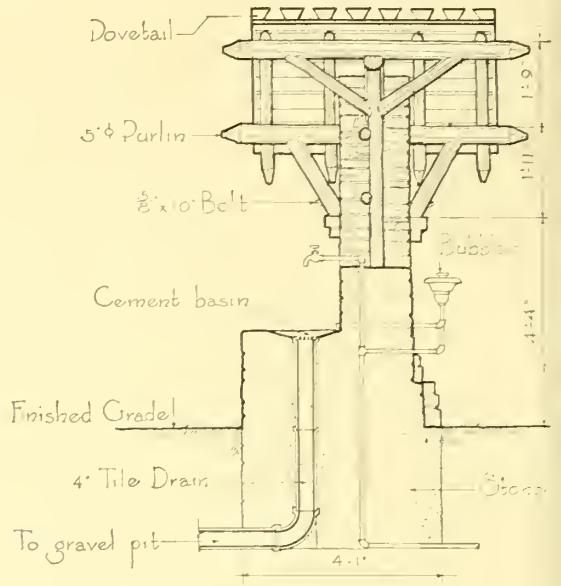


SIDE ELEVATION

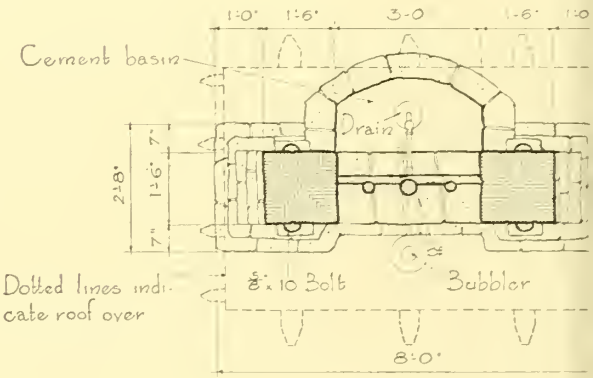
Scale ¼"=1'-0"

Drinking Fountain
McCormick's Creek State Park – – – Indiana

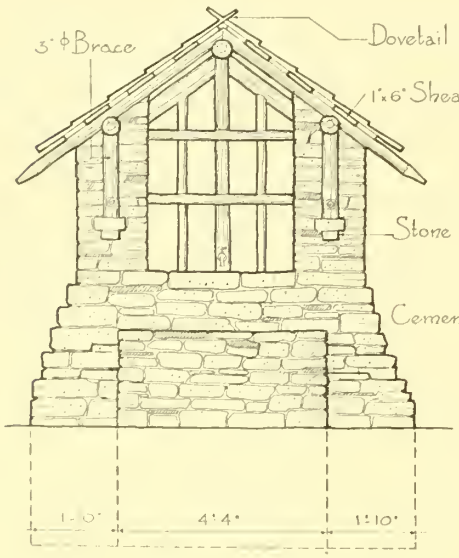
There are those who will claim that this specimen is too flamboyant for a taste that considers the drinking fountain a facility and not a shrine. A step to assist small children might well have been supplied. There is perhaps over-abundance of rustic wood trellis. Justification for the building up of a minor appurtenance to the prominence here displayed lies perhaps in the fact that it is thus more readily discovered by the thirsty public.



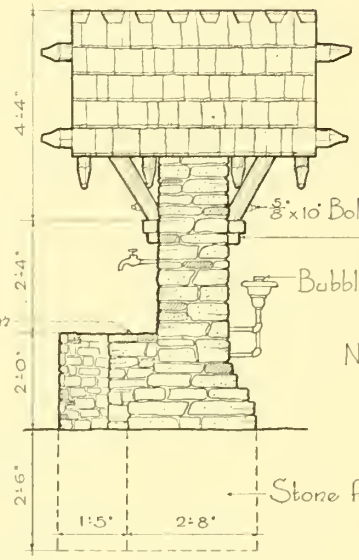
SECTION



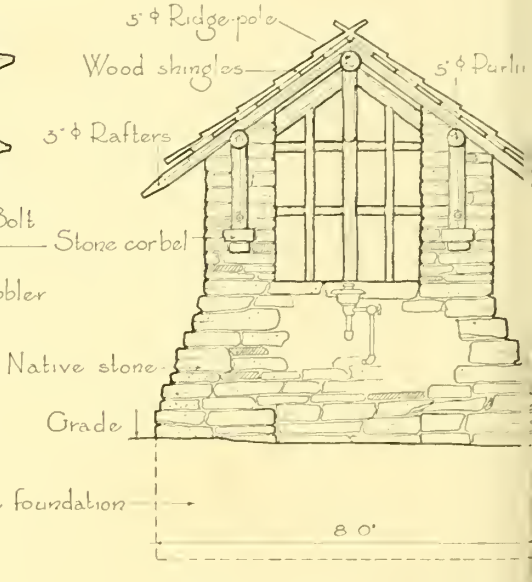
PLAN



FRONT ELEVATION



SIDE ELEVATION

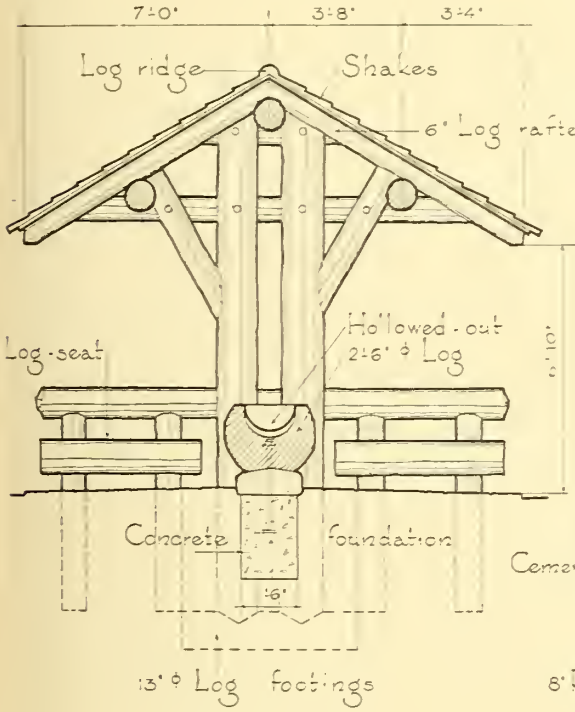


REAR ELEVATION

Scale ¼"-1'-0"

Well Shelter - Itasca State Park - Minnesota

Certainly exempt from any accusation of 'twiginess' this little structure perhaps exemplifies ideal proportions for a truly rustic construction. The idea of hollowed-out log as a receptacle for the piped spring water is novel. The ragged shake roof is particularly well-done. There is neither economy of materials nor of originality to detract from this example.



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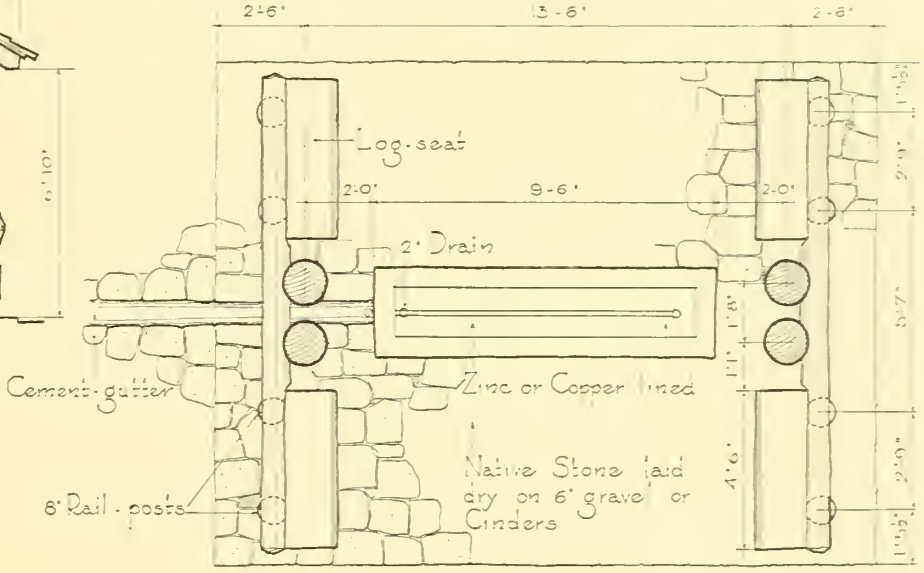
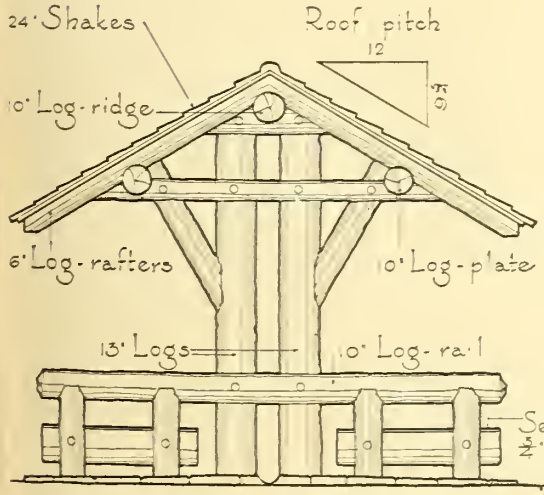


PLAN



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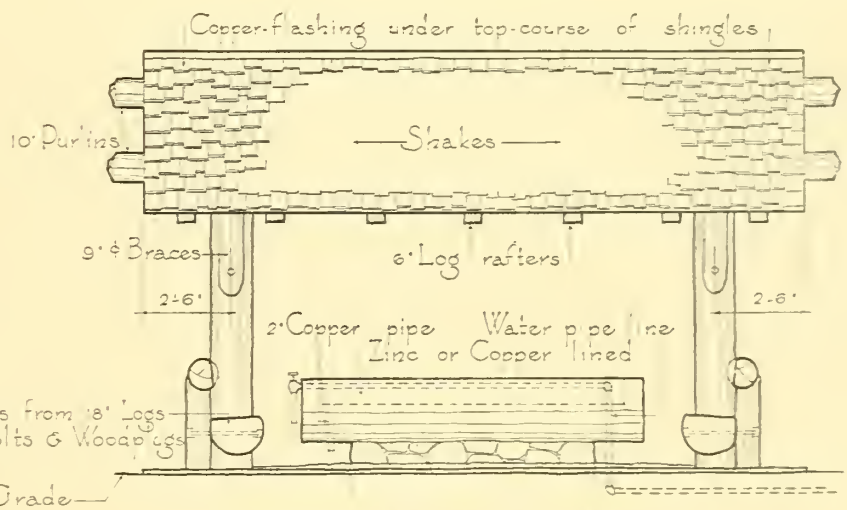
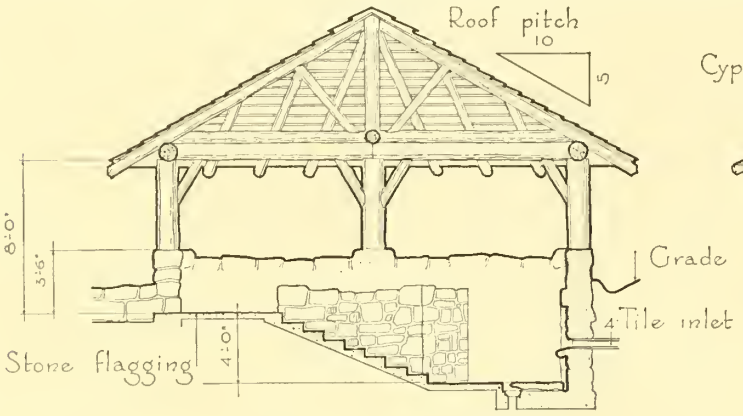
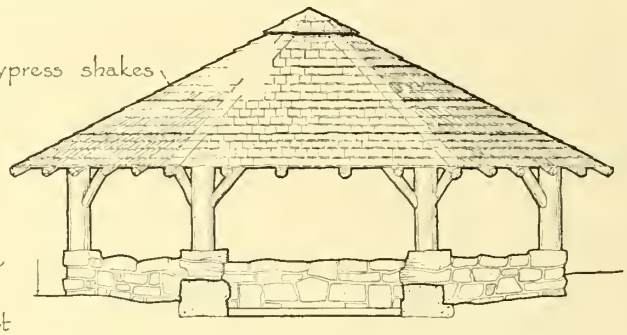


FRONT ELEVATION

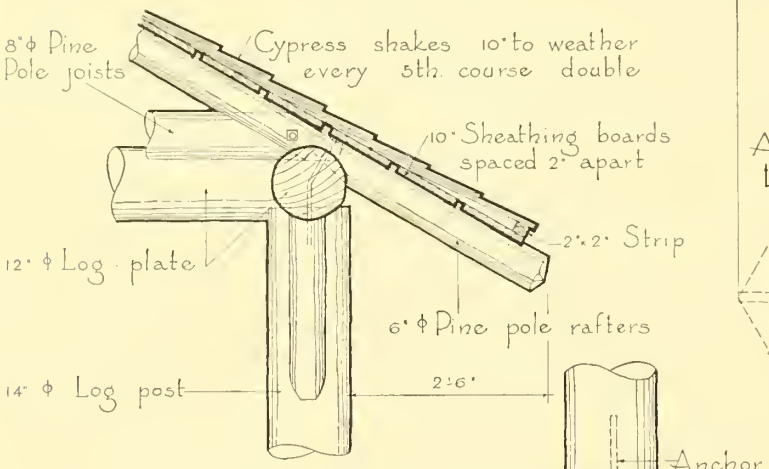
Scale $\frac{3}{16}$" = 1'-0"



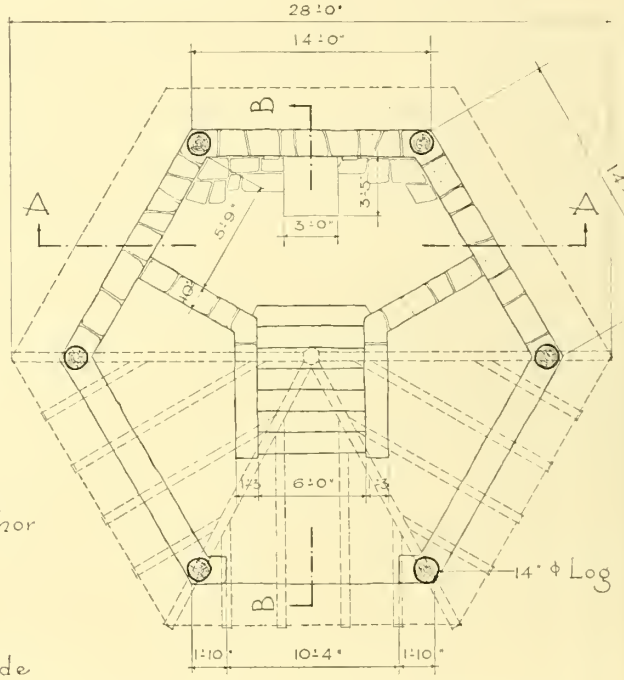
SECTION - "B-B"



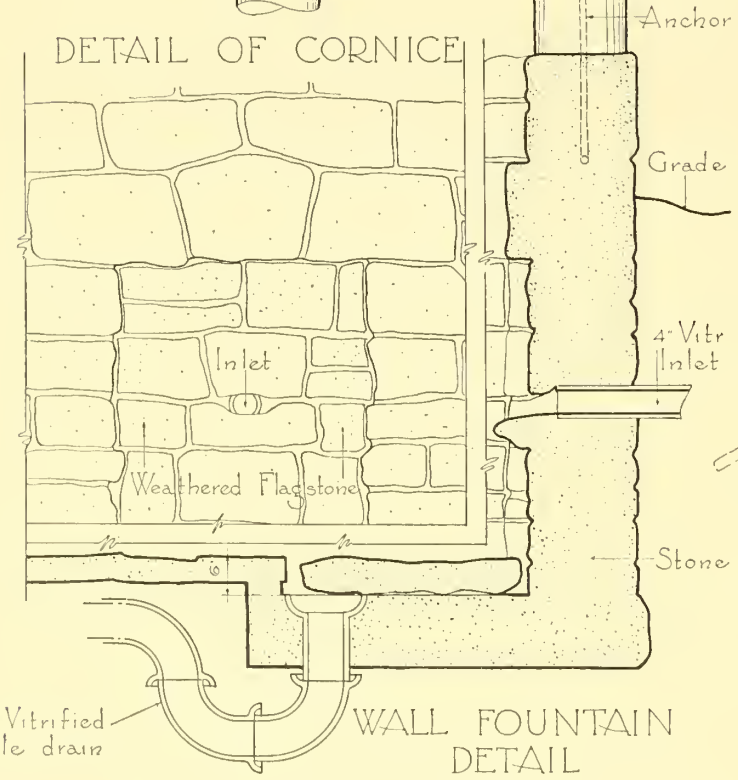
FRONT ELEVATION



DETAIL OF CORNICE

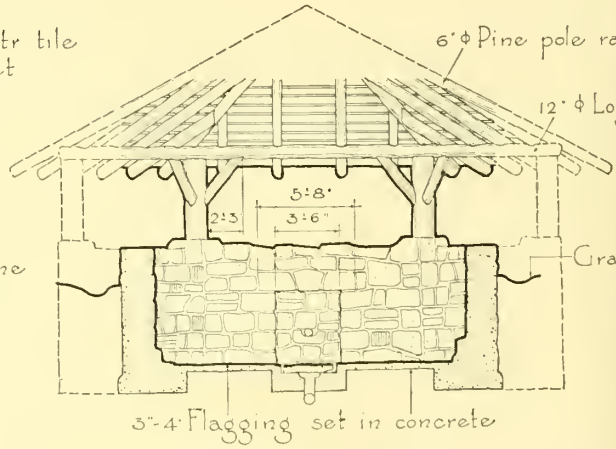


HALF ROOF & FLOOR PLAN



WALL FOUNTAIN DETAIL

Scale $\frac{3}{8}$"=1'-0"



SECTION - "A-A"

Scale $\frac{3}{32}$"=1'-0"

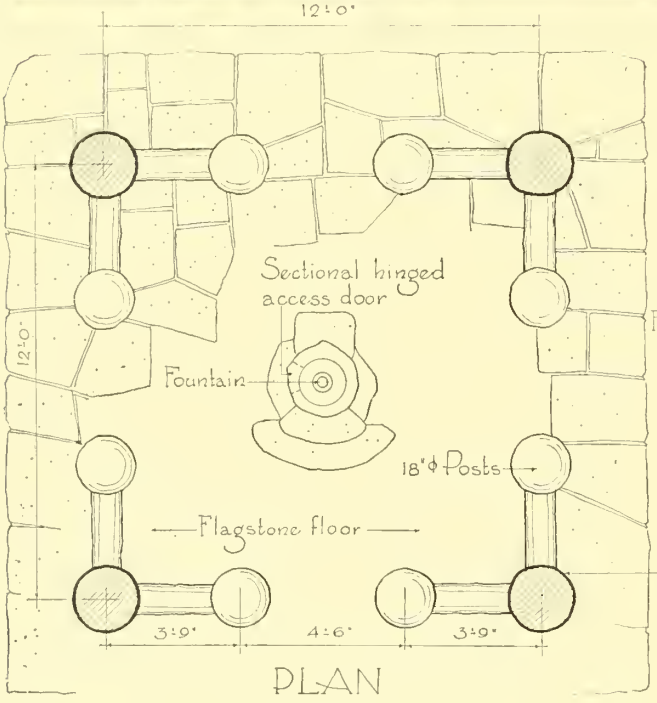
Spring House, Boyle State Park, Arkansas

If a rustic structure may ever properly be termed a temple, here is one. A veritable shrine for a woodland spring, this shelter seems in every detail beyond legitimate criticism. Roof texture, "whitled" rafter ends, character of stone work—all combine to render a structural symphony. Even the almost invariably unpleasant perching of a log post upon a built-up rock base does not here seem an offense. Plans and details of the structure are shown on the opposite page.

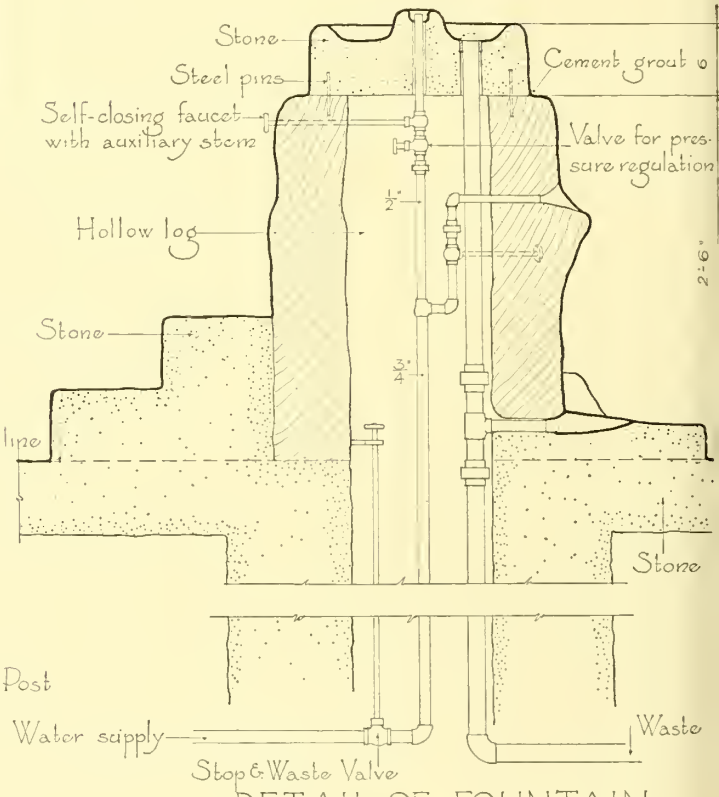
Water Fount Building

Lake Guernsey State Park – – – Wyoming

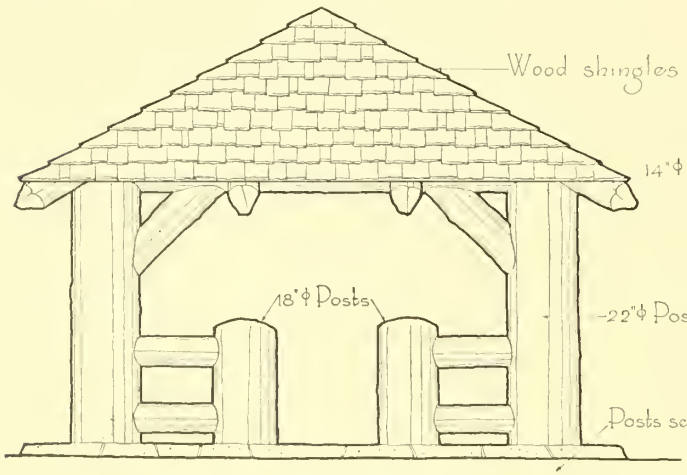
Sturdy perhaps to a fault but erring in the direction that is never so objectionable as the fault of frailness. This shelter houses a drinking fountain created from a hollow log, and piped for bubbler and tap for the filling of pails.



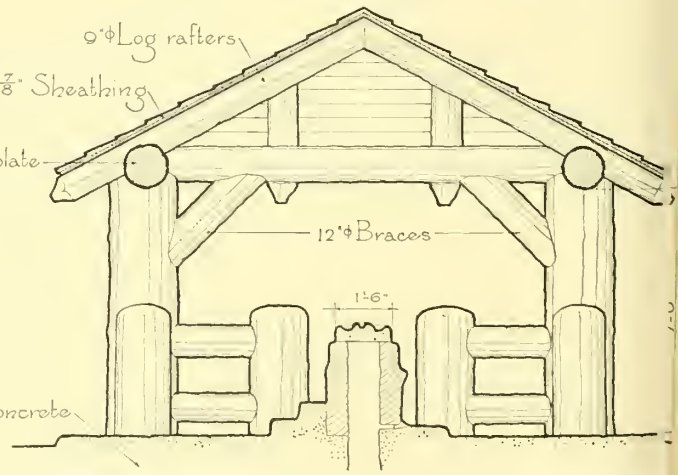
PLAN



DETAIL OF FOUNTAIN



FRONT ELEVATION



Scale 3/16"-1'-0"

SECTION

CONCESSION BUILDINGS

Although perhaps most of the many recreational facilities found in natural parks are with varying frequency let out as concessions, it is elected within this classification to treat only of the concession which dispenses by sale rather than by rental, and purveys to the recreationist food supplies, soft drinks, candies, tobacco, toys, prepared light lunches and meals. After all, it is this usage that comes first to mind at mention of the word, and the curb on verbosity that this limitation insures, while it comes hard for the pen in hand, will be a source of keen satisfaction to readers. A less restrictive interpretation of the word would lead to deadly duplication of the elsewhere dissected bathhouse, boathouse, and other structural media in promotion of active recreation.

Thus the concession building, as here discussed, is actually the corner store, delicatessen, restaurant, or even the hotel (in cases where overnight accommodation is offered), transplanted into the park area for the convenience of the park visitors. It may be some unpedigreed cross combination of two or more of these urban facilities, as it settles itself in adjustment to the demands of the recreation crowd and to its new environment.

If not extensive in size, the concession is very apt to seek association under the same roof with other nonconcession facilities or services, in order that it may be where the crowd is. This is essential to its commercial success, which is quite as necessary in a park environment as in the village. Other park facilities may exist by virtue of subsidy, but the concession is called upon to pay its way.

Since it must be located at the "cross roads" of the park, and must proclaim itself to the public, it cannot be exactly the shy violet among park buildings. It must announce its commercial traffic unmistakably but with subtlety. It is the Jekyll and Hyde among park structures. It is asked to walk in the paths of quiet beauty and of commercial solvency at one and the same time, though these may lead in opposite directions. It is scarcely a wonder that the concession building, successful both as a park structure and as a commercial venture, is not common.

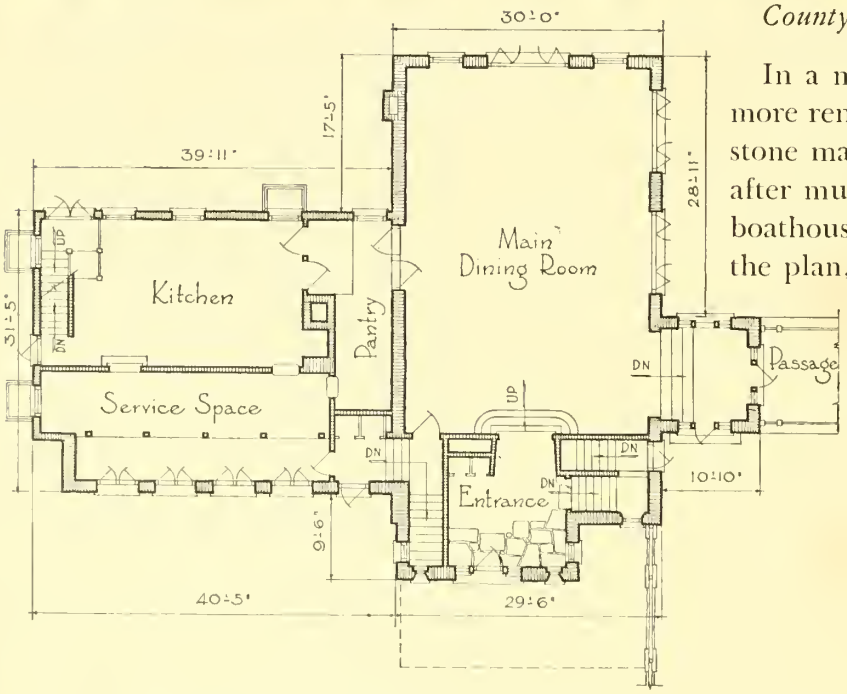
Perhaps the greatest fault to be found with concession buildings on the whole is their lag in attaining the standards urged for park structures generally. There is recent evidence to indicate that this shortcoming is in process of correction. It is hoped that past tendencies to flimsiness, the temporary and ultra-commercial in appearance, are being overcome.

There is a practical need in connection with concession buildings, large and small, that is almost invariably underestimated. This is the space requirement for supplies. The sale of food, soft drinks, and other articles dispensed by the park concession involve not only much garbage and rubbish, but the handling and temporary storage of containers for soft drink and milk bottles, and the like, awaiting collection. These bulk to a space need that is hardly ever correctly foreseen, and eventually force the building of an addition or enclosure to screen the unsightly debris from public view. Because funds for second thoughts are grudgingly given, and because the initial shortage of space leads to a desire for an overabundance, the addition is apt to be of inferior construction and down-at-heel appearance. Practicability is served but quality is depreciated in the process.

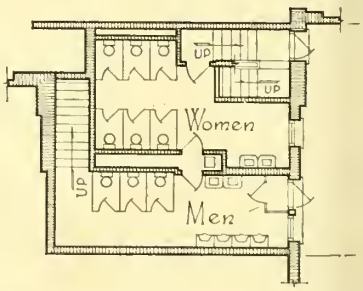
Where the nearest overnight accommodations are very distant from the park, it sometimes becomes expedient to provide them within the confines of the park itself. This is often handled as a concession, and is termed a lodge, inn, or guest house. It is not a facility to be promoted in a natural park. Rather is it to be undertaken only when any increasing demand for it cannot longer be resisted. It is a "civilizing" influence that tends to distort the true concept of the natural park and to frustrate the public's basic and prior interest in natural parks safeguarded against the artificial.

Restaurant Concession, Woodlands Lake, Westches County, New York

In a metropolitan area, but not too urbane f more remote settings, this combination of well-la stone masonry and stained wane siding is pleasa after much so-called rustic log construction. T boathouse connecting by the covered passage the plan, repeats the materials.

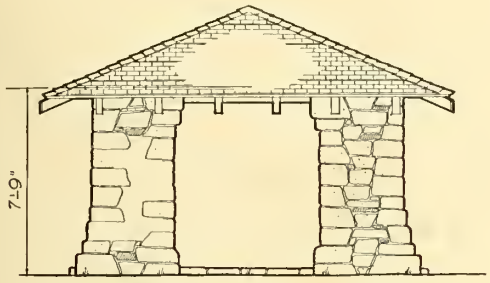


FIRST FLOOR PLAN

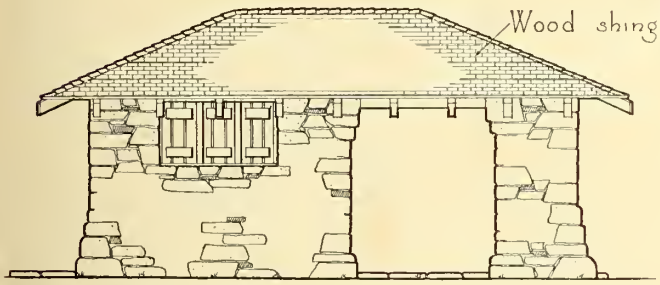


BASEMENT PLAN

Scale $\frac{3}{64}$"-1'-0"



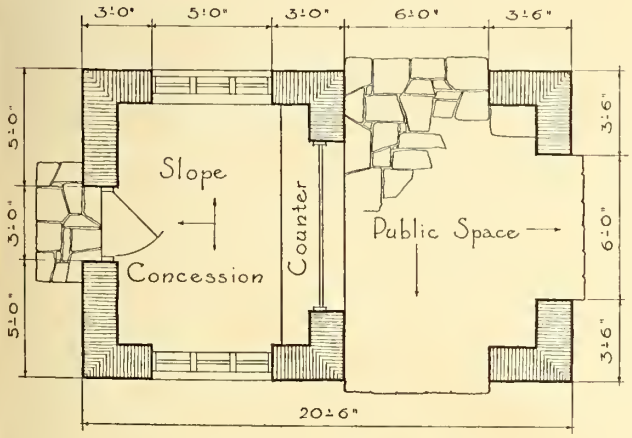
FRONT ELEVATION



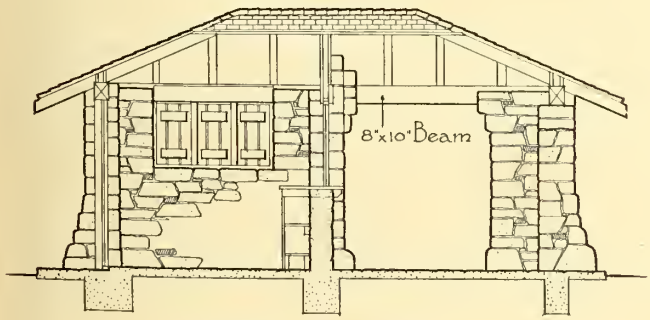
SIDE ELEVATION

Small Concession Building - Lampasas State Park - Texas

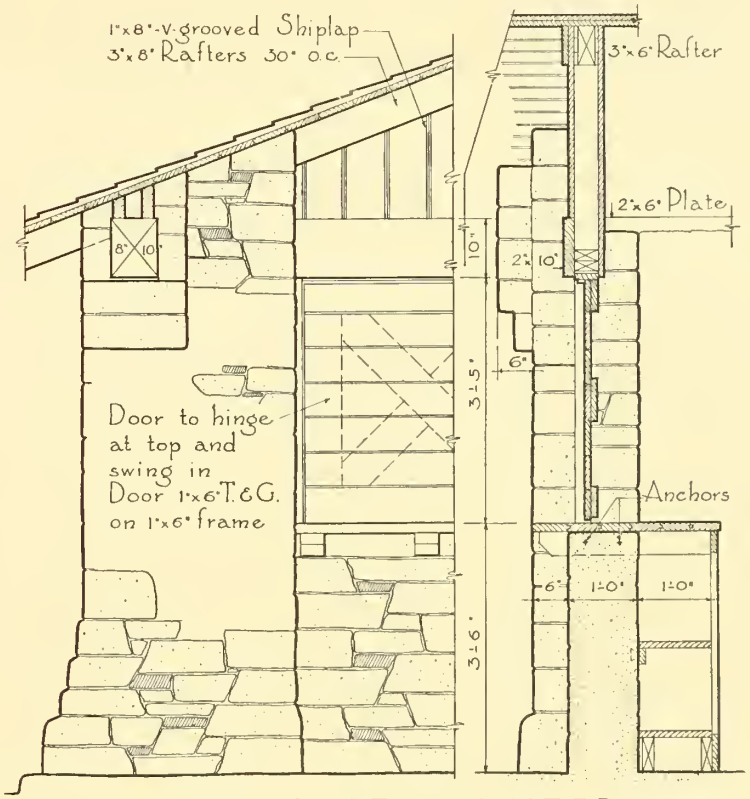
A concession stand that is not so regional in character as to deny inspiration over a wide area. Recommended to the attention of proponents of highway improvement who would kennel the hot dog in greater grandeur. The texture of the stone masonry is worthy of note.



FLOOR PLAN



SECTION

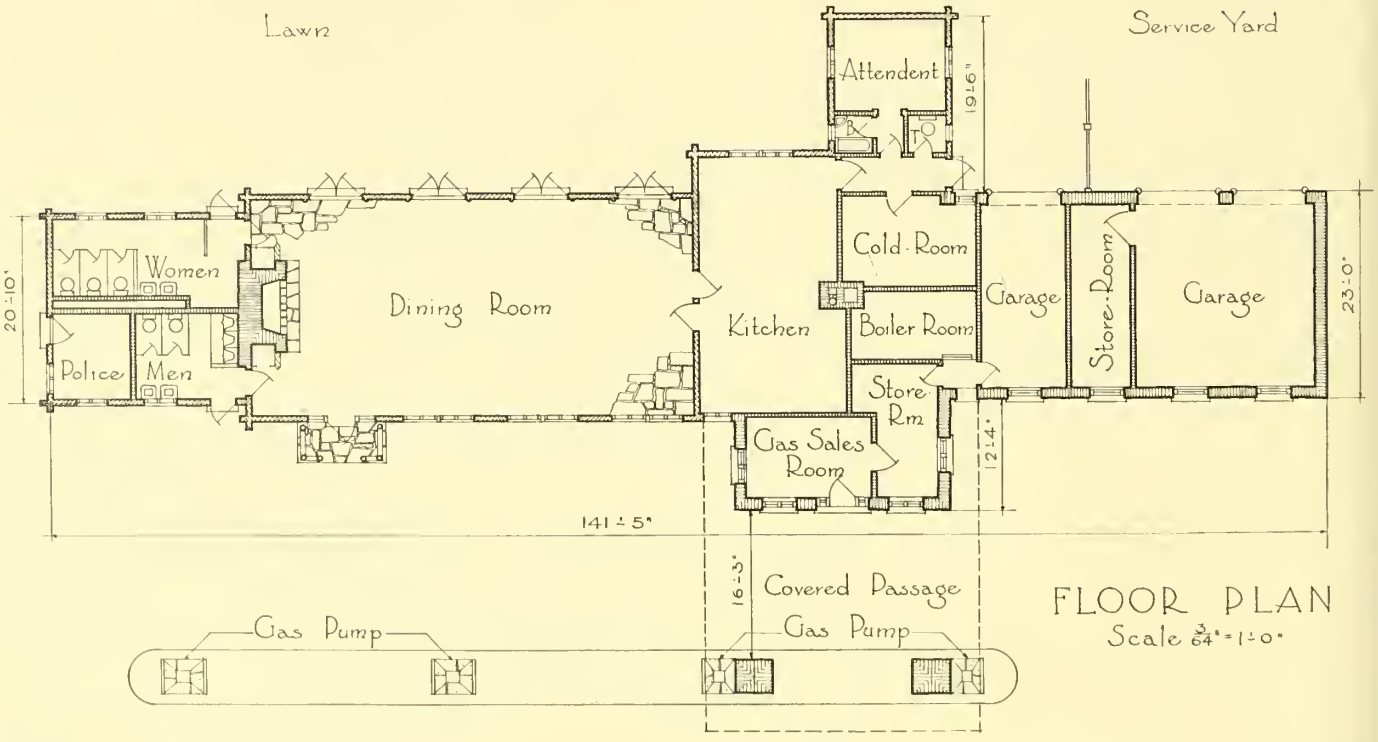


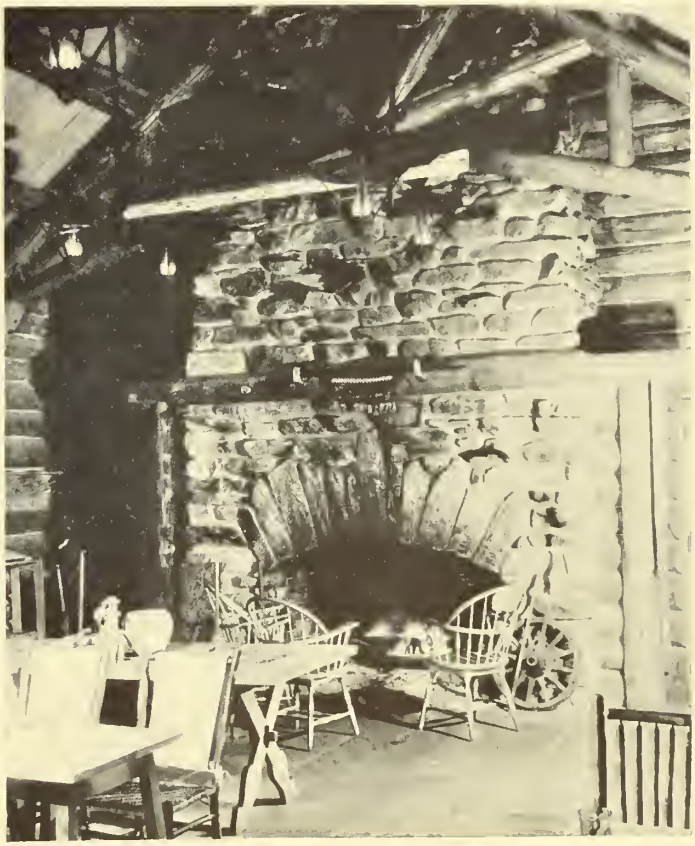
DETAIL OF COUNTER

Scale 3/8" = 1'-0"

Scale 1/8" = 1'-0"

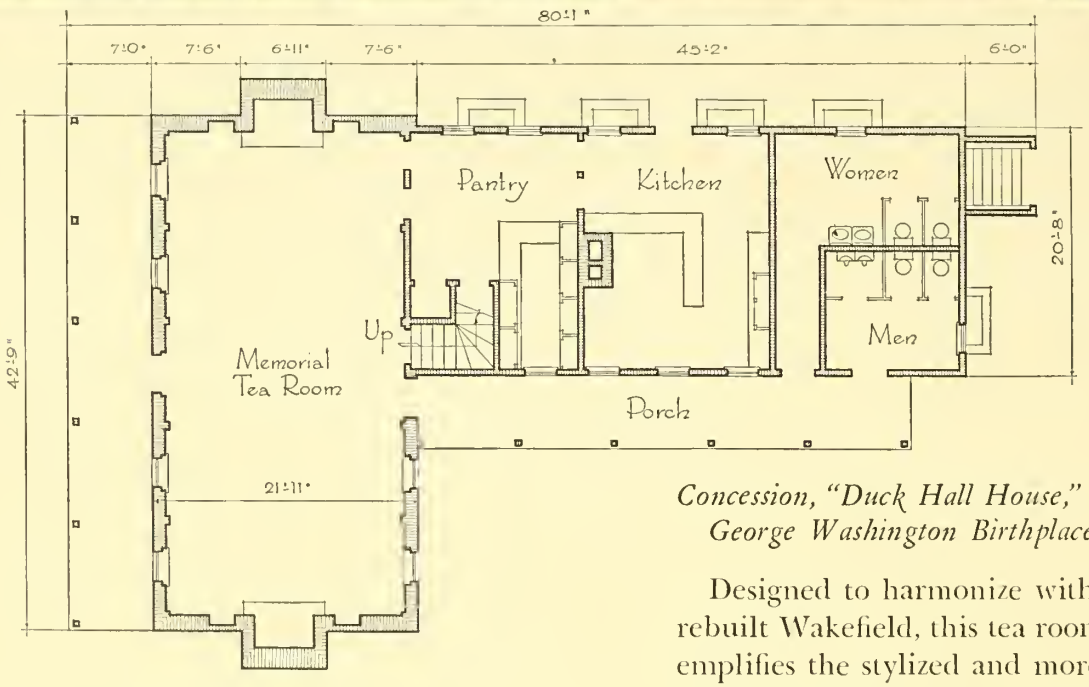
"Kitchawan Tavern," Bronx River Parkway, New York





Concession, "Kitchawan Tavern,"
Bronx River Parkway, New York

This sort of facility has evolved quite logically in connection with recent parkway developments. While it may never become a feature generally of parks remote from metropolitan districts, it is easy to imagine non-typical conditions that might warrant the sponsoring of a building of like functions. The broad restful roof surfaces, the low eaves—among other points of high merit—contribute to the excellent park character of the building.



FIRST FLOOR PLAN
Scale: ⅛"=1'-0"

Concession, "Duck Hall House,"
George Washington Birthplace National Monumen

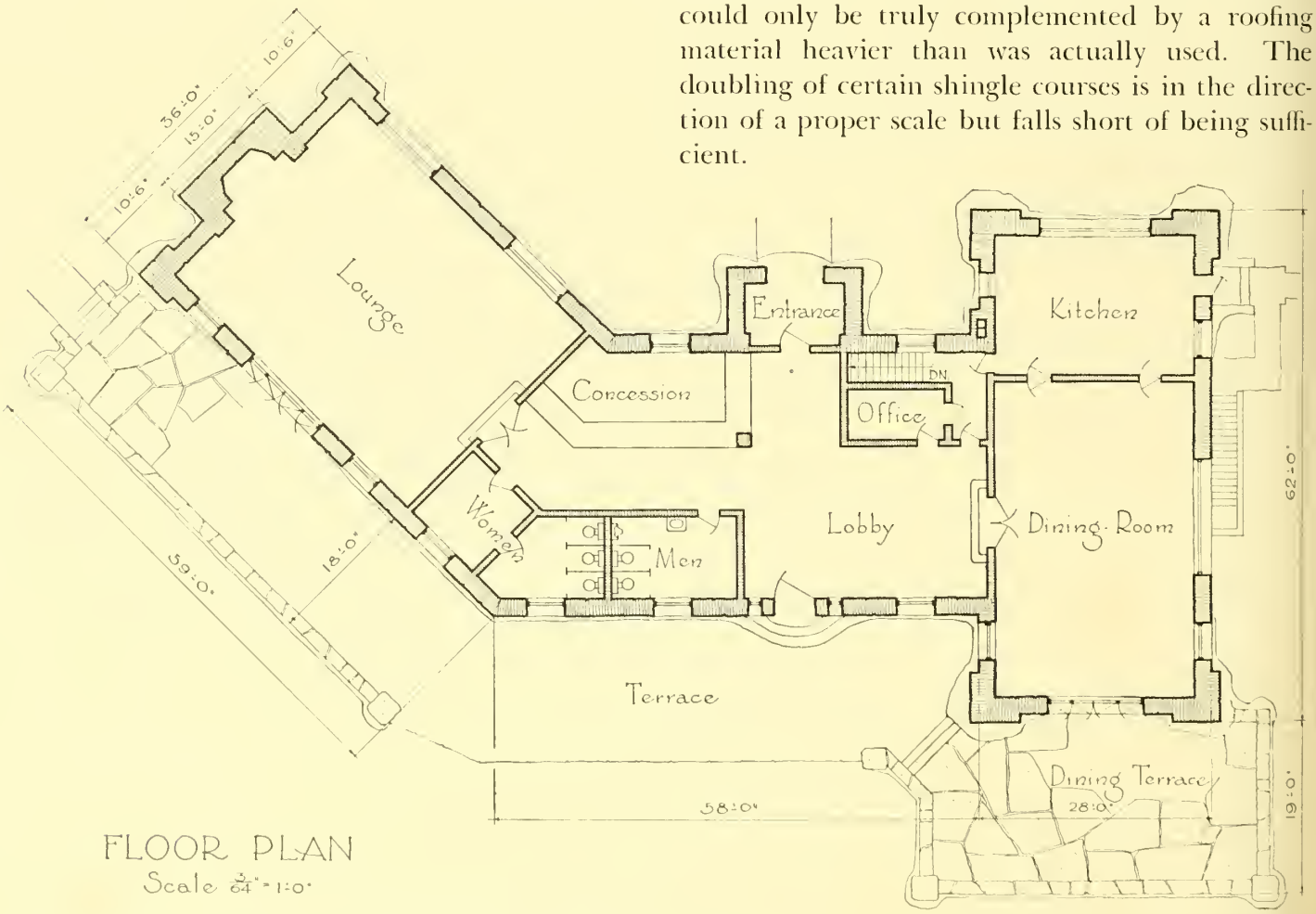
Designed to harmonize with the architecture o rebuilt Wakefield, this tea room concession well e emplifies the stylized and more finished structure that have place in parks. The inspiration of Yorl town and Williamsburg, and intelligent adaptatio to a problem, are evident. The second floor abov the service wing contains three bedrooms and a bathroom. Edward W. Donn, Jr., Architect.

Concession, Palo Duro State Park, Texas

The difficult problem of a building on the rim of a canyon can only be well met by a low structure, skillfully blended to the character of the canyon wall. There is large measure of successful accomplishment in this example.

Concession Building, Turner Falls State Park, Oklahoma

The long, low lines and rock walls here echo the contours of surrounding hills and the prevalent outcroppings of rock. The casual, artless masonry could only be truly complemented by a roofing material heavier than was actually used. The doubling of certain shingle courses is in the direction of a proper scale but falls short of being sufficient.



FLOOR PLAN
Scale 3/64" = 1'-0"

ADMINISTRATION BUILDINGS

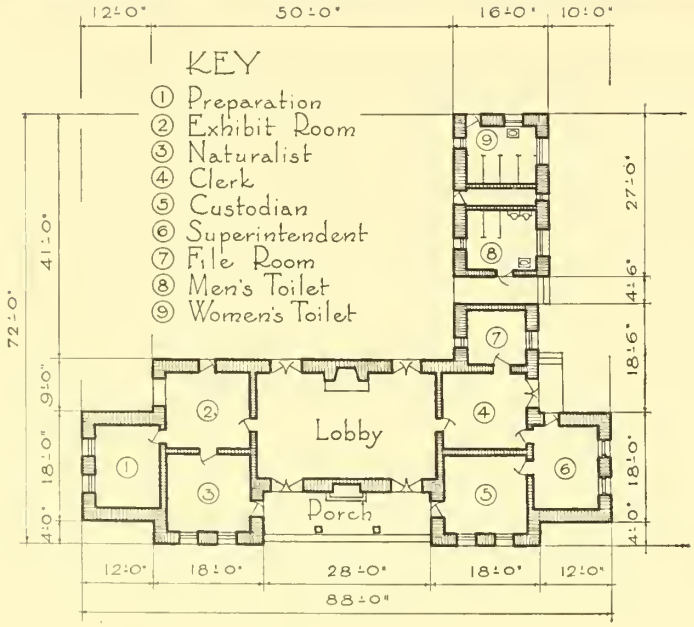
If, in the arranging of material of this collection, a certain latitude, not to say license, could not be assumed to be charitably granted the compilers by the readers, this heading would have little reason for being. For while, if asked to name a half dozen structures justified by need within parks, a reader will probably name an administration building as one of them, he might be somewhat in a fog if asked to describe just what, specifically, constitutes one. The embarrassing question will not be pressed upon the reader. Rather will the difficult duty of seeking the answer be here assumed and herein attempted, without, however, any certain expectancy of pulling a rabbit from an empty hat.

In theory the administration building is headquarters for directing effort and business management of the park area. Actually it may be a vest pocket, a desk, a room, perhaps supplemented with typewriter, adding machine, safe, possibly even two or more rooms with multiplication of these accessories. But few, if any, examples of administration buildings are known to exist as entities, separate from other functions. There are gate lodges, custodian's dwellings, community buildings, recreation pavilions, dining concessions, and numerous combinations of functions, all termed administration buildings. An appraisal of the use and of the space devoted to this intangible business of administration will usually demonstrate that the designation of the building is something of a courtesy title, if not actually a misnomer.

This widespread paradox exists very naturally and very logically. It is probably right that the point of control, the symbol of supervisory authority, should have importance, even dominance, among park buildings. It is quite pardonable that the limited space demand of administrative function should augment itself by the borrowed bulk of less significant space requirements and give name to the resulting combination structure. The tail is allowed to wag the dog with more than usual justification.

Structures dignified by the designation "administration building" often tend to prominence of location and austerity of treatment that arrogantly imply special prerogative to compete with Nature as the "feature" of the natural park. Such boorish behavior can no more be condoned in Park Building No. 1 than in lesser park structures.

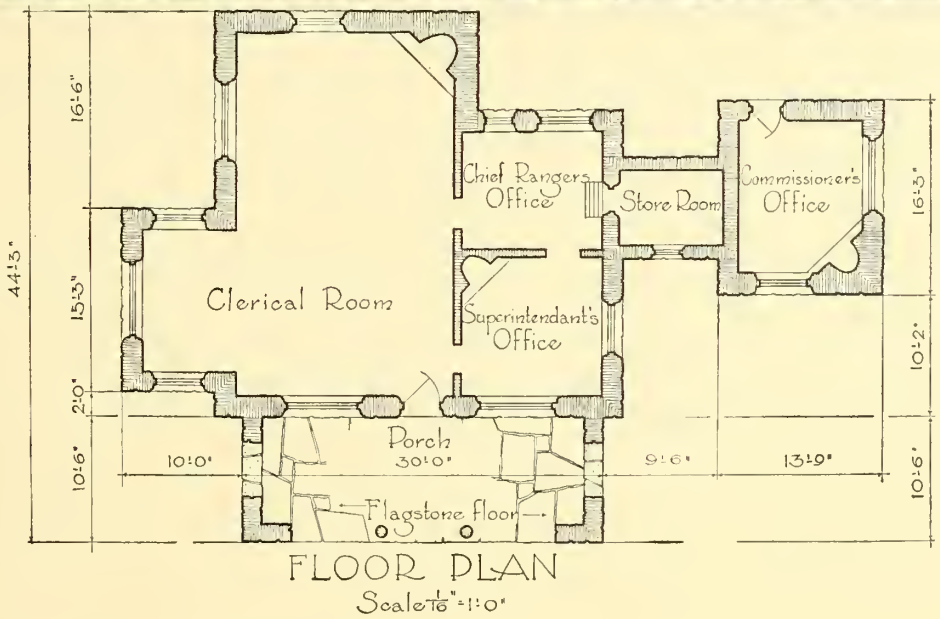
Illustrated hereinafter are numerous buildings, one function of which is administration. Some include closely related functions, others combine facilities ill-related to the business of administration. In so far as these avoid the blight of several scattered structures to result in a single structure free of pompous pretensions, the multi-purpose building masquerading as administration building is not unreasonable. Rather does it seem to be a solution worthy of encouragement.



FLOOR PLAN
Scale 1/32" = 1±0"

Administration Building, Casa Grande National Monument

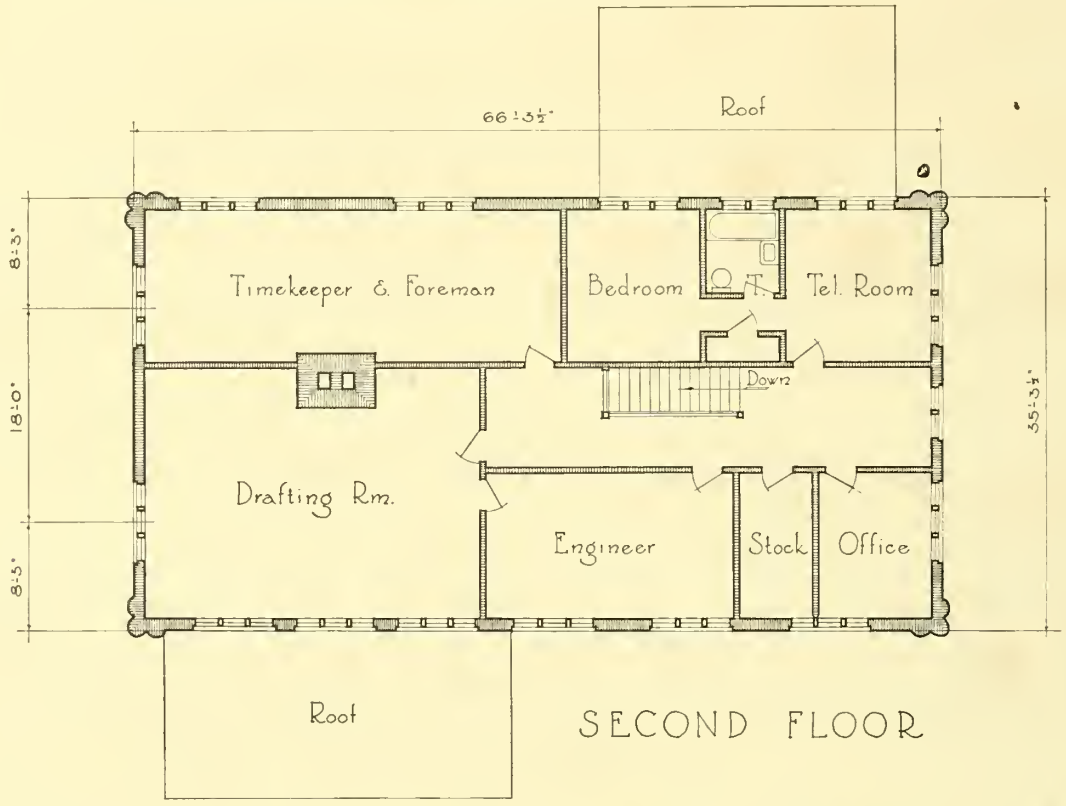
Adobe in gesture to tradition, and low, in keeping with the surrounding expanse of level terrain, this building is definitely and excellently custom-tailored to the Southwest. It houses various facilities that have legitimate function as phases of park administration and conveys impressively a feeling of organized administrative authority. The architectural style is related to that of the entrance way and entrance sign of this same park. These subjects are shown elsewhere in this collection.



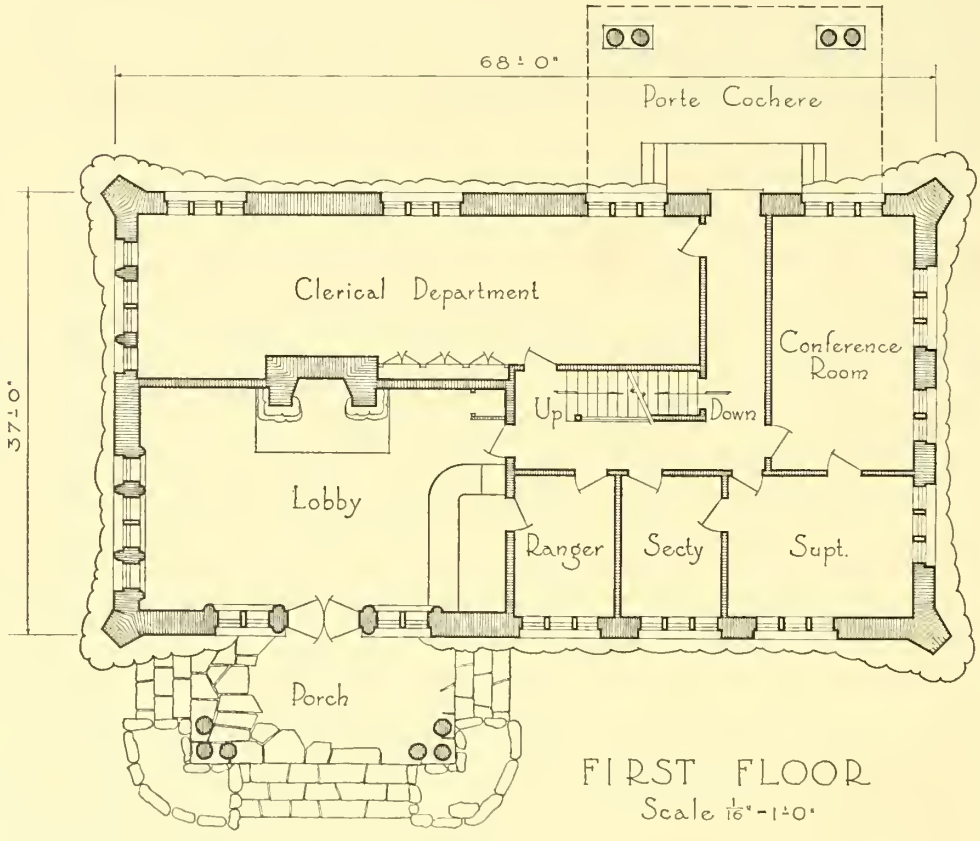
FLOOR PLAN
Scale $\frac{1}{16}$" = 1'-0"

Administration Building, Mesa Verde National Park

Here is exemplified that unusual park structure, an administration building that does not accumulate other functions to gain impressive bulk. Informal in plan and exterior, it relates well to the other buildings in this National Park, several of which are included under other classifications.



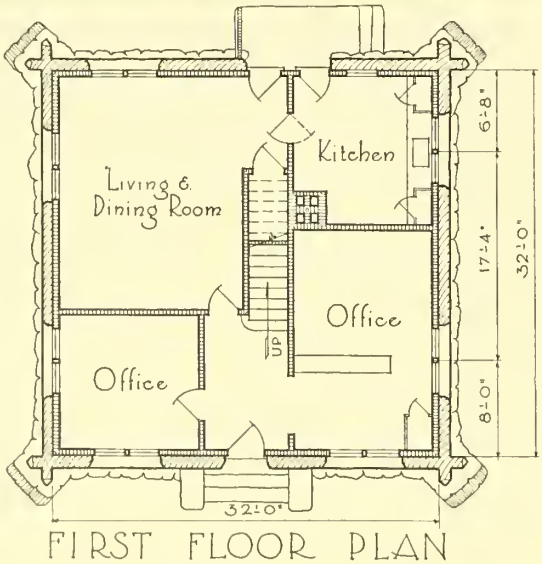
SECOND FLOOR



FIRST FLOOR
Scale 1/16"-1'-0"

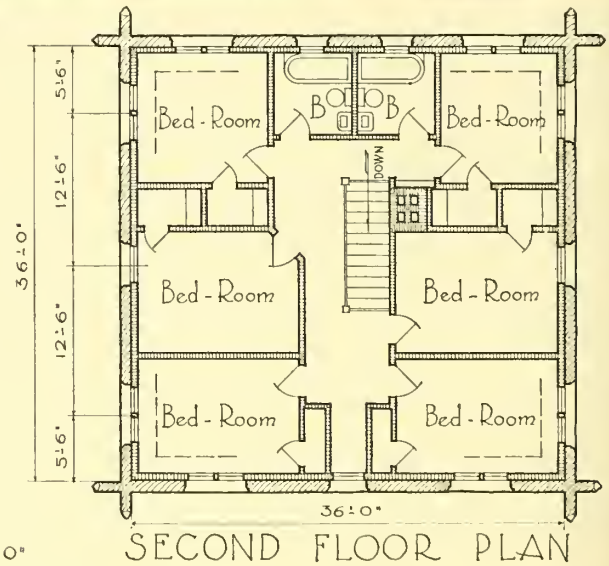
Administration Building, Longmire, Mt. Rainier National Park

The plans on the opposite page exhibit the several functions that may accrue to an administration building in a major park. The employment of boulder masonry as here illustrated is usually dictated and only justified by the absence of more workable rock material within reasonable distance. However well handled, it seems impossible to attain a satisfying appearance of stability. The rafters are appropriately vigorous in scale, and the blunted terminations of them are most agreeable. There is abundant provision of windows to insure a well-lighted interior without sacrifice of wall surfaces to the point where the exterior suffers in appearance.



FIRST FLOOR PLAN

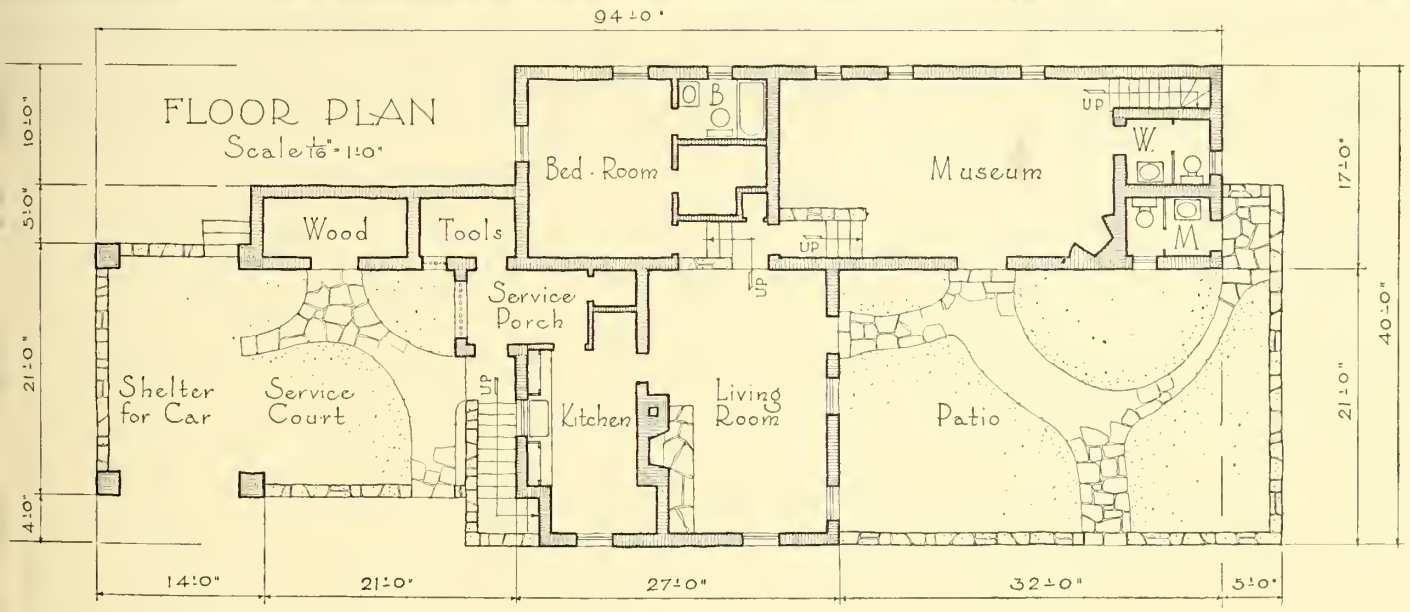
Scale $\frac{1}{16}$" = 1'-0"



SECOND FLOOR PLAN

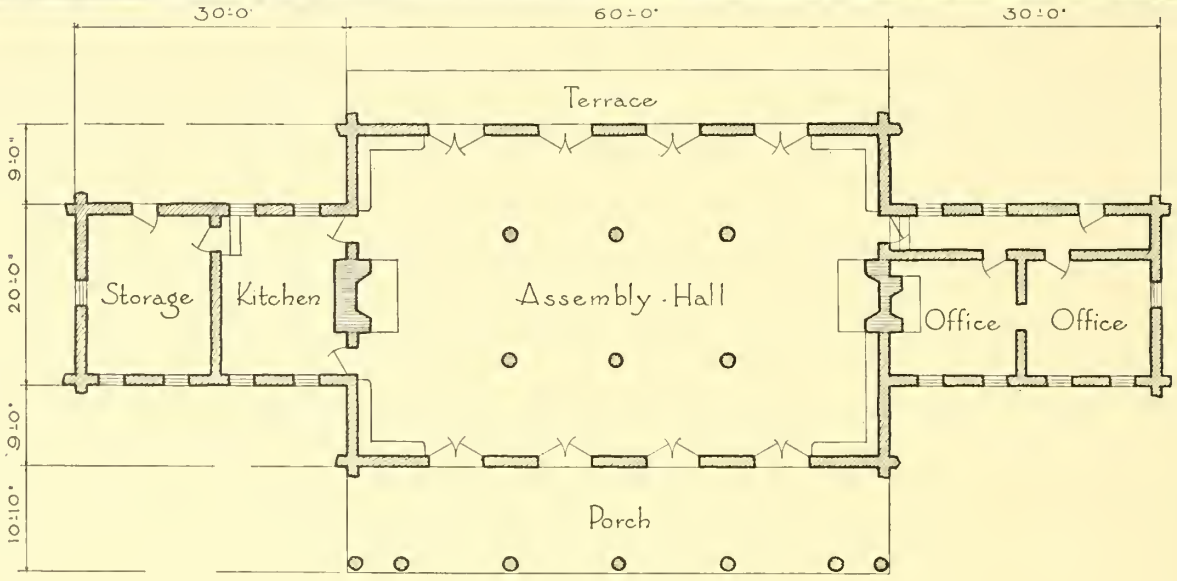
Administration Building, Yakima Park, Mt. Rainier National Park

Even without benefit of the magnificent background afforded by Mt. Rainier this log building would be an outstanding contribution to park architecture. Obviously, but not too self-consciously, inspired by the early block-house, here is a building representative of logical and legitimate adaptation of a traditional form. The log work is neither too precise nor too laboriously rustic.



Administration Building, Phoenix South Mountain Park, Arizona

In continuing prehistoric Pueblo structural tradition this building extends the vocabulary of park architecture to include a pleasing and welcome regional expression eminently suited to the Southwest. Interest is caught by the unusual character of the masonry, the several levels of the roof, the haphazard lift and drop of the parapets, and the rhythmic shadows cast by the projecting pole *vigas*. As is so frequently the case with administration buildings, the plan shown above does not particularly evidence administrative function. The combination of caretaker's quarters, service courtyard and museum form more accurately administration "point" than administration building.



FLOOR-PLAN
Scale 3/32" = 1'-0"

Administration Building, Selkirk Shores State Park, New York

Impressive in extent for a log building and notable for the workmanship of the log construction and the broad sweep of the roof. The severity of the concrete base, the trivial boulder masonry of the chimneys, and the thinness of the covering material of the roof are disturbing details.

SHELTERS *and* RECREATION BUILDINGS

BEYOND DOUBT the most generally useful building in any park is a shelter, usually open but sometimes enclosed or enclosable, and then referred to as a recreation or community building, or a pavilion.

It is admittedly no trivial task to achieve a desirable and unforced variety in such buildings within the confines of a moderate cost. This is true of other park structures, but it is more apparent of shelters because they are so universally existent in park areas. It is the almost invariable presence of at least one shelter, and often of several shelters, in every park that tends to make us especially and painfully aware of a spiritless monotony of design and execution. Exertion of effort to bring character to a shelter, such as will differentiate it from a thousand and one others, is all too rare; attainment of the objective, without bizarre result, still more rare. The attempt is worth all the creative effort expended; the successful accomplishment, truly worthy of praise.

Because its purpose and use usually lead to its placement in the choicest of locations within the park, where it is natural to invite the park user to rest and contemplate a particularly beautiful prospect or setting, the shelter finds itself in the very center of a stage with a back-drop by the first Old Master. Its rôle is thus a difficult one, and is ill-played if rendered in the flippant slang or thin syncopated measures of the moment. Slapstick comedy technique is inappropriate; some dignity beyond passing fad or fashion is demanded of the shelter's stellar part.

The essentials of a shelter include first of all overhead protection and a place to sit and rest. In size, shelters range from the very small and minor, in a simple rendering, to the large and complicated, when many extra-functional dependencies are included in the ambitious structures of a large, much-used park.

Transition from the simplest to the specialized or more complex structure may be effected by the incorporation of one or more fireplaces, the partial or complete enclosing of the sides for protection from wind or weather, the provision of ovens or grills for picnic cooking and tables and seats for the picnic meal. The shelter of special purpose or the recreation building for year-round use results.

There are colloquial departures in shelters and their functions that make for some well-defined varieties.

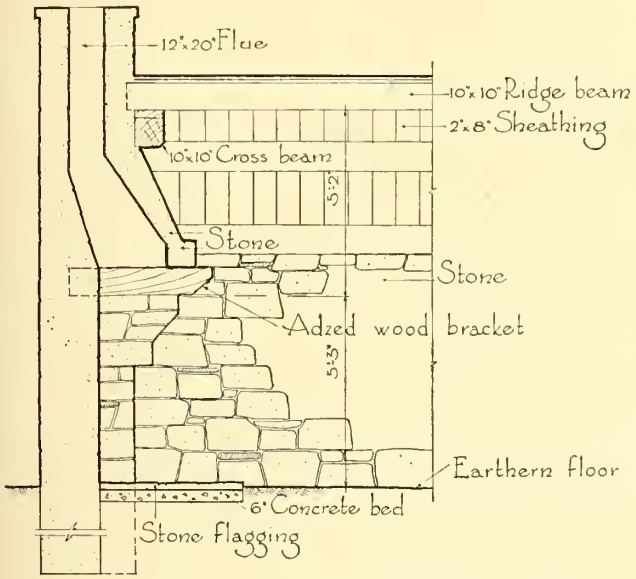
One such is the so-called kitchen shelter developed in the Northwest, where presumably heavy rainfall is an abnormal threat to cooking picnic fare in the open. The type evolved is a kind of combined kitchen and picnic shelter, the sides widely open except against the prevailing winds. Our countrymen of this region must fairly radiate sweetness and light, for here almost invariably the facilities for cooking are double, triple or quadruple ovens ranged in close proximity about one chimney. The shelters bear no noticeable scars of intergroup ruction and seem almost to refute the widely held conviction that close contact of picnicking groups is provocative of trouble. Perhaps from this peaceable region will spread forth the millennium when the lion and the lamb universally can picnic on the same half-acre and like it.

Typical of the Southwest is the *ramada,* functioning in protection of the picnicker from the heat and brilliance of the desert sun. Its name is from the Spanish, its style generally derived from the Pueblo. It is built with rock or adobe walls or piers, its practically flat roof carried on round poles, or *vigas.* The roofs are usually covered with a kind of thatch allowed to hang down over the edges as a fringed protective valance of bewhiskered appearance. The *ramada* of the desert country is often equipped with an integral open fireplace and chimney. Sometimes there is provided instead an outdoor fireplace nearby for the preparation of food. The *ramada* often accommodates more than one picnic group.

There are logical combinations of the shelter

with other park structural needs which bring welcome diversification to its form and appearance. Custodian's or concessionaire's quarters, concession space, public comfort stations, storage space, and other facilities have been successfully incorporated with shelters and produced satisfying variations which avoid implication either of the commonplace on the one hand or the fantastic on the other. There are sufficient legitimate combinations and cross combinations of functions, materials, forms, and other ingredients to make possible an almost infinite number of agreeably different shelters, if served up without economy of skill and effort in the contriving, and seasoned with a palatable dash of individuality.

The shelter floor may be simply a gravel or earth fill, or may be brick or stone laid on a sand fill. A wood floor for a shelter has little to recommend it. Concrete pavement with one of several surface materials may be used. The variety of soil and frost conditions over the entire country precludes the making of a recommendation in the choice of material. Available funds likewise will affect its selection. Whatever material a thorough consideration of circumstances may designate for use, it is rather to be urged that it be intelligently employed with due thought for its fitness and durability. So many pavements of open shelters have failed to survive the local temperature range and frost action with such disheartening results, that it is not unfair to assert that there has been too prevalent ignorance or naïve disregard of unchangeable material facts. Were it not for the introductory promise to avoid the "primer" approach within these discussions, there would be at this point a yielding to temptation to point out that masonry expands under heat and contracts with cold, and that proper expansion joints are a specific, that foundation walls are unreliable unless carried below the local frost level, and that bounding retaining walls do not long retain if moisture can collect underground above the frost line. A promise being what it is, a recall of these elementary facts must go herein unrecorded and neglected.



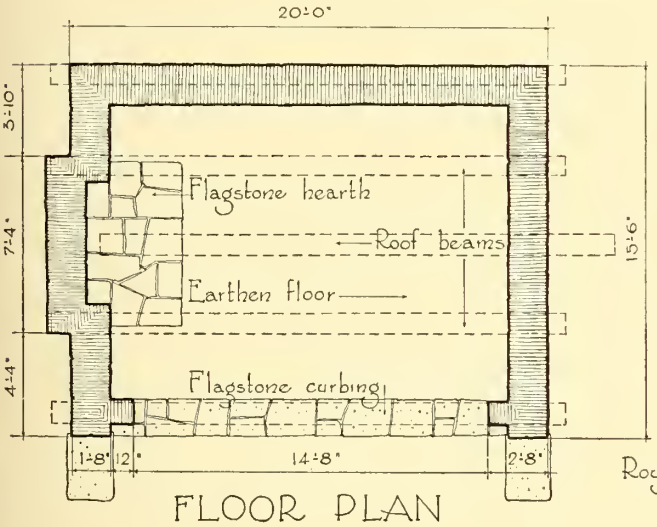
SECTION OF FIREPLACE

Scale $\frac{3}{16}$" = 1'-0"

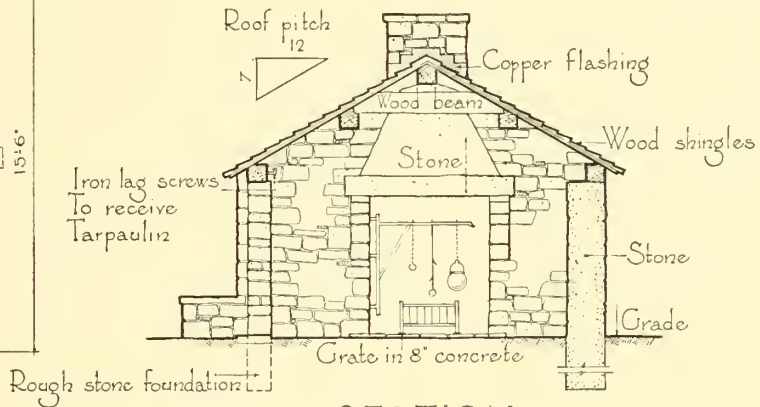
Shelter

Clarence Fahnestock Memorial State Park – New York

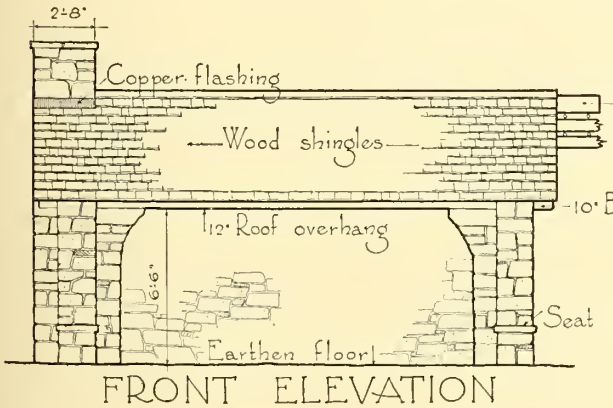
This simple and pleasing building promises to be a cool retreat during midsummer, and, by virtue of its fireplace and single open side, a well-protected shelter at other seasons. The roof and supporting members have desirable weight, the stonework has informal but structurally satisfying character



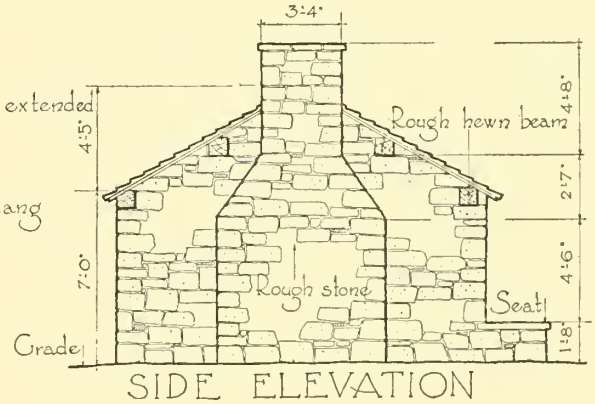
FLOOR PLAN



SECTION



FRONT ELEVATION



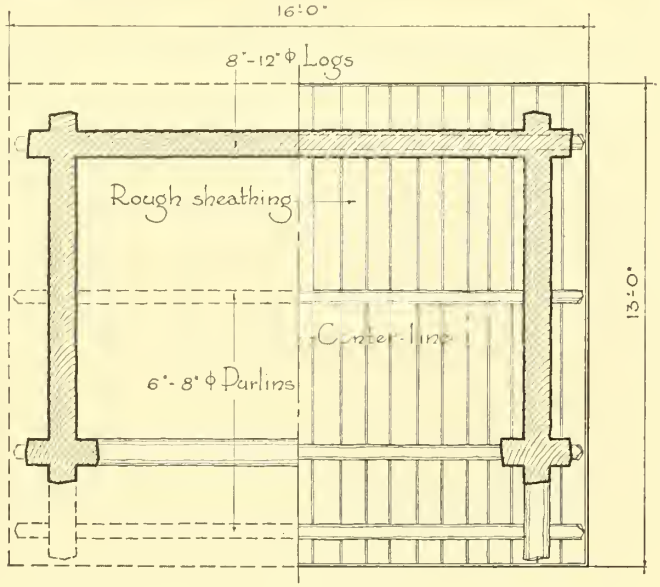
SIDE ELEVATION

Scale $\frac{1}{8}$" = 1'-0"

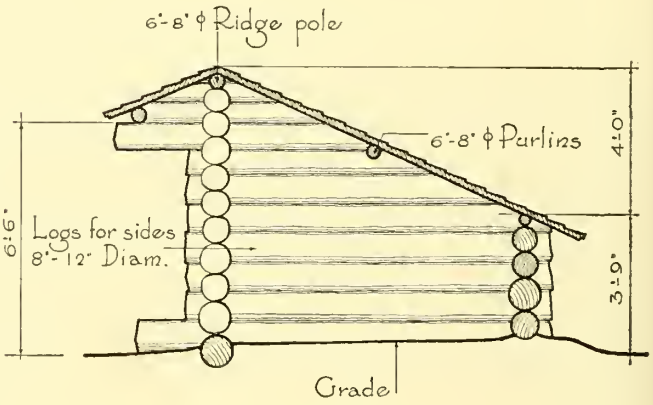
Adirondack Shelter

Letchworth State Park - - - - New York

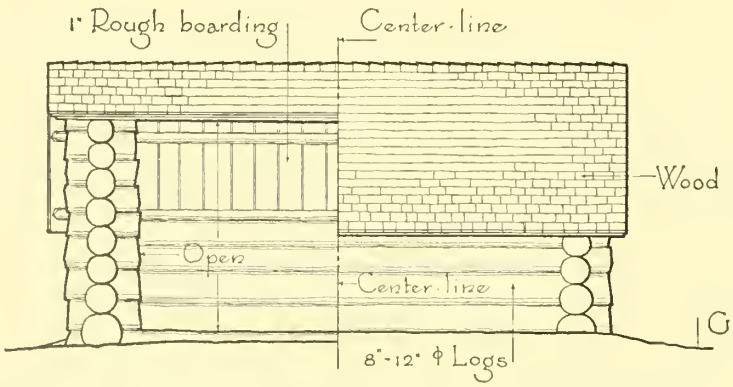
In New York State the Adirondack shelter is a tradition, a survival of the primitive shelter of the earliest woodsmen and hunters of this region. The end and rear walls are tightly built of logs, the front is open to the friendly warmth and light of the campfire. The roof slopes gently to the rear and sharply to the open front to give a protective overhang. The following page shows regional variations in the type as it has moved westward; the second following page depicts its translation into stone.



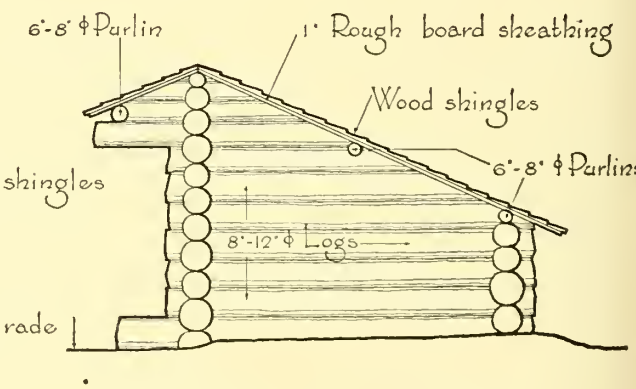
HALF FLOOR- & REFLECTED ROOF PLAN



SECTION



HALF FRONT & REAR ELEVATION



SIDE ELEVATION

Scale $\frac{3}{16}$"-1:0"

Trailside Shelter, Bismarck Metropolitan Parks, North Dakota

The Adirondacks shelter moving westward undergoes changes. In this example the points of difference are the informality of axe-cut log ends and an added rakishness of contours. The fireplace continues in its traditional location, facing the open front of the shelter.

Trailside Shelter, Scenic State Park, Minnesota

Structural forthrightness and precedent are sacrificed for novelty in the omission of wing walls from the front corners of this variant. Probably structurally safe through the use of very long spikes, there exists a feeling of insecurity in this abandonment of the time-honored "log cabin" corner. The benches around the three walls are a departure from type.

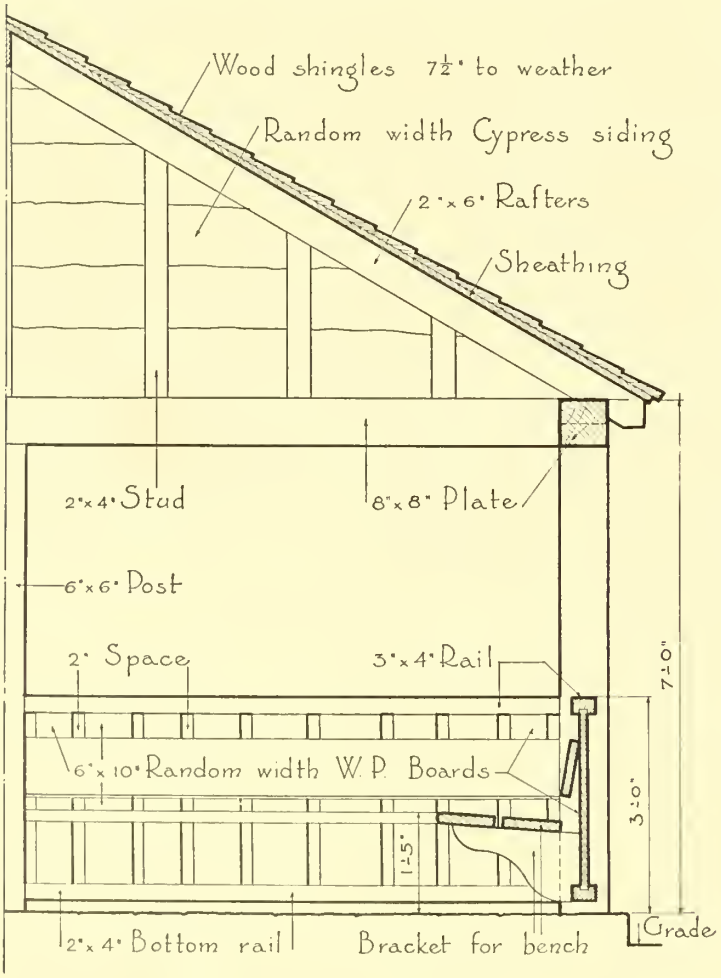
Trailside Shelter, Cook County Forest Preserve, Illinois

The Adirondacks shelter, in this example, turns to a rather meticulous stonework that is perhaps at home in a metropolitan area, but hardly as informal as we might wish for in a wilderness setting. The fireplace that was isolated and facing the open front in the prototype, is here incorporated with the shelter itself, and thereby precedent is somewhat obscured.

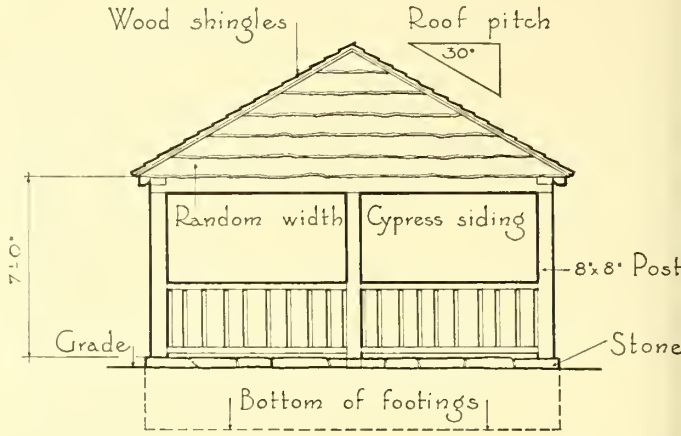
Shelter
Reading

Mt. Penn State Park
Pennsylvania

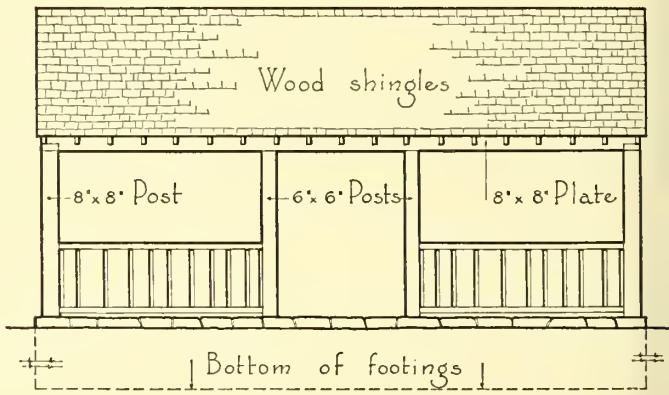
The simplicity of this picnic shelter and the apparent absence of pronounced regional characteristics recommend it for adaptation through a wide area. Without furbelows or overadornment, it recalls the Quaker tradition of Eastern Pennsylvania and may after all, carry more of regional flavor than first glance would disclose.



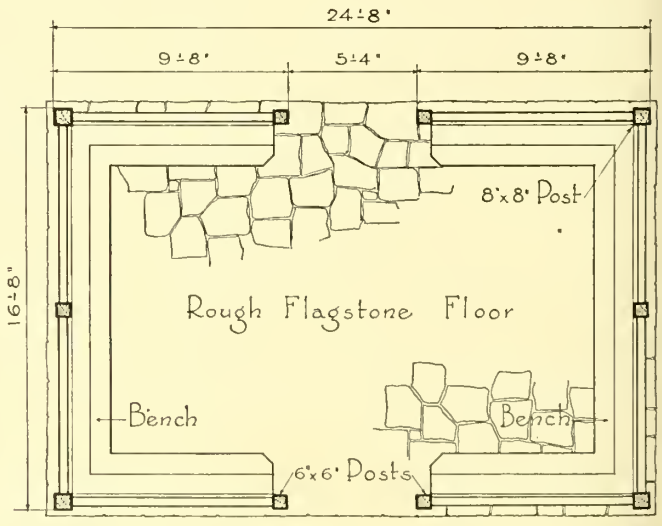
HALF SECTION
Scale ⅜" = 1±0"



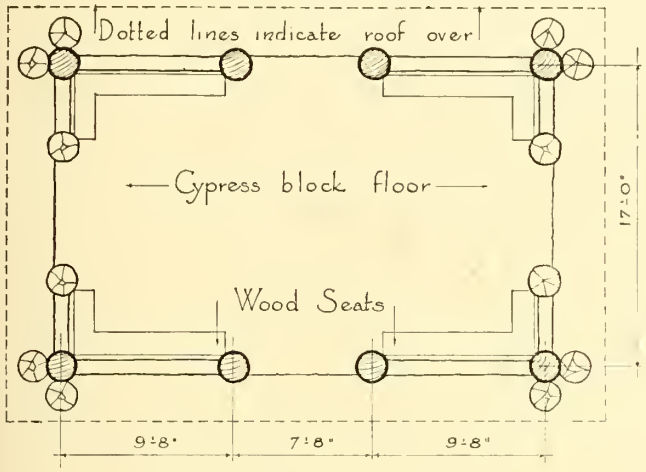
SIDE ELEVATION



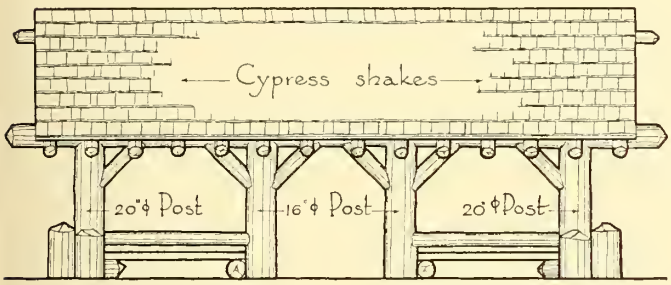
FRONT ELEVATION



FLOOR PLAN
Scale ⅜" = 1±0"



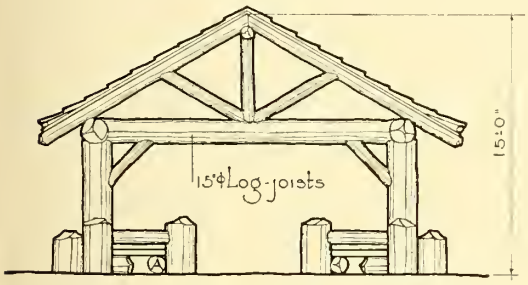
FLOOR PLAN



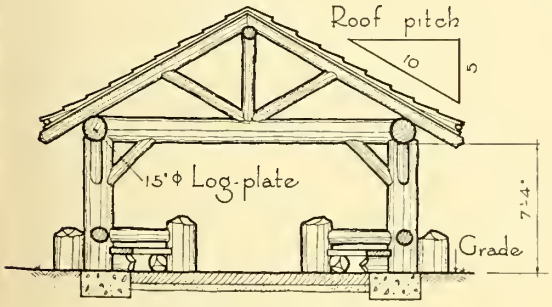
FRONT ELEVATION

Shelter – Crowley's Ridge State Park – Arkansas

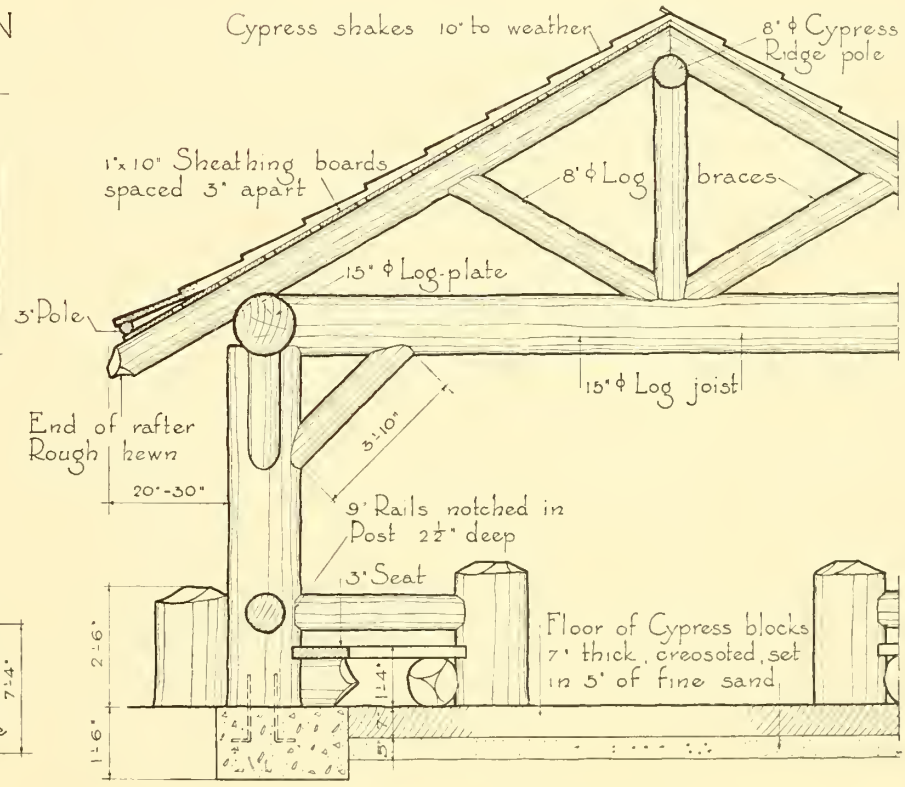
Here is no suggestion of fragility. The substantial structural members, the informality of their placing, the subtly freehand lines well-defined throughout, bring to this shelter an articulation quite its own. This, at the same time, is kept within limits that save it from appearing too forced or affected



SIDE ELEVATION



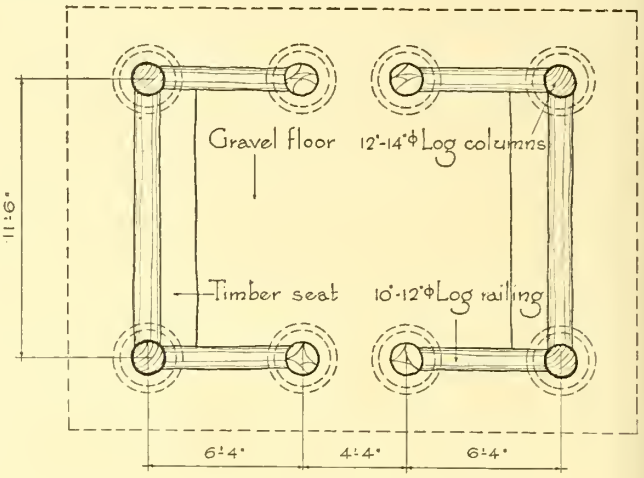
SECTION
Scale $\frac{3}{32}$"=1'-0"



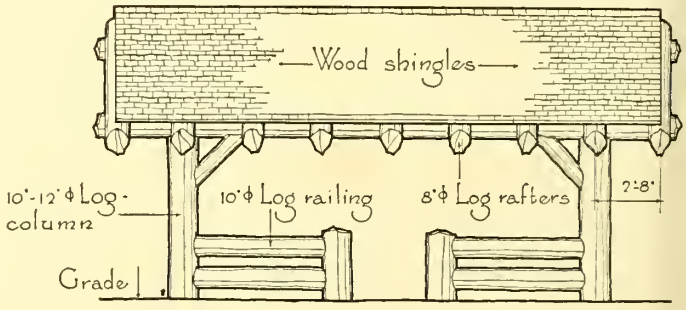
DETAIL
Scale $\frac{1}{4}$"=1'-0"

Small Shelter - Fargo Metropolitan Park - North Dakota

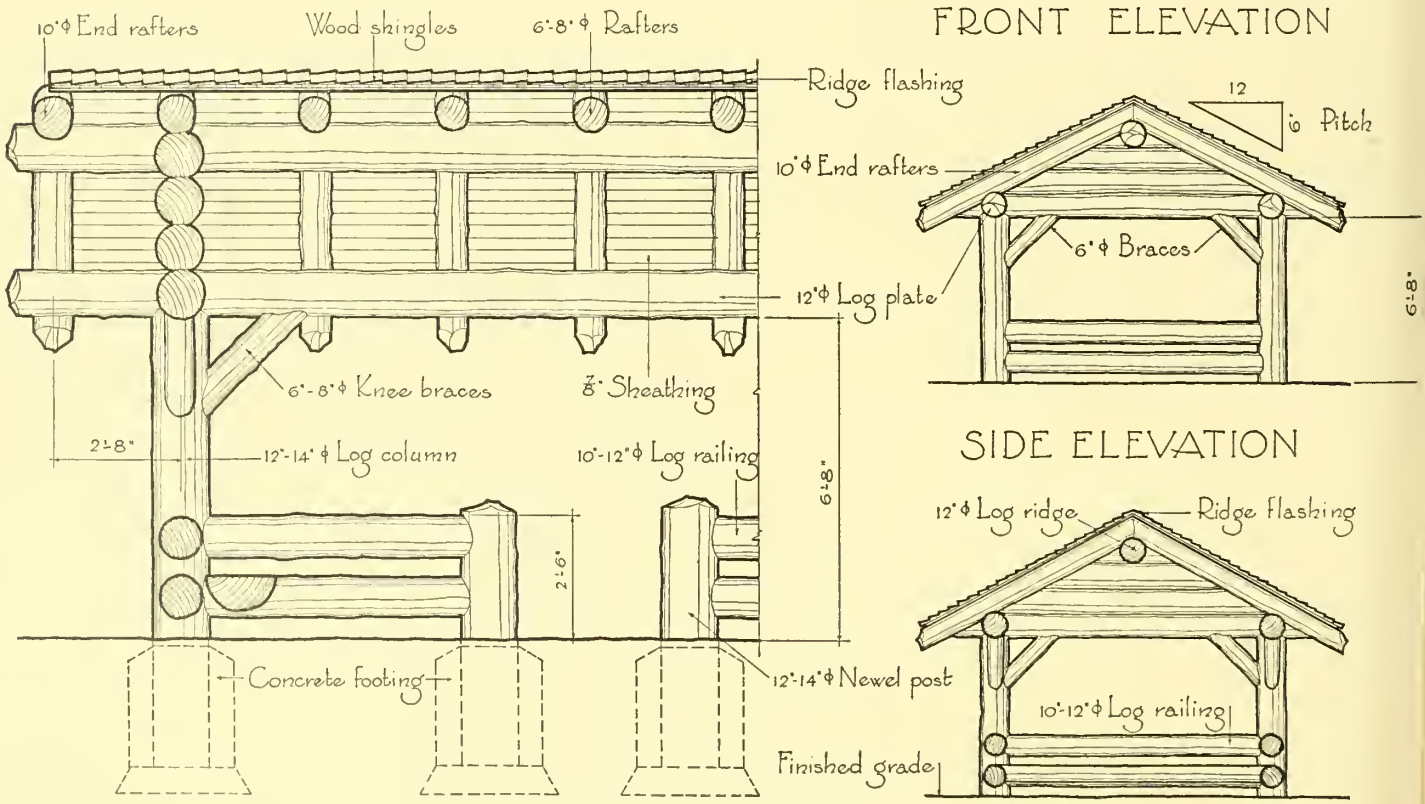
The best points of the so-called "rustic" style are here well exampled. The vigorous proportions of the timbers in the round, the free-hand eave and shingle course lines, the blunted rafter ends - all make for a well-proportioned and attractive small shelter in excellent scale, that would be appropriate far beyond the boundaries of the state in which it has been built.



FLOOR PLAN



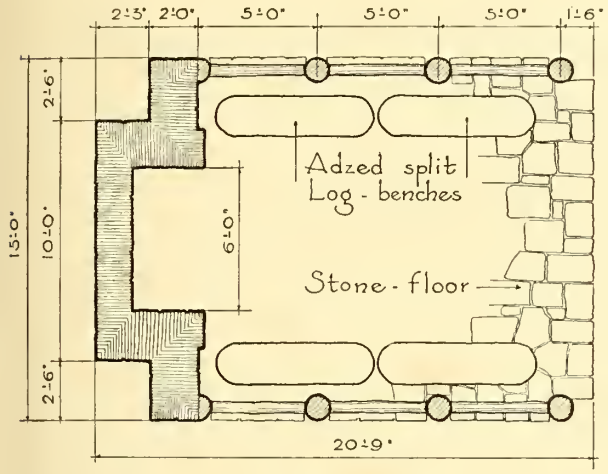
FRONT ELEVATION



SIDE ELEVATION

HALF SECTION
Scale ¾" : 1'-0"

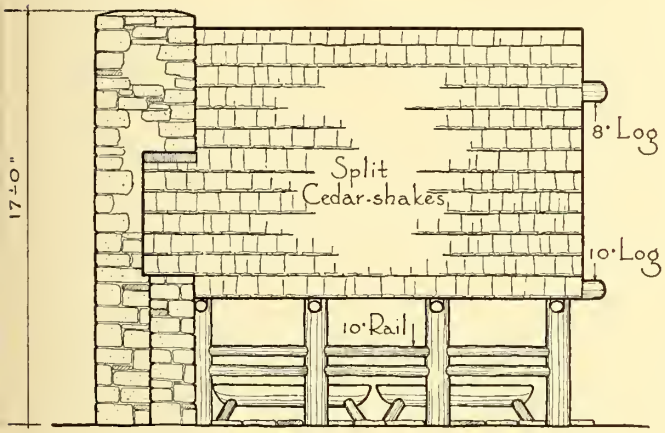
SECTION
Scale ⅜" : 1'-0"



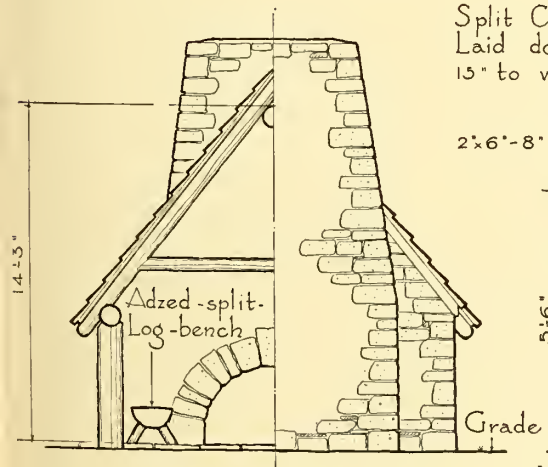
PLAN

Shelter - - Black Hawk State Park - - Illinois

A diminutive and rakish structure with personality plus One of those infrequent shelters that stand agreeably out from the crowd in spite of some trace of the bizarre While there is a faint recall of European farm buildings it seems incidental rather than deliberate, and has in this example resulted in an especially welcome departure from the commonplace.

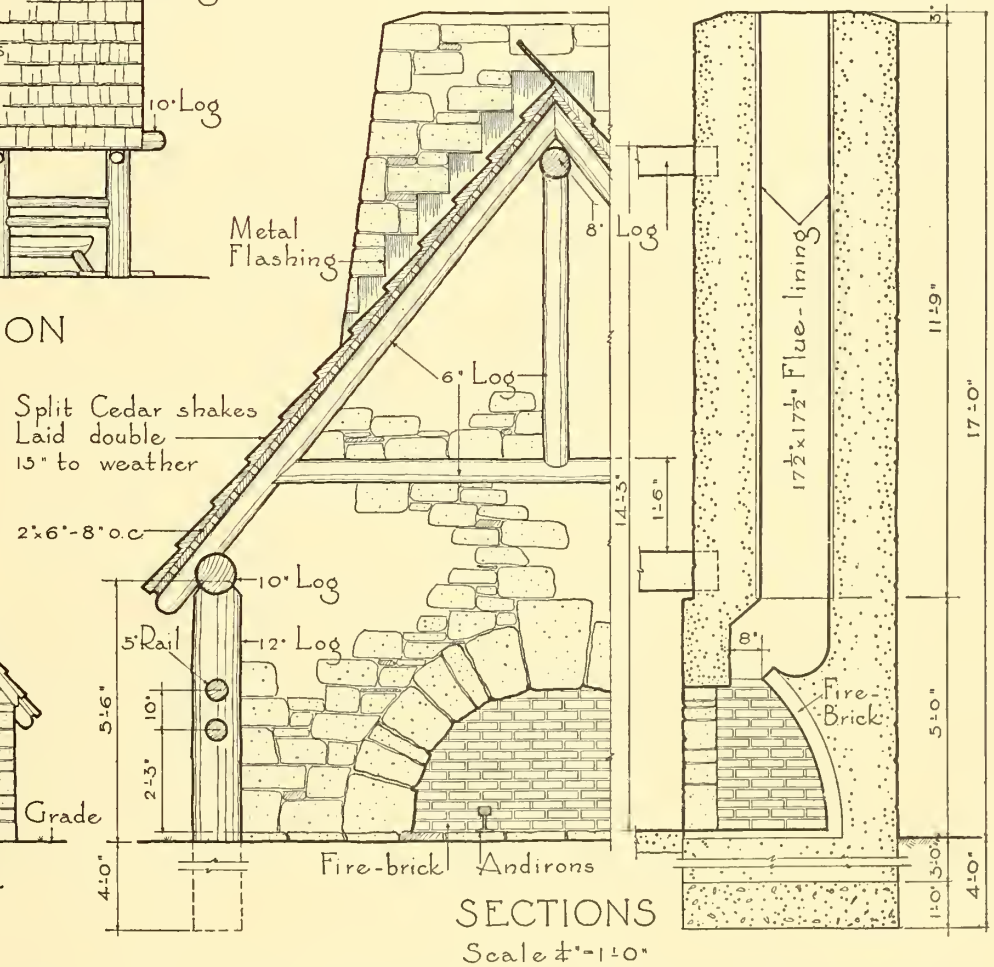


SIDE ELEVATION



FRONT & REAR ELEVATION

Scale $\frac{1}{8}$"-1'-0"

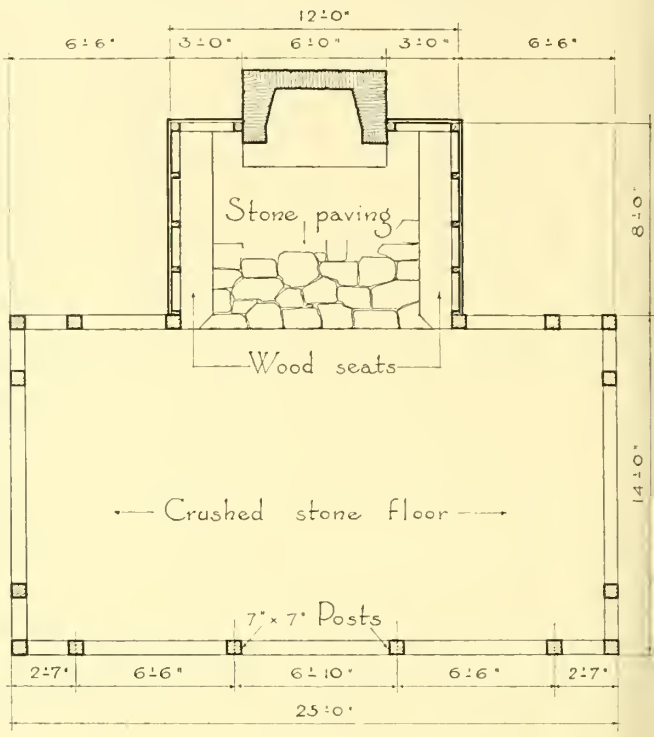


SECTIONS

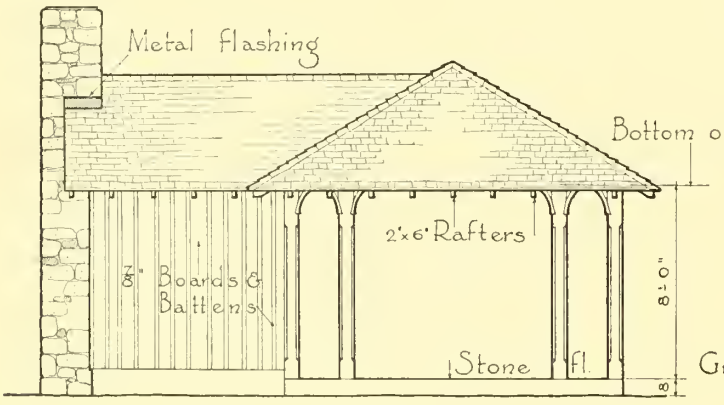
Scale $\frac{1}{4}$"-1'-0"

Picnic Shelter – Westmoreland State Park – Virginia

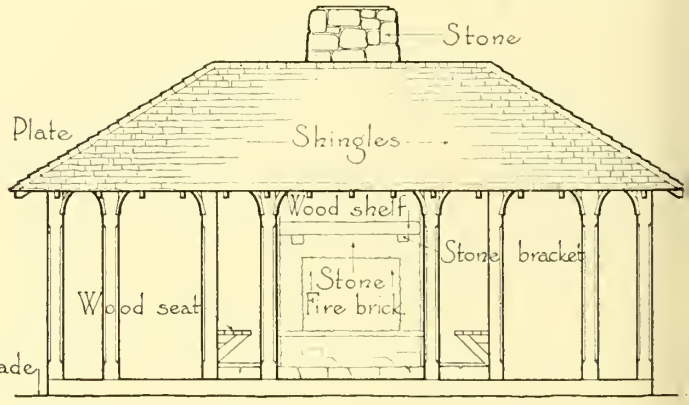
Plan arrangement, more than detail is the merit of this shelter. The main open portion is well suited to Virginia summers and permits a wide and unobstructed view up and down the broad Potomac. The wing with three enclosing walls, fireplace and seats furnishes greater protection if occasion demands. Had the supports of the open portion been built of heavier material the general proportions of the building would be greatly improved.



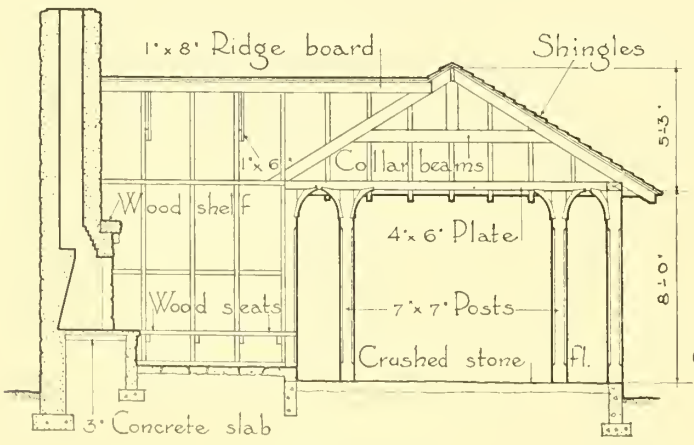
FLOOR PLAN



SIDE ELEVATION

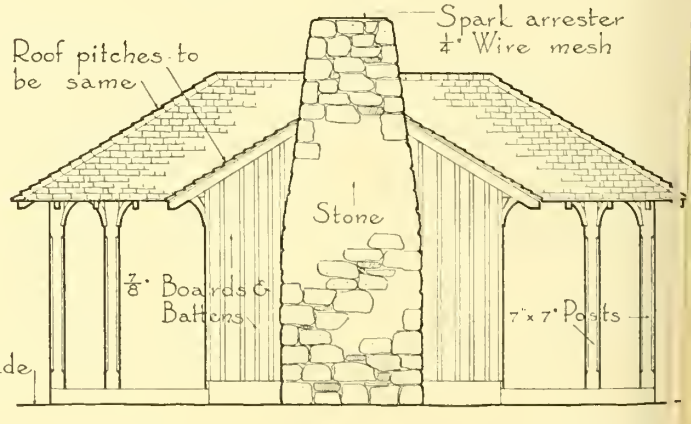


FRONT ELEVATION



SECTION

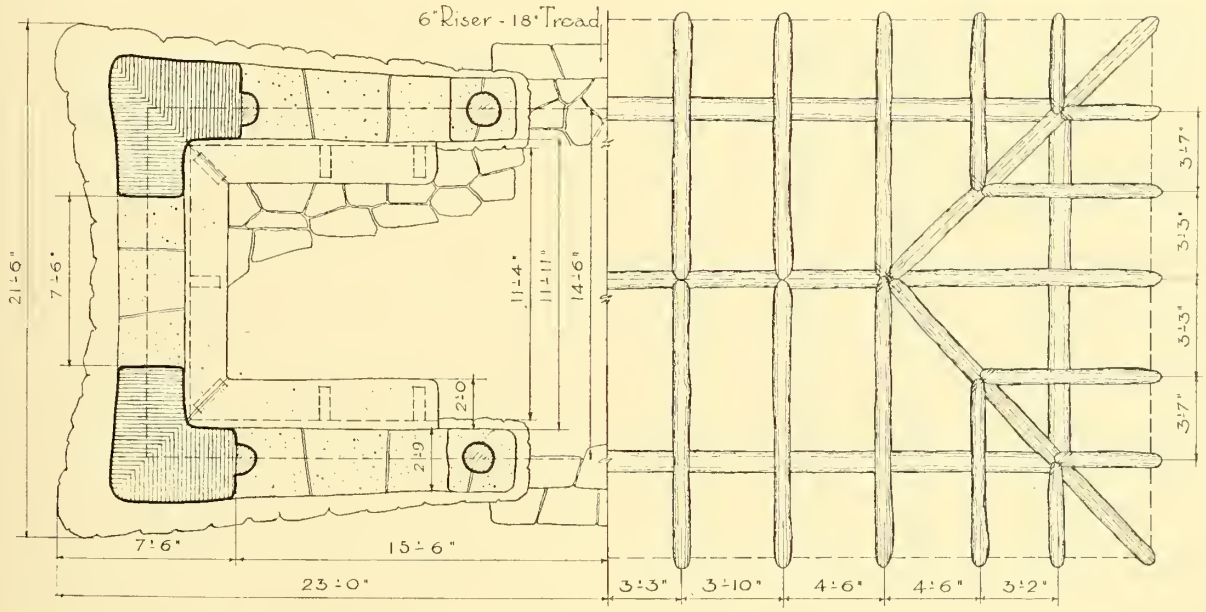
Scale 1/8" = 1'-0"



REAR ELEVATION

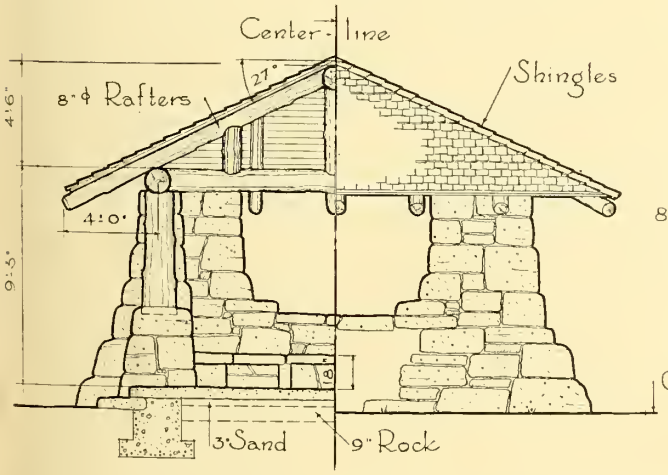
Shelter – Turner Falls State Park – Oklahoma

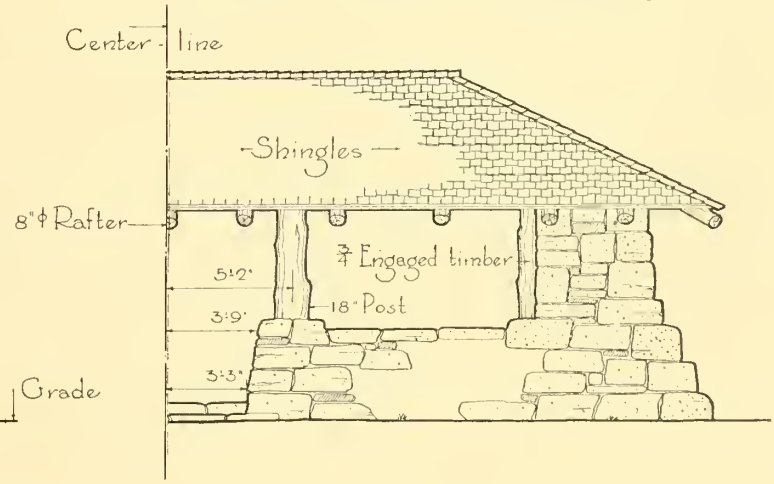
The carping critic may well skip this subject unless he would merely pause for breath. The free-hand lines of the shingle courses doubled every fourth or fifth course for scale and accent, the well-scaled pole rafter ends, the rugged informality and textural quality of the stone work, the batter of the wall - all combine to the success of this structure.



HALF PLAN

HALF ROOF FRAMING





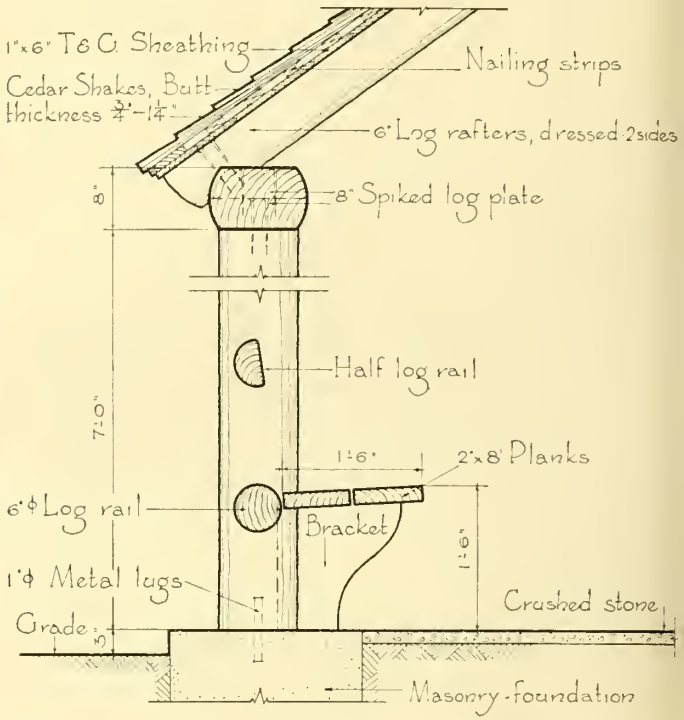
HALF SECTION & SIDE ELEVATION

FRONT ELEVATION

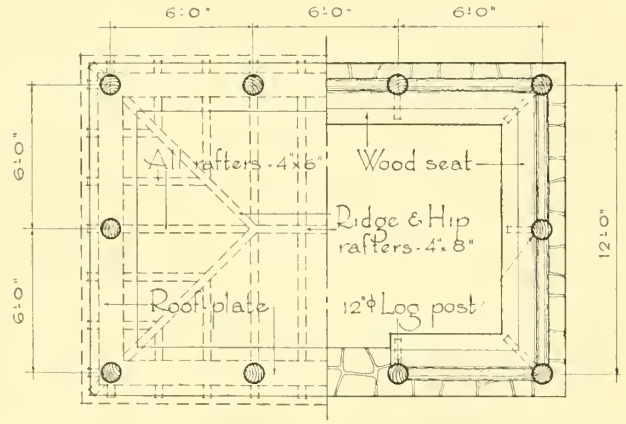
Scale ⅛"-1'-0"

Picnic Shelter — Parvin State Park — New Jersey

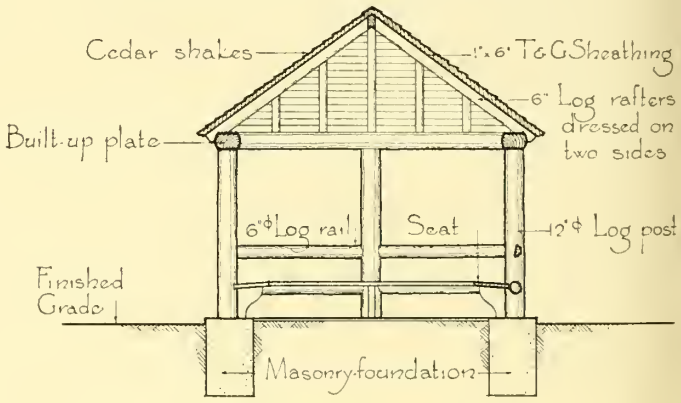
Exampling an appealing simplicity of structure with a nice scale maintained in every detail. Of interest are the half log used as upper rail member serving as back for the seat that carries around the shelter and the trim cornice with close cropped rafter ends.



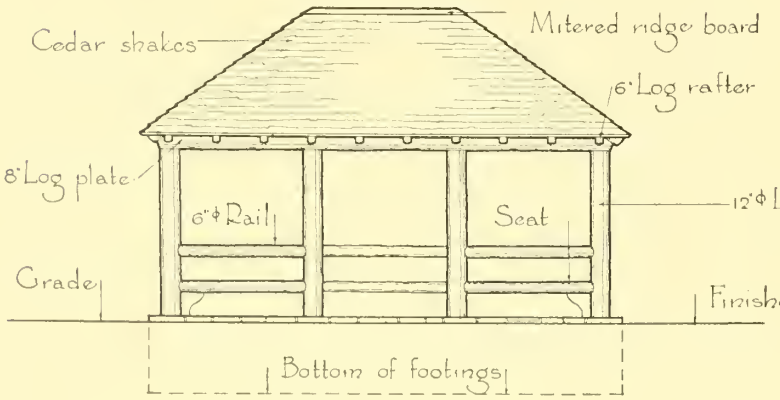
CONSTRUCTION DETAIL



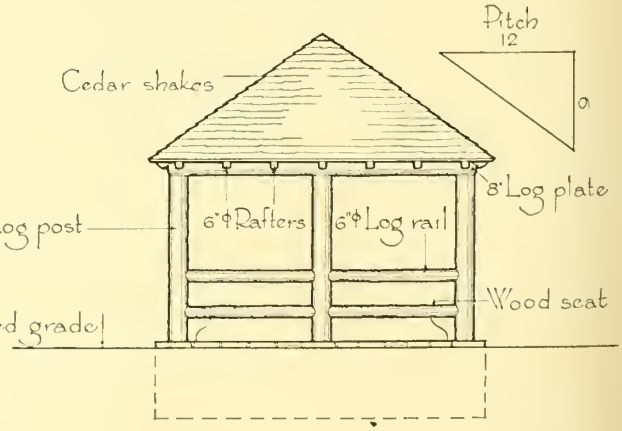
HALF ROOF & FLOOR PLAN



SECTION

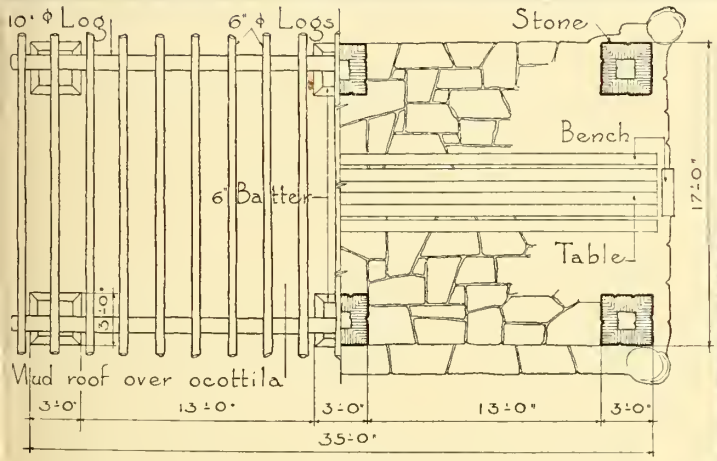


FRONT ELEVATION



Scale ¼"-1'-0"

SIDE ELEVATION

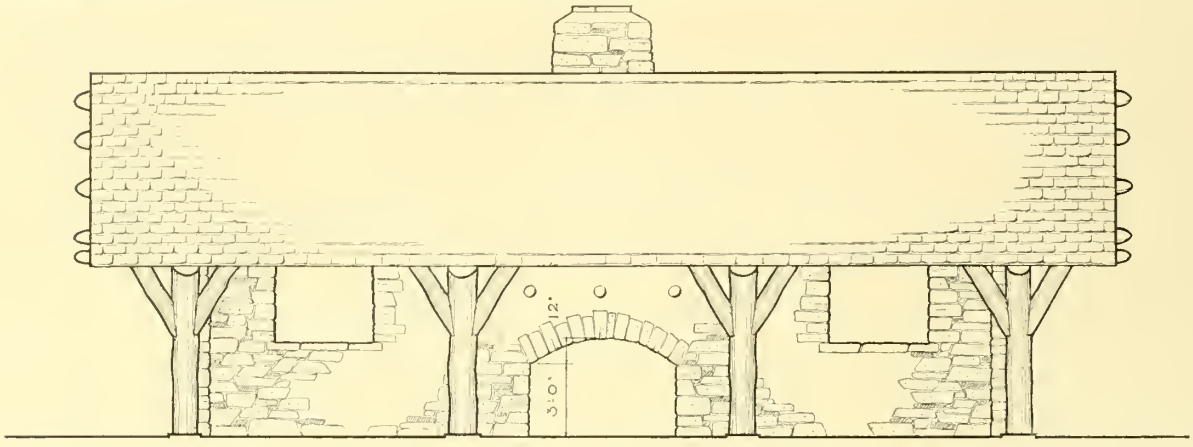


HALF ROOF & FLOOR PLAN

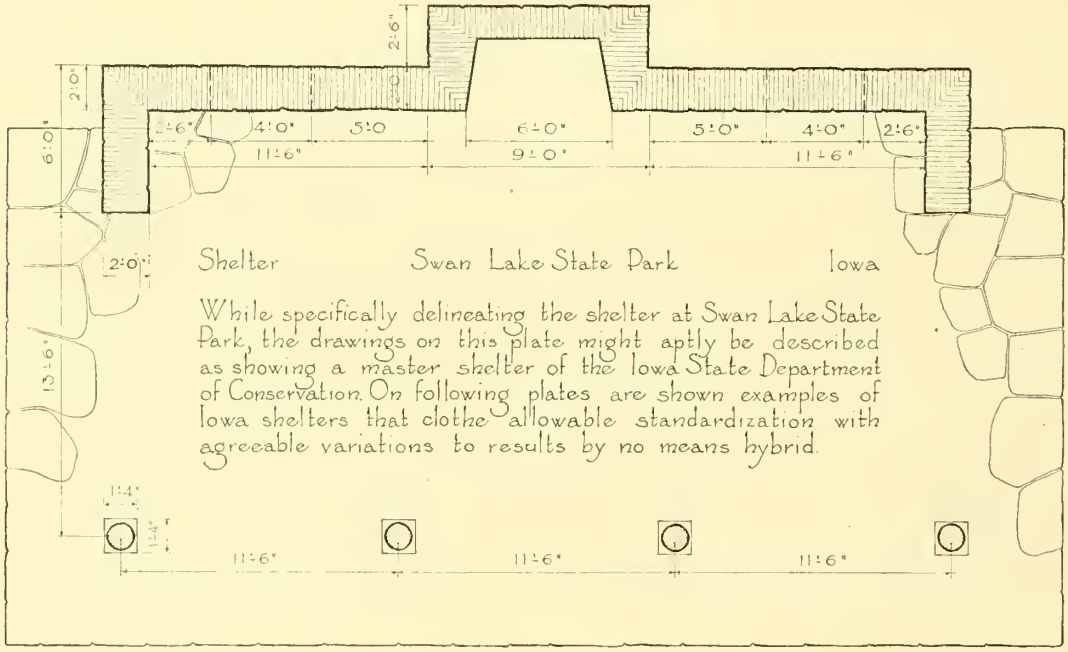
Scale 3/32" = 1'-0"

Picnic Shelter, Phoenix South Mountain Park, Arizona

This airy banquet hall in a desert setting repudiates all legendary perils of the Western desert. The wounded bandit dragging himself to the water hole, might well have gathered strength in the shade of a luxurious shelter such as this. The table is of majestic proportions, the stone piers of interesting workmanship and the unbarbered roof covering probably just an old Spanish custom.



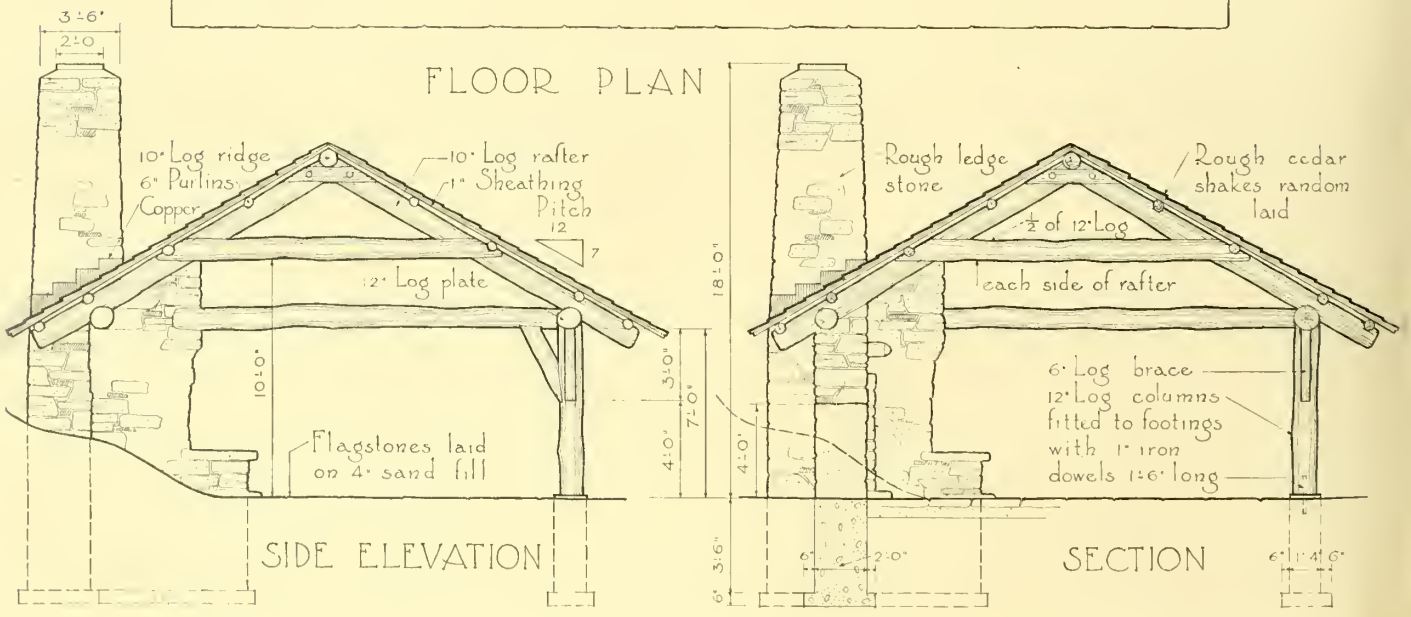
FRONT ELEVATION



Shelter Swan Lake State Park Iowa

While specifically delineating the shelter at Swan Lake State Park, the drawings on this plate might aptly be described as showing a master shelter of the Iowa State Department of Conservation. On following plates are shown examples of Iowa shelters that clothe allowable standardization with agreeable variations to results by no means hybrid.

FLOOR PLAN



SIDE ELEVATION

SECTION

Scale 8" = 1'-0"

Shelter, Forest City State Park, Iowa

Shelter, interior view, Forest City State Park, Iowa

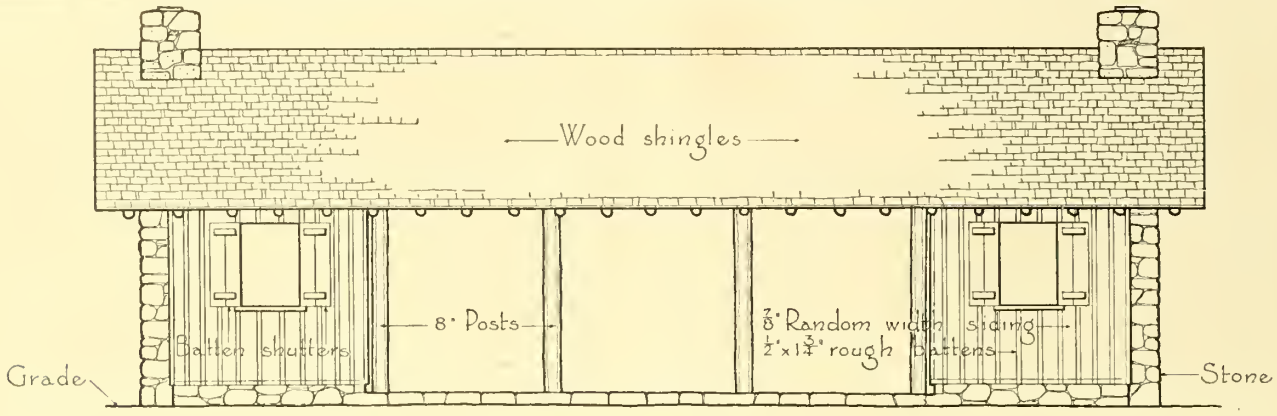
Typical Iowa Shelters

The surrounding illustrations serve to show that minor departures from the typical shelter detailed on the opposite page, even though within narrow limits, tend to result in distinct individuality. All bear the stamp of Iowa, a healthy indication that here is a region developing a structural expression of its own. None bears the rubber stamp of slavish duplication. The several points of minor variation are worthy of careful attention. The style is agreeable and vigorous and the plan one that is appropriate and useful in many settings.

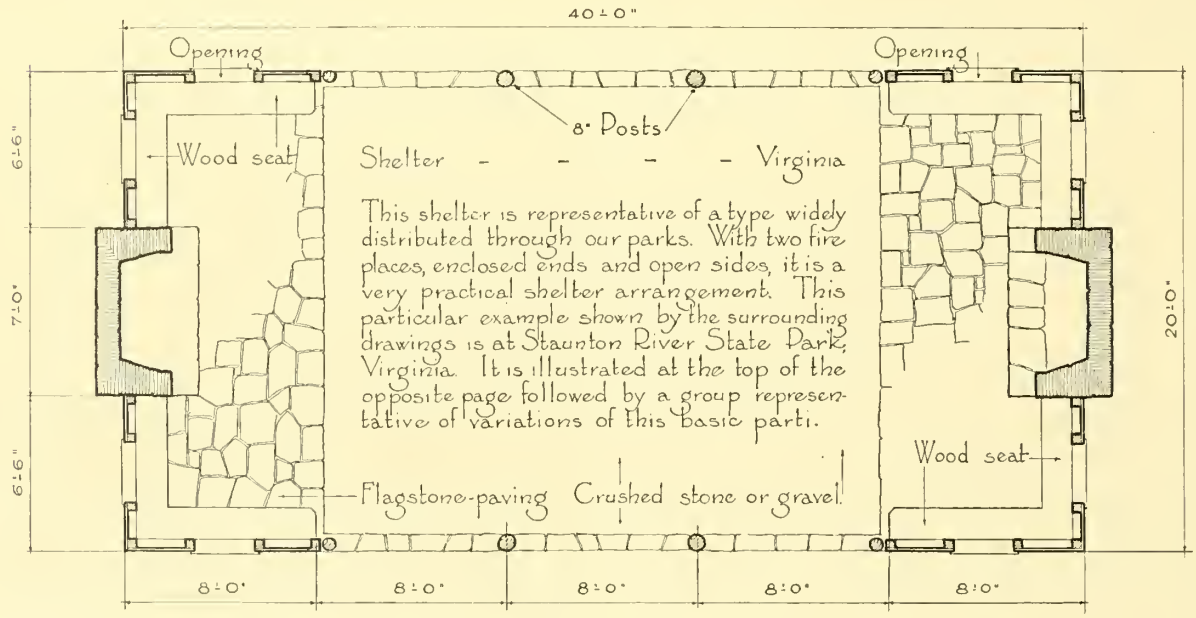
Shelter, Backbone State Park, Iowa

Shelter, Springbrook State Park, Iowa

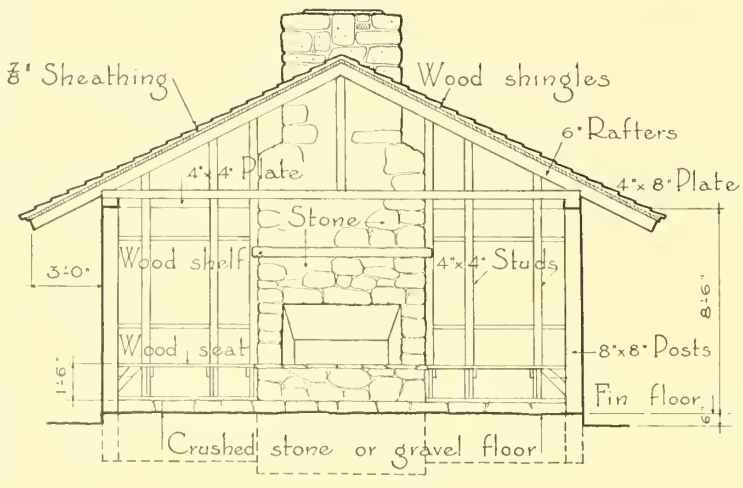
Shelter, interior view, Springbrook State Park, Iowa



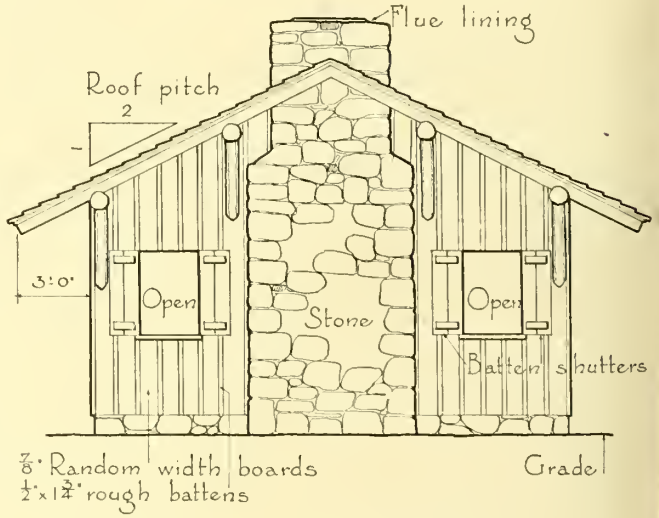
FRONT ELEVATION



FLOOR PLAN



SECTION



SIDE ELEVATION

Scale 1/8"=1'-0"

Staunton River State Park, Virginia

Staunton River State Park, Virginia

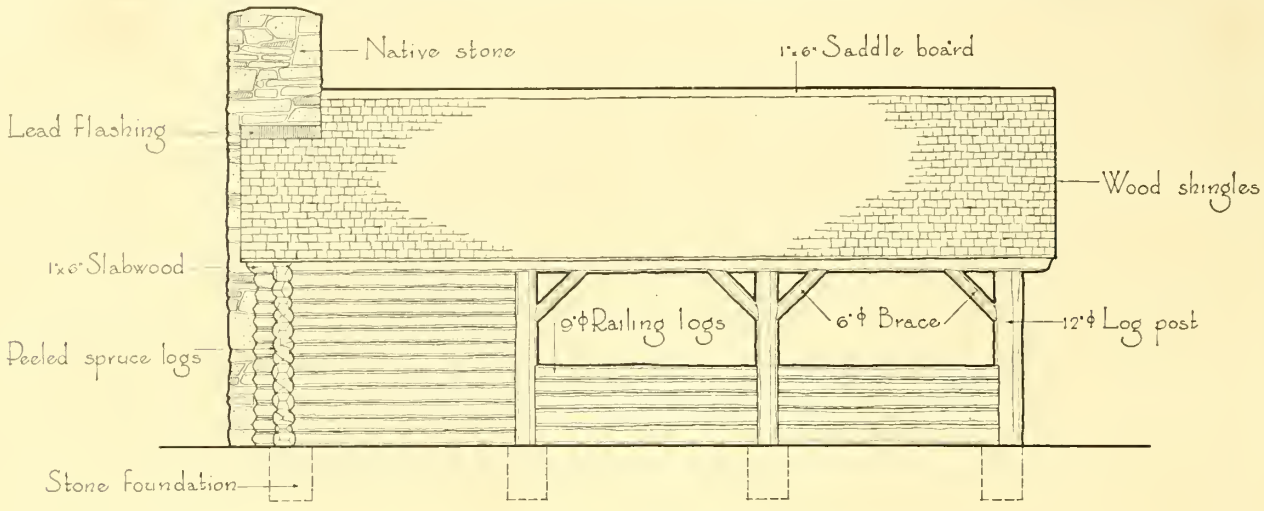
Picnic Shelters

Directly above is pictured the shelter at Staunton River State Park detailed on the opposite page. The other illustrations show different renderings of this basic and popular type in a variety of materials including board and batten, vertical logs, rough siding, and stone, in the order named. These serve to demonstrate the wide range for individuality of exterior treatment possible over an almost identical floor plan.

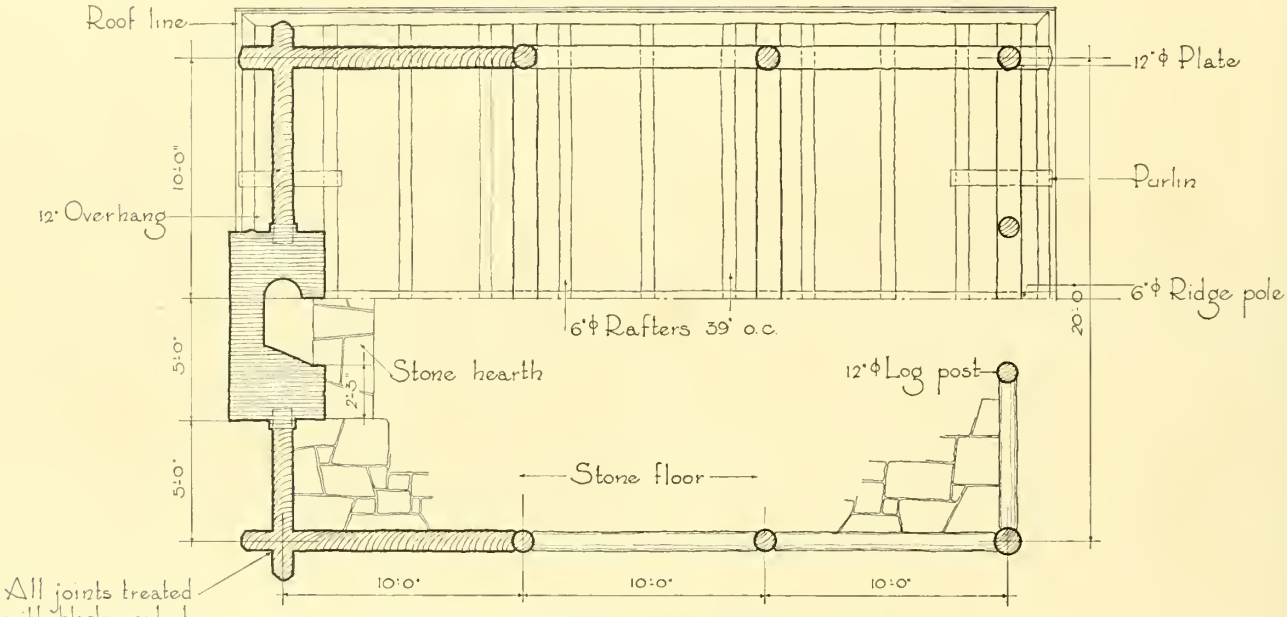
Douthat State Park, Virginia

Wheeler Dam Reservation, Tennessee Valley Authority

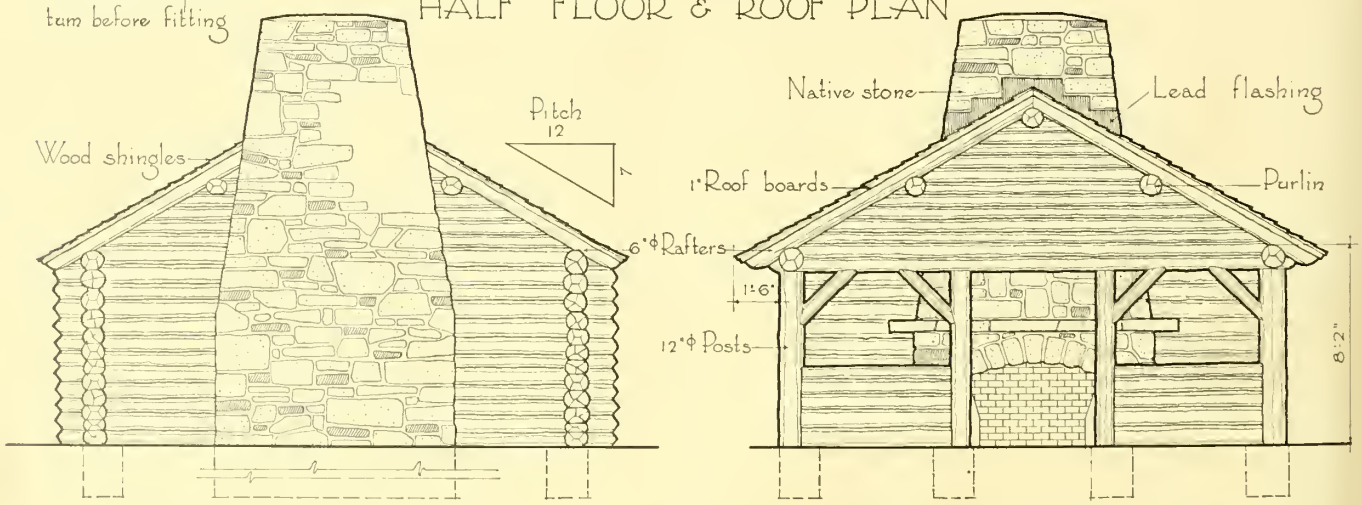
Clarence Fahnstock State Park, New York



SIDE ELEVATION



HALF FLOOR & ROOF PLAN



REAR ELEVATION

Scale ⅜"-1'-0"

FRONT ELEVATION

Shelter, Darling State Forest Park, Vermont

Opposite are shown the plan and detail drawings of this shelter. The general arrangement with fireplace at one end, and this end enclosed for one-third the length of the structure, is somewhat regional in its popularity. It is typical of New York and the New England States.

Kisil Point Shelter, Letchworth State Park, New York

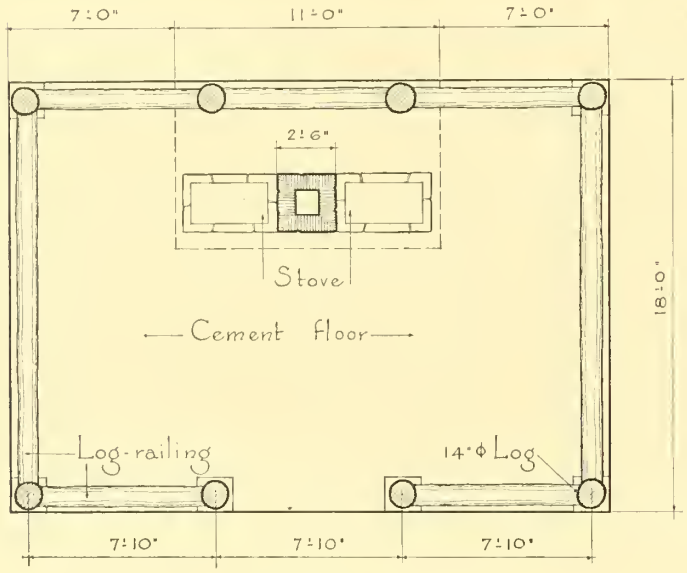
Kinship of this example with the one above is quite apparent. Points of difference are minor. This shelter and the one below employ rough slabs applied horizontally to give semblance of the true log structure. The chimney with continuous batter from grade to cap seems also to be a regional characteristic.

Tea Table Rock Shelter, Letchworth State Park, New York

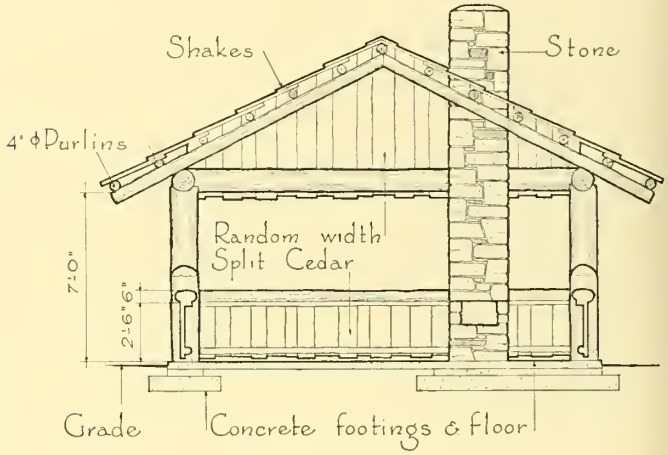
This third rendering of the group displays an open truss in the gable end, a feature usually no more successful than here. There is a look of frailty about most trusses fabricated of timbers in the round that is all but unavoidable. This one seems distressingly light.

Shelter Kitchen - Deception Pass State Park - Washington

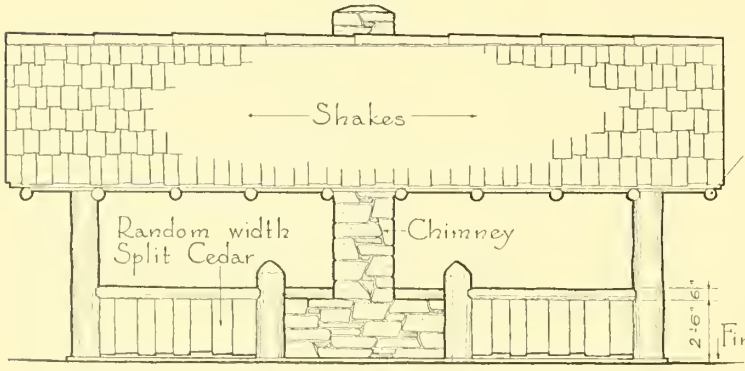
Typical of a structural facility provided in parks of the Pacific Northwest where heavy rainfall makes sheltered picnic tables and stoves a practical necessity. The hand-rived shakes and their rough-textured collective effect, as here laid, bring to this structure a manifest quality of handcraftedness. There is an agreeable sturdiness about the structure generally.



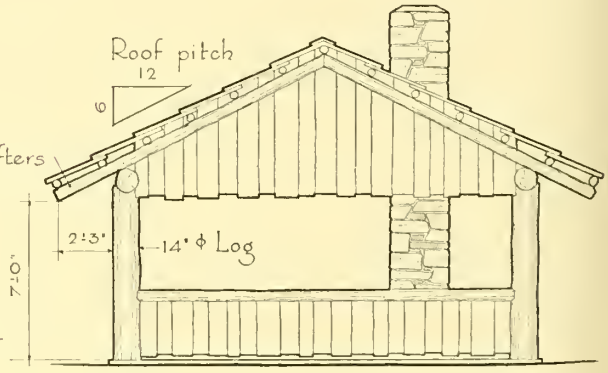
PLAN



SECTION



FRONT ELEVATION

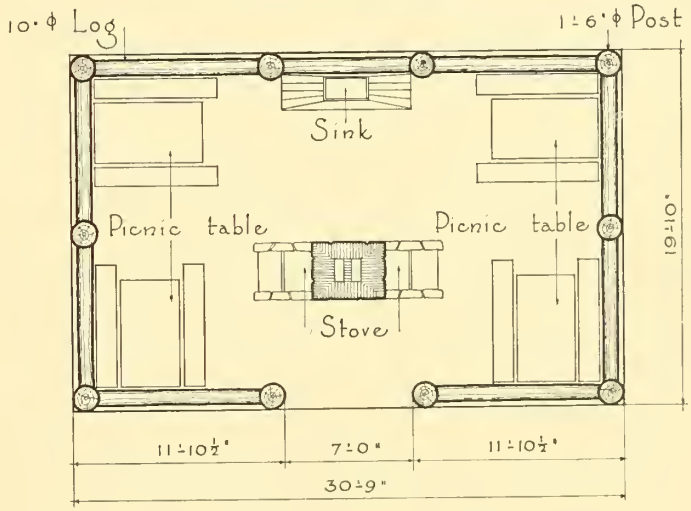


SIDE ELEVATION

Scale ⅜" = 1'-0"

Community Kitchen, Rainbow Falls State Park, Washington

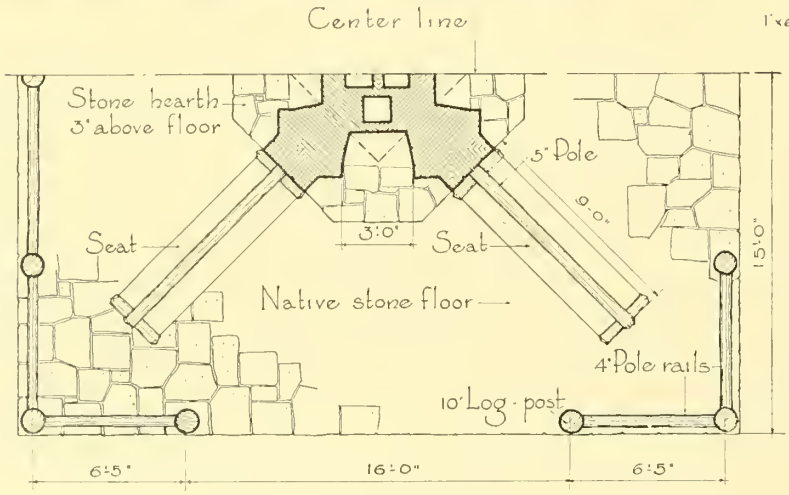
A facility significant of the climate of the Northwest where the mortality rate of picnics in the open relates directly to heavy rainfall. Here are exemplified massiveness of log construction and shakes scaled to the abundance of native cedar, but there is an uncompromising sharpness to the rafter and purlin ends that makes one wish that axe and draw-knife, rather than a saw, had been employed. The facilitating equipment consists of sink, double stove and four table and bench combinations, the latter in an intimate proximity that only a downpour would render inviting.



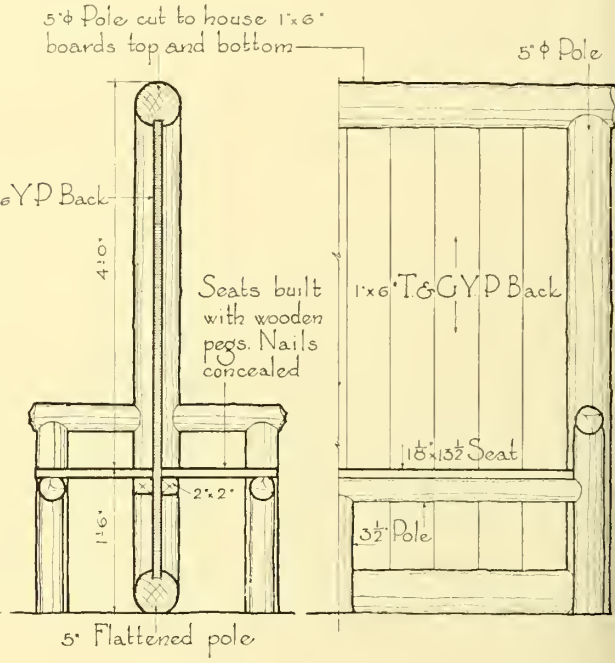
FLOOR PLAN
Scale $\frac{3}{32}$"-1'-0"

Shelter – Cumberland Falls State Park – Kentucky

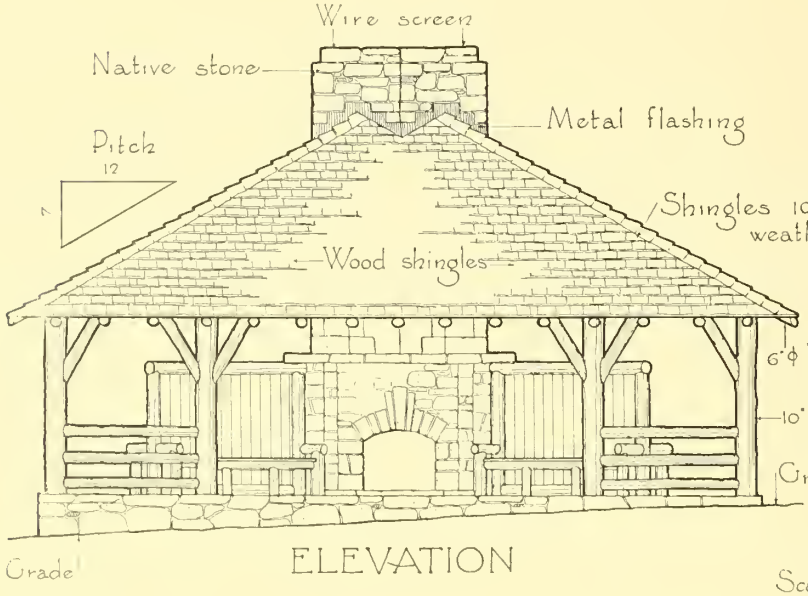
A single roof shelters four picnic groups and barricades each against the incursions of the others by means of partition walls that converge on the four-way fireplace. A splendid safeguard against the entire structure being monopolized by one particularly aggressive group.



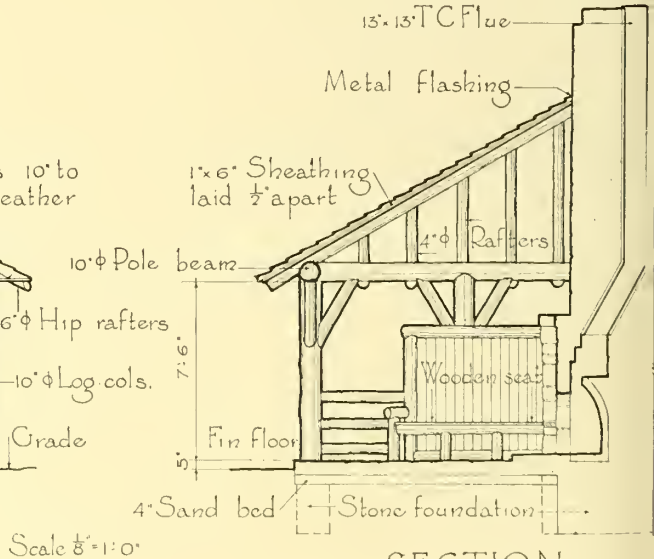
FLOOR PLAN
One half only



DETAIL OF SEAT
Scale ½" = 1'-0"

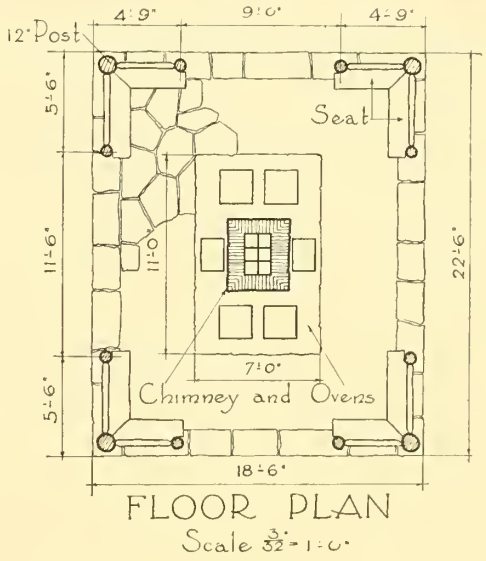


ELEVATION



Scale ⅜" = 1'-0"

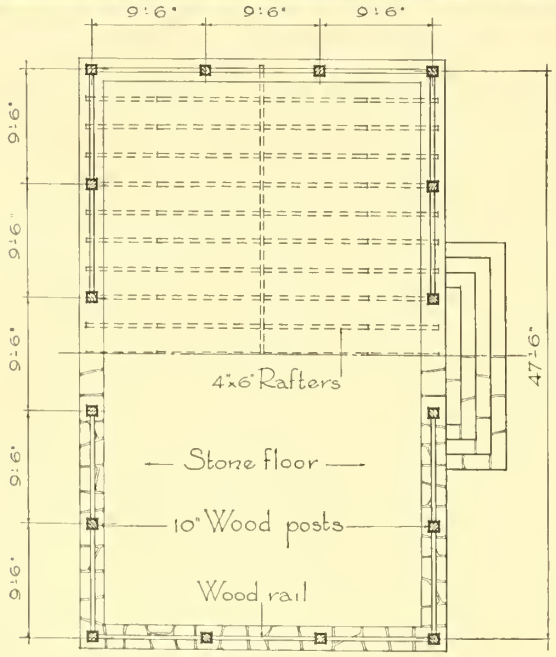
SECTION



FLOOR PLAN
Scale $\frac{3}{32}$" = 1'-0"

Shelter Kitchen, McCormick's Creek State Park, Indiana

This type of structure, so frequent in the Northwest, moves eastward to bid for popularity in the Hoosier State. The chimney serves six picnic ovens, and is located at the center of the sheltering roof. The shake roof has agreeable scale.



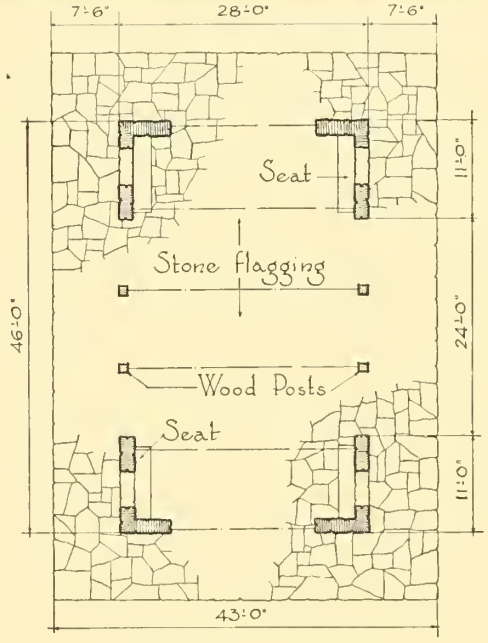
FLOOR PLAN
Scale: ⅛" = 1'-0"

Picnic Shelter, Voorhees State Park, New Jersey

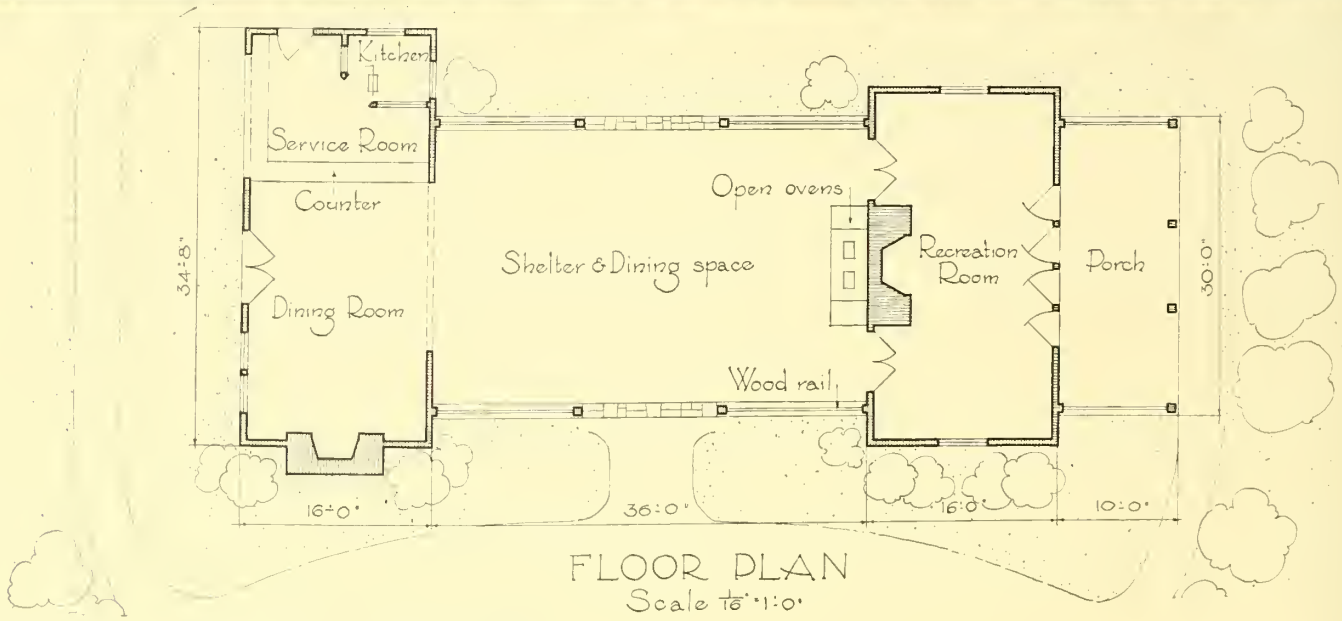
The supporting posts and brackets of this shelter seem perfectly scaled to the mass, and recall something of the sturdy and workmanlike joinery of the early American barn, a fitting source of precedent and inspiration for a building in our natural parks. The horizontality produced by the three-member railing offsets the considerable pitch of a roof that otherwise might cause the structure to appear too high. The simple gable treatment and the broad approach steps are important contributions to the satisfying effect here created.

Shelter, Whitewater State Park, Minnesota

This shelter building has features that differentiate it from the cast-in-one-mould-and-too-often-repeated shelter types. The continuation of the floor to give a stone paved walkway around the building is a novelty that would seem to offer the advantage of projecting the shelter's use into the immediate environs. The style of the roof shingling gives interest. The effect of the masonry is a happy mean between refinement and rusticity.



FLOOR PLAN
Scale $\frac{3}{64}$" = 1'-0"



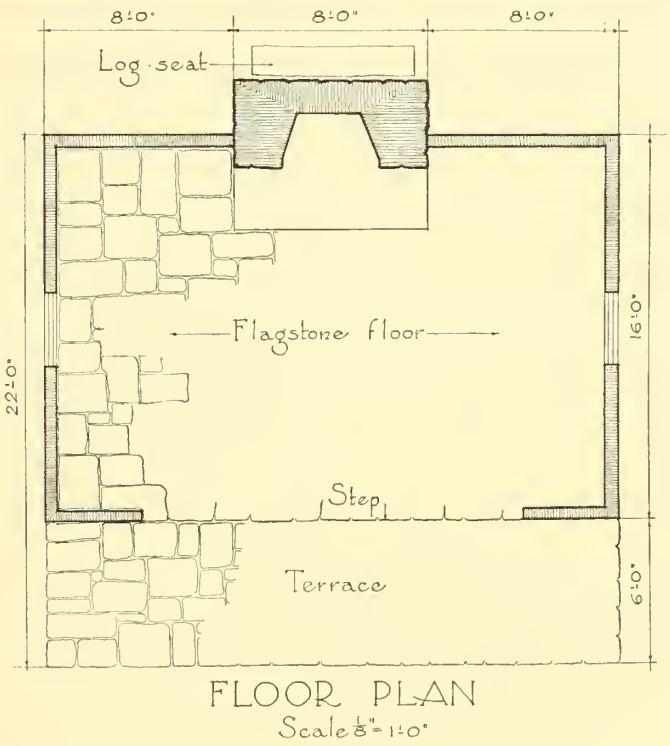
FLOOR PLAN
Scale 1/8" = 1'-0"

Large Shelter, Clifty Falls State Park, Indiana

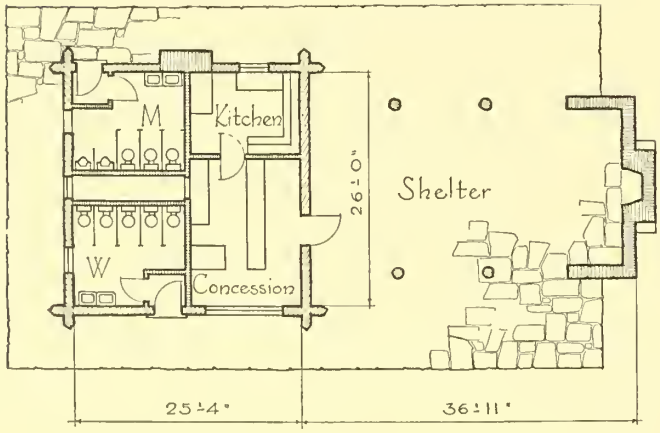
Low, informal, picturesque, this shelter succeeds in retaining the feeling of the typical primitive log cabin of southern Indiana that must have inspired it. The combination of textures, the denticulation of roof comb by the local practice of alternating the lap of the topping-off shingle courses, the squared logs and robust chimneys, are important details. This is Exhibit A in disproof of any contention that a simple structure of character cannot be expanded without sacrifice of its savor.

Small Shelter, Clifty Falls State Park, Indiana

A picturesque shelter so much in the spirit of early Indiana that doubt is aroused as to whether it has been converted from an old log cabin, reconstructed from the remnants of one, or is new construction cleverly "antiqued." The squared logs, the wide chinking and rude shake roof are characteristic of the locality.



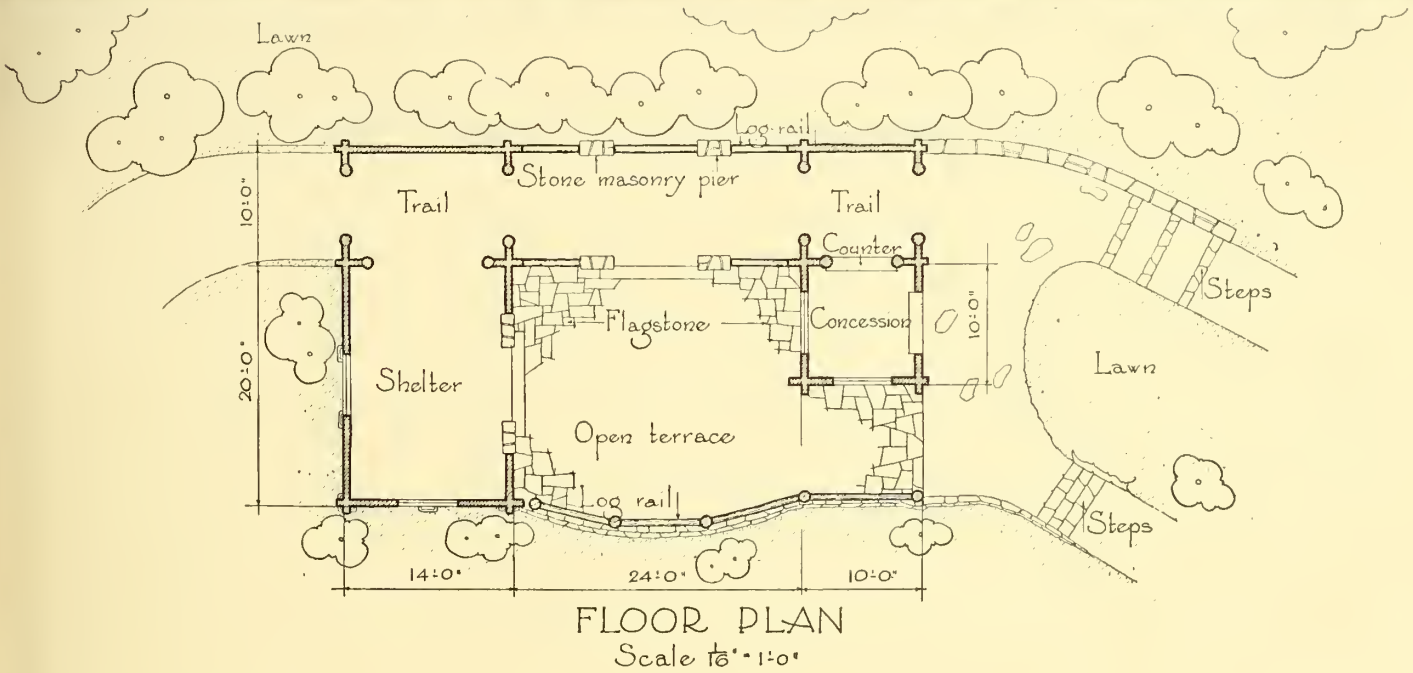
FLOOR PLAN
Scale $\frac{1}{8}$" = 1'-0"



FLOOR PLAN
Scale $\frac{3}{64}$"-1'-0"

Shelter, Buffalo Rock State Park, Illinois

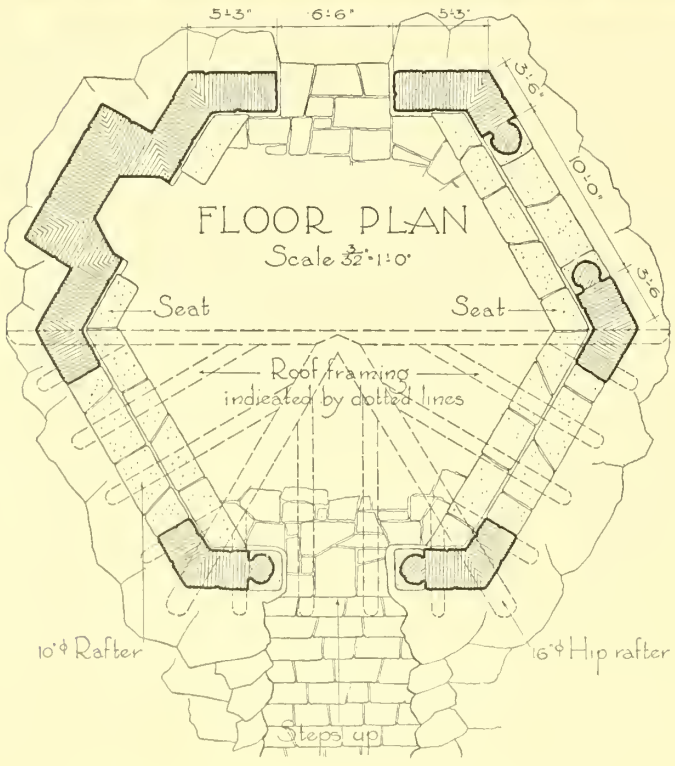
This combination building assuredly hous
much in little—sizable toilet rooms, concessi
stand with kitchen, and shelter with fireplace.
considerable merit are the log portion with int
estingly ragged corner joining and the "freeha
drawn" character of the roof and shingling. N
quite in key with the pleasing informality of th
materials is the stone work. This might have be
less painstakingly exact to great gain in the pa
like character of the ensemble. The plan sugge
probable insufficient light and ventilation for t
toilet rooms.



FLOOR PLAN
Scale 1/8" = 1'-0"

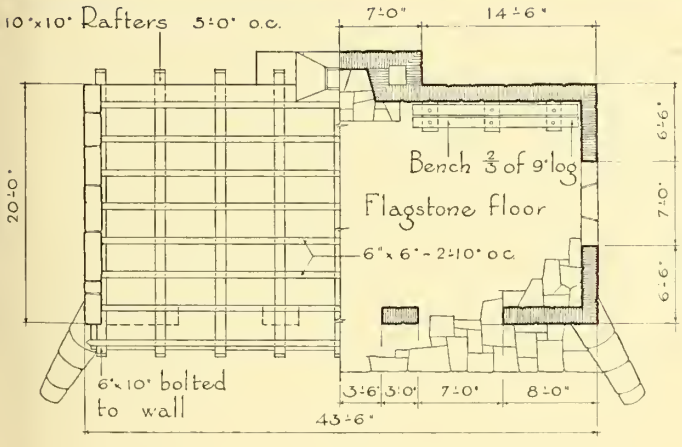
Shelter, Pere Marquette State Park, Illinois

This mid-western shelter steps outside the set patterns and achieves a naïve individuality. The paved semi-courtyard and the trail that passes through the structure are novel features. There is an uncouthness of character that compels attention, if it does not win unanimous admiration.



Shelter, Mohawk Park, Tulsa, Oklahoma

Evidencing brilliant indifference to the hackneyed in shelter plans, and a handling of materials free of hampering dictates of tradition, here is a building that gives promise of an eventual American park architecture. This accomplishment owes much to the irregularity of the shingle courses, the curiously blunted beavering of the rafter ends and the carefully careless ragged batter of the stone walls from grade to sill of openings.

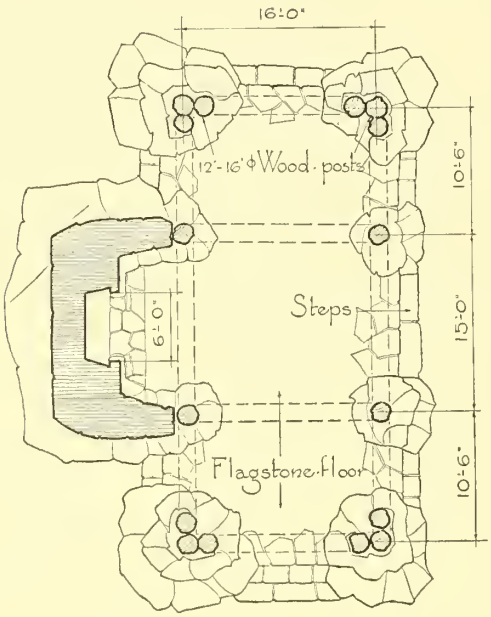


HALF ROOF & FLOOR PLAN

Scale 1/16" = 1'-0"

Shelter, Gitchie Manitou State Park, Iowa

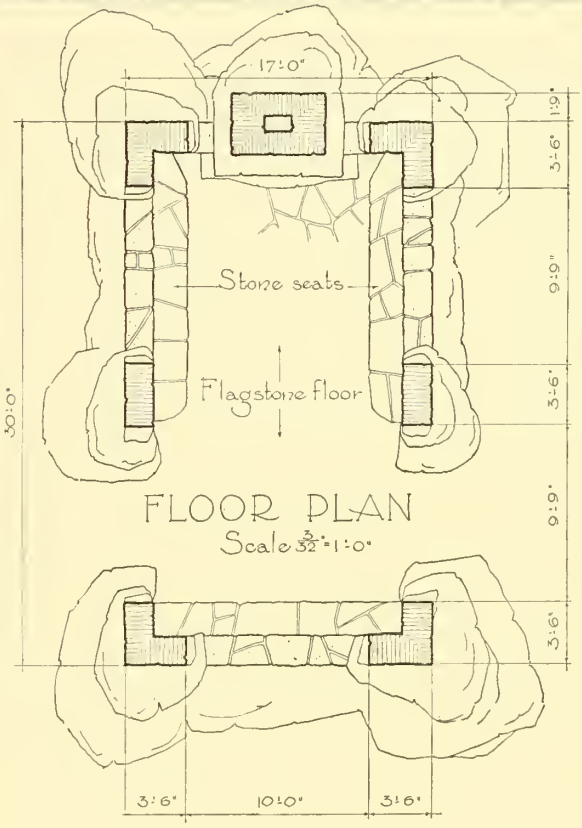
Few buildings among the subjects herein illustrated are so well keyed to their immediate surroundings as this stone picnic shelter. There is a rapprochement between the crude stone masonry and rock outcroppings that evidences an understanding of the claims of environment.



FLOOR PLAN
Scale 1/16" = 1'-0"

Shelter, Custer State Park, South Dakota

From its well-blended base line and rude stone pavement to ridgepole of its vigorous roof, this sturdy shelter is highly charged with admirable park character. Equally impressive is the interior treatment, in which the piers are contrived to provide stone seats that appear logically integral with the building itself.

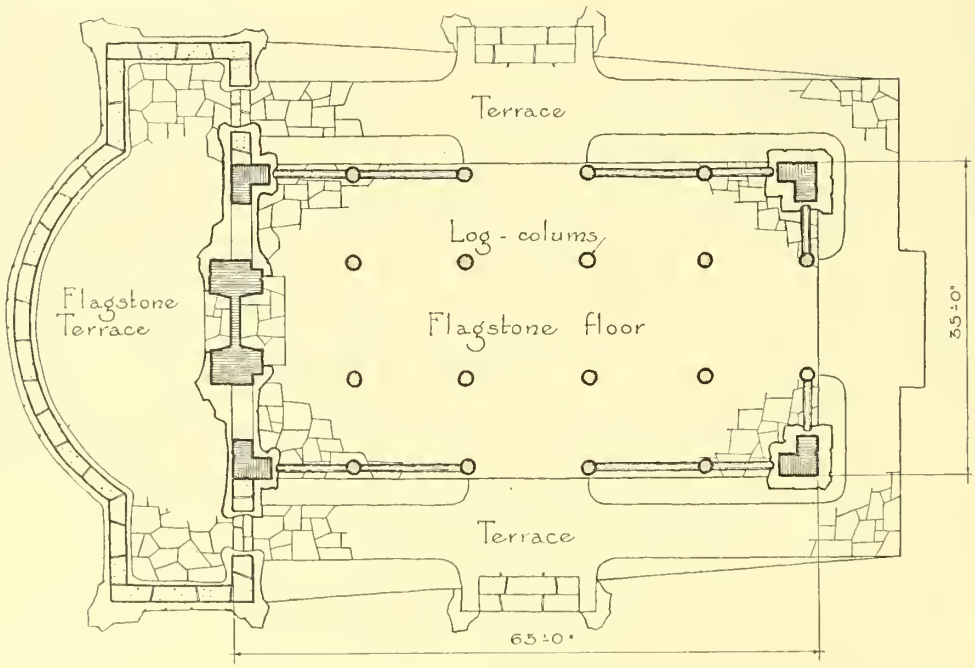


FLOOR PLAN
Scale $\frac{3}{32}$" = 1'-0"

Shelter, Lake Guernsey State Park, Wyoming

From rude outcropping at its base to finished termination of the chimney is visual presentation of successive stages of masonry evolution. Plant growth should ultimately complete the blending to site so skillfully started by the rock work. The contrast between exterior and interior masonry surface is startling.

Shelter, Boyle State Park, Arkansas

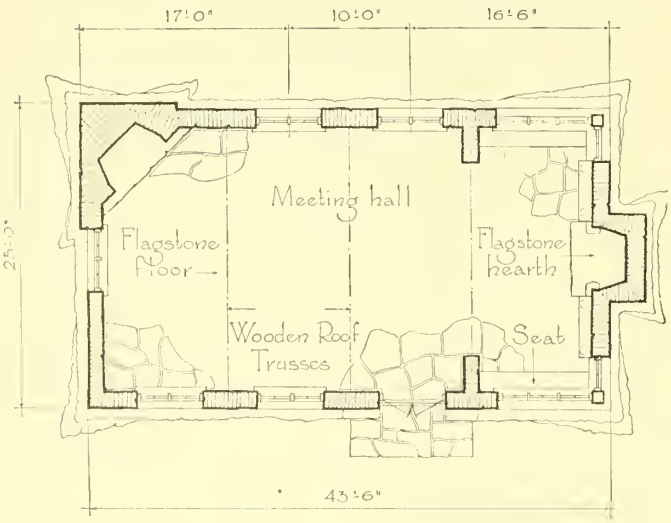


FLOOR PLAN

Scale 1/4" = 1'-0"

Shelter, Boyle State Park, Arkansas

Vigorous in design and sympathetically executed, this shelter ranks near the top by current standards for park architecture. The broad, unbroken roof surface, vitalized by the texture of thick shakes doubled every fourth course, and the informality of masonry and log work, could hardly be improved on. The outdoor fireplace, with broad stone-paved terrace for its hearth, is a feature of interest. The regular denticulation terminating the vertical boards in the gables forcefully accents the otherwise freehand lines of the building.



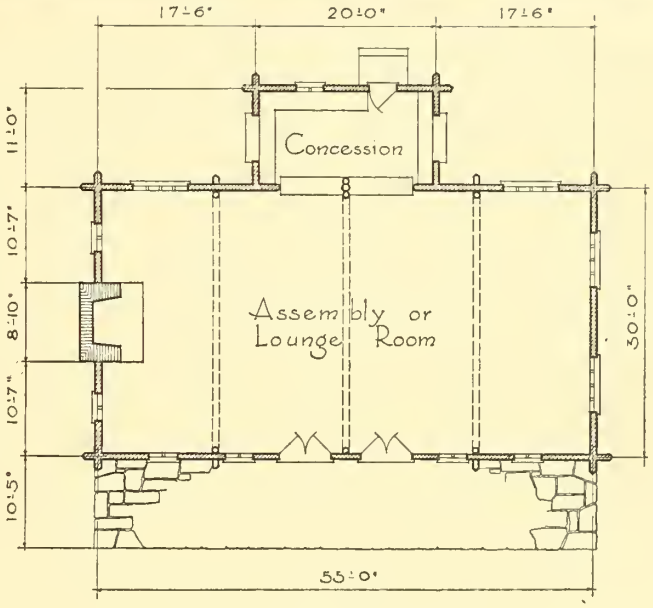
FLOOR PLAN
Scale $\frac{1}{16}$" = 1'-0"

Recreation Building, "Green Mountain Lodge," Boulder Mountain Park, Colorado

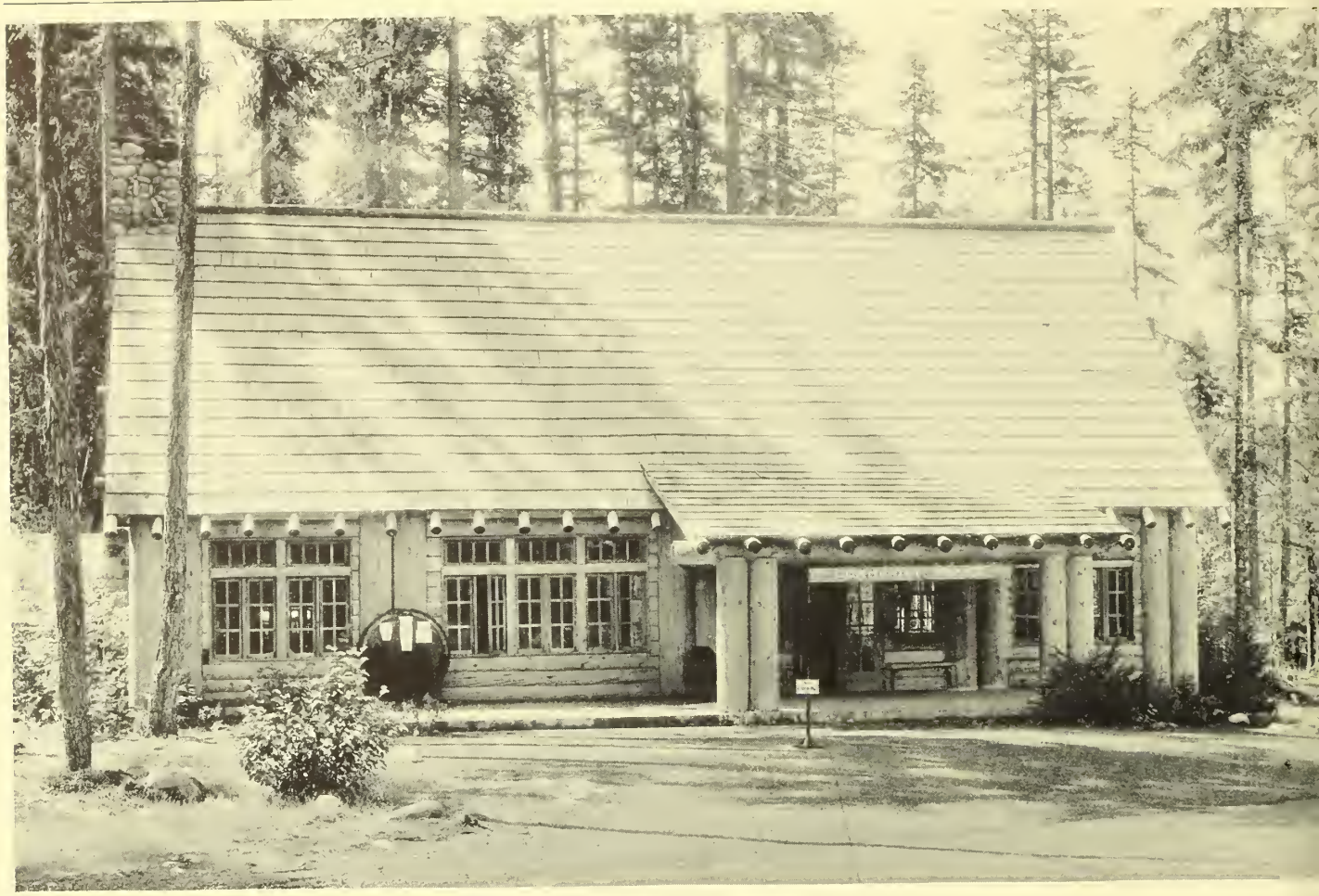
In close harmony with the rock-strewn site, this enclosed shelter building seems guiltless of false note. Even the formlessness of the rocks employed to top off the chimney can claim a measure of exemption from criticism on the plea of relationship to the indigenous rocks. The building is used as a rallying point for Boy Scouts and other organizations visiting the park as groups. There is great practical advantage in a building of this general type in a park. Its many windows provide good ventilation in summer, yet when these are closed and both fireplaces are lighted, use in the most severe weather is possible.

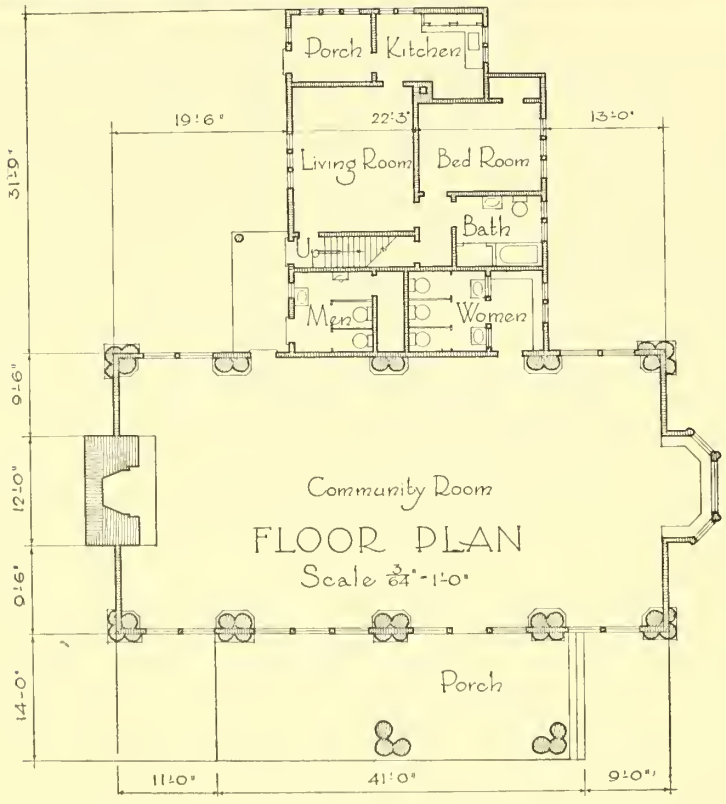
Shelter Pavilion, Scenic State Park, Minnesota

In this example Minnesota justifies her advantage of superior native timber resources by the fine character of the log construction. We are almost blinded to the lesser merit of the chimney masonry, which, for all its sturdy proportions, favors the "peanut brittle" technique. No one region seems to have been blest beyond its fair share of natural resources of the first flight. An imagined ideal park structure might call for a masonry chimney from one of several localities, but it would assuredly specify "logs and log construction by Minnesota."



FLOOR-PLAN
Scale 3/64 - 1'-0"





Community Building, Longmire, Mt. Rainier National Park

A park structure of importance that after point ing the way for many later buildings, has been fa outrun in achievement of subtleties of design an execution making for true park structural charac ter. The thinness of the roof shingles and th masonry of the chimneys are unfortunate. Com parison of the almost mechanical stiffness of th rafter ends with the handcrafted quality of th "whittled" rafter ends of other subjects more re cently built, will indicate one such advance i structural technique.

LOOKOUT TOWERS *and* OVERLOOKS

Within the compass of this heading is included a wide range of structures, the common denominator of all being the provision of means for negotiating a view. Lookouts may eventuate from the practical requirement of forest fire detection, or from determination on the part of designing technician or wilful band of park users, hyper-view-conscious, for something bigger and better and more distant in views than Nature unaided could achieve.

Between the grimly functional lookout of the ranger and the utmost in aesthetic structural elevation contrived by the view-for-view's-sakers is greater distance than any park vista will ever provide. When it has been essayed to superimpose the too conscious aspirations of the aesthetic, on the structurally sufficient skeleton of the fire detection tower, the literally "crowning" error in park development has been committed. Probably a frank rendering of either extreme, free of gesture toward the other, is better than any hybrid produced by crossing the two irreconcilables.

Examination of existing timber-framed trestle-type lookout towers for aesthetic values will prove disheartening. In general, the oil derrick as their inspirational source is painfully undisguised. This conclusion cannot be held in disparagement of the designers, if it be honestly admitted that they have valiantly sought to solve the unsolvable. There is such admirable show of there-is-no-such-word-as-can't in every new attempt! It seems heartless to venture a restraining word, but the accumulation in our parks of harrowing skeletons commemorative of past ill-advised best intentions in this direction admits no choice of action.

There are other than purely aesthetic reasons for discouraging the building of high wooden structures for use as observation towers. It is very difficult, if not impossible, to fabricate a timber-braced structure with bolted or spiked joints that will hold up under the attack of the elements for any considerable length of time without constant maintenance. Immediately after construction the wood members shrink and the joints loosen. Decay will proceed rapidly at the joints where water seeps in between the members and finally into the bolt and spike holes. The structure is weakened at its most vulnerable point. With the slightest loosening of the joints the tremendous wind pressures cause movements which increase the stresses in the entire structure. The safety of the people using the towers cannot be assured, when it depends entirely on inspection and maintenance that cannot be guaranteed into the future.

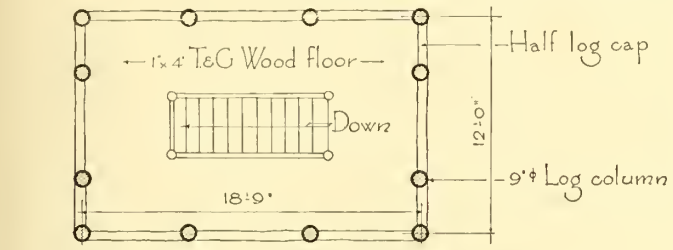
Because the wood-framed lookout tower is so utterly unappealing, and so potentially a hazard, it is strange that but few stone towers have been built. The stone lookout is not foredoomed to failure, aesthetic and structural, as is the open wood tower, but on the contrary offers opportunity for picturesqueness, satisfying design and great permanence. Particularly does it appear that the possibilities for a stone tower of modest height springing from a rock-crowned summit have not been widely sensed, certainly not widely embraced.

It is held by many that the birth rate for lookout towers in parks is currently too high, and that some measure of control should be instituted. It can be argued that the perching of a lookout on the high elevation of a park area is disfiguring to the natural sky line, that it is sometimes better to remove the trees that crown the high summit, and are the very obstructions to view that make necessary the building of a structural lookout. The bald crown of the eminence is held to be a lesser, certainly no greater, blemish than the structural tower rearing itself above trees. There are undoubtedly locations where this solution would be an acceptable alternative to a lookout tower. But it can hardly be urged for universal application. Rather should it be given thoughtful consideration as a possibility, to be weighed in the light of consideration of characteristics of hill or mountain top contours and prevalence of forest cover.

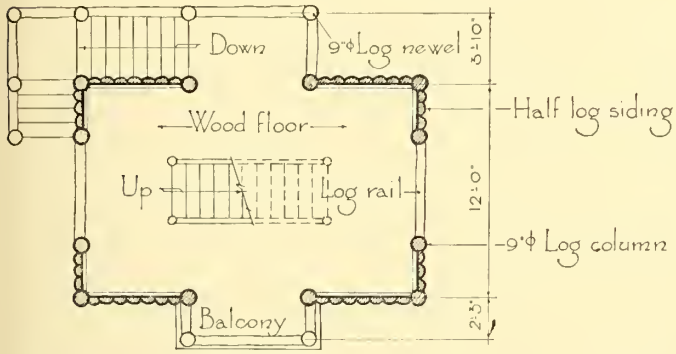
There is another less blatant type of lookout, without aspirations to become a tower of Babel, often termed an overlook, trail lookout or lookout shelter and usually strategically located at a prospect point of an upland, where the hiker is offered rest and shelter and a view. These little structures are notable for their general lack of pretentious character, and several successful examples of such are illustrated by photographs and drawings on succeeding pages. It must be admitted that these might as logically have been included within the shelter section. Perhaps the reader will withhold censure of this straining in classification and wink at this subterfuge as pardonable in the circumstances. The "batting average" for lookout towers without the beneficial rating of overlooks is such that it stands in need of any advantage that can be fairly given it.

OVERLOOK—STARVED ROCK STATE PARK—ILLINOIS

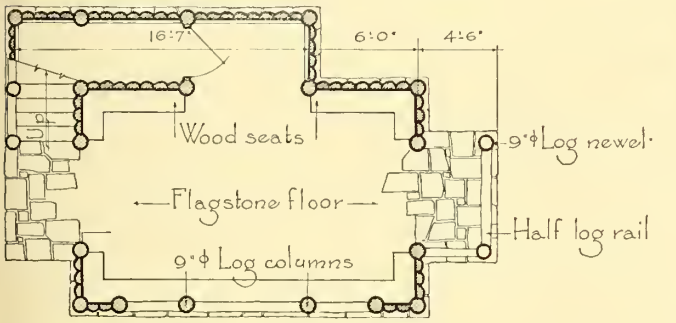
A hexagonal overlook structure of simple construction so photographed as to show the distant view that is its reason for being. No other purpose that might inspire a small shelter building offers benefits measuring up to those furnished by a sweeping view of a far horizon. A double or triple railing might have overcome the disturbing "openness" of the single rail that has here been used and have contributed a solidity to the base of the structure that seems to be lacking.



THIRD FLOOR PLAN



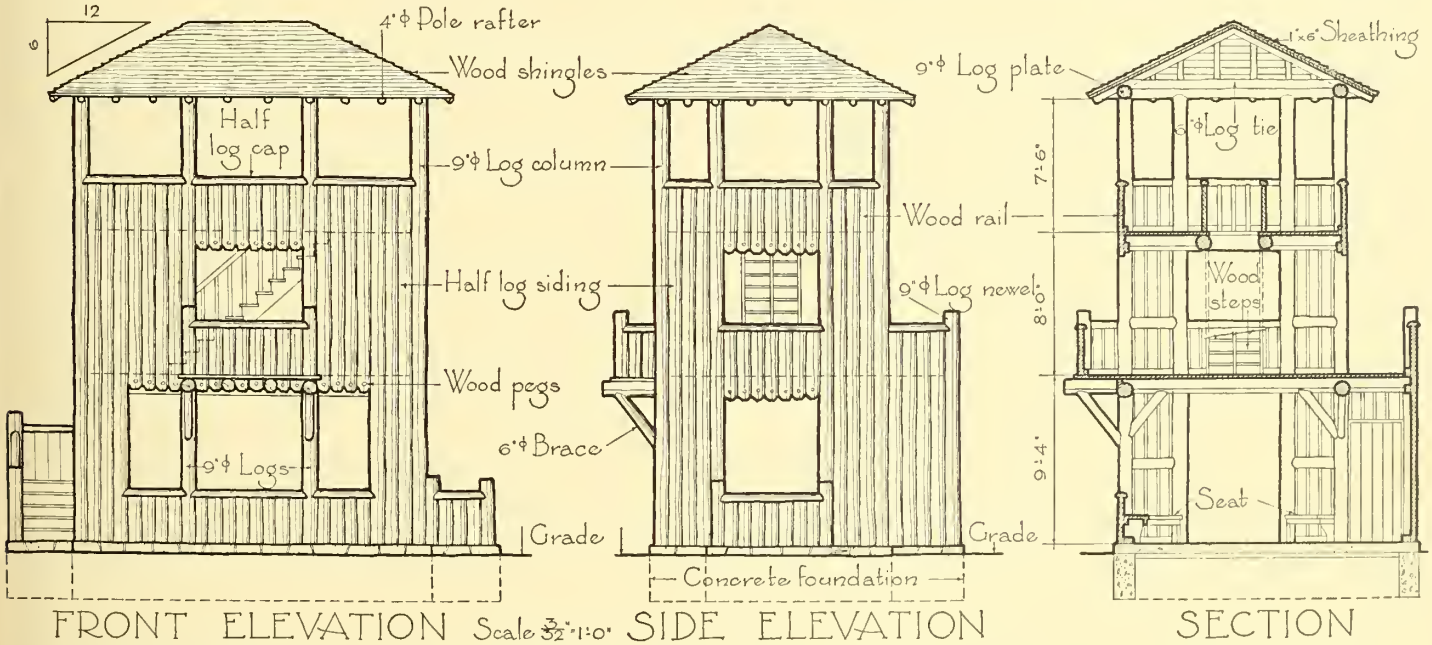
SECOND FLOOR PLAN



FIRST FLOOR PLAN

Lookout Tower – Cumberland Falls State Park – Kentucky

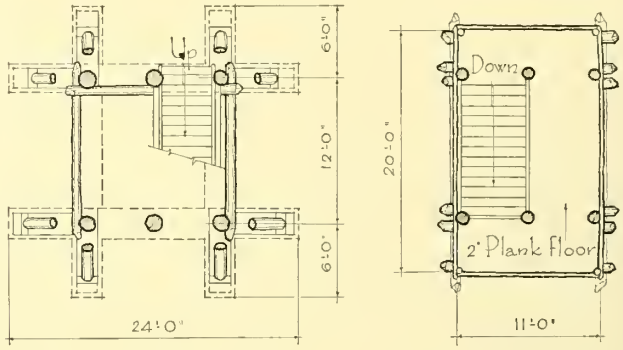
The answer to a demand for a wood-framed lookout tower of modest height may lie in the direction of the solution pursued with some degree of success by this example. The structural weaknesses of the typical trussed wood tower are avoided here by limiting the height and by enclosing the framing in large part with vertical logs. The design of future lookouts of logs might well be developed from this pioneering structure rather than from the hazardous latticed type.



FRONT ELEVATION Scale 3/32"-1'-0" SIDE ELEVATION SECTION

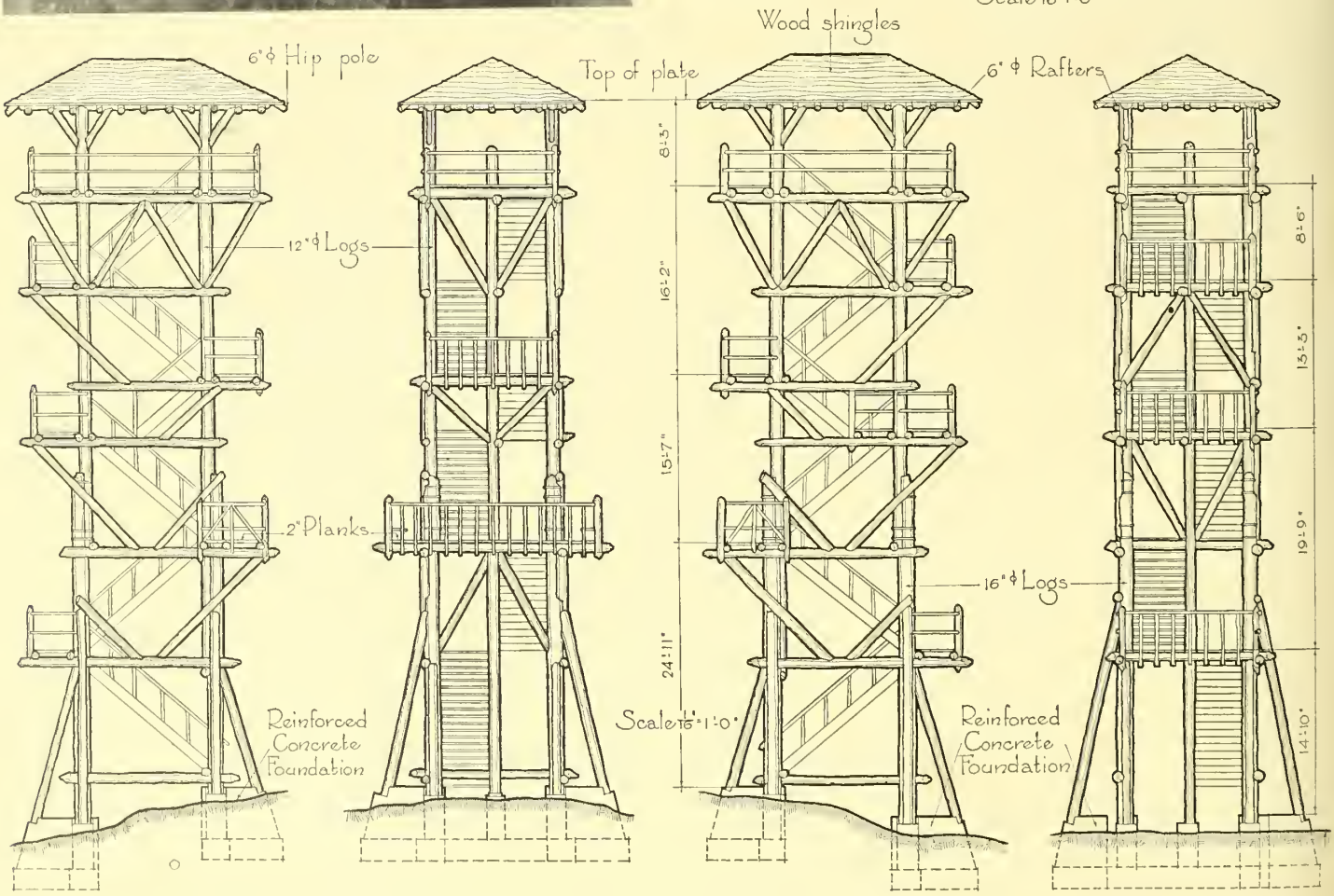
Lookout Tower – Mt. Nebo State Park – Michigan

More picturesque than most braced timber towers, this example is not thereby any less vulnerable to the deterioration that time brings. The overhanging landings mask but do not entirely eliminate the oil derrick implication of all structures of this general type.

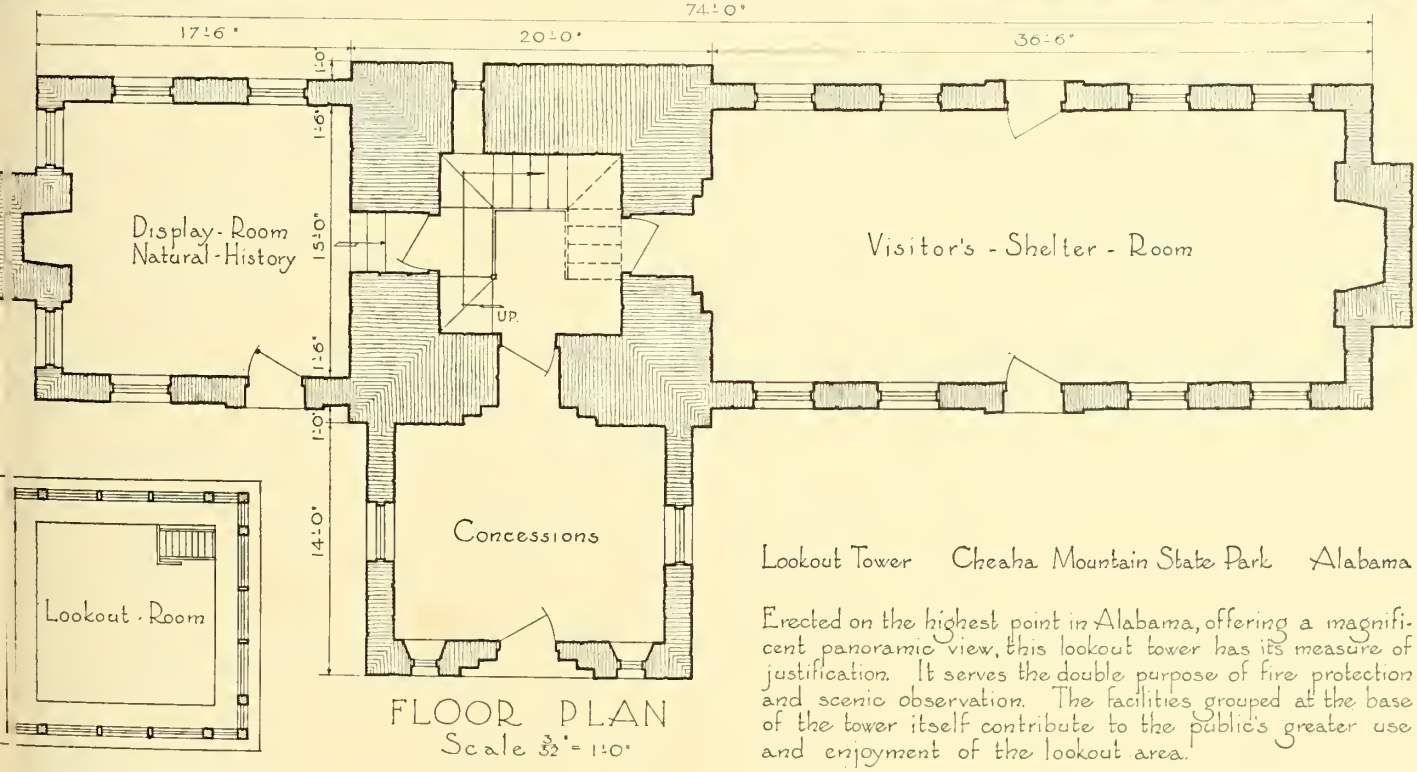


GROUND PLAN TOP PLAN

Scale 1/16"=1'-0"



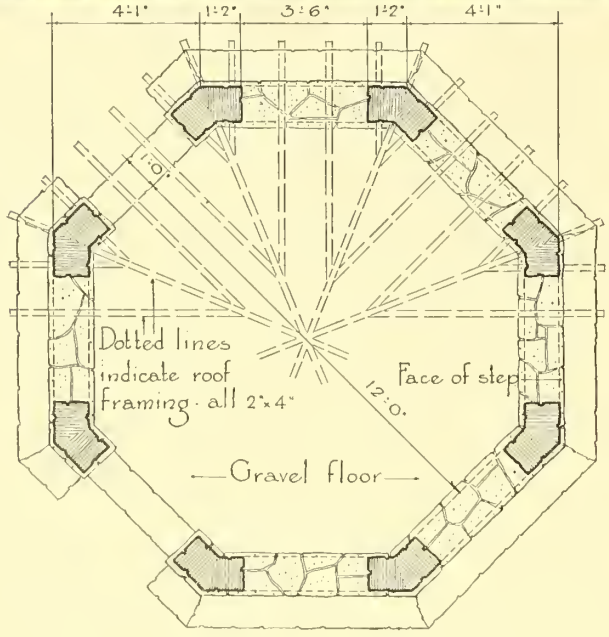
SIDE ELEVATION - FRONT ELEVATION - SIDE ELEVATION - REAR ELEVATION



FLOOR PLAN
Scale 3/32" = 1'-0"

Lookout Tower Cheaha Mountain State Park Alabama

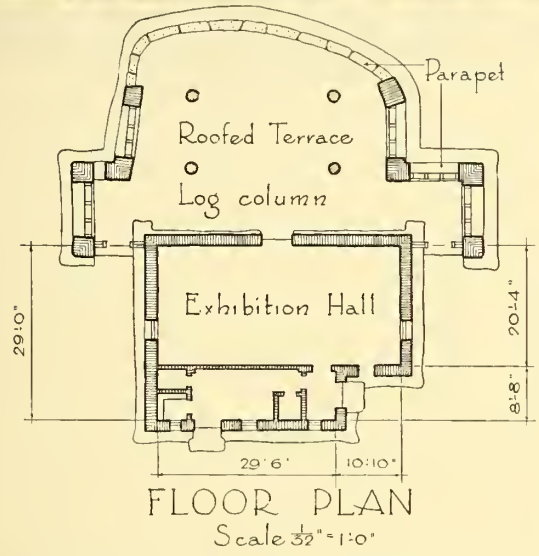
Erected on the highest point in Alabama, offering a magnificent panoramic view, this lookout tower has its measure of justification. It serves the double purpose of fire protection and scenic observation. The facilities grouped at the base of the tower itself contribute to the public's greater use and enjoyment of the lookout area.



FLOOR PLAN
Scale 3/16" = 1'-0"

Lookout Shelter, Meramec State Park, Missouri

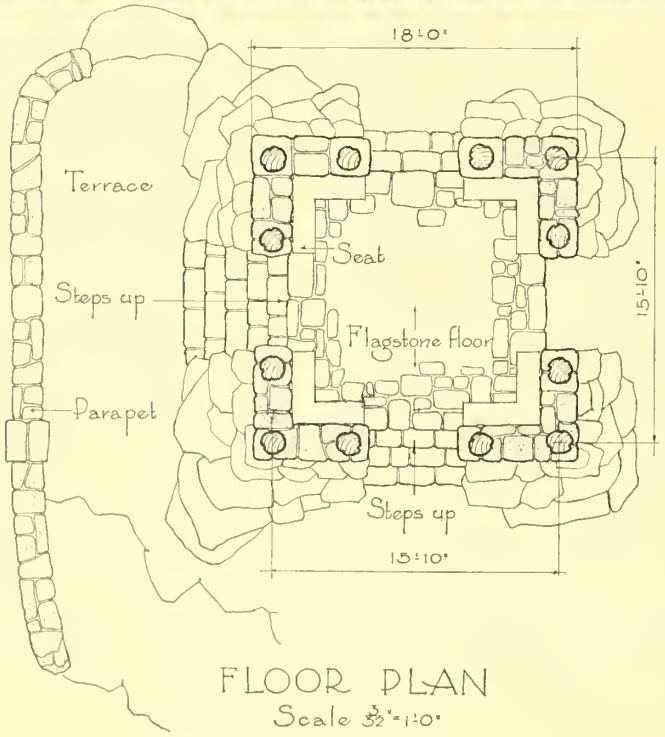
It is suggested to all who would build a tal trussed timber lookout tower that they pause and consider on its merits such a lookout as this. It i more enduring and comparatively free from main tenance demands, and very much more at home on a rocky eminence than any wood tower ever con trived. It offers a view in all directions and shel ter from sudden storms. The batter at the base of the wall is pleasing. Perhaps the low pitch o the roof and the thinness of roof covering could be quarreled with.



FLOOR PLAN
Scale $\frac{1}{32}$" = 1'0"

Observation Station, Grand Canyon National Park

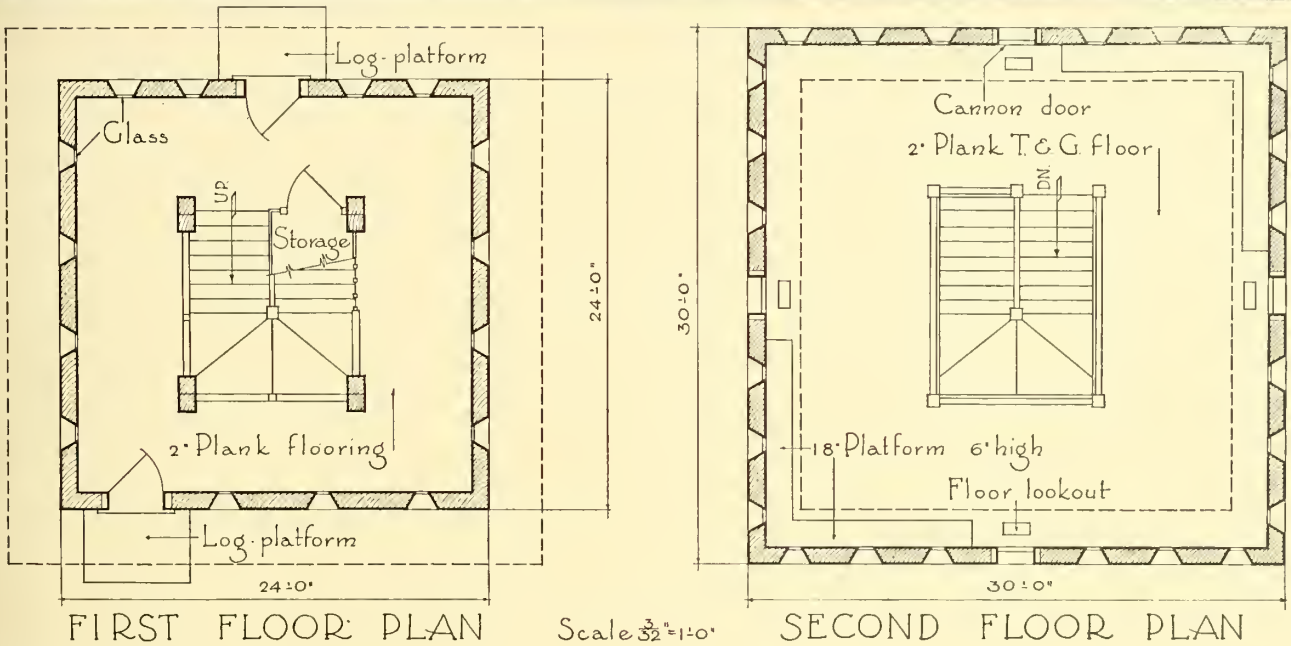
Perched on the rim of this spectacular canyon, this structure forms liaison with its setting by means of native stone ruggedly laid, flat roof, skillfully buttressed corners. Before a lecture group at the observation point the majestic canyon—subject of the talks—spreads uninterruptedly.



FLOOR PLAN
Scale 3/32"=1'-0"

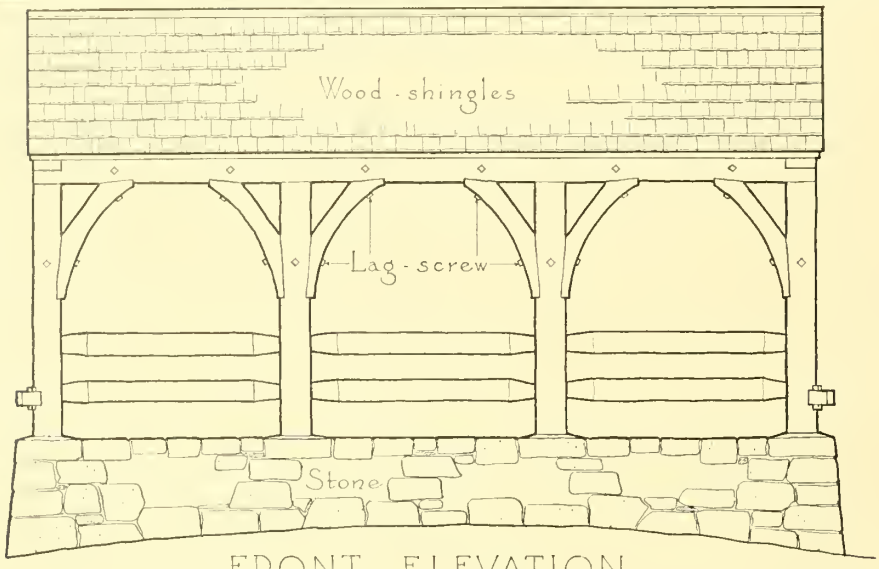
Overlook Shelter, Devil's Den State Park, Arkansas

Nominated from the floor as a candidate for a Pulitzer Award for Park Structures, if and when created. This little structure will cause chagrin and consternation among experts in destructive criticism who will be hard put to ferret out its shortcomings. An inventory of all its points of high merit is impossible in a limited space, but would surely lead off with blending to site, character of rock work and vigorous scale of the log timbers. The picturesque tree is flattering to the structure, but, it must be admitted, with unquestionable justification.

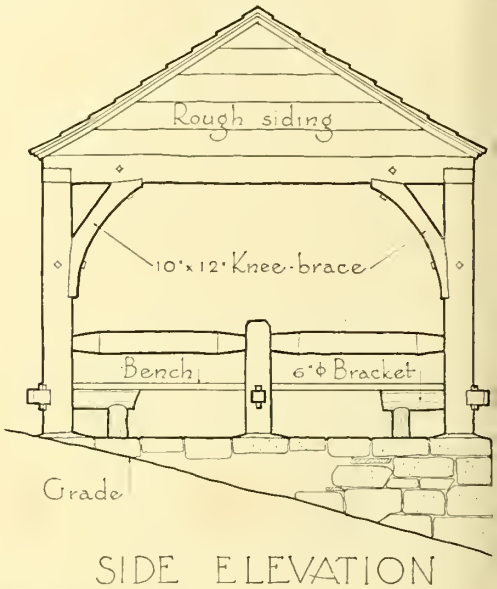


Lookout, Muskegon State Park, Michigan

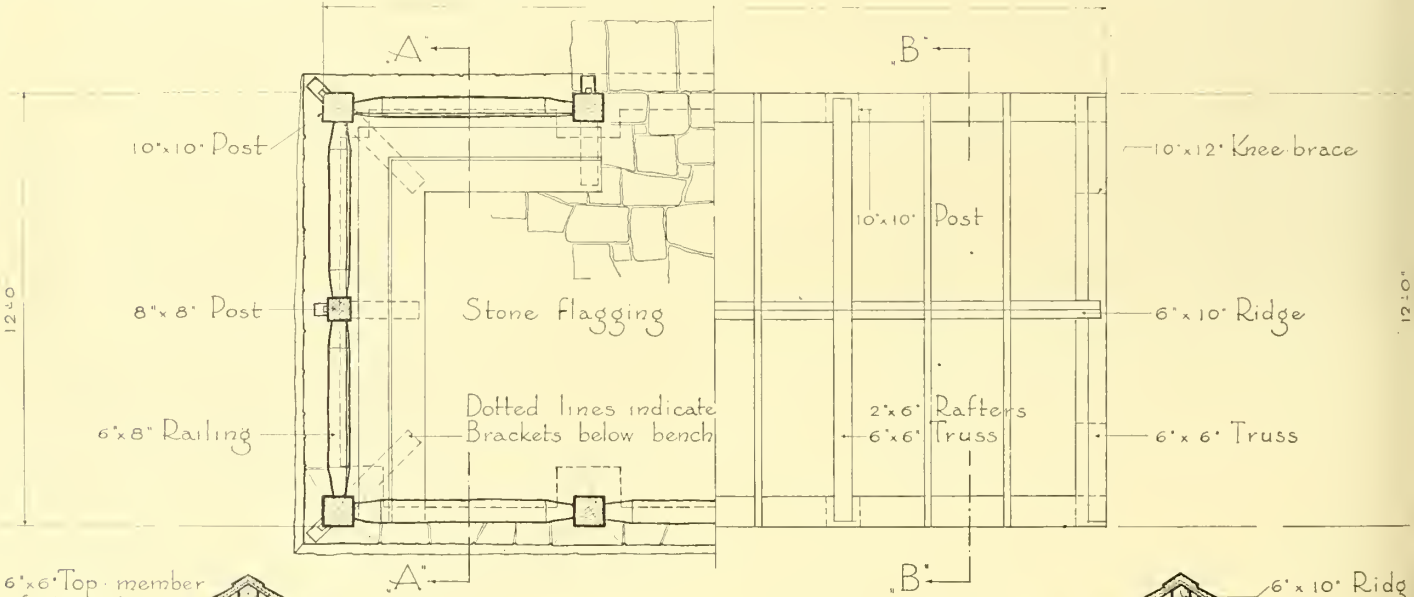
A graceful salute to the days of the Frontier! For the pleasantly dishonest authenticity of this new-old blockhouse we are indebted to the salvaged timbers of a wrecked lake vessel. This lookout inspires recall of vanished men and vanquished wilderness—a shrine for the Unknown Pioneer.



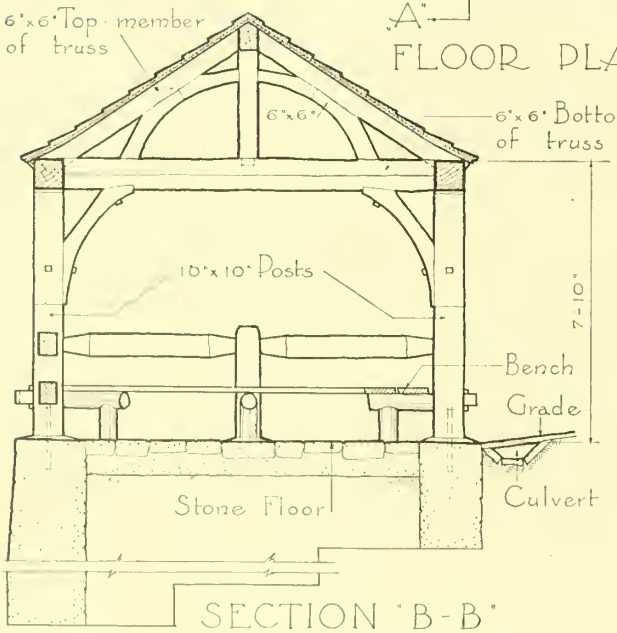
FRONT ELEVATION



SIDE ELEVATION

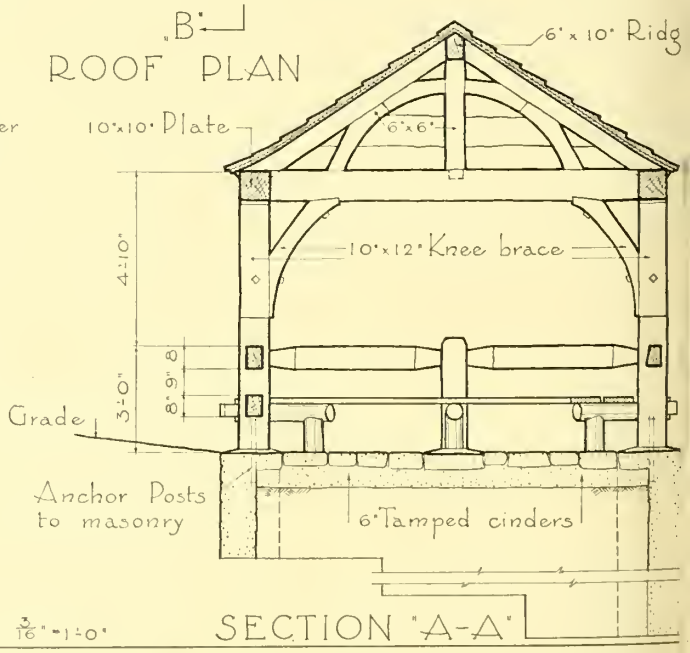


FLOOR PLAN ROOF PLAN



SECTION "B-B"

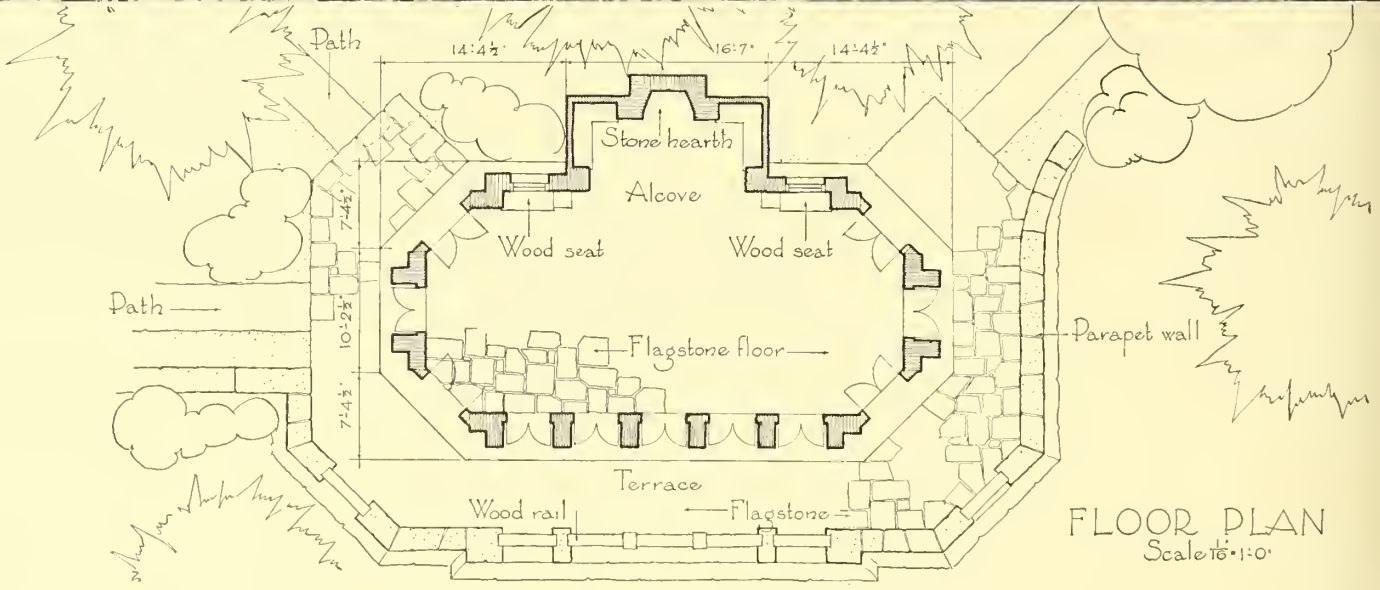
Scale - $\frac{3}{16}$"-1'-0"



SECTION "A-A"

Lookout Shelter, Mississippi Palisades State Park, Illinois

High in the merit list of lookout shelters, this jaunty little building of hand-hewn timbers as here illustrated basks in the full added benefit of dramatic photography. To those who must have something to cavil at, the excessive "beavering" of the rail members is suggested. But accelerated personality is more than compensatory for any minor sacrifice of structural maximum. Opposite are detail drawings of the building.



Overlook Shelter, Buttermilk Falls State Park, New York

Happily illustrative of escape from the bondage of the prosaic in shelter buildings, both in plan and exterior treatment. Abundance of doors and windows gives views in all directions and still permits the enclosing of the shelter in cool weather. The retaining wall is of interest by reason of its batter rather than adherence to all the laws of good masonry. It is unfortunate that the general ruggedness of the structure did not extend to the roofing material, which is thin and inadequate.

MUSEUMS

In a previous discussion was cited the modern tendency to elaboration of signs and markers in some instances to the point of serving almost as miniature trailside museums. Such developments in elucidation of natural sciences and phenomena, or of history, are the liaison between the mere park sign and the museum in natural parks.

Mr. Herbert Maier, who has had a conspicuous part in many successful park museums in the capacity of designer and consultant, explains his conception of the modern park museum and its function as follows:

"Of late years," writes Mr. Maier, "there has been a decided change in viewpoint on the value of the museum in interpreting outdoor life. This applies principally to museums of local natural history and to the smaller historical museums. The change has been largely due to the world's going on wheels and it is now possible for everyone, sooner or later, to study natural phenomena *in situ*. In other words, it is no longer necessary to bring the world in under one roof.

"Museums in parks and recreational areas should, for the most part, confine their scope to the interpretation of the subject matter contained within the immediate area, or at least within the region. A park museum may be little more than what has come to be known as a nature shrine, designed to interpret one particular phenomenon at hand, or the museum may interpret the subject matter of the entire park.

"In the former case the museum as a rule is merely an outdoor display in exposition of natural or historic fact, or is a small semi-open structure in which the group occupying the area, such as Boy Scouts, Campfire Girls, and similar organized groups, arrange their temporary collections as a part of their nature study work.

"Frequently, where a particular local phenomenon exists, an artistic unattended structure, designed to hold the interpretive material and to 'answer questions' is installed, either immediately off the road or along a foot trail. Such nature shrines may contain one or more weather-proof shallow wall cases with shatter-proof glass fronts. In here are displayed not only text but specimens, photographs and charts. The cases may be removed and brought in to the park headquarters for the winter months.

"The park museum that is other than nature shrine, or for the temporary use of organizations, is usually of the 'working type' or is designed to house permanent exhibits. The exhibits may be displayed as in the larger city museums but there should always be a consciousness of the immediate presence of the outdoors. It may be advisable to arrange the plan of the building so that a semi-enclosed courtyard obtains in which exhibits are displayed, and in which may be growing living flower and forestry specimens, labeled for identification. Here may also be found a vivarium containing a collection of living reptiles, etc., in semi-natural enclosures. The exhibit rooms should afford an occasional vista into the nearby woodland so that the visitor may have a feeling of being in the midst of the subject matter that is being interpreted.

"Certainly, a museum building is an academic structure. On the other hand, the architecture of our park museums should above everything else reflect the outdoors. In the design of these buildings it is usually desirable to make use of indigenous materials in a novel way. In the case of one of our National Parks the stone corner of the building is the local geological column. In another case basalt columns have been transported and reassembled in the structure. These small park museums, designed to interpret local material only, are what have come to be known as trailside museums.

"Above everything else in the installation of park museums, we should consider that it is not the policy to duplicate nature. It is far better to study living specimens *in situ* where that is practi-

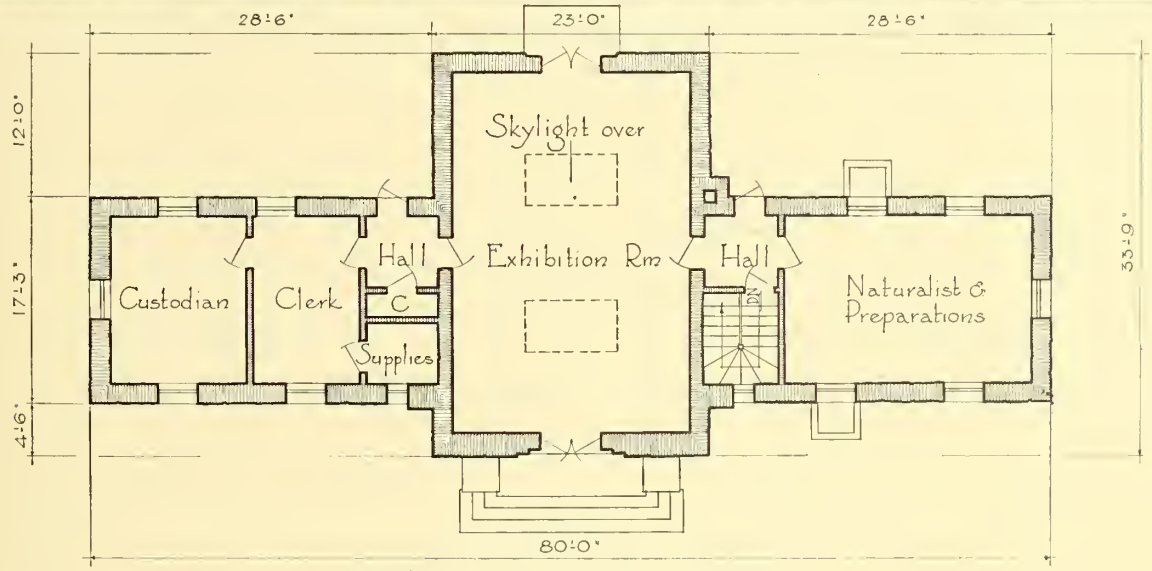
cal than to attempt to reproduce them and place them under a roof. A case in point is the advisability of studying wildflower collections actually growing in the field as compared to wax or preserved specimens reproduced in a museum display. As an opposite case, however, it is hardly possible for the visitor to make a comprehensive study of the local bird population by a brief visit to the park, whereas a collection of mounted birds of the region will facilitate study materially and therefore is a proper exhibit.

"We must always keep in mind that our parks themselves are museums of natural history and the best museum structure is that one which functions most efficiently as an interpretive agent. They should never become mere repositories for curios and oddities."

Both museum structure and trailside nature shrine offer great opportunity for capturing the characteristics or spirit of the region. Often some extraordinary formation can be logically utilized to create a structure especially typical of a particular site. In the case of an historical museum building devoted to a particular era, the structural traditions and methods of that period are commonly a well-justified theme for the design. There is successful precedent for the restoration of an ancient building to purposes of display. The old stone mill at Spring Mill State Park houses a collection of farm tools and household utensils of pioneer days. The restored log cabin of a pioneer in the Mariposa Grove of Big Trees serves the purpose of a museum. There is wide latitude for individuality among structures each of which is intent on stressing some particular phase of nature or of history.

MUSEUM, MARIPOSA GROVE OF BIG TREES, YOSEMITE NATIONAL PARK

A pioneer cabin of the region, re-built to serve as museum. Here are all the theoretical good features of the ideal log structure, universally known but seldom encountered in one building—simple lines, excellent scale of logwork and shake roof, and massive chimney of admirable masonry and good silhouette. A cabin such as this must have been the original of the "home on the range." Dwarfed in scale but not in merit by the huge trees, the presence of this simple and unassuming cabin is not the wide target for criticism that almost any other structure in so impressive a setting would be.

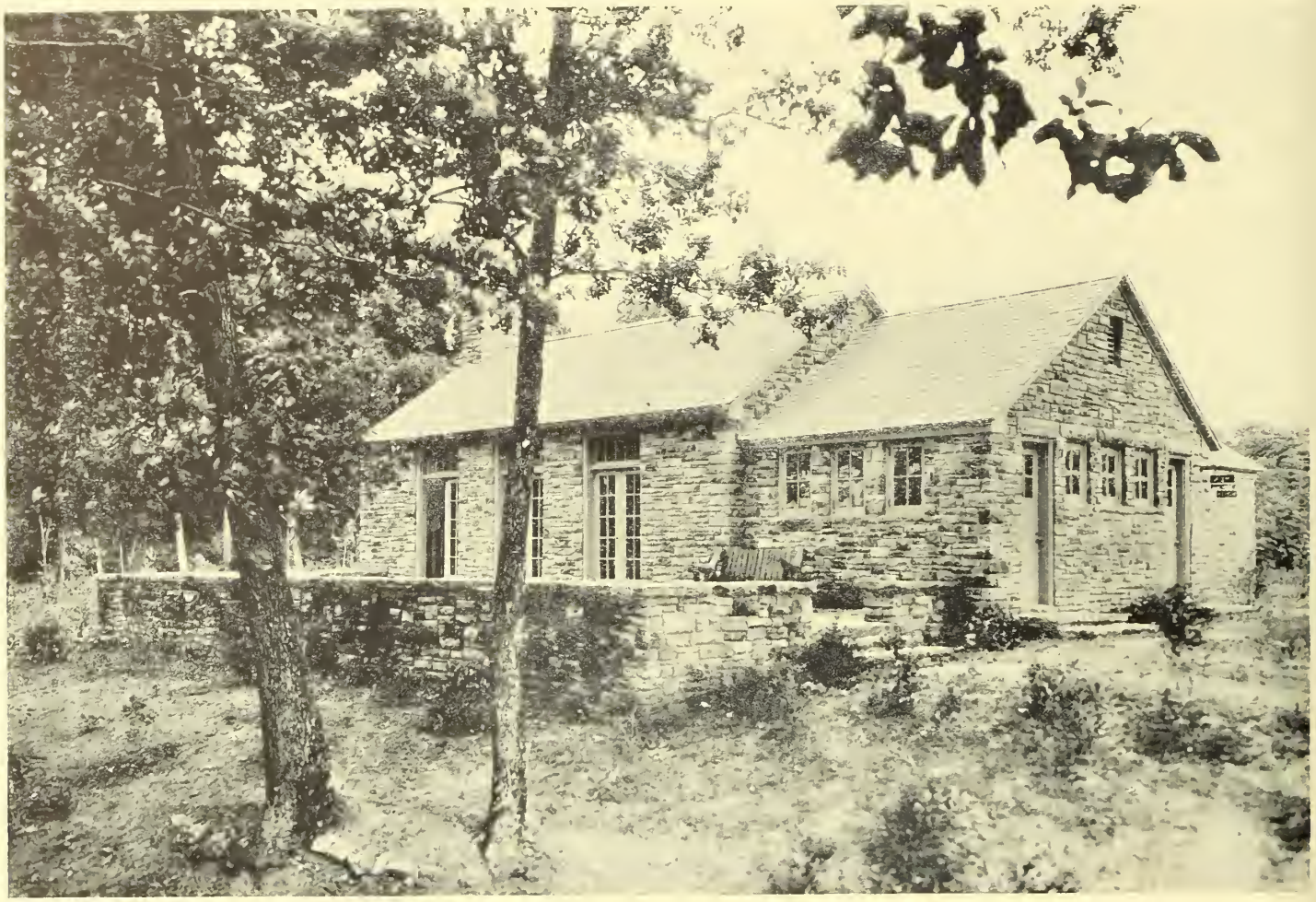


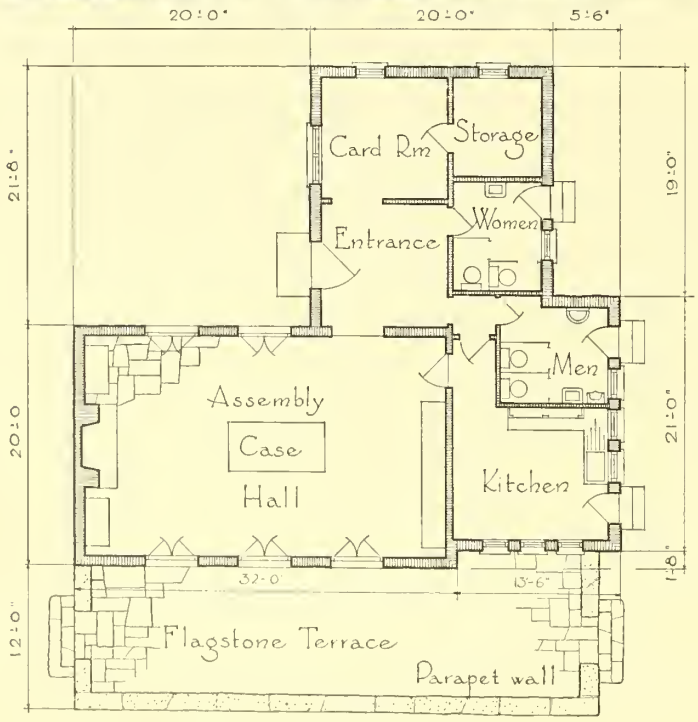
FIRST FLOOR PLAN

Scale $\frac{1}{16}$"=1'-0"

Museum Building, Petrified Forest National Monument

With simple dignity, this building happily succeeds both in capturing the flavor of the architecture of the old Southwest and gesturing in direction of the contemporary. No mean attainment in itself, but with the added score of an orderly workable plan, successful beyond cavil. As the plan indicates, the administrative function is incorporated in this museum building.

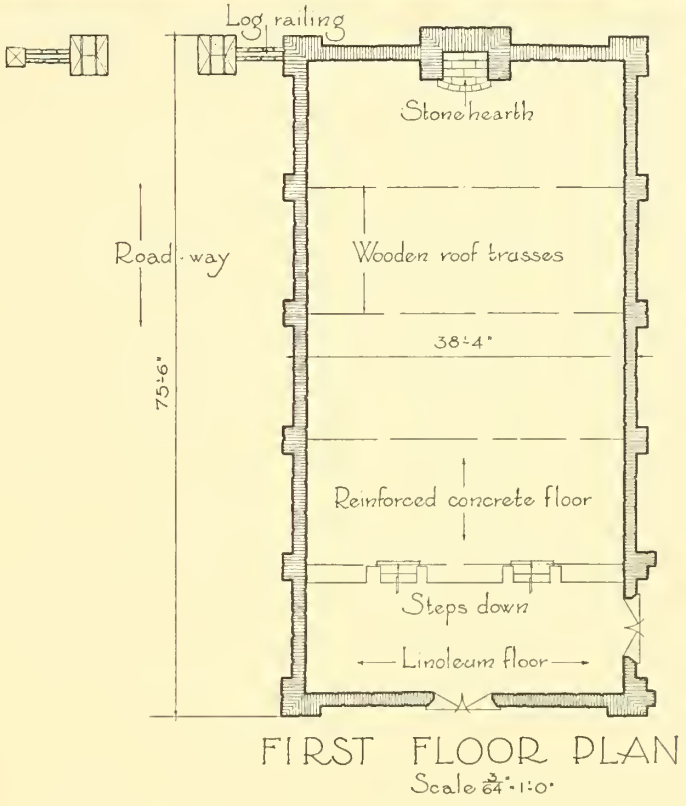




FLOOR PLAN
Scale $\frac{1}{16}$"=1'-0"

Nature Study Museum, Nitrate Plant No. 2 Reservation, Tennessee Valley Authority

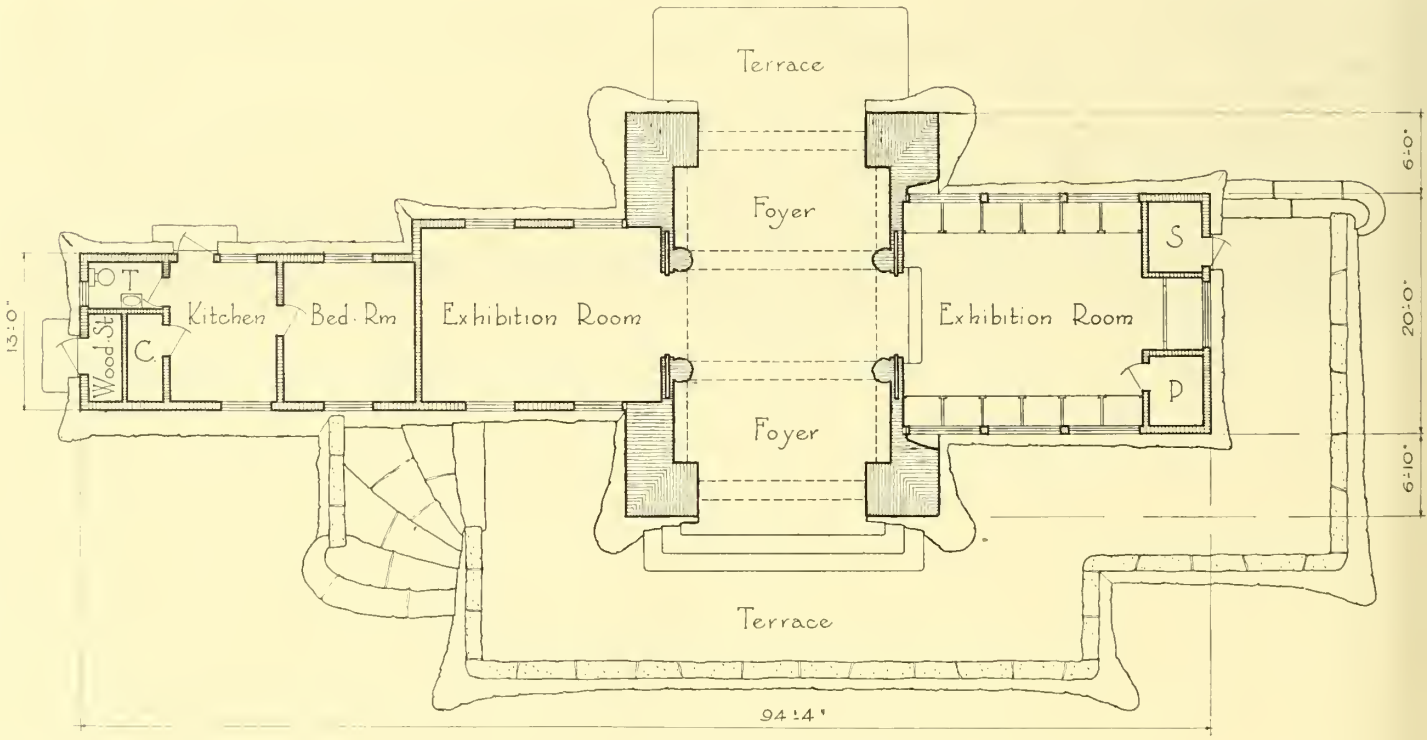
Overlooking the Tennessee River, the paved terrace of this building offers a splendid view. The stone is buff in color, pleasingly varied. It is laid with a mechanical perfection that many will decry in a building dedicated to Nature and located in a natural area. It is regretted that authoritative explanation of the "card room" and "kitchen" shown on the plan cannot be offered. Possibly here is clever experimental widening of appeal to the public that will be more generally undertaken by museums in the future.



FIRST FLOOR PLAN
Scale 3/64"-1'-0"

Museum, Black Hawk State Park, Illinois

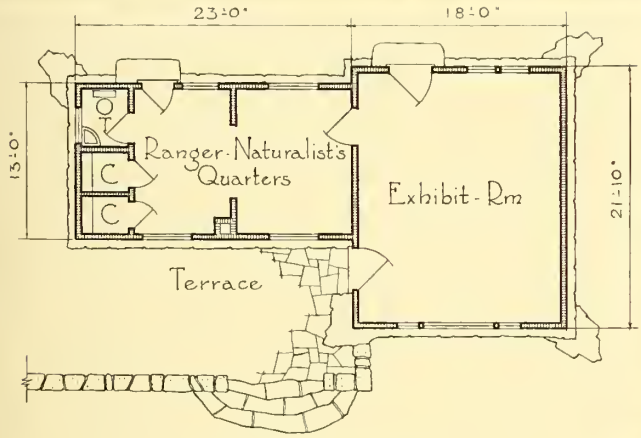
This museum was constructed to house an outstanding collection of American Indian relics. Although by no means expressive of such a collection in its architectural characteristics, the building has fine proportions and simple dignity. It can be argued that an unstyled structural interpretation such as this is to be preferred to a more obvious gesture in the direction of the civilization portrayed by the contents of the building. Its location near an urban area should go far to answer possible criticism of the somewhat finished character of the structure.



FLOOR PLAN
Scale $\frac{1}{16}$"=1'-0"

Trailside Museum, Norris Geyser Basin, Yellowstone National Park

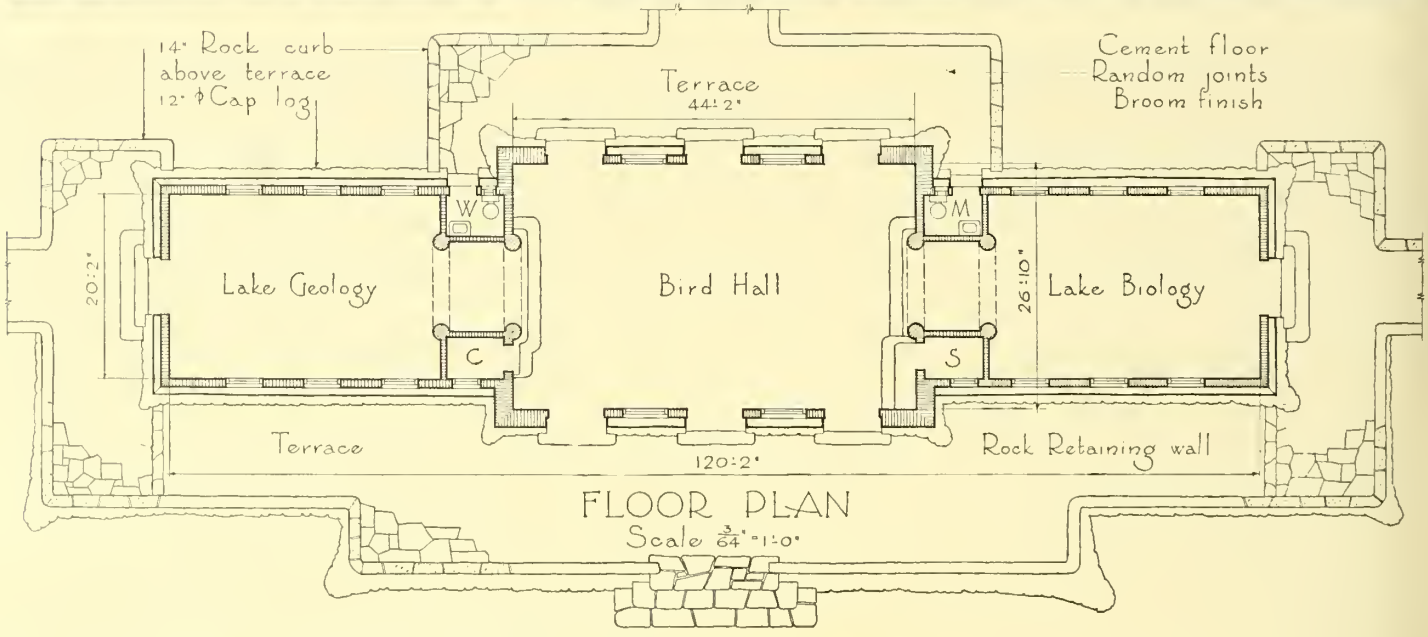
By its low horizontal lines this building gracefully insinuates itself into environment. Well-scaled to a rough mountainous region, and interesting by reason of irregularities of surface, are the logs selected. The shingles of the roof have adequate thickness, but might have been laid with more informality and consequent closer harmony with the bold log work and stone masonry.



FLOOR PLAN
Scale $\frac{1}{16}$" = 1'-0"

Museum Building, Madison Junction, Yellowstone National Park

Minor in size, but not in its contribution to park architecture. The pitch of the roof and the texture of the selected logs conspire with the rakish buttressing of the well-scaled rock work to deserve unqualified acclaim.

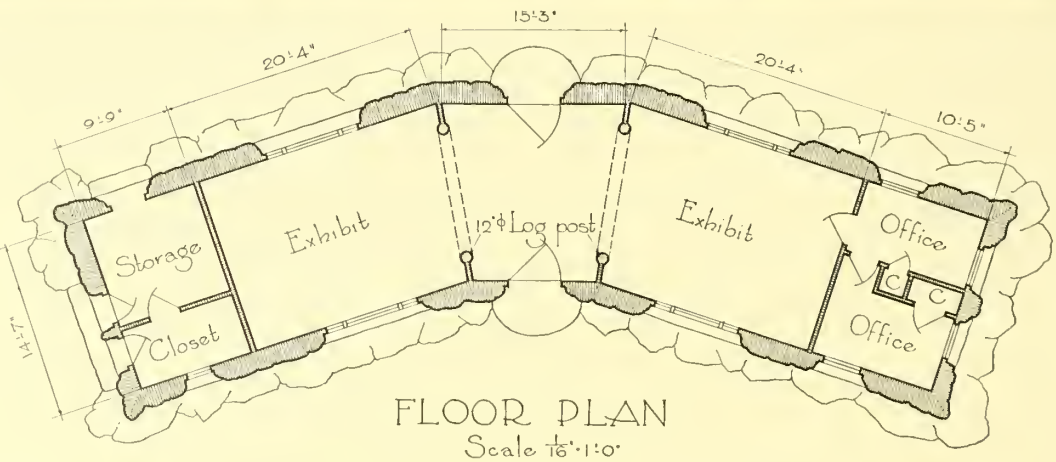


Fishing Bridge Museum, Yellowstone National Park

This well-planned and well-lighted nature museum is a successful example of the employment of principles important in the creating of buildings suitable to natural areas—among these the value of the freehand line, the avoidance of underscale, the pleasing quality of the furrowed and knotted log. The particular stone here used and its sweeping batter from grade to its meeting with the wood superstructure are agreeable details. On this page are the plan and a general view; on the opposite page a detail of exterior and an interior view showing arrangement of the exhibits.

Terrace, Fishing Bridge Museum, Yellowstone National Park

nterior View, Fishing Bridge Museum, Yellowstone National Park



Trailside Museum, Bear Mountain State Park, New York

The contriving of this boulder masonry, perhaps because the structure is so low, does not have the degree of apparent instability, so lamentable in most attempts. The roof covering falls far short of complementing the massive walls. This is on of the earliest of the trailside nature museums th have lately attained great popularity in natur parks in far flung locations.

CAMPFIRE CIRCLES *and* AMPHITHEATERS

These points of open air assembly and seating in parks range from the minor, represented by the campfire circle, sometimes termed a lecture circle or council ring, to the large and elaborate in the form of outdoor theater or amphitheater. The elementary expressions are to be found in many parks, while the more extensive developments are apt to occur in large parks appealing to more than local interest, or in metropolitan parks where local or civic interest is well defined. The locating of the intimate circle or ring is largely a matter of proximity to use-demand, as represented by a cabin or camp group, or other such point of concentration within the park. A small plot preferably generally level, but failing that, not too rugged or precipitous, is the only topographic requirement. The larger amphitheater, in its several varying manifestations, should on the other hand be located in a natural bowl wherever possible. Unless existing contours truly invite such development, a remoulding of them to create a natural effect is apt to require an amount of work disproportionate to the gain. If anything short of accomplishment of complete naturalness results from a remoulding of topography in creation of an amphitheater, the park area is burdened with a disfiguring scar that should be rigidly avoided.

The minor campfire circle or ring is merely the provision of seating around the community campfire, where the evening hours may be passed with song and story in the warmth of good comradeship and the friendly fire. The campfire is the sole physical essential of this foregathering place in the open. It is often given a fixity of location by the building of seats around it, particularly if conditions of climate or insect life make sitting on the ground unadvisable. Such seating may be merely logs or some more sophisticated adaptation of them, or again may be boulders or masonry construction, where stone is the more abundant native material. But there are no fixed principles, no traditions to be pressed, beyond admonishing an attention to the claims of the immediate natural environment.

The principles applicable to the creation of amphitheaters or outdoor theaters are numerous. Probably paramount are the considerations of sight lines and acoustics, here quite as important as for the enclosed auditorium. Many will at first thought regard acoustics as not of the problem, but these should not fail to appreciate that hills and mountains, water surfaces, woods and forests, deflect and echo sound in accordance with their own laws, no less than do man-made surroundings, and call for just as much study and advance consideration.

It is important that the stage be to the east or north, so that the audience will not face the afternoon sun. A distant view as background for the stage platform is greatly to be desired, or better still a picturesque cliff as at Pine Mountain, in Kentucky. If these do not exist, a background of trees should be sought. The amphitheater should be encircled by trees, to screen it from view and provide all possible shade for the audience, and to act as barrier against the disturbing noises of other park activities.

The outdoor stage is often merely a platform, the distant view or a near-by stand of trees serving as a backdrop. If these are lacking, or some required use of the stage demands it, an artificial background of rustic construction, or of planting, or a combination of the two is created. When the showing of motion pictures is an activity, the extent of the structural background will be dictated by the size of the picture screen. The screen should be removable in winter, should be recessed for some measure of protection, and supplemented with dark canvas curtains to be drawn over it when pictures are not being shown. Where dramatic entertainment is to be offered, some provision of dressing room space is necessary. The stage of the amphitheater, being the focal point, must be outstandingly representative of park character.

No harshness or rigidity of line is to be tolerated here and all the devices of skillful planting and naturalizing of native rock are legitimate in creation of the desired effect.

The seating of the amphitheater in a park setting is contrived of logs or of stone. It may be said of log seating that it is the more comfortable in use, but the adjusting of the long straight lengths to the segmental arrangement of seats results in angles that are rigid and in a measure inharmonious with the freehand lines of nature. Although stone seating on the other hand offers less physical comfort, it permits flowing and graceful curves in the seating arrangement that please the eye and complement the surroundings.

The cutting of large trees existent within t limits of the seating of the amphitheater is to avoided. It is better to interrupt the seating accommodate the trees. The latter. if trimmed the lower branches, will provide shade for t audience with negligible obstruction to view of t stage.

Usually a campfire is built in front of the sta platform. or to one or both sides of it. Sometim this must serve to illuminate the stage at night. lieu of footlights or other lighting. Whether not it must serve such purpose it links the prete tious amphitheater with the simple campfire ri from which it evolved and is the temporary hor fire of the wanderer.

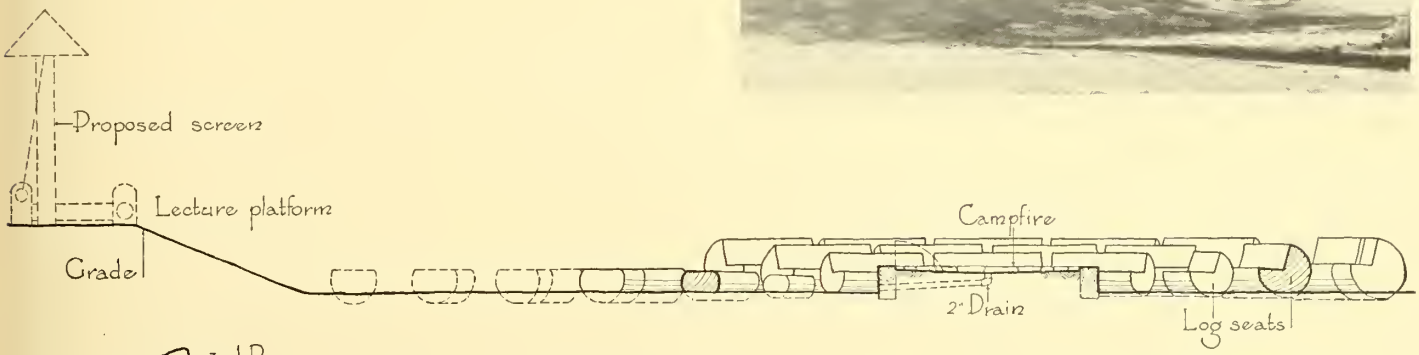
CAMPFIRE CIRCLE—SPRAGUE CREEK CAMPGROUND
GLACIER NATIONAL PARK

Here is simple provision of seating around a campfire that is devoid of all formality. The plan has been judiciously accommodated to existing trees and topography. The seating capacity is approximately three hundred people.

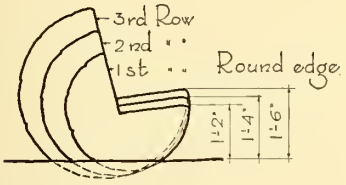
Manzanita Campfire Circle

Lassen Volcanic National Park

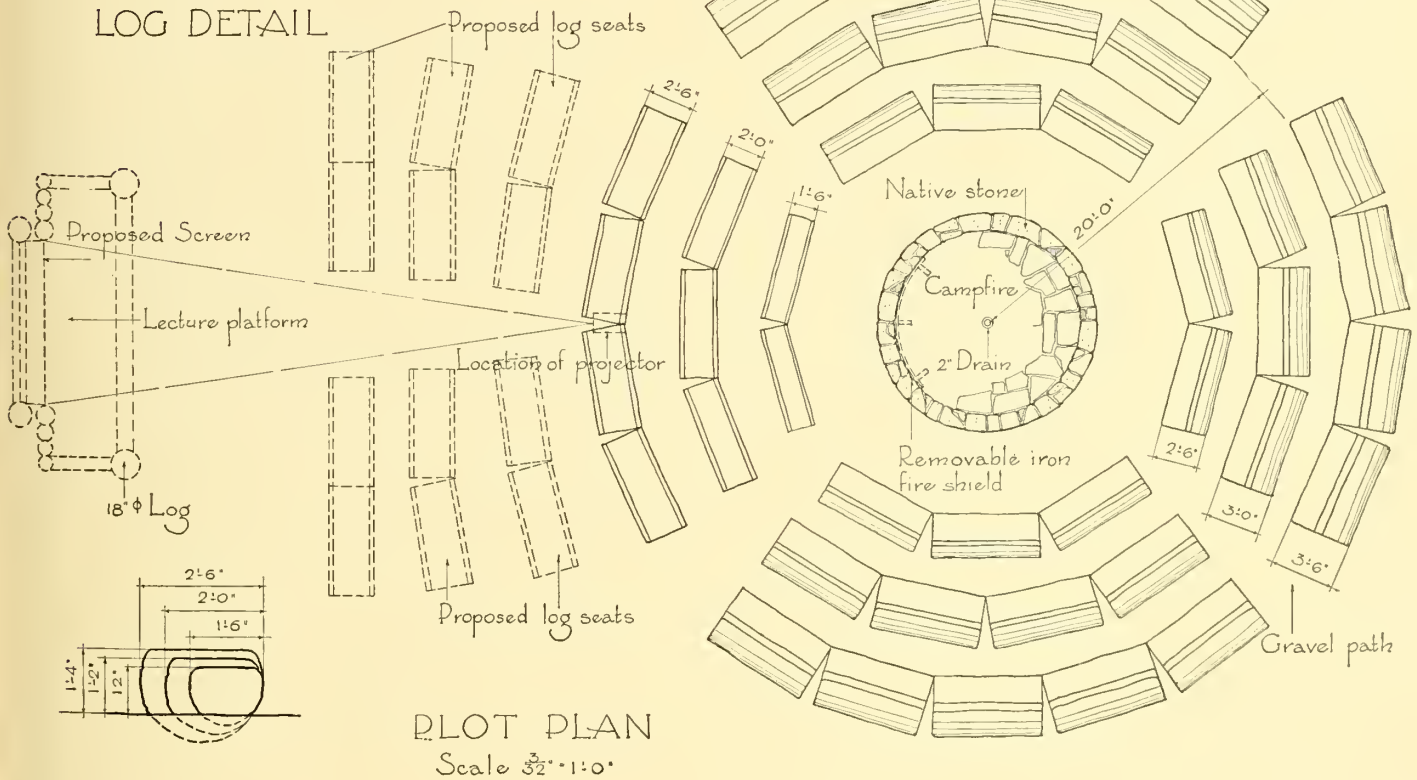
A campfire circle with budding ambition to become a kind of outdoor theatre. The seating for three-quarters of its circumference is of full round logs, cut out to provide both seats and backs. The rest of the seating is without backs, anticipating the lecture platform, picture screen, and additional front row seats at some future time.



SECTION



LOG DETAIL



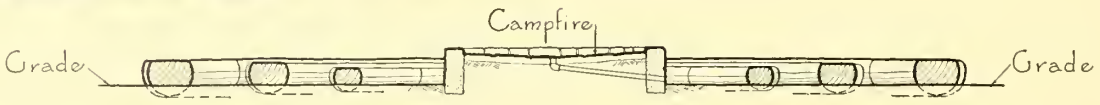
PLOT PLAN

Scale $\frac{3}{32}$" = 1'-0"

Campfire Circle

Summit Lake – – Lassen Volcanic National Park

Here is a simple and well-arranged campfire ring in an ideal wooded setting, offering nearby lake and distant mountain view. The fire is confined to the elevated hearth by a curb of stone masonry. The practical provision of drain for the hearth should be noted also the increasing sizes of the log seats from front to back row by virtue of which campfire enthusiasts in assorted sizes are catered to.



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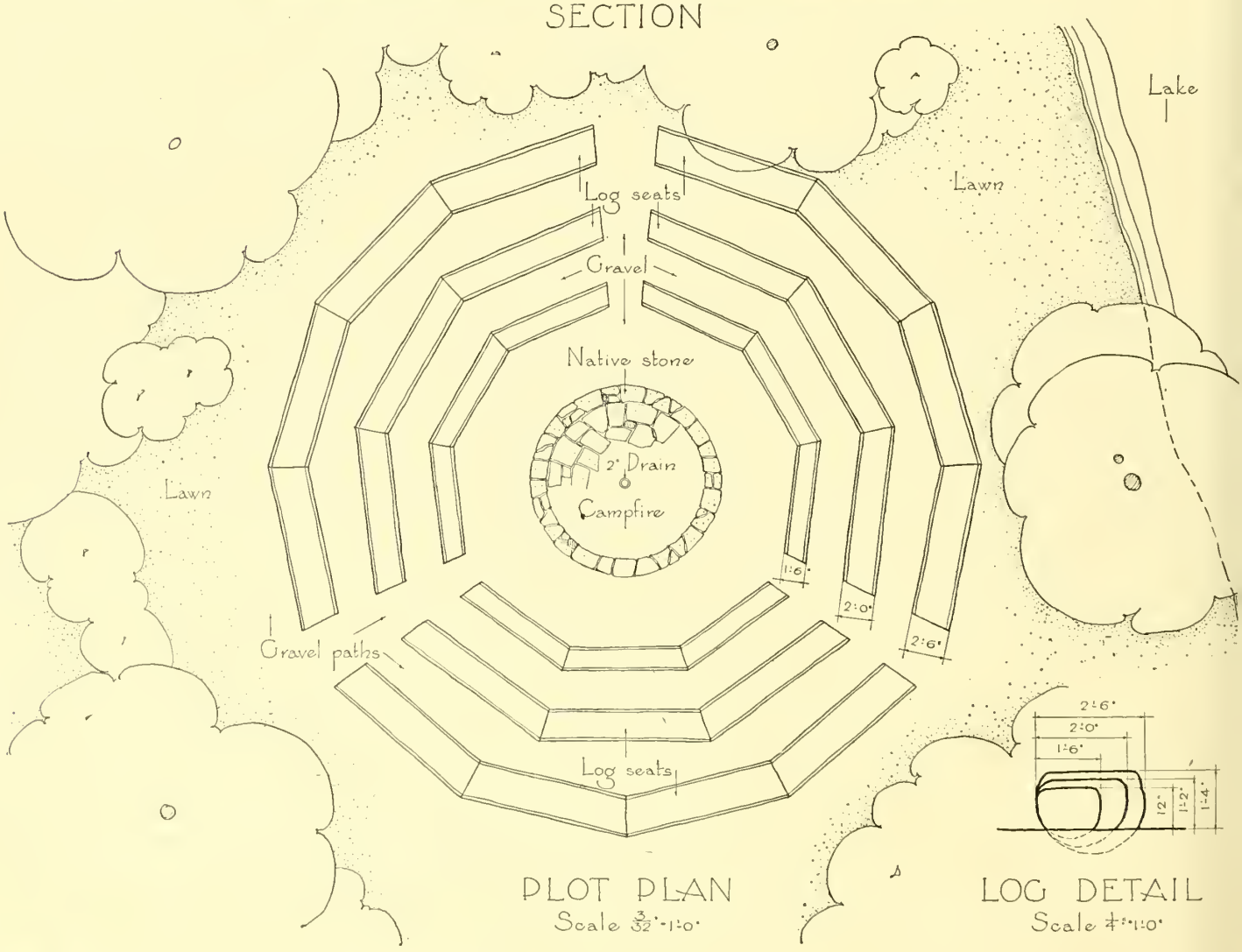
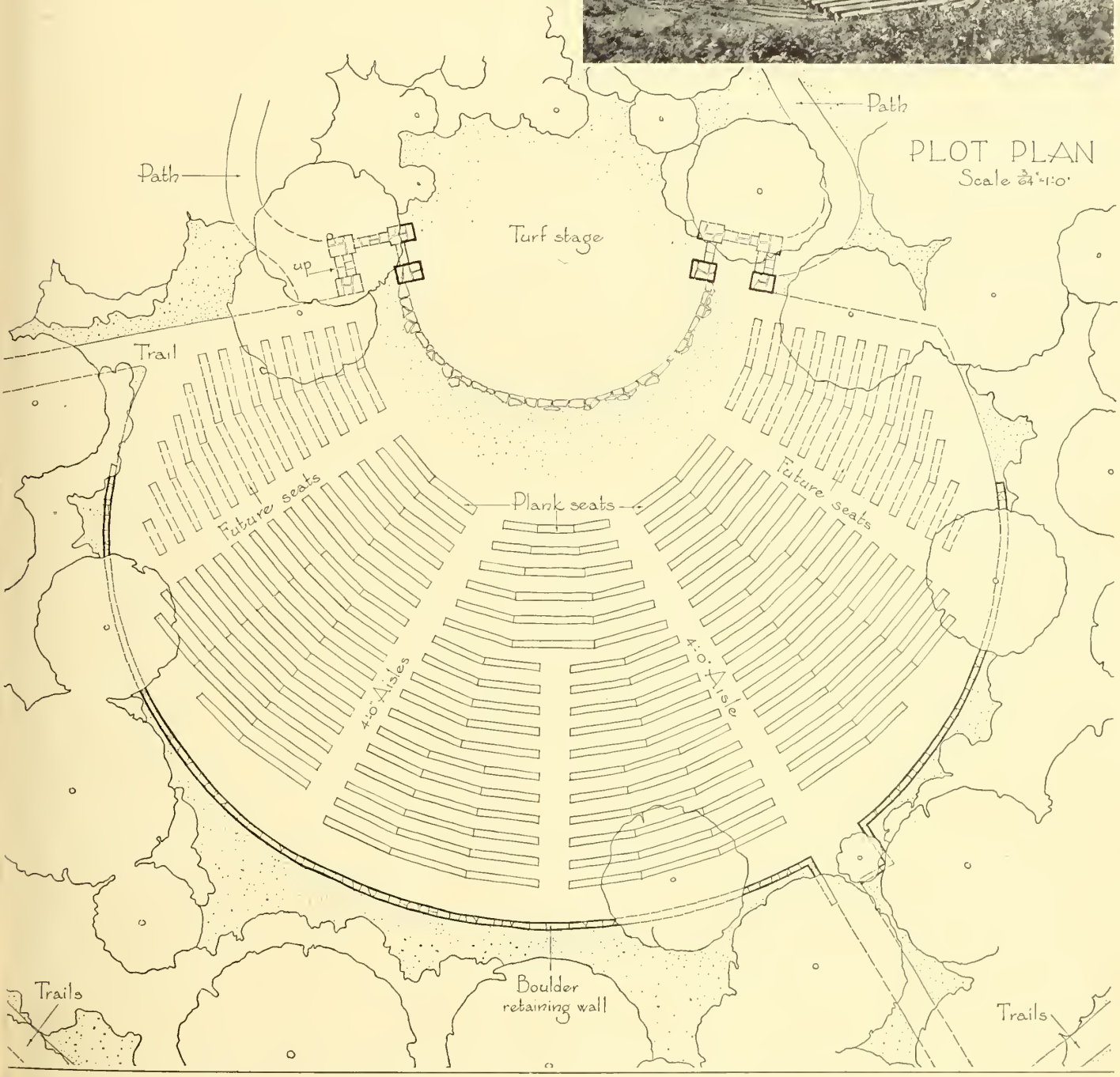


PLOT PLAN
Scale $\frac{3}{32}$"-1'-0"

LOG DETAIL
Scale $\frac{1}{4}$"-1'-0"

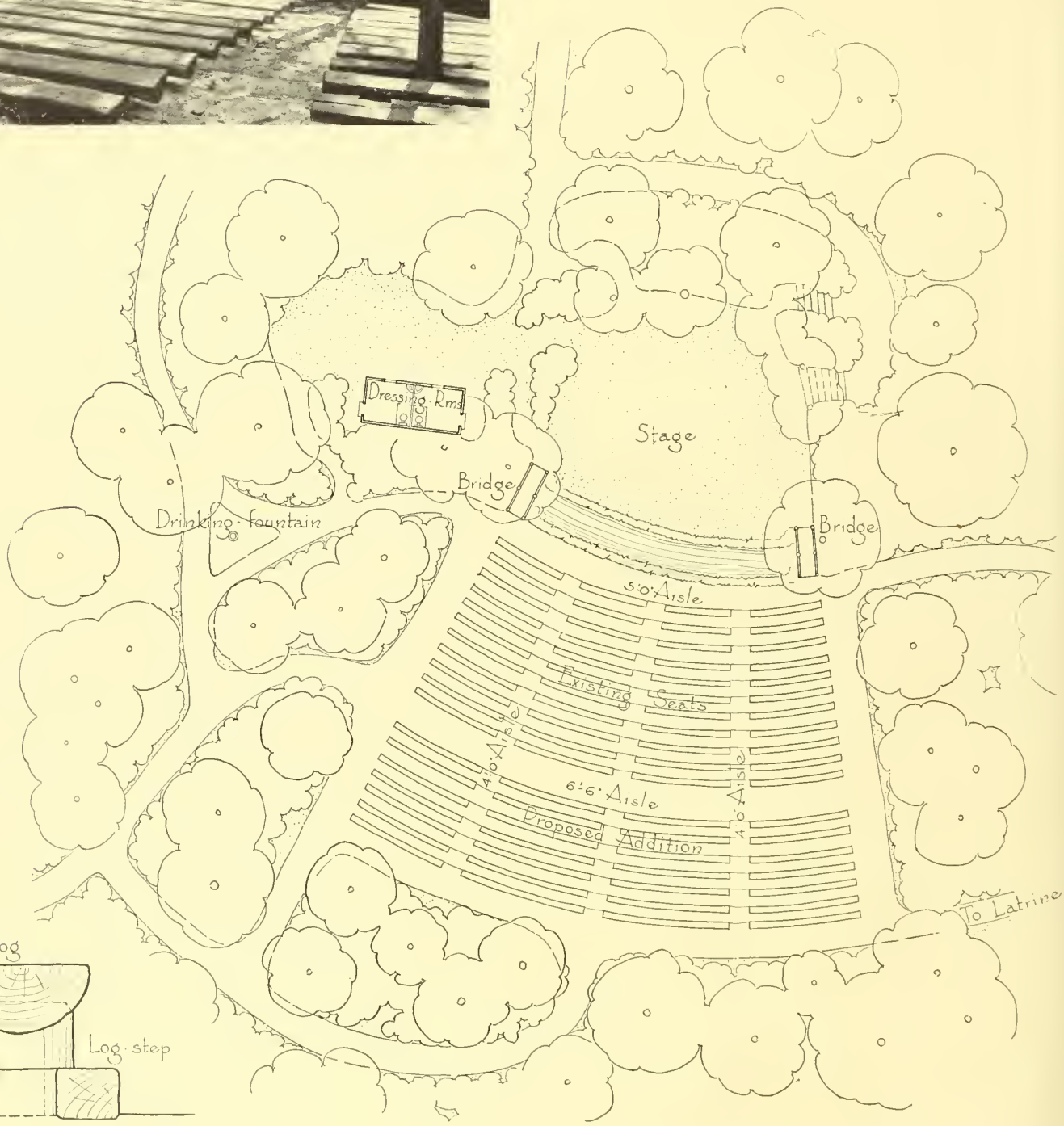
Amphitheatre – Forest City State Park – Iowa

The simpler the rendering of an outdoor theater the more fitting in a natural park. Here is an example that does not pretend to outdo its surroundings and as a result justifies its presence. The seats of heavy planks supported on masonry piers do not have the measure of informality attained by the log seating of some of the examples that follow. The state of incompletion and the absence of summer foliage in the illustration obscure the considerable merit, present and potential, of this project.



Outdoor Theater - - Matoaka State Park - - Virginia

Near historic Williamsburg and the campus of William and Mary College, this outdoor theater employs half log with a natural sweep, carefully placed to favor the arcs of the seating plan. A resulting rhythmic harmony with the woodland setting could never have been achieved had perfectly straight timbers been used.

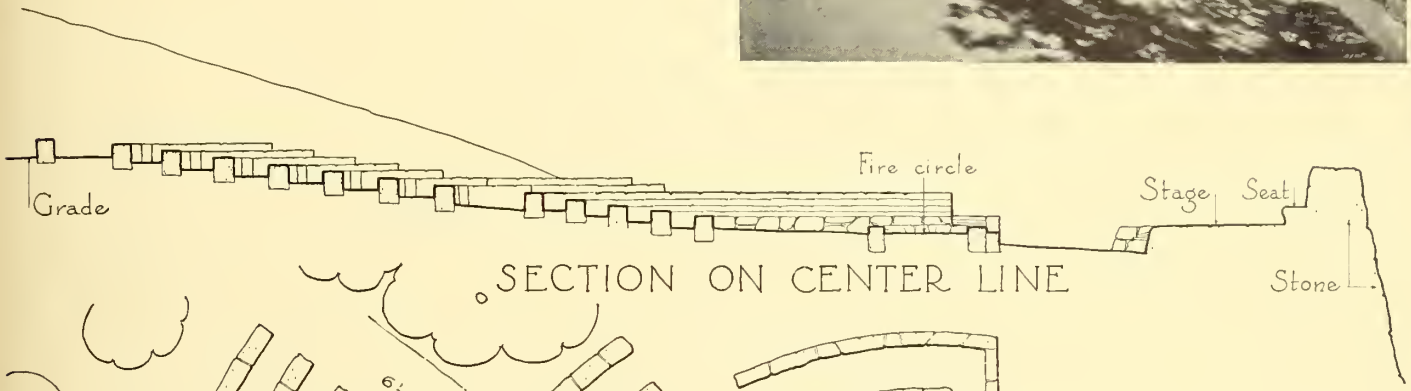


PLOT PLAN
Scale $\frac{1}{32}$" = 1'-0"

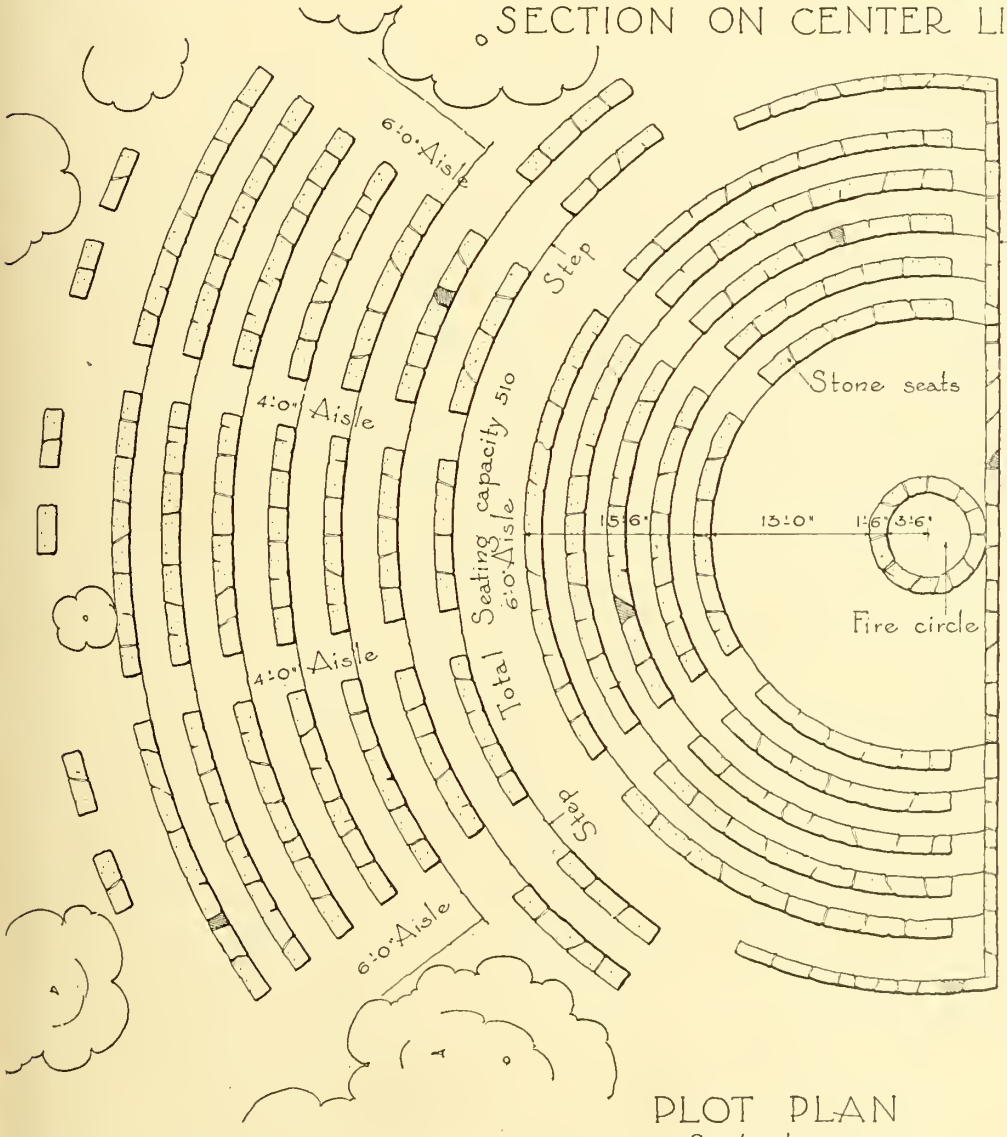
DETAIL OF SEAT
Scale $\frac{3}{4}$" = 1'-0"

Amphitheater - - Flagstaff Mountain State Park
Boulder - - - - - - - - Colorado

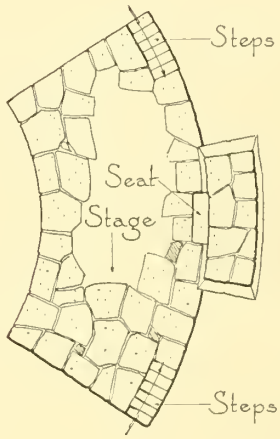
The value of the distant view as backdrop for the stage of an amphitheater is here manifest The campfire is brought into prominence as the very center of the arcs of stone seats When time has provided walls of evergreens as a background for the seating, and as a frame for the panoramic backdrop, this example will have come into its own.

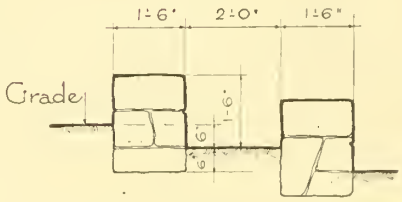


SECTION ON CENTER LINE



PLOT PLAN
Scale 1/16" = 1:0"

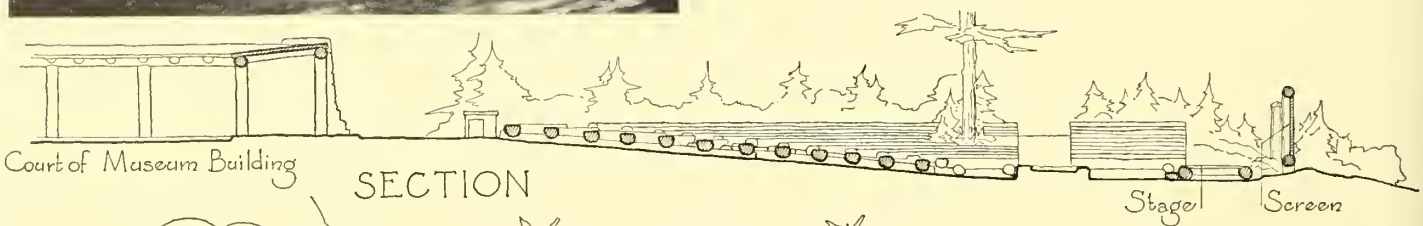


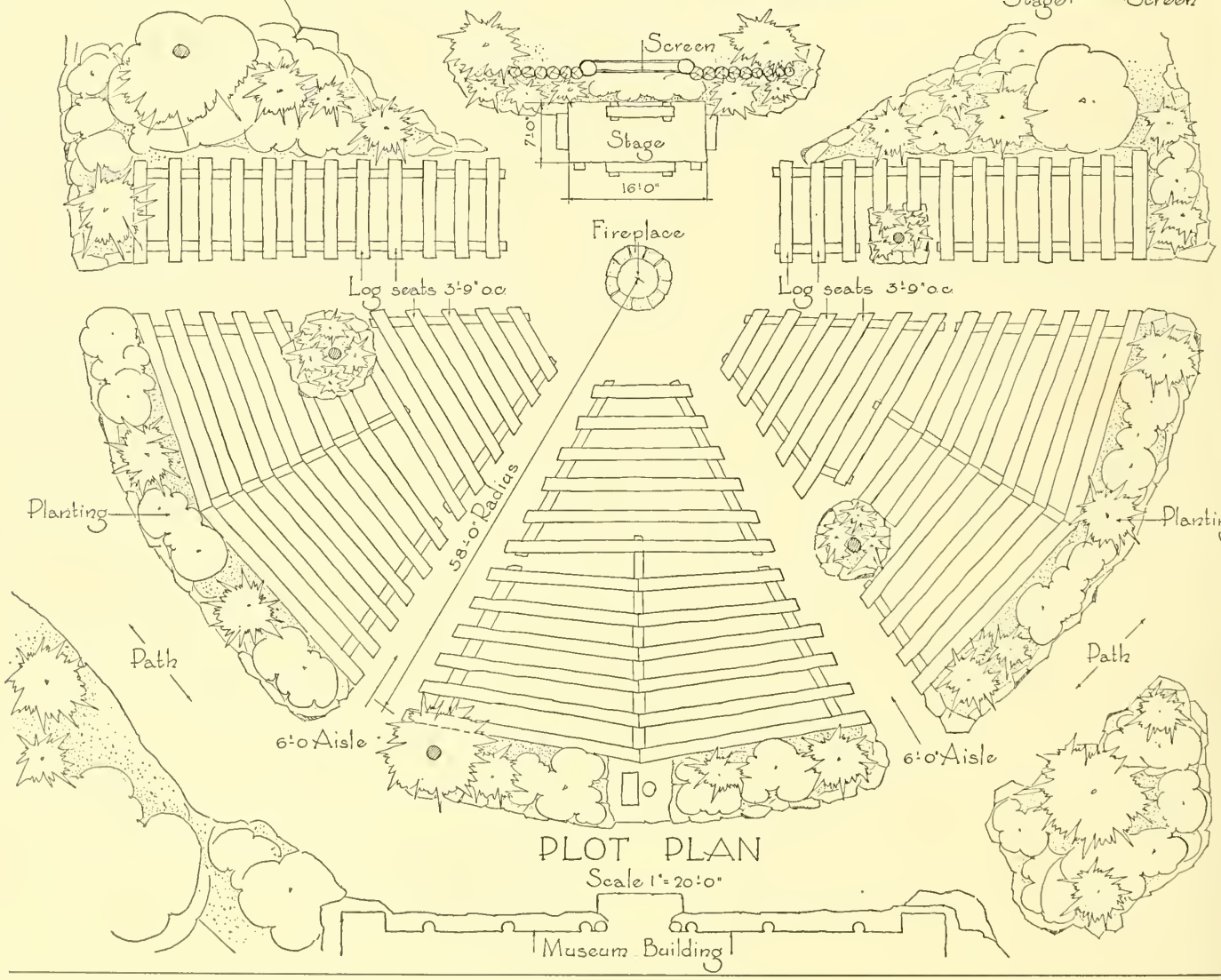


DETAIL OF SEATS
Scale 1/4" = 1:0"

Old Faithful Amphitheater – Yellowstone National Park

The artificial stage background of logs, rocks and planting in reflection of wilderness character is well-exemplified in this open-air theater. It serves also to frame the motion picture screen. The stage platform is quite shallow. In the very center of the pit is the campfire location marked by a ring of rocks. The seating of large barked logs slightly flattened on top and resting on log stringers is boldly scaled to the out-of-doors.





BATHHOUSES *and* SWIMMING POOLS

PRIOR TO EMBARKING on a discussion of bathhouses for the use of swimmers, it is well to cite and dispose of another type of bathhouse necessary in parks that offer camp sites and cabins as recreational facilities. The bathhouse serving camp ground and cabin colony is dedicated to bathing as such and not as a misapplied synonym for swimming. In essence it is the bathroom of the camping community. It may be a single building divided for the use of both sexes, or may consist of two buildings. It is an essential feature where facilities for bathing are not supplied with each individual cabin or other unit of housing. With such a bathhouse it is usual to incorporate laundry trays and related equipment for the campers' use. A drying yard in close proximity, screened by location or planting, is then a necessity.

Much of the ensuing discussion of bathhouses for swimmers is obviously and equally applicable to bathhouses for campers.

The era of the casual bathhouse in facilitation of swimming within publicly owned parks is passing. This more or less unsupervised building of the past, now giving place to the controlled bathhouse, is within the memory of all of us. As we dwell fondly on the summer holidays of youth, we perhaps find it difficult to recall clearly that dingy, ill-arranged, ill-maintained, and unhygienic structure. It was one of those pioneer structures in recreation that, after worthy apprenticeship cherished in memory, has since moved on to a more orderly and complete fulfilment of function. To cling to a nostalgic recall of the bathhouse of horse and carryall days is as illogical in present day park recreation as to insist upon that means of transportation, or bathing apparel of the same period.

Progress has overtaken the primitive bathhouse, just as it has forced more positive and more complex systems of sanitation within parks grown beyond the safe limits of that lack of sanitation tolerable only in the little-patronized area. Beyond doubt the ever-increasing use of public park facilities by people of widely different social strata is responsible for this trend, and its effects are beneficial and many. Supervisory control of the bathhouse or bathing pavilion has brought with it higher standards generally in all details of the structure and its accessories.

It has been subjected to tests for efficiency and hygiene and emerges very much in step with this year of grace. Whether operated directly or as a concession, a bathhouse in a public area should be so efficiently arranged and constructed that the greatest number of people are suitably accommodated at the lowest possible capital cost. This means, or should mean, the lowest possible charge for use. Here is no place for unnecessary spaciousness, or luxury, or operating system that does not fulfill this requirement. Here is no place for private dressing booths only, claimable under one rental for periods of many hours, and leading to vastness of structure if the demand use is to be met. Large and spacious buildings can only lead to an exorbitant use-fee if the investment is to be served, or to an inadequate financial return if the public is to be served as it has the right to expect—at a modest charge. A system that provides for a checking of possessions, while a patron is not actually occupying the dressing booth, multiplies the capacity and at the same time curbs the size of the building, and should lead to subsequent scaling down, theoretical at least, of the fee. The adoption of such a system is therefore an obligatory demand upon any park authority charged with determining the operating method of a bathhouse on public property, and not unaware of his responsibility.

Following demand for efficient conservation of space, the old practice of issuing keys for private dressing booths is replaced with open dressing space, or with booths that are only claimable during actual occupancy. Various arrangements for the safe-keeping of the bather's possessions while he is on the beach have developed. With the locker system, the bather is issued a key to a small com-

partment in which his effects may be locked up. With the basket system, he is furnished a basket or tray in which his possessions may be placed and checked with the attendant. The Westchester County Park Commission has given up the use of bathhouse lockers in favor of basket checking, for the reason that baskets can be sterilized more thoroughly and readily than lockers. This Commission prefers aluminum trays to wire baskets, because buttons and clothing are apt to catch and tear in wire mesh. The number of lockers or baskets provided should be nicely scaled to the capacity of the available dressing space, with due regard for whether the bathing is done in an artificial pool, where the time in the water is limited, or in a large body of water, where the time element is not a factor. For a given number of people, fewer lockers need be provided in connection with a pool than with a larger swimming beach where many of the bathers hold lockers or baskets for several hours.

Dressing space may be arranged in any one of several ways, or in combinations of these. For men and boys, one general open dressing room with benches and clothes racks is usual. Dressing booths, each equipped with seat and clothes hooks, either open front, curtained, or with doors, are sometimes provided. There is however hardly sufficient reason for providing these exclusively. It seems more reasonable to provide a limited number of dressing booths for the older generation, and a general dressing space for those younger patrons bred in the gymnasium-equipped public schools.

A general dressing space is less acceptable to women. Booths with curtains or doors are probably preferred by them, and if not provided to the exclusion of all open dressing space, should constitute the greater proportion of the space available. The younger woman of today, with her increasing participation in sports, probably does not demand the private booth as generally as her elders.

Showers are not only a desirable facility in all bathhouses, but are absolutely essential, and desirable in greater numbers, whenever the swimming is done in an artificial pool, and bathing with soap before entering the pool is obligatory. Showers for men may be in one general open area. For women they should be individual. It is illogical in bathhouse planning to make provision for women to dress in privacy in booths, and at the same time make necessary their traversing a public aisle to and from the showers. It would seem reasonable, if modesty is to be served, that it be served consistently. In a proper proportion, some few showers might well be provided in direct communication with groups of two or three booths, if available funds permit. Particularly is this true if the swimming is to be done in an artificial pool with its compulsory preliminary bath.

Toilets should be conveniently and conspicuously placed where they must be passed on the way to beach or pool.

If the swimming is in an artificial pool, a foot-bath containing disinfectant to minimize the spread of foot infections should be provided in the passage from the dressing room to the pool so that its use cannot be avoided.

An understanding of hygiene has brought other changes to the construction and operation of the bathhouse. Almost always when swimming is in an artificial pool, bathers are required for sanitary reasons to use suits, caps and towels provided by the management. In connection with some swimming pools in metropolitan park areas, a physical examination is compulsory before entrance to the pool is permitted. This is a common-sense precautionary measure for any heavily used facility.

The value of sunlight and ventilation is lately more fully understood. One bathhouse dressing room arrangement that reflects in maximum this enlightenment is roofed only over the booths and toilets, leaving the aisles and any general dressing space open to the sky. What is more logical than this casting off of the frayed tradition that dressing space must be entirely sheltered? When the weather is too cold for dressing in semi-shelter it is likewise too cold for outdoor swimming.

Almost without exception a charge is made for the use of the bathhouse. The income is applied to operation and maintenance. The attendants station or room, where fees are collected, where

suits, towels, baskets or keys are issued to patrons, and possessions are checked, should be adroitly and compactly laid out in relation to entrance and lobby passages to men's and women's dressing rooms, so that supervision is complete and uncomplicated.

All the foregoing is by way of outlining the essentials of the basic modern bathhouse in a park. There are supplementary appurtenances that are often desirable but not exactly requisite, such as lavatories, drinking fountains, bathing suit wringers, hair driers, public telephones. There are dependencies, the incorporation of which will be determined by the operating policy or the funds available, such as office, rest rooms, first aid room, and life guards' retiring and locker room. If suits and towels are rented, unless the laundering is done off the premises, a laundry and drying room are necessary. There are unrelated features that policy, expediency, economic and other considerations may make it reasonable to incorporate, and which forthwith transform the bathhouse into a pavilion, community or combination structure. Police or employees' retiring and locker rooms, employees' living quarters, winter storage space, concessions for the sale of food, drink, candy, tobacco, and toys, and for the rental of beach gear, with all the necessary dependencies of these, may make the bathhouse a large and complex structure.

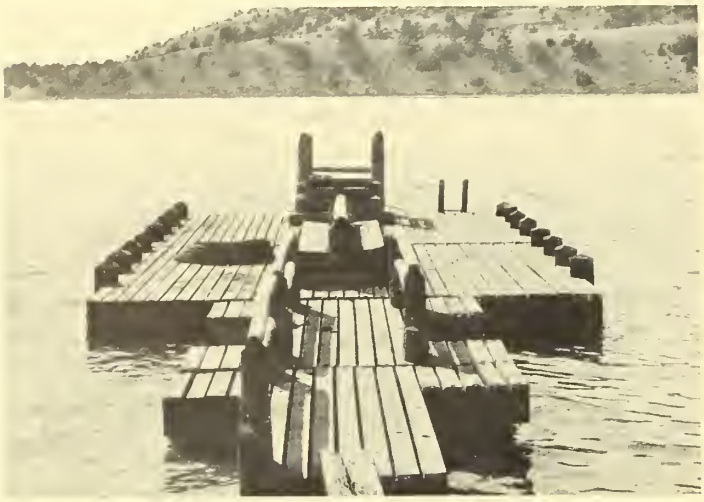
Those persons not bathing but wishing admission to the shore are often required to pay a nominal fee for this privilege if the beach area is limited and can be enclosed. This regulates crowding, and a turnstile entrance with change booth nearby is the usual and business-like means of control. Park regulations against taking food onto the beach and against persons in bathing suits leaving the immediate beach area, may be most easily enforced at the turnstile. Many parks see fit to prohibit the changing of clothes in automobiles or places other than the bathhouse provided for this purpose.

To back-track from these features sometimes auxiliary to bathhouses to a concluding consideration of the bathhouse proper, it cannot be too forcefully urged that in the choosing of materials and equipment entering into such a structure, the readiness with which these can be maintained in whole and clean condition should be carefully weighed. Just as for park toilets, the standard of maintenance is geared to the durability and cleanability of the materials used. Maintenance funds are too often insufficient, but a wise choice of materials can offset this lack within a reasonable limit. Failure to maintain suitably bathhouse and toilet facilities is a fair and proper target for complaint by a public that will be apathetic to equivalent lack of maintenance in the case of almost every other park facility.

Although the heading couples bathhouses and swimming pools it is not intended to limit the consideration of bathhouses to those in conjunction with swimming pools only. Nor is it attempted to treat in detail the swimming pool as a park structure. The swimming pool is strictly an engineering problem, so complex as to warrant thorough and detailed treatment if gone into at all. Our present interest in the swimming pool is entirely concerned with its place in the public park and its relationship to the bathhouse that serves it. It is so touched on in the plates and illustrations that follow. It is assumed that desired information bearing on the construction principles and details of swimming pools, being elsewhere available, will be elsewhere sought.

If the swimming is done in a large body of water, a float for bathers is often a practical requirement. This facility is a level platform carried on pontoons and anchored where the water is of suitable depth. It is regularly equipped with diving board and sometimes with seats for the bathers. It is an especially practical feature where the water level is not constant, and where there is real advantage in the offered possibility of mooring at different locations.

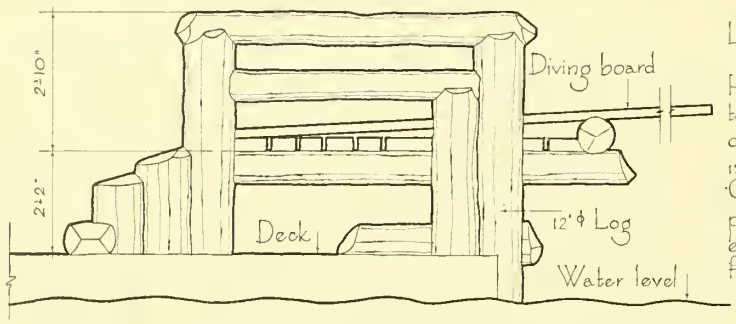
The diagrams and illustrations of specific successful examples which follow, seek to convey typical groupings and relationships of the several component parts of the bathhouse and swimming pool as public park structures.



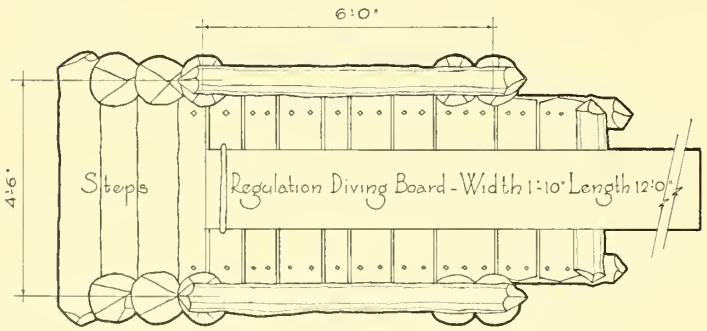
Floating Swimming Pier

Lake Guernsey State Park - - - - Wyomi

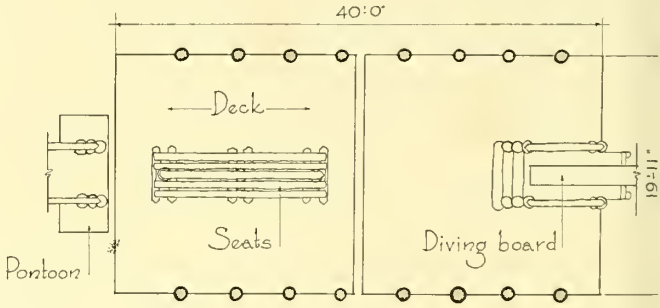
Here the characteristics of wilderness construction are broug to a swimming float, a facility seldom given the benefit of a consideration beyond complete practicability. The ventur is highly commendable for the effort and the accomplishme Careful thoughtful design is in evidence and the sturdy p portions of the rustic members are very agreeable to a eye accustomed to the utterly commonplace and merel functional in swimming floats.



SIDE ELEVATION

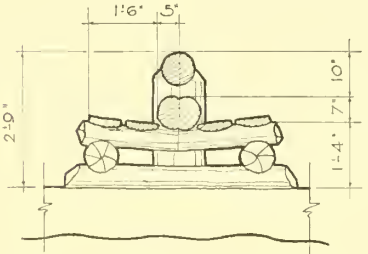


PLAN OF DIVING PLATFORM

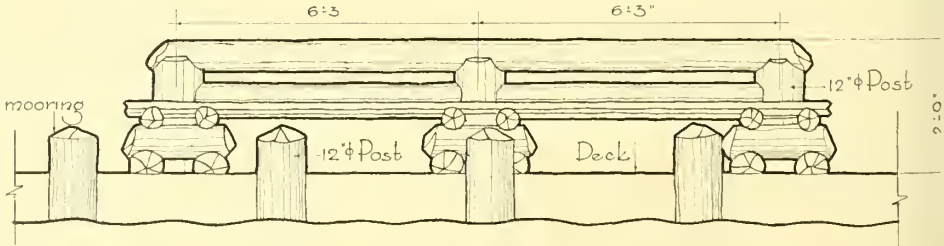


KEY PLAN

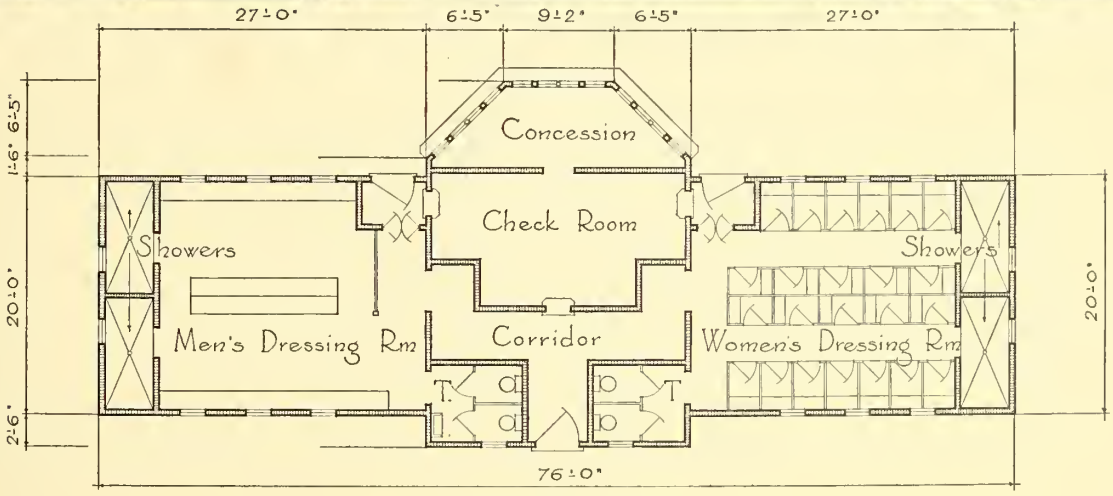
Scale 1/16" = 1'-0"



TRANSVERSE SECTION



Scale 1/4" = 1'-0" SIDE ELEVATION OF SEATS

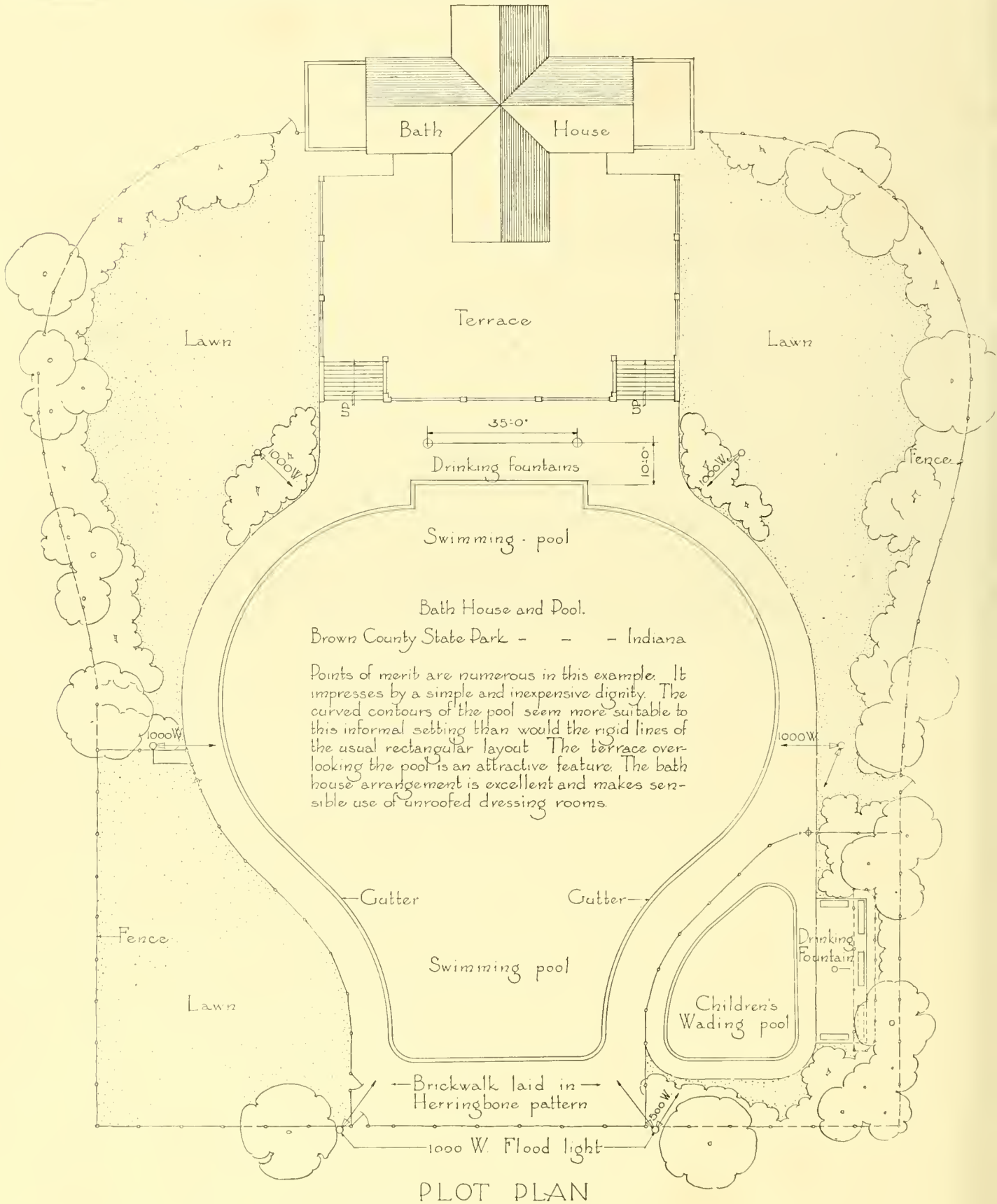


FLOOR PLAN

Scale $\frac{1}{16}$"=1'-0"

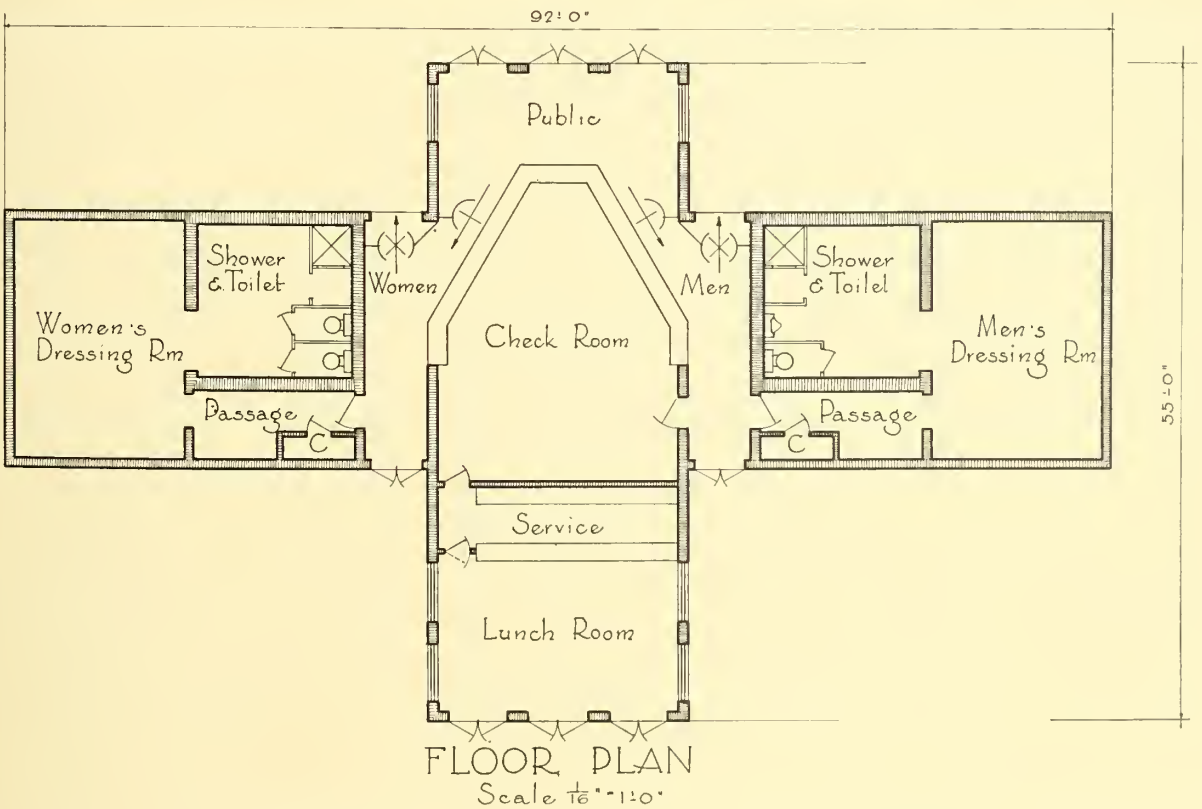
Bathhouse, Westmoreland State Park, Virginia

Modest in size and in materials employed, this bathhouse has many excellent features. The plan permits one man control of both bathhouse and adjoined concession. The sight lines are well baffled. The provisions of individual booths in the women's section and open dressing space in the men's section are very reasonable. If it were sought to adapt the building to use with a swimming pool, the plan offers possibility of turnstile control and foot-bath with only minor revisions.

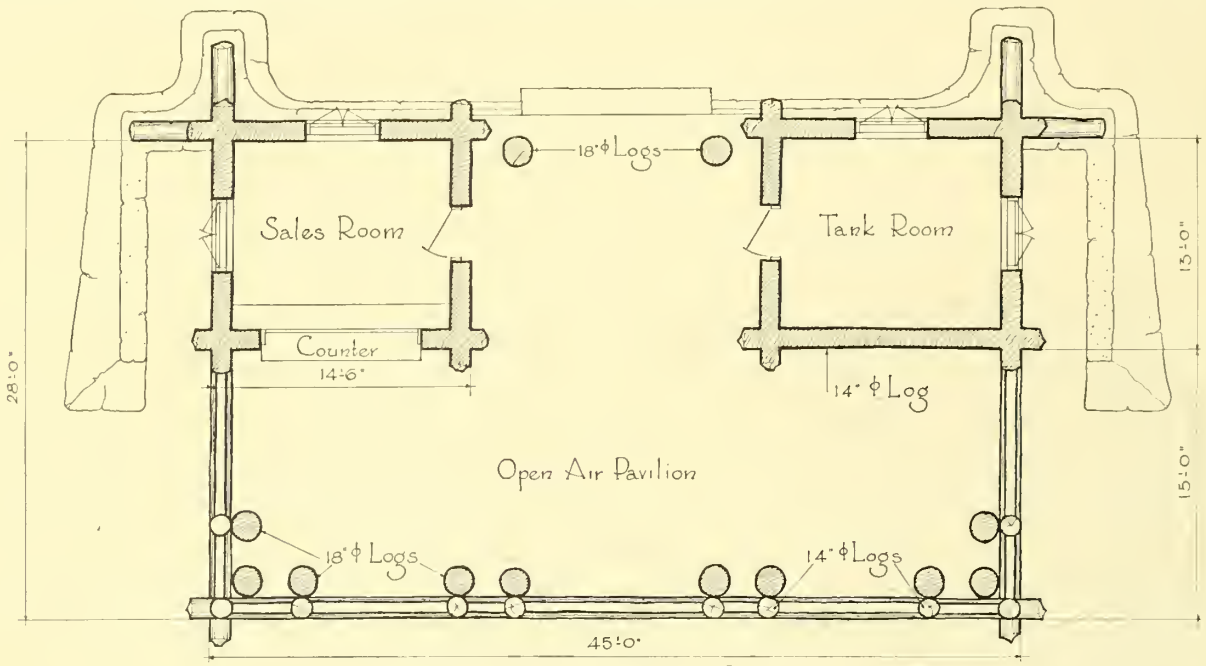


PLOT PLAN
Scale $\frac{1}{32}$"= 1:0"

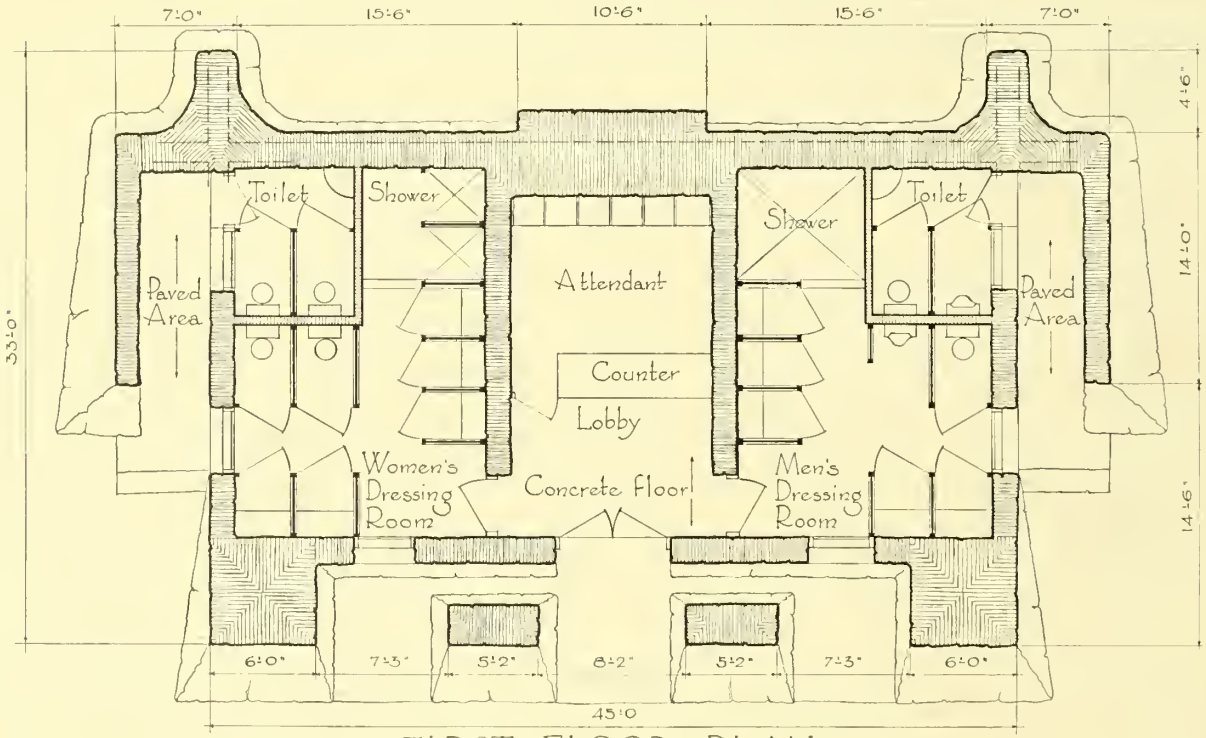
Bathhouse and Swimming Pool, Brown County State Park, Indiana



FLOOR PLAN
Scale 1/8"=1'-0"



SECOND FLOOR PLAN



FIRST FLOOR PLAN

Scale $\frac{3}{32}$" = 1'-0"

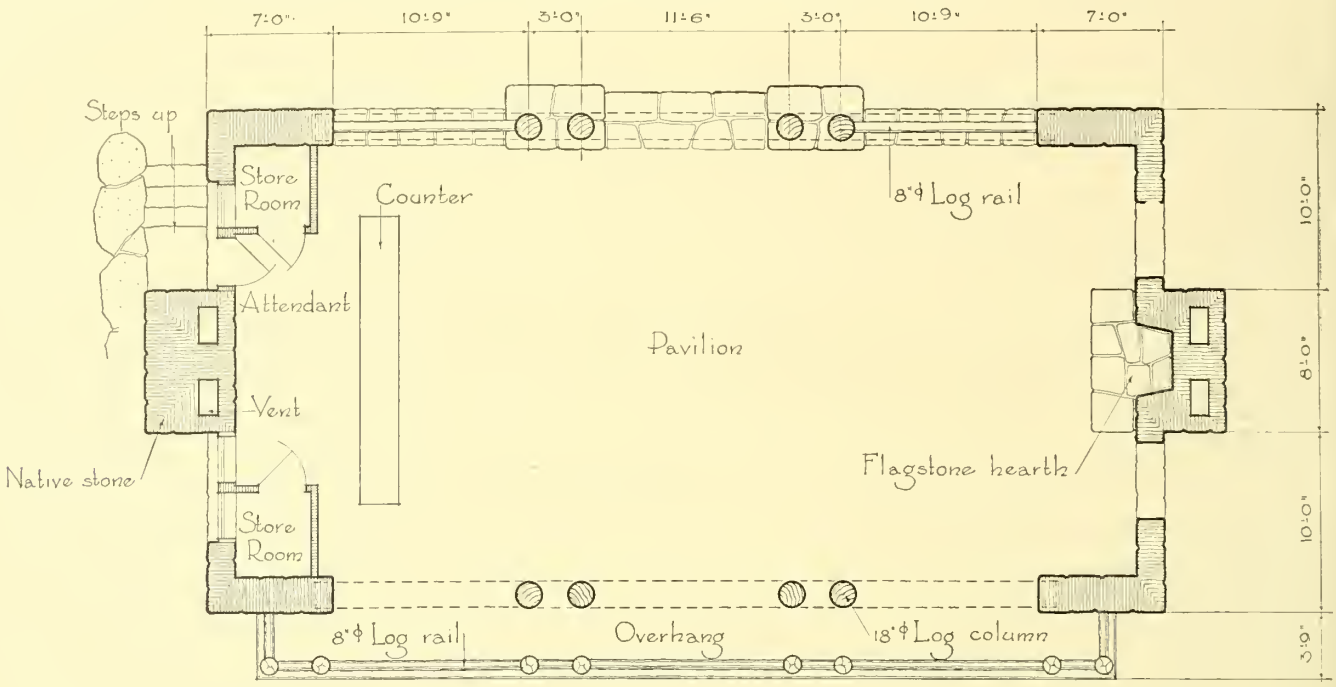
Bathhouse and Shelter
Crowley's Ridge State Park – – – Arkansas

Here is no pinch-penny employment of rock and logs Both materials are happily scaled to the mass and to each other.

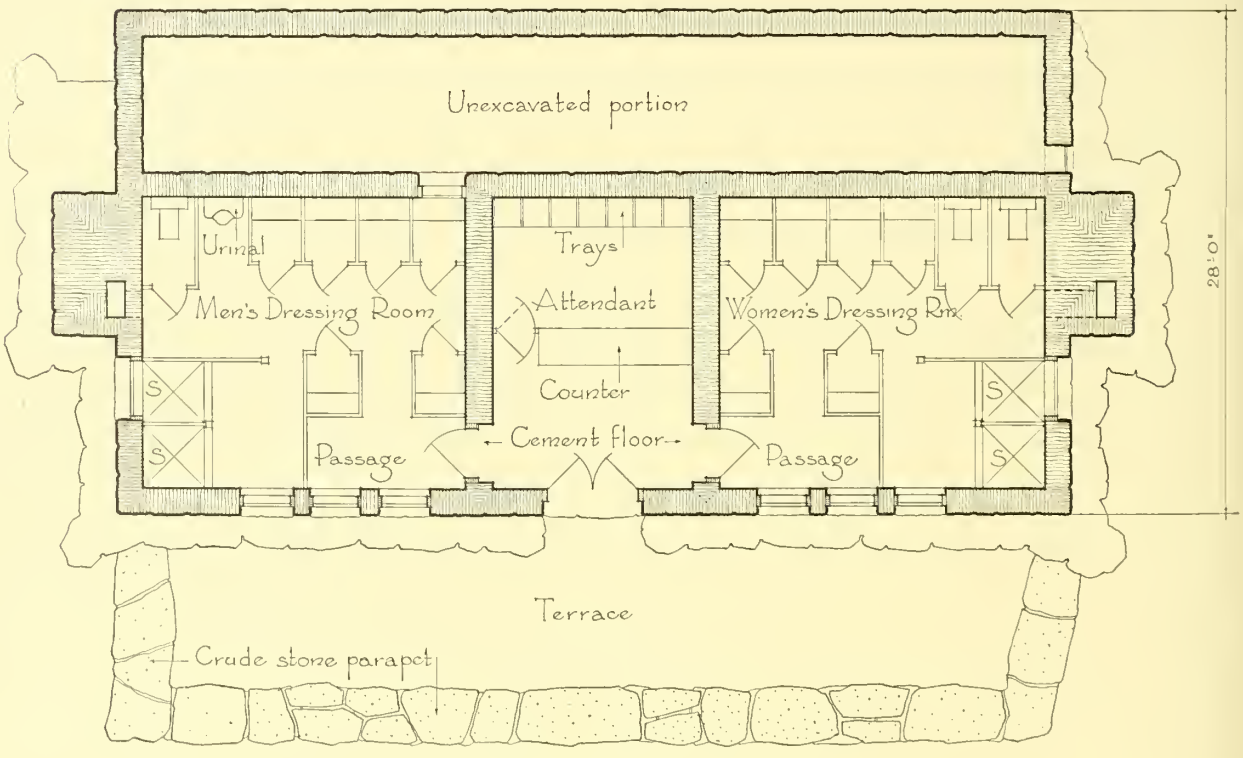
The plans on this page indicate the lower floor devoted toilet facilities and dressing rooms for bathers, the upp floor to shelter concession space and enclosure for wa storage tank. The extreme batter of the ragged rock w is interesting

Bathhouse and Shelter, Crowley's Ridge State Park, Arkansas

Bathhouse and Shelter, Crowley's Ridge State Park, Arkansas



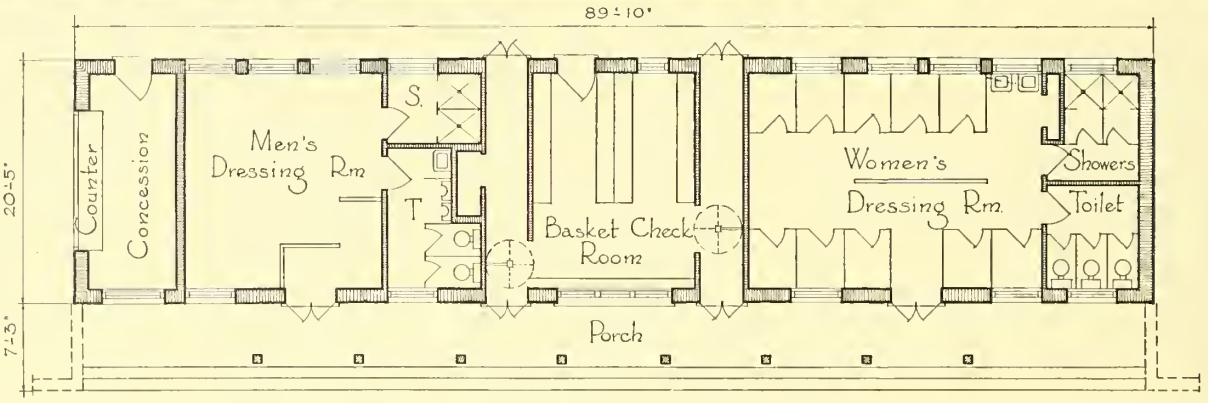
FIRST FLOOR PLAN
Scale 3/32" = 1'-0"



GROUND FLOOR

Bath-house and Shelter, Petit Jean State Park, Arkansas

Apology for the presence in a natural park of a structure so appealing as this need not be profuse. It is possible that this building, as here presented, is a triumph that the designer must share with the photographer. If aesthetic shortcomings are present the quality of the photographs blinds us to them. Here are found complete harmony with surroundings and a primitive informality that is an enviable accomplishment. The steep slope makes both shelter with concession space above, and bathhouse facilities beneath, directly accessible from grade levels. On the facing page are shown the plans.



FLOOR PLAN

Scale $\frac{1}{16}$" = 1'-0"

Bath House, McCormick's Creek, Indiana

This bath house serving an artificial pool is highly practical in arrangement. One attendant centrally located can wait on both men and women customers, who, upon payment of the fee, enter the fenced-in pool area by one-way turnstiles, then re-enter the dressing rooms. Booths serve the women, open dressing space the men. The absence of di infecting foot bath between dressing rooms an pool will properly be questioned. The archite tural feeling of the building is agreeable, althoug rather more finished than is usual in natural par areas.

BOATHOUSES *and* LANDINGS

Boathouses which do not incorporate other park facilities are the exception rather than the rule. Structural facilities providing for boating and bathing are so often housed under one roof, resulting in a combination building designated a water front building, that it might have been quite as reasonable to institute one such classification in lieu of the two actually used. Sometimes linked with the boathouse, is a shelter, effecting increased usefulness to the boating public.

In no other park building is the foundation of such importance as in the boathouse. It can be only as long-lived as its substructure, and the hazards of high water and swift current, and the threat from ice in northerly climates, should be appraised and guarded against in construction. Here economy in construction is by no means to be considered a virtue below the high water level.

The boathouse proper implies space allocation for the storage of boats, for their painting and repair, and lockers for motors, oars, paddles and other boating gear, as well as the effects of the boaters while they are on the water. Inclusion of lounge, office space, and shower and toilet rooms depends largely upon the elaborateness of conception of the boathouse, its size, or its remoteness from such facilities elsewhere provided in the park.

In instances where the boathouse is built on a lake or river of widely fluctuating water level, due to tide or flood conditions, it must be built out from the shore line to accommodate the low water stage. In such cases an approach runway out from the shore line at high water is essential.

Some form of landing or dock is usually auxiliary to the boathouse. This may extend out to deep water to permit the mooring of larger craft, or merely to reach beyond the shore line at low water. Again, the landing may be more useful as a platform paralleling the boathouse on the water front side. Especially is this desirable where canoes must be pulled out of the water and berthed under cover when not in use. Where the water stage is variable within limitations such a dock or incline is often hinged to the boathouse structure and its outer edge permitted to float, so that the inclination varies with the rise and fall of the water level. Too wide a variation in water level will naturally preclude the use of such a landing. Another provision to meet the exigencies of a changing water level is a stepped landing. Rollers are especially useful in connection with an incline, which when steep and drenched with water, offers uncertain footing to those straining to haul a heavy boat ashore.

In instances of broad shallow beaches and varying shore line, a floating dock for mooring boats may be the best solution. Such a facility may or may not incorporate slips for small craft. Floated by means of logs, kegs, or other buoyage, it is connected with the shore by a runway. There is the advantage of mobility, for such a pier can be shifted about as conditions may require. Secure anchorage is vital to a landing of this type.

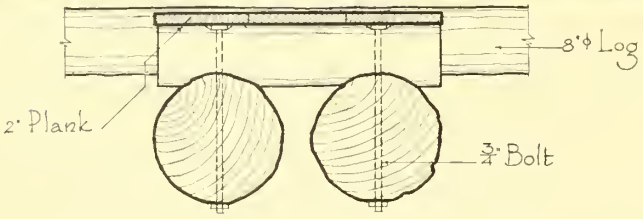
It is highly desirable to remove canoes from the water when not in actual use, and to store them indoors. It is usual to provide racks three tiers high for this purpose. The equivalent of barn doors on the water side of the boathouse gives the fullest possible opening to the platform or incline. The moving of canoes in and out with a minimum of damage to them is made possible by such an arrangement. Rowboats, other than delicate racing shells, are customarily kept in the water during their season of use and are berthed under shelter only out of season. Slips for each rowboat are, of course, the ideal provision.

The floors of the boathouse proper and of docks, runways and inclines in connection should be of woods that do not deteriorate rapidly when subjected to alternate drenching and drying out in the sun. Ample natural ventilation, and floor boards spaced well apart, will facilitate drying out and check the tendency to rot out quickly, so omnipresent in water front construction.

Mooring Float

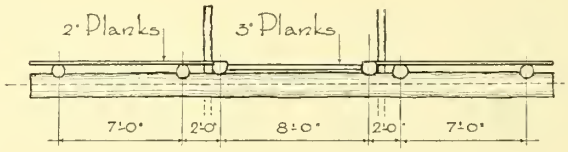
Moran Lake State Park - - - Washington

Here is a solution of the problem of docking small craft where the water level and shore line are variable. The buoyage for the slips is large logs. The runway from the shore, supported on fixed piers, is in sectional units, of which the one adjoining the float inclines with the changes in water level. Thoroughly practical, this example might well have had the aesthetic benefit of something of the character of the swimming float at Lake Guernsey State Park, Wyoming, elsewhere shown herein.

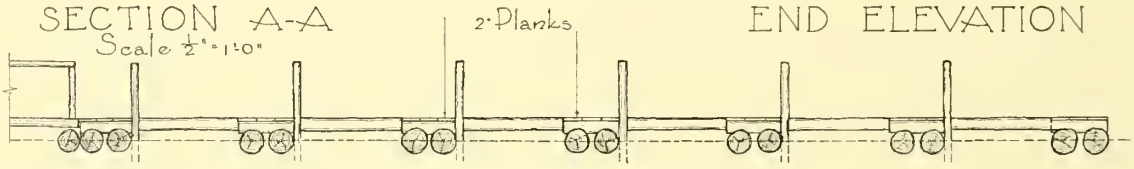


SECTION A-A

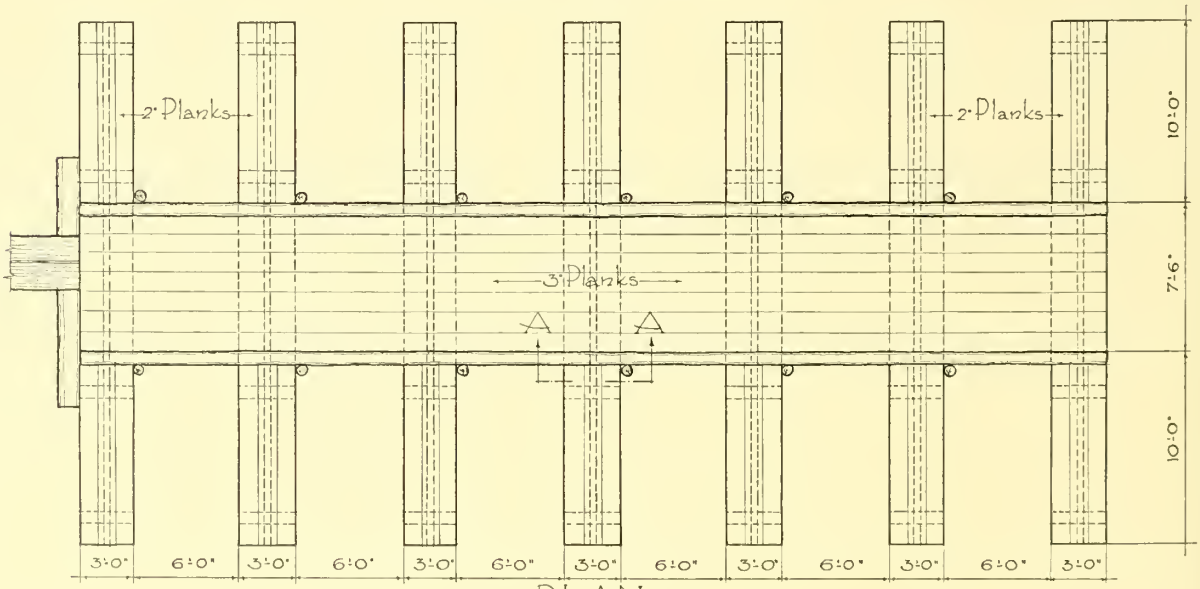
Scale 1½" = 1'-0"



END ELEVATION

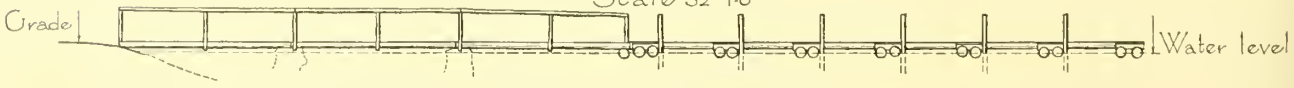


SECTION



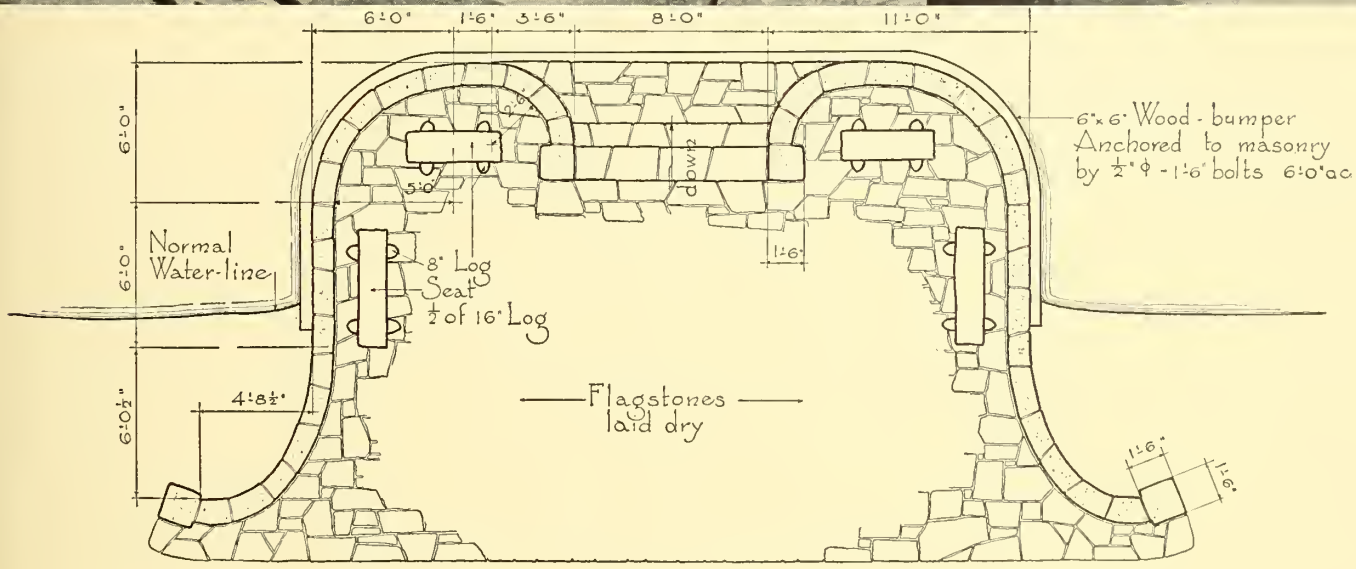
PLAN

Scale 3/32" = 1'-0"



SIDE ELEVATION

Scale 3/64" = 1'-0"

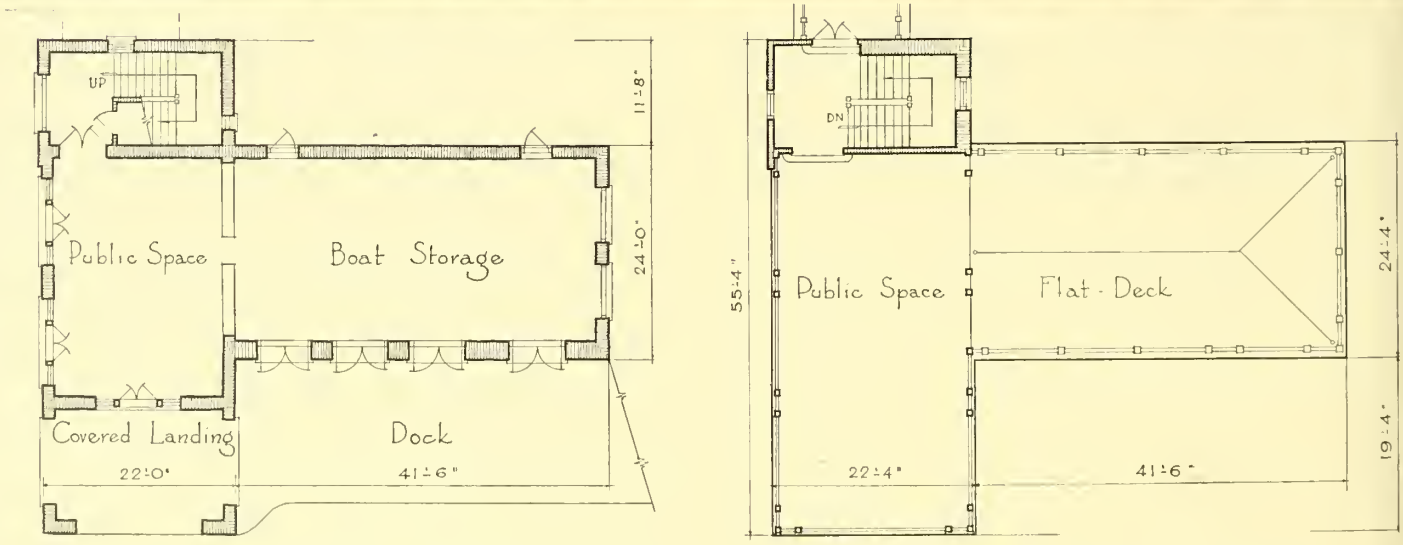


PLAN

Scale ⅛"=1'-0"

Boat Landing, McKinley Woods, Cook County Forest Preserve, Illinois

This water gateway is here pictured at a disadvantage, due to its state of incompletion. The log seats indicated in plan when added will agreeably interrupt the blank expanse of rigid stone work. Time and flood should do their part to break in this newcomer to the rough ways of the water front.



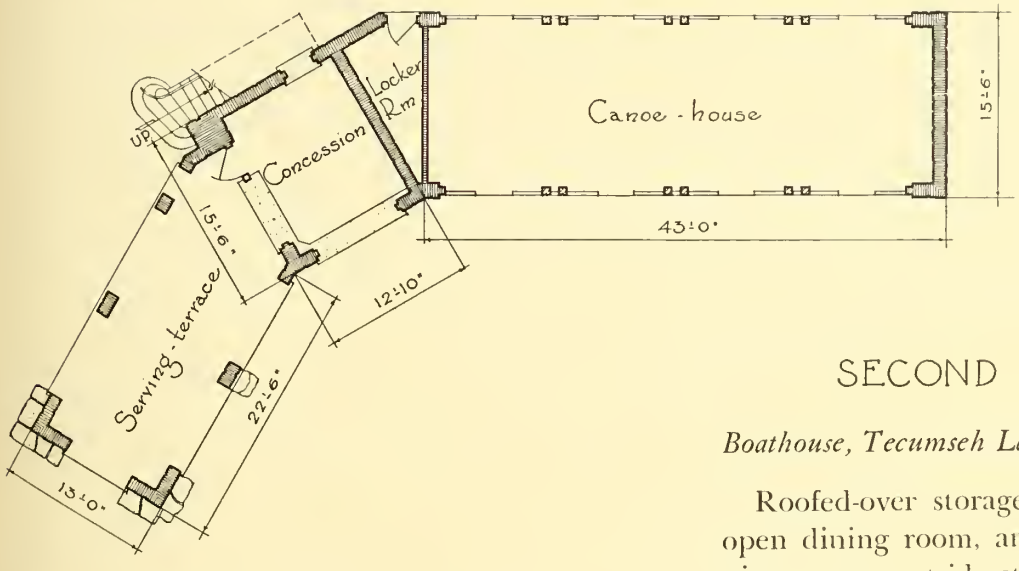
FIRST FLOOR PLAN

SECOND FLOOR PLAN

Scale $\frac{3}{64}$" = 1'-0"

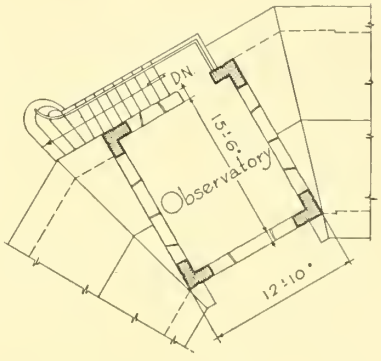
Boathouse, Woodlands Lake, Westchester County, New York

In the spirit of the restaurant concession at this park, shown elsewhere, and connected with it by the covered passage to the left in the illustration above. Boat storage is provided at the water leve and both open and sheltered lookout space at th level above.



FIRST FLOOR PLAN

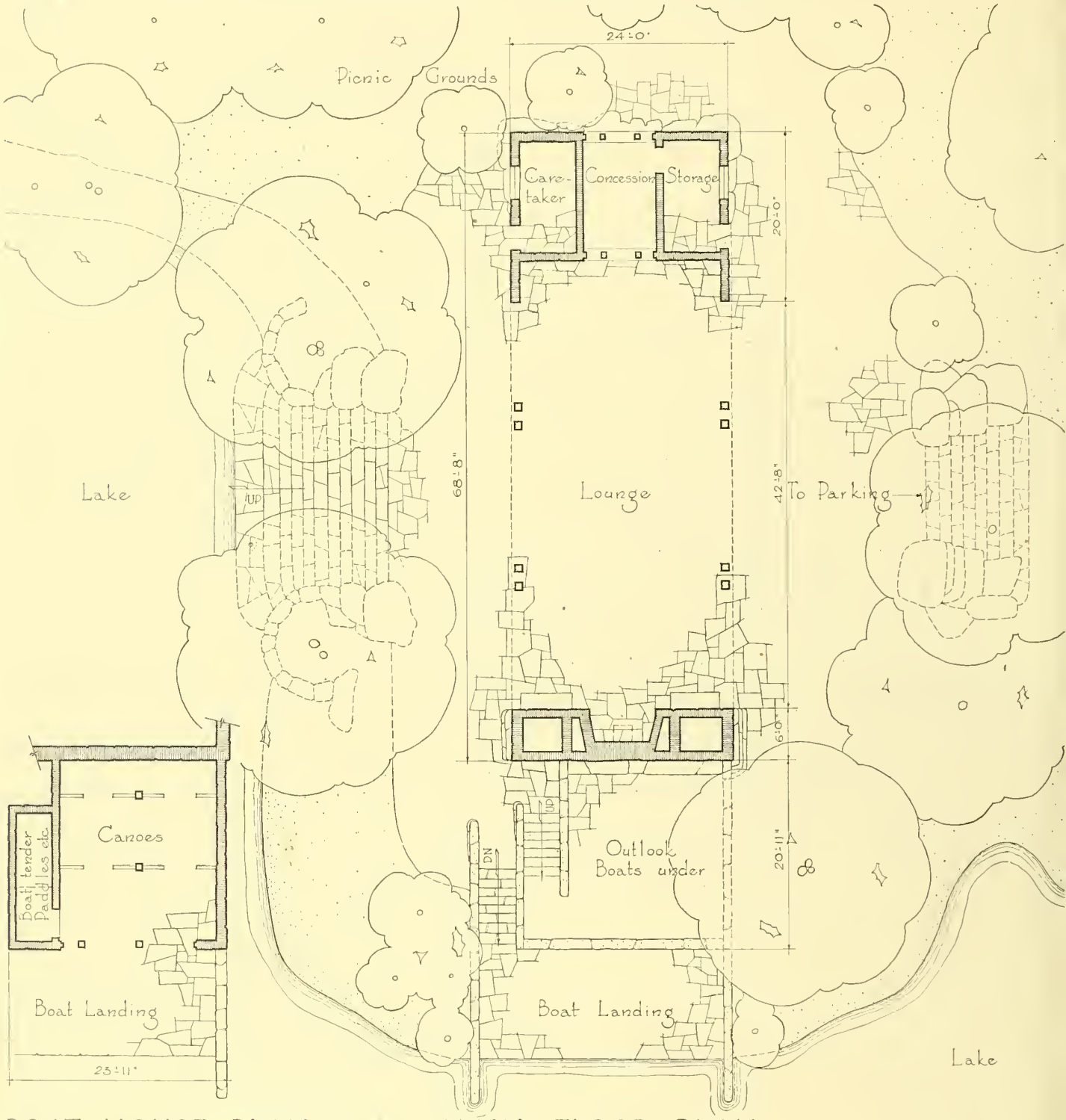
Scale $\frac{1}{16}$" = 1:0"



SECOND FLOOR PLAN

Boathouse, Tecumseh Lake State Park, Oklahoma

Roofed-over storage for boats, concession with open dining room, and observatory reached by a picturesque outside stairway, combine to produce a building of most agreeable form. The broad, stone-paved terrace on the lake side bordered by stone wall seems very much a part of the structure itself.



BOAT HOUSE PLAN
Under Outlook

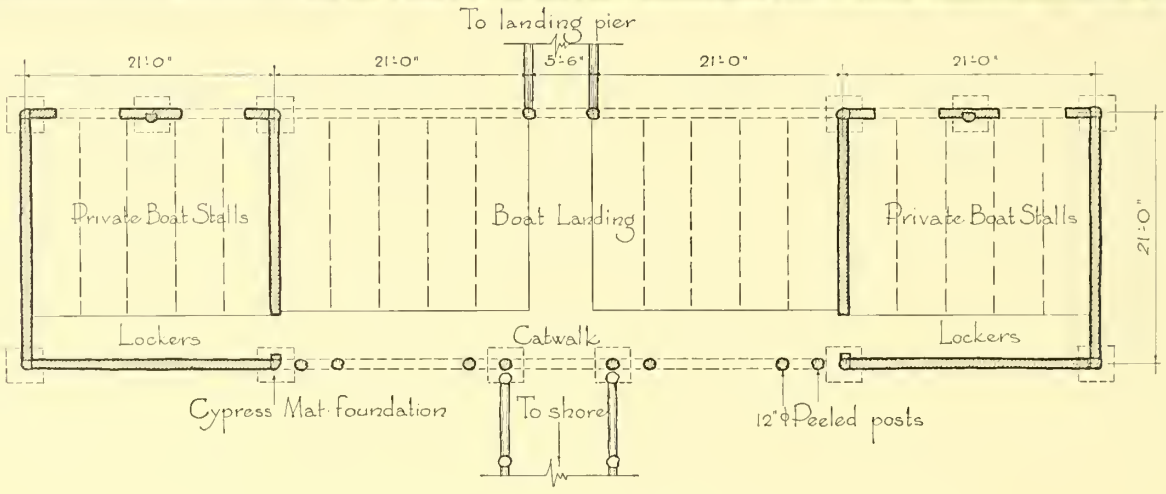
MAIN FLOOR PLAN
Scale $\frac{1}{16}$" : 1'-0"

Boathouse and Refectory.
Perry Lake State Park - - - - Oklahoma

An interpretation of sturdy park architecture that turns its back on the tight little patterns of precedent to the attainment of considerable distinction. Its long low lines massive dominant chimney, the structurally forthright ma sonry and the broad stone steps that closely link the struc ture with the environs-all are factors that inspire admira tion. The employment of several levels shows a nice atte tion to the requirements of site.

Boathouse and Shelter, Perry Lake Metropolitan Park, Oklahoma

Boathouse and Shelter, Perry Lake Metropolitan Park, Oklahoma



FLOOR PLAN
Scale 1/16"-1'-0"

Boathouse, Caddo Lake State Park, Texas

This boathouse of log construction, on a lake subject to flood stages, meets this condition by the provision of a runway to the high water shore line. Opposite this, a landing pier is extended to meet the condition of low water. Both enclosed storage and merely roofed shelter for boats are furnished. The building is well suited to its wooded location. Masking of the piling by a curtain wall of vertical poles or slabs to well below the low water level gives substantial appearance to the substructure.

COMFORT STATIONS *and* PRIVIES

A PARK PLANNER of long experience in the field of State Park work, Mr. Paul V. Brown, writes, "Toilets are the most important structures built in a natural park. If we were to provide only safe water and proper toilets, we would accomplish the essentials of development of these areas. Those who will not lead the field in proper sanitation should get out of it and allow those who are not ashamed to be proud of their toilet buildings to take over."

In general usage any distinction between "comfort station" and "privy" may be merely one of gentility of phrase. Within this discussion, and perhaps more generally distinguishing than is assumed, "comfort station" applies to flush toilet facilities and "privy" to non-flush toilet facilities.

While the plates which follow illustrate both comfort stations and privies, it is elected to discuss herein and but briefly the former and more modern facility, which, because of the higher standard of sanitation maintaining, is the type recommended for adoption in parks wherever possible. An earlier publication of the National Park Service, "Privies and Comfort Stations" covers in great detail the construction and maintenance of privies, and is an available source of complete information for those who are concerned with the more primitive types of toilets.

In the comfort station we have another facility that should not be taken seriously as a landscape or architectural feature until every demand of sanitation and practical need has been properly met. Economy in fulfilment of these requirements makes absurd any indulgence of a too impetuous urge to dress up the structure. The comfort station that is not a part of a building housing other park facilities is very properly so subordinated by location that there is no reason for embellishing the structure to a studiously park-like character. The preferable and usually more effective alternative is to screen both building and approach to it by planting and through careful choice of site. The comfort station is often incorporated in a park building that combines other park needs. Linked up with a shelter or concession building, or as part of a multiple-use building designated as administration, it is forced to a certain elaborateness of dress that, as a half hidden separate entity, it does not require.

The paramount practical need of proper sanitation implies first of all thorough knowledge of, and strict compliance with, all laws, ordinances and other regulatory provisions of governing and jurisdictional agencies. Beyond these are other considerations which may not be disregarded. If the comfort station is located where freezing temperatures prevail during the winter months, and if during that season it is not to be heated, there must be provision for ready and complete drainage of water from all piping and fixtures. The importance of smooth and impervious materials for floors, walls, partitions and other such interior surfaces should not be minimized. Funds tend to be scant enough for the cleaning and maintenance of readily cleaned and durable materials, and are certainly hopelessly less than adequate for the upkeep of materials without such merits. Ease of cleaning will determine the degree of cleanliness that will prevail over the long run. In consequence, any conscious effort at rusticity in suiting the exterior of the comfort station to park environment, should be just as consciously forsworn on the interior. Equipment and materials conforming to present day standards of sanitation should be adopted for all details.

When comfort stations are a part of buildings housing several facilities, it is generally desirable that direct outside entrance to them be provided in addition to any inside communication. Some park patrons may feel reluctant to make use of toilets that require approach through what may not be conspicuously enough a public space, such as a restaurant concession which might imply availability only to patrons of the concession. If intended for

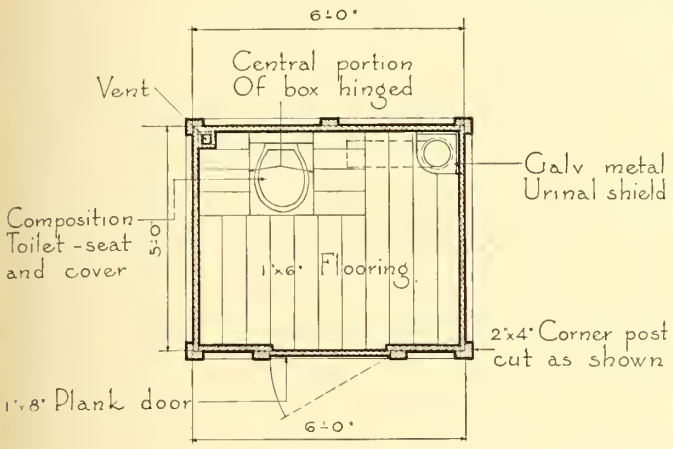
free use by the general public there should be no confusing of the fact of accessibility.

In the case of the comfort station there is obvious saving in cost to result from grouping men's and women's toilet rooms under one roof. When the facilities are of the privy type, separate structures for the sexes can be built at but little greater cost, and this is recommended. Privies are apt to be less soundly constructed than comfort stations. Therefore, greater distance between the men's and the women's toilets is desirable.

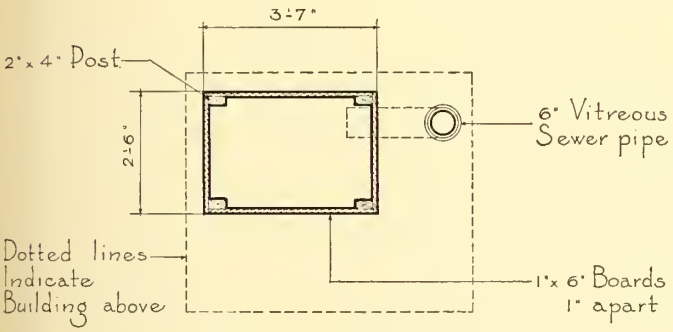
When comfort stations or privies serve both sexes under one roof, the arrangement of the separate entrances so that each section is suitably remote from the other is important. If on opposite sides of the building, the maximum in desirable separation of the approaches of course results. The approaches and entrances should be clearly marked. A substantial soundproof partition should completely separate the two toilet rooms. Unless vestibule and properly swinging door break the sight lines into the toilet rooms, an effective exterior sight barrier in the nature of a wall, trellis, or stockade must be provided to screen the entrance opening.

Toilet buildings, whether comfort stations or privies, must be well lighted and ventilated, and properly protected from the weather. Windows should be placed above the eye line for privacy. When not so placed, and obscure window glass is resorted to instead, the windows can often be opened in summer only with sacrifice of privacy, or remain closed at a sacrifice of ventilation. Windows should so operate that it is possible to equi them with insect screens on the outside. A mo practical toilet room window is hinged at the bo tom to open inward with chain fastening, whic gives some measure of protection against rain, win and snow, while providing continuous ventilatio and opportunity for a screen on the outside. I milder climates, and elsewhere when winter use not intended, there is a current tendency to mak use of louvres rather than windows. These give desirable maximum of ventilation, and may also b screened as effectively as windows against insect However, unless louvred openings are very gene ously provided the rooms are apt to be insuff ciently lighted. Because ample light and ventila tion are prerequisites of a clean and well-main tained room and go far to curb abuse by the usin public, an abundance of window or louvred are is to be sought.

Doors to toilet rooms should always be self-clo ing, by the employment of a high-quality doo closer if possible, or failing this, a less costly bu positive substitute device. If window or othe openings are screened, door openings should c course be fitted with screen doors. The ventilatio in summer will be greatly helped. All screenin in equipment of toilet rooms must be at least fou teen wires to the inch, and preferably finer. Whil galvanized or black enameled wire cloth is sati factory for the more temporary buildings, bronz or copper employed for permanent structures wil by their longer life, more than offset the greate initial cost.



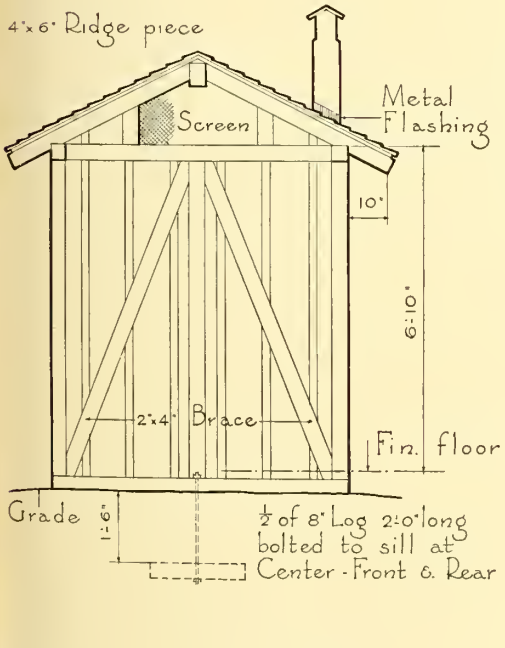
PLAN



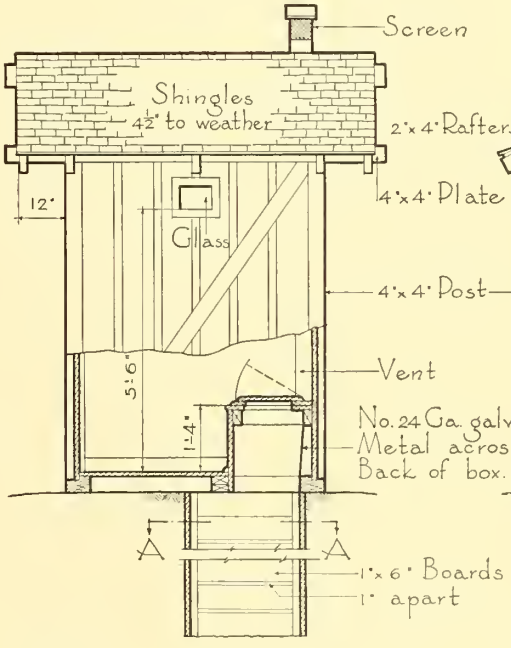
PLAN AT "A-A"

Privy - Mt. Tamalpais State Park - California

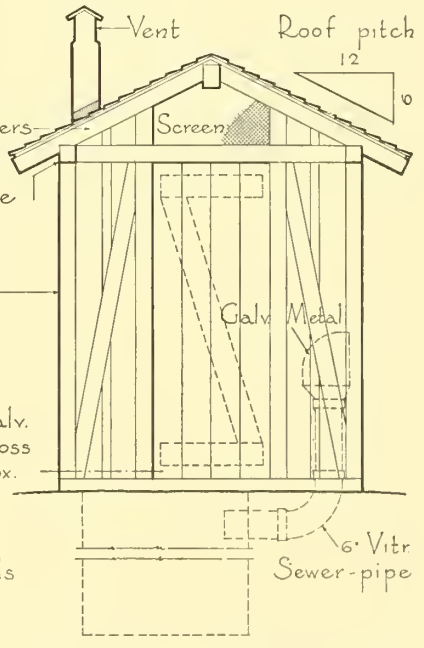
An unpretentious housing of toilet facilities that, with the benefit of properly retired location, would not be unsuitable in parks over a wide area. Its simple exterior is free of strictly regional characteristics. It can be built at small cost and is not unsightly. The wide overhang of the roof shelters the ventilation openings but makes for a dark interior where other light admission is as limited as here.



REAR ELEVATION



SIDE ELEVATION



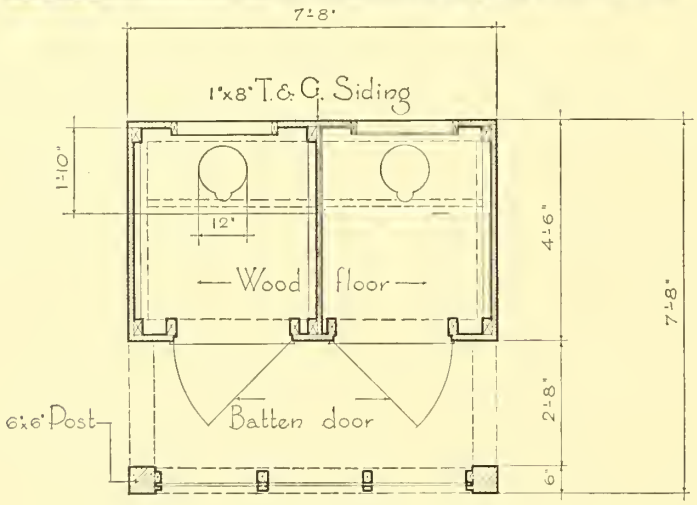
FRONT ELEVATION

Scale ¼" - 1'-0"

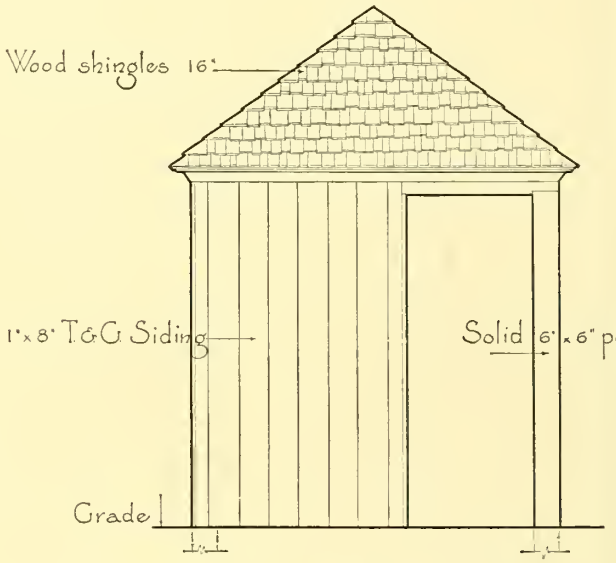
Privy

Egg Harbor River Parkway – Camden County – New Jer

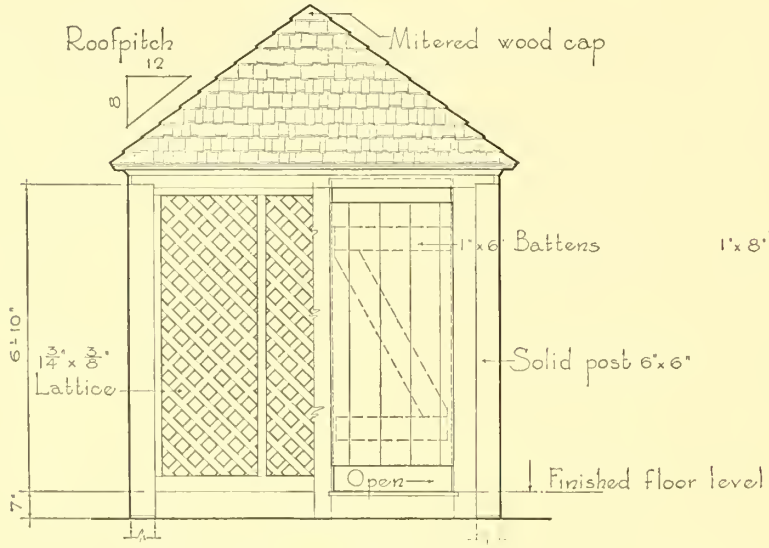
This privy is so unassuming and decorous in its externa
hardly to be an offense in any location, retired or not.
the simplest expression of the type which allows direct
side entrance to each toilet stall, and might be expanded
definitely to include more than the two stalls here shown.
screening of the doors by lattice is a desirable feature.
trim cornice is especially appropriate to so small a build



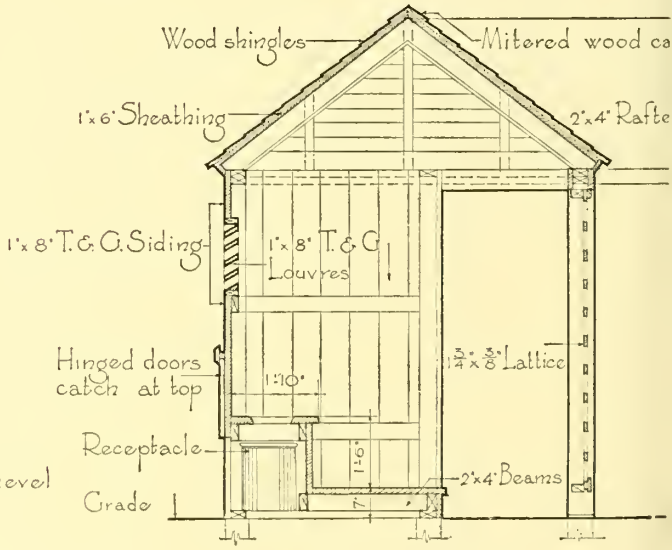
PLAN



SIDE ELEVATION

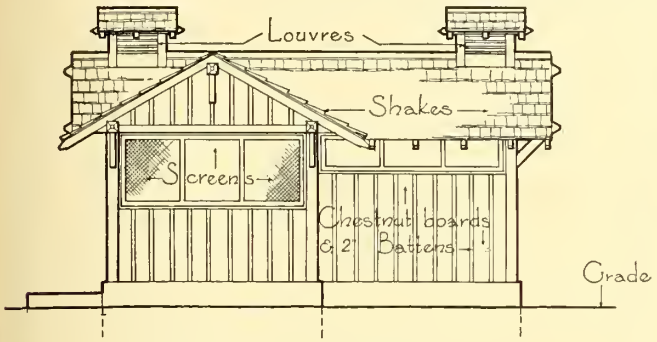


FRONT ELEVATION

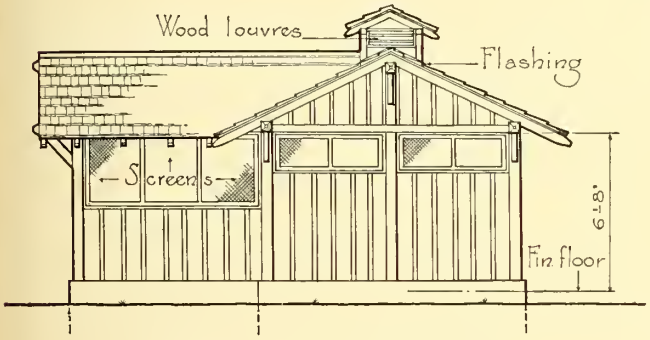


Scale ¼" = 1'-0"

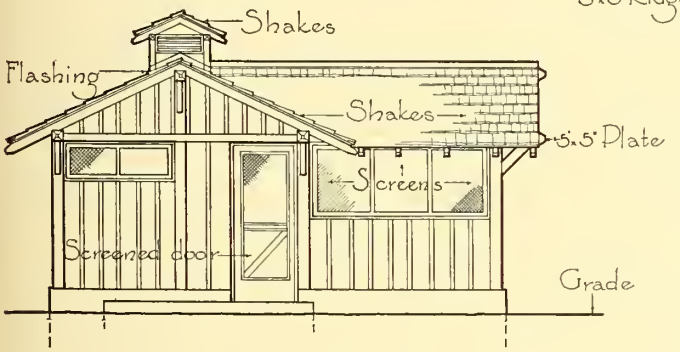
SECTION



SIDE ELEVATION



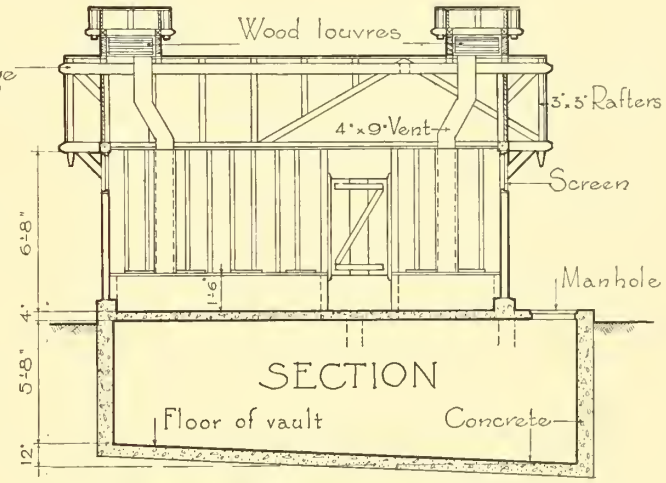
REAR ELEVATION

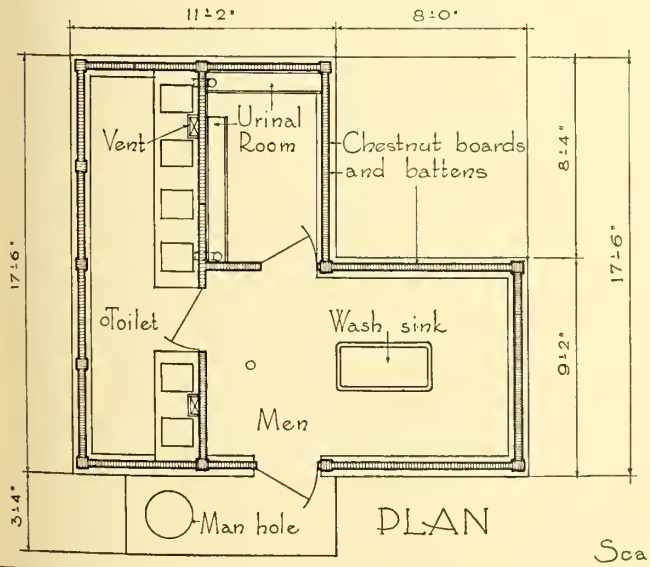


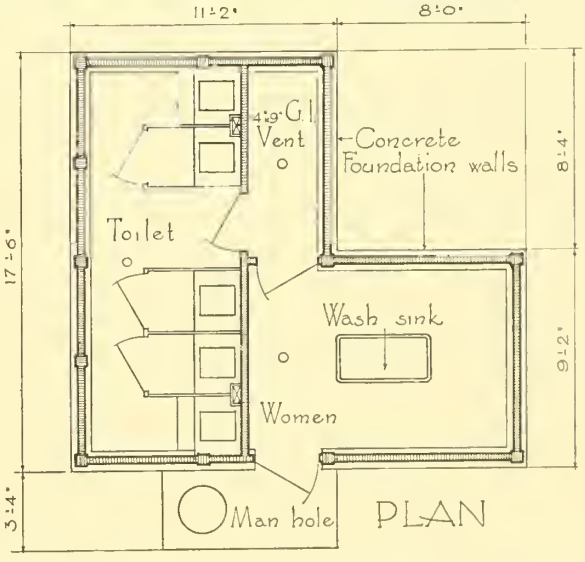
FRONT ELEVATION

Privy - - Virginia Kendall State Park - - Ohio.

Pit privy that is well-lighted, well-ventilated, and definitely suited to a woodland setting without straining at too primitive "nativeness". Men's and women's units are closely similar, except as to plan arrangement. The not inconspicuous ventilators jauntily straddling roof-comb may provoke argument.



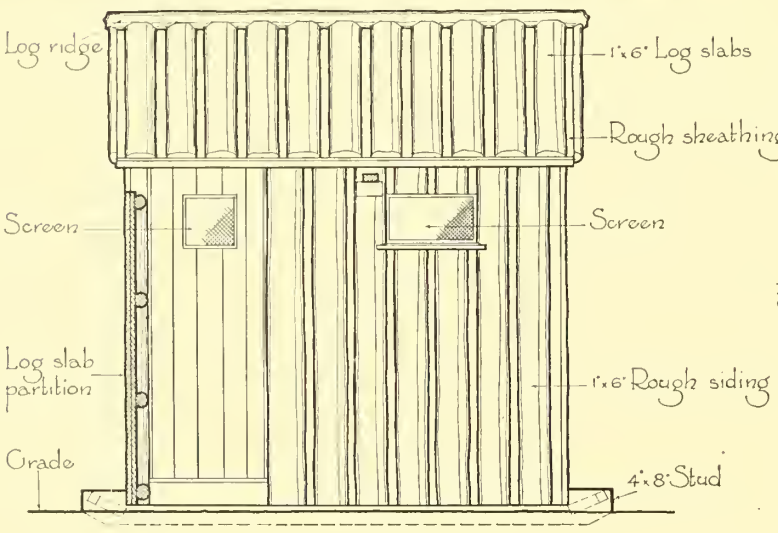




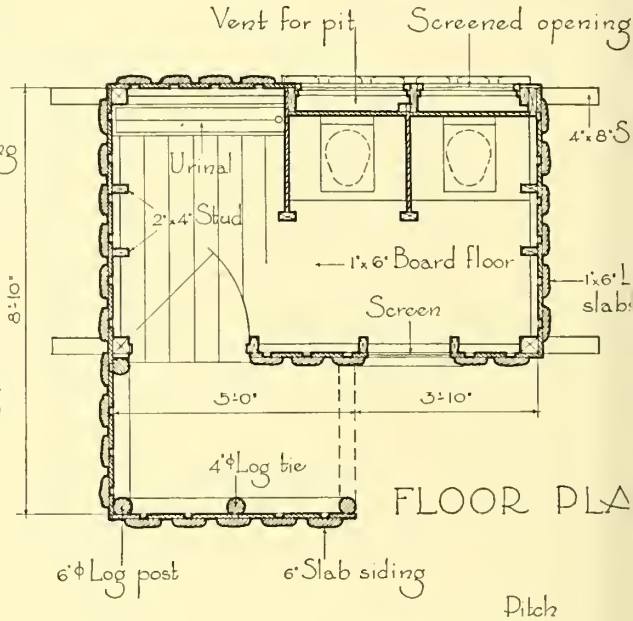
Scale 1/8" = 1'-0"

Privy - - Marseilles State Park - - Illinois

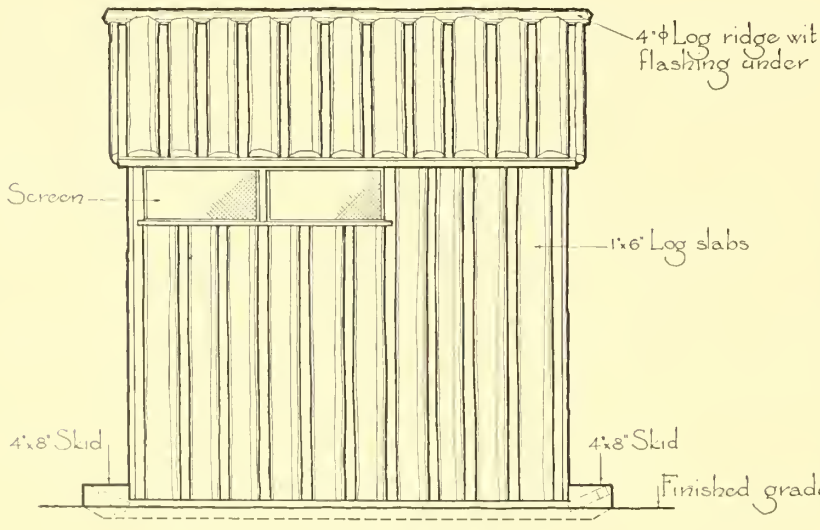
In connection with a picnic area which must be shifted perio dically for purposes of recuperating a wornout site, a toilet facility on skids capable of being moved readily is of great practical advantage. The construction of slabs applied ver tically over sheathing boards is one that gestures in the di rection of pioneer woodcraft character at economical cos The entrance door is well-screened by the stockade barrier



FRONT ELEVATION

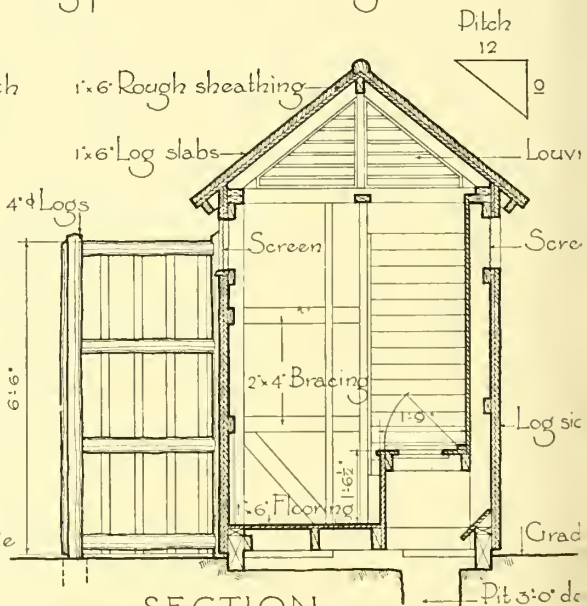


FLOOR PLA

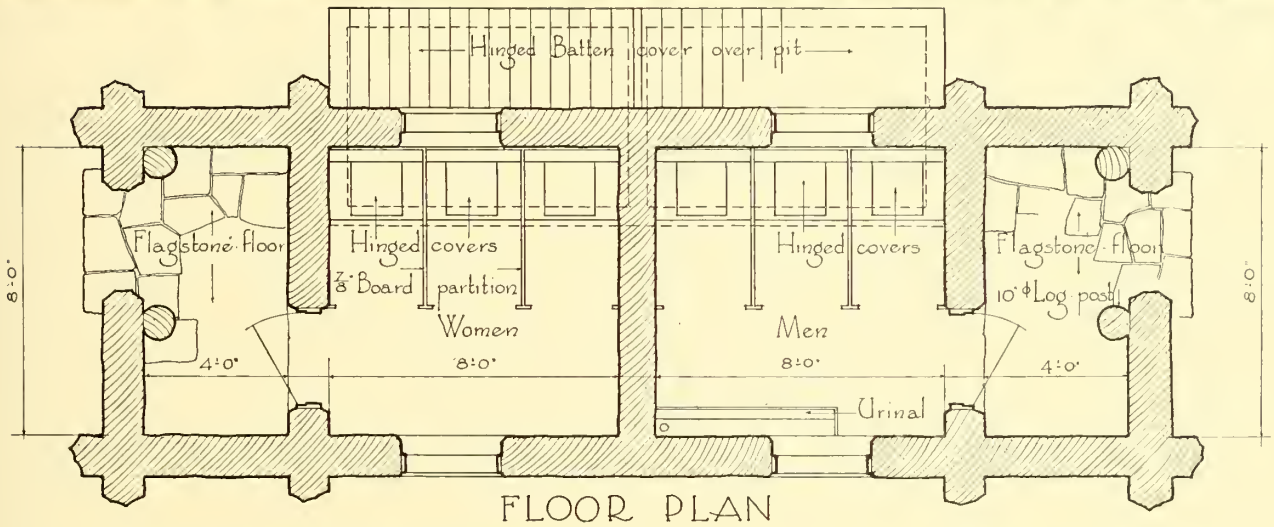


REAR ELEVATION

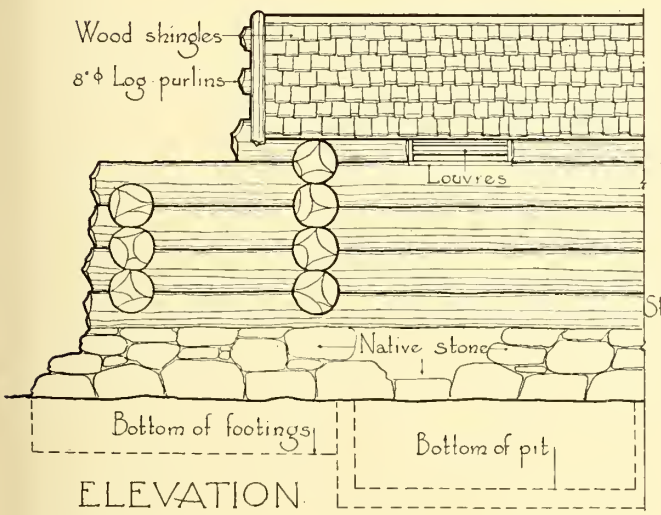
Scale 1/4"-1'-0"



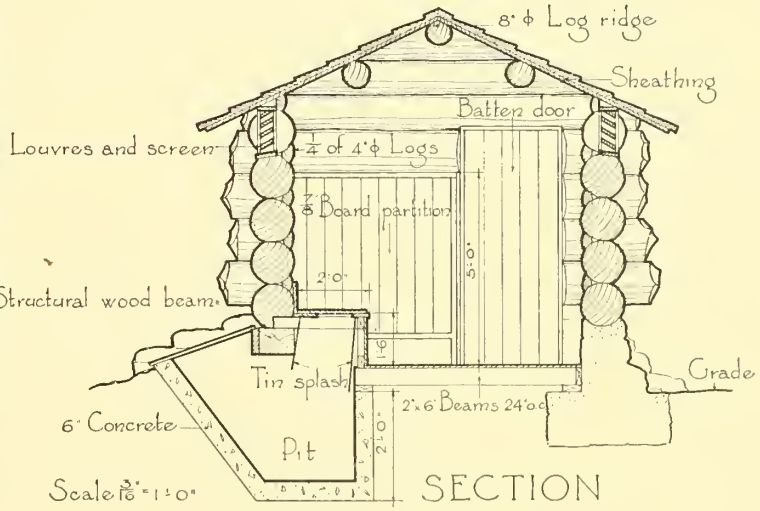
SECTION



FLOOR PLAN



ELEVATION



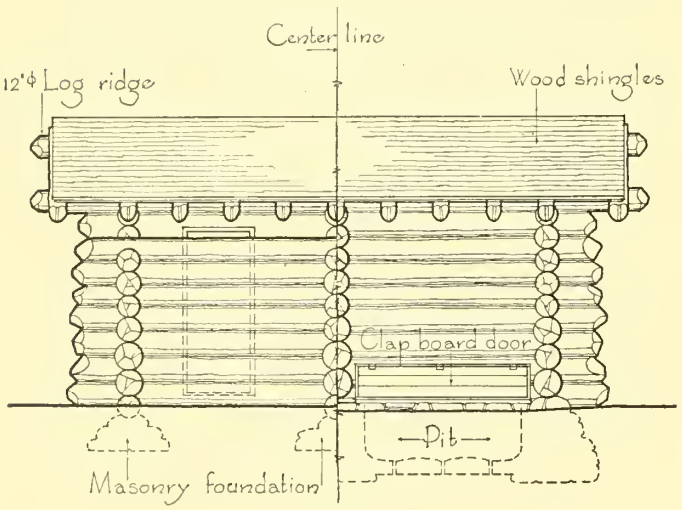
SECTION

Privy – Custer State Park – South Dakota

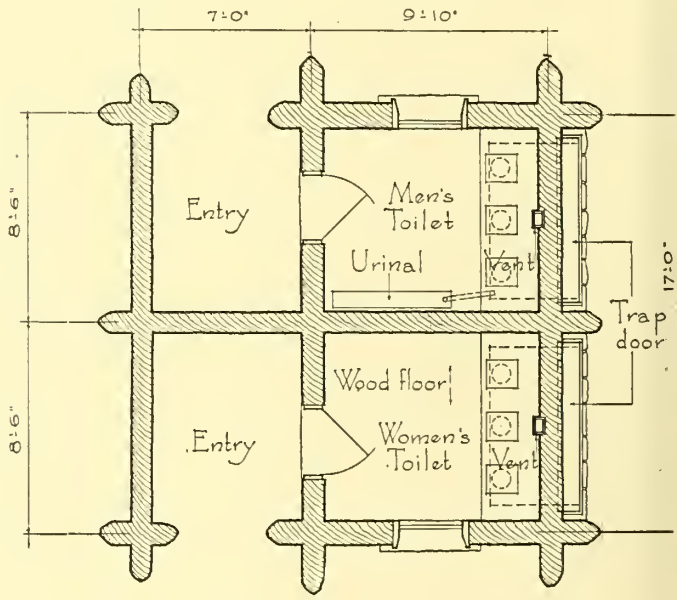
Employed in a lowly privy, here are quality and scale in log work that might well serve as models for more ambitious structures in parks. The shake roof, blunted log ends and casual foundation wall contribute to the highly pleasing total effect. There is an apparent lack of adequate provision for light and ventilation.

Privy – · Fargo Metropolitan Park – · North Dakota

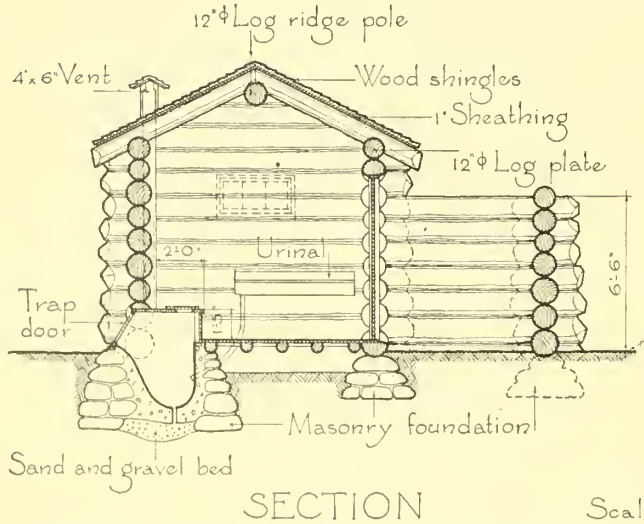
A free-hand rendering that does not suffer from over-application of the straight edge or other precision tools. The roof surface is in nice relationship to the virile log construction. From a practical viewpoint there is insufficient light and ventilation. Log shrinkage in the partition wall may result in a disturbing lack of complete obstruction to sight and sound. Logs do not offer the utmost in cleanability for the interior of a latrine building.



HALF FRONT & REAR ELEVATION

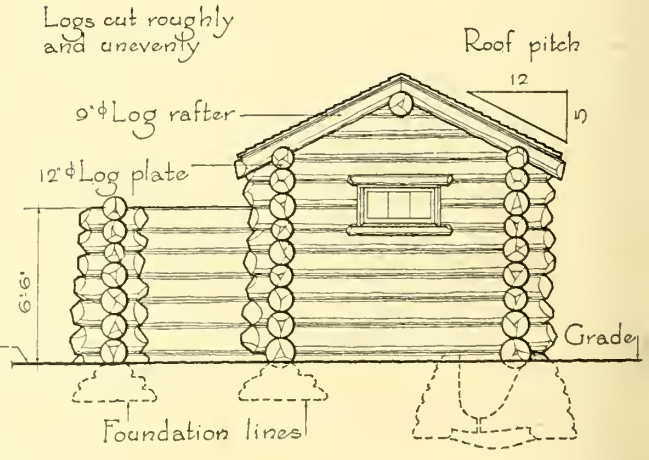


FLOOR PLAN

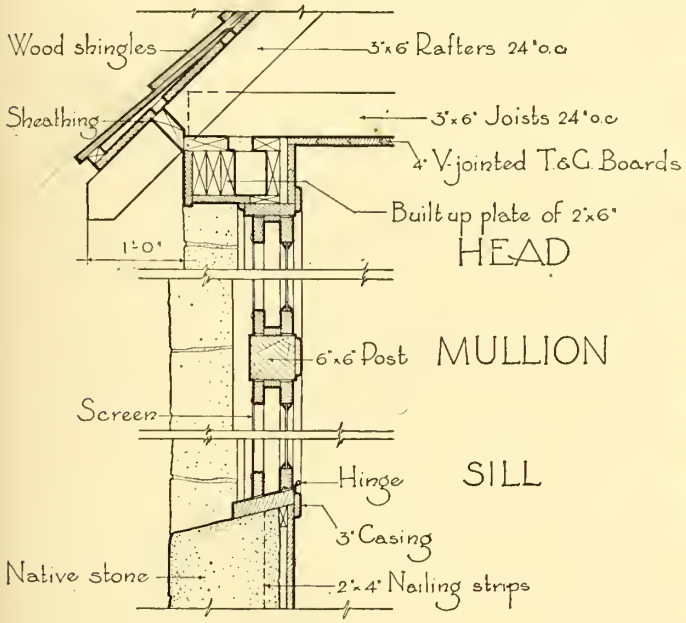


SECTION

Scale ¼"=1'-0"



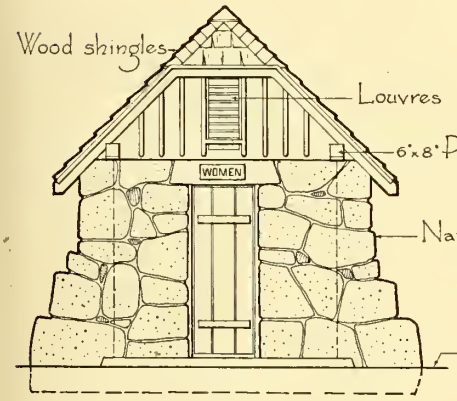
SIDE ELEVATION



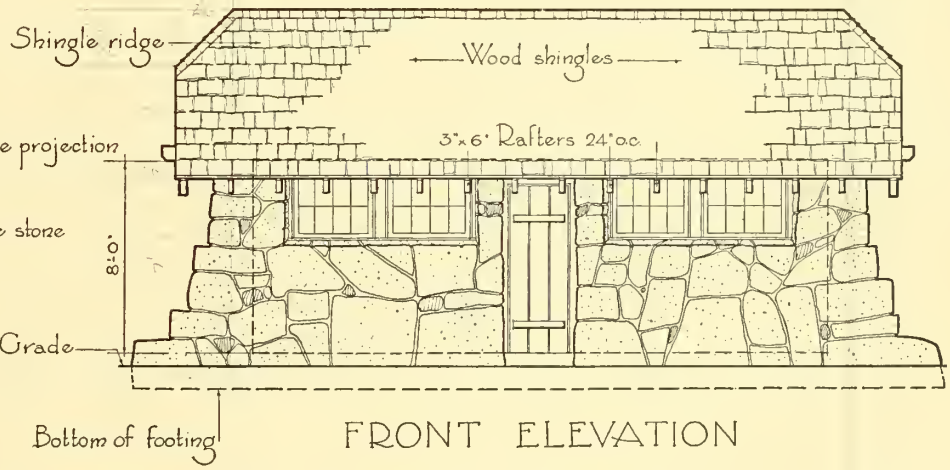
WINDOW DETAIL
Scale ½"=1'-0"

Comfort Station
Union Point - - - - Yosemite National Park

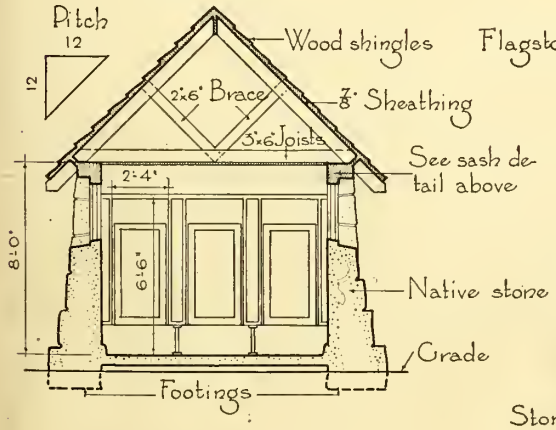
Here is exemplified the maximum of separation between the approaches to men's and women's toilets located within one building. The utility space between the two sections is highly practical not only in providing storage space for supplies and greater accessibility to piping, but in furnishing a more positive baffle to the transmission of sound than would prevail if the units were separated by a single wall.



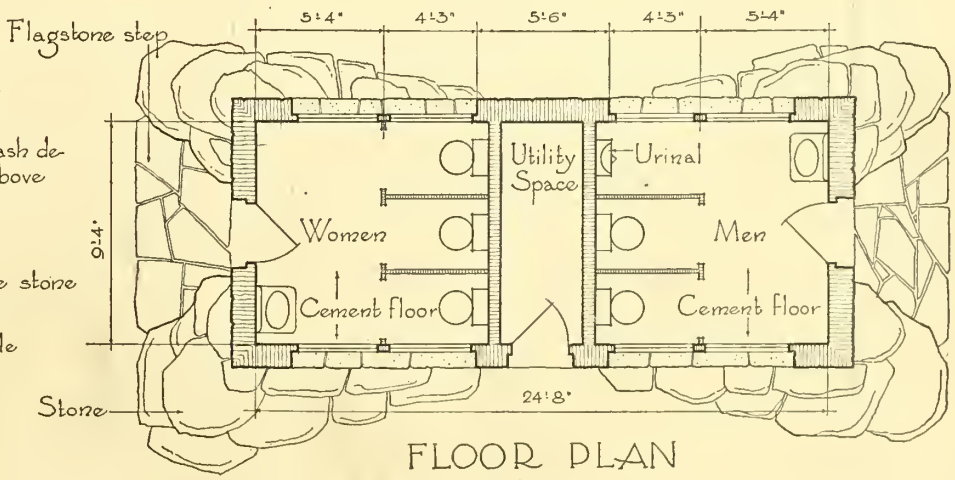
SIDE ELEVATION



FRONT ELEVATION



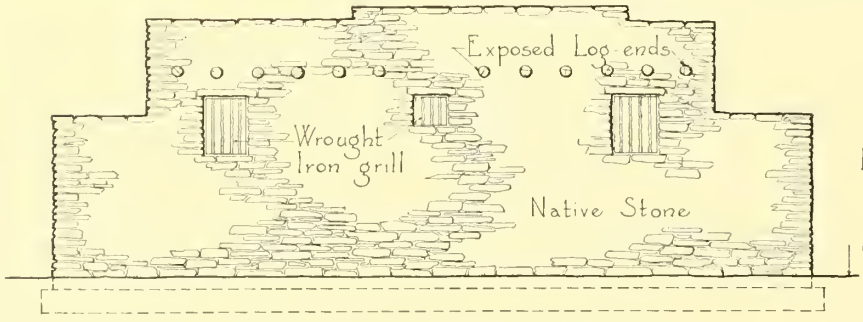
SECTION



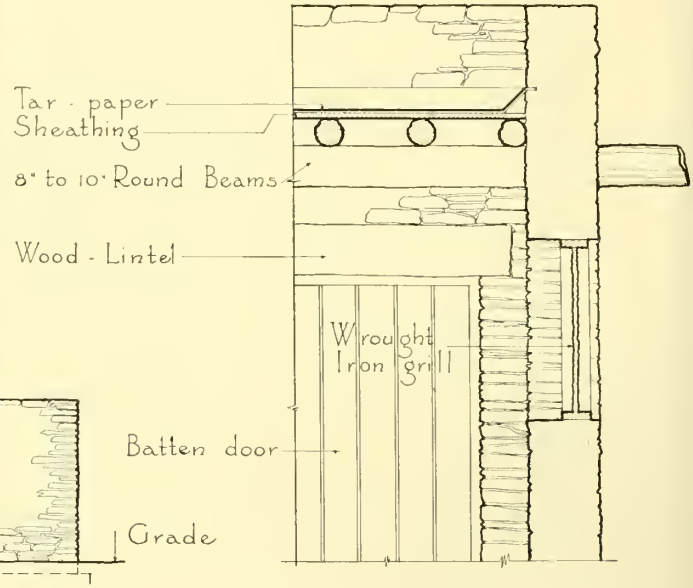
FLOOR PLAN
Scale ⅛"=1'-0"

Comfort Station
Phoenix South Mountain Park. - - - Arizona

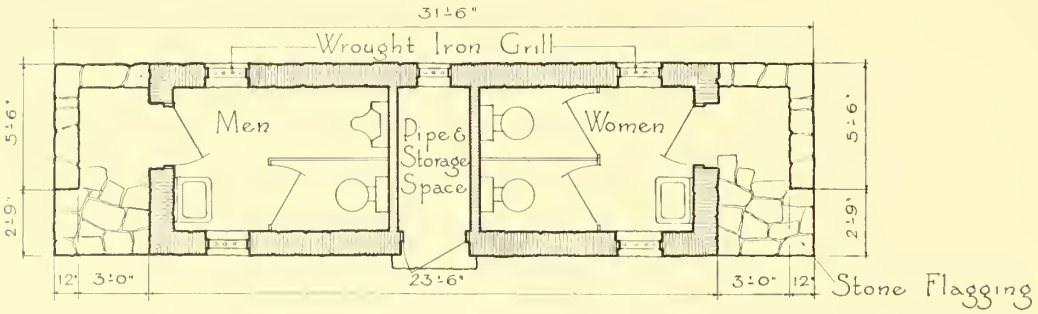
A comfort station styled to the historic background of the Southwest. Denied the decent retirement that should be the right of every comfort station, and offered by site and materials scant opportunity for blending with its sparse immediate surroundings, it can claim merit for it self alone. It is direct, dignified and pleasing in the character of the stone masonry.



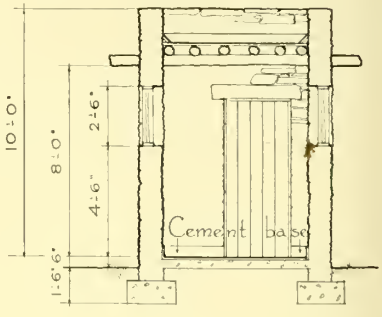
REAR ELEVATION



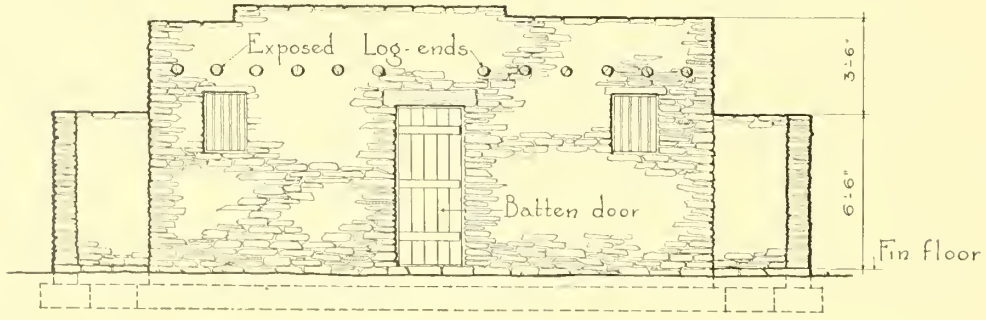
DETAIL
Scale $\frac{3}{8}$"=1:0"



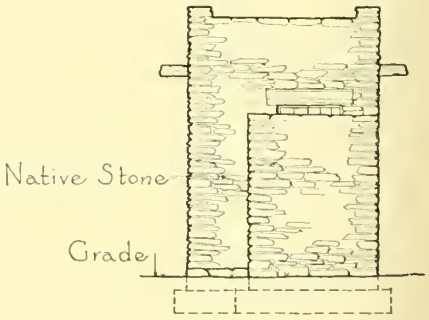
PLAN
Scale $\frac{1}{8}$"=1:0"



SECTION



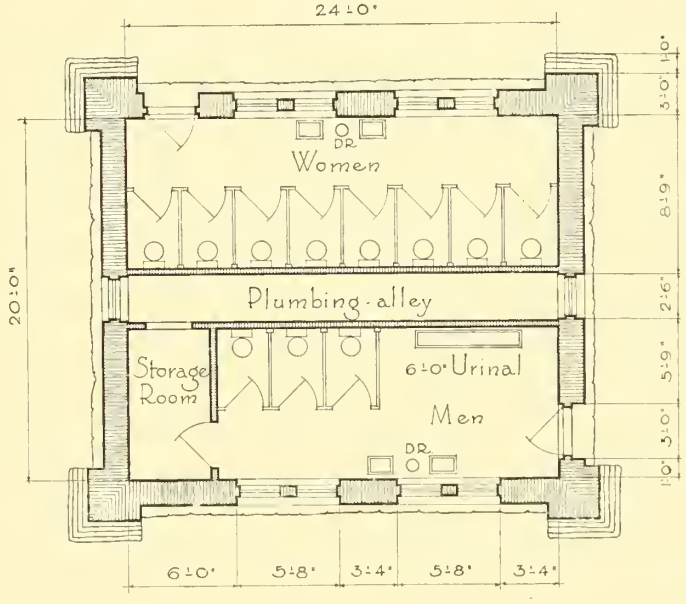
FRONT ELEVATION



SIDE ELEVATION

Comfort Station, Logan Pass, Glacier National Park

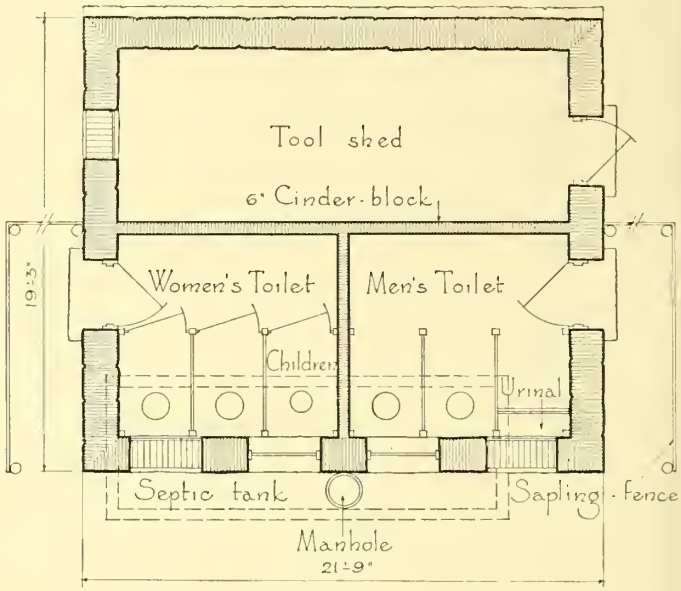
Here is a comfort station of considerable size, the exterior treatment of which is no less than very highly distinguished in its appropriateness to site. The degree of this accomplishment is hardly exceeded by any other subject herein illustrated. The bold masonry of heroic scale, projecting pole beams and rafters, and the skillful blending with the rugged terrain are important contributions to this completely satisfying structure.'



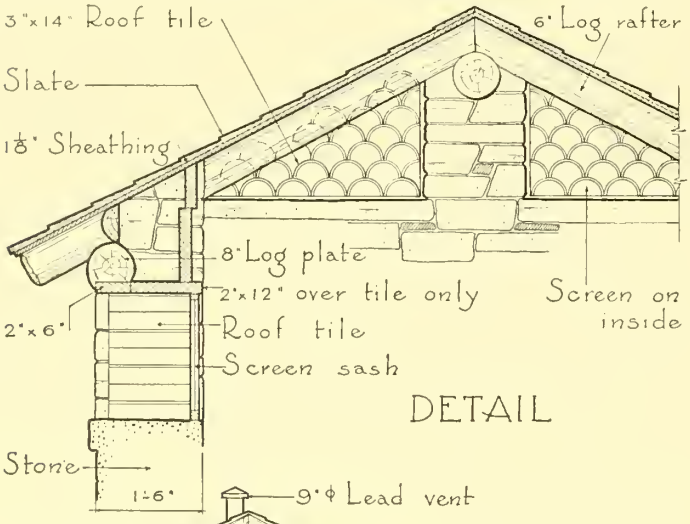
FLOOR PLAN
Scale $\frac{3}{32}$ = 1'-0"

Privy – Saxon Woods – Westchester County New York

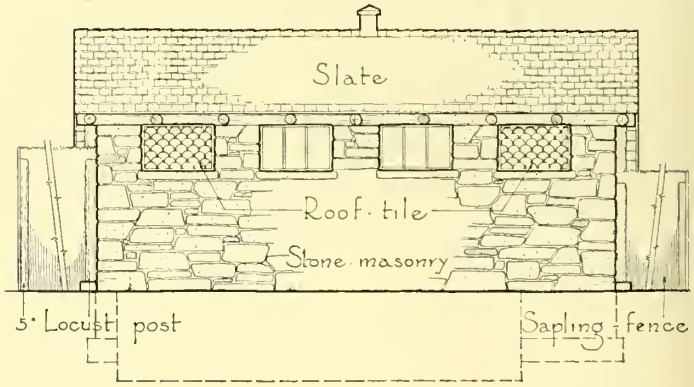
A highly pleasing structure whose permanent appearance presupposes something better than chemical toilet facilities. Probably these will be replaced eventually with a water-borne sanitary system and fixtures. The masonry is excellent and the ventilation provided by half-round roofing tiles in fish-scale pattern, interesting. The sapling fencing furnishes barrier to vision. This type of enclosure has considerable park like character, but has been surprisingly little used in our parks



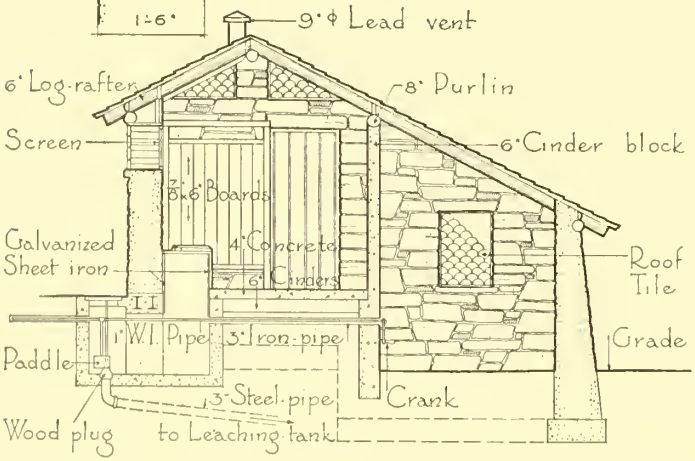
FLOOR PLAN



DETAIL

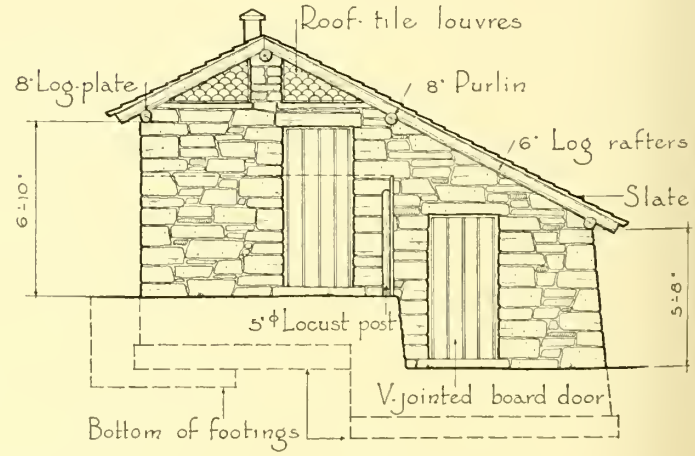


FRONT ELEVATION



SECTION

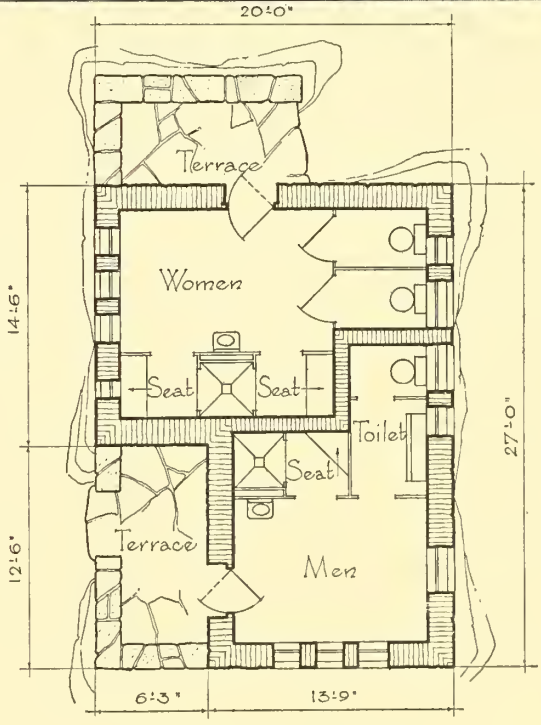
Scale 1/8" = 1:0"



SIDE ELEVATION

Comfort Station and Bathhouse, Bastrop State Park, Texas

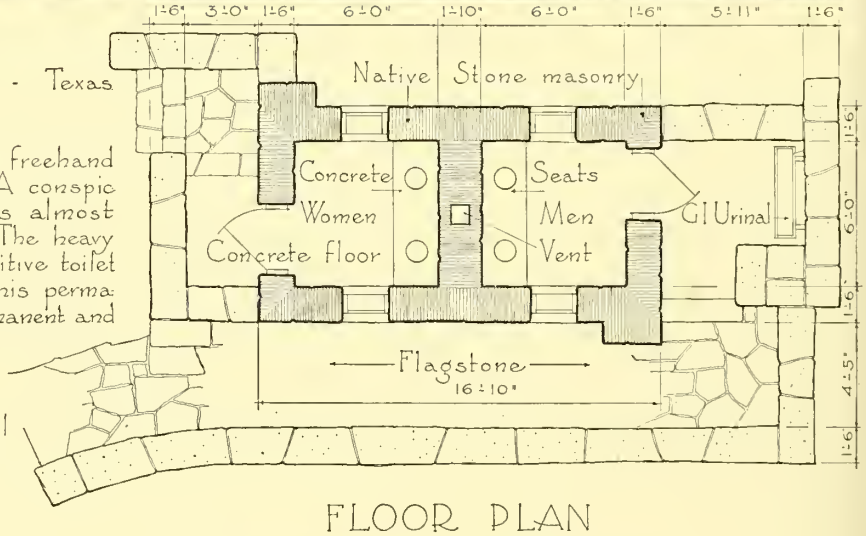
Well-related architecturally to the stone cabin group it serves, this building houses toilet and bath facilities. The low-pitched roof of rugged texture, the heavy verge boards and the studiously unstudied rock masonry delight the critical eye. The window guards of stone, not too meticulously laid, give privacy, yet because of the great number of windows, light and ventilation are still provided in proper degree. The entrance doors to men's and women's sections are screened well by the informal rock walls, and the approaches are properly distant from each other.



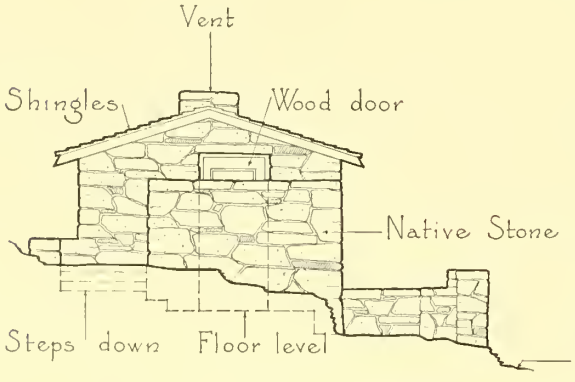
FLOOR PLAN
Scale 3/32"=1'-0"

Privy - - Davis Mountain State Park - - Texas

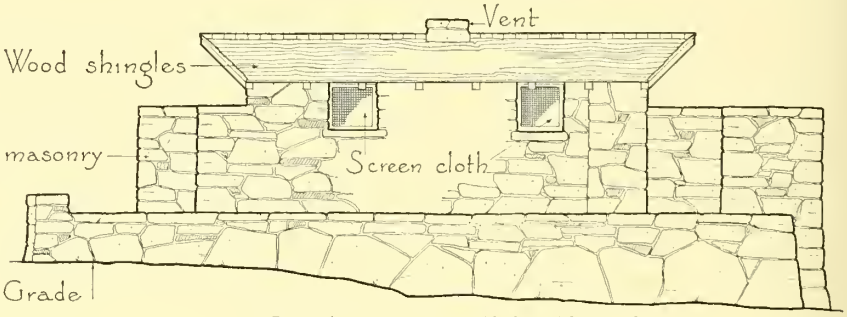
Notable for its low horizontality and the freehand lines of the shingle courses of the roof. A conspicuous example of rock structure that appears almost to have sprung from its rocky hillside site. The heavy masonry construction does not accuse the primitive toilet facilities housed. In general construction of this permanent nature, is better reserved for more permanent and modern equipment.



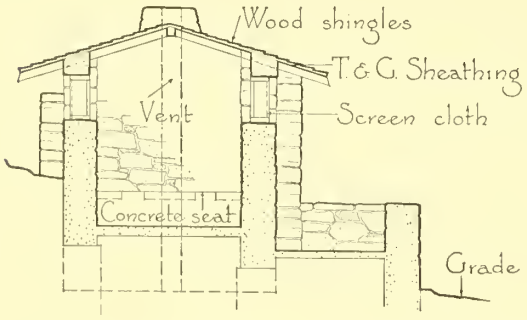
FLOOR PLAN



SIDE ELEVATION

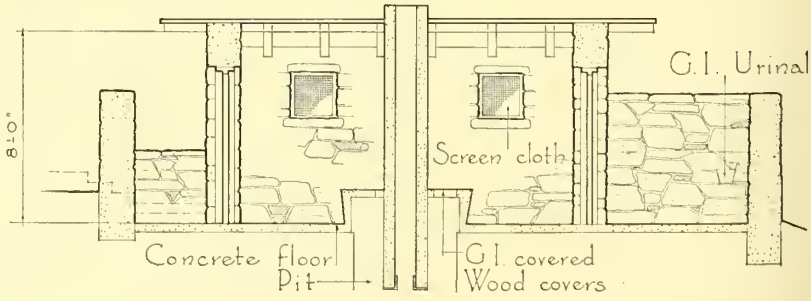


FRONT ELEVATION



CROSS SECTION

Scale ⅜"=1'-0"



LONGITUDINAL SECTION

Latrine, Hillcrest Park, Durango, Colorado

On this page are shown three variations of the latrine detailed on the opposite page. The basic theme is typical of recent park construction in the Southwest and Rocky Mountain States. This example appears ideally appropriate to its setting, and offers for our admiration heavy masonry, substantial roof framing and a roof covering of character.

Latrine, Caddo Lake State Park, Texas

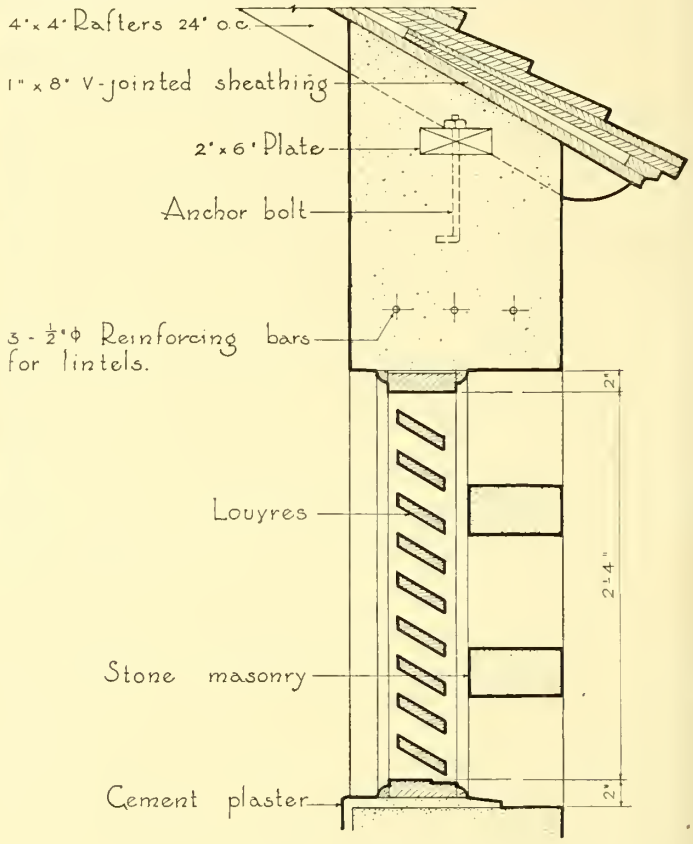
With the same good features apparent in the building above, this Texas model varies the pattern by presenting masonry that, while doubtless bonded by mortar in the inner reaches, certainly gives the impression of a dry wall. The prominent shadows resulting from the deeply recessed joints pleasantly accentuate the rocklike character of the masonry.

Latrine, Mohawk Park, Tulsa, Oklahoma

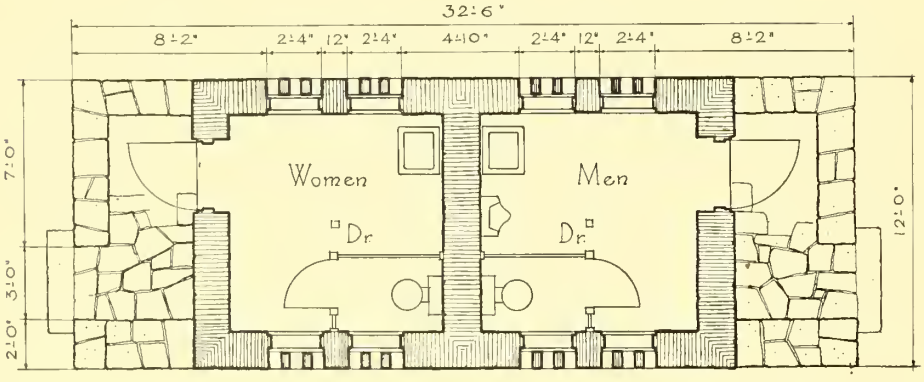
Reminiscent of preceding examples, this variant strays farther from type by incorporating log construction above the well-buttressed rockwork base. All materials employed are especially well scaled to each other and to the size of the structure itself. The bars or louvres at the window openings, formed by dressing off the log construction, invite attention.

Comfort Station – Lampasas State Park – Texas

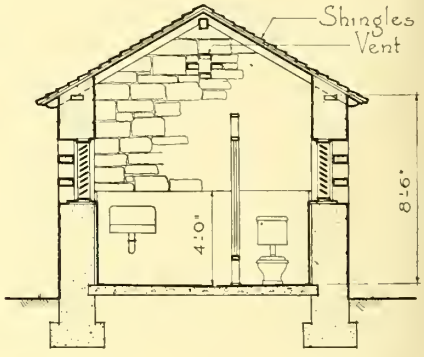
This example may not fully satisfy the plea entered that toilet facilities be abundantly lighted as a contribution to their proper maintenance and use. It rates, however, high in any appraisal of sturdy durability. The pierced stone masonry masking the louvred openings is undeniably a happy improvement over glazed openings which, in this southern location, would seem to be quite dispensable. Only recently completed it stands to gain greatly in appearance when skillfully planted.



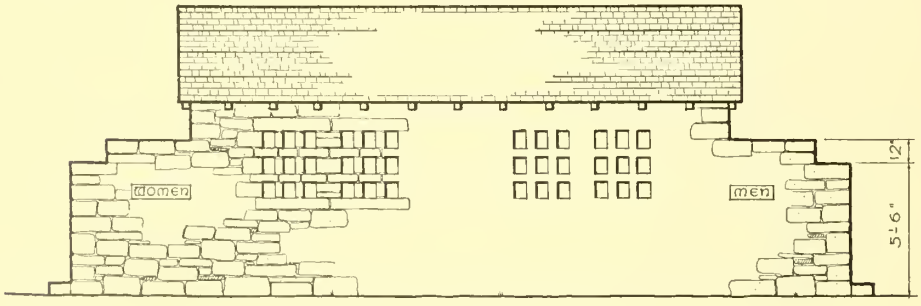
DETAIL OF WALL SECTION
Scale ¾"=1'-0"



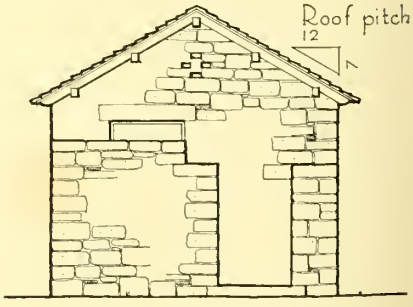
FLOOR PLAN



SECTION



FRONT ELEVATION
Scale ⅜"=1'-0"



END ELEVATION

CABINS

Among buildings that have come to be regarded as on occasion justified within our present conception of a natural park, the cabin alone has the favorable advantage of long familiarity to us in woodland and meadow. So accustomed have we become to the survivals of frontier cabins that dot the countryside that we have grown to look upon them as almost indigenous to a natural setting. Of all park structures, those cabins which echo the pioneer theme in their outward appearance, whether constructed of logs, shakes or native stone, tend to jar us least with any feeling that they are unwelcome. The fact that park cabins are usually erected in colonies or groups—which frontier cabins as a rule were not—destroys the feeling of almost complete fitness that is produced by a single primitive cabin. The further fact that the true cost of such structures is usually much higher than their purpose or the prospective income from them would justify imposes upon the designer the necessity of availing himself of cheaper and more easily handled materials, and of using them the best way he can. Hence these groups are something of a dissonance in parks, acceptable only when their obtrusiveness is minimized insofar as possible.

When occupied, the cabin becomes in effect private property, serving an infinitesimal portion of the park-using public. In consequence, if the cabin on public lands is to justify itself it is essential that it at least pay its way during its lifetime, and that charges for its use should bear a logical relationship to its true cost. Any evaluation of that cost which fails to assign a reasonable value to materials acquired on the site or to all labor, however compensated, would be faulty.

A tendency frequently observed in connection with cabin groups is to spread the effects of their presence over a needlessly large area, on the assumption that the occupants of each are entitled to complete seclusion. In groups composed of the simplest cabin types this either compels a multiplication of toilet installations or renders the use of central facilities so difficult that the cabin occupant, particularly after dark, will frequently not go to the required trouble, with consequent development of unpleasant and unsanitary conditions. It also compels establishment of additional water outlets—one more item of cost.

Even in the case of cabin groups equipped with toilets and with running water, wide separation means added road construction to make them accessible and greatly increased costs of water distribution and sewage disposal. After all it seems fair to assume that where cabins are erected in parks, their purpose is to facilitate enjoyment of the park itself and that complete seclusion during the hours when they are occupied is not the supremely important goal it is so frequently assumed to be.

Often overlooked, but certainly the primary objective in providing cabins in public parks, should be adjustment of cost and facilities to the income range of the using public. There ought to be just as sincere effort to make habitable vacation shelter available to the patron of very limited means as there now exists an enthusiasm to supply the more ample facilities which the higher income brackets can afford and demand. Reasonable assumption of a range of rentals suggests the logic of three basic types of vacation cabins. A large proportion may well provide accommodations for five persons as the average American family group.

The simplest type of cabin, the "Student" or "Tourist" class (to initiate the figure of the passenger liner), must seek to bring the required minimum of space need in shelter within a most rigid limitation of cost, which must bear an arithmetical relation to the very limited rent the humble park user can afford to pay. This problem will tax the ingenuity of the ablest designer capable and desirous of producing a nice relationship between traditional charm and reasoned practicability. Of necessity such a cabin must be a very simple affair, affording merely the most compact of sleeping ac-

commodations and small living space. In many localities an open or screened porch will be desirable or necessary. But required economy will compel the omission of toilet and bathing facilities, and even fireplace and kitchen that is more than mere cabinet, alcove or closet, from this simplest type of cabin. Group toilet and bathing facilities, and provision of very limited and compact kitchen equipment will naturally reduce the cabin unit cost, as compared with that of cabin groups in which toilet, bathing and more complete cooking facilities are integral parts of each cabin. A possible alternative for the very modest kitchen allowable within the simplest cabin is an outdoor camp stove, preferably with sheltering roof. If strategically located the camp stove may be a multiple unit and the kitchen shelter thus made to serve several cabins. Such is the prospectus for recreational or vacational cabin housing within the normal budget range of the great majority, and possible then, it should be borne in mind, for brief periods only and by dint of the most careful economy on the part of the family unit.

A narrowing field of potential users results when more ample space and added facilities, naturally accompanied by mounting costs and proportionately higher rental charges, are offered in "Second Cabin Class." Cabins of this type contain two rooms and a kitchenette. Both rooms should provide for sleeping. The kitchenette will tend to be something more than the simpler cabin type provides. A fireplace is an allowable feature, since the larger cabin will probably have a longer season of use. In the absence of a central recreation building as a gathering place, the cabin unit is forced to a greater self-sufficiency. Toilet and bath facilities within this class of cabin, while certainly to be desired, are hardly to be encouraged, in the face of the cost of these accessories.

The distinguishing features of cabins of the next group, the "First Cabin Class," are toilet and bath facilities, along with perhaps added spaciousness and greater privacy in sleeping quarters. Arbitrary pronouncement of limitations in space and facilities for these cabins is considered beyond the province of this general discussion.

When examples of the "First Cabin Class" give hint of elaboration to the point of becoming "Cabins de Luxe" or "Royal Suites" their appropriateness within natural parks will be challenged by many and defended by a few. Certainly such cabins are only justifiable if the vacancy ratio is negligible.

At the lack of spread in cabin facilities and rentals observable in many parks, just criticism can be leveled. It would seem not only to be better park planning, but better business planning, to have accommodations to offer over a wide price range and bearing some logical ratio to the wide income range that prevails among park patrons. It might be pointed out as an abuse of democratic principles if the benefits of park areas are withdrawn from availability to the many to the selfish enjoyment of the few. An abundant provision of cabins such as only the few can afford, and a blind, or calloused, disregard of the budget limits of the vast majority, are not social arithmetic.

It is not argued that the several "classes" of cabins must rub elbows in the park area as a condition of serving with equality the patrons of different social or financial strata. On the contrary, this is something to be rigidly avoided in layout. There is less emphasis on social differences and therefore less dissatisfaction for all concerned in a discreet grouping of cabins of each type somewhat to themselves.

While many cabins have been built as a single room large enough to provide sleeping accommodations for an average family, it is desirable even in such simple cabins to afford dressing space privacy by means of partitions, or curtains on poles, around one or more of the bed locations. Furthermore, the potential tenants are not always a family group, and failure to provide some measure of privacy results in a narrowing down of the tenant field.

Among space-saving possibilities to be carefully weighed by cabin designers with praiseworthy urge to provide the utmost for the cabin dollar, a wide opening between the enclosed living space and the screened porch is to be especially recommended. Such an opening about eight feet wide, and fram-

ing three- or four-fold, or sliding, doors, by throwing together the limited space allotments of living space and porch, makes for a spaciousness much desired on occasion.

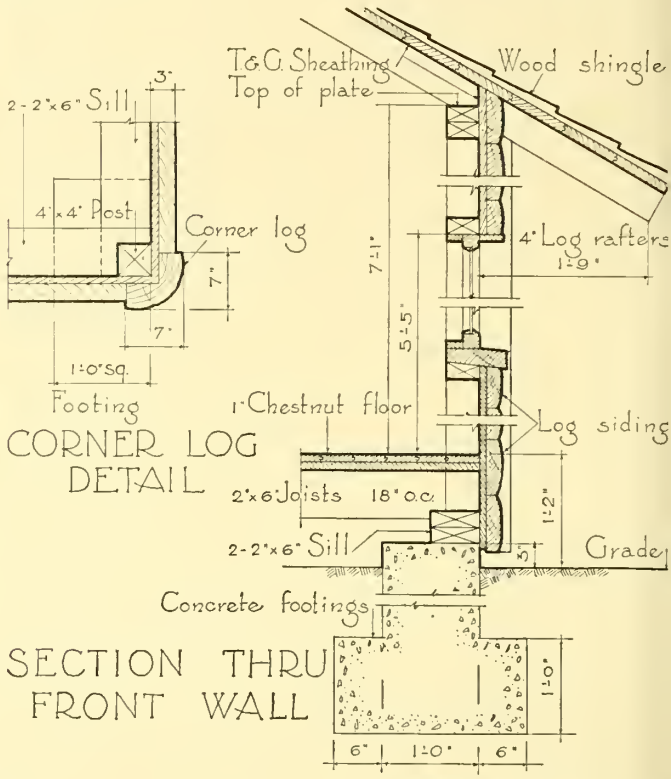
Something on the subject of chimneys cries to be heard, and since chimneys have no separate entity in these discussions, their case must be presented and pressed by cabins, as "next friend."

In the "what-not" or "mission" period of the discredited past, some individualist seems to have been possessed of a grim determination and an hypnotic ability to implant his school of debased thought in chimneys for log cabins through the length and breadth of the land. It must have been the life-long fixation of one crusading apostle. Nothing else will account for such far-flung and ardent faith in the sole and supreme appropriateness of boulder masonry for this purpose. The unfortunate circumstance is further aggravated by a quaint conviction that the less structural in appearance, the less evident the bonding mortar, and the less apparent any reliance on physical laws for stability, the happier and more creditable the accomplishment. Need it be more than pointed out that from time immemorial good stonework has always been that stonework which appears incapable of toppling even if all mortar were to be magically removed? It is highly possible that recurrently through history there have been revolutionary viewpoints determined to go counter to what probably seemed at the moment just trite and old-fashioned in masonry technique. This is mere speculation, of course, because somehow the evidence of such revolutionary experimentation, except that of the cited sponsor of "peanut brittle" or "grape cluster" chimney techniques for log cabins, has not survived the ravages of time to our day. It is indeed regrettable that this non-survival went unnoted by the most recent proponent, whose disciples, over the years, might have been spared many chimney replacements which, if not necessitated by actual collapse, then certainly blasted to ruin by the trumpets of good taste. As from time to time these reconstructions must be made, it is hoped that the reconstructors will appraise the chimney survivals of the American pioneer, and if they are led to offend with globular masonry no more often than did he, a weird ghost will have been laid.

When the timber resources of the American frontier seemed limitless, it was usual to lay the starting logs of a cabin directly on the ground, without supporting stone foundations. When after a time the logs in contact with the earth had rotted to a point where the cabin commenced to list and sag, another cabin was built and the earlier one abandoned. This, it seems, in the economy of the frontier, was more reasonable than to have provided a foundation under the earlier cabin. Regardless of the pious respect a log cabin builder of the present must have for the traditions of the past, the changed economy of our day demands that his cabin be preserved against deterioration by the use of masonry or concrete supporting walls or posts that extend well above grade.

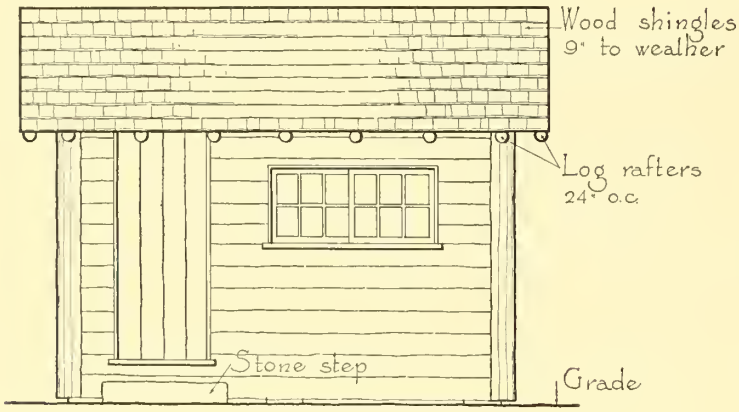
One Room Cabin - Letchworth State Park - New York

A wall closes the open side of the typical Adirondacks shelter and produces a cabin of the simplest form. Walls sided with so-called "log-siding" are a compromise with traditional primitive log structures and do not entirely sacrifice harmony with a woodland setting. The reduction in the amount of lumber required is not to be scorned lightly nor is the coincident item of lower cost.

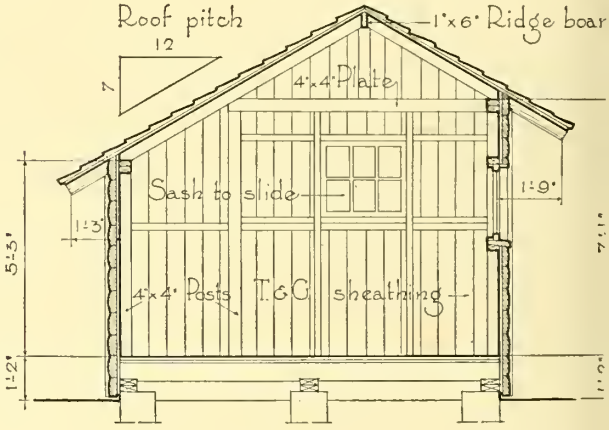


CORNER LOG DETAIL

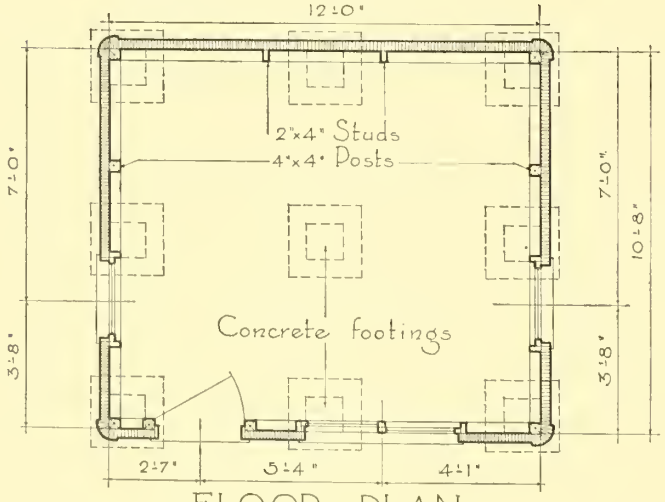
SECTION THRU FRONT WALL



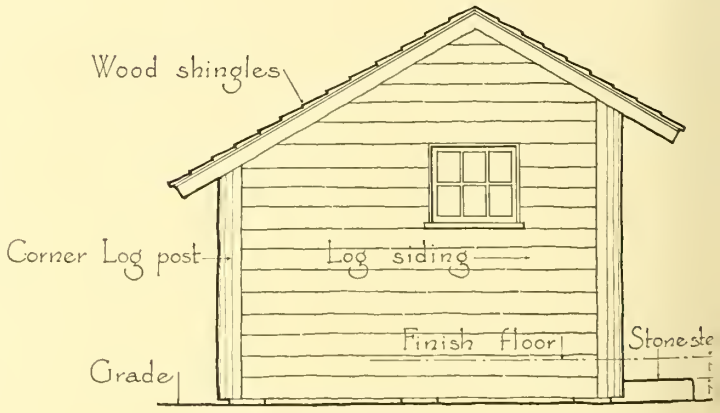
FRONT ELEVATION



SECTION

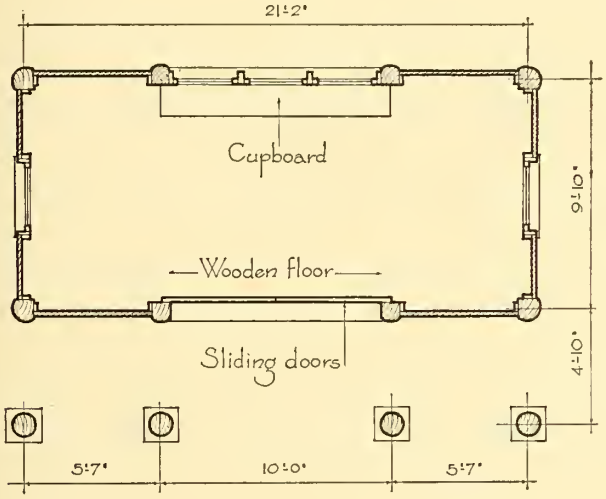


FLOOR PLAN



SIDE ELEVATION

Scale $\frac{3}{16}$"=1'-0"

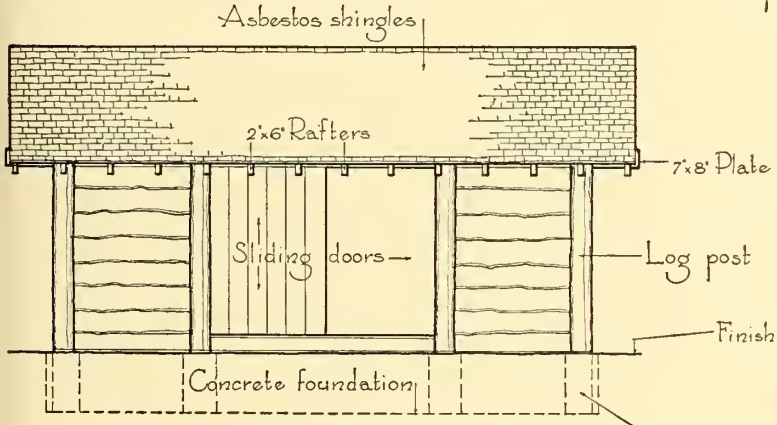


FLOOR PLAN

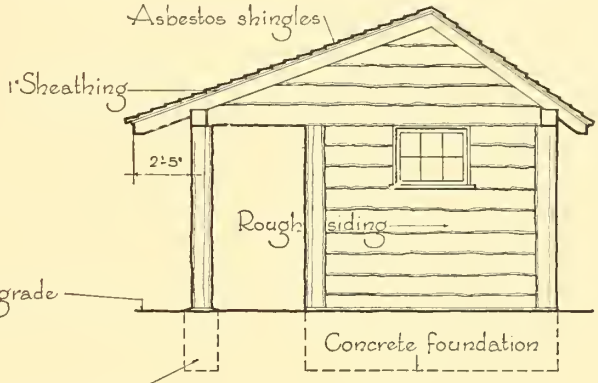
Cabin

Finger Lakes State Parks Commission – – New York

Deriving from the primitive Adirondacks shelter this type of one room cabin with open porch is popular in central New York. The sliding doors are its distinguishing feature. Opened, these relate the cabin intimately to the outdoors.

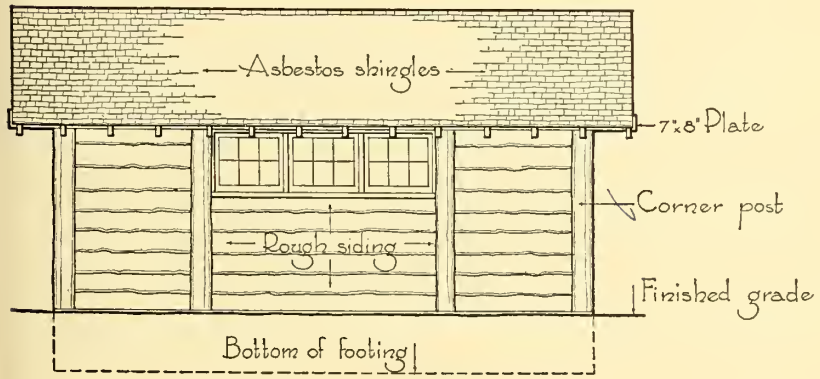


FRONT ELEVATION

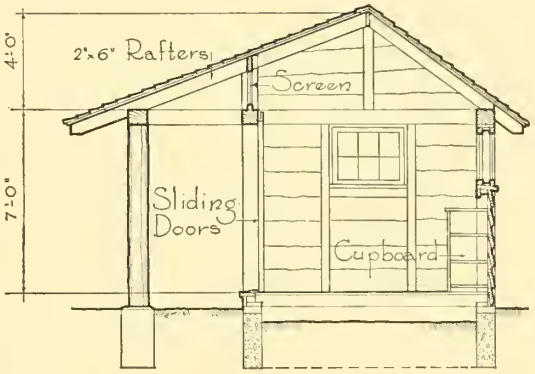


SIDE ELEVATION

All wooden posts anchored to stone



REAR ELEVATION

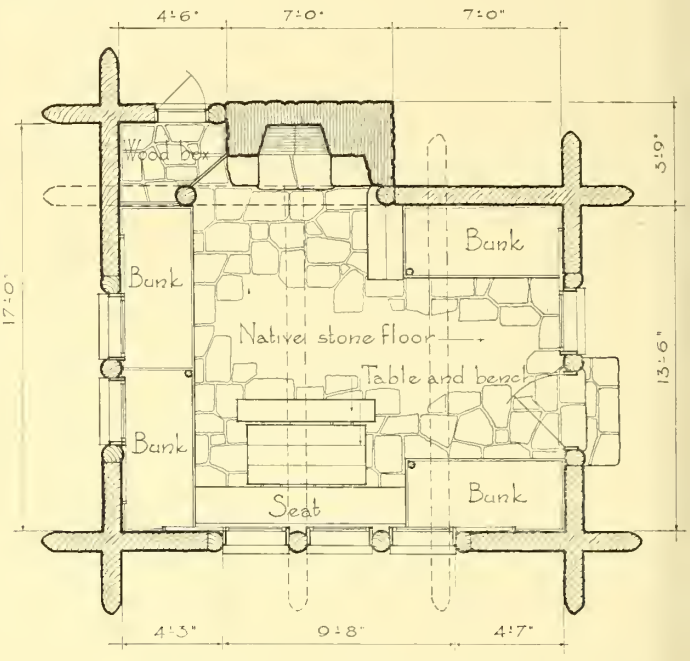


SECTION

Scale $\frac{1}{8}$"-1'-0"

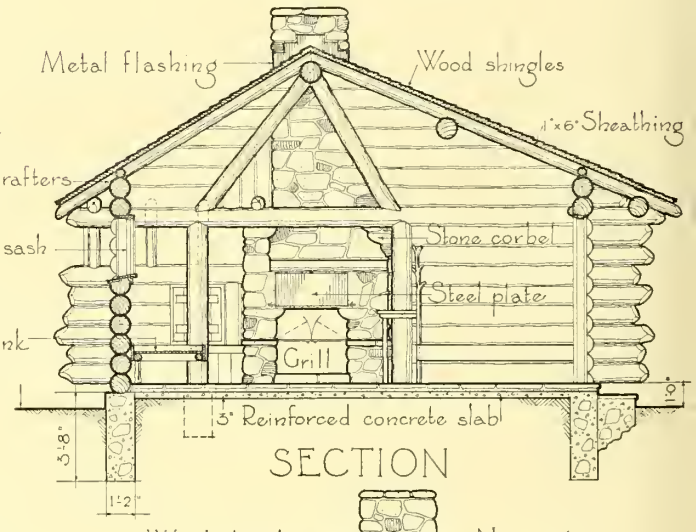
Cabin – – Wilderness State Park – – Michigan

This example, not content with its achievement of compact plan evidencing careful study and thoughtful design, carries further favor by reason of an exterior that is picturesque, well-proportioned and forthright. The fireplace nook, stone-paved floor and close-fitted log work are elements of interest and merit behind which only the boulder masonry of the chimney conspicuously lags.

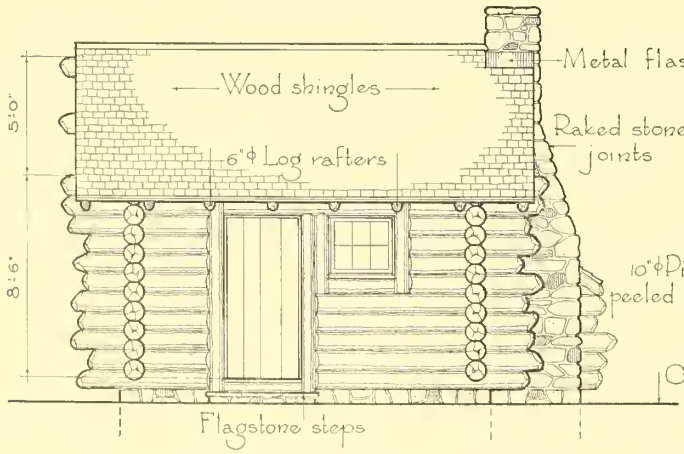


FLOOR PLAN

REAR ELEVATION

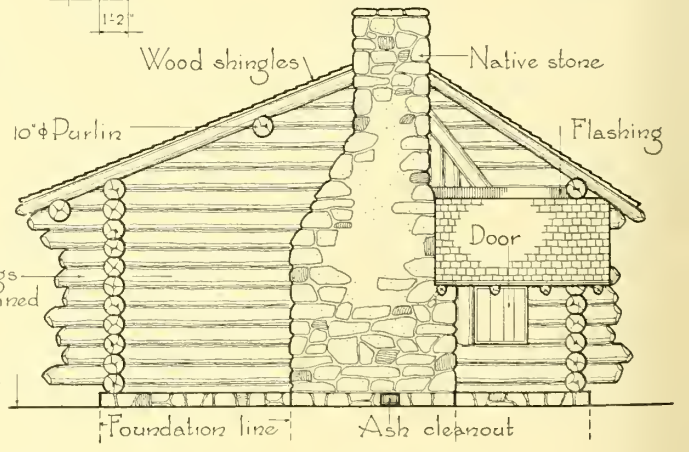


SECTION

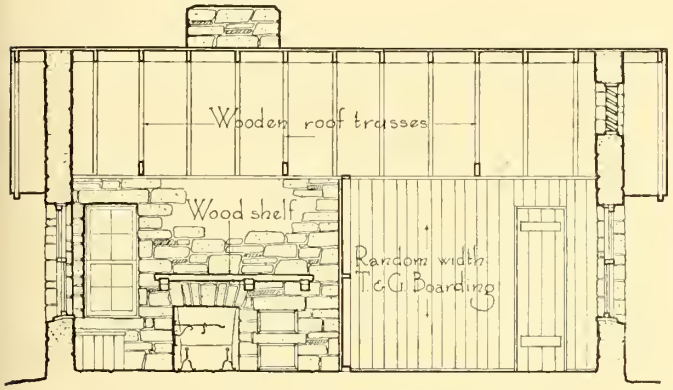


FRONT ELEVATION

Scale $\frac{1}{8}$"-1'-0"



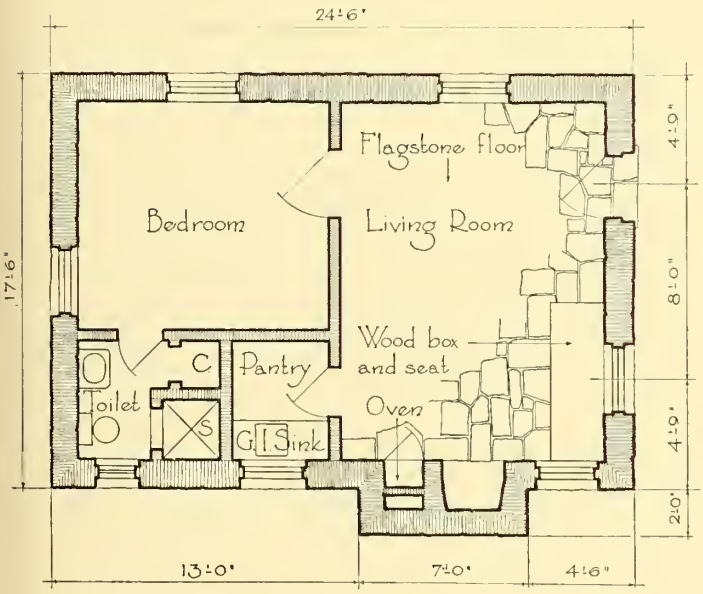
SIDE ELEVATION



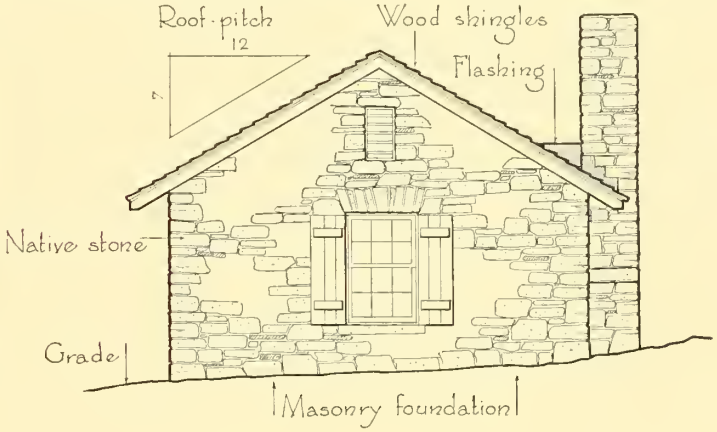
SECTION

Cabin – Cheaha Mountain State Park – Alabama

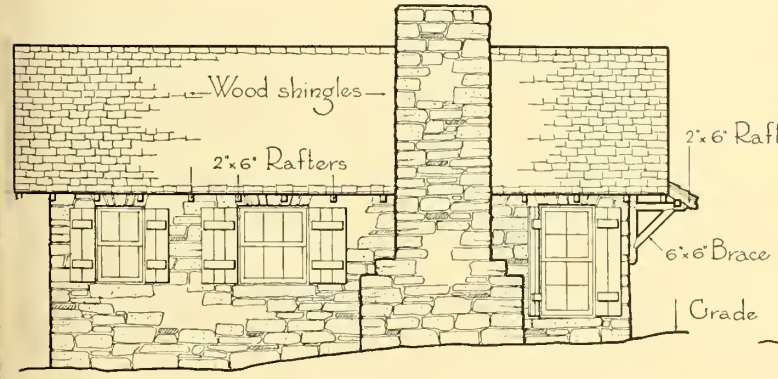
A plan representative of a compact grouping of all the elements that can be considered essential to a cabin in a state park. Apparently limited in sleeping accomodations to two persons this could well be increased by the addition of a screened porch sized for two or three cots.



FLOOR PLAN

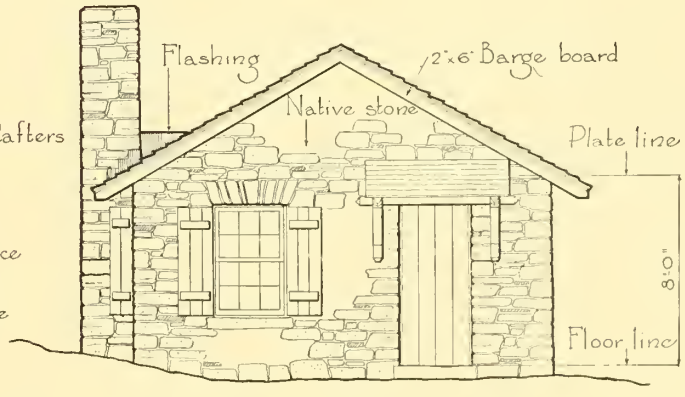


REAR ELEVATION

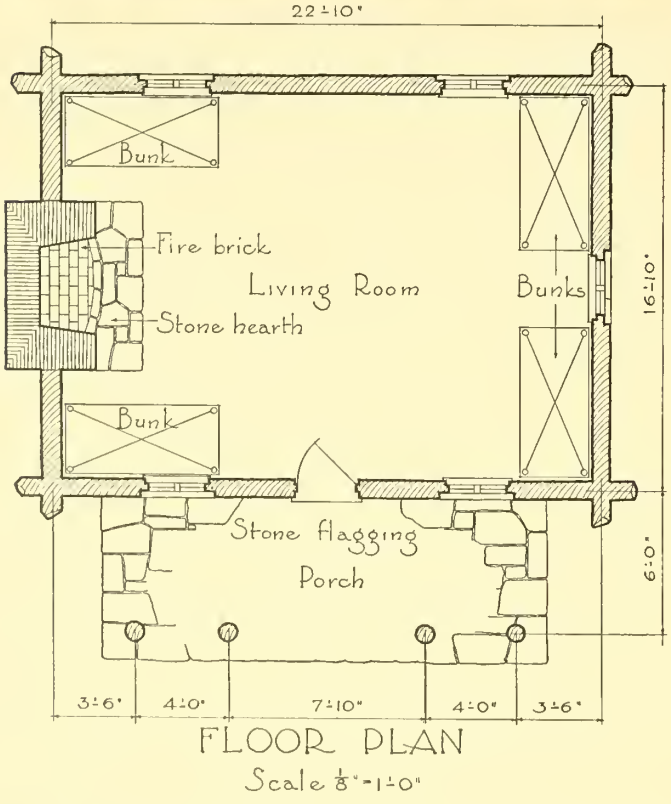


SIDE ELEVATION

Scale $\frac{1}{8}$"=1'-0"



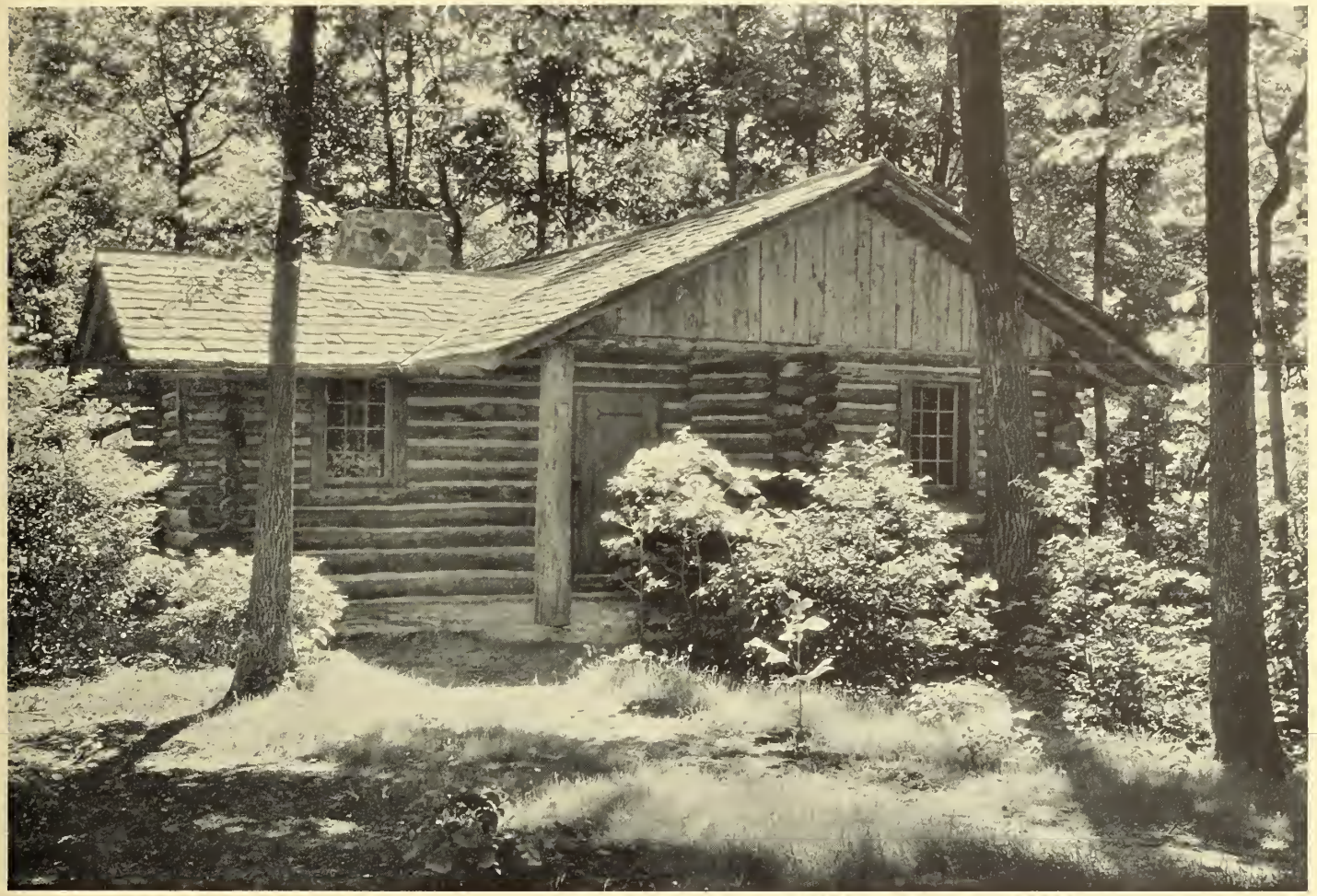
FRONT ELEVATION

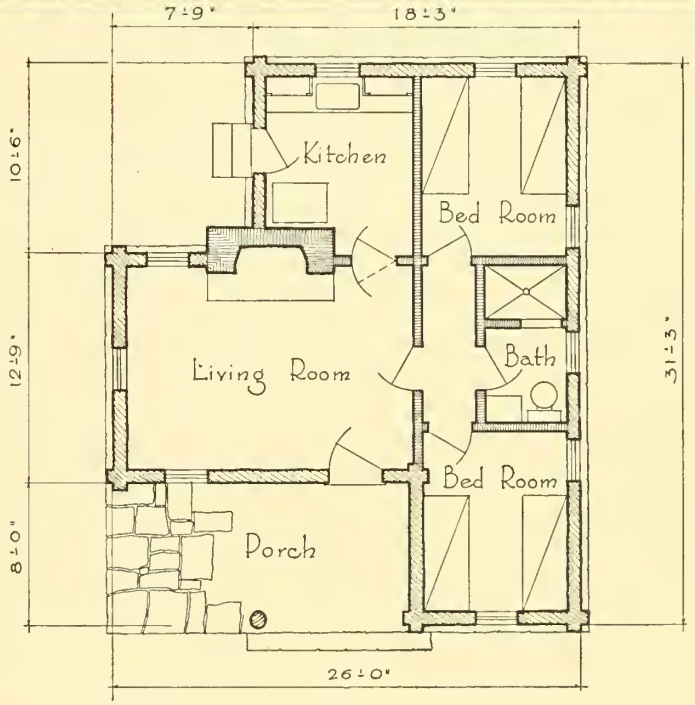


FLOOR PLAN
Scale $\frac{1}{8}$"-1'-0"

Cabin, Willard Brook State Forest, Massachusetts

This example succeeds in capturing the spirit of the early log cabin in greater degree than most present day log structures, due to simplicity of line and to unmannered directness. Although it is comparatively small in size, its equipment of double deck bunks will accommodate a maximum of eight occupants. The chimney has satisfying masonry and good silhouette and the log work pleasing variety of size. The superimposing of a shed roof of a porch upon the main cabin roof is always an awkward solution, but here has a certain picturesqueness.

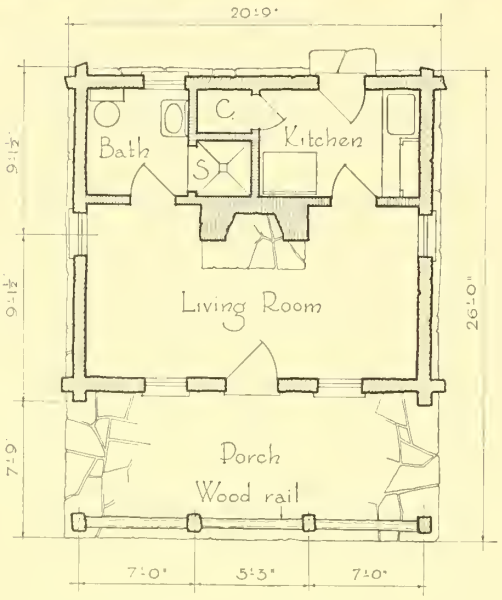




FLOOR PLAN
Scale 3/32"=1'-0"

Cabin, Westmoreland State Park, Virginia

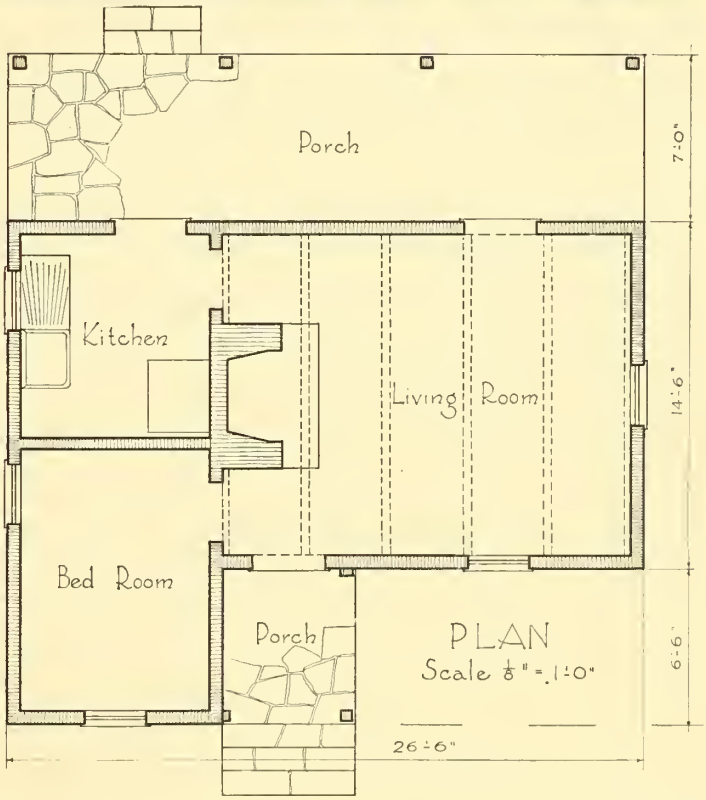
Almost idyllic in spirit and setting, this vacation cabin can also claim a plan conveniently arranged to accommodate four persons, without either waste or painful economy of space. The quality of the log work, the texture of the shingled roof, are commended to attention as important factors in the favorable reaction this cabin inspires.



FLOOR PLAN
Scale $\frac{3}{32}$"=1'-0"

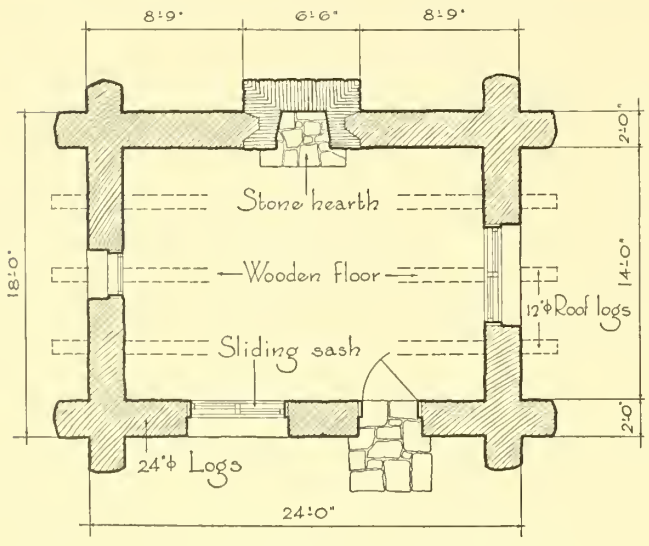
Cabin, Douthat State Park, Virginia

A fine example of vacation cabin, content to follow externally the simple log prototypes of the Frontier Era without apparent aspiration to be bigger and better and gaudier. Inside it slyly incorporates a modern bathroom just to prove that it is not the venerable relic it appears. The squared logs with hewn surfaces and the simple fenestration contribute greatly to the look of authenticity. There is threat of accelerated deterioration in every log structure in which the spacing of the logs requires such wide chinking.



Cabin, Staunton River State Park, Virginia

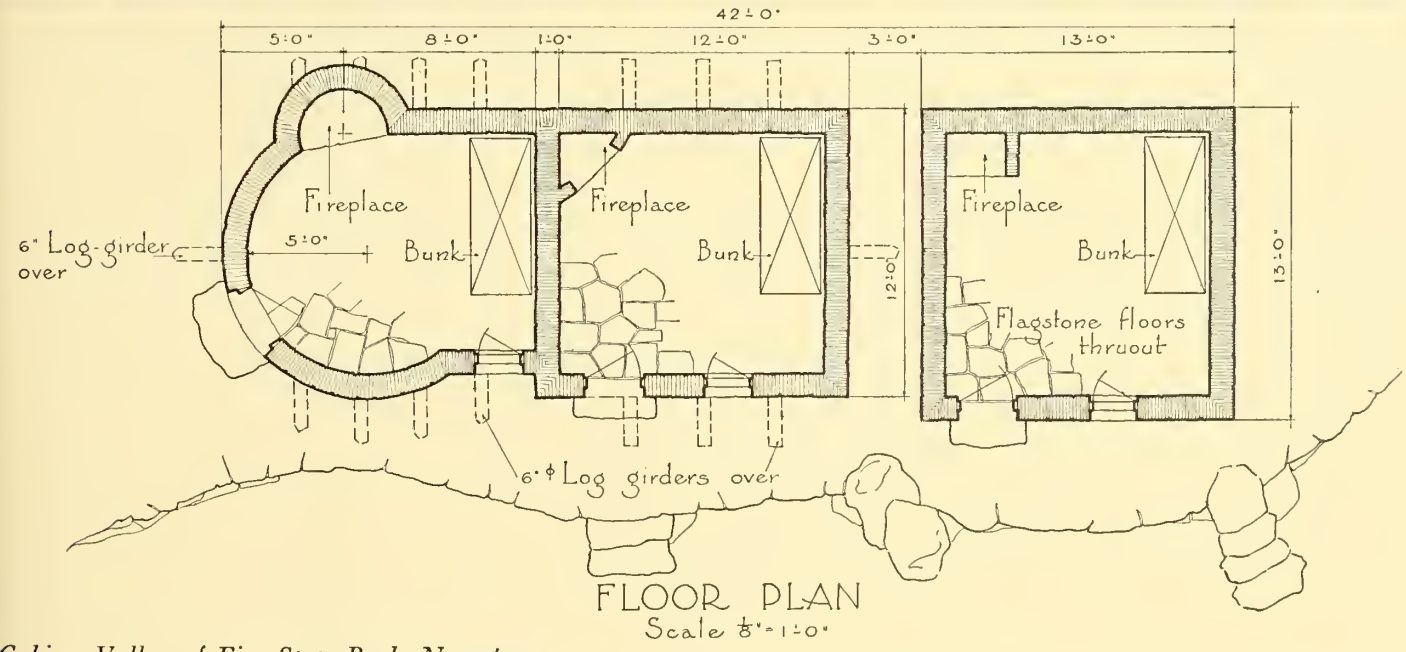
The exterior treatment of this cabin is typical of a number of park cabin groups in the Old Dominion—walls of wide boards and squared battens, rough-sawed siding in the gables, and steep roofs. Assuming from the plan that sleeping accommodations in the living room are possible, the "bedding-down" capacity of the cabin is doubtless greater than the one bedroom would indicate.



FLOOR PLAN
Scale $\frac{3}{32}$"=1'-0"

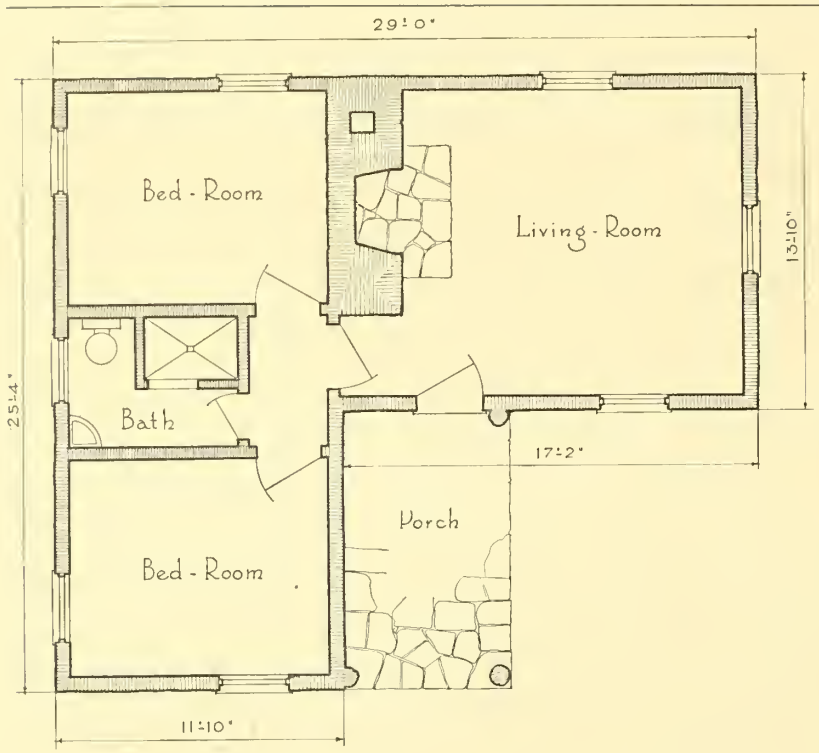
One Room Cabin, Itasca State Park, Minnesota

Only the sworn statement of one who is well informed, to the effect that this cabin was built from wind-falls and not cut timber, permits conservationists to show this cabin here. Almost humorous in its scale, it is far from that as a reminder of magnificent forests all but extinct. As a relic of the days when trees were trees, this cabin can inspire us to firm resolution to permit them to be so again in the long term future. Somewhere between the scale of this log work and the spindling scale of the majority of present day log structures is the happy and satisfying medium that is too infrequently seen. The random informality of the axe-hewn log ends contributes greatly to the naïve charm of this little building.

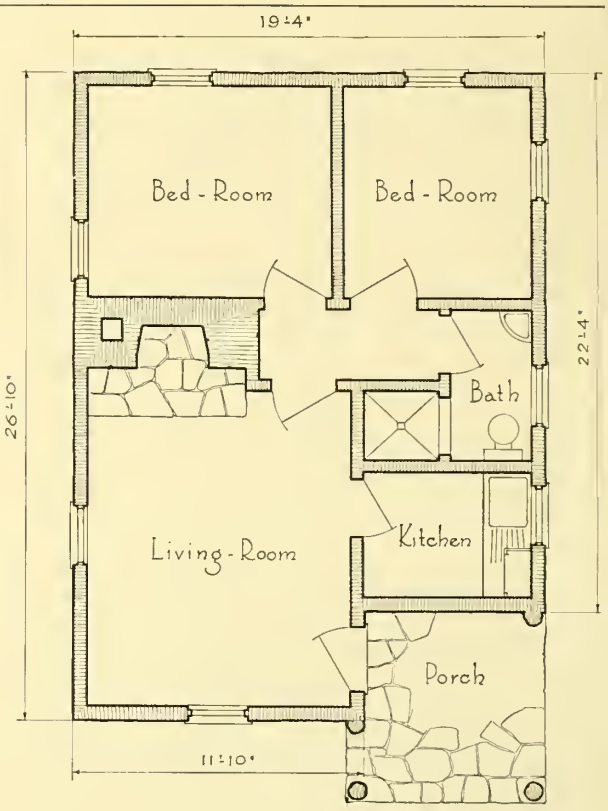


Cabins, Valley of Fire State Park, Nevada

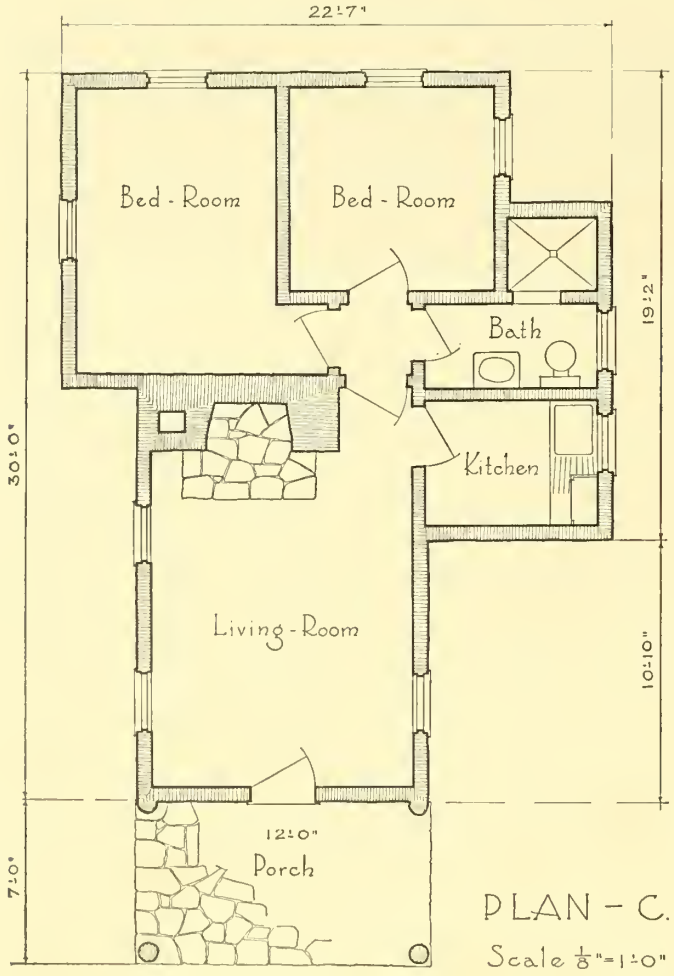
These overnight cabins are built of rock in the native structural tradition. The limited space allotment suggests that much time is spent out of doors. There are diverse fireplaces for cool evenings and restricted windows against daytime heat to meet climatic conditions of the locality.



PLAN – A

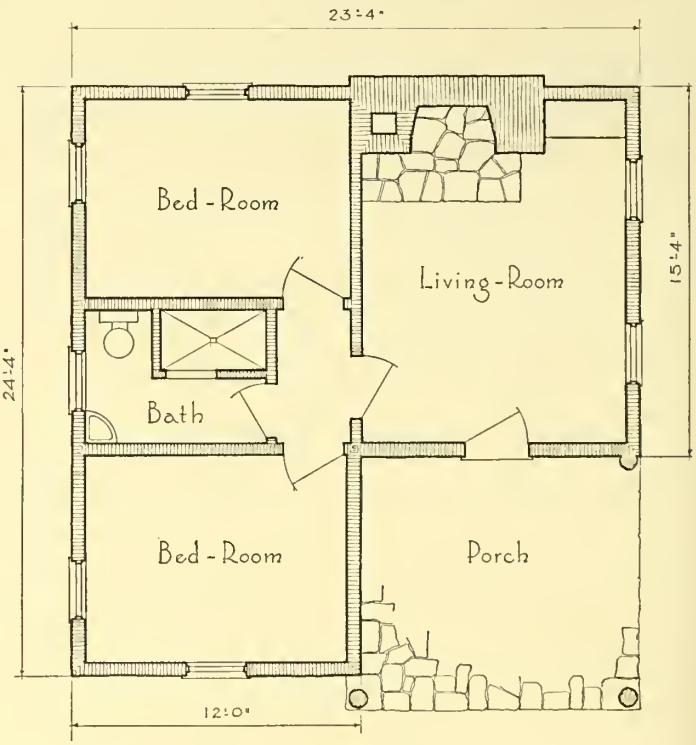


PLAN – B.



PLAN – C.

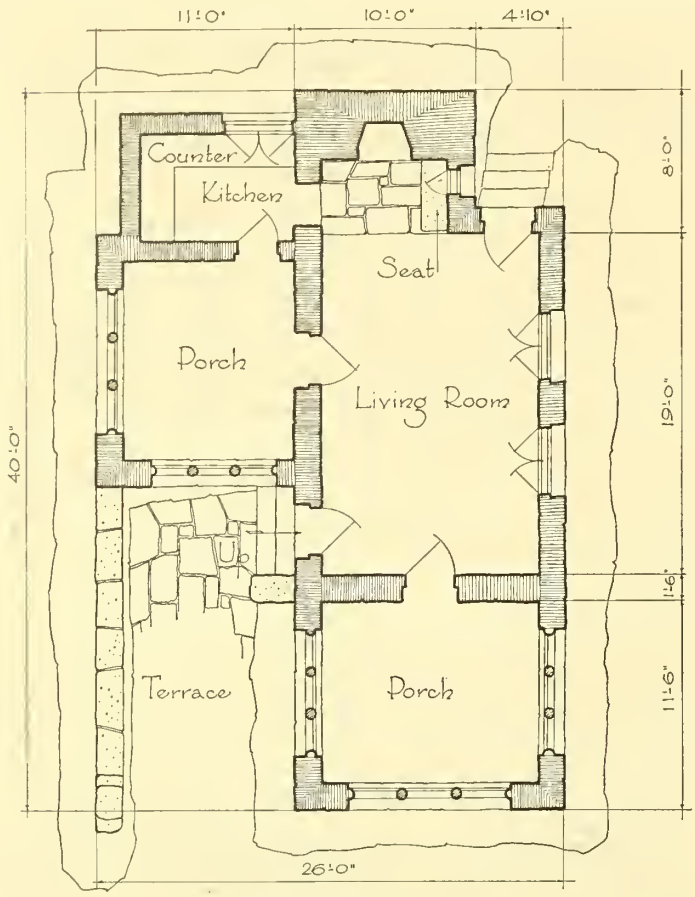
Scale $\frac{1}{8}$"=1'-0"



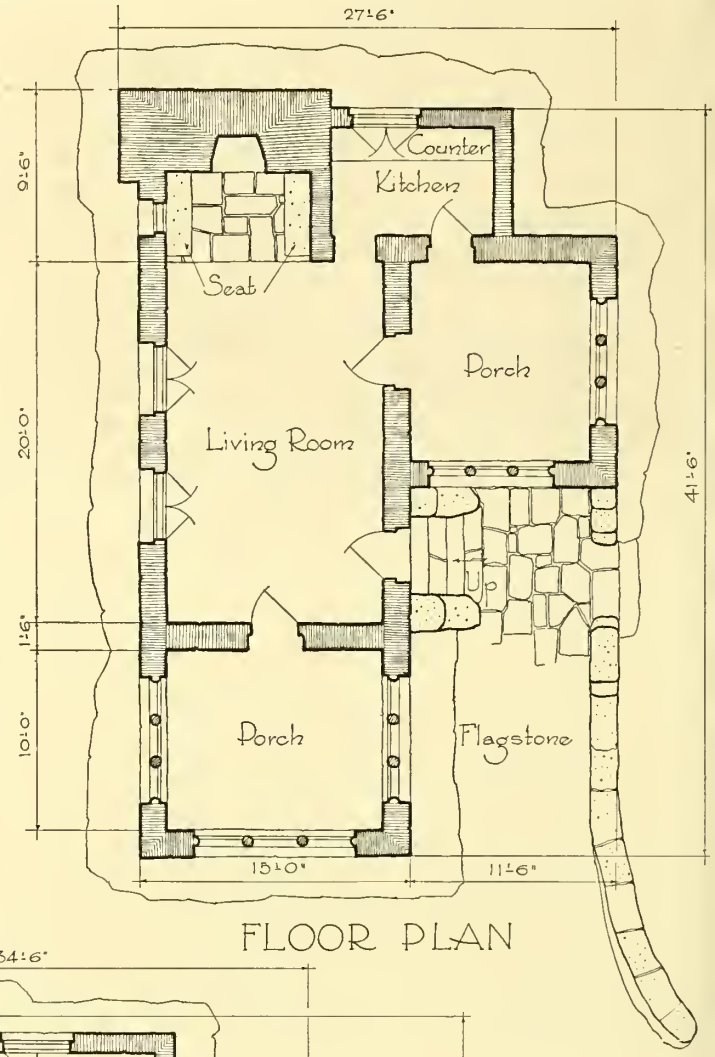
PLAN – D.

Cabins, Cumberland Falls State Park, Kentucky

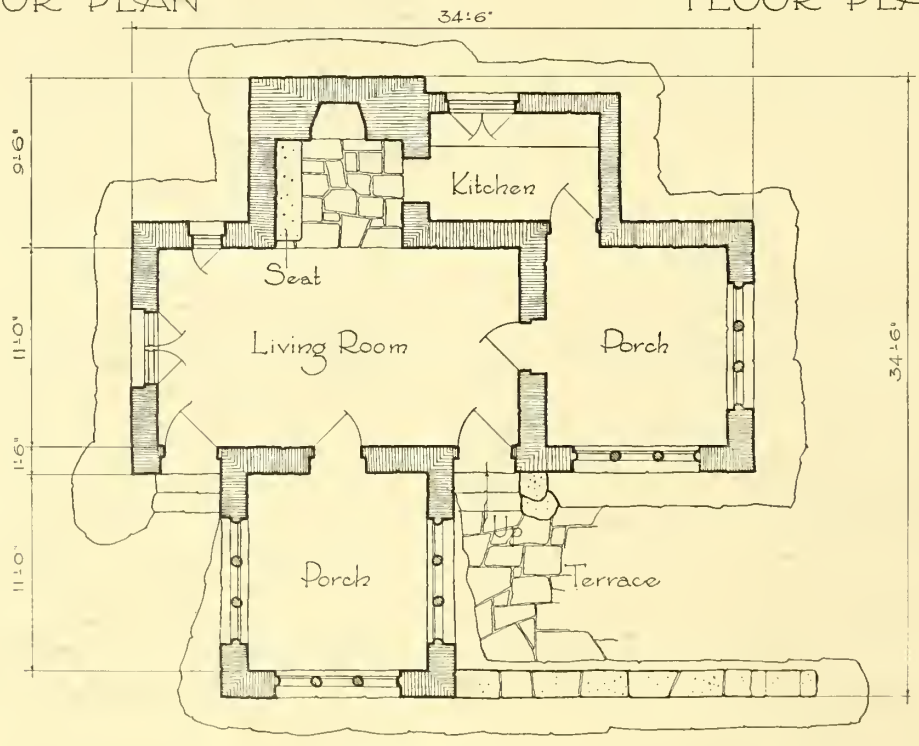
Opposite are shown plans typical of cabins developed in this park. There is hint of spaciousness in some of these that, while not undesirable, is perhaps not essential for over-night or brief vacation occupancy, nor so much in demand as more compact and therefore less expensive accommodation. Above are shown a type C cabin (left) and a type A (right). To the right of this caption is pictured a type D cabin.



FLOOR PLAN



FLOOR PLAN



FLOOR PLAN
Scale 3/32"-1'-0"

Cabins, Bastrop State Park, Texas

Plans of three of the cabins built at this park are shown on the opposite page. Surrounding this caption are exterior and interior views. Low and sprawling, the structures seem appropriate to the character of the region in which they occur. Because some of the cabins have been built from reversed plans for added variety, the illustrations shown are not always readily assignable to the plans presented.

Restorations of Frontier Cabins, New Salem State Park, Illinois

Restorations of Frontier Cabins, Spring Mill State Park, Indiana

In the growth and development of our natural park areas, the educational, recreational and interest values of the past, except in scattered instances, have been neglected. New Salem State Park, Illinois, wherein is reconstructed the vanished frontier village in which Lincoln wooed Ann Rutledge, is a notable exception. Above on this page are shown log structures restored, reconstructed, and rebuilt as units of this praiseworthy undertaking. These accurately portray the methods and manners of a century ago as no other medium could. An early log cabin or mill existing within park boundaries is a feature to be safeguarded and preserved.

Indiana's Spring Mill State Park exists for a double purpose—the preservation of natural beauty and of a backwoods village that grew up around a stone mill. By intelligent and painstaking research and effort the mill and dependencies have been restored to operating condition, and many of the log buildings that once comprised the village live again. Below on this page are shown two of these cabin restorations. Spring Mill is one of the high spots in park development, stressing as it does an objective too infrequently pursued. The well-considered restoration of an ancient mill, iron furnace or tavern is a legitimate project in a park.

CUSTODIANS' DWELLINGS

HERE IS A PARK BUILDING that often, and with propriety, can recall in its externals the typical pioneer homestead of a locality. In its essentials, the custodian's dwelling, more than any other park structure, is closely similar to the pioneer cabin. This fact makes possible recall of traditional lines and colloquialisms without too evident struggle, which cannot always be said of adaptations in which the old forms and the modern requirements are not so well related.

Thus we may appropriately house the custodian and other park attendants in characteristic frontier log and stone structures, over a wide area geographically, subject to regional variations. Over less-extended areas Spanish, Pueblo, the several manifestations of the Colonial, and other traditional expressions, born of historic background, local materials, and climatic considerations, will be the precedent for the residential structures within a park.

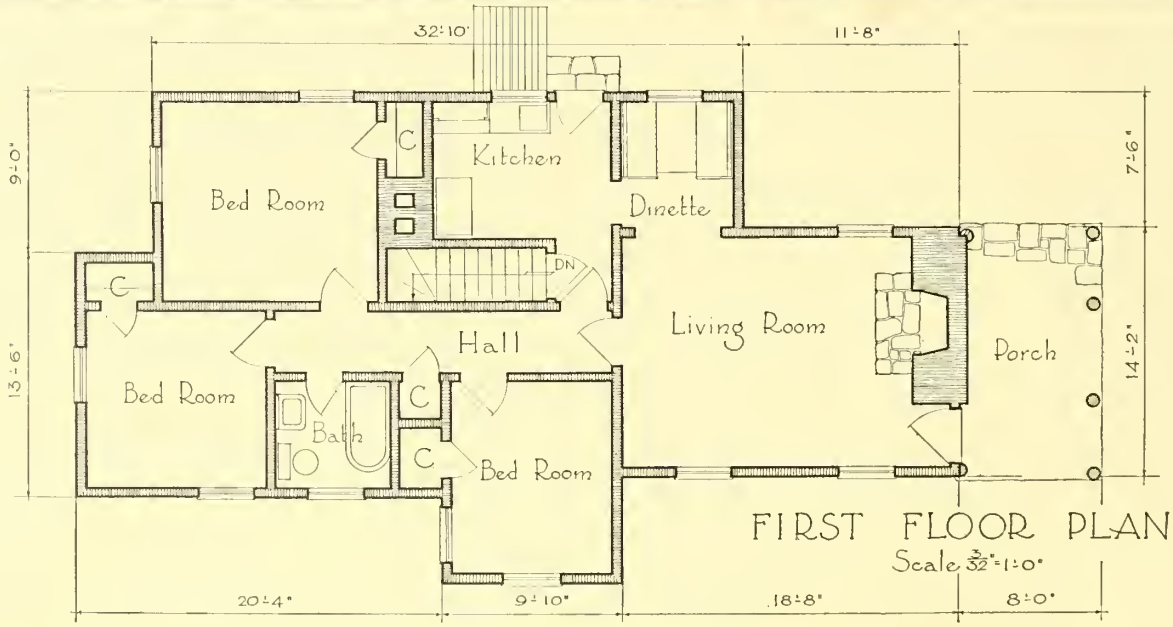
The design of the usual custodian's dwelling, not combined with other needs, is simply the problem of the small, rural dwelling, with a stressing of the importance of fitness to environment. So with living quarters provided for the naturalist, ranger or other personnel of a large park, where the requirement is the accommodation of a family unit. In the instance of the isolated park of considerable area, the problem sometimes varies or expands to embrace barracks or dormitory housing for groups of unmarried employees.

Sometimes, for purposes of control, economy or other reason, living quarters for custodian, concessionaire, and other personnel are combined with other park needs in structures, such as recreation or administration buildings, food concession, entrance gates and checking stations. In a park of limited size this is a logical development in avoidance of small, independent buildings ruinously crowding the area.

Comfortable, well-maintained living quarters in which the park custodian and his family, or other attendants housed, can take personal pride, will undoubtedly find reflection in the attitude of each employee toward maintenance of the public area. It is but natural that patched-up, ramshackle living quarters will influence unfavorably the standards of general park operation.

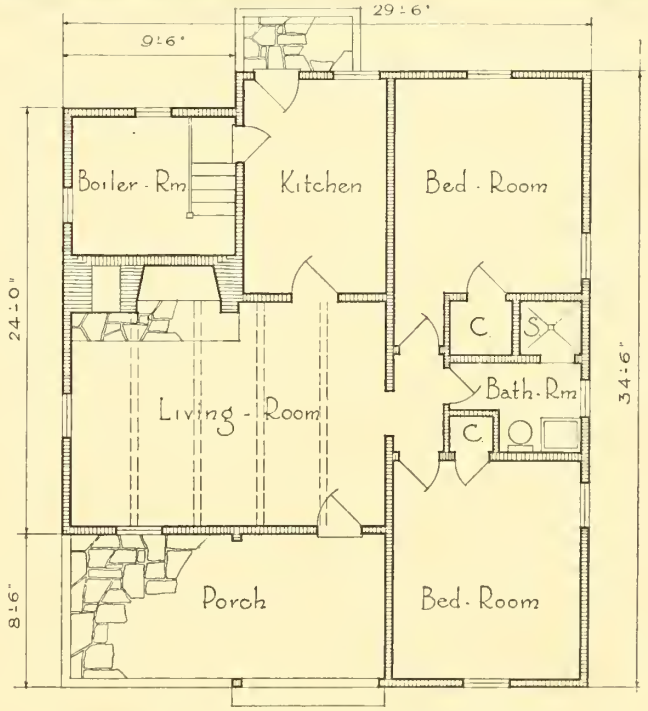
Since the quarters provided actually supplement the salary paid to custodian or other attendant, it seems desirable and logical that quarters and salary be reasonably scaled to each other. Neither commodious residence in lieu of decent salary, nor substantial salary in lieu of decent living quarters is a satisfactory alternative for living quarters and salary in an appropriate relationship. If this relationship were more carefully considered generally a frequent cause of dissatisfaction on the part of personnel could be eliminated.

The typical custodian's residence is a five-room house, efficiently and compactly planned, with consideration given to climatic conditions, the comfort of the occupants, the traditions of the locality, and the budgetary limitations of both park and occupant. Its location is worthy of careful study. This should be convenient to those points which demand the closest supervision by the custodian or other attendant, yet should not obtrusively invade areas of intensive use by the public. An attendant's residence too convenient to an entrance point tends to put the employee and members of his family "on call" twenty-four hours a day. This is neither fair to them nor to the best interests of the park, and is happily avoided only if the chosen site offers a reasonable amount of privacy during the hours off duty.



Superintendent's House, Cumberland Falls State Park, Kentucky

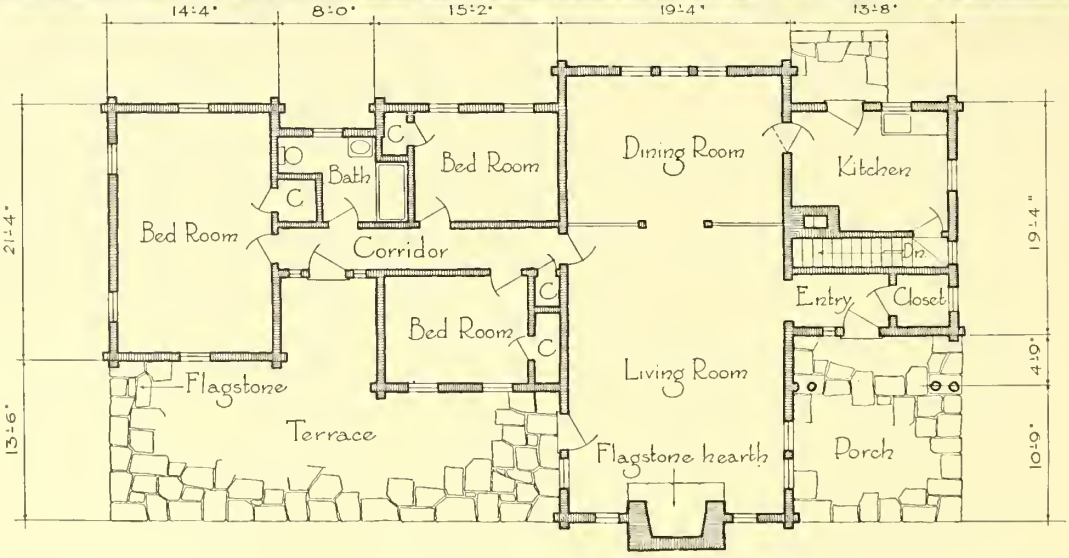
Simple in design, well arranged, and employing inexpensive materials, here is an adequate custodian's dwelling. Siding of wide boards and battens, placed vertically, succeeds rather better than other economical wood constructions in appearing harmonious with a wooded setting.



FLOOR PLAN
Scale 3/32" = 1:0"

Custodian's Cabin, Staunton River State Park, Virginia

The dwelling here shown is compact and well arranged and has been contrived to appear not inappropriate in a park setting through the apt employment of inexpensive materials. The lines of the building suggest a style that is typical of a number of Virginia cabin groups.



FLOOR PLAN

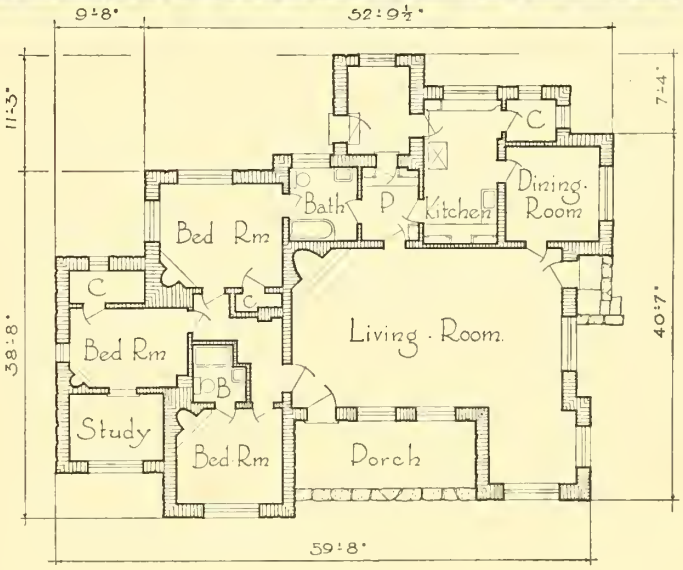
Scale $\frac{1}{16}$" = 1'-0"

Custodian's Cabin, Douthat State Park, Virginia

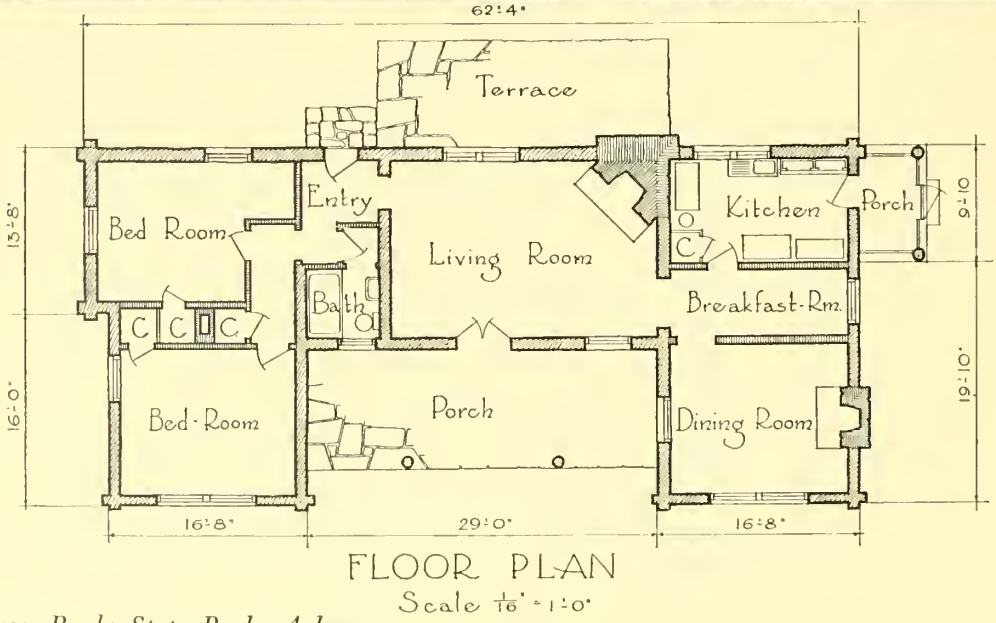
Here is proof that a log structure can be varied and exciting without breaking with tradition. A stickler for perfection might wish for a shaggier roof, closer joints between logs and a less pronounced terrace line, but he would be a stickler indeed in the face of such high merit in other essentials.

Superintendent's Residence, Mesa Verde National Park

Definitely regional by reason of the technique of its masonry, the projecting *vigas,* and the shifting parapet levels surmounting flat roofs, this example is rather larger than most of the dwellings shown herein for the accommodation of the family of park custodian or superintendent. The building seems particularly well suited to site and to region. The several corner fireplaces are in the spirit of the architectural prototypes of the American Southwest.



FLOOR PLAN
Scale 3/64" = 1'-0"



FLOOR PLAN

Scale $\frac{1}{16}$" = 1:0"

Custodian's House, Boyle State Park, Arkansas

Although not specifically warned in the moral code against coveting a custodian's house among those worldly holdings that might incite envy, it was surely because such an example as this did not exist at the time. We may forego coveting, but are not to be denied admiring, this excellent plan and the fine use of the materials that so satisfactorily clothe it.

SERVICE BUILDINGS *and* UTILITIES

THAT FACILITY least contacted by the using public, the maintenance building in parks, needs to make least effort in gesture to its environment, if it is properly located. Generally speaking, its location is off the track beaten by park patrons, and is an isolated and well-obscured one, where this stepchild among park structures need not suffer unfavorable comparison with necessarily more self-conscious and better groomed neighbors. This is not to say that it need not be conveniently located. Inconspicuous convenience is the qualification. If such a site is not available, then the service building must go in for protective coloration, and perhaps to a greater degree than other buildings because it is so completely nonrecreational and without the saving grace of very apparent direct benefit to the public itself. Its reason for being is so little sensed by the unanalytical public mind that its presence is more than likely to be subconsciously resented.

The typical service or facilitating buildings within parks provide for the housing of trucks, equipment, implements and supplies necessary to park maintenance. They are sometimes referred to as maintenance, utility or equipment buildings. Often provision must be made for the stabling of work horses, or of one or more saddle horses used by caretaker, ranger or others of the park personnel in their duties. This leads to need for space in which to store wagons and feed. Repair shop, carpenter and paint shop, and winter storage space for park furniture are among space requirements not unusual to parks of any considerable size. These and countless other service space needs crop up so progressively during park development that the service building seems always to be in process of change, or in crying need of it. Indeed it is foolhardy to look upon the most carefully considered and planned initial structure as the fixed ultimate for a service building or group. It may serve perfectly the need of the moment. But there is nothing within parks more legitimately subject to change than service and facilitating needs during development, and few parks are recorded as having finally passed that stage. The very choice of site for the service center should be predicated upon expansion possibilities beyond all reasonable limits foreseen at the start, and the wise technician will clearly see and cannily plan the initial structure as an extensible building, or as one unit with which others can be joined or grouped.

Probably the happiest and most forehanded visualization of the ultimate service group is a square service courtyard surrounded by all the facilitating structures. If, at the starting gong, the required buildings utilize but one, or at most two, sides of the eventual courtyard, the planner need not feel regretful concern for its incompleteness. Time will correct that, and speedily. His concern might more profitably be for how the threat of future additions will be met after structures have raced their way to enclose all sides of the courtyard. He may almost find that to maintain any opening for access to the service court is his real problem.

The chief advantage of the "hollow square" plan for a service group is the confinement of maintenance activities and paraphernalia to an area that becomes ultimately screened from public view as the expanding structures proceed to enclose it. Cavernous openings for entrance of trucks and equipment, factory-like windows so necessary for ample lighting of work spaces, all the inharmonious and unparklike can be made to open on the court, while the walls exposed to public view need not shout stridently the maintenance activities within. This results in an opportunity to limit "eye appeal" construction to the exposed outer walls, and to resort to strictly practicable and serviceable construction within the court. The enclosure serves also to accommodate and screen from view any equipment which need not be kept under roof. It masks the loading and unloading of supplies, the arrival and departure of work crews.

The park patron is fended off from wandering into the activities of the maintenance base with which his recreational use is not properly involved, and limits are created to prevent a loose overflow of maintenance facilities into areas that the public should be privileged to claim for its own. Confined to their own fixed precinct, hemmed in and obscured by their own requirements of structure, the activities and facilities which have to do with the mechanics of development and maintenance need not constitute a disfigurement of a preserve of Nature.

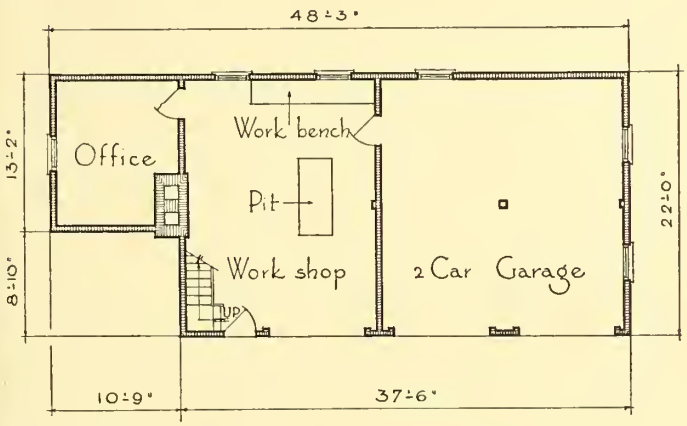
Certain facilities in parks can almost be termed utilities. The supply of safe drinking water and sanitary toilets, already cited as "first things" in the development of a natural area, are of this nature. Also in this category and hardly second in importance is the need for the disposal of garbage and rubbish for the maintenance of healthful and sightly conditions. As surely as drinking water must be provided and kept uncontaminated and sewage disposal provided and kept uncontaminating, so must garbage and rubbish disposal be positive and complete. The undertaking may not be haphazard. The incinerator is the structural medium, but it is not automatic and depends entirely on the human equation for its effectiveness. Tending of the incinerator, and all the preliminary routine of garbage and rubbish collection, must be regular and diligent.

The incinerator can be one of innumerable forms. Important are the considerations of ample capacity, the employment of heat resisting materials, and both the draining of accumulated waste prior to burning and provision of abundant draft to insure maximum combustion. Desirable are overhead shelter for the attendant operating the incinerator and convenient method of charging.

It is regrettable if the flue must be tall and unsightly, but it is more regrettable if, in attempting to overcome this, the draft is reduced beyond the desirable maximum and unnecessary smoke and stench are the result.

Incinerators should be located conveniently near to the intensively used areas, yet must be decently retired so that their nuisance quality is minimized. Prevailing air currents should be studied before the site is determined. Tree growth and other natural screening from view are only advantageous if they do not also become obstructions to draft.

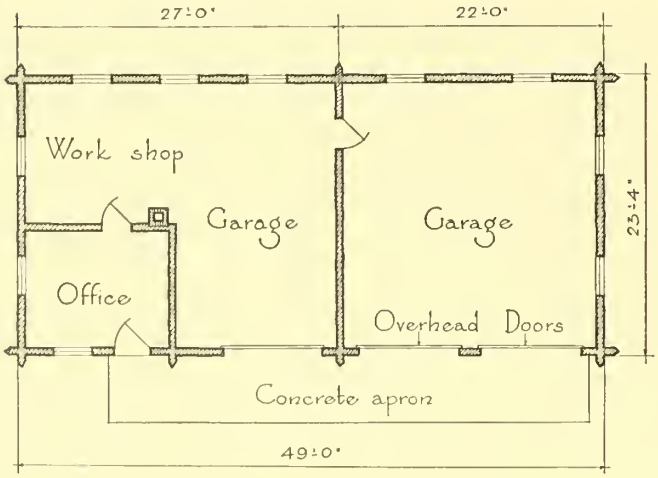
It might be said in short that incinerators, service structures, and all such other phases of park operation which by their nature are capable of functioning without direct contact with the public, function best if kept out of its sight and out of its path.



FIRST FLOOR PLAN
Scale 1/16" = 1'-0"

Maintenance and Equipment Building, Levi Jackson-Wilderness Road State Park, Kentucky

Decorously unpretentious, this substantial and well-arranged building supplies housing and repair shop for park automotive equipment. Location in a wooded tract has shielded it from any temptation to glorify with sports clothing a building that looks so well in clean overalls. The masonry of the chimney is well done, the roof texture adequate.



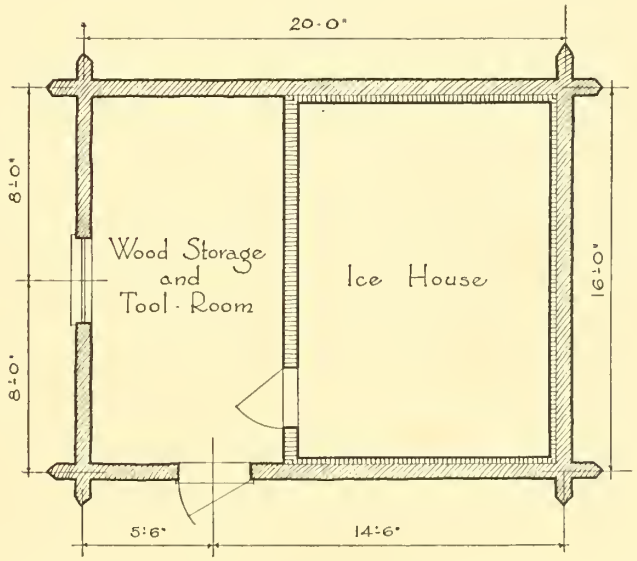
FLOOR PLAN
Scale 1/16" = 1'-0"

Equipment and Maintenance Building, Scenic State Park, Minnesota

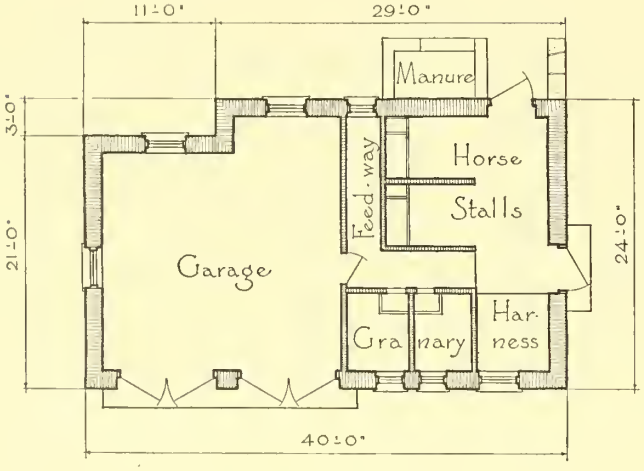
A mere facilitating building glorified by the excellent log work almost invariably found in Minnesota. When all structures in parks exemplify the sturdy forthrightness of this example, many existing buildings will have been replaced.

Storage Building, Scenic State Park, Minnesota

Obviously close kin to the equipment and maintenance building of this same park through the family trait of excellent log construction. The projecting logs at the corners keep within allowable limits of rakishness and enliven the general effect. The ridge capped with a pole should be noted. Ice, wood and tools are stored in the building. The ice storage room is lined with insulating material.



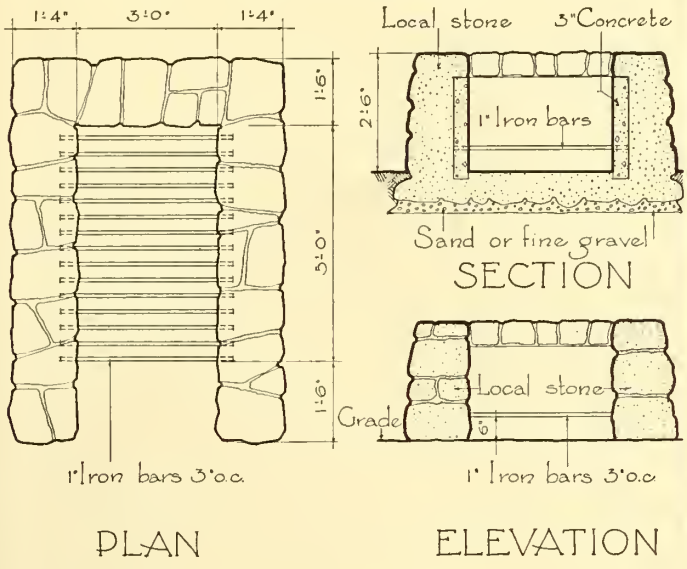
FLOOR PLAN
Scale 3/8" = 1'-0"



FLOOR PLAN
Scale $\frac{1}{16}$"=1'-0"

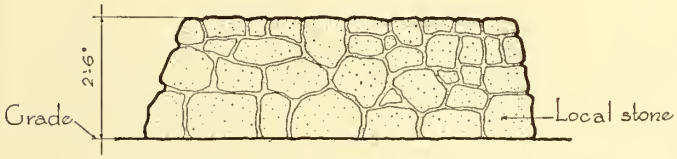
Service Building, Pilot Knob State Park, Iowa

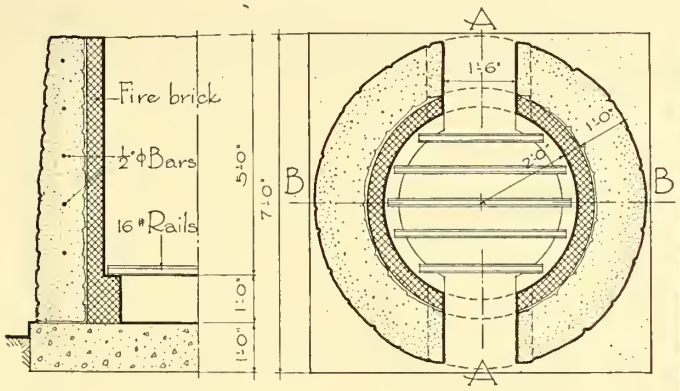
Exhibiting a degree of structural permanence seldom found in maintenance and equipment buildings in parks. By no means a fault—unless its site is injudiciously selected. Second thoughts on suitable locations for buildings facilitating maintenance are not unheard of. The end garage stall has the appearance of being a later addition. If the pattern of the past forecasts the future, this is the first of a probable succession of extensions in provision of necessary service space.

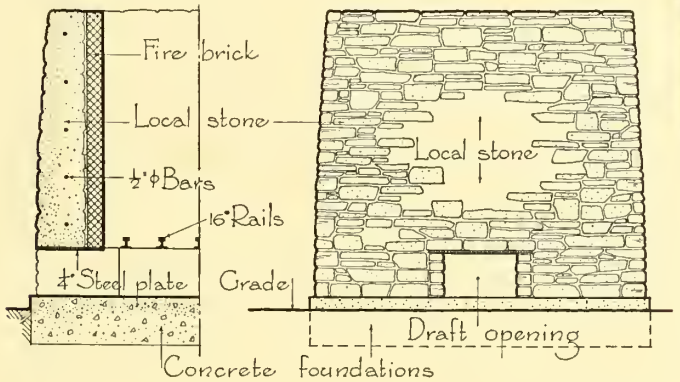


Incinerator – Fargo Metropolitan Park – North Dakota

The most elementary form of incinerator is this type. It is merely picnic fireplace of exaggerated size. In capacity it is more restricted than the examples which follow.







Incinerator – Taughannock Falls State Park – New York

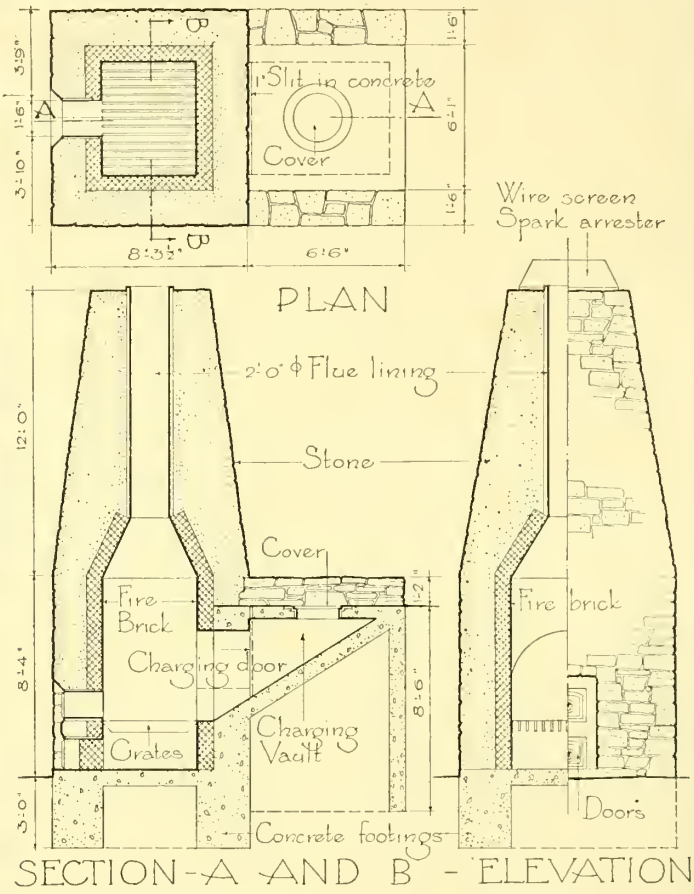
The refuse is lowered into this circular incinerator from the level of truck or wagon approach for which is supplied by the concrete pavement to the left of the unit. This design is sightly in appearance and provides large capacity.

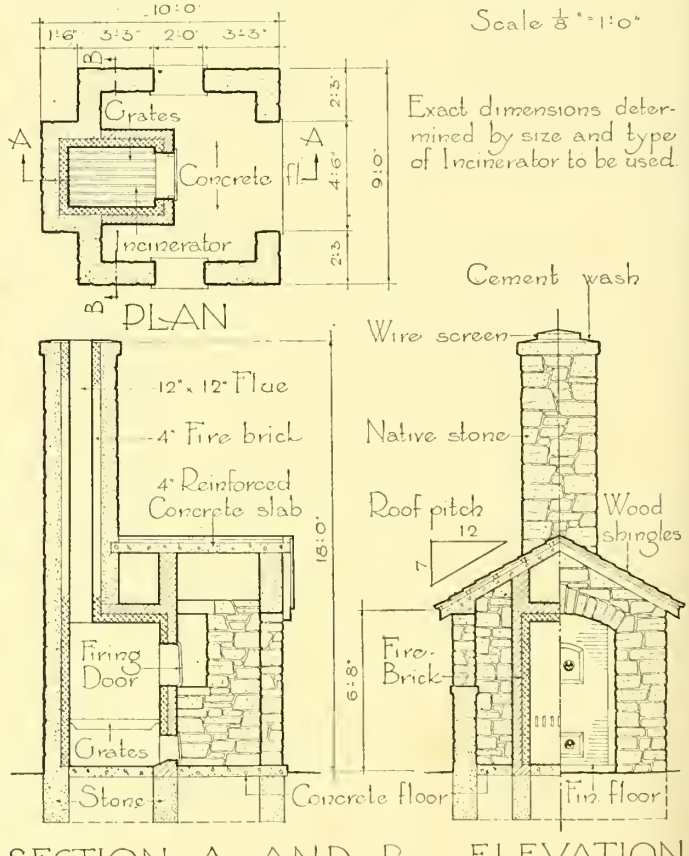
Incinerator – · Sharon Woods – Cincinnati

Monumental in size, and almost so in its character, is this utilitarian incinerator. It is fed directly from refuse collection trucks which reach the charging door by means of elevated earth ramp. The capacity of this chimneyed facility and the one below greatly exceed those of the previously shown examples.

Incinerator – Audubon Memorial State Park – Kentucky

The gauntness of unavoidable soaring chimney is considerably softened by the roofed structure at its base which houses the incinerator itself and provides shelter for attendant operating it. The charging of the unit is from the front wall, not overhead opening as in the example above. The wire screen spark arresters that equip both units are a very necessary provision.





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