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A RESORT DEVELOPEMENT FOR GLACIER NATIONAL PARK

Part I

Undergraduate Thesis in Architectural Design

by

441

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of the requirements for the degree of Bachelor of Architecture

at

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i n t r o d u c t i o n :

INTRODUCTION

HISTORY OF PRIVATELY OWNED LAND IN APGAR VILLAGE

Since the establishment of Glacier National Park, the area in and around the Village of Apgar has always been one of the major visitor centers of tourists. Even before the land was incorporated as a National Park in 1910, the beauty of Lake Mc Donald and the surrounding area held such a fascination for its visitors that many people settled the land.

The homestead act was in existence at this time, and from the 1880's until 1910, the establishment of Glacier National Park, a large portion of the land at the lower end of Lake Mc Donald was homesteaded by these early settlers. The homestead act, of course, did not apply after 1910. From 1910 it has been the policy of the National Park Service to purchase these private lands any time that they are available for sale. Due to this policy, a large amount of the original privately owned land has reverted back to government ownership. This has caused an increasing scarcity of private property which has tended to greatly increase the value of the remaining private lands. Presently, property on the shore of Lake Mc Donald at Apgar is the most valuable lake-shore property in the state of Montana.

PROPOSAL

The largest private landowner in Apgar Village at the present time is the West Glacier Mercantile Company. They own a $5\frac{1}{2}$ acre tract of land at the foot of the lake in the

center of the village. About 4 acres of this land has been developed to include over-night accommodations, a restaurant, and a curio shop. The owners, realizing the value of their location and the large yearly growth of tourist travel in the park, wish to completely redevelop their property to accommodate more of the tourist travel passing through Apgar. They wish the redevelopment to include the type of facilities now present, but on a larger scale.

It is the design of this redevelopment that will comprise the work I will do for my undergraduate thesis in Architecture.

conditions

creating a need :

CONDITIONS CREATING A NEED

NEEDS IN GLACIER NATIONAL PARK

Visitor travel has been steadily increasing in Glacier National Park since its establishment in 1910. The year 1962 saw a record 966,100 people pass through the park. By 1972 it is expected nearly 1,100,000 people will visit the park. Graph no. 1 shows visitor travel from 1958 through 1965 and projected to 1972.

Along with the increased visitor travel to the park there has given rise to the need for more and better tourist accommodations and improvements of park roads and campgrounds. This problem is not unique to Glacier Park, but is a problem in all the National Parks. The Federal Government realizing this problem, in 1956, initiated the Mission 66 program to improve roads, campgrounds, and facilities for visitor use and also to stimulate investment of private capital for the improvement on tourist accommodations.

Within Glacier Park, Mission 66 has been responsible for the improvement of all major roads, the rebuilding of all major campgrounds, a new visitor center at Logan Pass on Going to the Sun Highway, and extensive remodeling and additions to the park headquarters area at West Glacier.

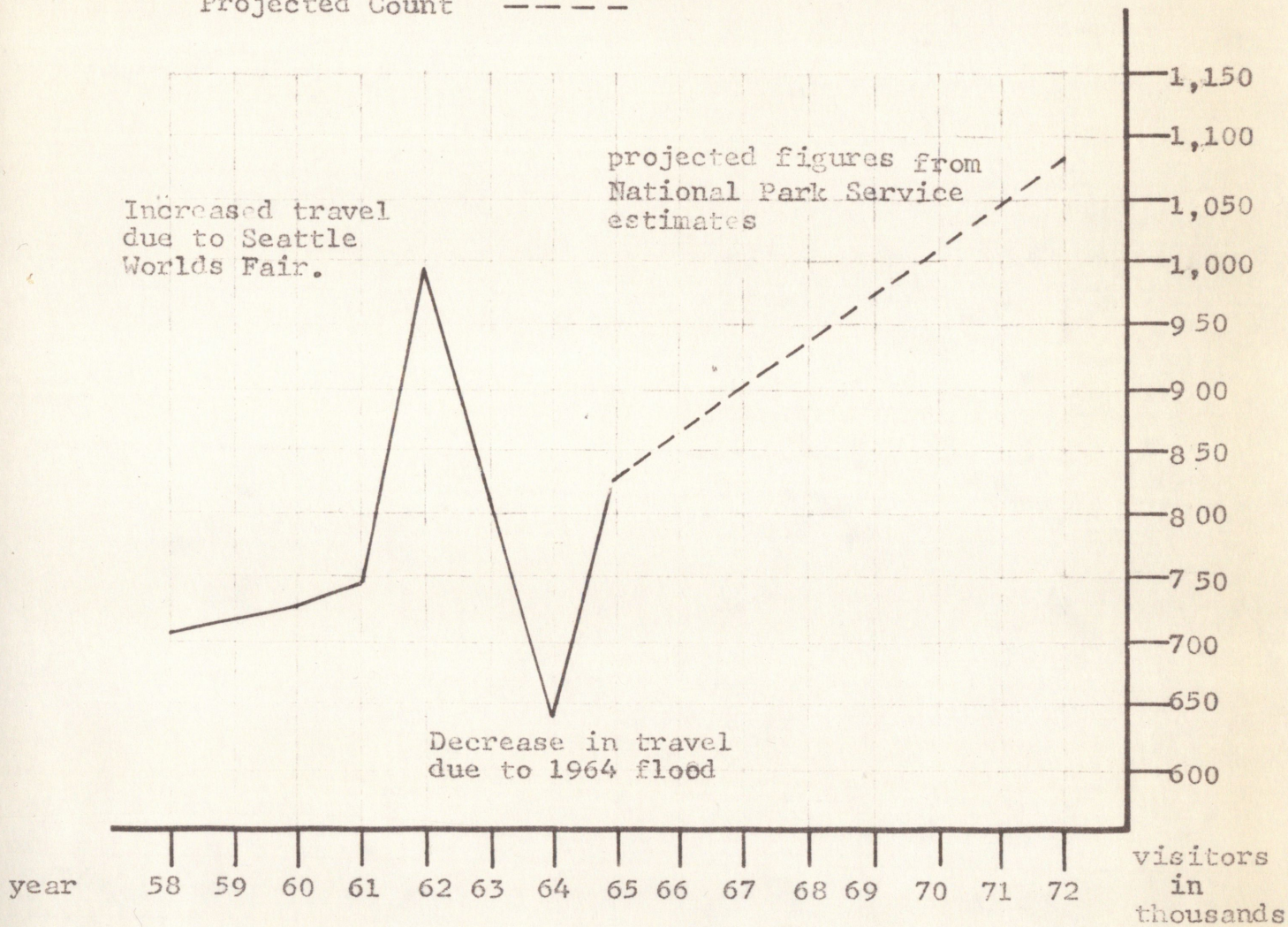
NEEDS AT APGAR VILLAGE

Within the limits of the park, the majority of the tourist accommodations are supplied by the Glacier Park Company, a corporation that leases and operates the government owned

hotels, motels, and eating facilities. With the exception of Apgar Village, this corporation has a near monopoly of service facilities at all the tourist centers in the park. In Apgar, the Glacier Park Company operates the Village Inn, a 36 unit motel owned by the National Park Service. The West Glacier Mercantile Company owns and operates the remaining tourist facilities which include 50 overnight accommodations, a restaurant seating 120 people, and a small curio shop. The daily reports from both of these businesses for the last five seasons indicates the needed number of visitor accommodations has greatly exceeded the existing number of accommodations. It is the policy of the National Park Service not to build any more accommodations on park land. It is their hope that the needed accommodations will be developed on the boundaries of the park by private investors or within the park on privately owned land. Therefore, any new tourist accommodations built at Apgar must be built by the West Glacier Mercantile, as they own the only parcel of land large enough for commercial development. They do not intend that the proposed development of their land will fulfill the needs of all the tourists that visit Apgar, as this would be impossible with the amount of land they have, but they do wish to develop their property so as to accommodate as many visitors as possible

GRAPH NO. 1

Actual Count —————
Projected Count - - - - -



VISITOR TRAVEL IN GLACIER NATIONAL PARK
1958 to 1972

local
conditions :

LOCAL CONDITIONS

GEOGRAPHIC CONDITIONS

Glacier National Park is located in North-Western Montana. Established in 1910, it is the fourth largest National Park with nearly 1,000,000 acres. Its northern edge is on the Canadian Border and with Waterton Lakes National Park of Canada, makes up the Waterton—Glacier International Peace Park. Glacier is famous for its mountain scenery and beautiful lakes.

Apgar Village is in the south—western portion of the park at the lower end of Lake Mc Donald three miles from the west entrance to the park.

The following two maps show Glacier Park in relation to Montana and Apgar Village in relation to Glacier Park.

HISTORIC CONDITIONS

HISTORY OF LAKE MC DONALD

Lake Mc Donald was called the Sacred Dancing Water by the Indians of long ago and the Apgar vicinity was reserved for their religious ceremonies and sacred dances. They seemed to see the handiwork of the Great Spirit in the beauty of the lake, so they never lived there but only went there on a yearly pilgrimage.

The lake was named after Duncan Mc Donald, one of the first white men to see the area. He, with a party of Indians, camped on the shores of a lake, and while there, Mc Donald carved his name on a large cedar tree. When the carving was found in later years the lake was named after him.

HISTORY OF THE APGAR CABINS

The history of the development of the cabin camp which comprises the site of this thesis, not only makes interesting reading but helps the reader understand the character of the present development. The tall cedar trees, the view of Lake Mc Donald and Mc Donald Creek plus the old log cabins on the site combine to give the site the peaceful and quiet character that must be continued in the design of the new development.

The earliest settler to homestead in the Apgar area at the foot of Lake Mc Donald was Milo Apgar, who with his brother Charley arrived in the area in the early 1890's. It was Charley Apgar who built the first cabin camp at the foot of Lake Mc Donald. Although many people in the Village later on had rooms to rent to the passing visitor, no one went at the tourist business like Charley Apgar did. Each year he would build a new log cabin and move his family into it and then rent the old one to the tourists, most of whom during these early years, stayed the whole summer. After a number of years he had quite a few cabins to rent and a good business.

A few of these cabins have had quite a history. The one pictured in illustration no. 1 was the first park headquarters building. The one pictured in illustration no. 2 was built as a barn, later turned into a community dining hall, then remodeled as a wash house. Presently it is the largest cabin on the site.

The Apgar cabins continued to grow from these early years on, but only under the ownership of the Apgar Family until the 1930's. The man responsible for construction of the

majority of the buildings on the site is Bill Mackin, who acquired the land and cabins from the Apgar Family. With the exception of the original log cabins that are still standing, all of the buildings now on the site were built by Mackin. Mackin built cabins, motels, houses, garages, storage buildings—anything he felt he needed at the time. No thought was given to any over-all planning or site development and the size of each of the buildings was determined by the amount of money Mackin had at the time he built it. As might be expected, some of these buildings do not enhance their surroundings. In the mid 1950's Mackin built his last and largest building, a 36 unit motel on the shore of Lake McDonald. This building was designed by an Architecture firm in Kalispell and at present is one of the best looking buildings in Apgar. By 1958 the tourist business was getting the best of Mackin and he sold all of his property and buildings excepting his new motel, to the West Glacier Mercantile Company. A year later he sold the Motel to the National Park Service, left Apgar and retired in Kalispell.

Many of the old cabins on the site are so run down that they are almost beyond repair and many of the later models were poorly constructed and inadequately planned. The present state of these cabins is one of the reasons for the proposed new development. But in spite of their condition they still have a definite charm about them, a certain attraction that draws people back year after year. It is this character that, hopefully, will be incorporated into the new buildings.

Illustrations one through four show typical cabins as they are at present. The first three show examples of the earlier log cabins built by the Apgar Family and illustration four shows one of the frame cabins constructed about 15 years ago.

SOCIAL CONDITIONS

At the turn of the century, the large resort hotel represented the tourism concept of visiting the National Parks. The great hotels of 40 or 50 years ago, some built by railroad money, offered grand accommodations to entice the visitor to the park. He arrived by train or stagecoach and stayed for a considerable length of time. The visitor was, of course, supposed to be attracted by the park's wonders not by the activities at the hotel.

Within the last 15 years however, the hotels seem to be in progressively less favor. The present day tourist wants motel or cabin--type accommodations, or camp grounds as he stays for only a short time and then is on his way.

The increasing trend toward the use of campgrounds and trailer parks by the park visitor is a problem that must be taken into account when planning any tourist accommodations. But due to the fact that park visitor travel is increasing at a proportionally faster rate and the fact that the Apgar area has never been able to meet the demands of visitors for accommodations, greatly lessens the problem in this case.

To meet the demands of the present day tourist, Apgar Village should supply both the motel--type accommodation and the cabin--type accommodation. Directly adjacent to the site is a 36 unit motel, the Village Inn, owned by the Government

and operated by the Glacier Park Company. See illustration no. 6. The proposed development and the Village Inn must work together. The Village Inn provides strictly motel accommodations while the proposed development adjacent to it will provide the individual cabin-type accommodation. Along with the accommodations the development will provide a restaurant, bar and lounge, camp store and gift shop. The demands of the present day visitor to the area dictate that there be more accommodations of the individual cabin-style than the standard motel-type; therefore the decision was made not to include a motel in the proposed development. Due to the large increase in the number of families visiting the park the proposed development will be designed mainly around the family as the typical guest. The majority of the cabins will be large enough to accommodate three or more persons and will be equipped with kitchens. The bar and lounge will be kept fairly small. The type of activities emphasized will be fishing, swimming, hiking and, of course, site-seeing. The restaurant and the gift shop will cater to the families also. Meals will be fairly inexpensive and served in an informal atmosphere; objects sold in the gift shop will be inexpensive and eye-catching.

ECONOMIC CONDITIONS

The average visitor to the park, according to National Park Service figures, spends \$9.50 per day. About half of this goes for lodging, one third of it for meals and the rest for transportation and incidentals. This is the person that the proposed development will cater to. The person spending less than this amount most likely is the camper with all his

needed equipment with him. The only part of the development designed solely with the camper in mind will be the camp store. The person that wishes to spend much more than the average of \$9.50 per day will be attracted to the large hotels in the park of which there are four. The number of these people as park visitors, is declining each year so none of the development will be designed with their wants exclusively in mind.

CLIMATIC CONDITIONS

The tourist season in Glacier Park lasts approximately 75 days; from the middle of June to Labor Day. This is dictated by the weather and by the length of the school summer vacation. The weather during the tourist season is typified by warm, sunny days, cool nights, and occasional rain showers. The actual dates that the park is open extend from about a month before the start of the season to a month after its end. The rest of the year the park is closed due to the snow. The proposed development will be designed for occupancy only during the 75 days of the season. Due to the chilly nights in the summer some form of heating will be necessary in the units, although insulation will not be necessary. Due to the heavy snowfall (up to as much as four feet at a time) the buildings must be designed and constructed sturdy enough to withstand the added weight. Often the snow is wet and sticky and very heavy. This coupled with the fact that there is very little wind in the area to blow the snow off the roofs, makes the snow problem significant. See illustration no. 5. Graph no. 2. shows the average weather reports for a typical year at Apgar.

GRAPH NO. 2

	June	July	August	Jan.	Feb.
Number of clear days	11	19	20	0	2
Number of cloudy days	14	6	7	29	16
Number of partly cloudy days	5	6	4	2	10
Total rainfall	3.79	2.25	4.12	3.91	3.63
Total snowfall	0	0	0	46.2	25.9
High temperature	85	89	92	44	38
Low temperature	31	30	32	5	-32
Average temperature	67.5	79.9	78.4	33	28
Depth of snow at end of month	0	0	0	36	32

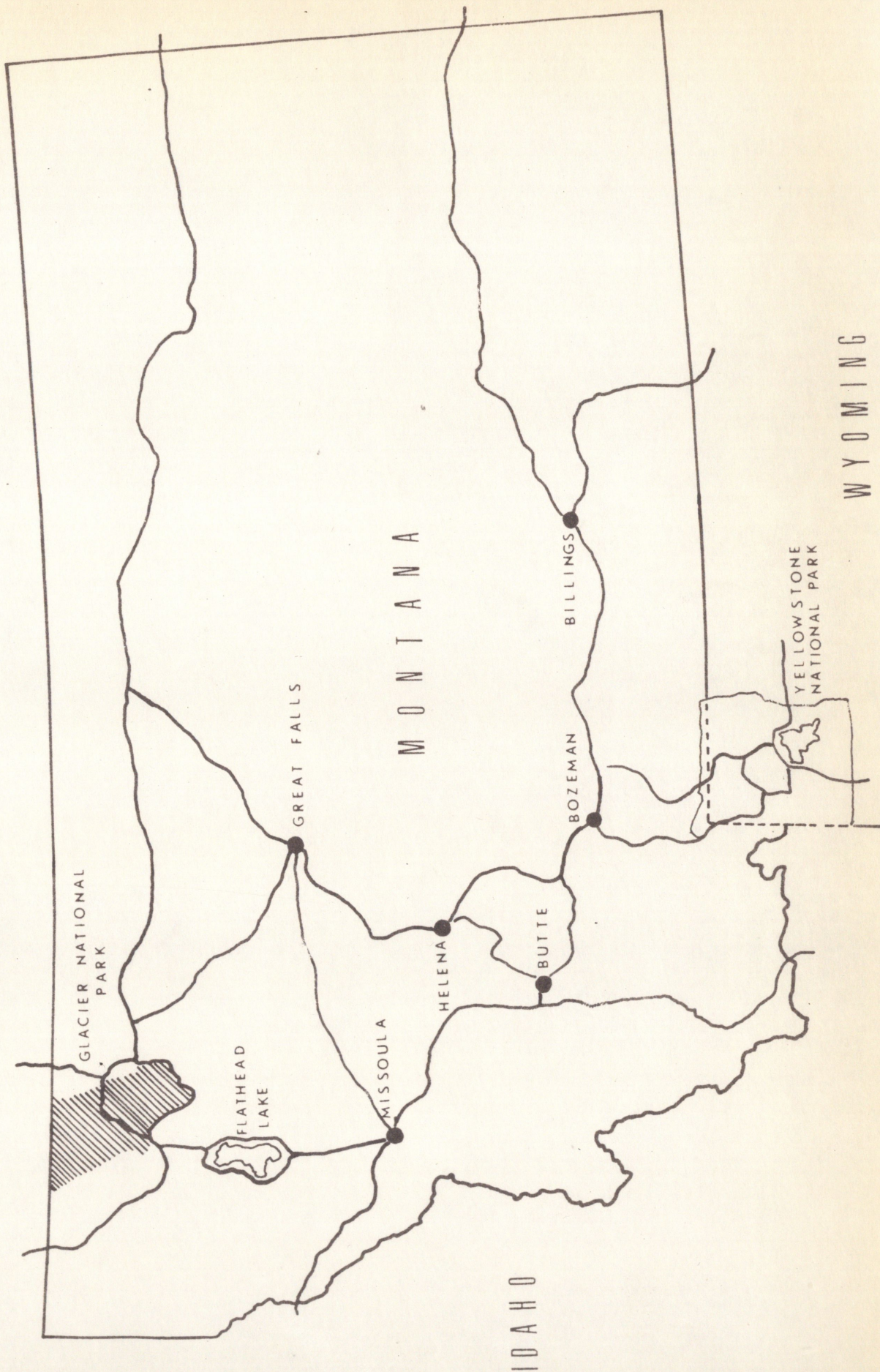
AVERAGE MONTHLY WEATHER REPORT FOR APGAR

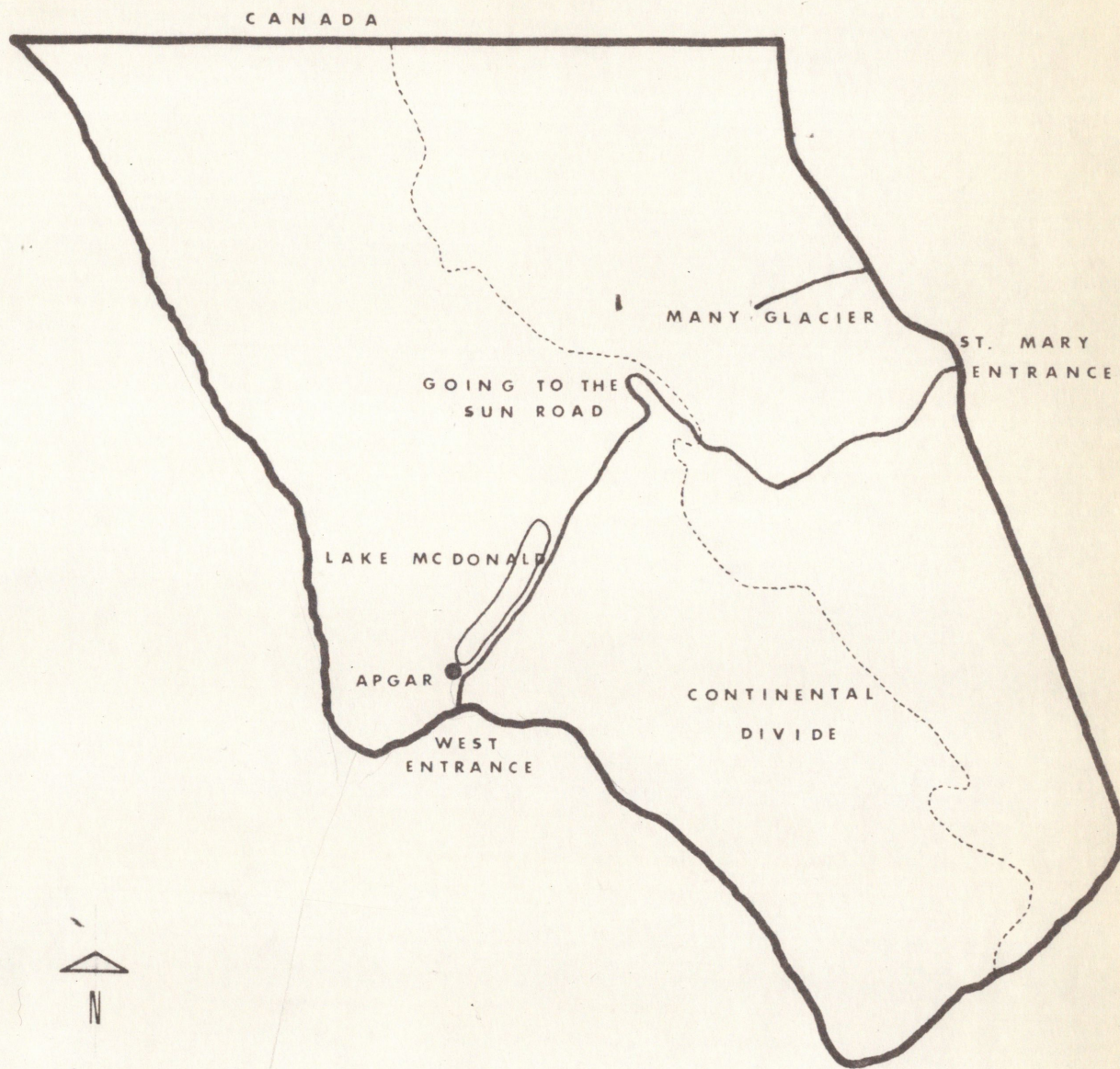
The reports from the months of June through August give an indication of the weather during the tourist season.

The reports from the months of January and February show the extremes in climate over the period of a year.

These figures were obtained from National Park Service records.

CANADA





GLACIER NATIONAL PARK



Illustration no. 1 Typical log cabin on the site



Illustration no. 2 Typical log cabin on the site



Illustration no. 3 Typical log cabin on the site



Illustration no. 4 Typical frame cabin on the site



Illustration no. 5 Apgar during the winter



Illustration no. 6 View of the Village Inn,

site
conditions :

SITE CONDITIONS

ORIENTATION

The site of the proposed development is located in one of the most heavily traveled areas of the park. Visitor counts in the park show that Apgar Village is second only to the St. Mary's area, on the east side of the park, in tourist travel. The two main roads entering Apgar, one from the "Going to the Sun Highway" and the other from the west entrance of the park, converge right at the site. Lake Mc Donald and Mc Donald creek also border on the site. This piece of land occupies the prime position in Apgar Village, as can be seen from the following map.

NATURAL ENVIRONMENT

The site is situated in one of the most beautiful areas of Glacier Park. The view from the site of Lake Mc Donald with the mountains of the continental divide in the distance is a never-to-be-forgotten picture for the visitor. The outstanding feature of the site itself is the stand of magnificent Cedar trees that covers it and much of the land around the shore of the lake. Along with the cedar trees there are a few birch and pine trees scattered throughout the site. It is the intention to preserve all the trees possible when constructing the new buildings.

The site has a very gradual slope toward the lake and the creek. At the edge of the creek there is a steep bank about 10 feet high. As the creek nears the lake this bank

Slopes down toward the lake finally meeting the rocky beach at the mouth of the creek.

Illustrations 8 through 13 show the site and views of the site.

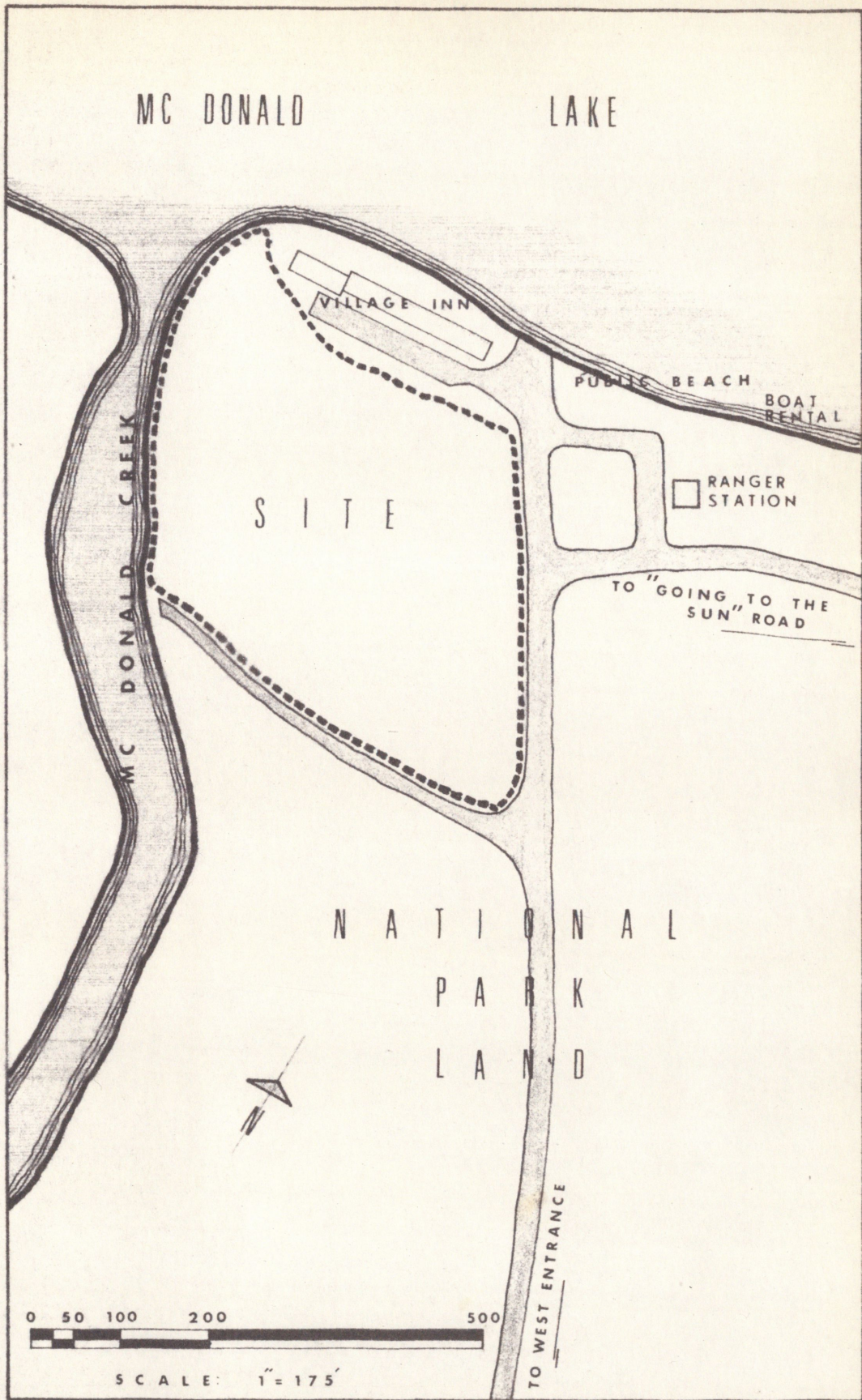
SUPPORTING FACILITIES

The National Park Service has supplied many tourist facilities in and around Apgar Village. These facilities for the use and enjoyment of the visitor are a definite asset to the proposed development as they draw people to the area and tend to keep them there for a longer period of time.

One mile east of Apgar, on the shore of the lake is a large picnic area. Directly across the road from the picnic area is Apgar Campground. Approximately four miles from Apgar on the west shore of the lake is Fish Creek Campground and Picnic Area. Both of these campgrounds have a large Amphitheater adjacent to them. Directly across the road from the site is a public swimming beach with a boat rental facility adjacent to it. Directly behind the beach is the Apgar Ranger Station. Facilities not offered at Apgar are offered at West Glacier, three miles to the south west, outside the park boundary. West Glacier is a small town of 300 people situated at the junction of U.S. Highway no. 2 and the main highway entering the park. The facilities there include a service station and garage, a general store, post office, railroad depot, and coin laundry.

UTILITIES

All utilities needed for the development are presently at the site. These include electric service, cold water supply and telephone service. Sewage disposal will be handled with septic tanks on the site as there is no centralized disposal system for Apgar Village. The electric service is supplied by the Pacific Power and Light Company; Telephone service is supplied by the Mountain States Telephone and Telegraph Company; and water is purchased from the National Park Service.



ARGAR VILLAGE

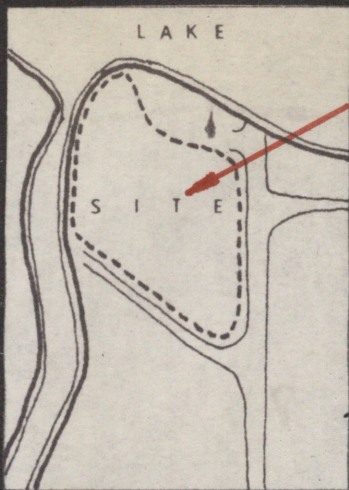


Illustration no. 7 View of the site

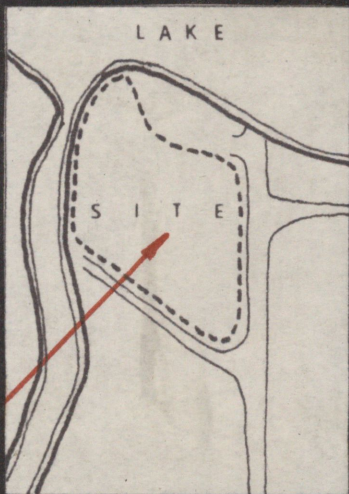


Illustration no. 8 View of the site

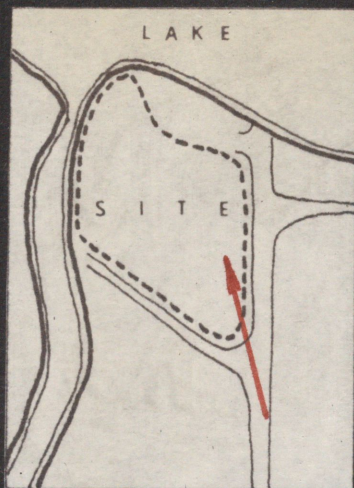


Illustration no. 9 View of the site showing present buildings

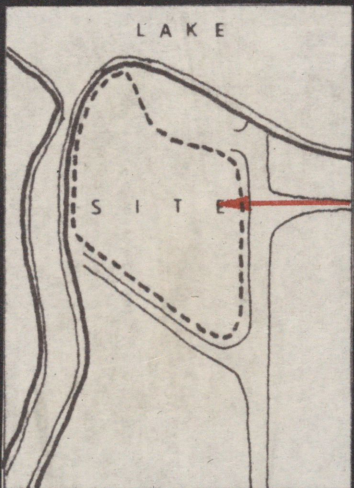


Illustration no. 10 View of the site showing present buildings

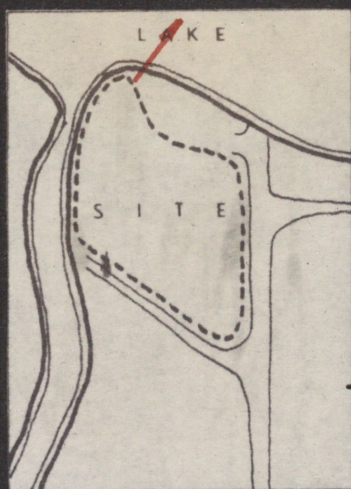


Illustration no. 11 View from the site

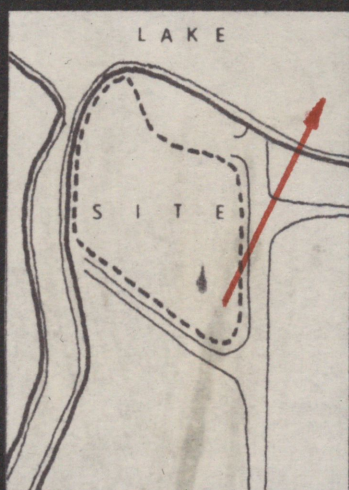


Illustration no. 12 View from the site

function :

FUNCTIONS OF THE FACILITIES

RESTAURANT

The restaurant will be able to seat 200 people; the atmosphere will be kept informal but attractive. The restaurant should have a view of the lake and be completely visible from the two approach roads to the site, so as to draw as many people as possible.

In conjunction with the restaurant will be the kitchen, storage area, and a small employee dining room, seating about twenty people. The employee dining room will serve all the employees of the development, but due to the difference in their working hours, they will not all eat at the same time. The kitchen will be located so as to efficiently serve both the restaurant and employee dining room.

BAR AND LOUNGE

The bar and lounge will be kept small because of the type of clientele expected. Seating at the bar and at tables will accommodate 25 people. The hours the bar and lounge will be open will be 1:00 p.m. until 2:00 a.m. Its location will be near the restaurant so as to provide drinks for patrons of the restaurant. Packaged liquor will be available at all hours to overnight guests of the resort.

GIFT AND PHOTO SHOP

The gift and photo shop will have an area of about 4000 sq. ft. Its function will be to sell souvenirs, gifts, curios, magazines, film, photos, and post cards.

The store will be planned so it can be operated efficiently by two to three clerks. An adequate storage and work room will be provided.

CAMP STORE

The camp store will be designed mainly to service the campers staying in one of the two campgrounds located near Apgar Village. The store will have an area of approximately 3000 sq. ft. ; the majority of this area will be devoted to grocery sales - dry, refrigerated and frozen foods. A small drug section, a fishing tackle section, and an area devoted to clothing and other camping supplies will be provided. An adequate storage area will also be provided.

VISITOR ACCOMMODATIONS

There will be 100 cabins on the site offering accommodations ranging from single units with one bed and a bath to units accommodating up to 10 people including kitchen, bath, dining area and living room. The emphasis will be directed toward accommodating the family as the typical guest. The rates will be moderate for a tourist area and the majority of the 100 cabins will have cooking facilities.

The above accommodations are called cabins but that does not mean that they must take the physical shape of the typical cabin found in most National Parks. While they may be individual separate buildings, they may also be small groups of attached units. The word 'cabin' connotes a seemingly independent interior area which is intimately related to the surrounding landscape and environment.

Small linen and maintenance rooms will be provided for storage of supplies and maintenance equipment. They will be conveniently located throughout the development.

OFFICE

A small office will be provided for the renting of the units. The main office for the entire development will not be located on the site. A small apartment for the manager will be located adjacent to the office.

EMPLOYEE HOUSING

Housing facilities will be provided for approximately 40 employees other than the manager and his wife. The majority of the employees will be college students and they will be housed in dormitory style accommodations. One or more double rooms will be provided for older employees.

aesthetics :

AESTHETIC CONSIDERATIONS

Within the last ten years the majority of buildings in the National Parks of the United States have been built adhering to one of two conflicting philosophies of design.

The first of these two philosophies has been practiced by the concessionaire, the private investor developing private land inside the park for economic return. It has been his intention to surround the visitor with the identical environment he has at home. The results are an overlay of urban life imprinted upon the original wilderness with disturbing and sometimes horrible results. The typical building designed around this philosophy is an exotic glass-walled, flat-roofed, pastel-tinted structure which becomes a distinct intrusion on the native wilderness.

The second philosophy, as supported by the National Park Service, is completely the opposite and equally as bad.

"Park buildings should be as unobtrusive as possible, harmonizing with their surroundings to the fullest extent. In its most satisfying expression, the park structure is designed with a view to subordinating it to its environment, and is located so that it may profit from any natural screenings that may exist."

The continual effort to pretend a building isn't there only makes it the more prominent by guaranteeing that it will not be designed to belong there.

Neither of these two philosophies should be followed in the design of this development. The first completely ignores the site and the second philosophy, as stated, completely ignores

the possibility of good design.

If these two commonly accepted philosophies are wrong, then what is the correct philosophy of design for Architecture in the National Park?

Two general statements for any building on any site within a National Park would be: Design the structure such that it expresses the individuality of the site and design it so that it would come into a bold but harmonious coexistence with nature.

The problems of designing a building that adheres to this philosophy, for the site in question, would be overcome by first analyzing the character of the site, the surrounding environment, the function of the building, and the character that the building is to express. In this case the magnificent stand of cedar trees that cover the site and the surrounding area coupled with the beauty of Lake Mc Donald give the site a peaceful and quiet character which should be reflected in the proposed buildings. They should also express the character of the "mountain feeling" and function as an efficient resort.

These ideals could be achieved by the use of indigenous materials; wood or stone; and by the use of warm "earthy" colors, and a type of construction that reflects the "mountain feeling". Careful consideration must also be given to be sure the buildings are designed to the human scale.



Illustration no. 13 View of a portion of the site showing cedar trees and one of the present cabins



Illustration no. 14 View of Lake McDonald

economics :

ECONOMIC CONSIDERATIONS

From an Economic standpoint, construction and operation of any building or group of buildings within Glacier Park has advantages and disadvantages.

During the entire construction phase, in order to maintain an operating resort, the construction of the buildings would have to progress in stages over a number of years. At no time during the construction phase would there be fewer facilities available for the tourist than the number now present. Construction would have to be scheduled so as not to bother the guests during the tourist season and so that interior work could be done during that time of the year when the weather prohibited exterior work.

Due to these restrictions, the completion of the development will take longer and the entire cost will be higher than if all the construction was done at one time, but these restrictions are necessary because of the climate and the necessity of maintaining a completely operative resort at all times.

The construction would be planned so that the present unused areas of the site would be developed first. At the end of this stage, existing buildings would then be removed, a few at a time, and other portions of the development constructed.

The present buildings on the site that are worth saving would be sold or used by the owner in a different location.

Apgar Village is three miles from the park boundary and within 40 miles of the sources of the majority of materials

and labor that will be used in the development. Therefore there will be very little added cost due to inaccessibility of the site.

Operation costs for the proposed development will be kept as low as possible. Because of the type of resort this will be, luxuries such as television, expensive furnishings or telephones will not be offered. The number of employees will be kept at a minimum; the majority of which will be College students with an average salary of \$200 per month.

From previous year's records it can be assumed that the proposed resort will operate at maximum capacity for 60 days during the tourist season and at half capacity for the other 15 days. The average price of the units will be \$10 to \$12 per day.

At the end of each tourist season the entire development will be closed as soon as possible. There will be absolutely no operating costs during the off-season months. The owner will act as caretaker during the winter months.

building program:

BUILDING PROGRAM--RESTAURANT

<u>SPACE</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>AREA</u>
<u>Dining Area</u>		1	3000 sq.ft.
	Function: Table and counter service of a variety of foods for 200 people		
	Equipment: 30 counter stools, 45 tables, 180 chairs		
	Relation: kitchen, bar, rest rooms		
<u>Employee Dining Area</u>		1	250 sq. ft.
	Function: Cafeteria service for 20 people		
	Equipment: 5 tables, 20 chairs, small food dispensing counter		
	Relation: kitchen, employee rest rooms		
<u>Kitchen</u>		1	1500 sq. ft.
	Function: food preparation and dishwashing for main dining area and employees dining area		
	Equipment: stoves, walk in refrigerators, counters for preparation and other equipment		
	Relation: employee dining, main dining, storage area		
<u>STORAGE AREA</u>		1	500 sq. ft.
	Function: storage for all food and equipment used in the kitchen; temporary storage of garbage; storage for bar		
	Equipment: walk in refrigerator, large freezer, pantry, large cans for garbage beer cooler		
	Relation: all areas of the building		

BUILDING PROGRAM--RESTAURANT

<u>SPACE</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>AREA</u>
<u>Public Rest Rooms</u>	175 sq. ft. each	2	350 sq. ft.
	Equipment: men-- 2 urinals, 3 water closets, 2 lavatories women--4 water closets, 3 lavatories		
	Related: Main dining, bar and lounge		
<u>Employee Rest Rooms</u>	75 sq. ft. each	2	150 sq. ft.
	Equipment: men-- 1 water closet, 1 lavatory women: 1 water closet, 1 lavatory		
	Relation: employee dining area, kitchen		
<u>BAR AND LOUNGE</u>		1	650 sq. ft.
	Function; service of all types of alcoholic beverages; seating for 25 people		
	Equipment: bar, back bar, 10 bar stools, 15 chairs, 5 tables		
	Relation: main dining area, rest rooms, storage area		
		<u>TOTAL:</u>	6400 sq. ft.
Add 20% for construction, circulation, and utilities			1280 sq. ft.
		<u>TOTAL:</u>	7680 sq. ft.

BUILDING PROGRAM--GIFT SHOP AND OFFICE

<u>SPACE</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>AREA</u>
<u>Sales Area</u>		1	3000 sq. ft.
	Function: Sale of souvenirs, gifts curios, magazines, film, photos, and post cards		
	Equipment: Display cases and shelves; counters for merchandise; sales counter		
	Relation: Office, storage and workroom		
<u>Storage and Work Room</u>		1	800 sq. ft.
	Function: Storage of all merchandise and workspace for two employees		
	Equipment: Shelves for storage; large work table		
	Relation: Sales area, rest room		
<u>Employee Rest Room</u>		1	30 sq. ft.
	Equipment: 1 water closet, 1 lavatory		
	Relation: storage and work room		
<u>Office:</u>		1	300 sq. ft.
	Function: registration of guests		
	Equipment: counter, files, storage, ice machine		
	Relation: gift shop, apartment		
<u>Apartment</u>		1	450 sq. ft.
	Function: Provide living accommodations for the manager and wife		
	Equipment: bed, bath, kitchen-living combination, closet space		
	Relation: Office		
		<u>TOTAL</u>	<u>4580 sq. ft.</u>
Add 20% for construction, circulation, and utilities			916
		<u>TOTAL</u>	<u>5496 sq. ft.</u>

BUILDING PROGRAM--CAMP STORE

SPACE	DESCRIPTION	QUANTITY	AREA
<u>Sales area</u>	without cooking 2500 sq. ft. each	1	2500 sq.ft.
	Function: selling of groceries, drugs, fishing tackle, clothing, and camping supplies		
	Equipment: display shelves and counters, refrigerated display case, meat case, sales counter		
	Relation: storage room		
<u>Storage room</u>	provide living, sleeping, cooking and eating and sanitation facilities for 2 to 4 people	1	500 sq. ft.
	Function: storage for all merchandise and equipment needed in the store		
	Equipment: work counter, shelves		
	Relation: sales area		
<u>Double unit without cooking</u>	275 sq. ft. each	20	3,300 sq. ft.
	Function: provide living, sleeping, and eating and sanitation facilities for 2 to 4 people		
	Equipment: two double beds; clothes rack; water closet; shower; chair; sink and chair		
<u>Double unit with cooking</u>	400 sq. ft. each	30	12,000 sq. ft.
	Function: provide living, sleeping, cooking and eating and sanitation facilities for 2 to 6 people		
	Equipment: two double beds; clothes rack; water closet; lavatory; shower; chair; single compartment sink; stove and refrigerator combination; table and chairs; couch that makes into a double bed		
		<u>TOTAL</u>	<u>3000 sq. ft.</u>

BUILDING PROGRAM--VISITOR ACCOMMODATIONS

<u>SPACE</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>AREA</u>
<u>Single unit without cooking</u>	200 sq. ft. each	20	4000 sq. ft.
Function: provide living, sleeping, and sanitation facilities for 1 to 2 people			
Equipment: one double bed or two single beds, clothes rack, water closet, lavatory, shower, desk and chair, chair			
<u>Single unit with cooking</u>	225 sq. ft. each	10	2,250 sq. ft.
Function: provide living, sleeping, cooking and eating and sanitation facilities for 1 to 2 people			
Equipment: one double bed; clothes rack; water closet; lavatory; shower; chair; single compartment sink; stove, refrigerator combination; table and chairs			
<u>Double unit without cooking</u>	275 sq. ft. each	20	5,500 sq. ft.
Function: Provide living, sleeping, cooking and eating and sanitation facilities for 2 to 4 people			
Equipment: two double beds; clothes rack; water closet; shower; chair; desk and chair			
<u>Double unit with cooking</u>	400 sq. ft. each	30	12,000 sq. ft.
Function: provide living, sleeping, cooking and eating and sanitation facilities for 2 to 6 people			
Equipment: two double beds; clothes rack; water closet; lavatory; shower; chair; single compartment sink; stove and refrigerator combination; table and chairs; couch that makes into a double bed			

BUILDING PROGRAM--VISITOR ACCOMMODATIONS

<u>SPACE</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>AREA</u>
<u>Triple unit with cooking</u>	600 sq. ft. each	20	12,000 sq.ft.
Function: provide living, sleeping, cooking and eating and sanitation facilities for 3 to 8 or 10 people			
Equipment: Three double beds; clothes racks; water closet; lavatory; bathtub-shower combination; 2 chairs; single compartment sink; stove and refrigerator combination; couch that makes into a double bed; extra bed supplied if needed			
Linen and maintenance rooms	variable		700 sq.ft.
<u>TOTAL</u>			<u>36,450 sq.ft.</u>
Add 10% for construction and circulation			3, 645 sq.ft.
<u>TOTAL</u>			<u>40,095 sq. ft.</u>

BUILDING PROGRAM--EMPLOYEE HOUSING

<u>SPACE</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>AREA</u>
<u>Dormitories</u>	1200 sq. ft. each	2	2400 sq.ft.

Function: Provide living, sleeping, and sanitation facilities for 20 employees

Equipment: beds, closets, tables and chairs, bath facilities, laundry facilities

Relation: entire development

NOTE: This building would include 2 to 4 single rooms for older employees

TOTAL 2400 sq. ft.

add 20% for construction, circulation, and utilities 480 sq. ft.

TOTAL 2880 sq. ft.

REFERENCES

GOBLE, Emerson, "Architecture for the National Parks,"
Architectural Record, January, 1957, pp. 173-185

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National Parks Magazine, January, 1961, pp. 7-9

National Park Service records

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SUMMARY

The following photographs illustrate the solution arrived at for the problem as it has been presented.

This solution includes the site planning for the entire complex and the design of a building incorporating the restaurant, gift shop, and lounge.

The site plan gives approximately half of the cabins a view of the creek or the lake while the other half are orientated in to the site. The office is located so as to be convenient to the tourist as he enters the village. The camp store and the restaurant and gift shop are located so as to be convenient both to the person staying at the resort and the visitor passing through the village. The majority of parking was located at the rear of the buildings with only a small amount visible from the roads.

The large restaurant and gift shop building was orientated on the site so as to take advantage of the best view of the lake—shown in illustration no. 12. The materials used in this building are wood, stone and glass. The design of the building attempts to follow the philosophy of design as stated on page 34.

The completed work as described here and shown in the following illustrations is only the first phase of the redevelopment project. Succeeding phases would include the design of the cabins, the camp store, the office, and the employee housing.

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