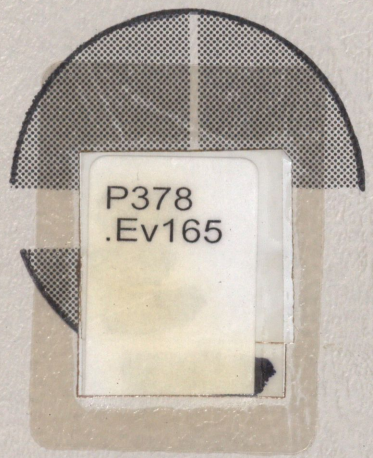

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Gates of the Mountains Meeting Center

LIBRARY
Montana State University
Bozeman

GATES OF THE MOUNTAINS MEETING CENTER

THESIS II

BY: RUSSELL EVANS

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INTRODUCTION

Gates of the Mountains Meeting Center, owned and operated by the Montana University System, is a learning and meeting center for faculty, administration and students involved in the academic system. It is located twenty miles north of Helena, Montana, adjacent to the Hilgar Ranch on Upper Holter Lake, next to a mountainous wilderness area.

The facility exists for the dual purpose of relaxation and stimulation in a suitable atmosphere of change. It will be used for exchanging intellectual ideas, which could happen through conversation after a meeting or seminar, at social gatherings, and through films, lectures, presentations, meetings, etc. One's stay at the Center will be a change from the usual days in classroom or office. Its beautiful scenery and open spaces provide a setting conducive to relaxation as well as stimulation. Both interior and exterior spaces is designed to provide a setting for intensive information exchanges and to stimulate this exchange in a relaxed atmosphere.

PERSONAL APPROACH TO THE DESIGN OF FORM

The process of designing architectural form is similar to forming and molding a sculpture. The surrounding area is basically mountains and the rolling hills. These hills that house the meeting facility end abruptly, and a mountainous wilderness area begins. With the forming and molding pieces taken from this overall setting, ideas are also generated by and borrowed from existing forms and structures in the surrounding areas. The site is part of a ranch and resembles the ranching and farming environment around Helena, although it is the edge of the mountains. To create form, I looked at what the viewer sees in similar settings, such as shed roofs, grain elevators, grain silos, ranch houses, barns, etc. These elements influence roof forms, create proportions, vertical heights, and formation of enjoyable space. The mountains rising abruptly above the hills create a vertical dimension to influence the sculptural reaction to the mountains, hills, and existing forms. So nature, as well as built forms, plays an important part in the molding process.

In an urban environment the surrounding buildings, existing streets, circulation paths, trees and foliage, views, etc. are also a part of the molding process. A three-dimensional form reflects, reacts, and responds to its immediate context as well as the whole contextual

setting. These parts of the environment are part of the process which the sculptor (I, as Architect) uses to create a form. Of course, the situation or environment in which this Meeting Center exists is entirely different, but the process of forming and molding this sculpture is much the same.

Another part of the process involves order. In studying and responding to the physical surroundings of the area, one realizes that nature has an order within itself, and that is very important. Sculpting overlaps and is integrated with a sense of order, which is described below.

Order in the design of this facility is similar to the ordering systems in nature and to academic systems of order. This, again, is part of the sculpting process. In nature, order can be seen to begin at either end of a spectrum. Large elements break down into smaller elements, which break down into even smaller elements--each having order as a group of elements or as an element in itself. One could also observe it from the other end: Starting with small elements, each having order within itself and making up a larger order. Either way is feasible; but for the sake of elaboration on the order involving physical form, we shall progress from small to larger elements. As a viewer gazes across the lake, a small portion of order could be described as the individual tree, forming a group of trees (larger) that cover a mountain which is part of a range of mountains. Another example is the grass creating

patterns of grassy areas that cover a hill which make a group of hills. Each piece has aesthetic order within itself, and there is an overall aesthetic order. Nothing is really symmetrical to the eye, but there is balance. The sweeping lines of the lake shoreline and the rolling hills tie each of the integral parts together. The mountains loom against the hills as a vertical element, making one wonder how it can be a part of order; yet it becomes a backdrop and an ordering principle to all that surrounds it, tying pieces together. This facility attempts to respect and reflect this order.

Since the facility is used for academic affairs by people involved in academia, its order also evolves from order within the academic institution. The institution divides each function, area of study, or department into pieces, each functioning within itself while the institution functions as a whole. This order--each piece existing on its own, yet an integral part of the whole--is similar to the order existing in nature. The facility is divided vertically as well as horizontally for each function. Each piece or space functions on its own, yet functionally relates to the total structure. The distant view of the rolling, golden hills, which abruptly meet the mountains, creates another distinct, sweeping line. The view that is most to be enjoyed is directed out away from the hill. Advantage of the sun is taken throughout the day, except for the harsh evening sun. The climate becomes extreme at times (cold, wind, snow) making outdoor exposure undesirable; so the facility is not stretched out in the sense of requiring long walks from one space to another; However, experiencing the

outdoor environment with walks or just being outside at times is an important part of being in this location for meeting. All of these factors place the form on the site, create an orientation, and each part of this physical environment says something about the form.

Ideas for built form evolve from nature, that which exists around the specific site as well as the general area. Organization is created by evaluating nature's order and the order used by the academic community. All of these influences--physical, visual, and mental ordering systems--are integrated to create this sculpture, Gates of the Mountains Meeting Center.

A MODEL FACILITY

This educational and meeting facility is labeled a model facility. The State of Montana has been chosen as a location for the project although conceivably the project could be located in any state. It will be a model facility in the sense of planning, programming, and development. This exact site location has been selected at the center of the State of Montana, but these same terms and this same approach could be used in any other state.

TRANSPORTATION:

Transportation to the Center is up to the person, but a car will be available for transportation from Helena if the visitor is ariving by plane, bus, or train.

DURATION:

Use of the facility is oriented around overnight use from two days to two weeks.

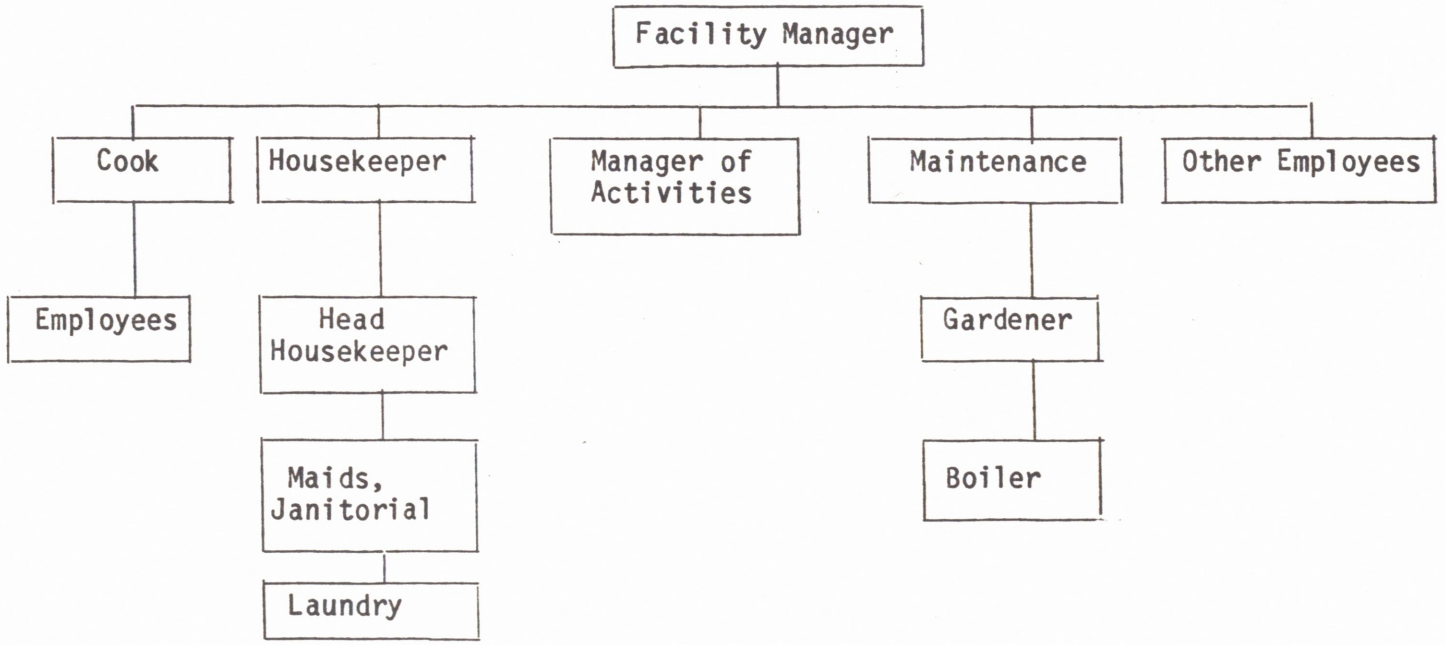
LOCATION:

- Southwest side of Upper Holter Lake, 20 miles north of Helena, Montana.
- It is centrally located in relationship to universities and colleges.
- Located near Helena, Montana - the government hub of Montana.
- It is located near Canyon Ferry Reservoir, golf courses exist outside of Helena, a ski area and beautiful scenery surround the area.
- Located twenty miles from the nearest airport.
- Paved roads exist up to 1/4 mile of the site. The roads are easily accessible summer and winter.

SIZE

The facility will accommodate a maximum of 180 people. Depending on scheduling, two groups of people (related or non-related) could use the facility at the same time.

MANAGER AND EMPLOYEES:



The Facility Manager lives at the facility; other employees work eight hours a day and drive or arrange for transportation.

PROGRAMMING

Upon arrival, the guest must check in at the main entry desk. Adjacent to the lobby is the administrative area (including guest mail and duplication facilities). Then the guest is given a small location map, which also indicates his assigned room.

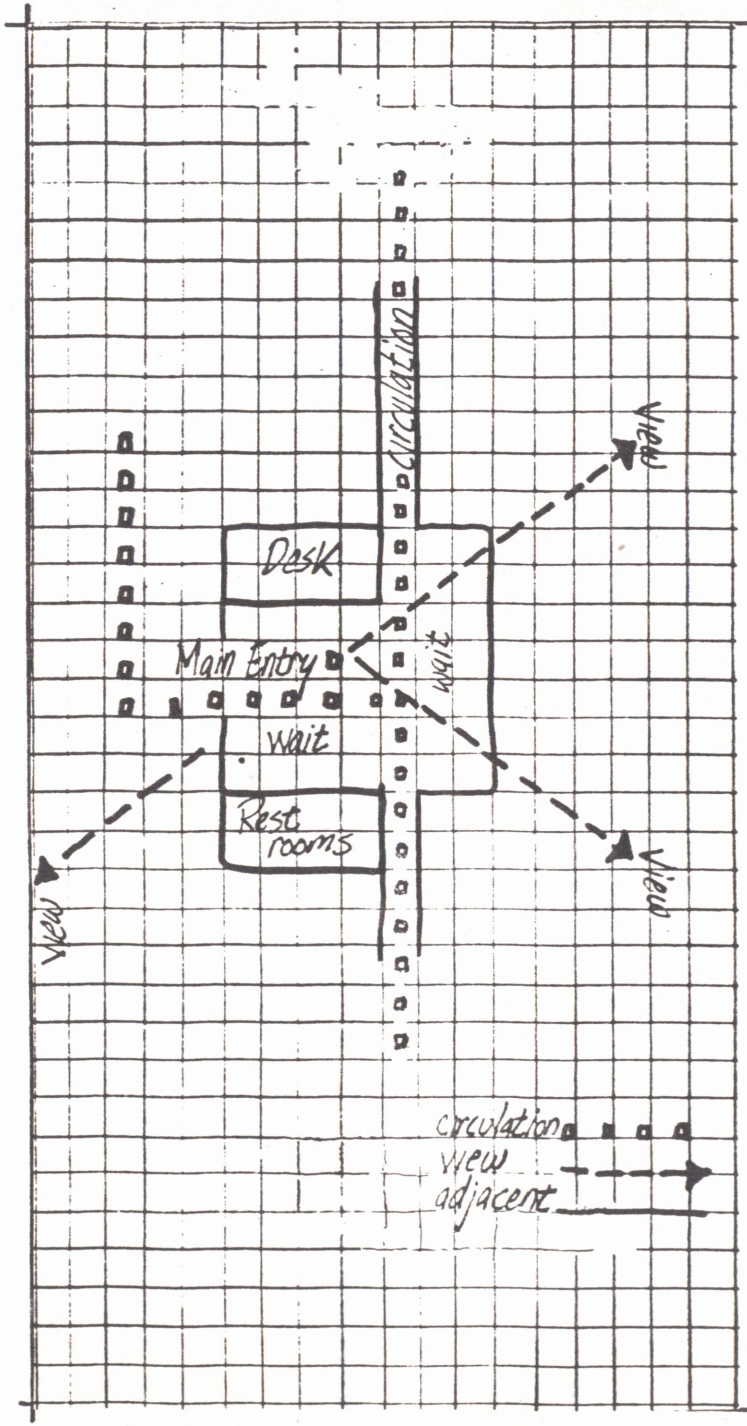
Parking is on the perimeter of housing. Once settled in housing after parking the car, the guests become part of pedestrian circulation. Pedestrian circulation is developed with courtyard space and faces the view of the lake.

Housing consists of three buildings. The number of persons expected then can determine whether one, two, or three buildings will be used (saving on utility costs). Private rooms are clustered around general, living room areas, where guests can converse, exchange ideas, and get acquainted. Recreation space is provided as one enters the main facility from housing. It is designed to handle a thirty percent capacity, although more would conceivably use it.

A spacious lounge area with a service bar, off the lobby, is a comfortable retreat for relaxation, cocktails, and conversation. The library is a more private place for relaxing, viewing, reading, and use of reference materials. Dining is designed to be a versatile room for use as an open banquet area or as a dining facility for individual guests, with more intimate groupings formed by visual separation.

The meeting and seminar area is an independent area in itself that closes down after meetings. It is composed of two parts, each containing a large space--which may be divided with a partition--and a small, private meeting room. This space is designed to use all kinds of audio-visual equipment, and for a variety of seating arrangements. Meeting rooms, as well as the auditorium, surround the break area designed for coffee breaks, conversation, and relaxation ... refreshment and conversation while standing or sitting, or walking about inside or outdoors.

PUBLIC AND SUPPORT



Main Entry

USE : It is the entry point upon first time inside the building (Reception, check-in, front desk).

CHARACTER : The entry point should be inspiring and inform the viewer of different circulation routes.

VIEW : Good view.

ADJACENCY : Close to administrative offices, restrooms, and elevator.

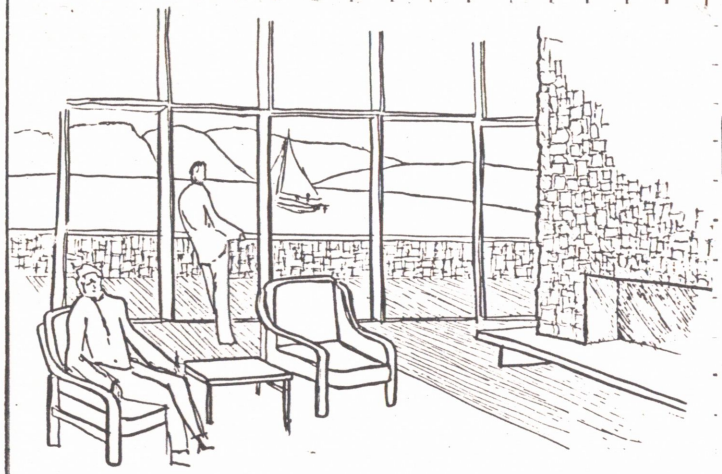
ACOUSTICS : Applied.

ILLUMINATION : Natural, incandescent (indirect and task light)

AREA : Depends on traffic flow and layout.

SPECIAL REQUIREMENTS : Entry is the main focal point of the facility.

DESCRIPTION : One basic entry space will be utilized by those entering from housing, meeting spaces or upon first entry, so circulation through the space or to the space should be considered. The front desk, waiting, entry, and circulation to all different areas stem from this point.



Main Lobby, Lounge

USE : Relaxation, breaks, cocktails.

CHARACTER : Space or spaces should have a relaxed atmosphere - comfortable space for talking and drinking.

VIEW : It should have an excellent view of the lake and the outlet of the lake.

ADJACENCY : Dining, or front entry, restrooms, bar.

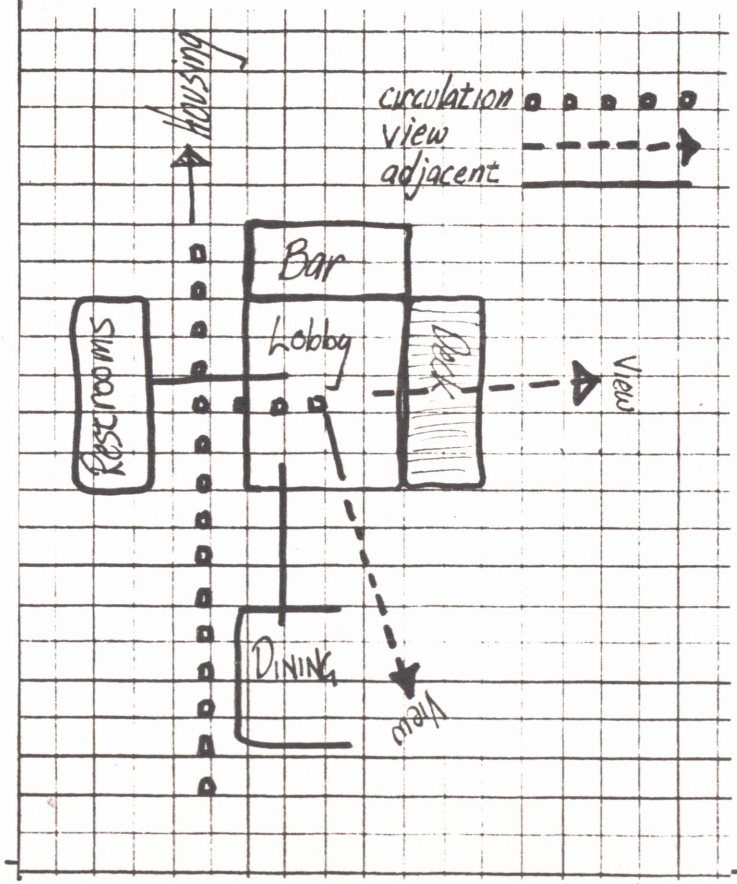
ACOUSTICS : Applied.

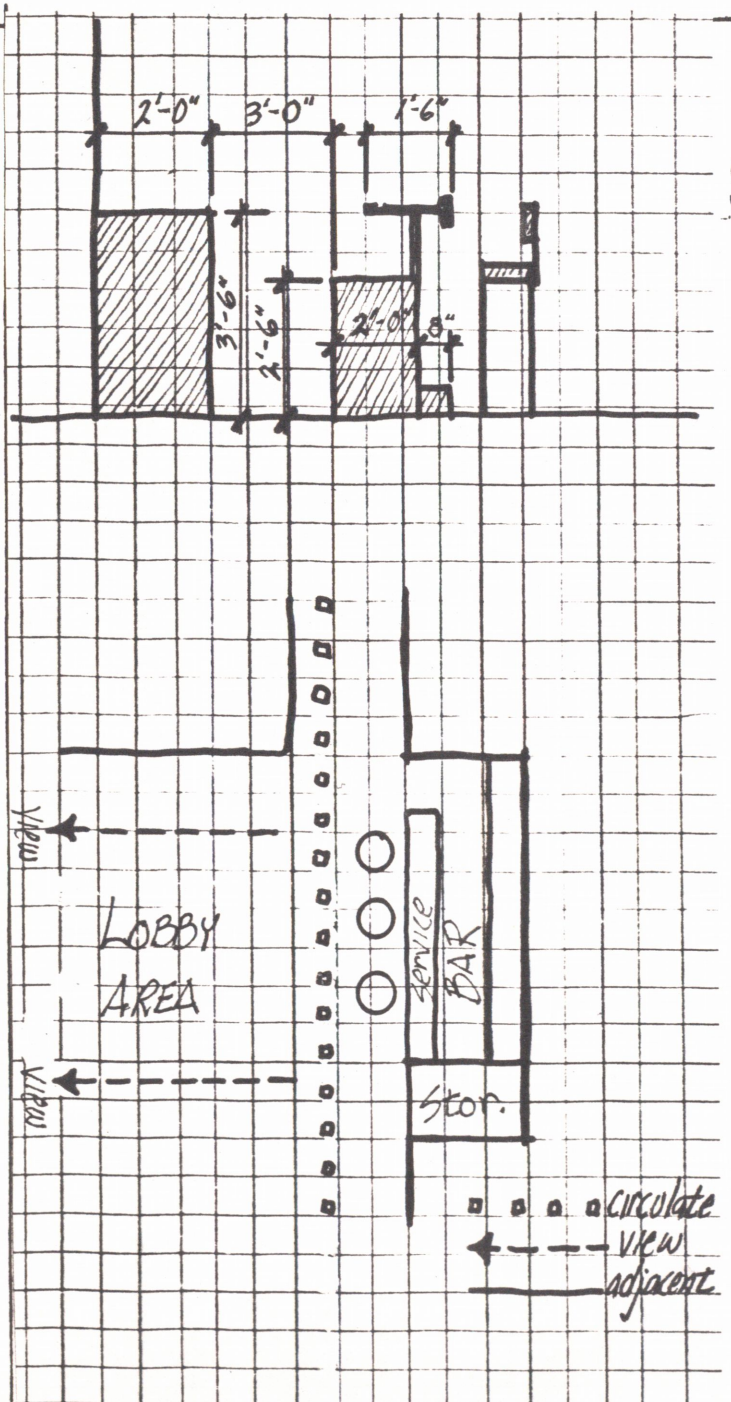
ILLUMINATION : Natural lighting, task lighting.

AREA : 1000 sq. ft.

SPECIAL REQUIREMENTS : None

DESCRIPTION : One basic space (fireplace) which could be different levels with decks, or divided up into smaller areas.





Service Bar

USE : The bar is used for service to the lobby and dining area.

CHARACTER : Mirrors, liquor bottles on display and oak are used throughout the bar.

VIEW : Possible.

ADJACENCY : Main Lobby

ACOUSTICS : Applied

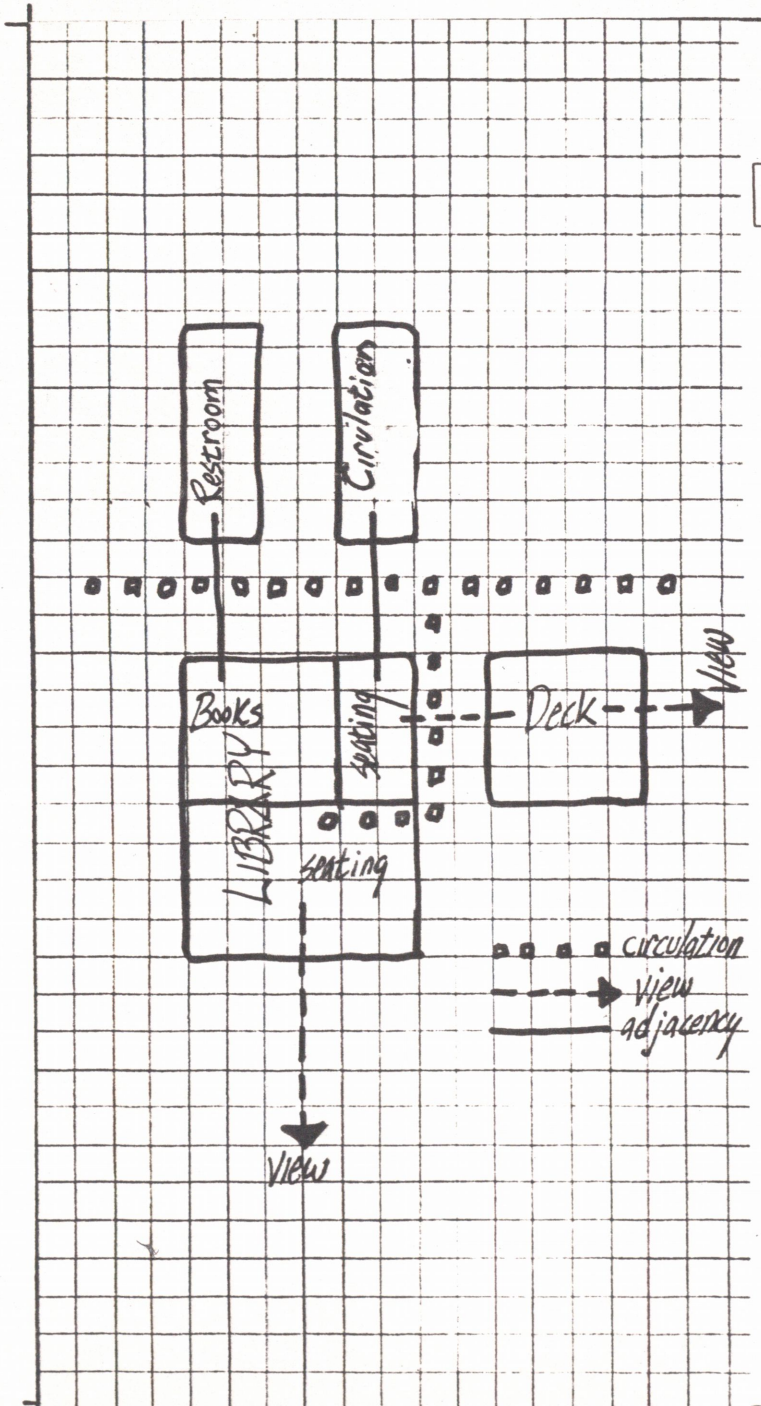
ILLUMINATION : Task lighting.

AREA : 150 sq. ft.

SPECIAL REQUIREMENTS : Refrigeration.

DESCRIPTION : The Lobby is the lounge area, so the bar is purely functional as a service counter. It will serve all types of liquor. The dining area will require use of this bar or another separate service bar.

Library



USE : For privacy, contemplation, studies.

CHARACTER : Panoramic view, yet intimate private area, similar to a watchtower.

VIEW : Panoramic View

ADJACENCY : Close to circulation core.

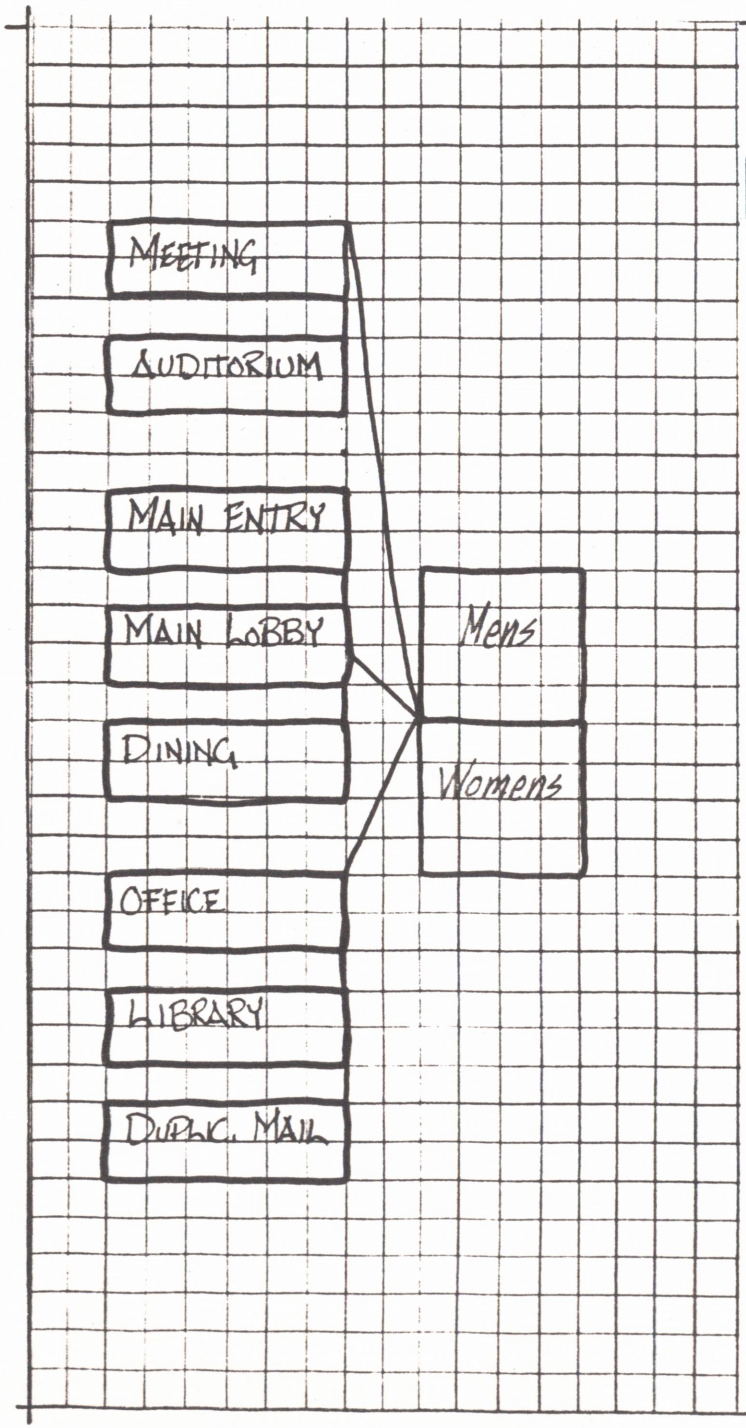
ACOUSTICS : Applied.

ILLUMINATION : Incandescent, fluorescent, natural.

AREA : 900 sq. ft.

SPECIAL REQUIREMENTS : None

DESCRIPTION : One space, fireplace, bookshelves with references and reading material, casual seating areas.



Restrooms

USE : Men's and women's restrooms.

CHARACTER : Functional.

VIEW : None

ADJACENCY : As close as possible to spaces used by clientele.

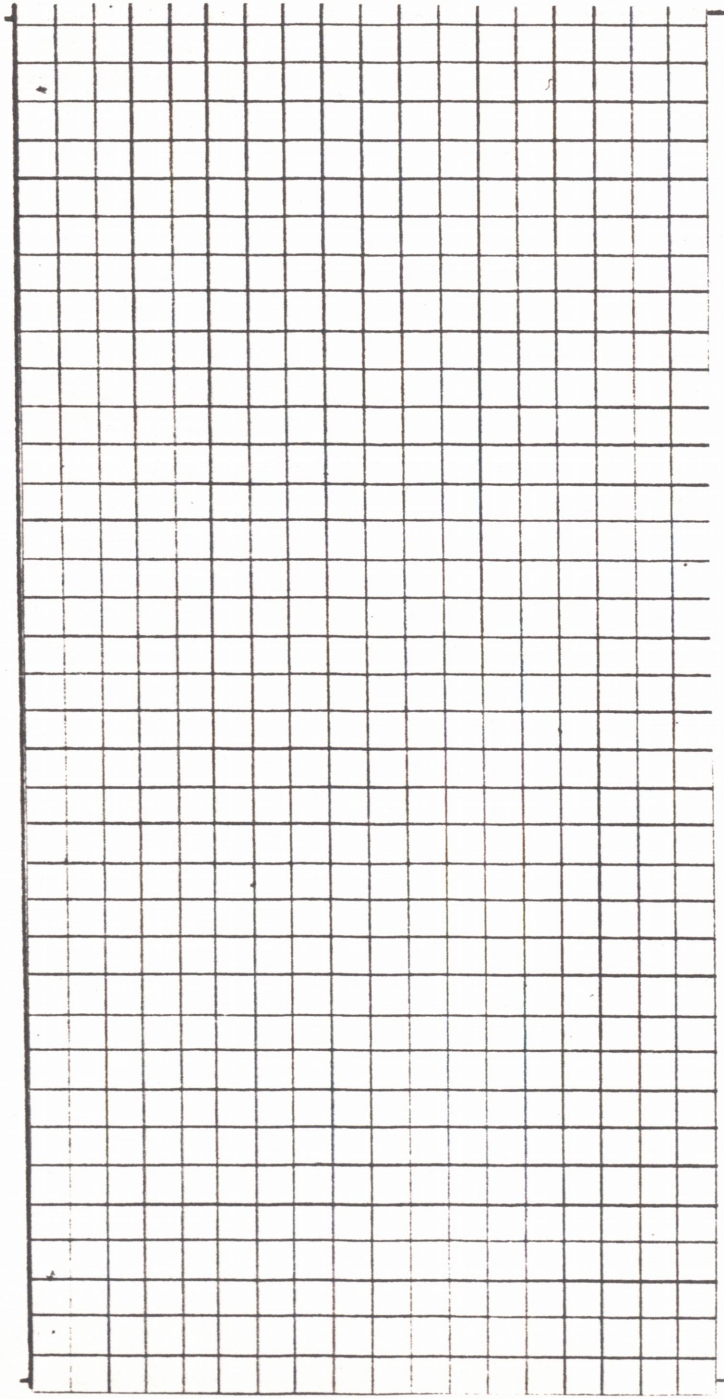
ACOUSTICS : Applied if next to a space which needs barrier to sound.

ILLUMINATION : Fluorescent.

AREA : Approximately 350 sq. ft. depending on whether more than one is required.

SPECIAL REQUIREMENTS : None.

DESCRIPTION : Men's and women's restroom. Depending on the layout, one or more main restroom facilities.



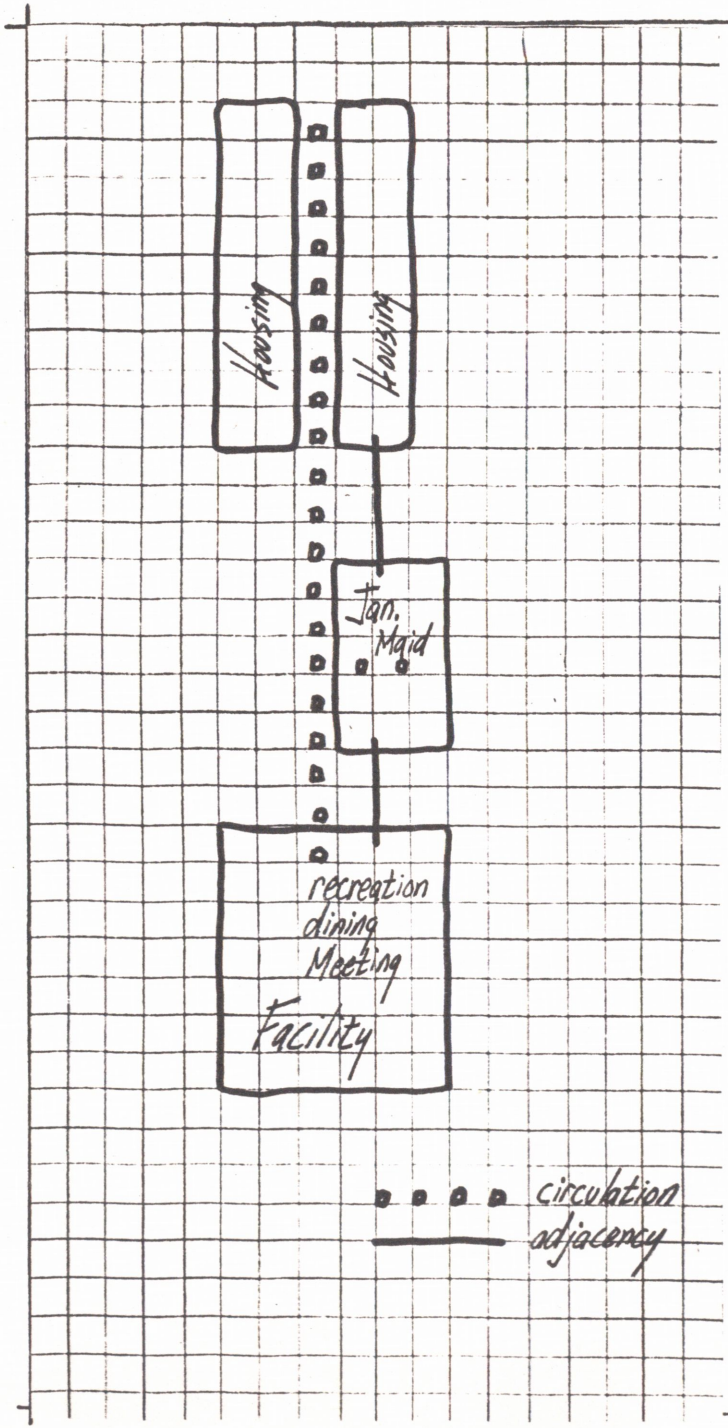
Elevators

Vertical circulation of two or more levels.

Passenger - 3 @ 9' x 8'-2-1/2" R.O.
Freight - 1 @ 10' x 10'-0" R.O.

Mechanical Room

Large area for facility and pool, 60 x 60



Janitorial, Maid

USE : Janitorial closet, washing mops, cleaning tools, etc.

CHARACTER : Functional.

VIEW : None.

ADJACENCY : Housing units, central to the facility as a whole or in smaller pieces.

ACOUSTICS : None.

ILI UMINATION : Incandescent fixture.

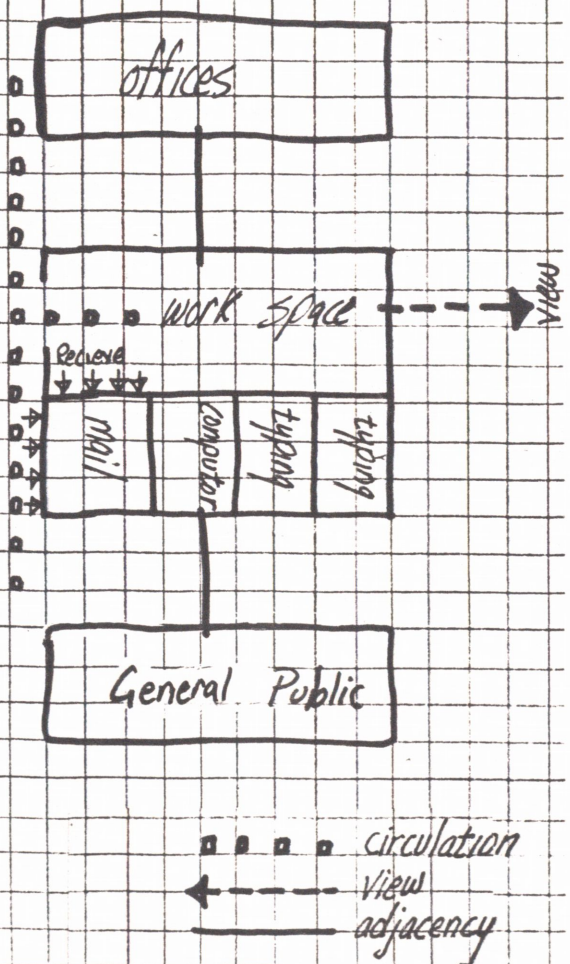
AREA : 150 sq. ft.

SPECIAL REQUIREMENTS : None

DESCRIPTION : Storage for cleaning machines and tools, wash sink, cart storage.

ADMINISTRATIVE

Duplicating, Mail Rm.



USE : Duplication of paperwork, typing, computer service, mail pickup and delivery.

CHARACTER : Soft atmosphere.

VIEW : Possible.

ADJACENCY : Offices, General Public

ACOUSTICS : Good acoustics applied throughout walls, sound room for typing.

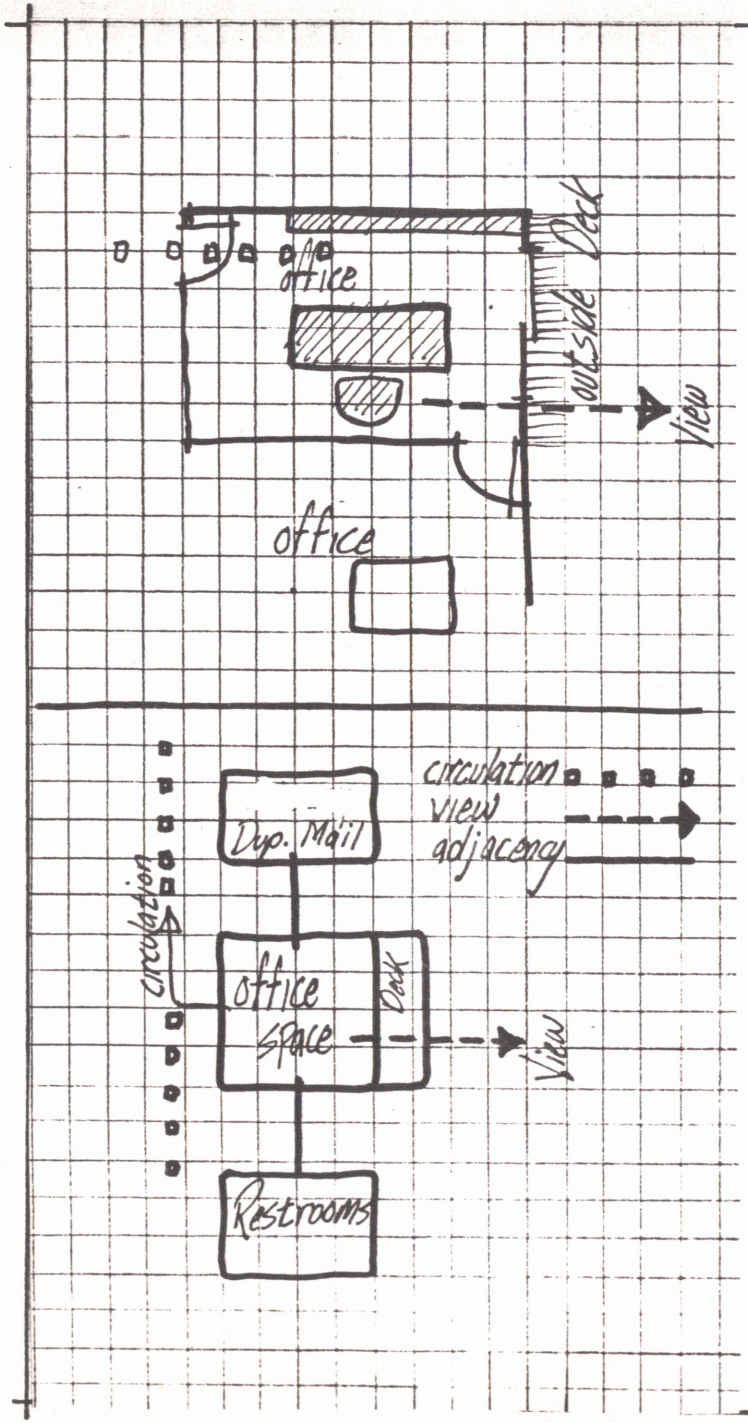
ILLUMINATION : Fluorescent.

AREA : 500 sq. ft.

SPECIAL REQUIREMENTS : Computer hook-ups, security.

DESCRIPTION : Work space, duplicating machine, typing space, computer space and mail delivery and pick-up.

Office Space



USE : Office, secretarial.

CHARACTER : Impressive as administrative space, oak furniture, carpeting, etc. Executive chair and desk. Bookshelves, large picture window in each office space.

VIEW : Good view to any exterior space.

ADJACENCY : Restrooms, duplicating, mail.

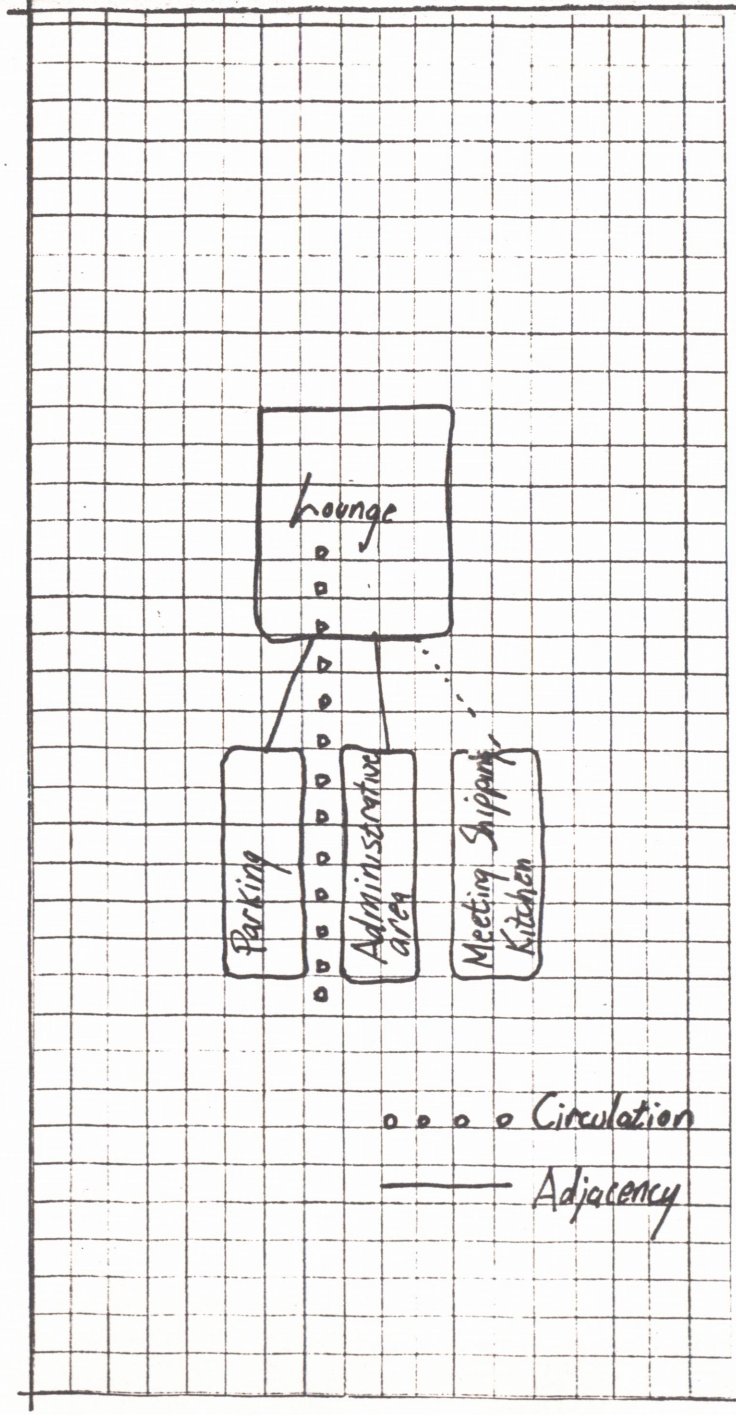
ACOUSTICS : Applied.

ILLUMINATION : Natural, task lighting, down lights, fluorescent.

AREA : 600 sq. ft. - Two offices @ 200 sq. ft.
One secretary @ 200 sq. ft.

SPECIAL REQUIREMENTS : None

DESCRIPTION : Two offices, functional, yet with character and secretarial space.



Employees Lounge

USE : Employee breaks and relaxation.

CHARACTER : Conversation, relaxing chairs, sofas, etc.

VIEW : Exterior view.

ADJACENCY : Central to facility - could be in the administration area.

ACOUSTICS : Applied.

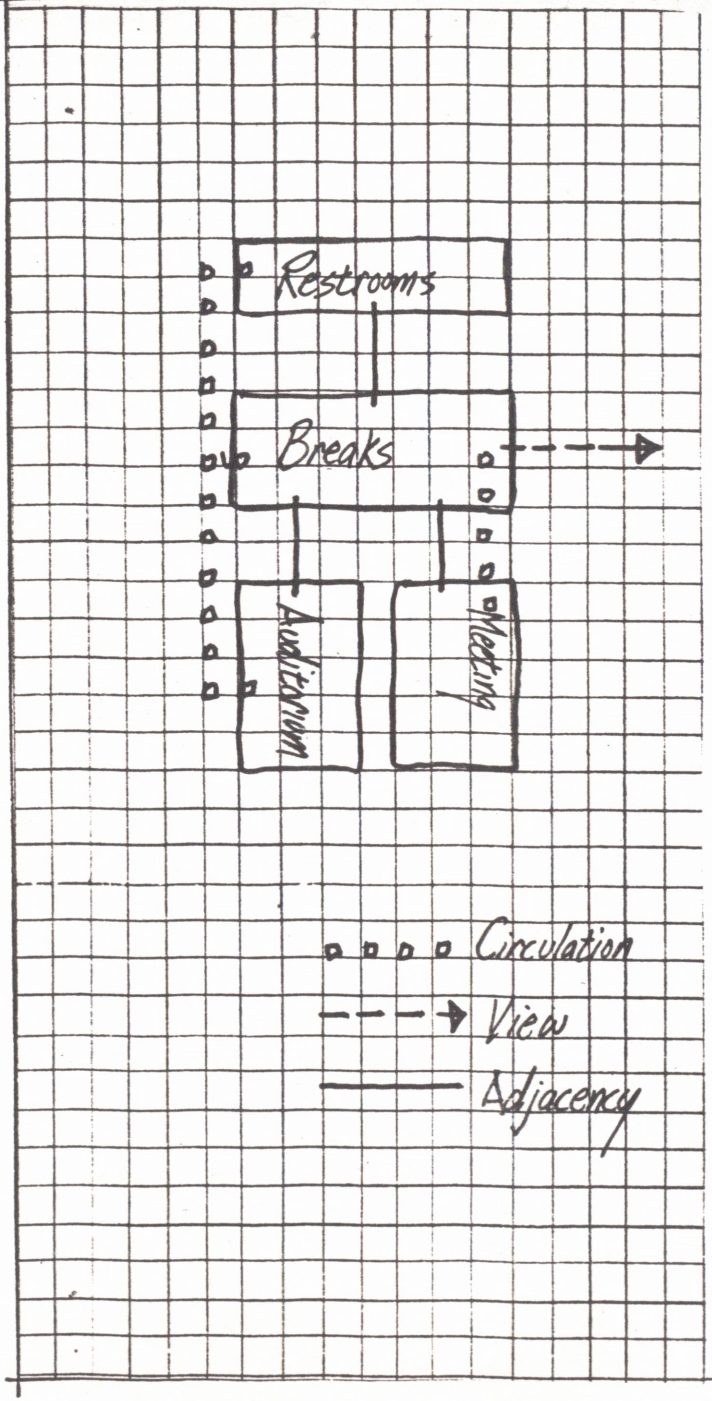
ILLUMINATION : Table lighting and fluorescent.

AREA : 225 sq. ft.

SPECIAL REQUIREMENTS : None.

DESCRIPTION : One space, possibly a deck, seating lounge chairs, tables, locker room.

MEETING



Breaks

USE : After and during meetings, this space is for relaxation, conversation, and coffee.

CHARACTER : Inside, outside relationship, beams showing through the roof system, fireplace.

VIEW : Good view.

ADJACENCY : Auditorium, meeting spaces, restrooms.

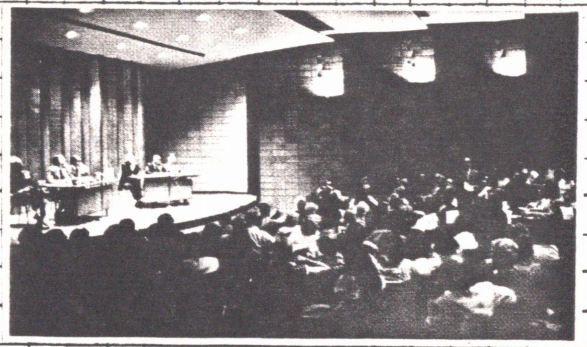
ACOUSTICS : Applied.

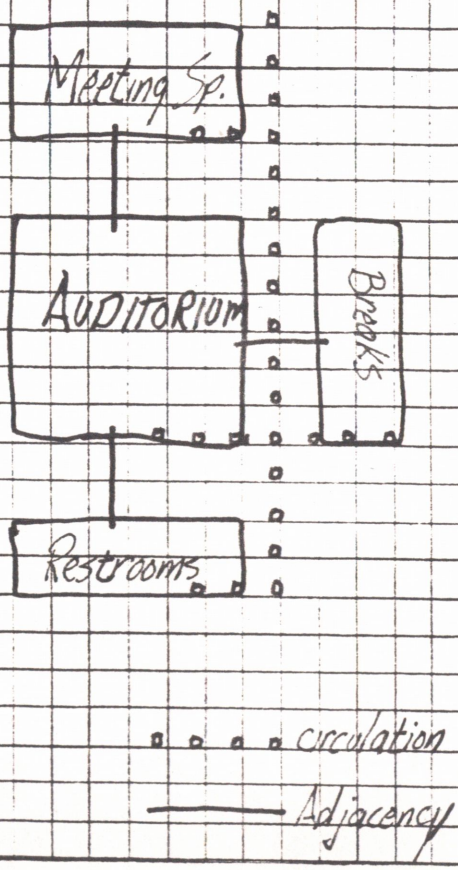
ILLUMINATION : Natural, incandescent.

AREA : As required depending on traffic flow, approximately 1800 sq. ft.

SPECIAL REQUIREMENTS : None.

DESCRIPTION : One basic space which could be divided into smaller, more intimate spaces. One hundred people should be able to occupy the space at one time, although fewer would normally occupy it.





Auditorium

USE : Lectures, presentation, film, slides, meetings which an audience may view.

CHARACTER : Open, large, space textures on portion of area.

VIEW : None.

ADJACENCY : Restrooms, meeting space, breaks.

ACOUSTICS : Applied.

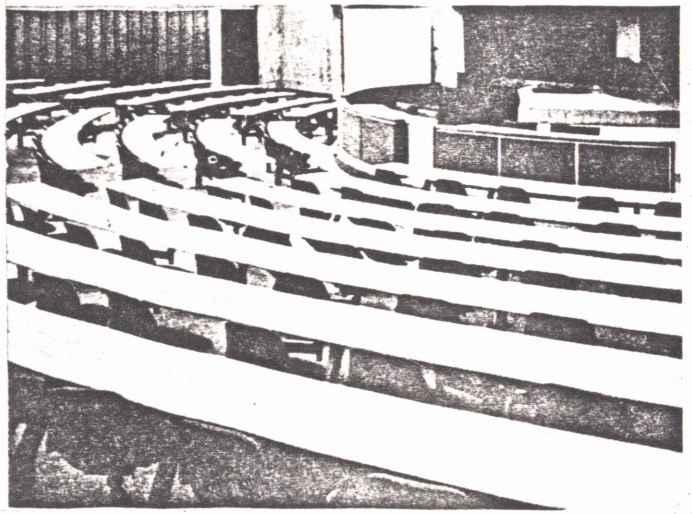
ILLUMINATION : Fluorescent, downlights on front floor.

AREA : 4,000 sq. ft.

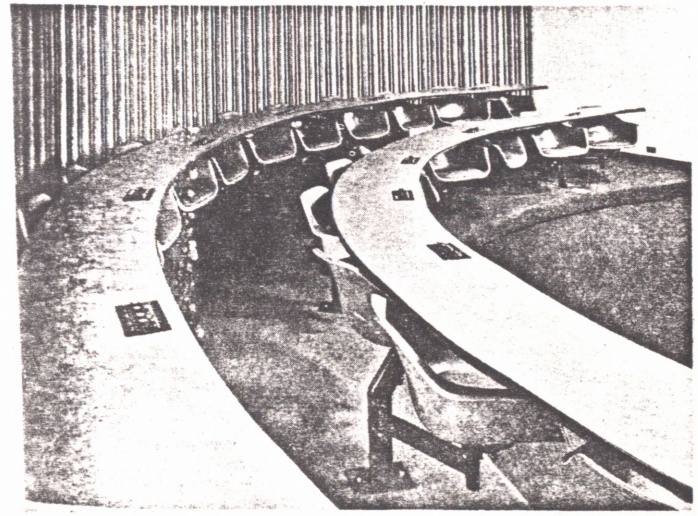
SPECIAL REQUIREMENTS : None.

DESCRIPTION : Large symmetrical space, sloping down to the front area, front area should be large enough for 12 people to have a meeting.

Camden Law School, Camden, New Jersey

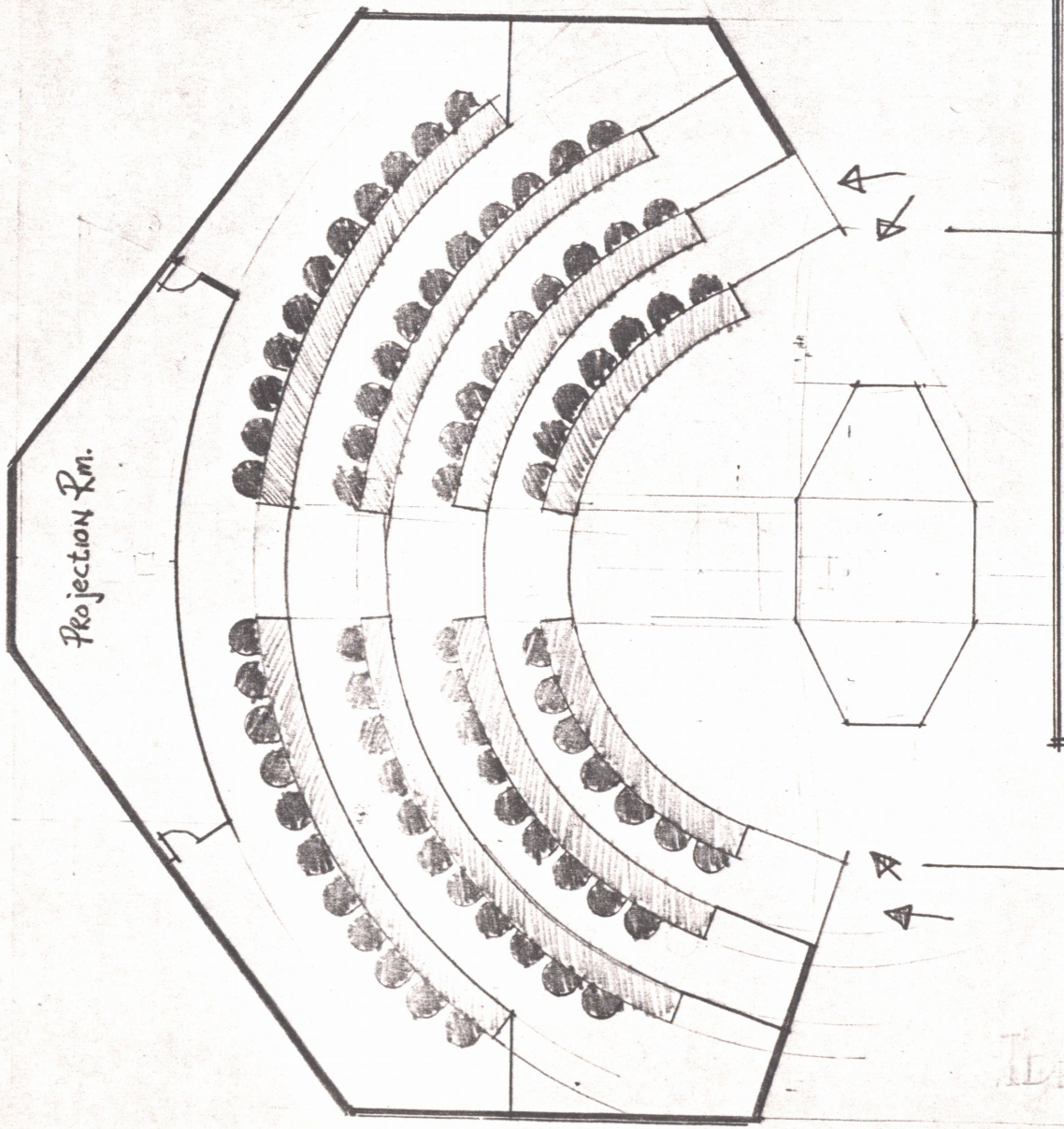


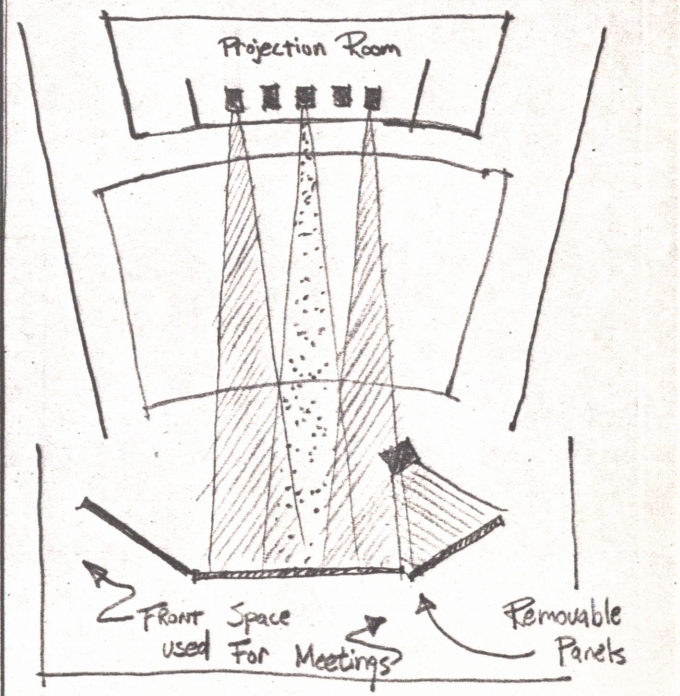
National Institute for the Deaf, Rochester, N.Y.



SIMILARITES:

- Circular Desks - provides eye to eye contact and conversation between the user. It also directs vision toward the speaker, presentation, meeting, film, etc.

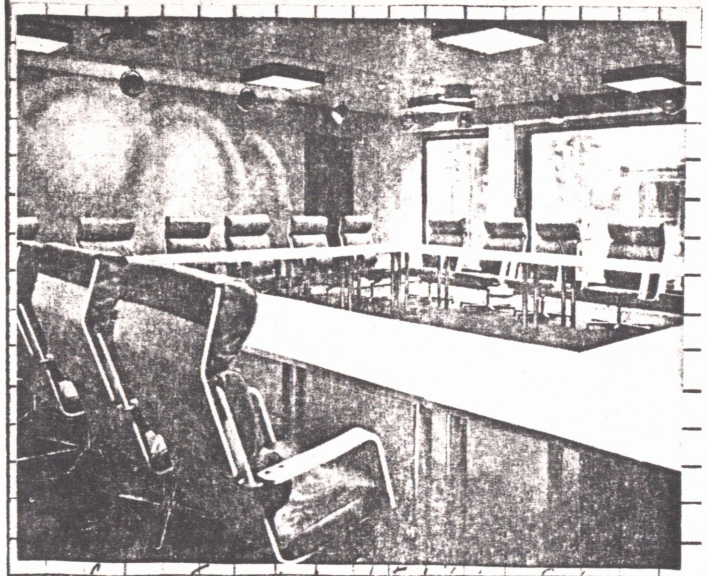




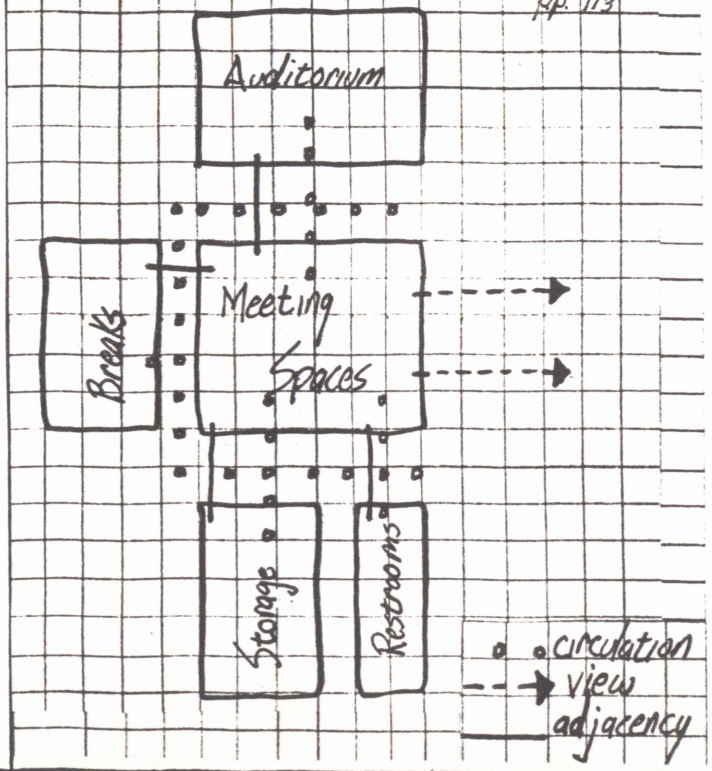
PROJECTION - MEETING Space

IDEAL AUDITORIUM

120
110 x 90



conference Convention and Exhibition facilities pp. 113



Meeting Spaces

USE : Meetings, seminars, and vestibule for coffee.

CHARACTER : Very functional, versatile spaces, comfortable.

VIEW : Possible view - perhaps toward the sky with venetian blinds for blocking light during slides or film presentation.

ADJACENCY : Auditorium, storage, film and slide projectors, restrooms, breaks.

ACOUSTICS : Walls and movable partitions should be acoustically sound.

ILLUMINATION : Natural, track lighting, task lights, fluorescent.

AREA : Meeting space - 2 @ 1050 sq. ft.
2 @ 800 sq. ft.

SPECIAL REQUIREMENTS :
Computer hookups, movable equipment.
Teleconferencing room (in future)

DESCRIPTION : One main space which may be split up into smaller spaces. Use of movable partitions. Two smaller spaces - one for teleconference and the other a smaller, private meeting space. A coffee vestibule outside these spaces also exists.

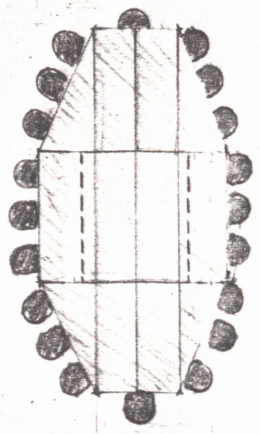
Conference, Convention, and Exhibition Facilities P. 75

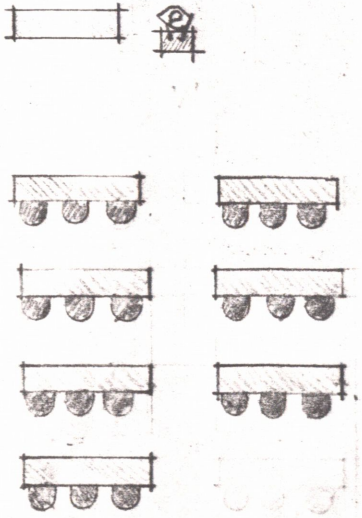


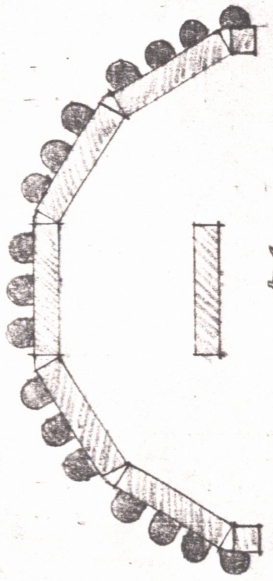
SIMILARITIES

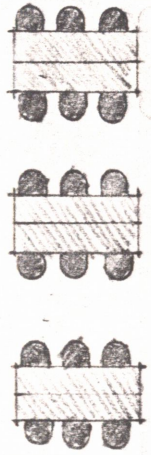
- Track lighting along wall-presentation space
- A.V. Equipment, tele-conferencing
- Quality in choice of materials
- Person to Person Contact

DIVERSIFICATION OF SPACE AND SEATING ARRANGEMENTS









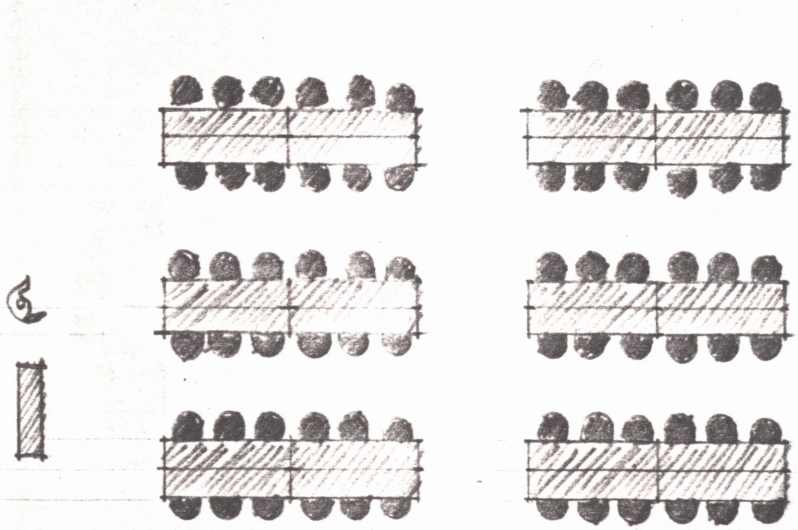
- CONFERENCE

- LECTURES
- PRESENTATION

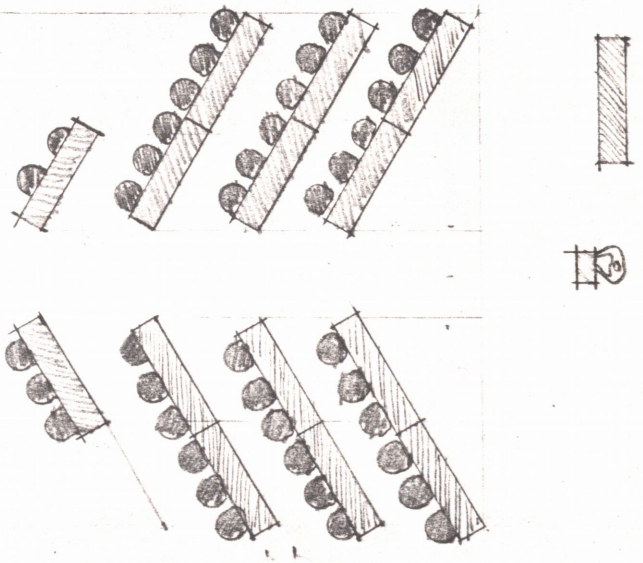
- CONFERENCE

- WORKSHOP

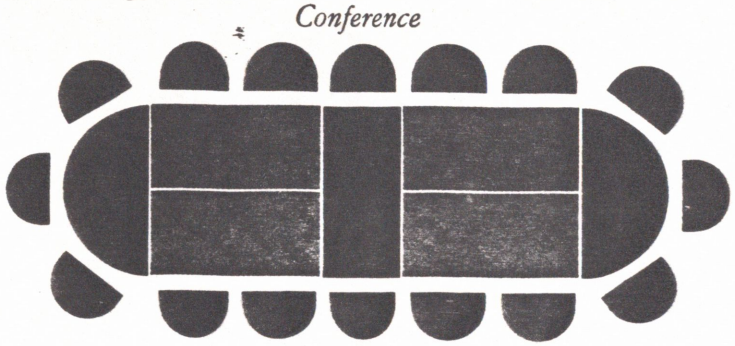
DIVERSIFICATION OF SPACE AND SEATING ARRANGEMENTS

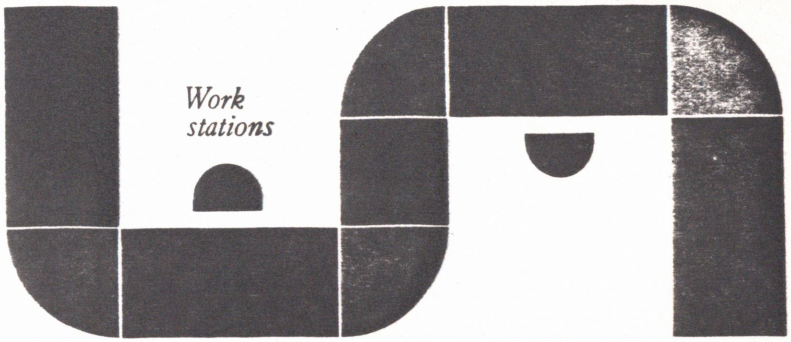


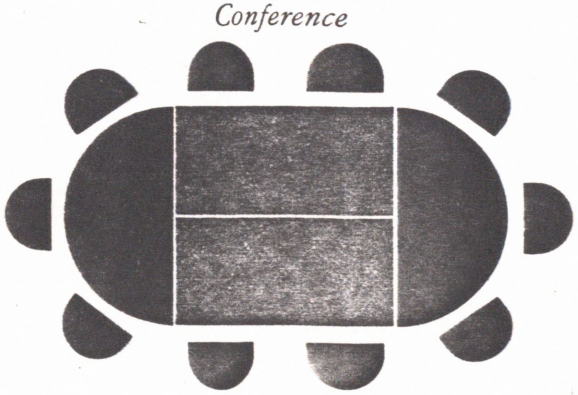
- SEMINARS

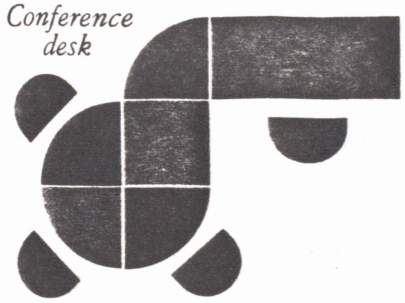


- LECTURES
- PRESENTATION


Conference

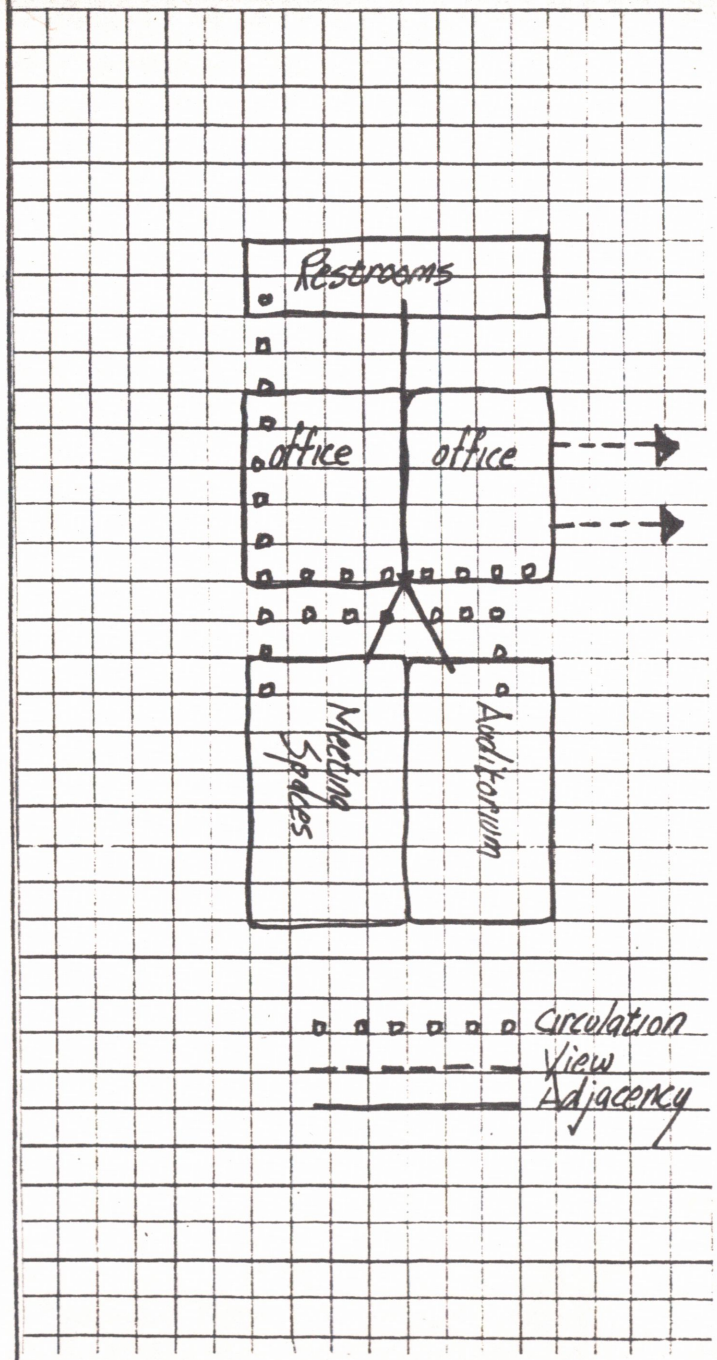

Work
stations


Conference


Conference
desk


Work
stations


Conference
grouping



Offices

USE : Used for visiting lecturers, teachers ... anyone who is participating in information giving systems.

CHARACTER : Functional spaces - warm atmosphere.

VIEW : Possible view.

ADJACENCY : Meeting, Auditorium, restrooms.

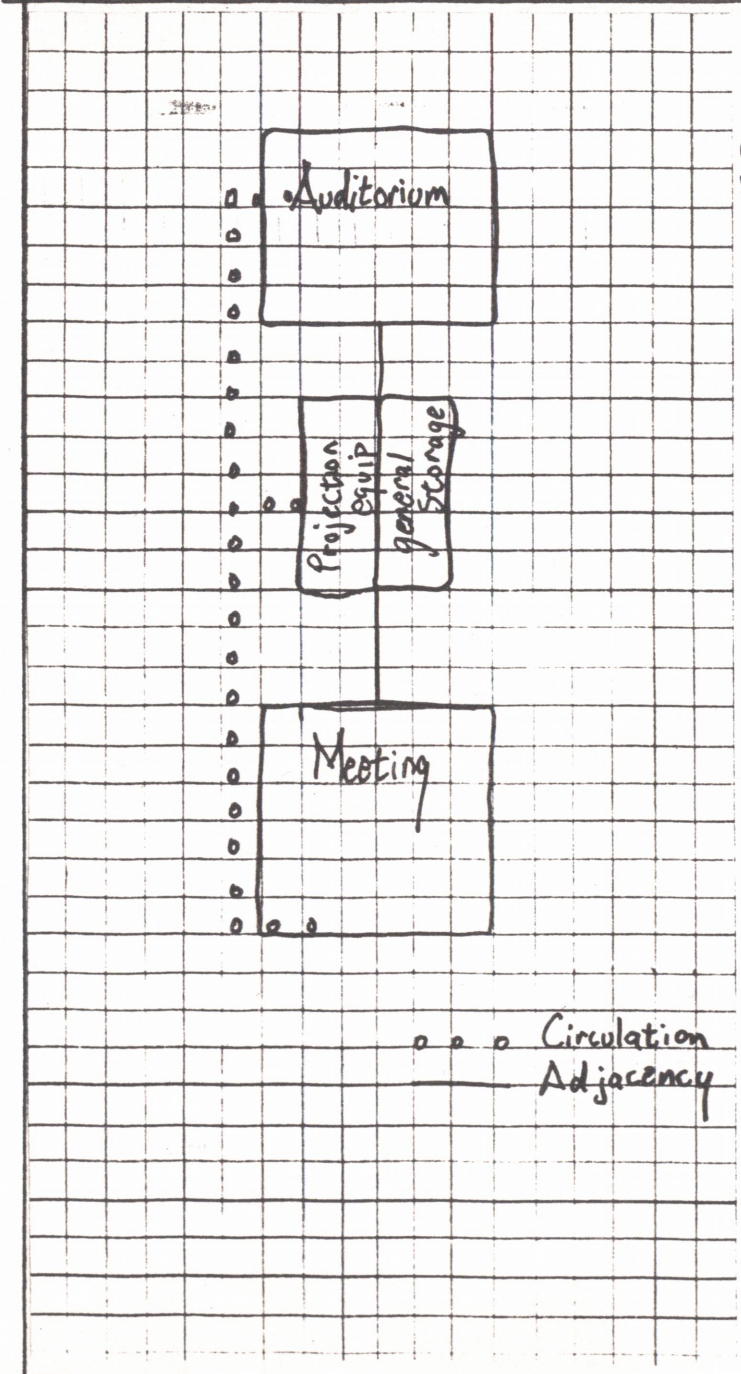
ACOUSTICS : Applied.

ILLUMINATION : Incandescent, fluorescent.

AREA : Two @ 180 sq. ft.

SPECIAL REQUIREMENTS : None.

DESCRIPTION : Two office spaces.



Storage

USE : Storage of equipment and possibly used as the film A.V. equipment room.

CHARACTER : Functional.

VIEW : None.

ADJACENCY : Auditorium, meeting spaces.

ACOUSTICS : Applied in wall systems.

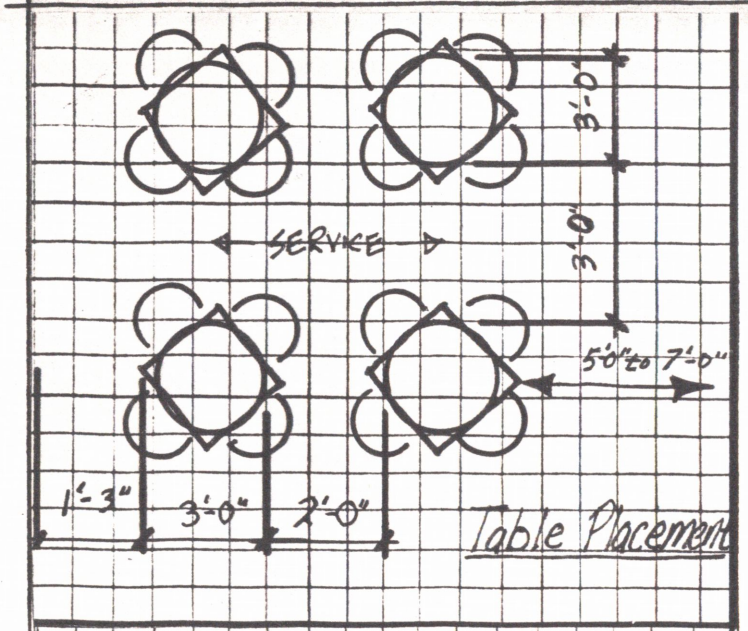
ILLUMINATION : Fluorescent and task lighting.

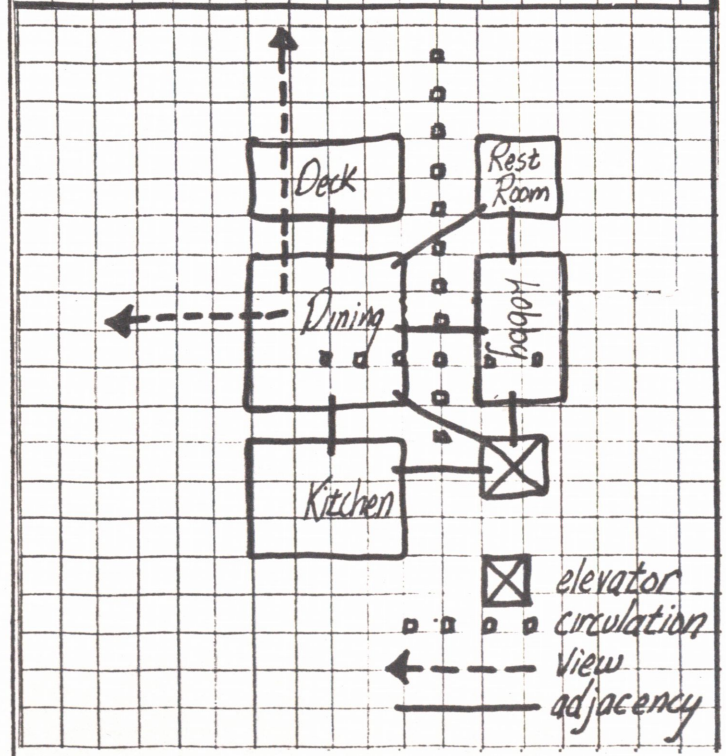
AREA : Projection equipment - 200 sq. ft.
General storage - 600 sq. ft.

SPECIAL REQUIREMENTS : Security in storage of A.V. equipment, computers, etc.

DESCRIPTION : Valuable equipment and projection room - consisting of storage space and circulation for projection crew.

DINING





Dining Room

USE : Meals, banquets and relaxation take place in this space.

CHARACTER : Soft, warm relaxing atmosphere - open to exterior sky and view.

VIEW : Good view.

ADJACENCY : Kitchen, restrooms, possibly next to lobby area.

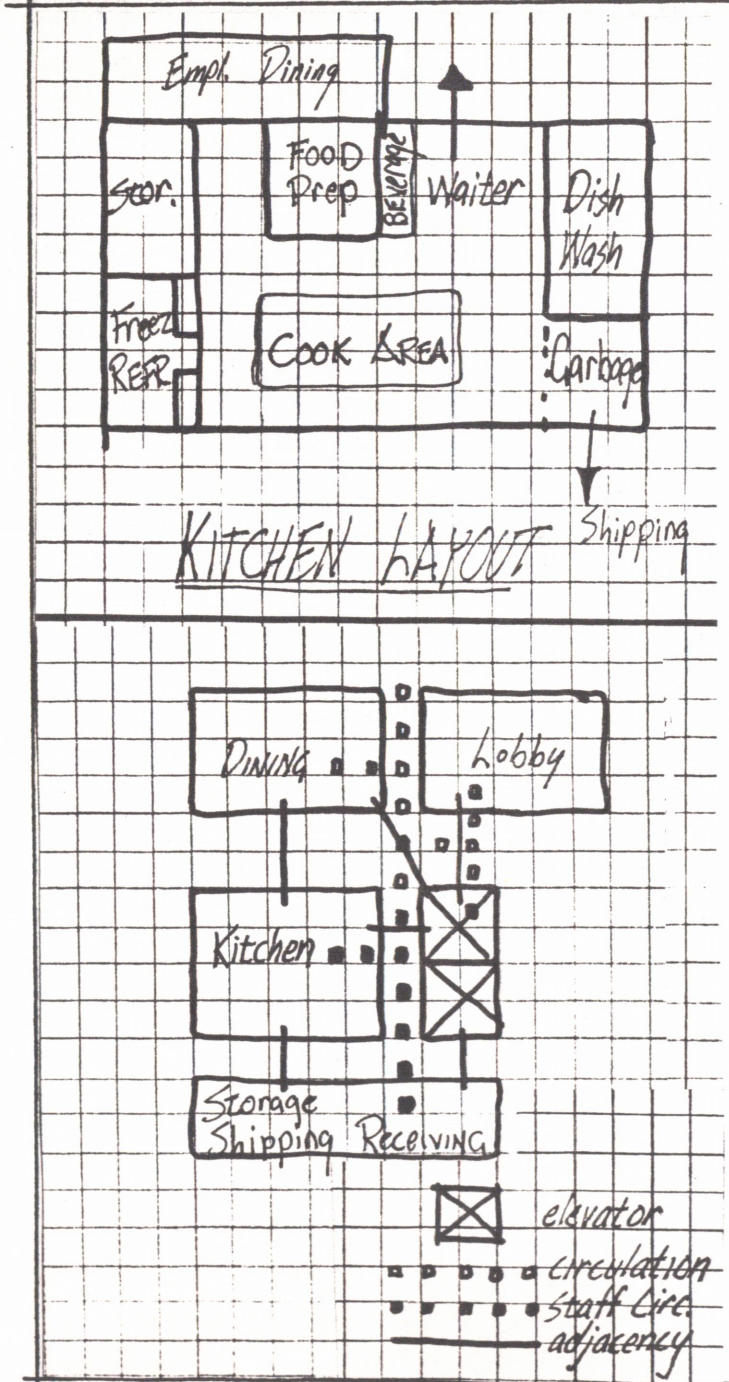
ACOUSTICS : Applied.

ILLUMINATION : Natural, incandescent.

AREA : 1500 sq. ft.

SPECIAL REQUIREMENTS : None

DESCRIPTION : Accommodations for 100 people. Outside deck, fireplace.



Kitchen

USE : Food preparation and cooking.

CHARACTER : Working space.

VIEW : Possible.

ADJACENCY : Dining, storage, shipping.
Employees dining.

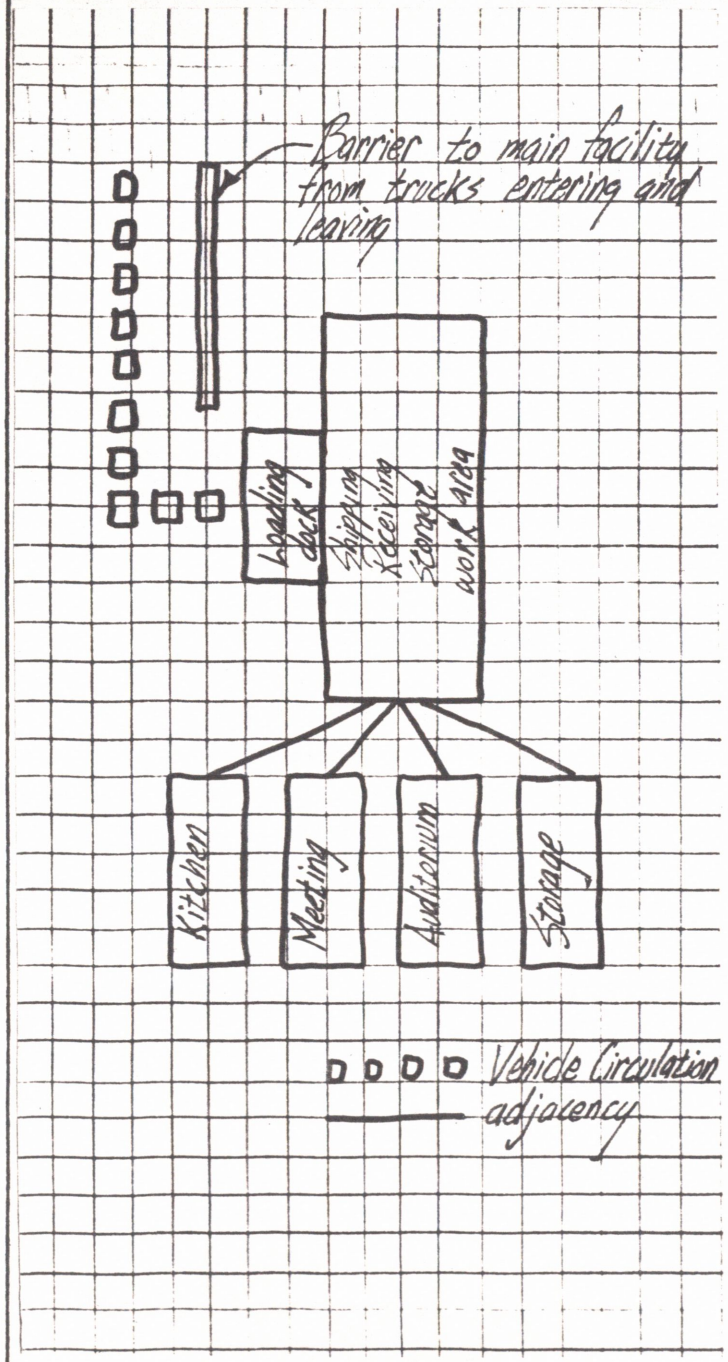
ACOUSTICS : Not applied.

ILLUMINATION : Fluorescent, task lighting, natural.

AREA : 1900 sq. ft.

SPECIAL REQUIREMENTS : Mechanical equipment.

DESCRIPTION : Functional in its use. It should have adequate circulation and work areas.



Shipping, Service

USE : Receiving and shipping department - loading and unloading items used in the complex and specifically in the kitchen.

CHARACTER : Functional.

VIEW : None.

ADJACENCY : Kitchen, meeting, auditorium, storage.

ACOUSTICS : Not applied unless a wall is shared with an area used by clients.

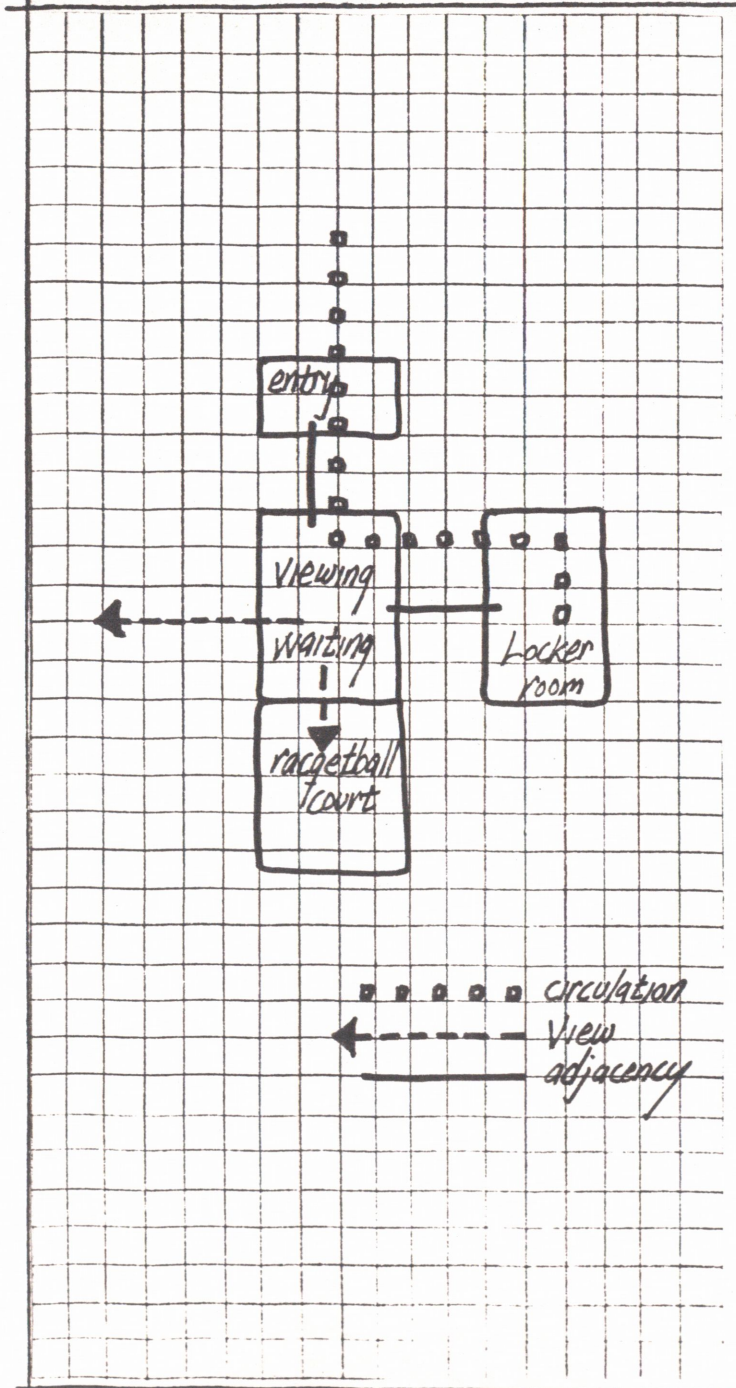
ILLUMINATION : Fluorescent.

AREA : 600 sq. ft.

SPECIAL REQUIREMENTS : Security

DESCRIPTION : Loading, unloading dock.
Work area - storage, etc.

RECREATION



Viewing, Waiting

USE : Waiting, viewing racquetball and pool area.

CHARACTER : Visual contact with some of the activities going on in recreation center - lounge chairs and sofas.

VIEW : Possible.

ADJACENCY : Entry to recreation center, locker rooms, and racquetball courts.

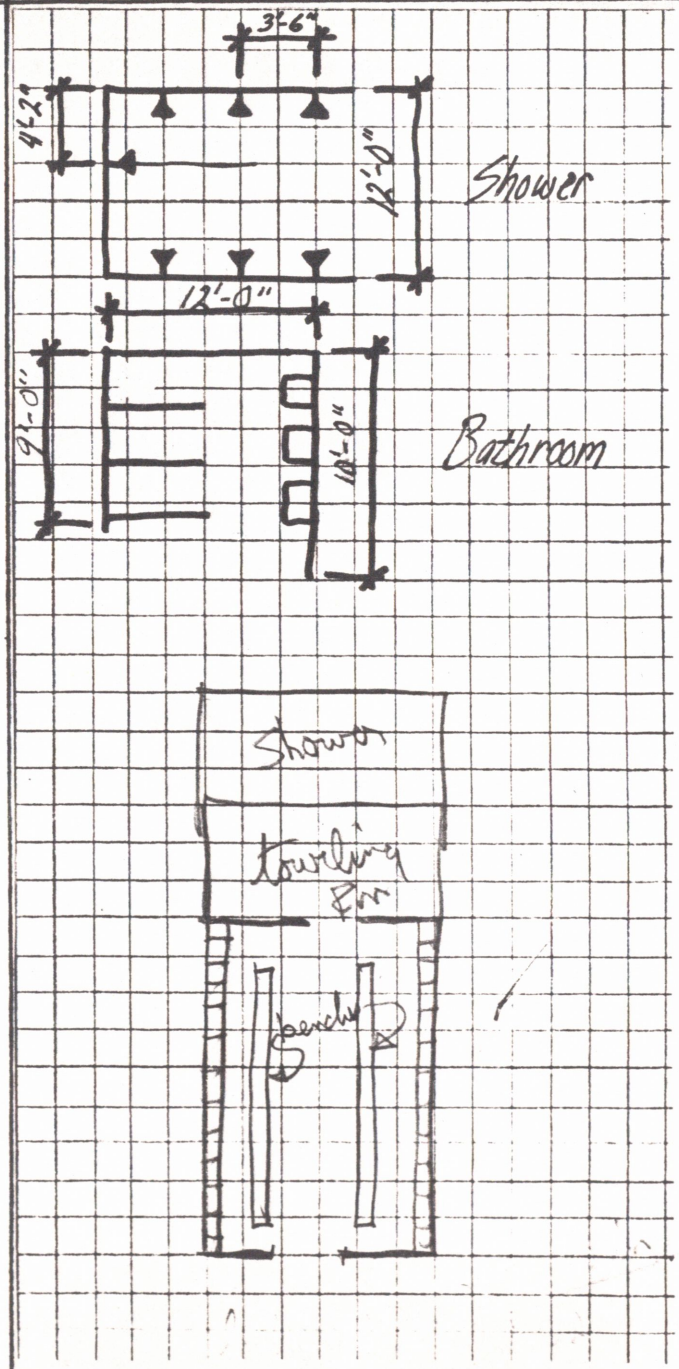
ACOUSTICS : None

ILI UMINATION : Fluorescent.

AREA : 150 sq. ft.

SPECIAL REQUIREMENTS : None.

DESCRIPTION : One area oriented toward viewing activities going on and possibly outside.



Locker Rooms

USE : Showering, change of clothing.

CHARACTER : Functional, wood lockers, tile floor.

VIEW : None.

ADJACENCY : Adjacent or close to all functions involving the Recreation Center.

ACOUSTICS : None.

ILLUMINATION : Fluorescent.

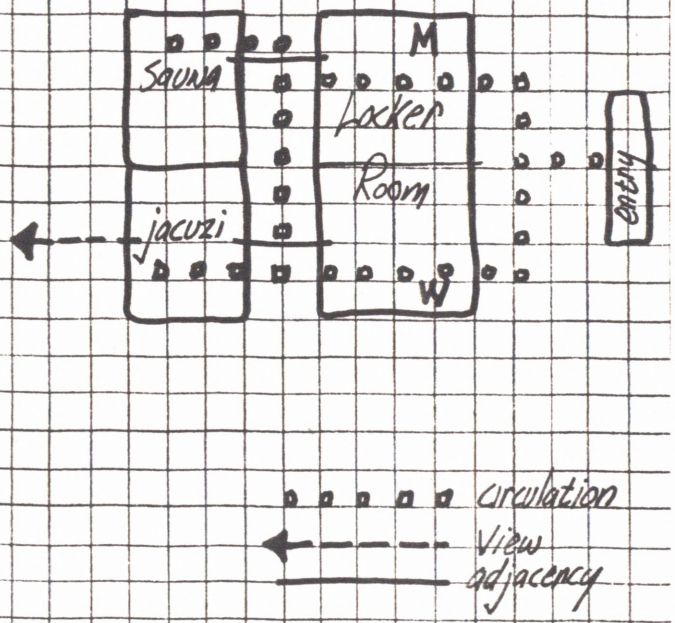
AREA : Two @ 850 sq. ft.

SPECIAL REQUIREMENTS : None.

DESCRIPTION : Locker rooms, shower and toilet facilities, dry off room.

Capacity - 1/3 capacity of total facility at one time which is 35 people.

Sauna, Jacuzi



USE : Relaxation.

CHARACTER : Cold, tile, redwood, ferns.

VIEW : Possible.

ADJACENCY : Locker room.

ACOUSTICS : None.

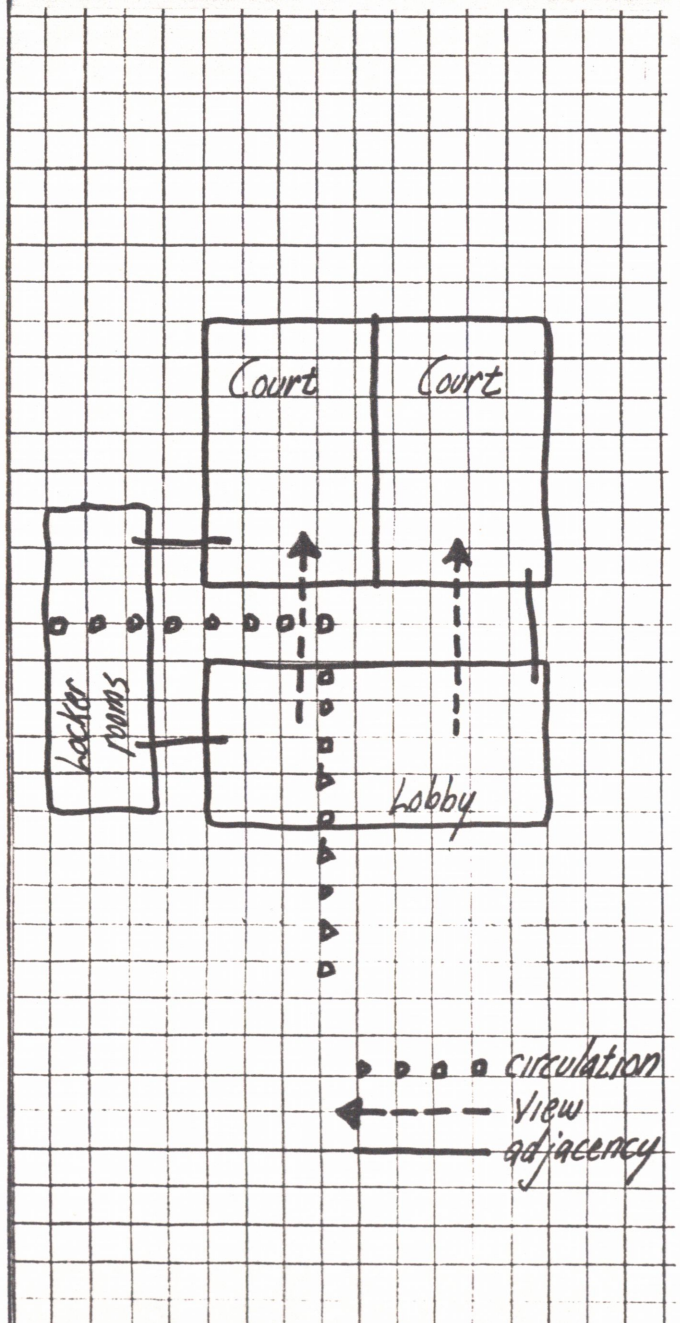
ILLUMINATION : Natural, incandescent.

AREA : 150 sq. ft.

SPECIAL REQUIREMENTS : None.

DESCRIPTION : Sauna, Jacuzzi, circulation

Sauna - 8 x 8
Jacuzzi -6 x 8 inside.



Racquetball Courts

USE : Handball, racquetball.

CHARACTER : Functional.

VIEW : Back wall visible into lobby in one of the courts.

ADJACENCY : Lobby area, locker rooms.

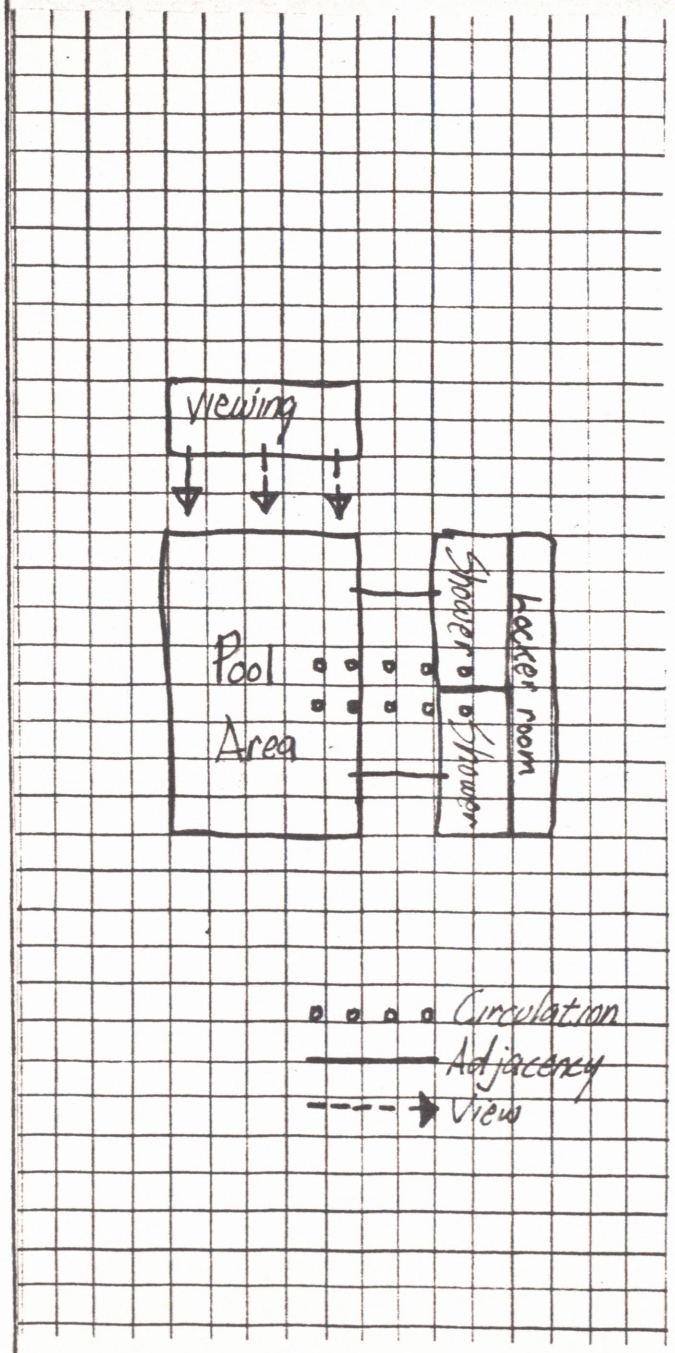
ACOUSTICS : Not applied.

ILLUMINATION : Fluorescent.

AREA : 1100 x 2 = 2,200 sq. ft.

SPECIAL REQUIREMENTS : None.

DESCRIPTION : Two courts - AAU official courts. 46' x 23' x 24'



Swimming Pool

USE : Recreation, relaxation.

CHARACTER : Large open space, exposed beams.

VIEW : Possible.

ADJACENCY : Showers and viewing area.

ACOUSTICS : Applied.

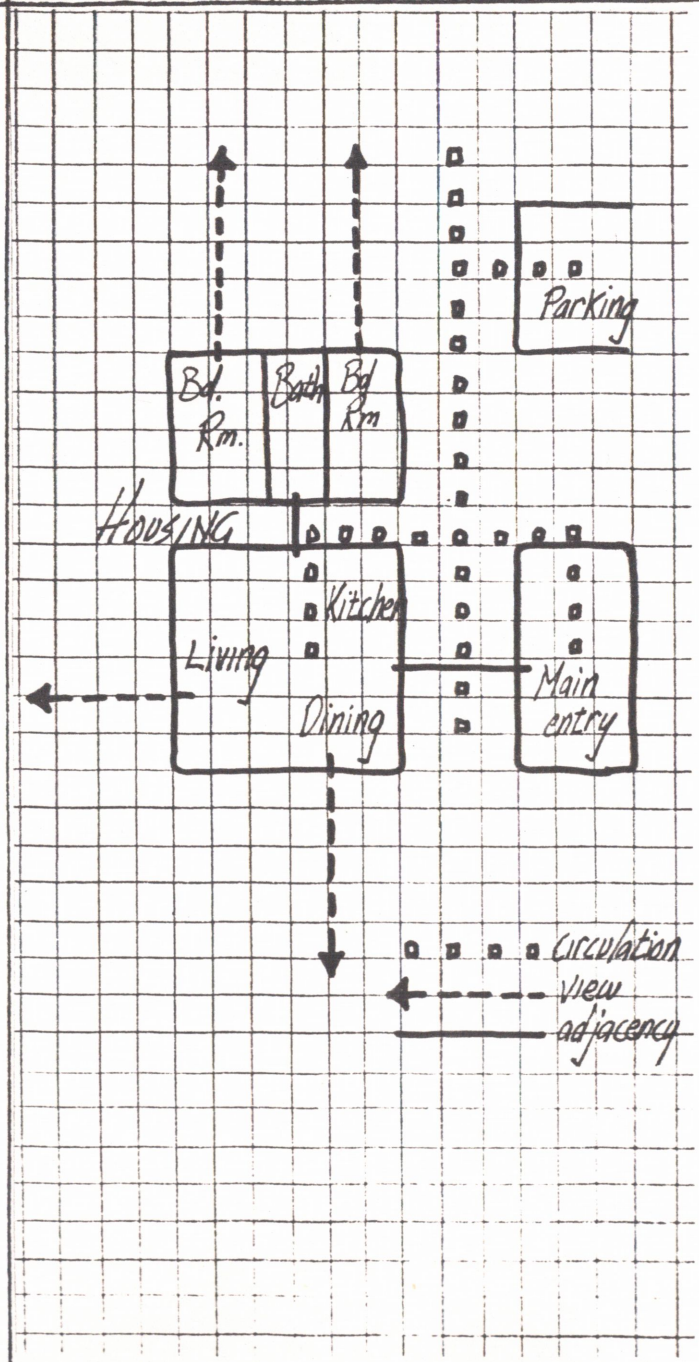
ILLUMINATION : Fluorescent.

AREA : 4500 sq. ft. space, including pool.

SPECIAL REQUIREMENTS : Humidity control.

DESCRIPTION : Pool area, diving board, shallow end for sitting in water Also, area could be set aside for lap swimming.

HOUSING



Res. Mngr. Housing

USE : Facility Manager's Housing.

CHARACTER : Apartment, compact.

VIEW : Exterior view, preferably.

ADJACENCY : Should be close to main entry, although it could be separated from the facility.

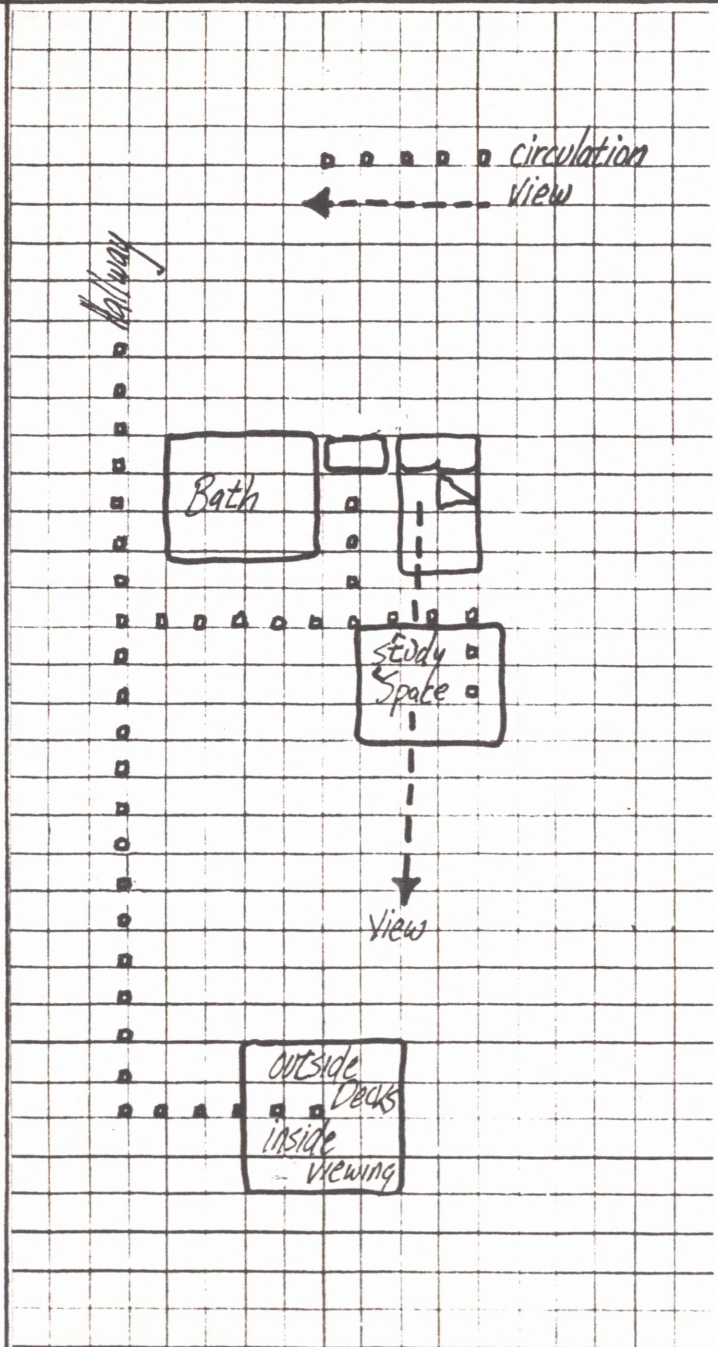
ACOUSTICS : Applied, party wall.

ILLUMINATION : Incandescent fixtures.

AREA : 100 sq. ft.

SPECIAL REQUIREMENTS : None.

DESCRIPTION : Living, kitchen, dining, bathroom, bedroom.



Housing Units

USE : Sleeping, studies, bathroom.

CHARACTER : Small units - an inside-outside relationship should give it a feeing of being larger.

VIEW : Good view to the outside.

ADJACENCY : Maid, close to recreation facilities.

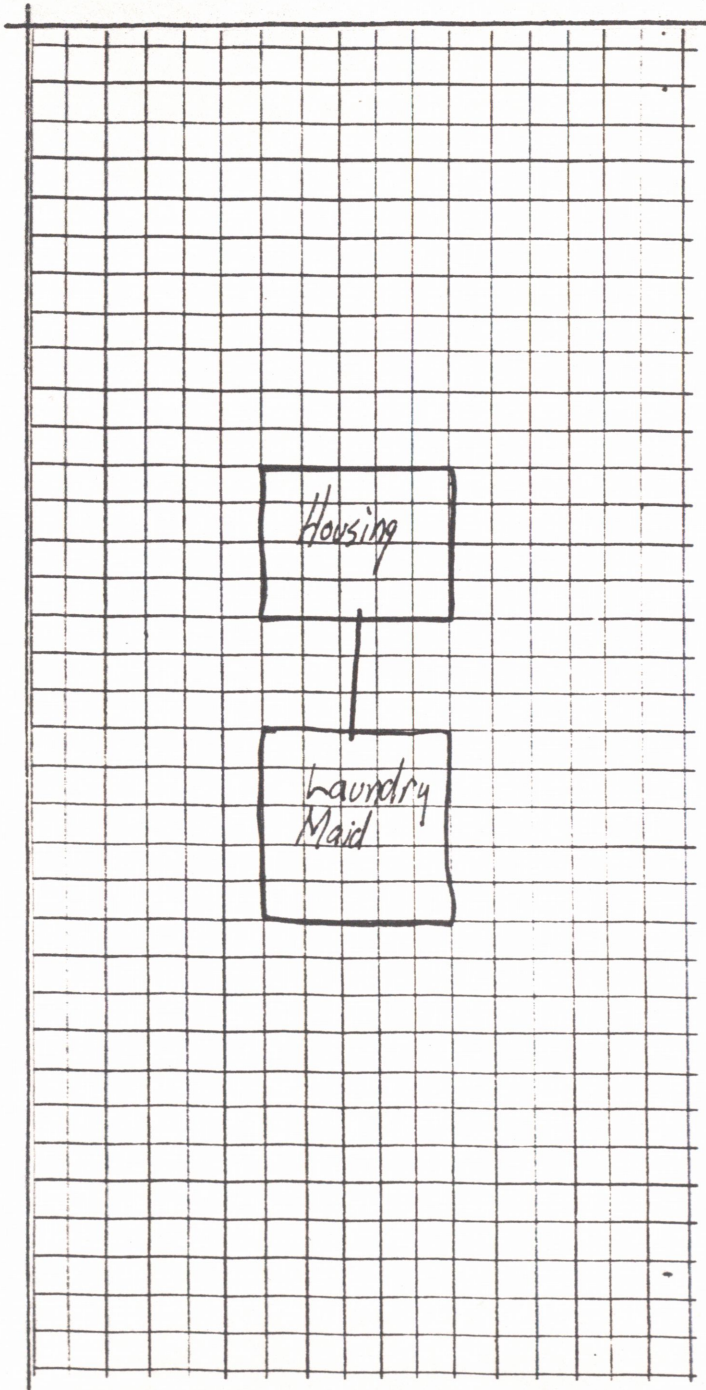
ACOUSTICS : Applied to wall systems.

ILLUMINATION : Task and ceiling fixtures.

AREA : 14 x 400 sq. ft.

SPECIAL REQUIREMENTS : Versatility, could accommodate two people.

DESCRIPTION :
Bathroom - 40 sq. ft.
Double bed - 54" x 75"
Dresser - 36" x 20"
Study space - 50 sq. ft.
Study desk - 50" x 28"



Laundry, Maid Service

USE : Washing and cleaning linens, etc.

CHARACTER : Functional.

VIEW : Possible.

ADJACENCY : Housing units.

ACOUSTICS : Applied if connected to housing units.

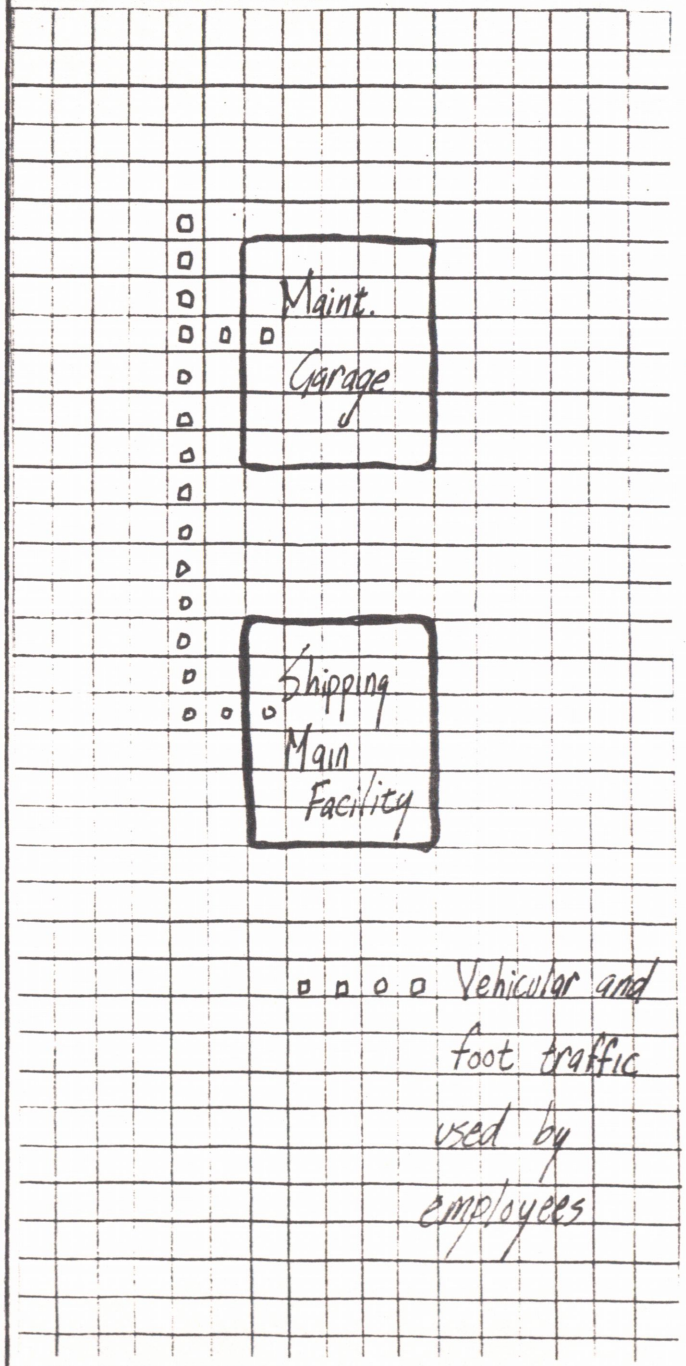
ILLUMINATION : Fluorescent, incandescent.

AREA : 500 sq. ft.

SPECIAL REQUIREMENTS : None.

DESCRIPTION : Space containing washers, dryers, and storage of linen.

MAINTENANCE



Maintenance, Garage

USE : Storage of vehicles, maintenance of machinery, etc.

CHARACTER : Functional inside relating to facility or exterior.

VIEW : Possible.

ADJACENCY : Close to shipping - receiving.

ACOUSTICS : Applied if attached to facility.

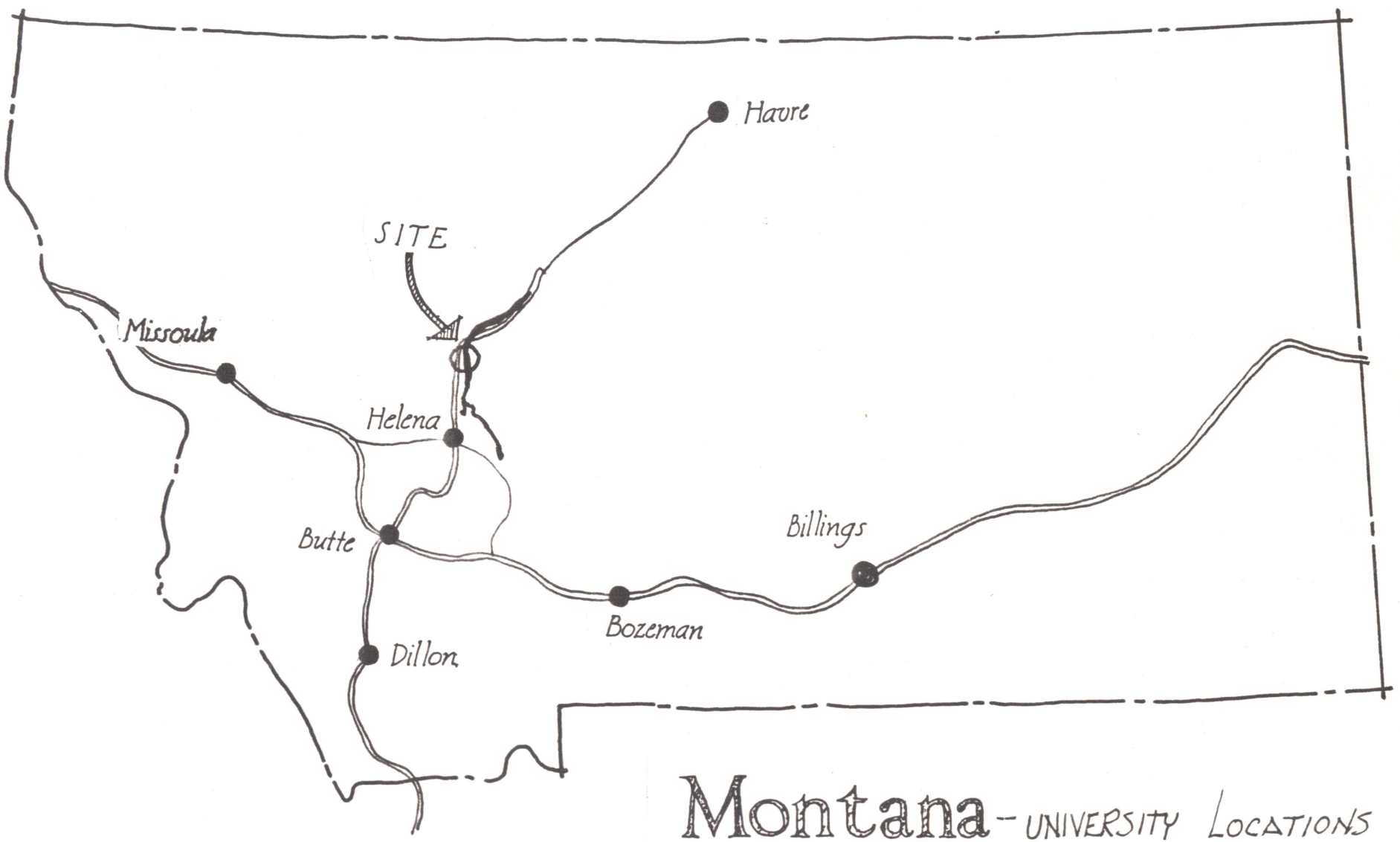
ILLUMINATION : Incandescent.

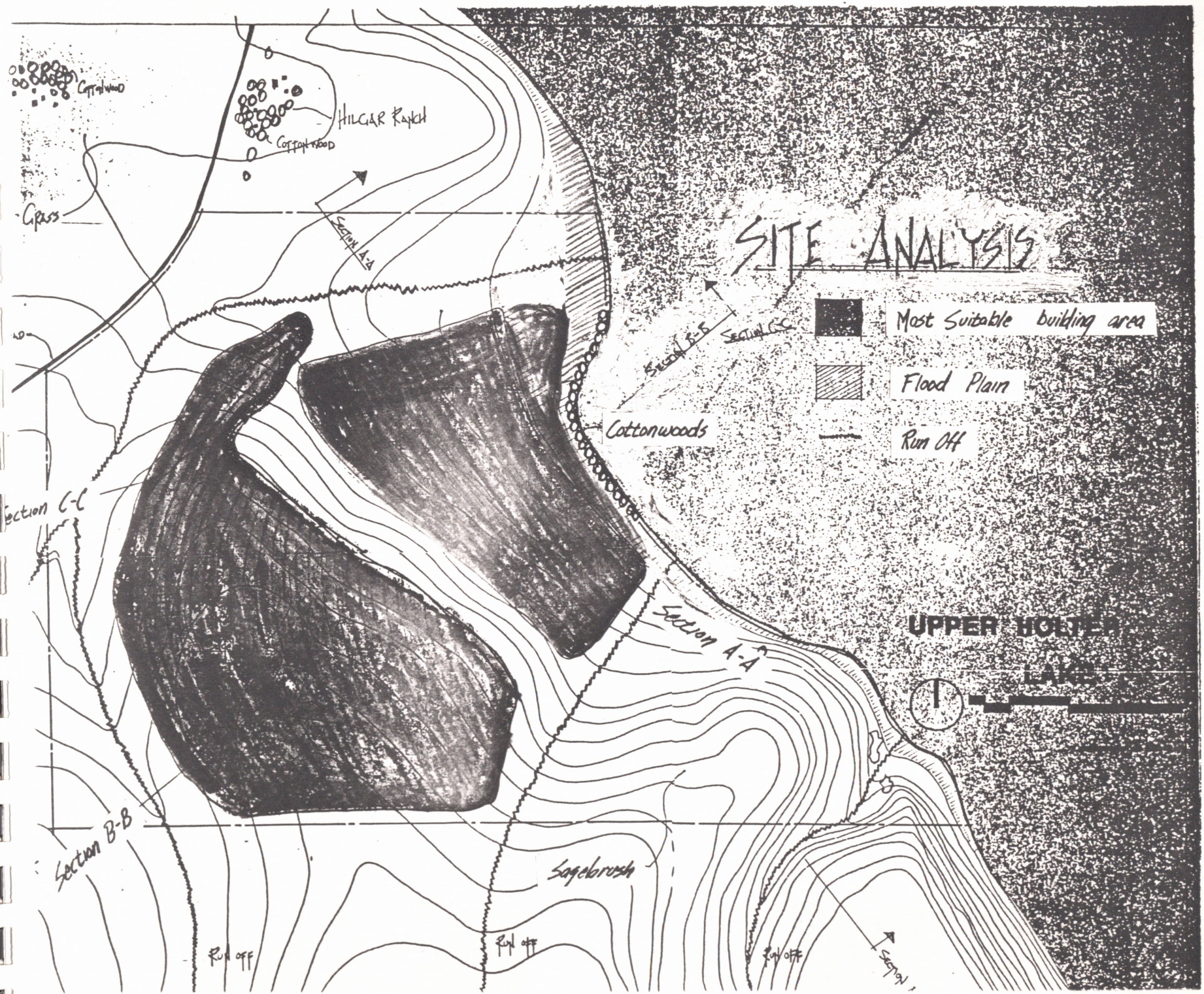
AREA : 1500 sq. ft.

SPECIAL REQUIREMENTS : None.

DESCRIPTION : Space for three cars - possibly four, maintenance equipment and a work shop.

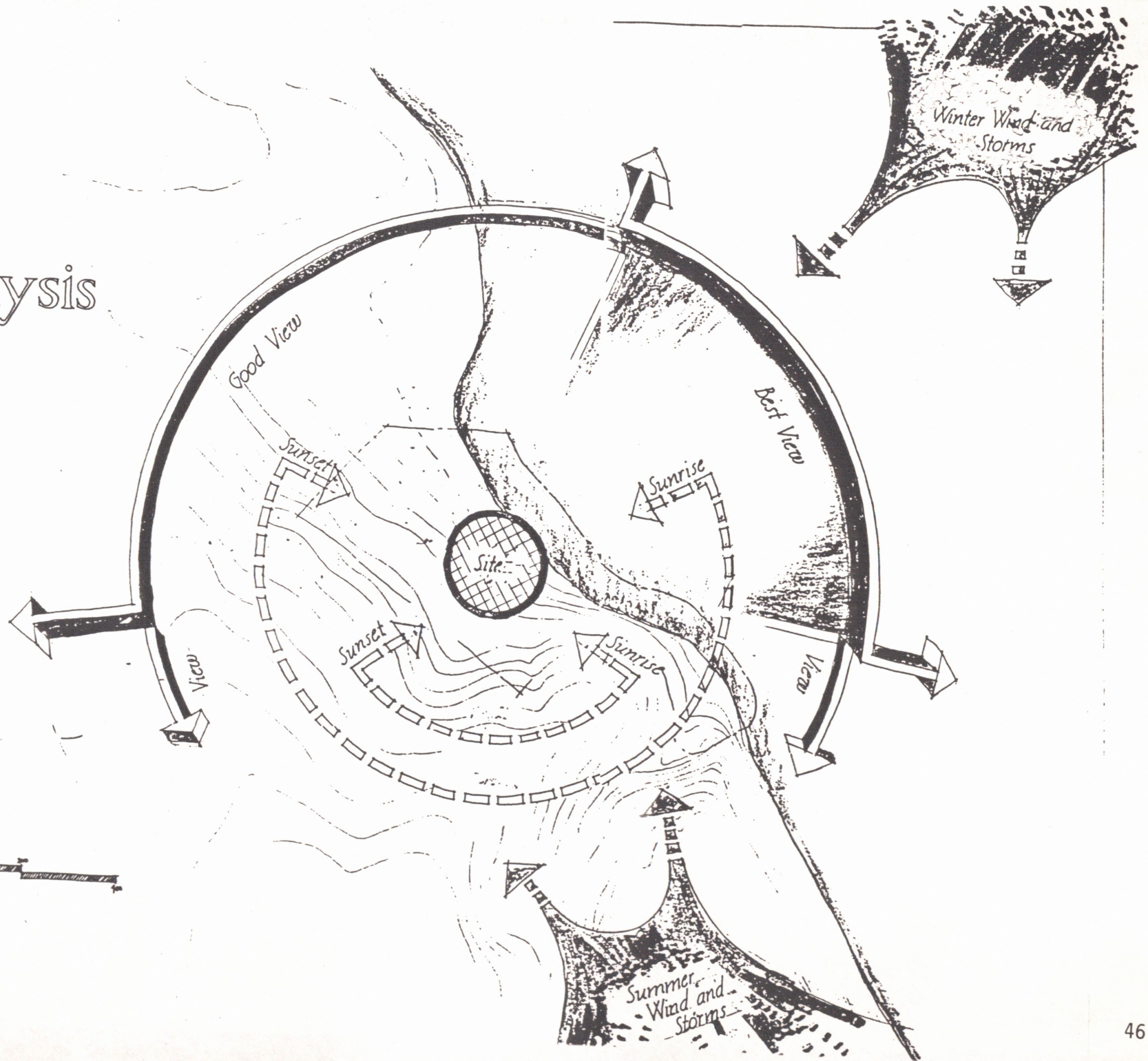
THE SITE

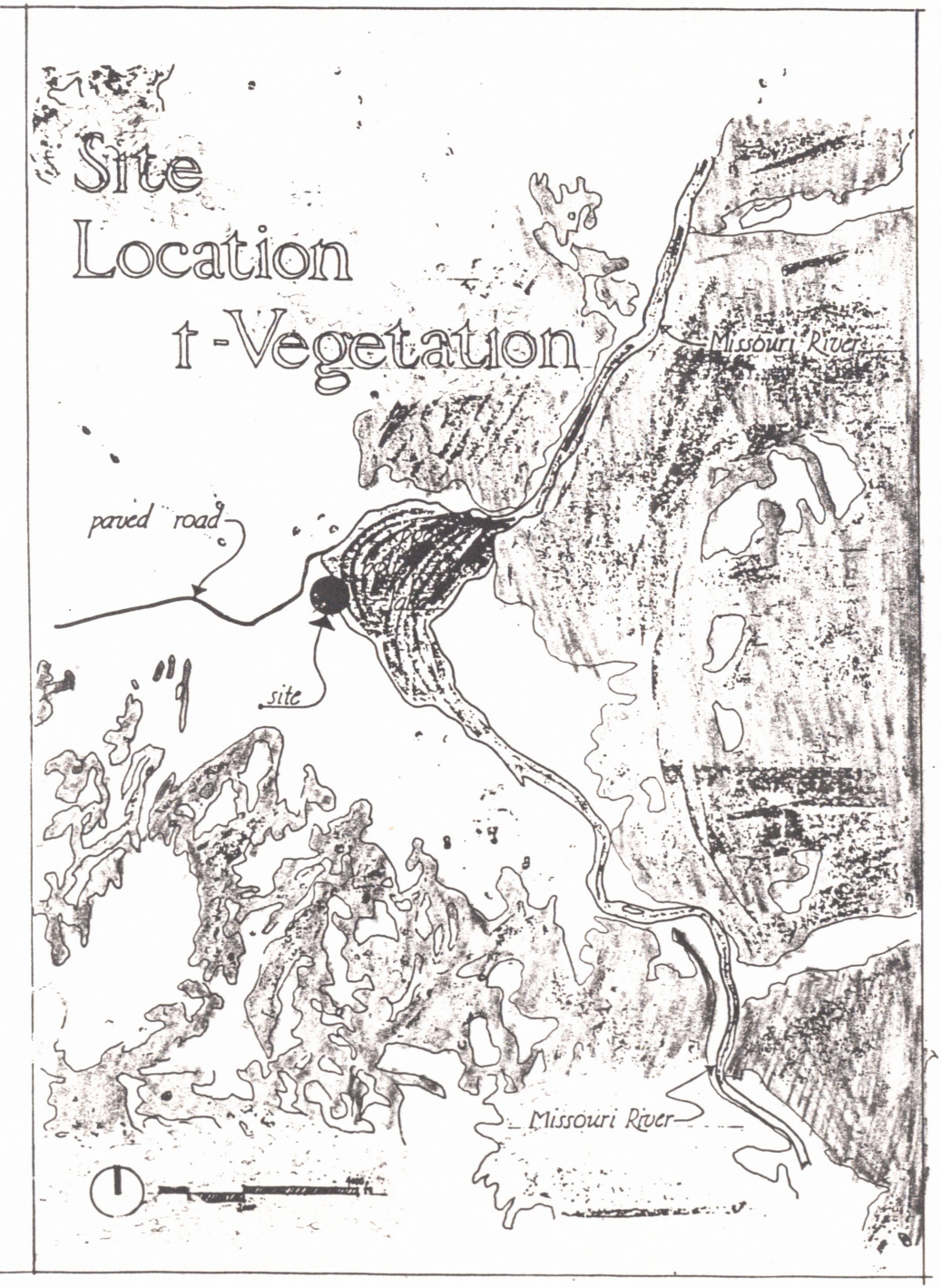

Havre
SITE
Missoula
Helena
Butte
Billings
Bozeman
Dillon
Montana - UNIVERSITY LOCATIONS
10
20
40
Miles

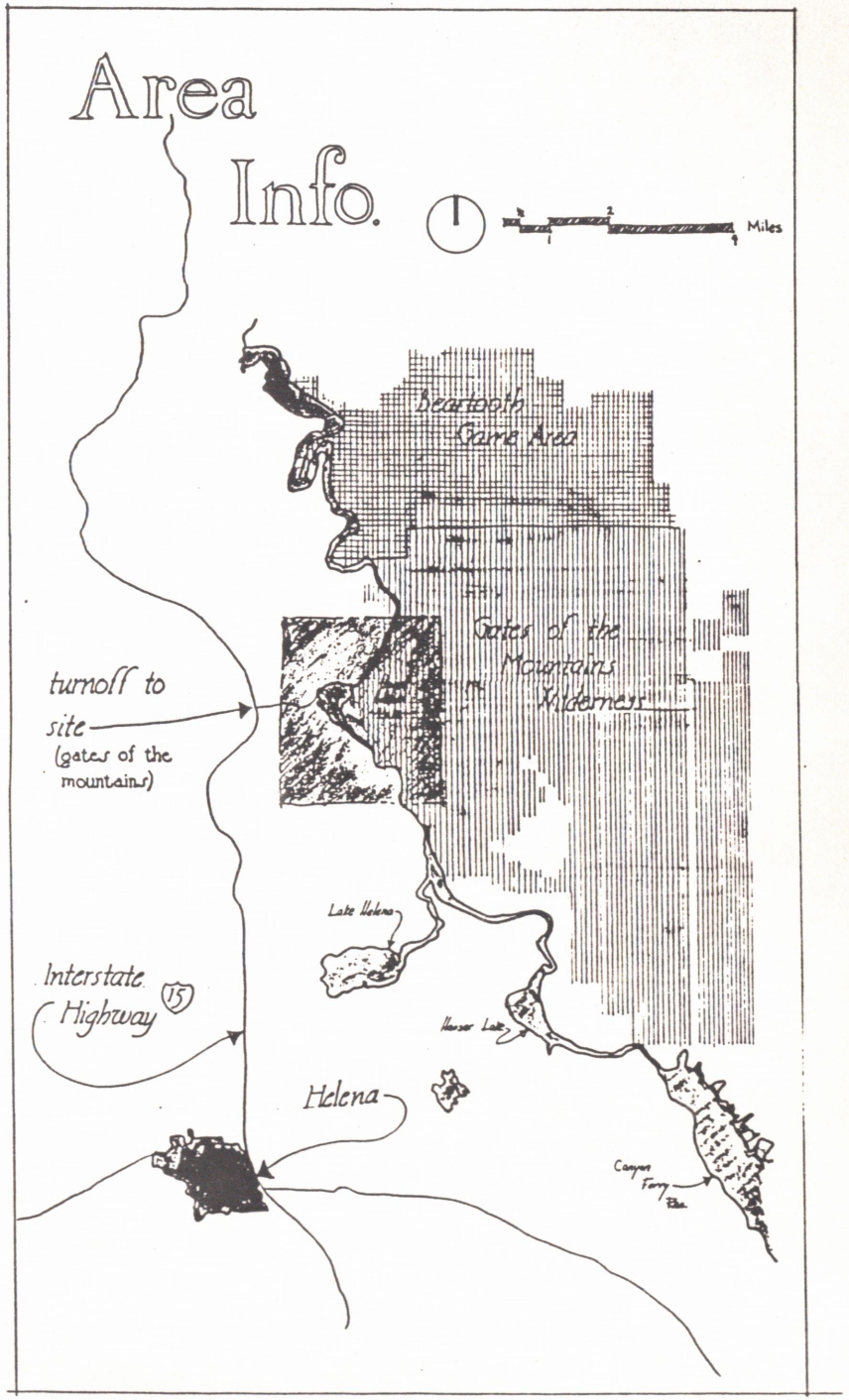

SITE ANALYSIS
Most Suitable building area
Flood Plain
Run Off
Cottonwoods
Hilgar Ranch
Cottonwood
Grass
Section A-A
Section B-B
Section C-C
Section C-C
Section A-A
Section B-B
Sagebrush
Run off
Run off
Run off
UPPER HOLTER
LAKE

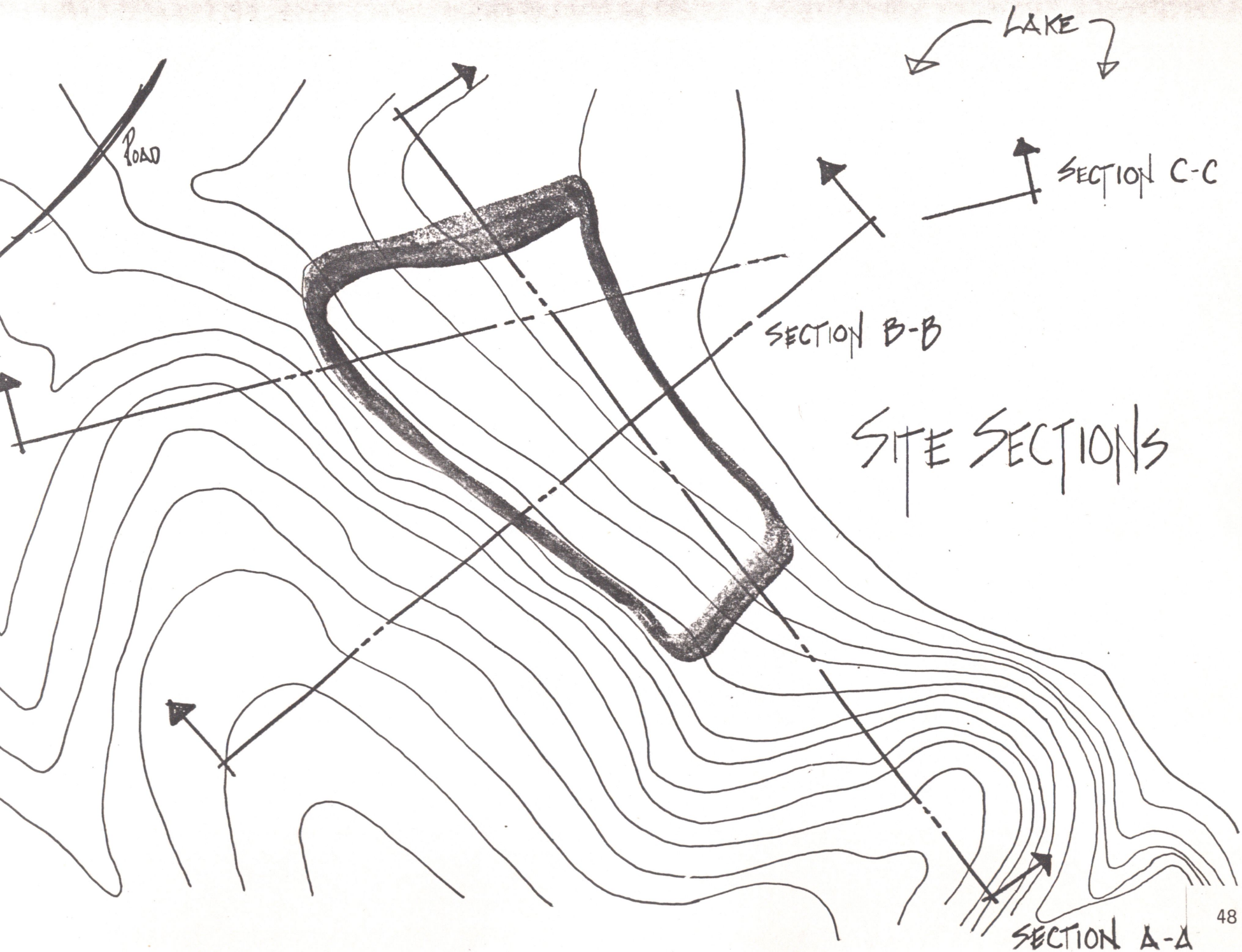
Site Analysis

- Climatic
- View



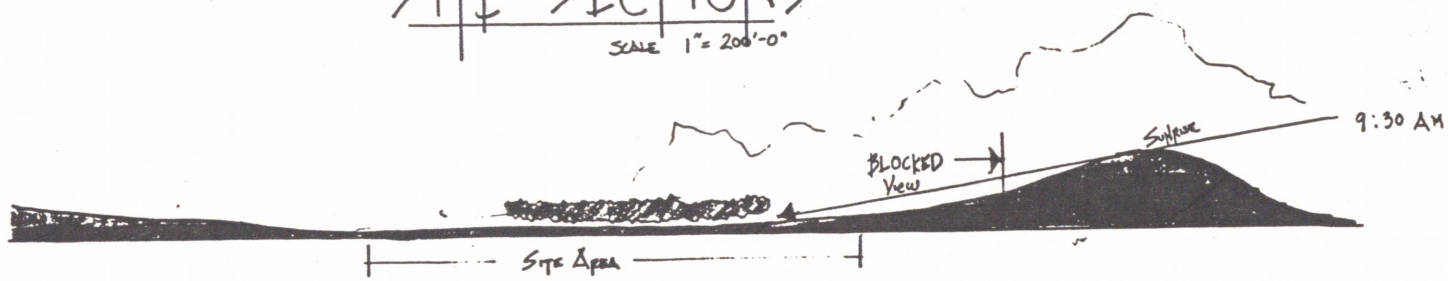

Site
Location
t-Vegetation
Missouri River
paved road
site
Missouri River


Area
Info.
Miles
Beartooth
Game Area
Gates of the
Mountains
Wilderness
turnoff to
site
(gates of the
mountains)
Lake Helena
Interstate
Highway
15
Helena
Canyon
Ferry

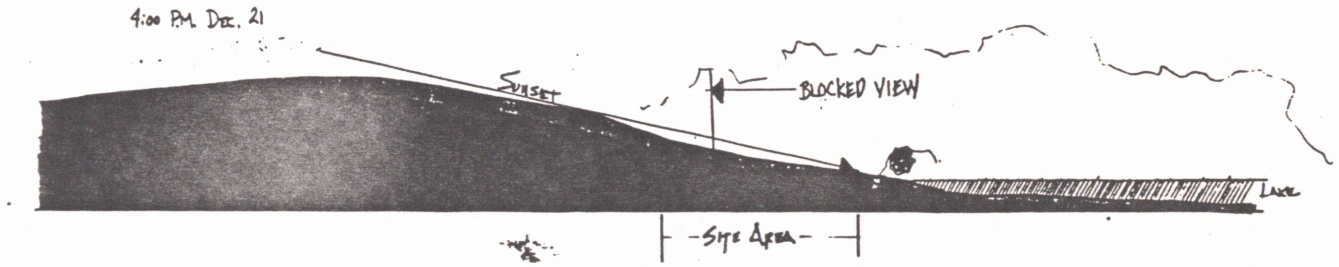

LAKE
ROAD
SECTION C-C
SECTION B-B
SITE SECTIONS
SECTION A-A

SITE SECTIONS

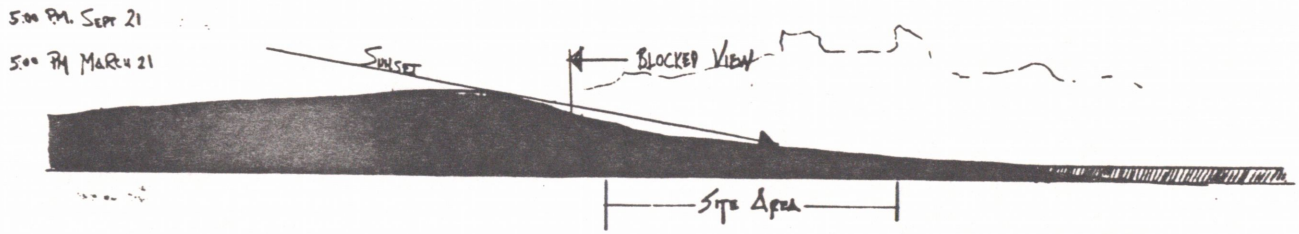
SCALE 1" = 200'-0"



SECTION A-A



SECTION B-B



SECTION C-C

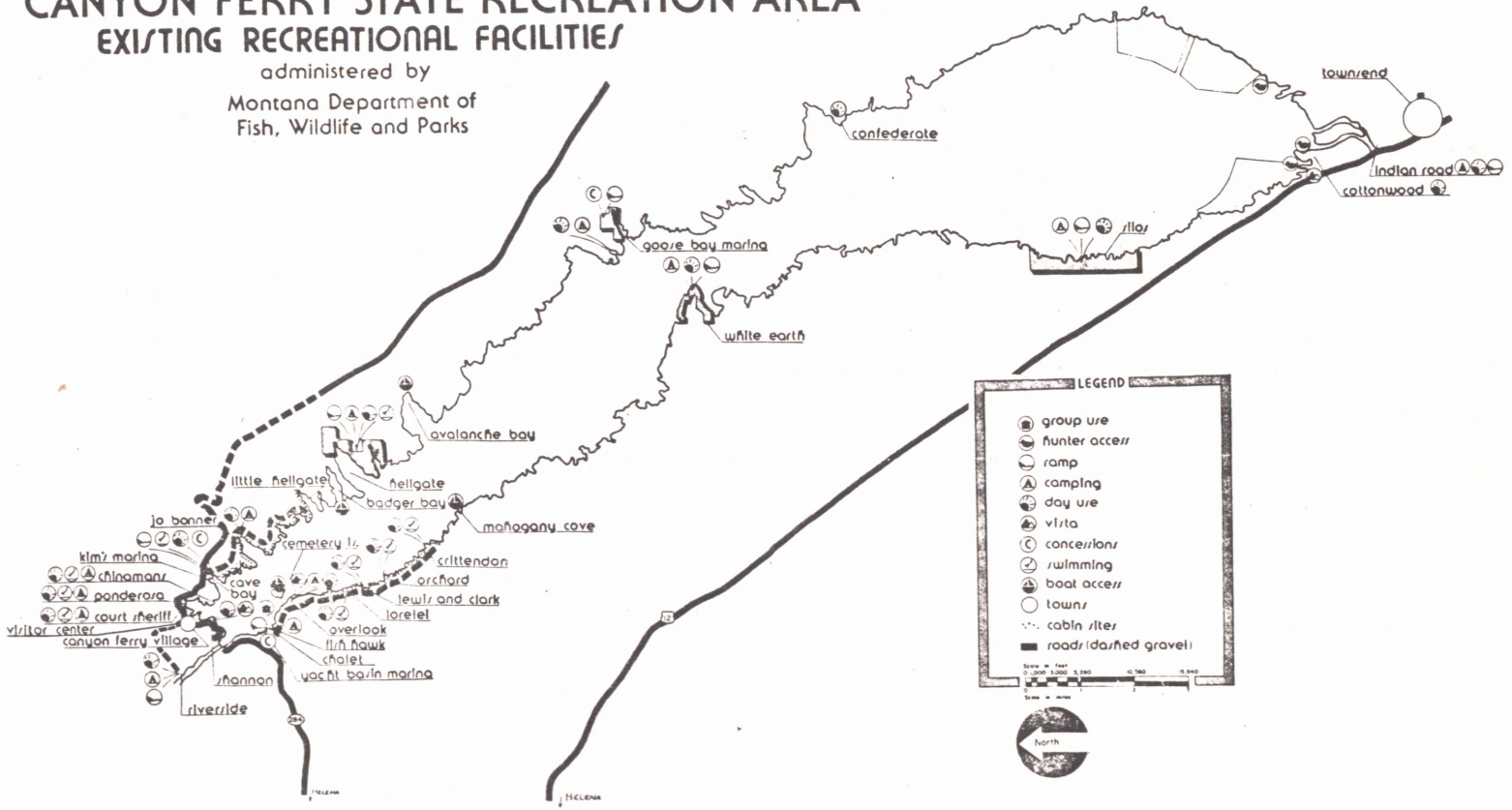
RECREATION - OFF SITE

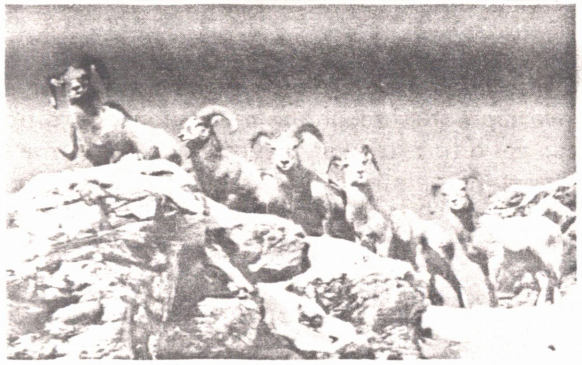
CANYON FERRY STATE RECREATION AREA

EXISTING RECREATIONAL FACILITIES

administered by

Montana Department of
Fish, Wildlife and Parks





Rocky Mountain Bighorn Sheep were native to this canyon when Lewis came through. They were all killed off by the early 1900's. The sheep you may see in the Canyon today were transplanted from the Sun River Herd in the early 1970's.



Rocky Mountain Goats were transplanted in the Canyon in the 1950's.



The Osprey, or Fish Hawk, is one of the many birds that make their home in the Canyon.

Some of the other birds and small animals that live in the canyon are the bald eagle, prarie falcon, red tailed hawk, great horned owl, cliff swallows, common merganser ducks, eared grebes, western grebes,

HOW TO GET THERE

FROM HELENA

Take interstate 15 North from Helena 16 miles. Turn off on Gates of the Mountains exit and proceed to Lewis & Clark Landing at the end of the road.

FROM GREAT FALLS

Take interstate 15 South from Great Falls 74 miles. Turn off on Gates of the Mountains exit and proceed to Lewis & Clark Landing at the end of the road.

1984 CRUISE SCHEDULE

(Opens to the general public
Memorial Day weekend
Charters are taken throughout May)

JUNE & SEPTEMBER

SATURDAYS - SUNDAYS & HOLIDAYS
10:00 am, 12 noon, 2:00 pm, 4:00 pm

WEEKDAYS
11:00 am - 2:00 pm

JULY & AUGUST

SUNDAYS & HOLIDAYS
1 boat leaving every hour
starting at 10:00 am
last trip at 5:00 pm

SATURDAYS
10:00 am, 12:00 noon, 2:00 pm, 4:00 pm

WEEKDAYS
11:00 am, 1:00 pm, 3:00 pm

1984 CRUISE FARES

Adults	$5.00
Senior Citizens	$4.00
Children (6 yrs. to 16 yrs.)	$2.00
Children (under 6 yrs.)	Free

Inquire about
Special Charter Trips at Tour Center
Gates of The Mountains
P.O. Box 478, Helena, MT 59624
or call: (406) 458-5241

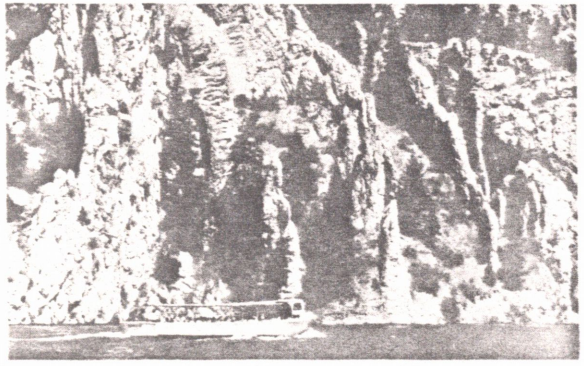
Boat Tours

GATES OF THE MOUNTAINS



Welcome to A Cruise on the Longest River in North America—The Missouri.

You will be going through a limestone canyon which, at one time was the floor of the Mississippian Sea. As you travel through the canyon, the towering cliffs on each side present a visual study of the sea floor. The life that lived in the sea 300 million years ago is now fossilized and vividly displayed for all of us to enjoy.



The folds in the photo above give evidence of the tremendous pressure exerted when the Rocky Mountains were formed 60 million years ago.

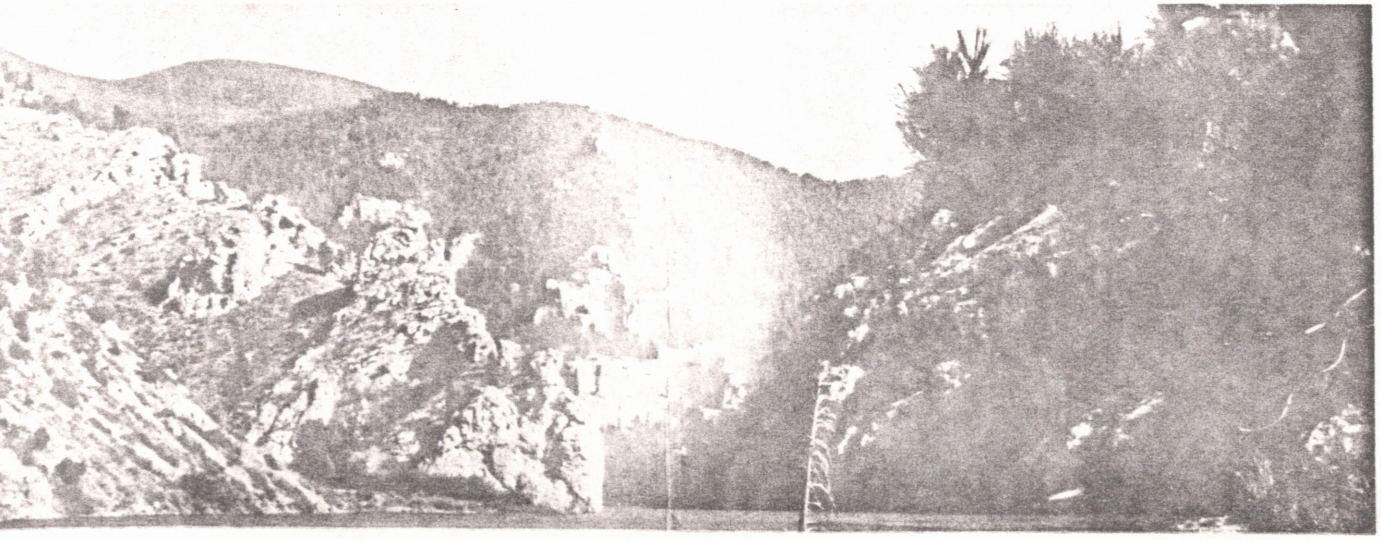
The Missouri River started its journey to the sea about 3 million years ago. Primitive people may have been in this area as long



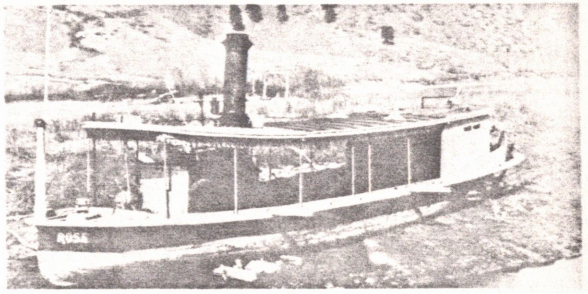
ago as 10 thousand years. Thousands of years later the Indians used many of the caves in the canyon for protection as they traveled and hunted in the area. Pictographs drawn by these early people are visible from the cruise boat.

It was the evening of July 19, 1805 that Meriwether Lewis and his party entered the canyon. Lewis wrote the following in his journal: **This evening we entered much the most remarkable clifts we have yet seen on our journey. From the singular appearance of this place, I shall call it the Gateway to the Rocky Mountains.**

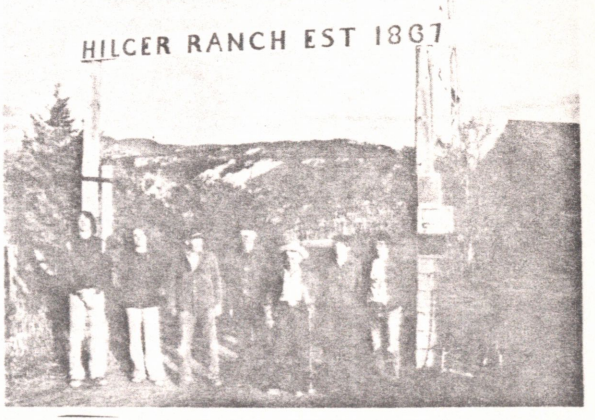
Today the campsite of Lewis and his party is a beautiful picnic area developed and maintained by the United States Forest Service. The campsite is the only stop the cruise boat makes. You will have time for a relaxing walk through the area before boarding for the return trip, or, if you desire, you may stay at the campsite between boats and picnic, explore or just relax in the quiet beauty of Meriwether Canyon.



Sixty two years after Meriwether Lewis traveled through this canyon Nicholas Hilger settled on his ranch at the head of the canyon. Mr. Hilger loved the "Grand White Canyon." It was in the year 1886 that he decided to put a steamboat on the River.



The **"Rose"** was a sturdy stern wheel, steel hulled steamer manufactured in Dubuque, Iowa. For many years Mr. Hilger carried happy and excited people through the canyon on the "Rose." Later Mr. Hilger's son took over the tours with gas driven boats.



Today the grandchildren of Nicholas Hilger operate the Hilger Ranch. "The Hilger Kids" Dan, Brian, Susan and Babe, thi
fifth and sixth from the left in the p
Polled Herfords. They are well kn

CLIMATE

CLIMATE:

Local residents interviewed state: "the wind blows quite often in the winter. Blizzards occur throughout the winter. Summers are nice. The area is quite dry so large quantities of snow aren't common. The lake never totaly freezes over although the edges do freeze."

The following information was taken from James A. Ruffner's Climates of the states from the Holter Dam area statistics:

- mean annual precipitation ——— 12 inches/year
- mean max. temp.(°F) January ——— 32°
- mean min. temp(°F) January ——— 10°
- mean max. temp.(°F) July ——— 86°
- mean min temp.(°F) July ——— 56°

TEMPERATURE (°F)

Jan.	Feb.	Mar	APR	May	Jun.	Jul	Aug	Sept.	Oct.	Nov.	Dec.
26	28.2	37.4	45.8	55.3	62.2	71.3	69.1	59.8	50.5	38.2	31.8

PRECIPITATION

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug.	Sept.	Oct.	Nov.	Dec.
.54	.47	.62	1.0	2.08	2.89	1.12	.86	1.12	.73	.53	.47

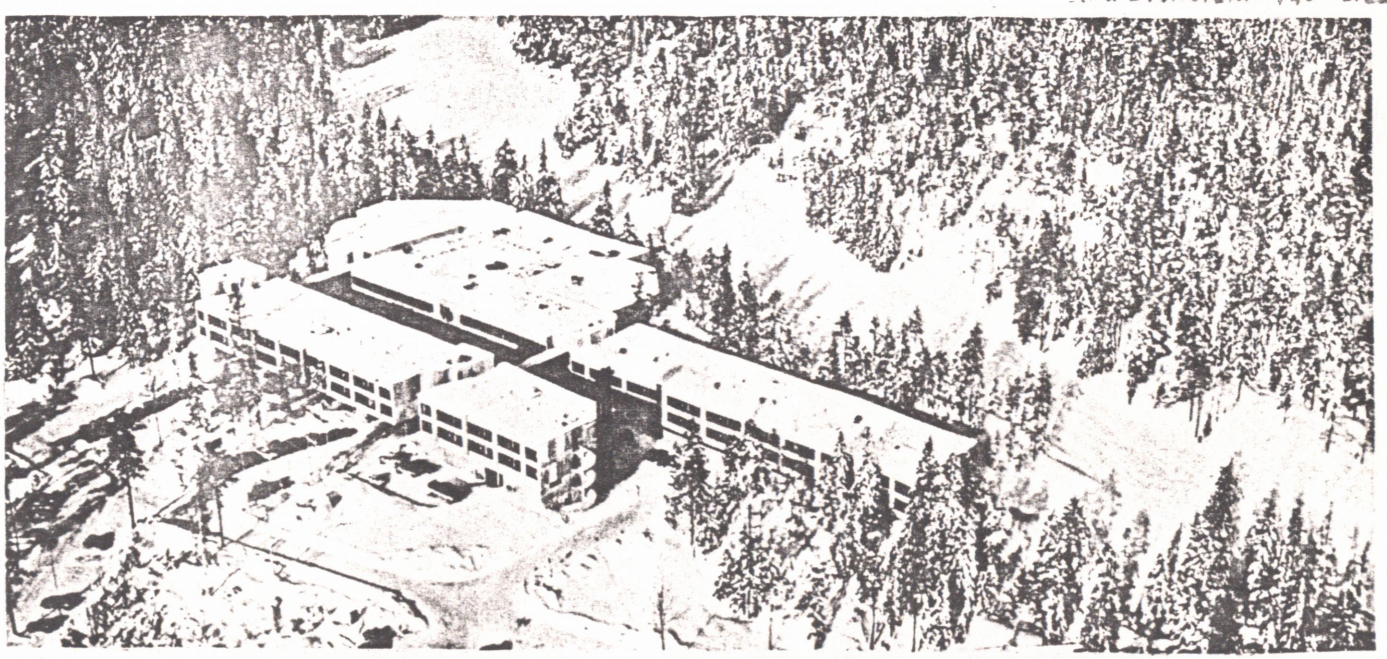
Freeze Threshold Temp.	Mean date of last occurrence	Mean date of first fall occurrence	Mean no. of days between dates	Years of Record Spring	No. of occurrences in Spring	Years of record fall	No. of occurrences in fall
32	5-12	9-28	139	30	"	"	"
28	4-29	10-14	169	30	"	"	"
24	4-15	10-24	192	30	"	"	"
20	4-06	11-02	210	30	"	"	"
16	4-01	11-10	224	30	"	"	"

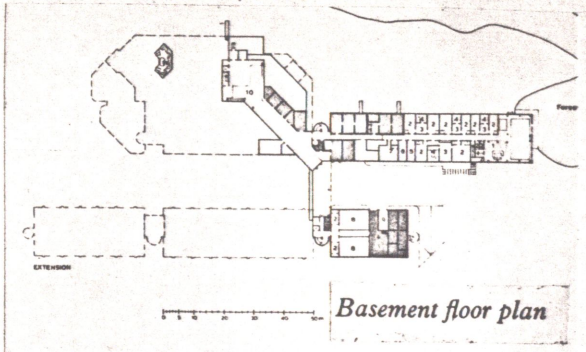
CASE STUDIES

SIMILAR FACILITIES:

These facilities provide useful information in understanding functional relationship of spaces, imagery and aesthetics

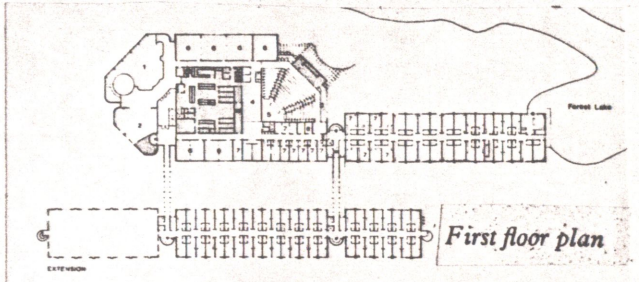
Hotel Forest Lake, Helsinki, Finland - info from conference, convention and exhibition facilities pp. 92-43





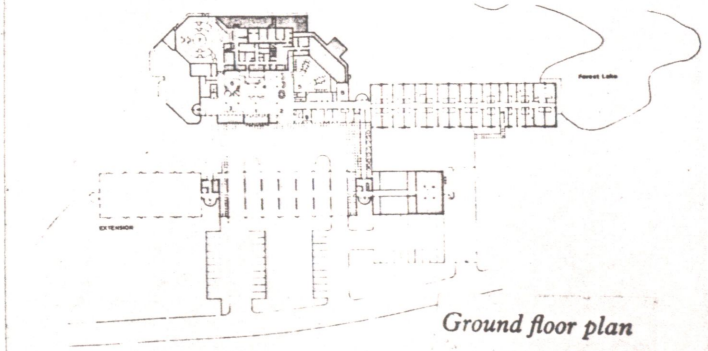
Basement floor plan

Key
1 Swimming pool and bar
2 Dressing rooms
3 Washrooms
4 Saunas
5 Water massage
6 Massage
7 Gymnasium
8 Squash courts
9 Garage
10 Maintenance
11 Night club



First floor plan

Key
1 Main restaurant
2 Restaurant/conference room
3 Kitchen
4 Cafe
5 Auditorium
6 Conference rooms
7 Meeting rooms
8 Office



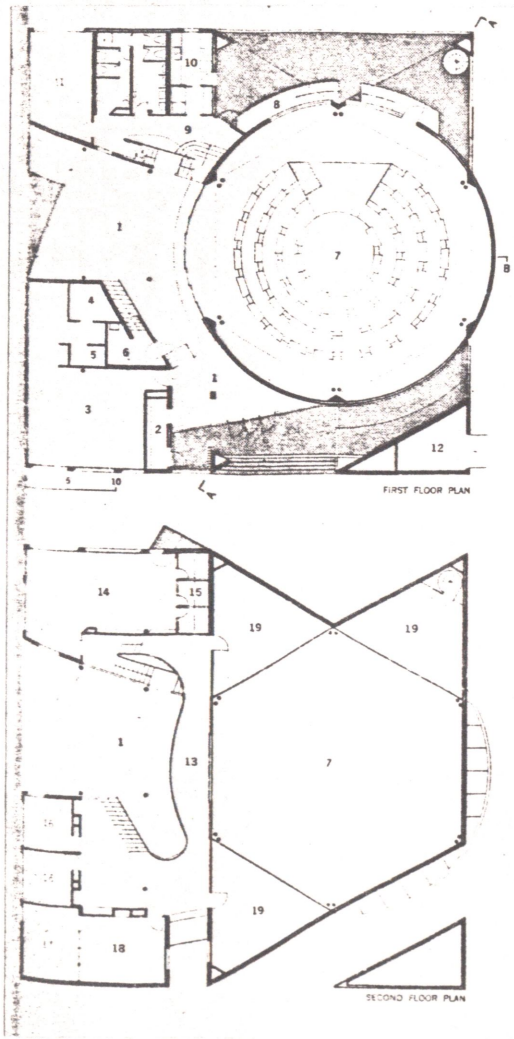
Ground floor plan

Key
1 Main entrance
2 Reception
3 Wardrobe
4 Lobby bar
5 Auditorium
6 Roulette
7 Night club
8 Showroom/children's room
9 Offices

- Facility is larger but it has many of the same functions.
- the setting is very similar
- it houses congress and is a meeting place for business men
- Circulation throughout the project is good

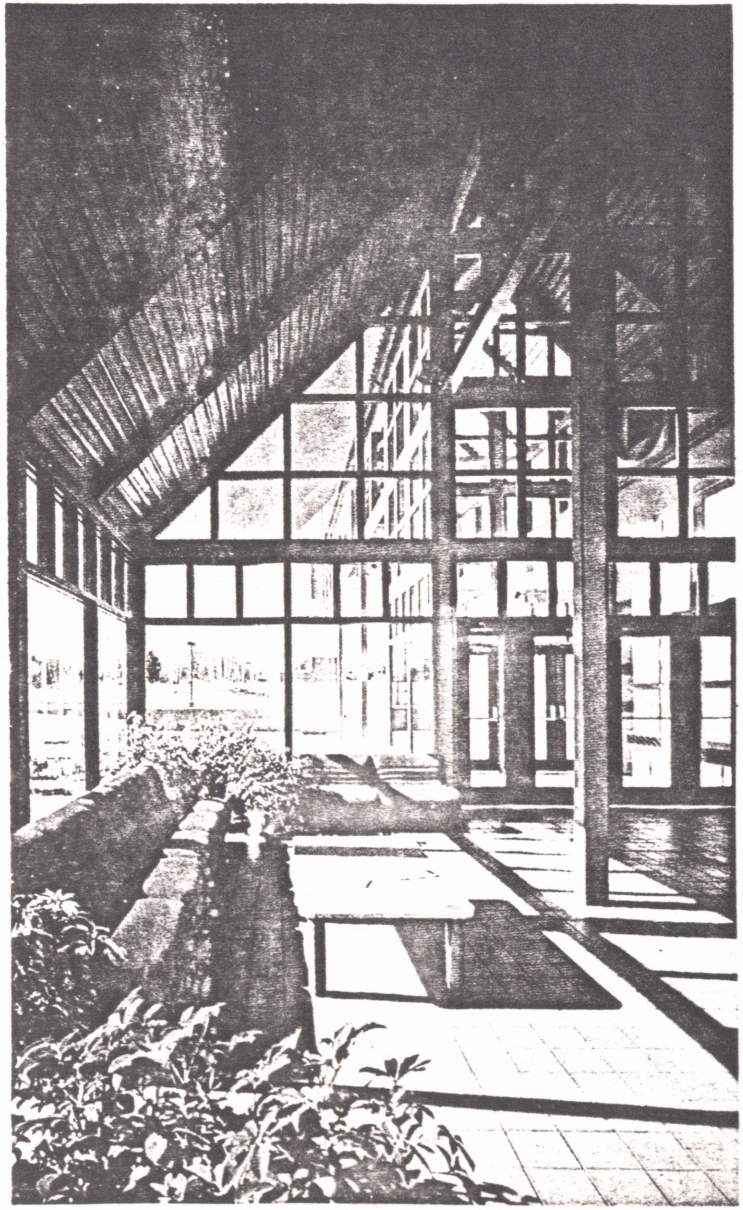
info. from Arch. Forum v. 138
Mar. 1973 p.62-65

Given Institute of Pathobiology - Aspen, Colo.
: Harry Weese + Assoc.

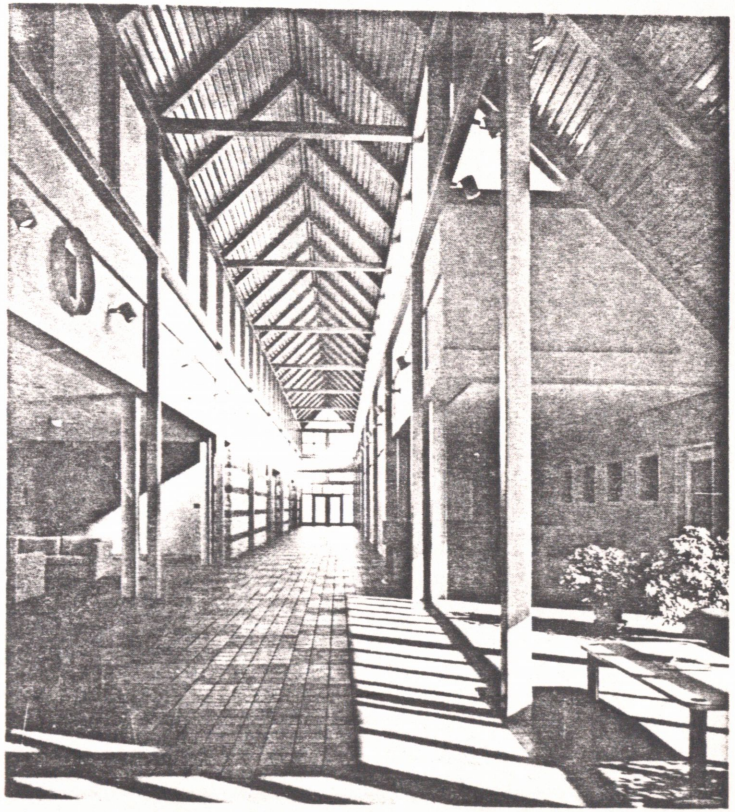


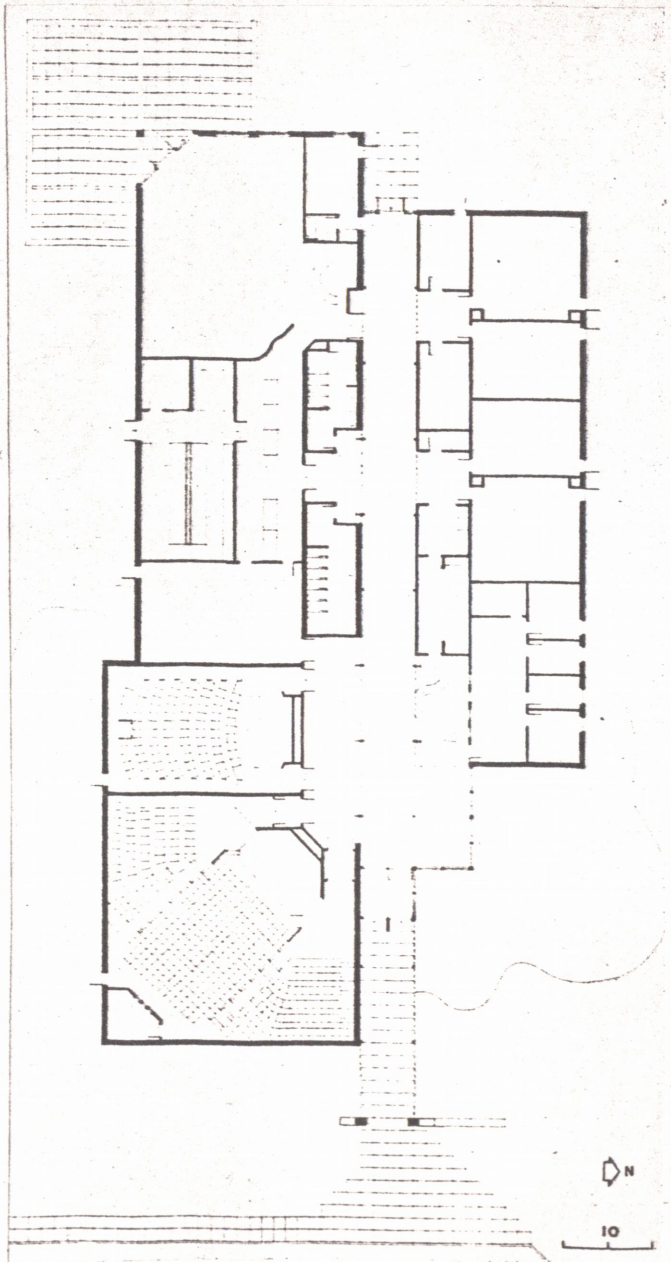
- Use of entry-Lobby space, public may enter seminar room immediately
- floor plan is arranged well.
- Library, offices and reproduction room are located upstairs

1 LOBBY
2 COAT ROOM
3 DEMONSTRATION LABORATORY
4 DARKROOM
5 COUNTING ROOM
6 JANITOR'S CLOSET
7 SEMINAR ROOM
8 FOYER
9 HALL
10 KITCHEN
11 CONFERENCE ROOM
12 MECHANICAL ROOM
13 BRIDGE
14 LIBRARY
15 CARRELS
16 OFFICE
17 SUPPLY ROOM
18 REPRODUCTION ROOM
19 CONFERENCE-PROJECTION ROOM



Luzerne County Community College
Conference Center - Hanticoke, Pennsylvania.
information taken from:
Architecture and Urbanism
June 1982, p.p. 95-98





- The facility takes on an axial circulation which is desirable on a site which has a steep slope to it. (although this project is not on a sloped site.) Entry is directly into a lobby which is accessible to the auditoriums. Intuitively, the lobby has the kind of feeling a lobby for a facility like this one should have, a view to the exterior and natural lighting from outside throughout the facility.

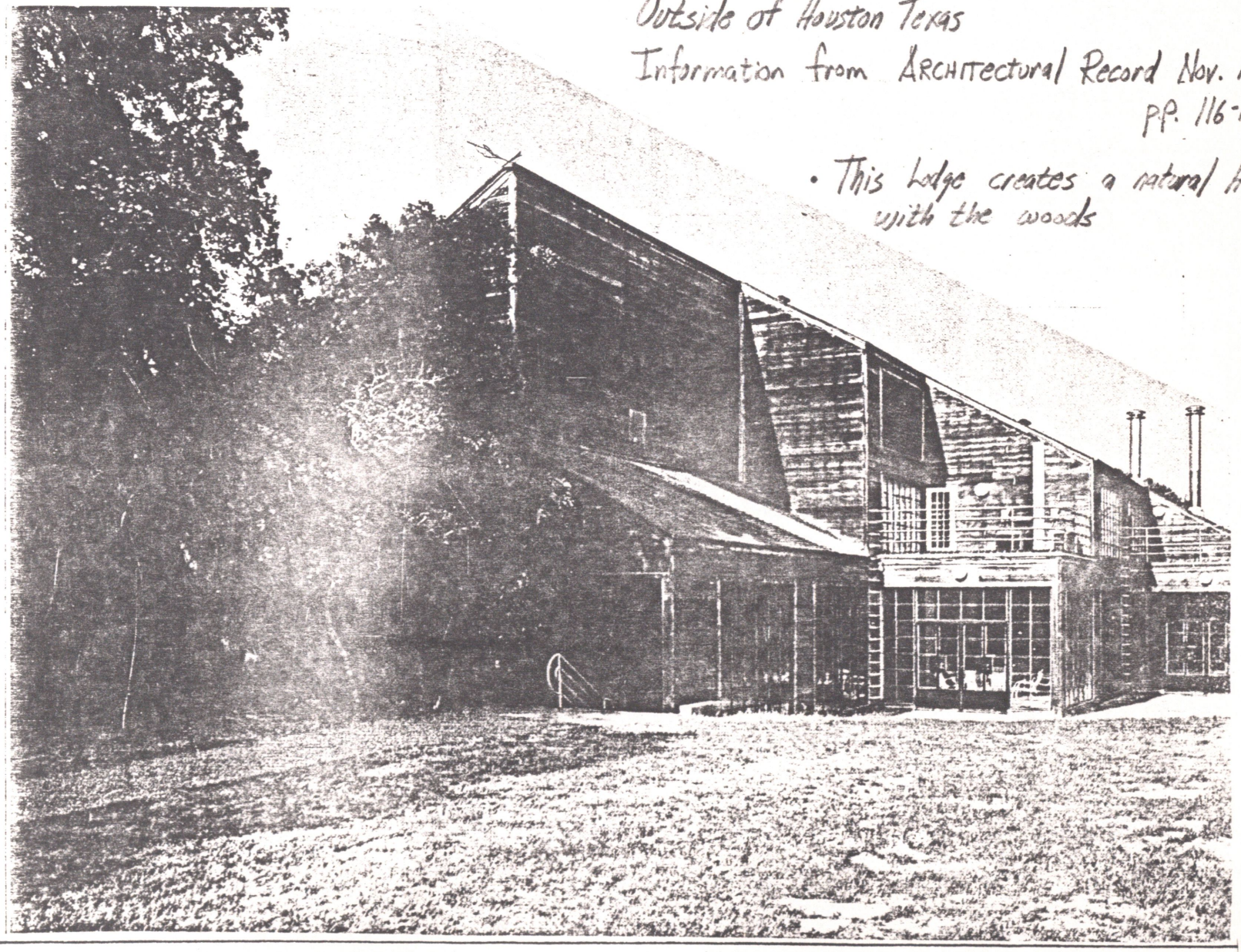
Camp Allen Episcopal Camps & Conference Center

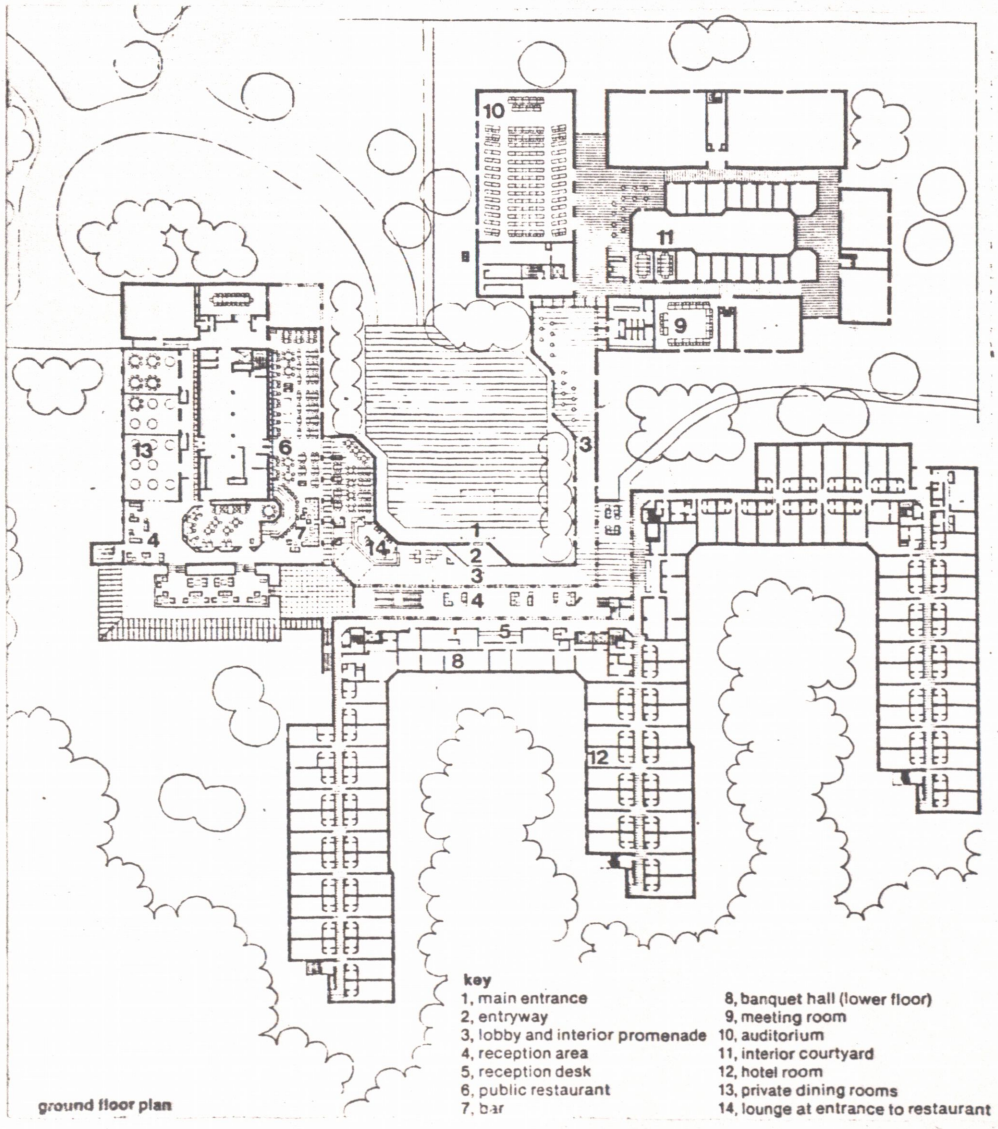
Outside of Houston Texas

Information from Architectural Record Nov. 1981

pp. 116-119

- This Lodge creates a natural Harmony with the woods

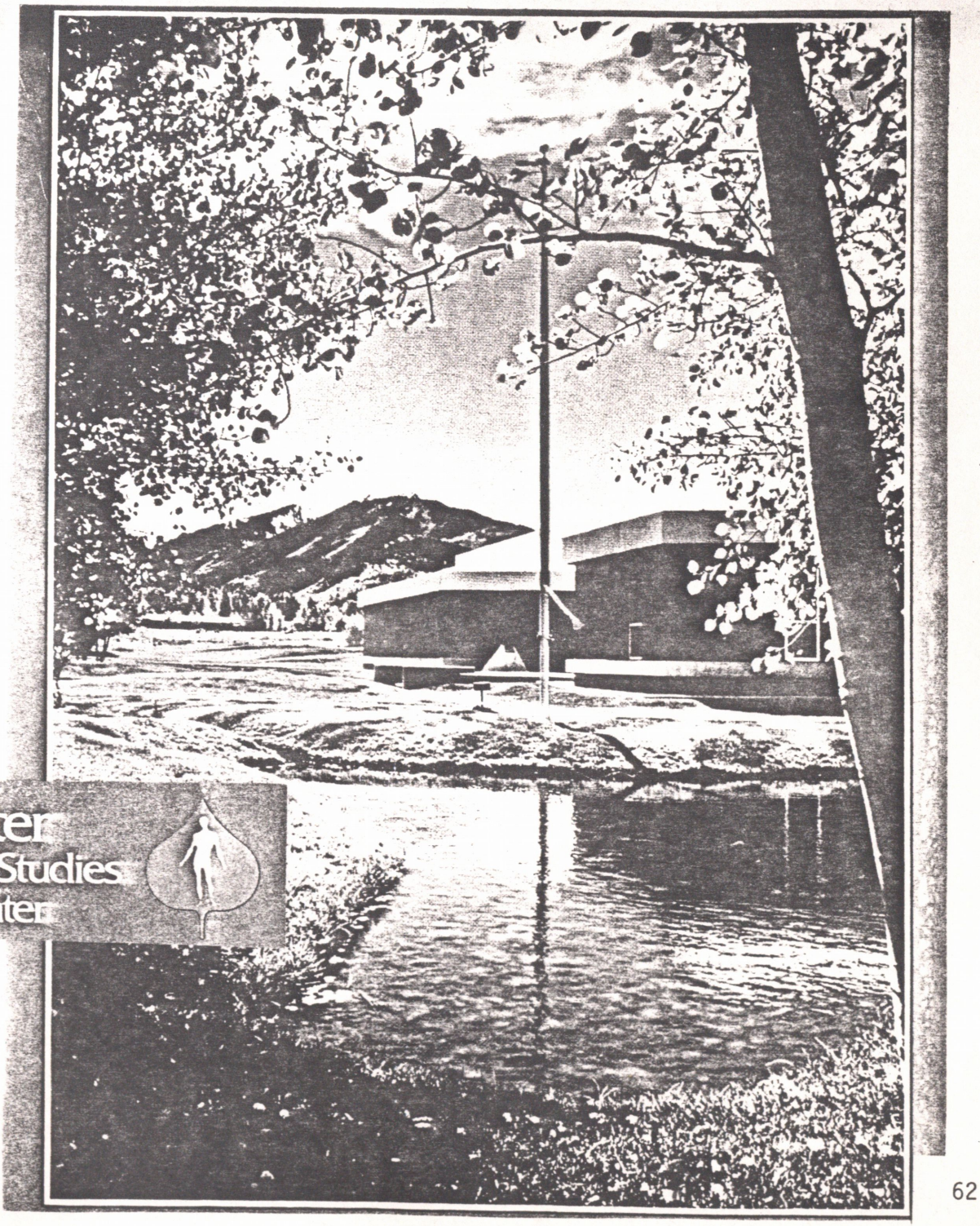




Conference Centre
Princeton, New Jersey

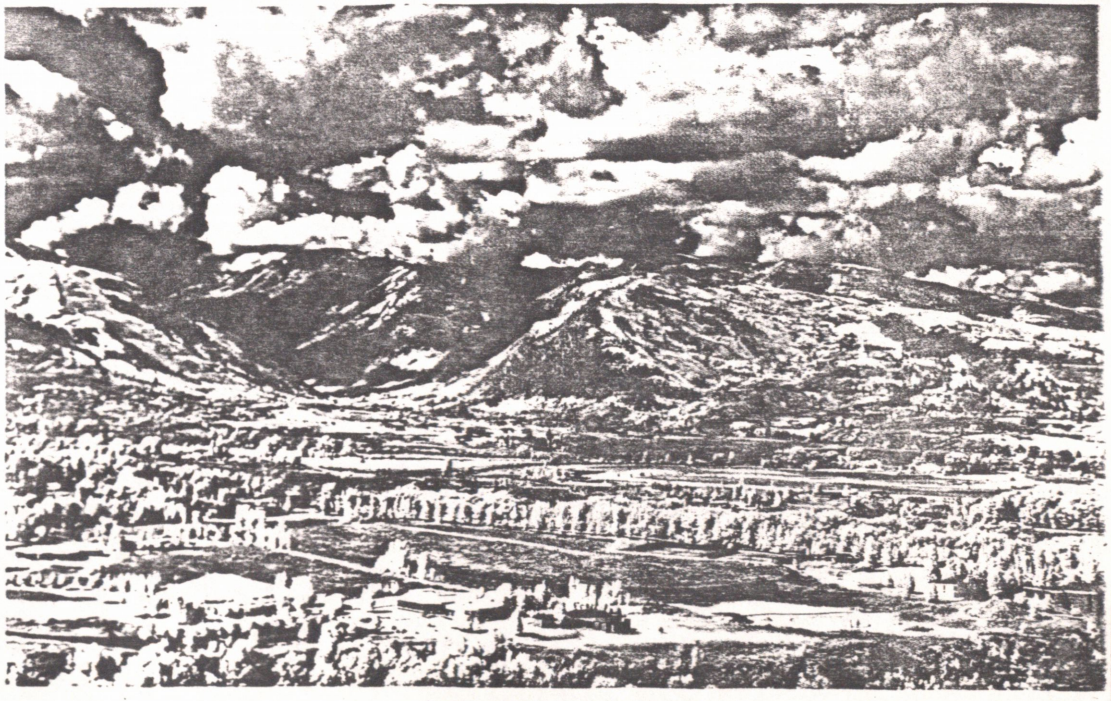
- although larger in scale than Gates of the Mountains Meeting center this facility is very similar in circulation and functional characteristics. It is located in the rolling hills adjacent to a wooded area. It is trying to react to it's natural surroundings.



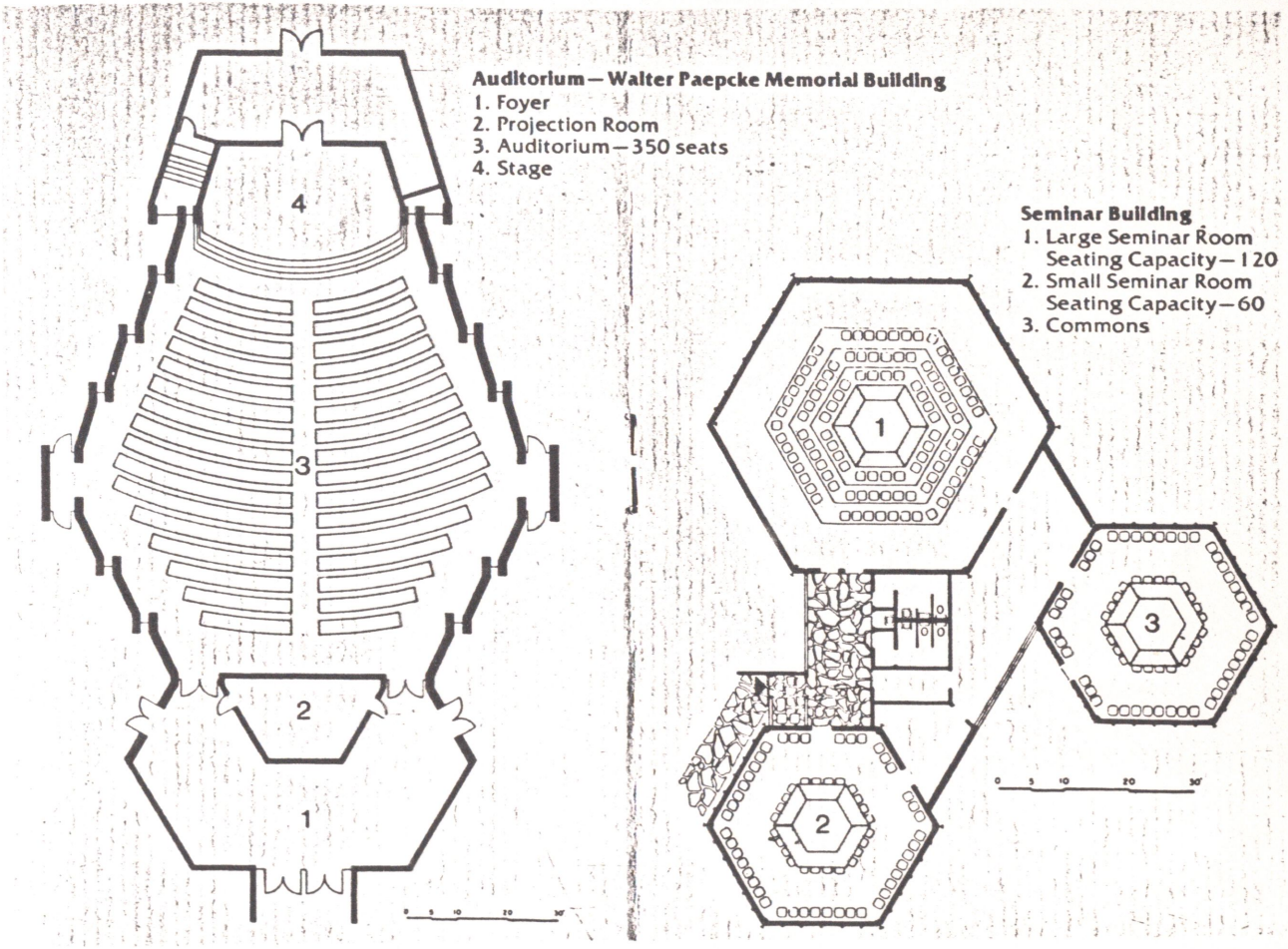


Robert O. Anderson Center
of the Aspen Institute for Humanistic Studies
An International Conference Center







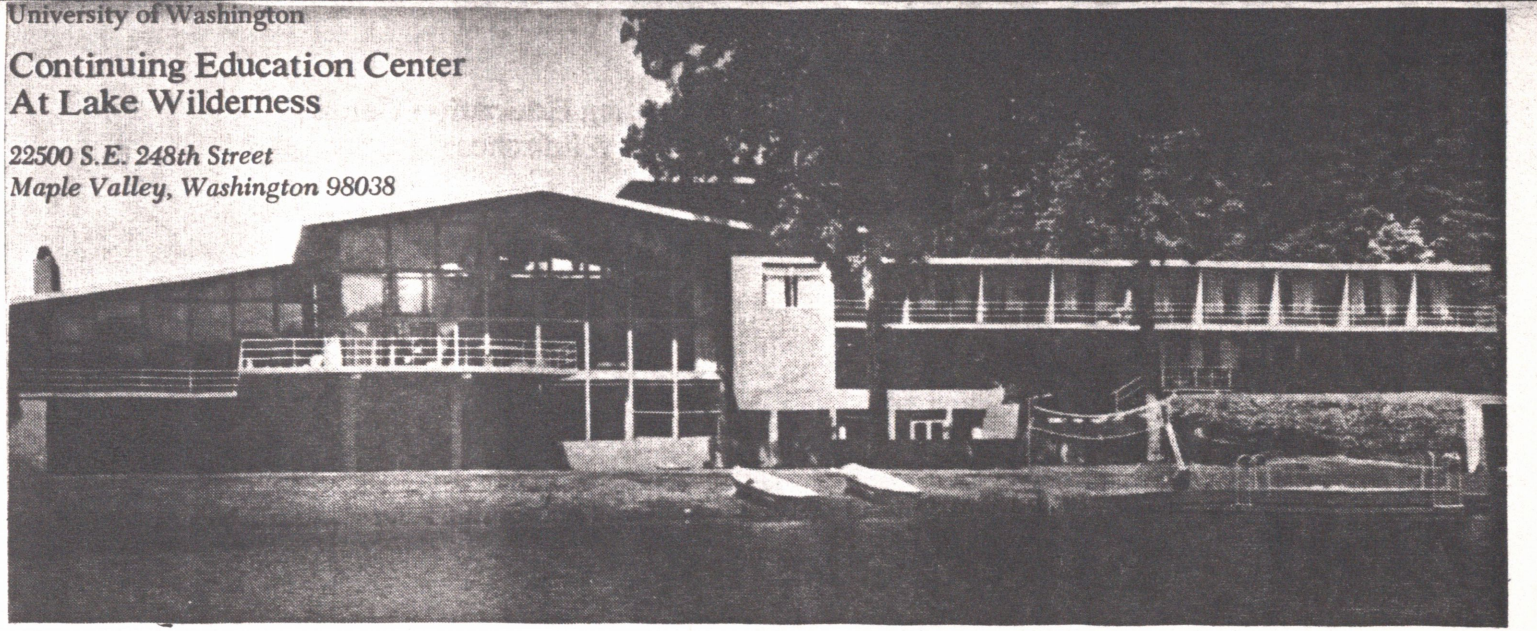

Auditorium—Walter Paepcke Memorial Building
1. Foyer
2. Projection Room
3. Auditorium—350 seats
4. Stage
Seminar Building
1. Large Seminar Room
Seating Capacity—120
2. Small Seminar Room
Seating Capacity—60
3. Commons
4
3
2
1
1
2
3



University of Washington

Continuing Education Center
At Lake Wilderness

22500 S.E. 248th Street
Maple Valley, Washington 98038



UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

from:
Diane Brittenham
Lake Wilderness Conference Center
University of Washington DW-50
Seattle, WA 98195

Dear Mr. Russell,

I hope the enclosed information is of use to you. If you have any further questions, please contact me at the above address.

Sincerely,

Diane Brittenham

- This information is very useful in terms of management and what a facility similar to Gates of the Mountain Meeting Center would offer. It's size location and function are very much the same as Gates of the Mountains will be (hypothetical)

The Center: The University of Washington Continuing Education Center is operated as a residential conference site for continuing education programs sponsored by the University or other state educational institutions, and by federal, state and local governmental agencies.

Conference Scheduling: All scheduling of conferences and arrangements for services are made through the office at the Center. Telephone: (206) 543-5380; SCAN 323-5380.

Location: The Center is 30 miles southeast of the University campus (approximately 45 minutes driving time) and about 16 miles southeast of Renton.

Transportation: The only means of transportation to the Center is by taxi or by private car, unless special arrangements have been made for a particular conference.

Check-in: Arrive at the Center at the time indicated on your conference program or time schedule. The Center is not open daily, only as arranged for each conference.

Dress: Casual attire is in order. A sweater or jacket is advisable year around. A raincoat may be needed.

Housing: There is housing for 40 persons, including 18 twin bedded rooms with bath and a coordinator's suite of 2 bedrooms and sitting room. All linens are furnished and daily maid service is provided. Two guests are normally assigned to a room.

Other Facilities: On the lower floor of the main building are four confernece rooms with capacities ranging from 10 to 100 persons. Each group is assigned one or more conference rooms. A fire place lounge, lobby and mezzanine areas, and a large recreation room are available for other group sessions and free-time activities.

Food Services: Meals and coffee breaks are served according to each conference schedule.

Other: Personal supplies may be purchased at nearby Wilderness Village Shopping Center.

Children: The Center is an adult facility with no provisions for small children. The Center does not accept children's programs.

Pets: Pets are not allowed on the premises.

Recreation: Facilities are provided for table tennis, swimming, boating, badminton, volleyball, croquet and shuffleboard. A pool table is in the lodge recreation room and new tennis courts are located in the adjoining King County park. A public golf course is one half mile away.

Telephone and Mail: There are no phones in the individual rooms. There are pay phones for outgoing calls; incoming telephone messages are received at the reception desk telephone (206) 432-4282; mailing address is: Lake Wilderness Center, 22500 S.E. 248th Street, Maple Valley, Washington 98038.

Handicapped accessiblity: The Lake Wilderness Center Lodge is handicapped accessible, including all meeting rooms, dining room, lounges, public restrooms, and two bedrooms.

The University of Washington Lake Wilderness Center is located approximately 15 miles (25 minutes) east of Sea-Tac International Airport and 30 miles (45 minutes) south of the University of Washington campus, in a lovely wooded retreat on the north shore of Lake Wilderness.

The Center houses four conference rooms with capacities ranging from 10 to 100 persons, dining facilities for 100 persons, and overnight facilities for 40 persons including a suite of two bedrooms and a sitting room. There is a minimum guarantee of 20 persons in residence unless you are overlapped with another group using the Conference Center at the same time.

As a facility of the University of Washington, the Continuing Education Center at Lake Wilderness is available for use by state, federal, or civic organizations whose activities are of a character appropriate to the University. Throughout the year, many public agencies have found the convenient location and the specialized nature of this unique educational facility particularly desirable as the site for training sessions and staff development meetings.

Because the primary mission of the Lake Wilderness Center is educational, many special services, not always found at other facilities, are readily available for your convenience. These include blackboards, projectors, other visual aids, IBM electric typewriter, Saxon copier, ditto duplicator, and other items, all designed to assure the success of a conference.

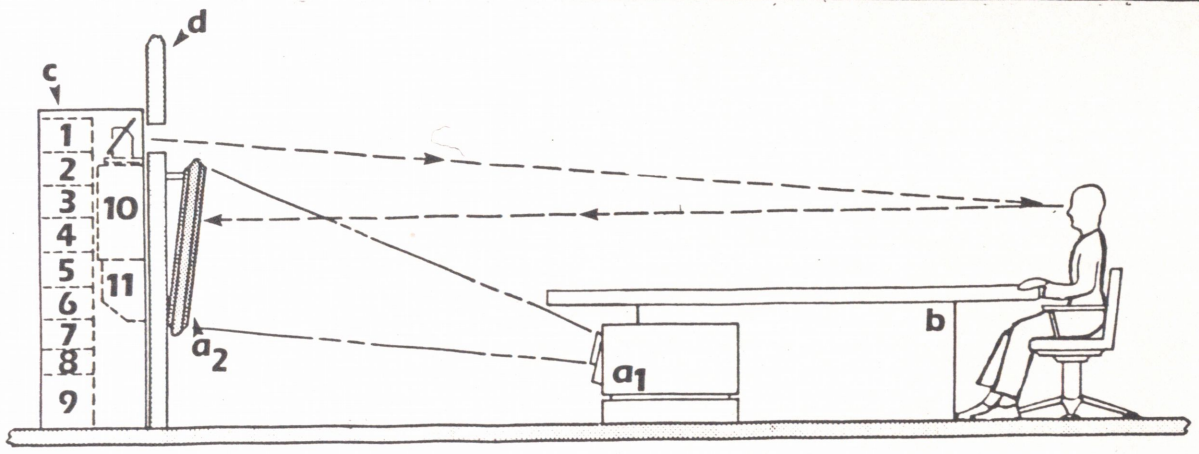
The charge per person for overnight lodging, breakfast, lunch, and dinner; and use of all conference facilities is $49.95 (plus sales tax) per day, based on double occupancy in a twin bedded room with private bath.

I have enclosed a brochure and map for your further information. If you have additional questions or would like to visit the Center, please call me at (206) 432-4282.

Sincerely,

Peggy L. Muggoch
Assistant Manager
Lake Wilderness Center

AUDIO VISUAL AIDS



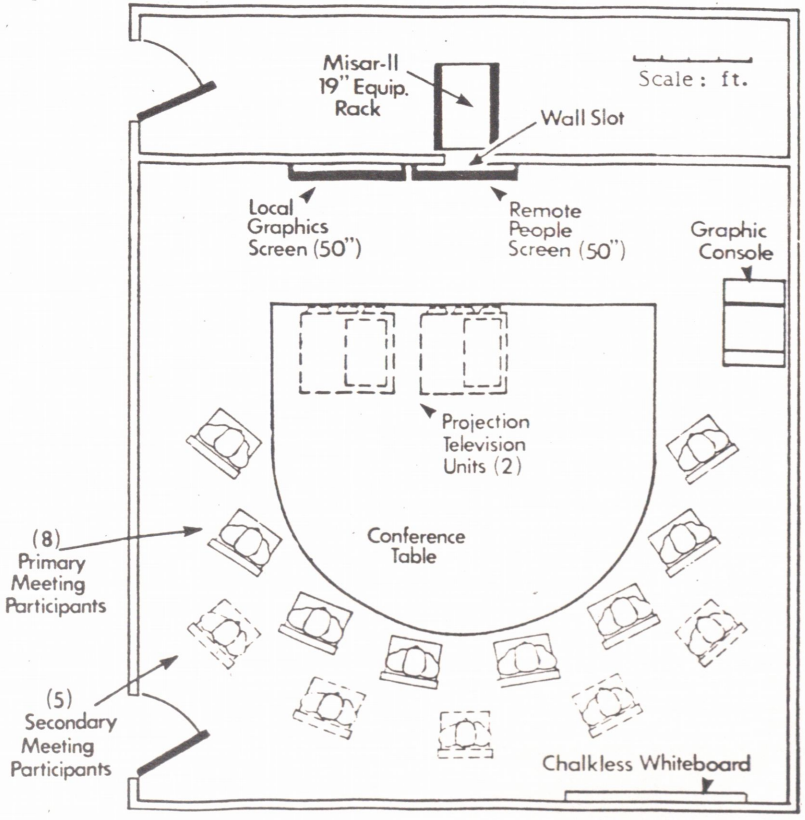


Figure 15: Misar II video conference system: plan.

P. 67

Legend: (Not to scale)

- a_1 Projector
- a_2 Screen 50"diag.
- b Table
- c Misar-II Equipment Rack
- d Sub Wall

System Components

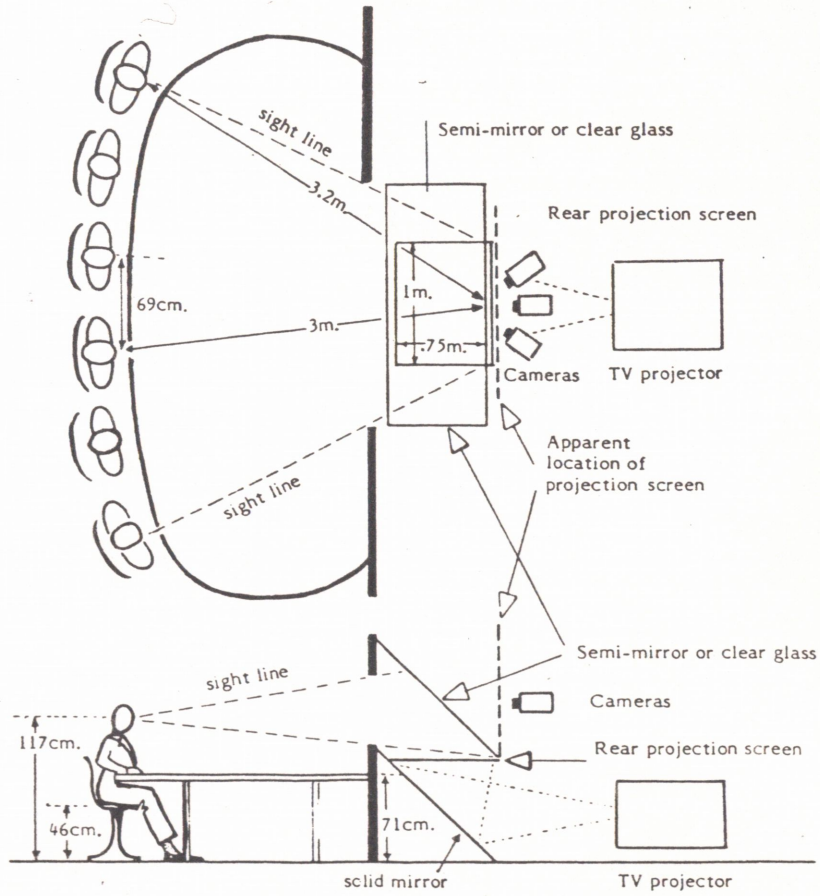
1 Motor Control Unit A
2 Motor Control Unit B
3 Special Effects Unit
4 Misar-Bus
5 Micro-Bus
6 Camera Control Unit A
7 Camera Control Unit B
8 Sync Generator
9 Interface Panel
10 Optical Blocks A & B
11 Cameras A & B

TELE-CONFERENCING

TABLE 3 Hall's Zones of Communication P. 183

Zones	*Estimates*	*Metric Approximations**	*Characteristic Behavior (of Americans)*
Intimate distance			
near phase	touching to 6 inches	touching to 15 centimeters	Conversation tends to be in whispers.
far phase	to 18 inches	to .5 meters	
Personal distance			
near phase	18 inches to 2.5 feet	.5 meters to .75 meters	Reserved for people with whom one has close relationships. Can comfortably discuss subjects of a personal nature.
far phase	to 4 feet	to 1.25 meters	
Social distance			
near phase	4 feet to 7 feet	1.25 meters to 2.25 meters	For discussing impersonal subjects of a business nature. Relations tend to be more formal. Voice levels rise.
far phase	to 12 feet	to 3.75 meters	
Public distance			
near phase	12 feet to 25 feet	3.75 meters to 7.5 meters	Tendency to project the voice. Formal speech-making. Projection of personality by good communicators.
far phase	to beyond	to beyond	

*In most cases these approximations are to the nearest .25 meters. This makes all conversions within about 6 percent, except for 18 inches, which actually converts to .457 meters. The round figure, .5 meters, is 9.3 percent larger than this. The figure is not used in the accompanying discussion, in any case.



NOTE: Viewing distance = 3 W.

Figure 32: Proposed teleconference system with single large screen. P. 208

P. 246

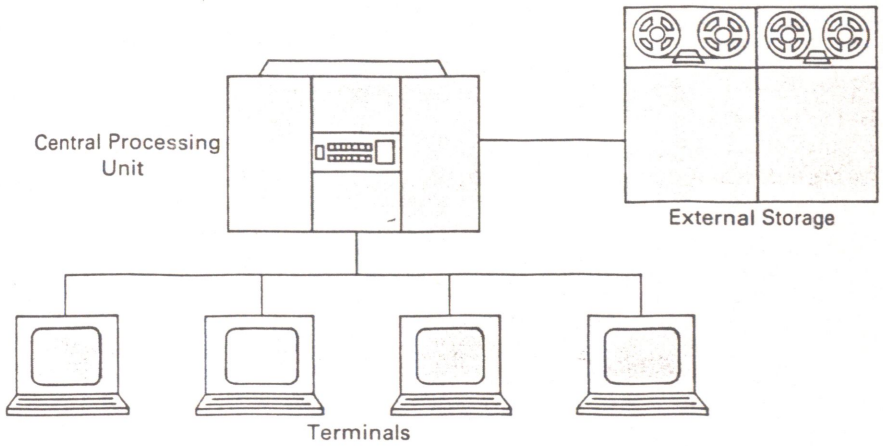




FIGURE 10.14 A maxicomputer

Source: Photograph courtesy of International Business Machines Corporation.

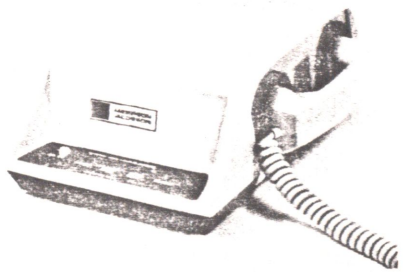


FIGURE 10.15 This modem connects a terminal to a distant computer by phone

Source of photograph: Anderson Jacobson, Inc.

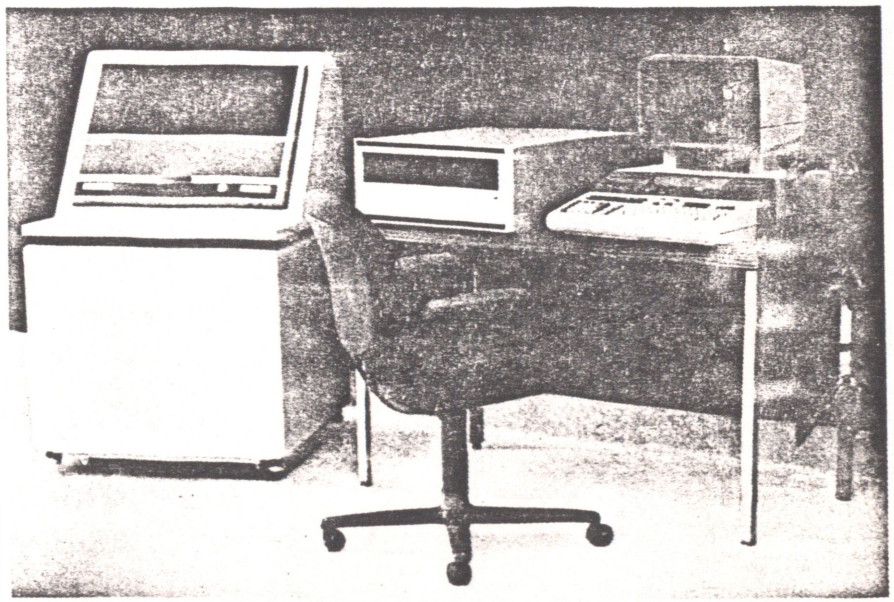
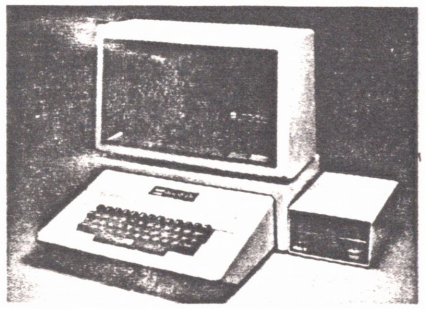
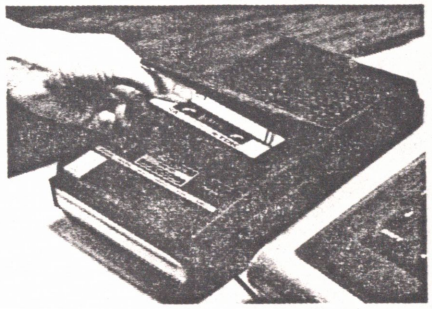
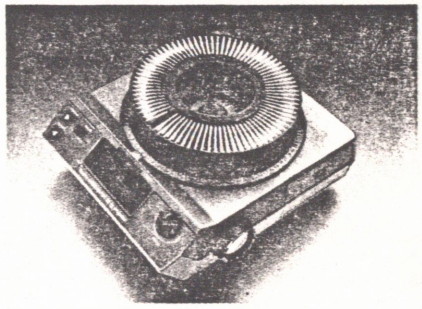


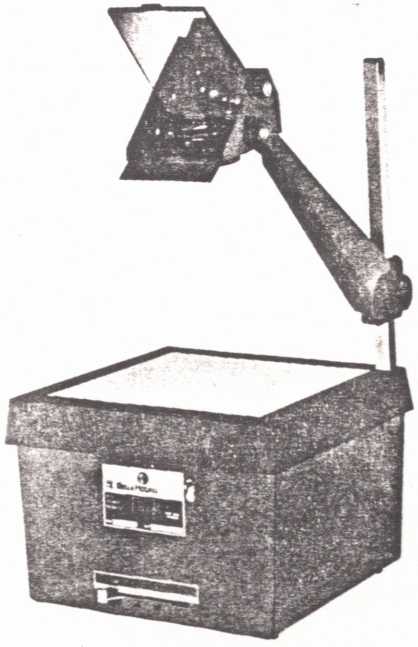
FIGURE 10.16 A minicomputer system

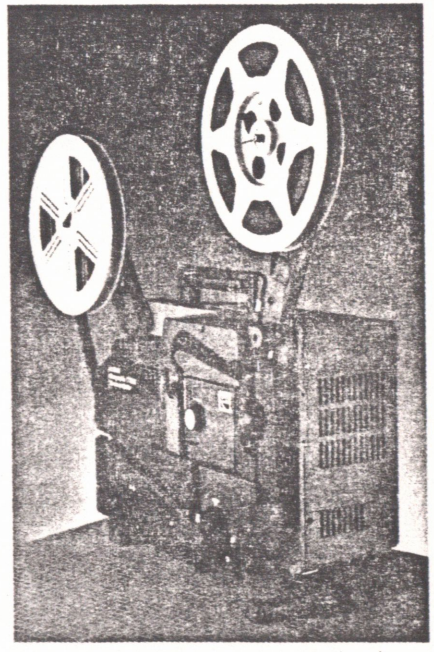
Source of photograph: Courtesy of Hewlett-Packard.

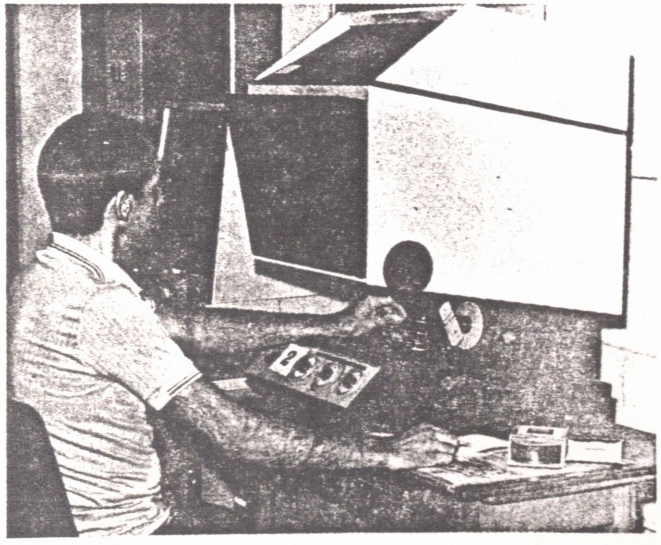












P. 5

A.V. EQUIPMENT

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Architectural Record November 1981, pp. 116-119.

Aspen Institute for Humanistic Studies 1000 North Third Street,
Aspen, Colorado 81611

Architectural Forum v. 138 March 1973 pp. 62-65.

PERSONAL INTERVIEWS

Elizabeth L. Hurley - Administrative officer. Research and Development, M.S.U.

Elmira Smyrl - Professor, Architecture, Architectural Department, M.S.U.

Ray Sperry - Director of Continuing Education, Continuing Education Department, M.S.U.

Tom Nopper - Vice President for University Services Administration, M.S.U.

Lewy Evans - Board of Regents, Montana University System, Helena, Montana.

Ed Groenhout - Dean of Arts and Architecture, Administration, M.S.U.

Frank Quinn - Manager, Holter Lake Dam. (235-4250).

Glenn Black - Program Manager, Continuing Education, M.S.U., Bozeman, Montana.

Grace France - Media Services, 422 Reid Hall, M.S.U., Bozeman, Montana.

CORRESPONDENCE INTERVIEWS

Diane Brittenham - Lake Wilderness Conference Center, University of Washington DW-50, Seattle, Washington 98195.

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