

SMOKEJUMPER BASE

MCCALL, IDAHO



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A SMOKEJUMPER BASE

MCCALL, IDAHO

by

SALLY JO WEYERS

A professional paper submitted in partial fulfillment
of the requirements for the degree

of

BACHELOR OF ARCHITECTURE

Approved:

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MONTANA STATE UNIVERSITY

Bozeman, Montana

December 10, 1984

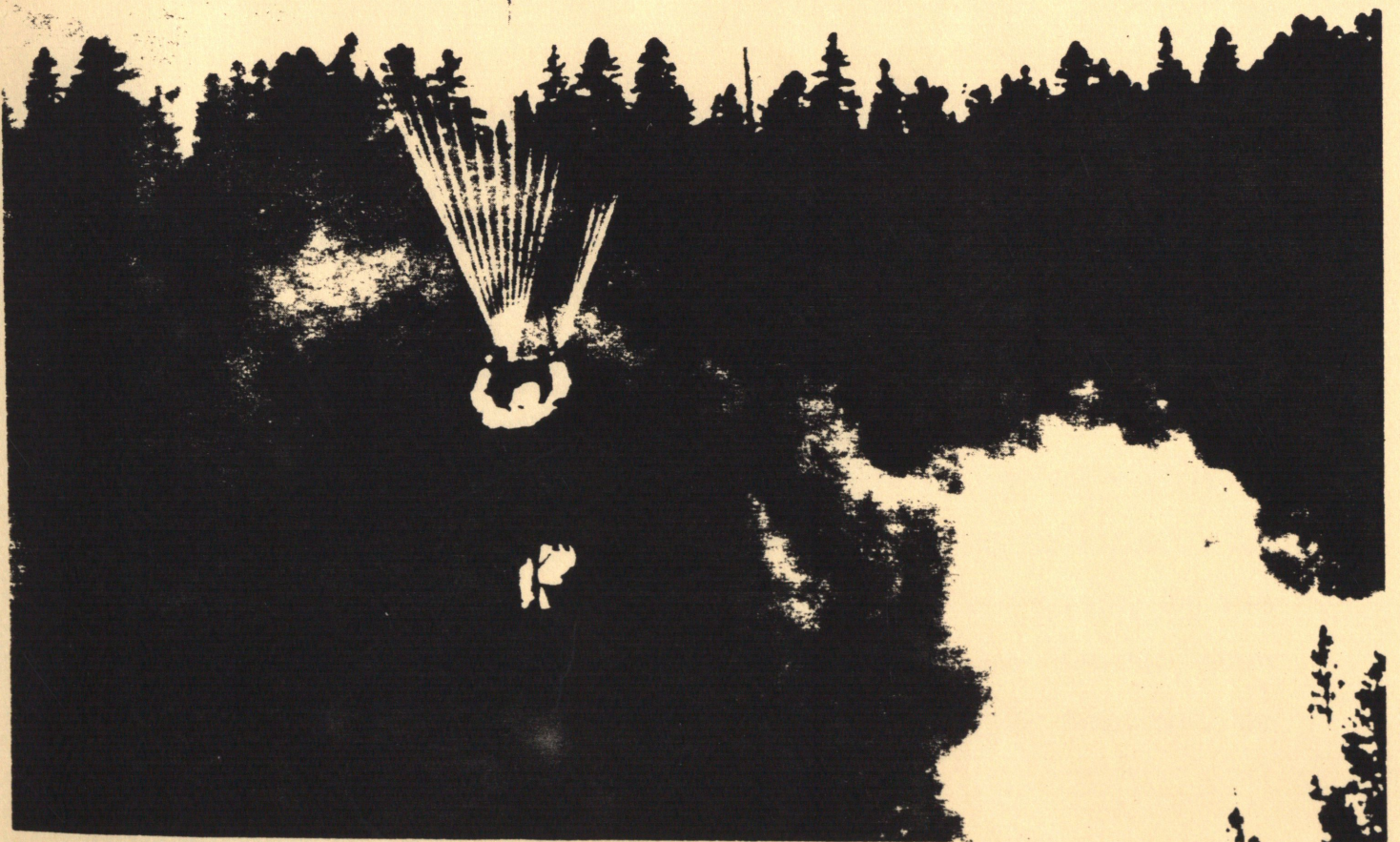
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ABSTRACT

The main idea behind this thesis was to study the needs of smokejumpers which relate to their role in modern day Fire Management, and to provide them with a facility to support their functions.

Research began by visiting the present Smokejumper Base in McCall, Idaho, to determine if the facilities were adequate. After studying the situation and reviewing the feasibility study, which the Payette National Forest had completed in 1982, it was determined that a new base was needed.

The next step of the research was to determine what type of facility was needed to sustain the smokejumper program in the most efficient way. I used the Aerial Fire Depot in Missoula, Montana as a main case study and contacted people from all levels within the smokejumper organization. One of the major drawbacks of the existing facility in McCall is that only a portion of the operation is located at the airport, in contrast to other bases whose entire complexes are established directly at the airport, which is more efficient. The number of smokejumpers employed by the McCall base has increased to exceed its design capacity. There was also a need for more administrative space. Other bases have their fire dispatchers located in the same building as the smokejumpers, which aides in the communication between the two organizations.

By combining the various functions within the base into one facility at the airport, the McCall Smokejumper Operations could act more readily and reduce conflicts. The design of the new base which I am proposing includes the change in location, the increased program and several other improvements. The ideal smokejumper base interrelates the functions, the people, and the site into one unification.

INTRODUCTION

According to the Payette National Forest Service, the National Smokejumper Study conducted by the Washington Office of Aviation and Fire Management in 1980 identified McCall, Idaho as one of four primary smokejumper bases located in the western United States. Subsequent studies have confirmed that McCall is an optimum location and recent management decisions have increased the staffing level at McCall from 60 to 100 personnel to provide adequate smokejumper capability to geographical areas previously served by the Boise and LaGrande bases for fire protection. These actions have resulted in overcrowded conditions at the existing McCall facilities and a need to expand facilities to accommodate the increase in personnel and additional protection responsibilities.

The Smokejumper program has been a way to preserve and protect a vital resource for almost 50 years. It has remained a strong program due to factors such as the rigorous training, parachute jumping and being a team. The action, thrills and pay are great incentives for those interested persons, but the responsibilities of the job and the tough, grueling work of putting out fires puts the reality back into the job after the romance of jumping out of an airplane is gone.

The rewarding experience of working as a team are heightened by the accomplishment of doing something unique.

THESIS STATEMENT

My Architectural Thesis will be a design proposal for the new Smokejumper Base in McCall, Idaho. The proposal will attempt to respond to the character as well as the functions and activities of the smokejumpers. A search into the history of smokejumping, the functions and activities, and the typical spatial uses will be my main objective in Thesis I. After familiarization of all the integral parts of the smokejumper program, Thesis II will proceed with the actual organization and design of the smokejumper complex, while accommodating the program and being compatible with the context of McCall, Idaho. My goal is to create a complex and image that will portray the smokejumper ideology and uniqueness as well as the individual smokejumper. I hope to create a product (design and documentation) that will aid those seeking information on Architecture in one facet of fire suppression, smokejumping.

THE ARCHITECTURE OF

SPACE STRUCTURE ENCLOSURE

- organizational pattern, relationships, & hierarchy
- spatial definition & image - qualities of form, scale, & proportion surface, shape, edges, & openings:
- light, view, focus, & acoustics

EXPERIENCED THROUGH

MOVEMENT IN SPACE - TIME

- approach & entry
- path configuration & access
- sequence of spaces

ACCOMMODATING A

PROGRAM

- user requirements, needs, & aspirations
- legal restraints
- economic factors
- social/cultural factors
- historic precedents

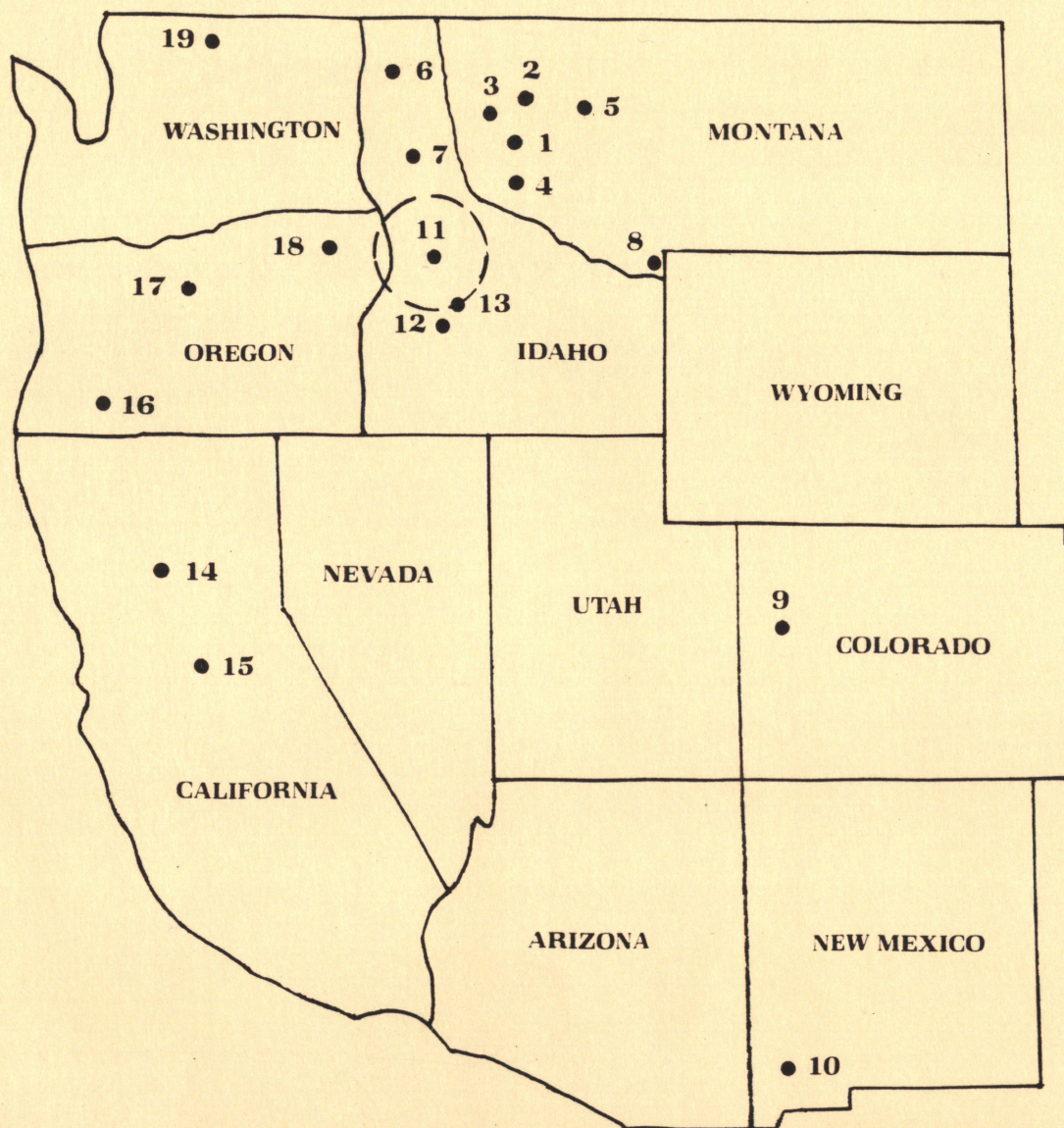
COMPATIBLE WITH ITS

CONTEXT

- site & environment
- climate: sun, wind, temperature, precipitation
- geography: soils, topography, vegetation, water
- sensory: character of the place, views, sound

- Francis D.K. Ching

Smokejumper Bases, 1954-Present



REGION I

1. Missoula
2. Condon
3. Plains
4. Hamilton
5. Lincoln
6. Couer d'Alene
7. Grangeville
8. West Yellowstone

REGION II

9. Grand Junction (BLM)

(C) = Closed

REGION III

10. Silver City

REGION IV

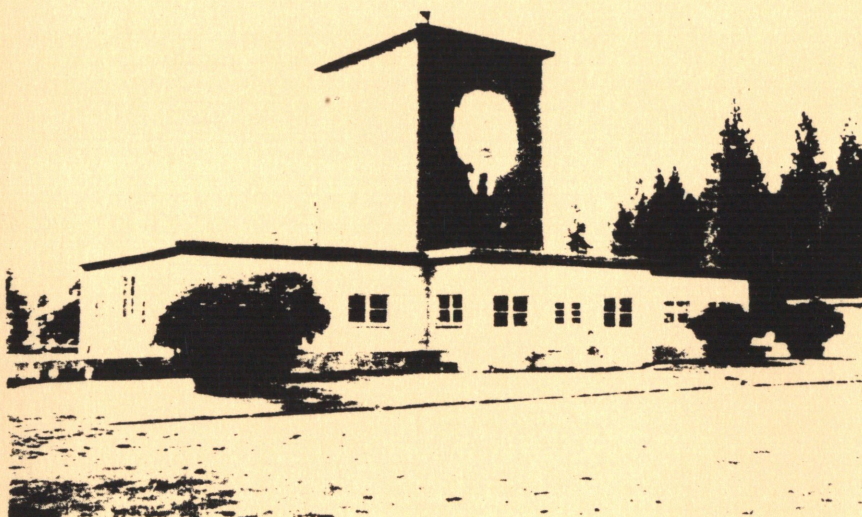
11. McCall
12. Boise (C)
13. Idaho City (C)

REGION V

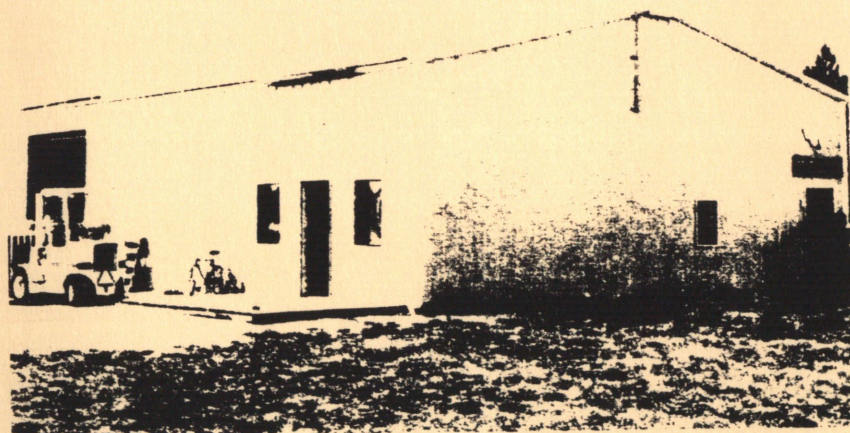
14. Redding
15. Sonora

REGION VI

16. Cave Junction (C)
17. Redmond
18. La Grande (C)
19. Winthrop
- BLM-ALASKA
- FAIRBANKS
- ANCHORAGE (C)



Loft and Administration
building, McCall.



Ready room, McCall airport.



Forest Service DC-3,
McCall airport.

PROGRAM

PROGRAM

FUNCTIONS & ACTIVITIES

FIRE JUMP LIST/PROJECT WORK

The fire jump list consists of all the jumpers names which rotate consecutively with each parachute fire jump. As each jumper returns from a fire their name goes on the bottom of the list and there is no correlation with seniority. The number of jumps a smokejumper makes is contingent on the severity of the fire season that year and can range from 8 to 20 jumps per person.

Project work is assigned to the jumpers when they are not on fires and the position of their name on the fire list determines where they are stationed. If a jumper's name appears close to the top of the list it is highly possible that s/he will be dispatched to a fire at any moment, thus s/he must await dispatch in the Ready Room. While in the Ready Room the jumpers will perform such tasks as: checking in gear returned from fires, packing fire packs, packing cargo chutes, and loading airplanes with fire gear.

Jumpers whose names appear farther down on the fire list may be assigned to the Loft where, if qualified as a parachute rigger, will pack the personal parachutes. To qualify as a rigger, jumpers must pass the FFA examination for parachute rigging. The Forest Service does not train all the jumpers to be riggers, but only those who are seeking a fire career and stability in the job. While in the Loft, if not a qualified rigger, the jumpers can work in the sewing area. Activities may include manufacturing cloth articles for the smokejumpers as well as for the Forest Service, and repairing jump gear and Forest Service gear, such as: canteen covers, shovel covers, backpacks, timber cruisers' vests, jump suits, and personal gear (PG) bags. The jumpers assigned to the Loft may also perform

"lizzarding" tasks for the riggers. Lizzarding involves hanging the parachutes up to dry, straightening out the lines, removing foreign materials (branches, leaves, pinecones), checking for damage (rips, tears, burns, or cut lines), and finally, tag any damage for repair.

For the smokejumpers whose names are even farther down on the fire list they may be assigned to grounds keeping or building maintenance. Others might go to work in the Warehouse sharpening tools, packing food bags, stocking shelves, cleaning fire hoses and painting pulaski and shovel heads.

Other one-day project work, away from the base, consists of brush disposal, tree thinning, picking pine cones for seeds, campground maintenance, and fence building. Overnight project work includes trail maintenance tasks and work similar to one-day project work but is carried out on other districts farther away from the base hence, extensive travel time is required.

FIRE!!

Once a fire is spotted it is reported to the Fire Dispatch. The Fire Dispatch determines the location (down to the half-section), size (estimate of acres), fuel types, rate of spread, wind and weather, and location on slope. Dispatch then decides on the means in which to attack the fire depending upon available resources of man power, size and location of fire, and potential for spread. The means by which the fire can be attacked are: helitack crew or bucket drop, tanker crew with pump trucks, smokejumpers, smokechasers, or aerial drops of fire slurry. If Fire Dispatch decides to send smokejumpers to the fire a call to the Ready Room is made and simultaneously a fire alarm is set off. The adrenaline starts to flow and

the smokejumpers were dispatched to the time they arrived at the fire

the smokejumpers immediately suit up and have in hand their personal gear bag and helmet. In the meantime, the spotter, one of the several foremen who are also on a rotating fire jump list, takes down the information from Fire Dispatch. The number of jumpers needed for the fire will determine the aircraft used. There are three types of airplanes that the Payette National Forest Service uses and they are: the DC-3, which holds 12 jumpers; the Twin Otter, which holds 8 jumpers; and the Beech-99, which holds 6 jumpers. The airplanes are preloaded with the necessary supplies and air cargo. Before the smokejumpers board the airplane, each person is thoroughly checked to assure they are properly geared. The smokejumpers then board the airplane and immediately take off.

Once the Fire Dispatch has notified the Ready Room it takes only 5 to 10 minutes before the airplane load of jumpers is in the air. A smooth flow of the functions and spaces is crucial to the expeditious smokejumpers.

PARACHUTING FROM THE AIRPLANE

When the airplane arrives at the fire spot it circles the area to size up the fire and locate an appropriate jump spot near the fire. The spotter surveys the area while the airplane is circling and gives directions to the jumpers on demobilizing the fire, that is, how the jumpers will leave the fire either by helicopter or packing out.

To determine wind drift, the spotter drops colored streamers. Many streamers may be dropped until the spotter knows when to send the jumpers out from the airplane in relationship to the jump spot. The first jumper on the ground sizes up the fire and will determine any extra equipment or man power needed. (Sometimes the fire has increased a great deal from the time the smokejumpers were dispatched to the time they arrived at the fire

and more persons may be needed to aid in the attack.) After all the jumpers land and regroup they decide upon a plan of attack. When the fire has been put out or has burned out the smokejumpers then demobilize as originally instructed by the spotter.

BACK AT THE BASE

When the smokejumpers arrive back at the base they turn in their gear and fill out time and fire reports. Usually they are then given the remainder of the day off to record their time, clean up and recuperate. The names of the jumpers that have returned are put on the bottom of the fire jump list to wait, inevitably, for their next jump.

FIRE BUST

A firebust occurs when there are extreme dry conditions and a lightning storm passes through the area causing numerous fires simultaneously. All available people are dispatched to these fires. A fire bust can last several weeks, and thus, there is a constant rotation of the jumpers. Returning jumpers are given a few hours of rest and then sent out again.

PROGRAM

SPATIAL REQUIREMENTS

ACTIVITIES WITHIN THE BASE

1. ADMINISTRATION
2. DISPATCH
3. PARACHUTE LOFT
4. AIR CARGO ASSEMBLY AND STORAGE
5. READY ROOM
6. VISITOR'S INFORMATION CENTER
7. CLASSROOM TRAINING
8. DINING
9. WAREHOUSE
10. GARAGE
11. AIRPORT SERVICE BUILDING (PILOTS)
12. BARRACKS
13. PARACHUTE JUMP TRAINING
14. SMOKEJUMPER AIRCRAFT PARKING AND LOADING
15. RETARDANT MIX PLANT AND AIRCRAFT LOADING AND PARKING
16. VEHICULAR CIRCULATION
17. PEDESTRIAN CIRCULATION
18. OUTDOOR RECREATION

I. I.

PARALOFT

ADMINISTRATION

1. Unit Manager	168
2. Training/Operations Foreman	144
3. Parachute Foreman & Fire Foreman	120
4. Project Clerk & Clerk/Typist	600
5. Storage	200
6. Lobby	400
7. Restrooms, mechanical, etc.	700
	2,332 SF

DISPATCH OFFICE

1. Dispatch	960
2. Conference Room	320
3. Radio Equipment Storage Room	100
4. Forms & maps storage room	100
5. Restrooms, mechanical, etc.	400
	1,880 SF

PARACHUTE LOFT

1. Sewing Room - 13 machines 25 SF each	1,444
2. Parachute Drying Tower (46' High min.)	1,250
3. Packing Room - 5- 46' x 3' tables	2,600
4. Parachute Technician/Loft Foreman Office	225
5. Restrooms, mechanical, etc.	492
	6,011 SF

AIR CARGO/RECEIVING ROOM

1. Aerial Delivery Specialist/ Loadmaster Office	393
2. Cargo Area	2,516
3. Restrooms, Mechanical, etc.	233
4. Receiving Room/Storage	2,184
	5,326 SF

READY ROOM

1. Ready Room	1,392
2. Break Room/Conference Room	336
3. Restrooms, Mechanical, etc.	233
4. Outdoor Gathering Area	1,800
	3,761 SF

19,310 SF

II. VISITOR'S INFORMATION CENTER		
1.	Exhibit area/Information	2,000
2.	Restrooms, mechanical, etc.	500
		<u>2,500</u> SF

III. TRAINING/DINING		
1.	Lobby	240
2.	Classrooms	1,000
3.	Storage/Projection	324
4.	Office and Study	400
5.	Therapy and Toilet	256
6.	Weight Room	480
7.	Kitchen Preparation/Receiving	1,700
8.	Kitchen Office	220
9.	Dining	1,500
10.	Restrooms, mechanical, etc.	340
		<u>6,460</u> SF

IV. WAREHOUSE/GARAGE		
1.	Warehouse	2,676
2.	Shops -2	504
3.	Office	144
4.	Garage shop area	344
5.	Enclosed parking	1,296
6.	Restrooms, mechanical, etc.	128
7.	Dock	660
		<u>5,692</u> SF

V. AIRPORT SERVICE BUILDING (PILOTS)		
1.	Storage/Workshop	1,444
2.	Pilot Office/Standby	300
3.	Aerial Tanker Administration Office	300
4.	Restrooms, mechanical, etc.	144
		<u>2,188</u> SF

VI. BARRACKS		
1.	28, 2-person rooms (12' x 14')	4,705
2.	4, 1-person rooms (12' x 14')	672
3.	Recreation Room	800
4.	T.V. Room	340
5.	Bathrooms	960
6.	Laundry	260
7.	Mechanical, storage, etc.	1,800
		<u>9,537</u> SF

VIII. PARACHUTE JUMP TRAINING AREA

1. Ft. Benning-type aircraft exit tower 115' x 405' = 46,575 SF
2. Timber letdown training tower 30' x 30' = 900 SF
3. A-Frame landing simulator 35' x 146' = 4,818 SF
4. Three each aircraft mockups: DC-3, Twin Otter and Beech-99, 20' x 60' = 1,200 SF each x 3 = 3,600 SF
5. Obstacle course (3.03 acres) 550' x 240' = 132,000 SF

VIV. SMOKEJUMPER AIRCRAFT PARKING AND LOADING AREA

1. Paved area for aircraft parking and taxiing. (Sufficient area for up to five DC-3 and Twin Otter size aircraft.) 250' x 500' = 125,000 SF
2. Ramp area to be located adjacent to administration building for easy access from Ready Room and cargo area.
3. Concrete aircraft maintenance ramp with drains 100' x 50' = 5,000 SF
(to be located near the aircraft service building)

X. RETARDANT MIX PLANT AND AIRCRAFT LOADING AND PARKING AREA

1. Retardant aircraft parking and loading 300' x 500' = 150,000 SF
(sufficient paved area for up to five PB4Y-2 and "Baby" DC-6 retardant aircraft.)
2. Turnoffs from main taxiway to aircraft ramp area to be a minimum of 75' wide.
3. Concrete pads located on each side of retardant mix plant 100' x 50' = 5,000 SF
4. Retardant mixing and loading plant to be centrally located on northern end of ramp area, oriented so that retardant aircraft when parked for loading are on each side of mixing plant facing north.

5. Concrete loading pads are to be situated on each side of mixing plant with adequate wing clearance (approx. 150') between mix plant and property fencing.
6. Mixing plant and loading pads to be located sufficient distance from northernmost property boundaries to provide adequate wing clearance for retardant aircraft maneuvering from loading area to taxiway (wing clearance for PB4Y-2 and CD-6 is approximately 150 feet).
7. Entire area of retardant mixing plant to be concrete surface.
8. Requires footings to support one 13,000 gallon water tank, two 10,000 gallon retardant holding tanks and one 2,000 gallon off-load tank.
9. Requires 10' x 12' framed structure located above tanks for mixmaster's office with 360 degree visibility of retardant aircraft parking and loading area.

GENERAL REQUIREMENTS FOR PARALOFT BY THE FOREST SERVICE

A. General. The primary objective will be to provide buildings which are convenient, functional, and are designed for an efficient base operation. The buildings should be functional in structure and sympathetic to the natural setting of the area. The design should be sensitive to the native land forms around the facility and the architectural style of the community.

Building entrance and egress will be coordinated with the parking areas, pathways, etc. The entrance to the building will provide a major focus and invitation to the visitor to participate in the indoor activities. The major view of the building will be from the north as visitors approach on Caldwell Street.

Access for the handicapped will be provided by pathways and ramps to the main entrance of the paraloft building. The administration portion of the paraloft building shall be designed so that additions, if required in the future, could be built economically and yet provide a functional and attractive building.

B. Architectural

1. Within the reception area of the paraloft, it is desired to have an open, airy and inviting atmosphere. The office and administrative portions of the paraloft should be light and conducive to good office procedures. The barracks should provide for a comfortable, relaxing and clean living environment.

2. The buildings will represent the use of wood and wood products where possible. The design shall include the use of wood where it is an equivalent or superior construction material. Use of other materials shall occur where they are clearly better suited to meet the requirements of maintenance, performance, durability, & aesthetics.

3. Synthetic material carpeting shall be installed for purposes of sound control, ease of maintenance, durability, and long-range, low cost considerations in all areas except those identified in specific requirements. Impervious materials of the ceramic type will be used in the toilet and shower areas at both walls and floors.

4. Conference rooms, equipment storage rooms, storage areas, classrooms, parachute drying tower, parachute rigging room, projection room and restrooms are not necessarily required to have windows. Adequate mechanical ventilation must be provided for these rooms.

5. Following is the required insulation values for the building:

Ceilings	-	R-38
Walls	-	R-19
Windows	-	R- 2
Floors	-	R-22

C. Structural Design Loads

Floor Live Loads - Comply with requirements of Uniform Building Code.

Roof Live Load - 120 pounds per square foot.

Wind Load - 20 pounds per square foot.

Earthquake Forces - Design building to resist forces in Seismic Zone 2.

a. Equipment Manufacturing Area Requirements:

1. Capacity for 12 commercial sewing machines with a minimum of 25 sq. ft. working area for 12 of the machines and 35 sq. ft. working area for 12 machines.
(Minimum space required: 335 sq. ft.)

2. Capacity for fabric cut-out tables. Work space required:
24' x 16' area = 384 sq. ft.

3. Capacity for a 32" x 30' work bench and webbing cut-out area and also drawers and cabinets for sewing machine parts and miscellaneous tools. (Minimum space required: 82.5 sq. ft.)

PAYETTE NATIONAL FOREST SERVICE
Requirements for Loft & Ready Room/Cargo

1. Parachute Drying Tower Requirement:

- a. Capacity for hanging 36-40 parachutes with 5 feet spacing between suspension points.
- b. Drying system and mechanical systems for raising and lowering parachutes.
- c. A minimum height of 46 feet for parachute hanging.
- d. Be able to be completely closed off.
- e. Drying tower must be accessible to receiving area, parachute rigging area and repair room.
- f. Heating for this room in winter months is 40 degrees to 50 degrees F.

2. Parachute Rigging Room Requirements:

- a. Capacity for 5 each 46' x 3' packing tables with 5' spacing between each table and from outer wall.
- b. A minimum of 4 feet clearance at each end of packing tables.
- c. 4-foot depth by width of rigging room shelving space for 350-400 packed parachutes.
- d. Shelving area needs to be accessible to ready room.
- c. Capability to be closed off in winter months with a required heating between 40 degrees to 50 degrees F.

3. Parachute Repair and Equipment Manufacturing Room:

- a. Equipment Manufacturing Area Requirements:
 1. Capacity for 13 commercial sewing machines with a minimum of 25 sq. ft. working area for 12 of the machines and 35 sq. ft. working area for one machine.
(Minimum space required: 335 sq. ft.)
 2. Capacity for fabric cut-out tables. Work space required:
14' x 16' area = 224 sq. ft.
 3. Capacity for a 32" x 30' work bench and webbing cut-out area and also drawers and cabinets for sewing machine parts and miscellaneous tools. (Minimum space required: 82.5 sq. ft.)

4. Capacity for 2 each multi-purpose snap fastener attaching presses, 4' x 5' each. (Minimum space required: 40 sq. ft.)
- b. Parachute Repair Area Requirements:
 1. Capacity for 2 each parachute repair tables. 22' x 11' working area required for each - 484 sq. ft.
 2. Capacity for 4 each sewing machines. 25 sq. ft. working area required for each = 100 sq. ft.
- c. Materials and Parachute Hardware Storage Area Requirements:
 1. Storage of canvas and nylon fabric, webbing and tapes, thread, fire clothing and miscellaneous smokejumper equipment.
 2. Located adjacent to parachute repair and equipment manufacturing room.

4. **Ready Room Requirements:**

- a. Capacity for storage bins for a minimum of 80 sets of smokejumper gear. Minimum shelving area required 6'6" x 30' = 195 sq. ft.
- b. Capacity for suit-up area and "speed racks" for a minimum of 40 jumpers. Space required: 8' x 40' = 320 sq. ft.
- c. Capacity for radios, maps and spotter equipment storage area. Storage area required: 4' x 12' = 48 sq. ft.
- d. To be located adjacent to air cargo assembly and storage areas and Loadmaster standby office.

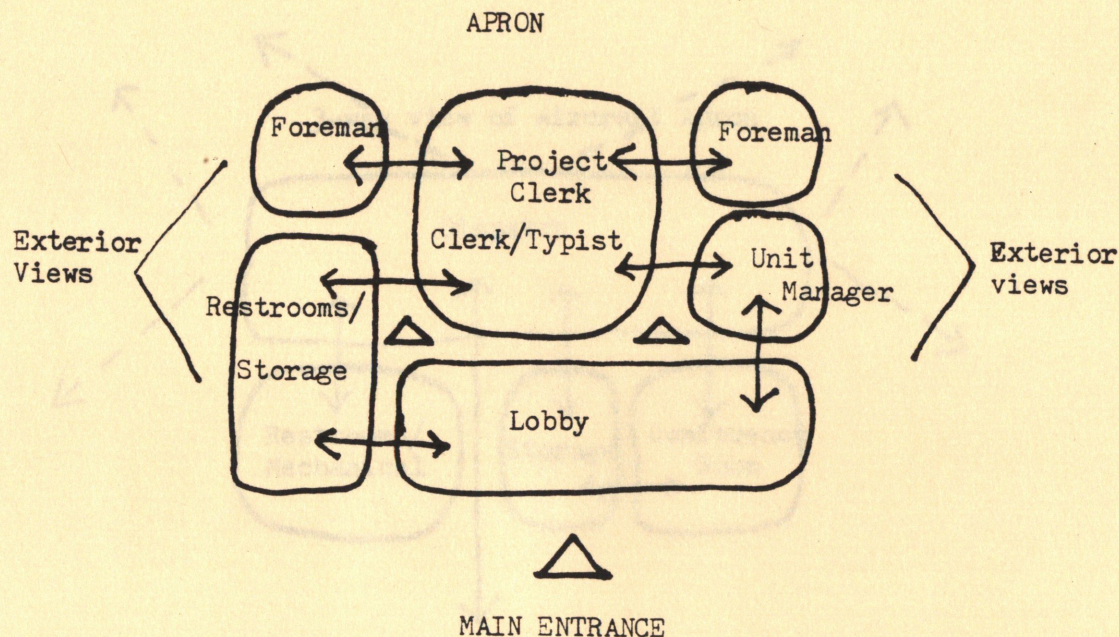
5. **Air Cargo Assembly and Storage Area Requirements:**

- a. Capacity for storage of 75 assembled firepacks and stacking of supplies and tools for an additional 25 firepacks. Area required: 385 sq. ft.
- b. Capacity for storage of approximately 250-300, 20' cargo chutes. Area required: 4' wide x 4' long x 8' tall = 16 sq. ft.
- c. Capacity for shelving for necessary fire equipment for smokejumper operations (chain saws, climbers, crosscut saws, etc.). Area required: 4' wide x 56' long x 12' tall = 224 sq. ft.
- d. Sufficient area required to maneuver fork lift in air cargo assembly and storage area. Area required: 16' x 56' = 896 sq. ft.
- e. Storage area for extra jump gear, parachute harnesses, helmets, fire protective clothing, etc., and commercial washing machine and dryer. Area required: 385 sq. ft.

- f. To be located adjacent to receiving area and ready room.
- g. Requires a 16' x 12' overhead door that is flush with the outside ground level.

6. **Receiving Area Requirements:**

- a. Capacity for temporary storage of returning fire and smokejumper equipment to be properly checked in and distributed to reconditioning and repair areas.
- b. To be located adjacent to parachute drying tower and air cargo assembly and storage area.
- c. Requires a 16' x 12' overhead door that is flush with outside ground level.



ZONE: Paraloft

SPACE: Administration

SQ. FOOTAGE: 2,332 SF

FUNCTION: Facilitate office personnel and overhead, social and business gatherings, main entrance, year round use.

USERS: Administration include:

- Unit Manager (near receptionist/lobby)
- Training/Operations Foreman (near Ready Room)
- Parachute Training Foreman and Fire Training Foreman (two positions in one office)
- Project Clerk and Clerk/Typist (two positions in one office)
- Lobby and Receptionist (lobby must be located at the main entrance and have a receptionist desk conveniently located for assistance to the public)

ATMOSPHERE: Functional, controlled

ADJACENCY: Visitor's Center, Training, Ready Room Loft

ACOUSTICS: Mid-range

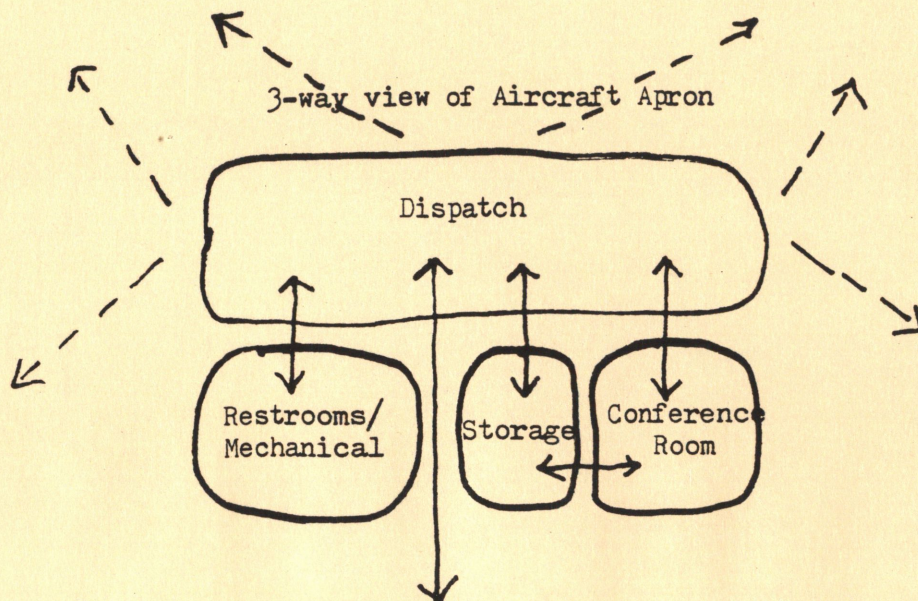
ILLUMINATION: Task, southern exposure

MECHANICAL: Controlled

VIEW: South

ACTIVITY: Active

ACCESSABILITY: Public/Private



ZONE: Paraloft

SPACE: Dispatch

SQ. FOOTAGE: 1,880 SF

FUNCTION: Dispatchers receive fire calls, plot locale of fire and determine means of attack. Seasonal personal

USERS: Three dispatchers full time and up to seven during peak fire periods. Requires 3-direction visibility of airport runway and aircraft approach and departure patterns, shaded windows, and 10' high walls.

ATMOSPHERE: Functional, controlled

ADJACENCY: Aircraft ramp and runway

ACOUSTICS: Mid-range

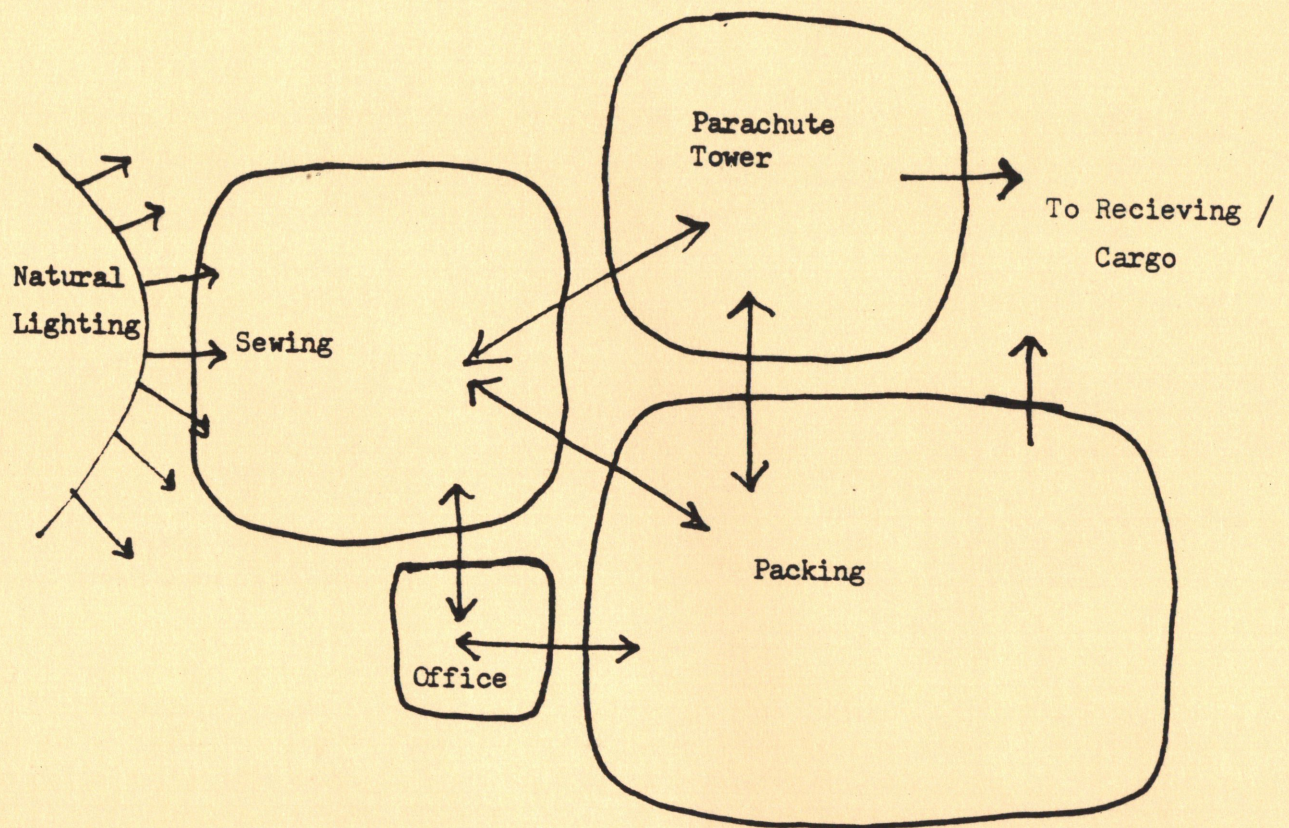
ILLUMINATION: Controlled Task

MECHANICAL: Controlled

VIEW: North, south, east

ACTIVITY: Active/Passive

ACCESSABILITY: Private



ZONE: Paraloft

SPACE: Parachute Loft

SQ. FOOTAGE: 6,011 SF

FUNCTION: Facilitate Parachute Drying Tower, Parachute Rigging Room, Parachute Repair and Equipment Manufacturing Room, and Materials and Parachute Hardware Storage.

USERS: Parachute Technician, Loft Foreman (two positions in one office located where sewing room and parachute packing area can be observed) Smokejumpers on project work lizzarding, packing or repairing chutes, and manufacturing equipment.

ATMOSPHERE: Functional

ADJACENCY: Receiving, Cargo, Ready Room

ACOUSTICS: Loud

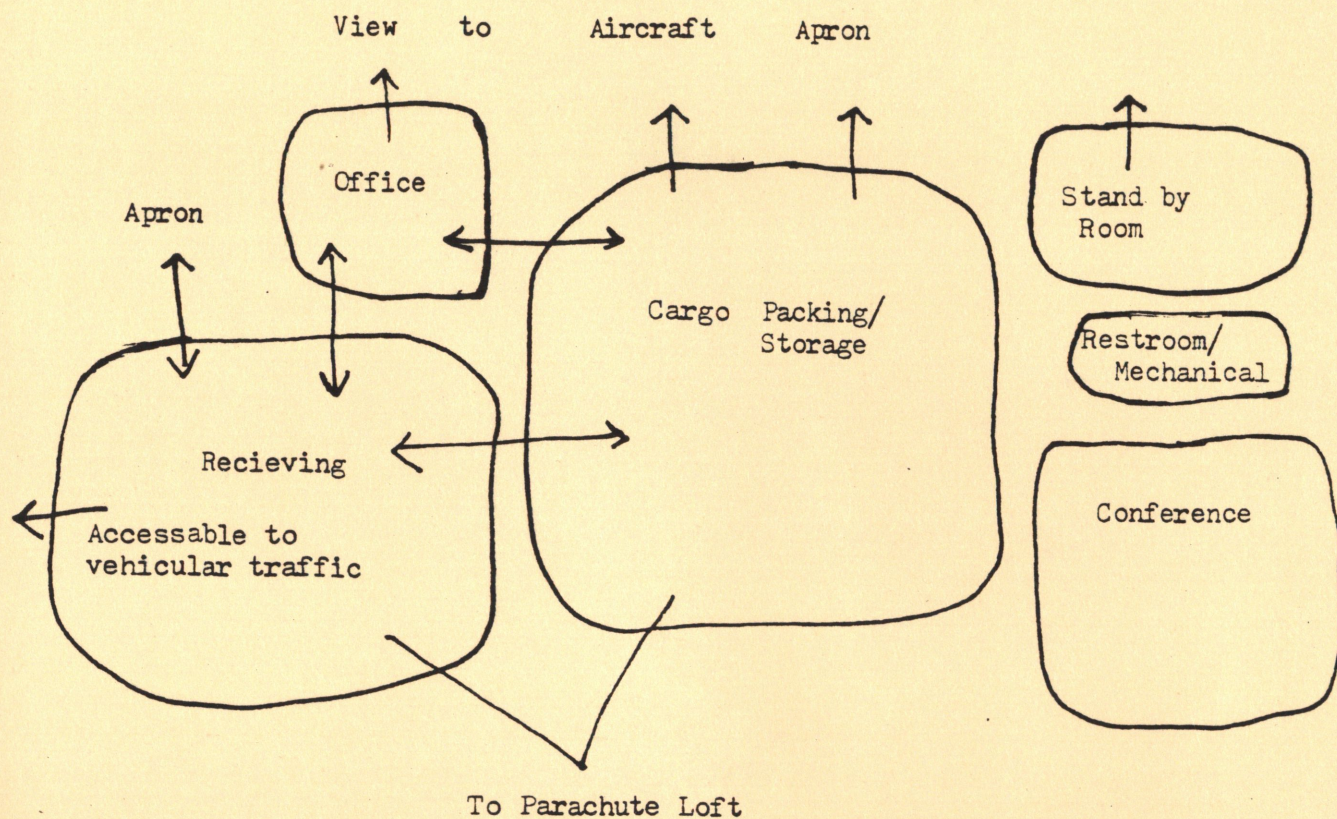
ILLUMINATION: Task

MECHANICAL: Controlled/Natural

VIEW: None required

ACTIVITY: Active

ACCESSABILITY: Public/Private



ZONE: Paraloft

SPACE: Air Cargo/Recieving/Ready Room

SQ. FOOTAGE: 9,087 SF

FUNCTION: Incoming used fire gear is sorted, repaired and packed for aerial cargo drops. Smokejumpers standby for immediate dispatch.

USERS: Aerial Delivery Specialist and Loadmaster (one office space)
Smokejumpers on project work sorting, repairing and packing aerial cargo. First 12 jumpers on fire jump list are on standby for fire dispatch.

ATMOSPHERE: Functional

ADJACENCY: Parachute loft area, Aircraft apron, warehouse

ACOUSTICS: Loud

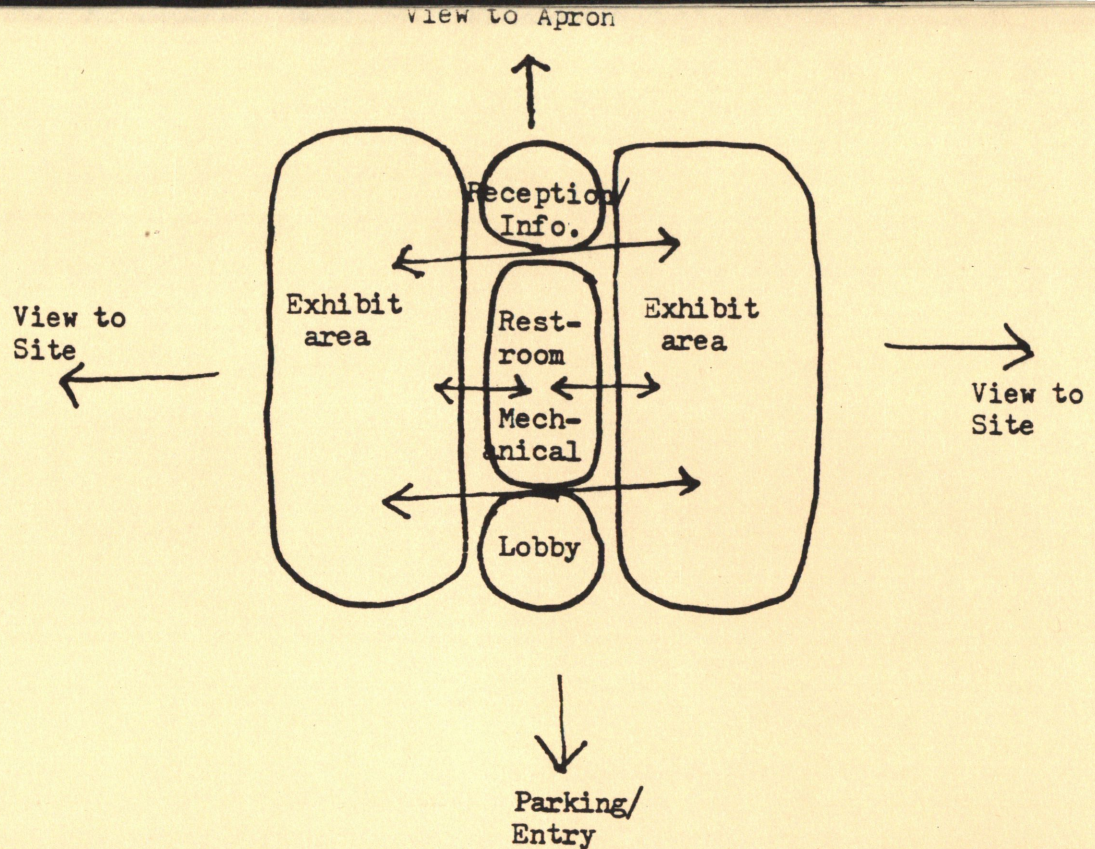
ILLUMINATION: General

MECHANICAL: Natural

VIEW: East

ACTIVITY: Active

ACCESSABILITY: Public/Private



ZONE: Visitor's Information Center

SQ. FOOTAGE: 2,500 SF

FUNCTION: Serves as an information center with display-exhibit area, public information counter, bathrooms, seasonal use only. Open during working hours, Monday thru Friday.

USERS: Smokejumpers detailed on project work will/can give information, directions and tours of complex. General public, civic groups, tour groups, school system.

ATMOSPHERE: Social, Controlled

ADJACENCY: Parking, Administration

ACOUSTICS: Loud to mid-range

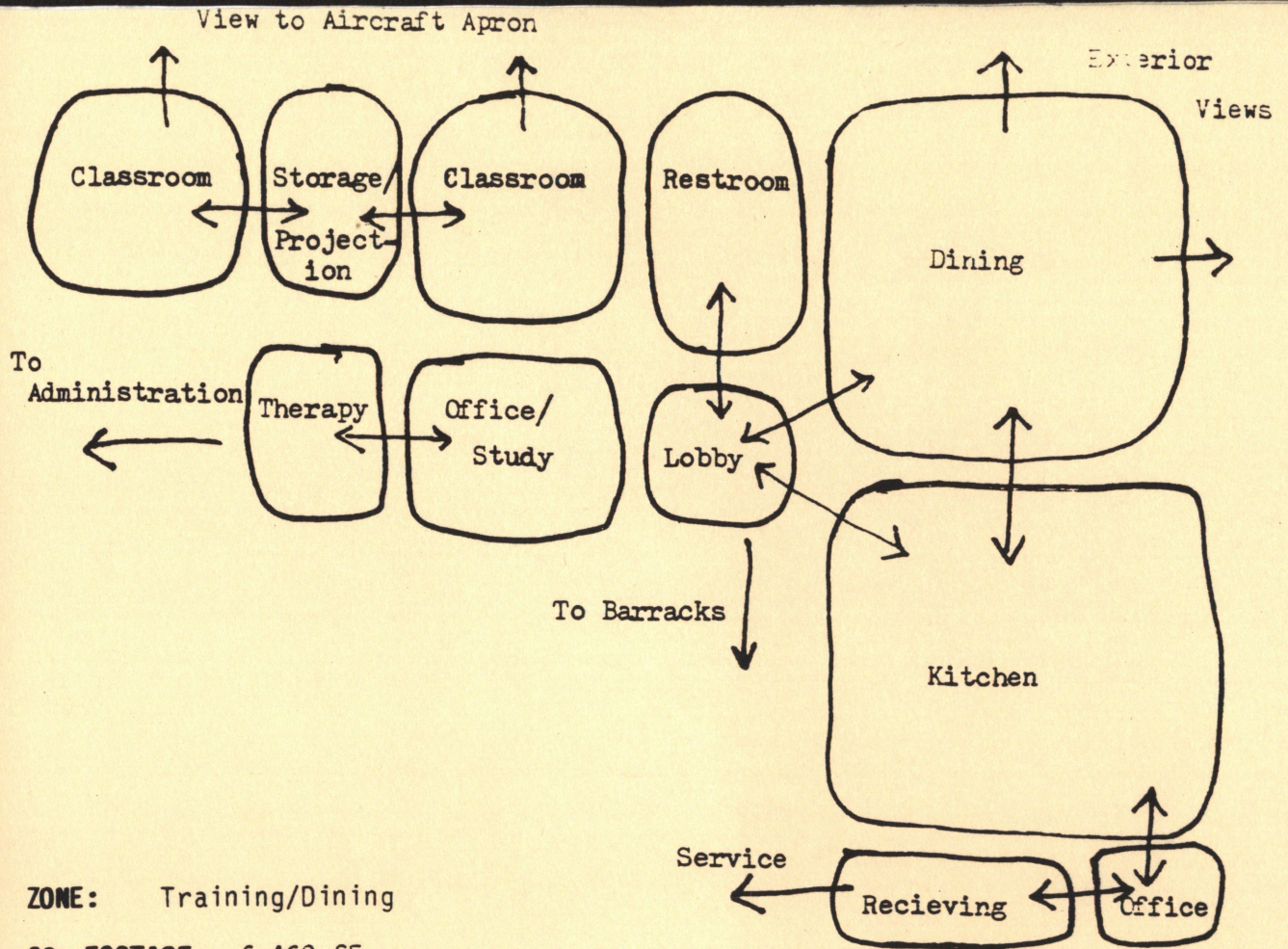
ILLUMINATION: General, special

MECHANICAL: Controlled

VIEW: Entire base and aircraft ramp

ACTIVITY: Active

ACCESSABILITY: Public



ZONE: Training/Dining

SQ. FOOTAGE: 6,460 SF

FUNCTION: Kitchen facilities with cafeteria service, dining area with seating for 100, training classrooms, office, therapy room, weight room, lobby.

USERS: Smokejumpers in training for classroom training and therapy use.
Overhead personnel to instruct and rehabilitate injured.
Forest Service personnel

ATMOSPHERE: Social, controlled

ADJACENCY: Barracks, parking, Paraloft, service.

ACOUSTICS: Quiet - Loud

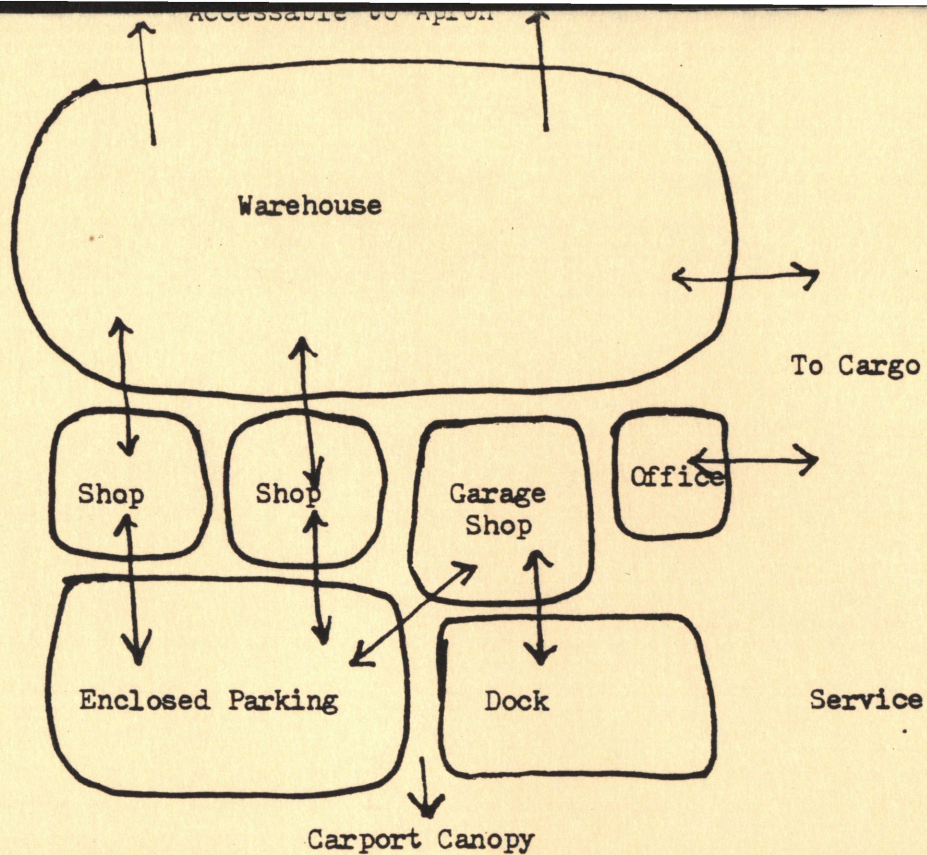
ILLUMINATION: Task, general

MECHANICAL: Controlled

VIEW: South, airport ramp

ACTIVITY: Active/passive

ACCESSABILITY: Public



ZONE: Warehouse/Garage

SQ. FOOTAGE: 5,692 SF

FUNCTION: Warehouse space for cargo and equipment, tool storage, workshop, maintenance, enclosed garage, offices, restroom, dock.

USERS: Forest Service Mechanics - smokejumpers on project work, servicepersons.

ATMOSPHERE: Controlled

ADJACENCY: Airport ramp-cargo area, receiving, service, aircraft service building.

ACOUSTICS: Loud

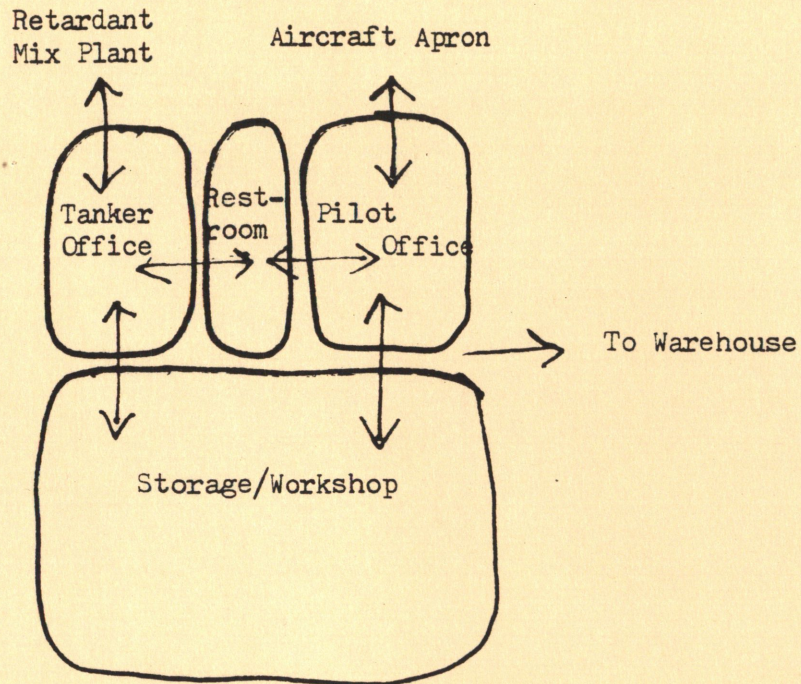
ILLUMINATION: Task, Security

MECHANICAL: Natural

VIEW: West-aircraft ramp

ACTIVITY: Active

ACCESSABILITY: Private



ZONE: Aircraft Service Building (Pilots)

SQ. FOOTAGE: 2,988 SF

FUNCTION: Aircraft maintenance, parts storage, pilot's office, aerial tanker administration.

USERS: Forest Service - pilots, airplane mechanics

ATMOSPHERE: Controlled

ADJACENCY: Retardant storage, apron, warehouse, parking

ACOUSTICS: Mid-range

ILLUMINATION: Task, security

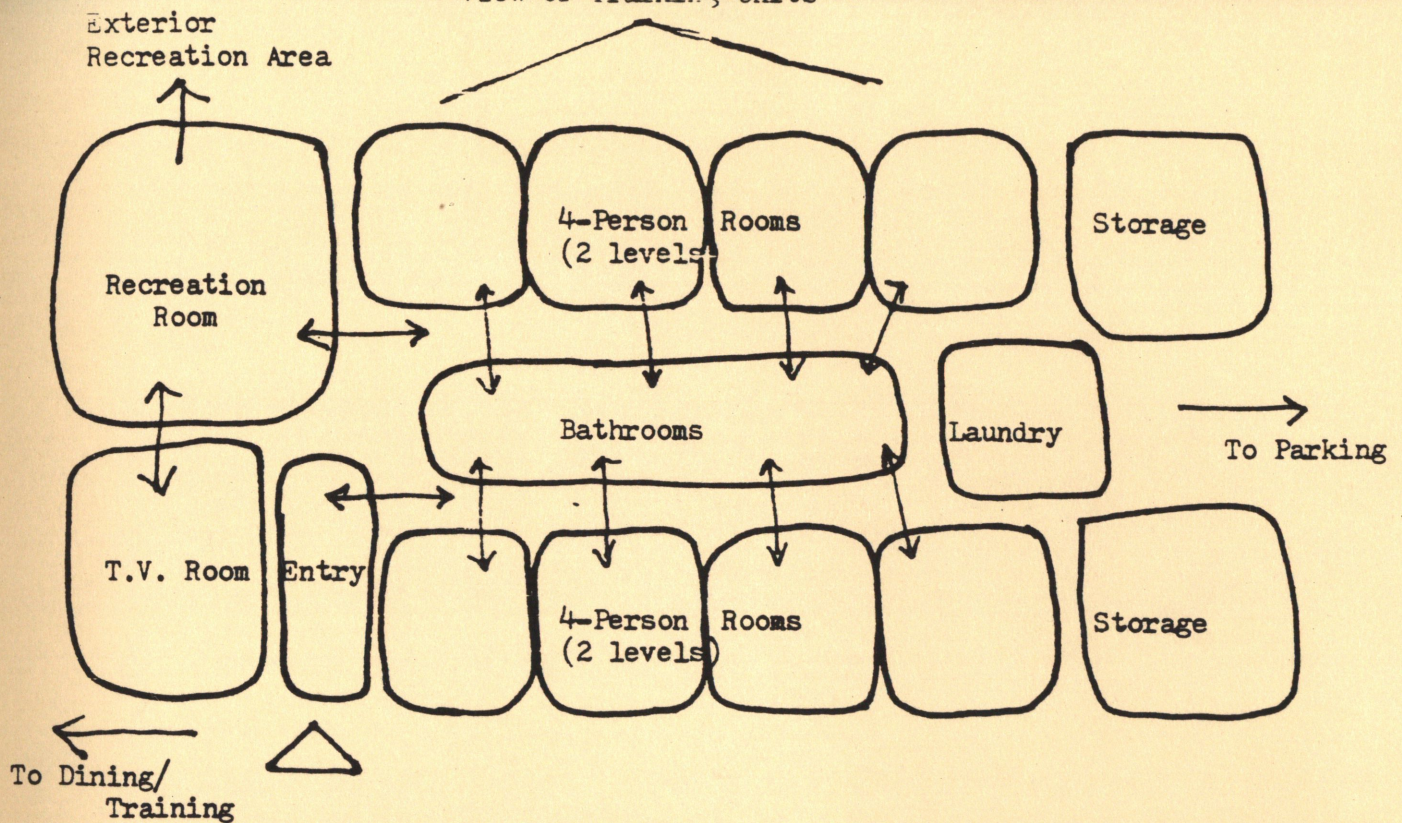
MECHANICAL: Controlled/Natural

VIEW: Runway

ACTIVITY: Active

ACCESSABILITY: Private

View of Training Units



ZONE: Barracks

SQ. FOOTAGE: 9,537 SF

FUNCTION: 28, 2-person rooms, 4, 1-person rooms, Bathrooms, laundry, recreation room, T.V. room, storage, mechanical.

USERS: McCall Smokejumpers - possibly detailed smokejumpers from other regions.

ATMOSPHERE: Controlled, social

ADJACENCY: Parking, training, dining, training field.

ACOUSTICS: Quiet

ILLUMINATION: General, southern exposure

MECHANICAL: Controlled

VIEW: South, North

ACTIVITY: Passive

ACCESSABILITY: Private

AIRCRAFT OPERATIONAL REQUIREMENTS - by McCall Smokejumper Feasibility Study

Fire retardant and smokejumper operations are two major components of the U.S. Forest Service complex at McCall Airport. Related activities include the dispatching/communications center, fire detection flying, leadplane aircraft flying and occasionally the Helitac operation, which is not a permanent McCall-based activity. Tanker aircraft which deliver fire retardant generally make the greatest demand on airfield facilities. The dimensional and weight bearing capabilities of existing runways, taxiways, and apron impose some restrictions on tanker operation but are generally adequate for the smokejumper aircraft.

The primary aircraft used for the smokejumper facility at McCall are the DC-3, Twin Otter and Beech 99. They are all twin-engine propeller aircraft that have gross takeoff weights ranging from 26,900 pounds for the DC-3 to 10,400 pounds for the Beechcraft 99. Takeoff distances for these aircraft are less than the existing runway length of 5,002 feet. Dimensions of existing airfield facilities are also adequate for the smokejumper aircraft.

The Douglas DC-3 was designed and built during the World War II period. The Forest Service would like to replace this aging aircraft, but at present there is no available similar size economical replacement. The Twin Otter and Beech 99 are proving to be adequate for many smokejumper missions but the large smokejumper capacity of the DC-3 is frequently needed.

Smokejumper Aircraft Dimensional And Operational Data

<u>Aircraft</u>	<u>Wingspan</u>	<u>Length</u>	<u>Max. T.O. Weight</u>
DC-3	95'9"	64'6"	26,900 lbs.
C-7 Caribou	95'7"	72'7"	28,500 lbs.
Twin Otter	65'0"	51'9"	12,500 lbs.
Beech 99	45'11"	44'7"	10,400 lbs.

Source: FAA Advisory Circular AC 150/5325-5B

The larger tankers used by the Forest Service at McCall are classed as general transport aircraft. However, the McCall Airport is identified in the National Airport System Plan and the McCall Airport Master Plan as a utility airport with a future transition to general utility. Apparently the existing and forecast Forest Service activity was not considered to be adequate to justify planning for a transport level airport in the future.

Dimensional and Clearance Standards General Utility and General Transport Airports

<u>Item</u>	<u>General Utility</u>	<u>General Transport</u>
Runway Width	75'	100'
Taxiway Width	40'	50'
Runway C/L to Taxiway C/L	200'	300'
Runway C/L to Aircraft Parking	250'	425'
Taxiway C/L to Aircraft Parking	50'	100'

Sources: FAA Advisory Circular AC 150/5300-4B Utility Airports, 1975 and
FAA Advisory Circular AC 150/5300-6A Airport Design Standards
General Aviation Airports, Basic and General Transport, 1981.

The McCall Airport Master Plan recommends a number of improvements for the airfield and terminal area. Major proposed improvements include a 1,090 foot southerly extension to the runway, a full parallel taxiway for the runway, navigational aids, paved automobile parking, an overlay on the runway and security fencing.

PROGRAM

HISTORIC

PRECEDENTS

Some say the world will end in fire,
Some say ice.
From what I've tasted of desire
I hold with those who favor fire.....

- Robert Frost, "Fire and Ice"

NATIONAL AWARENESS

The Northern Rockies fires of 1910 left a burning swath across the memory of a generation of foresters, not unlike the Great War on the intellectual class of Western civilization.¹ In the summer of 1910, 5 million acres of national forest burned with 3 million acres being in Montana and Idaho. There were a series of 1,736 fires that ravaged those 3 million acres and killed 85 people. The national forests were undermanned and underequipped to deal with the abnormally low amounts of precipitation and soaring, high temperatures. The holocaust of 1910 gave fire protection an overbearing role within the U.S. Forest Service and promoted the field of national fire policy.

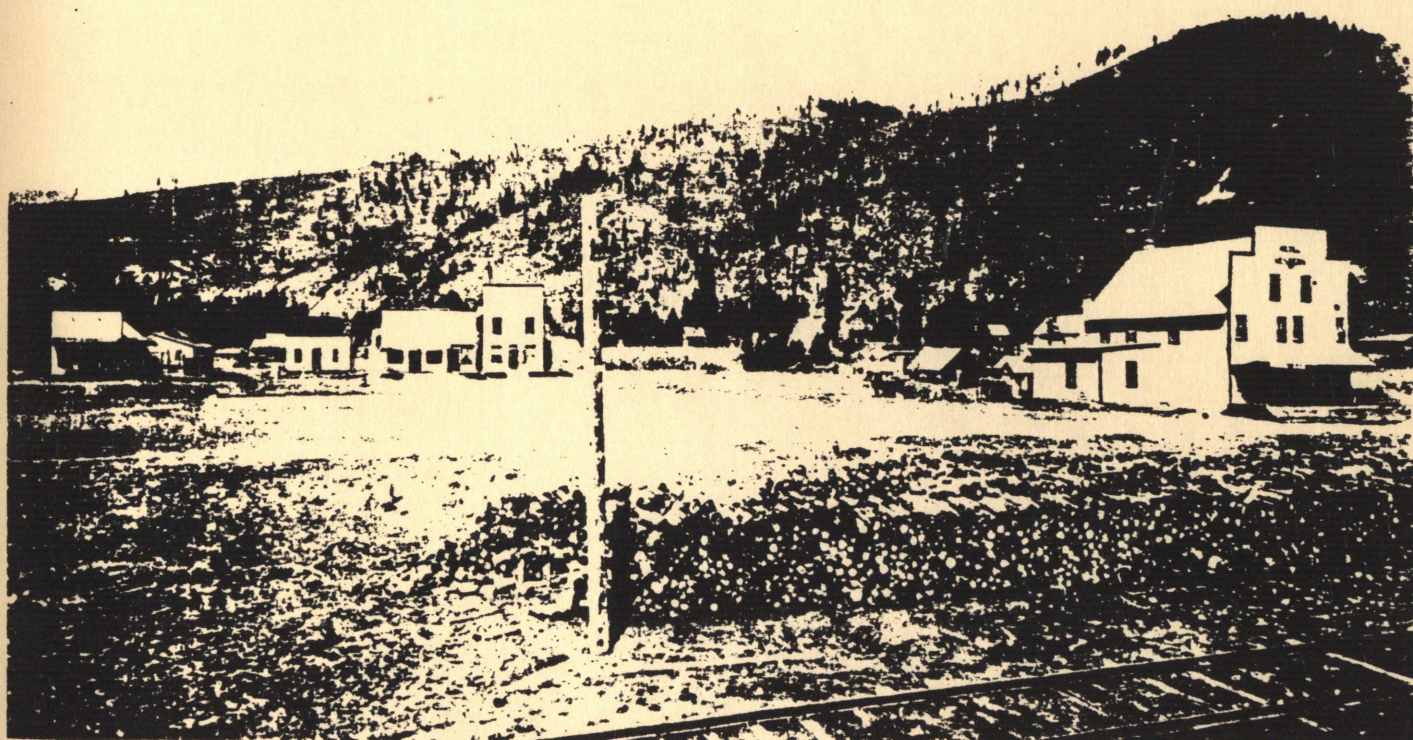
Most communities in the Northern Rockies were the residues of past mining days. As of 1910 neither industrial logging nor agricultural settlement had taken hold. The remoteness of the landscape was vivid with its vast and rugged inaccessibility. Coping with fire was practically impossible due to lack of means. After the 1910 "blaze" the Forest Service had to confront the reality of remoteness and inaccessibility. Special fire crews would have to be formed since local settlers could not be expected to fight fires. Fire suppression would become a preliminary to future forest management practices. A new aura of patriotism enveloped the nation in its fight to save the forests. The doctrine of the strenuous life found wide currency - in the enthusiasm for saving wilds, preserving the passing frontier, and fostering habitats for big game hunting; in the



A scene of complete destruction along the main line of the Northern Pacific Railway on the Lolo National Forest of Montana.



Giant cedar trees, burned and blown down by the force of the fire-created wind by the fire of 1910.



View of DeBorgia, Montana, on the main line of the Northern Pacific Railway
Approximately 88 miles west of Missoula, Montana.



DeBorgia after the fire of 1910. The saloon on the far left was one of the few
buildings to remain intact.

nascent Boy Scout movement; in the novels of Jack London and Edgar Rice Burroughs; in the personality of President Theodore Roosevelt and that of his sidekick in rough sport, Gifford Pinchot; and in the high culture of William James' essay on the moral equivalent of war.² Artists, writers and naturalists went west to reinvigorate the frontier. The 1910 fires preceded the national drama by beginning a lore of high adventure against a Lewis and Clark backdrop of wilderness and by contributing to the tradition of courageous action in the face of national perils.

With these exploits and with the political events that surrounded them, firefighting entered its heroic age.

"I preach to you, then, my countrymen, that our country calls not for the life of ease but for the life of strenuous endeavor...Above all, let us shrink from strife, moral or physical, within or without the nation, provided we are certain that the strife is justified, for it is only through strife, through hard and dangerous endeavor, that we shall ultimately win the goal of true national greatness."

--Theodore Roosevelt, "The Strenuous Life," 1912

CIVILIAN CONSERVATION CORP

Before the creation of the Civilian Conservation Corp (CCC) the problem of developing reliable firefighting crews was great. The national parks could rely on Army troops, but the new forest reserves of the West hard to look elsewhere. Not until the CCC was it considered preferable to hire well-trained fire crews who could also do project work, rather than project workers to fight fires. The top priority was placed on well trained and organized crews rather than project work. The CCC was a profoundly civilian phenomenon even though the Army managed the camps. The crews of men had a magnificent impact on fire protection. Initial attacks had been made on fires by individuals, not by crews, and training had been directed



Aerial view of the CCC camp on Stoney Creek west of Missoula, Montana.

toward specific skills. With the CCC, large crews had to be trained and equipped. The era of the CCC inaugurates the real development of organized line construction methods, of crew production figures, and of reliable crews stationed more or less permanently at critical locals.³ The presence of the CCC allowed fire control to make the critical transition from a frontier militia to a disciplined army.⁴

EARLY SMOKEJUMPING EXPERIMENTS

Study of time records of forest fires has shown that travel time, that part of elapsed time from report of the fire until attack is made, is a major factor affecting the final burned area of a fire. David P. Godwin, director of the Aerial Fire Control Project in 1939, was inspired by T.V. Pearson's idea of using airplanes and parachutes to overcome the travel time handicap. But, parachuting smokejumpers into the back country was an ideal, no one had ever attempted to parachute into mountainous terrain.

Godwin was aware of mass paratroop movements by the German and Russian armies in 1936. He saw the applicability of parachuting men, not only supplies or water, into fires.

In October and November 1939, Godwin supervised 58 experimental jumps on the Chalen National Forest in Washington. The Eagle Parachute Company was the successful bidder for a contract to provide parachutes, protective clothing, and the services of professional riggers and jumpers. The selected training outfit, consisting of the Eagle 30-foot backpack and 27-foot emergency chest-pack canopies with quick detachable harnesses, proved satisfactory. A two-piece, felt padded suit, football helmet with wire-mesh face mask, athletic supporter, ankle braces, combined back and abdominal braces and heavy logger boots completed the attire of the jumpers and provided protection from the hitherto unknown hazards of timber jumping.⁵



The first parachute loft in Moose Creek on the Nezperce National Forest in Idaho, was of pole construction.

The thoroughness of the preliminary planning by Region 6 personnel was a vital contributing factor to the success and safety record of the experiment. Even though there had been no actual fire jumps in 1939 the smokejumping program was on the brink of tremendous practical and public success.

The first actual fire jump in the history of smokejumping was made by Rufus Robinson at 3:57 p.m., July 12, 1940, in connection with initial attack operations on the Martin Creek fire, Nezperce National Forest (Region 1).⁶ Earl Cooley is credited with making the second actual fire jump on the same fire.

...The plane circled the flaming bull's-eye of burning timber and swirling smoke, flew wide to gain altitude in the thin mountain air, and came in again. The smokejumpers, crouched in the open door of the plane, signaled for the motors to be cut before they stepped off above a sea of timber. Their parachutes bloomed.

The lines of the chute fouled behind the jumpers head. He fought to straighten them out as he plummeted toward the tall timber. By the time the lines were in order, he was smashing through a network of branches. The canopy crowned on a treetop, slamming the man against its trunk. Before he stopped swinging, he was fumbling in a pocket on his right pants leg. A hundred-foot rope snaked to the ground and the man slid down it.

Earl Cooley had just completed the first organized fire jump in the United States, but he was too busy retrieving the firefighting equipment being dropped from the plane and joining forces with Rufus Robinson to think about anything more than getting this fire in the Idaho back country under control...

-Dale White, "Trouble Chuters"⁷

EARLY YEARS OF SMOKEJUMPING

With the successful results of the jump experiments and early attack and suppression upon wildland fire, came the expansion to 28 jumpers in 1941. The program was centralized in Missoula, Montana due to the large

roadless areas in Region 1. Missoula was also the home base for the Johnson Flying Service, the private contractor which provided men and aircraft for the project.⁸ Parachutes were packed in a conference room in the Federal Building in Missoula, replacing the first parachute loft in Moose Creek on the Nezperce National Forest in Idaho, which was of pole construction.

A new base was established at Nine Mile on the Lolo National Forest, one eight-man squad was sent to Moose Creek on the Nezperce National Forest and one to Big Prairie on the Flathead National Forest. The sub-base concept of distributing jumper personnel which is in practice today dates back to these early origins of the parachute project.

Doctor L.P. Martin of Missoula was trained to make rescue jumps and became the first "Jump Doctor".

The parachute project began to be approached by feature writers and other interested sources of news publications. The smokejumper program attracted media coverage: writers clamored for copy, newsreel producers flocked to Missoula, and a movie studio even had a film in the works.⁹ The smokejumpers began to be presented in a highly public "movie image." In an era before Smokey Bear, the Aerial Fire Control Project kept firefighting vividly before the public eye.

WORLD WAR TWO

Just when it appeared that smokejumping might enjoy unprecedented success, America declared war. Anyone fit enough to parachute out of an airplane over the Northern Rockies with logger boots and a leather football helmet was destined for the draft. Of the 26 men that jumped the year before, only five returned for the 1942 fire season.

Due to lack of equipment the personnel had to improvise and develop their own gear. Frank and Chet Derry invented a slotted parachute, which increased maneuverability and dampened oscillation and opening shock.

Again in 1943 only five men returned, the man power situation was desperate. A number of inquiries had been received from conscientious objectors in public service camps who wished to secure noncombatant work involving exceptional physical risk. This paved the way for Civilian Public Service (CPS) parachute programs of 1943 with the Forest Service selecting 62 candidates in 1943 and 110 in 1944. The program was so successful that the smokejumper operation was finally financed through regular appropriations as an integral unit of fire control and not, as in the past, as a special, auxiliary force supported by experimental funds.

In 1945 smokejumper bases were supplemented by Negro paratroopers of the 555th Battalion, out of apprehension over Japanese fire balloons.

Despite the war, smokejumping had proven itself. The major training base at Missoula was accompanied by three other principal bases at McCall, Idaho, Winthrop, Washington, and Cave Junction, Oregon.

The achievements of the War Era were made during a stressful time in American History by a group of people with personal spiritual beliefs or race that required them to rise above the social norms of the time.

TRANSITION AND MATURITY

The end of the war brought the dismantling of the CPS program and again there was a shortage in trained smokejumpers. Of the 160 new recruits 84 percent were ex-service men; 5 percent were too old or had been deferred from service; 11 percent were local 18 year olds with previous Forest Service experience.



Civilian Public Service (CPS) smokejumpers at Camp Paxson on Seeley Lake,
Lolo National Forest, Montana, 1943.

By 1949 smokejumpers had achieved such fame that they staged an exhibition on the Ellipse outside the White House for the President and members of Congress.

When smokejumpers returned to national headlines a few months later, it was tragedy, not triumph. On the Mann Gulch fire near the Gates of the Wilderness in Montana a blowup fire overran a crew of 16 men; three lived, but the rest died:

It started with a lightning storm in Montana's Gates of Mountains area, a wilderness traversed by Lewis and Clark in 1806. A lazy column of smoke curled up from desolate Mann Gulch, which is studded with fir and pine and carpeted with dry "cheat grass." A crew of smokejumpers piled into a C-47 at Missoula and headed east. Soon they were over the fire, and Foreman R. Wagner Dodge picked his jump spot near the head of the gulch. "Wag" Dodge jumped first. The landing was routine, and the men signaled that they were safe and set up a cargo camp. At 5 p.m. they headed down the gulch toward the Missouri to fight the fire, joined by Jim Harrison, fire guard from nearby Meriwether Canyon. By now the fire was "heated up", sending up black smoke and gases that explodes high in the air. At 5:45 Dodge saw that it had struck across the gulch and was climbing toward them, cutting off access to the river. Dodge shouted to his to drop their heavy equipment and retreat. But another pincer of fire had crossed the canyon above them. Advancing like a force of massed flamethrowers, the enemy was rapidly shrinking their grassy pocket, and Dodge saw they could not get out. He lit a grass fire to burn out a small safety zone, stepped into it and yelled to his men to follow. Instead they fled up the slope and he heard one say, "The hell with this, I'm getting out of here!" Then the whole superheated canyon seemed to explode. Flat on his burned ground, Dodge felt himself "in a big vacuum... I felt suddenly buoyant." In a few minutes it was over. Two of his men had scaled the ridge above to safety; two were alive but fatally burned; 11 lay dead where the fire had overtaken them, their clothes burned off and their canteens melted. The Mann Gulch fire raced on, to sear 5,000 acres before it was controlled.



The 13 firefighters who lost their lives at Mann Gulch.



The tragedy was in no way connected with the jumping activity and would undoubtedly occurred had a crew of ground transported men been caught in a similar situation.

The nation saw the Montana Mann Gulch fire as a heroic, but tragic, story. Every tourist and camper was urged to help by "being extra-careful in the woods, and by remembering that lives, as well as trees are endangered..."¹¹

The Mann Gulch story prompted a popular movie, "Red Skies of Montana." In the summer of 1950 jumper personnel became involved in the Twentieth Century Fox production. This adventure film brought the smokejumpers to the silver screen with Tab Hunter and Richard Widmark starring as jumpers letting a personality difference interfere with their job obligations. A roaring fire and a pulaski fight contribute to the agreeable ending and the smokejumpers make their contributions to the West.

Shortly after the film a serious examination of the entire smokejumper program occurred. The result was Operation Smokejumper, a general overhaul that culminated in the construction of the Aerial Fire Control Depot in Missoula and its dedication in 1954 by President Dwight D. Eisenhower. Although the Missoula base became the focus of aerial fire control, other permanent bases were established at Boise, West Yellowstone, Redding, California and Fairbanks, Alaska.

Hollywood made another visit to Missoula in 1960 when Walt Disney Productions made the adventure film, "A Fire Called Jeramiah." This film has survived to become one of the best historical documentaries of the equipment and jumping procedures during the late 1950's and early 1960's.¹²

The 1970's found a change in attitudes amongst jumper personnel toward the job itself and their career opportunities within the Forest Service as



SMOKEJUMPERS "GO HOLLYWOOD"

A still shot from the movie "Red Skies of Montana"

a smokejumper. These changes came about from two changes in Fire Management Policy.

1. The paying of overtime wages for all hours worked in excess of the regularly scheduled 40 hours a week.

2. The elimination of the 40 year age ceiling for active jumpers.

The changes reversed the trend in which most jumpers had jumped for three or four years and then left for other jobs within the Forest Service or private industry. Today it is not uncommon to find non overhead jumpers with 10 years experience or more. Smokejumping has become a career for more people than in the past and the average level of fire experience for employees has risen dramatically. This maturity and additional experience has greatly contributed to the Forest Service Fire Management Program.

Little has changed since 1939, even though Forest Service Fire Management policies have been altered to allow wildfire to run its natural course in wilderness areas, the main role of the smokejumper is still initial attack wildland fire suppression. Equipment has changed, aircraft have become obsolete and individuals have come and gone but the organization has remained and the smokejumpers have become a part of the Forest Service and Western History.

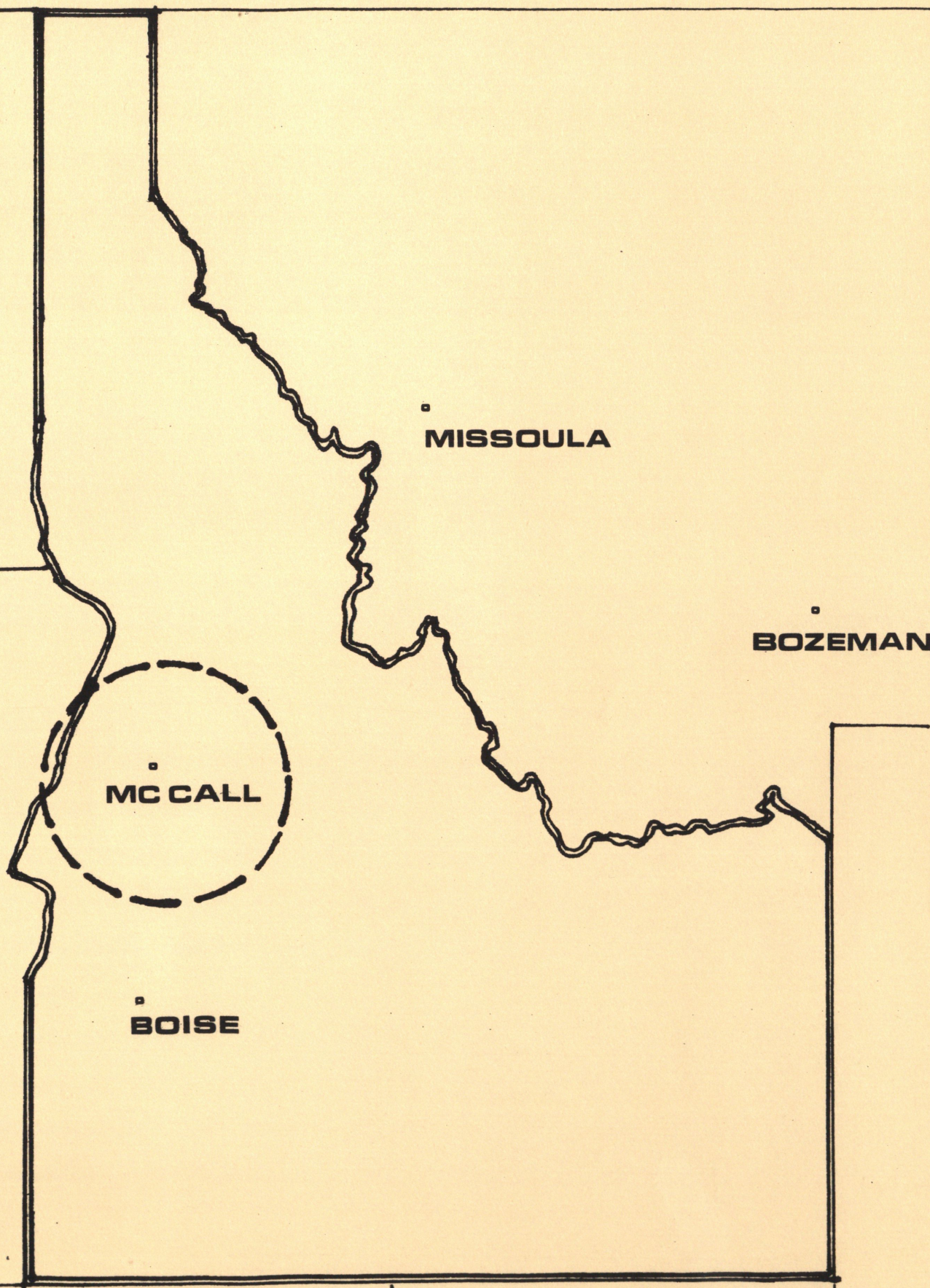
FOOTNOTES

1. Pyne, Stephen J., Fire in America - a Cultural History of Wildland and Rural Fires, 1982, pg. 239.
2. Ibid., pg. 241.
3. Ibid., pg. 365.
4. Ibid., pg. 365.
5. U.S. Forest Service, Fire Control Notes, "History of Smokejumping, 1939-1949," Vol. II, July 1950, #3, pg. 3.
6. Ibid., pg. 4
7. White, Dale, "Trouble Chuters," Collier's, December 16, 1944, pg. 23.
8. Harper, John J., "History of Smokejumping National Smokejumper Training Seminar," pg. 6.
9. Pyne, op. cit. pg. 373.
10. "Smokejumpers Suffer Ordeal by Fire," Life Magazine, Vol. 27, No. 8, August 22, 1949, pg. 18.
11. Ibid., pg. 20.
12. Harper, op. cit., pg. 21.

CONTEXT

CONTEXT

SITE & ENVIRONMENT



MISSOULA

BOZEMAN

MC CALL

BOISE

The City of McCall sits on the south shore of the Big Payette lake, 110 miles north of Idaho's capital city, Boise. At the elevation of 5020 feet, the winter season is long lasting with mild temperatures but heavy snowfall. The summer is too brief to take advantage of the area's 132 lakes and 169 streams stocked with rainbow trout, eastern brook, dolly varden, steelhead and chinook salmon.

McCall has a year-round residence population of about 2400 and a summer population of 6-10,000. Tourism plays a large part in McCall's economic stability, along with lumbering and farming. Tourist attractions other than the Payette Lake include big game hunting, snowmobiling and skiing. The Payette National Forest Service is headquartered here and employs many of the residents as well as seasonal employees.

There are no commercial flights that arrive in McCall, but the municipal airport, south of town, has a 5000' N-S runway which services private and chartered airplanes as well as those used by the Forest Service.

McCALL'S HISTORY

Ten to twenty-five thousand years ago, Payette Lake was created by a valley glacier which was approximately 1,000 feet high, 2.5 miles wide and eight miles long, leaving Payette Lake nearly 400 feet deep.

The first known Euro-Americans in the area, around the 1820's to 1850's, were Francios Payette and his trappers from the Pacific Fur Company.

In the 1870's to 1890's, before McCall had been settled, two large commercial fishing companies netted thousands of pounds of salmon, trout and whitefish. The fish were canned or smoked at the fishery located at the north end of Payette Lake and then freighted in and sold to the mining

camps and towns in the north. Game animals had been entirely wiped out of the mining district to the north by 1900 and the fish had become more valuable than gold.

The Sam Dever family was the first to claim "squatter's rights" to the land which is now McCall's main street. On May 27, 1889 a 14 wagon caravan, which included the Thomas McCall family, camped on the southern shore of the Payette Lake. The McCall family stayed behind to take up a homestead as the caravan moved south. Dever traded his assumed rights to his land and cabin to the McCall family for a team of horses and left the area.

Eventually, the superb scenery surrounding the Payette Lake area drew an enlarging number of visitors and Mr. McCall was forced into the hotel business. Several other businesses sprang up including a sawmill which was rebuilt twice after fires.

McCall became a lakeport, not only a logging town, but also supplied the mining districts to the north with goods. By utilizing the lake, the Steamboat Lyda was a fast, smooth, and more economical way of transporting goods than using freight wagons to transport supplies 15 miles around the lake on poor roads and trains. The goods were shipped from the lakeport at McCall through the narrows and on up the North Fork River to a place where the cargo was loaded onto wagons and transported to the mining districts.

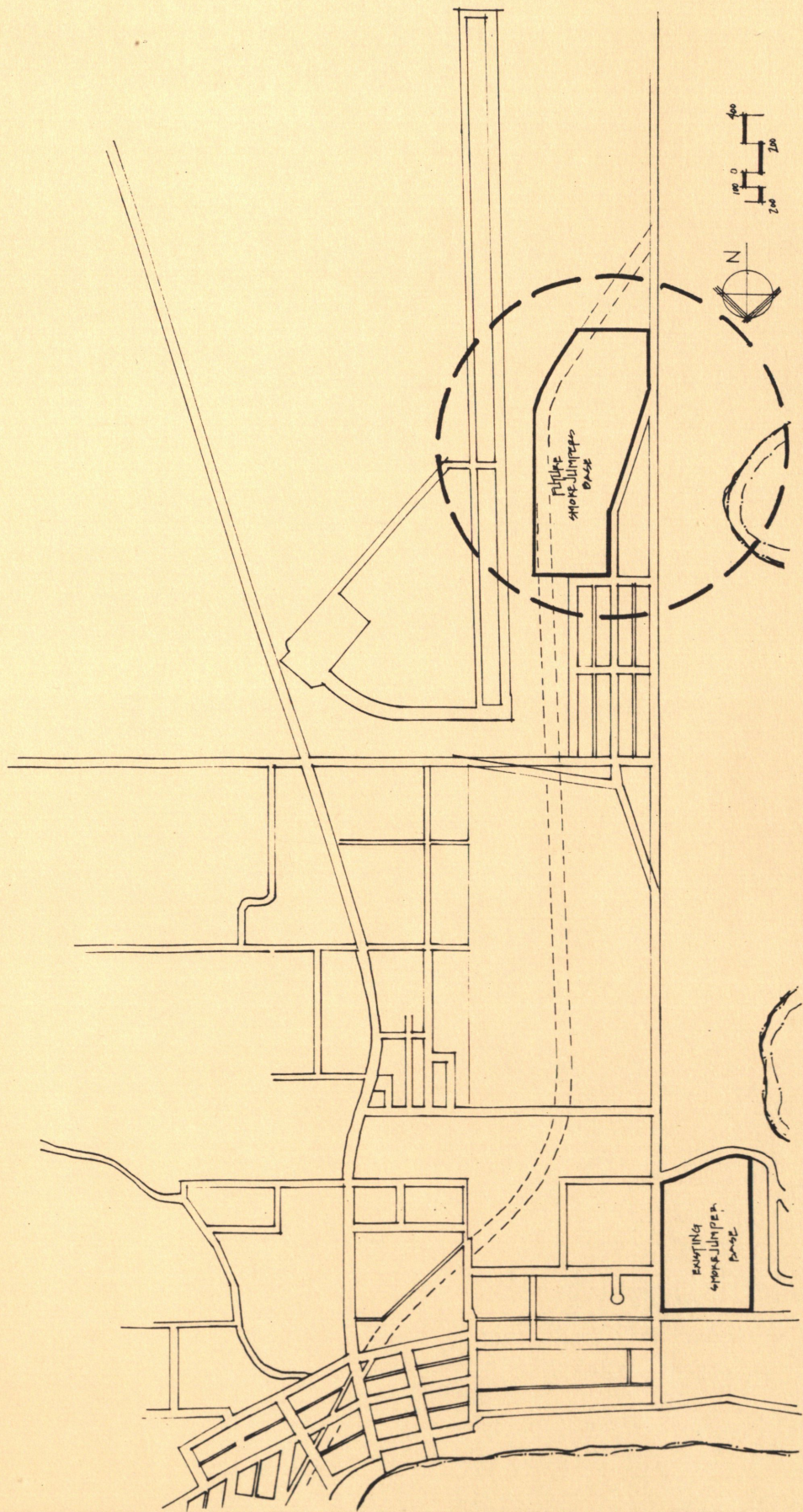
By 1907 McCall boasted of its general stores, a 32' x 80' amusement hall, a blacksmith shop, a livery barn, and an up-to-date meat market. Early schools were first held in homes until the first school house was erected in 1906. The Union Pacific Railroad came to McCall in 1914, with the first train appearing in June.

The Idaho National Forest was created by executive order on July 1, 1908. The Forest Supervisor's office was located in a rented storefront building in Meadows, Idaho until it moved to McCall, 10 miles to the east, in 1909.

The first smokejumpers to serve the central Idaho forests came to McCall in 1943. The five man squad was trained in Missoula and detailed to the Idaho National Forest. The first jump for the McCall unit was on August 14, 1943, when John Ferguson and Lester Gohler were dropped on a fire at the head of Captain John Creek.

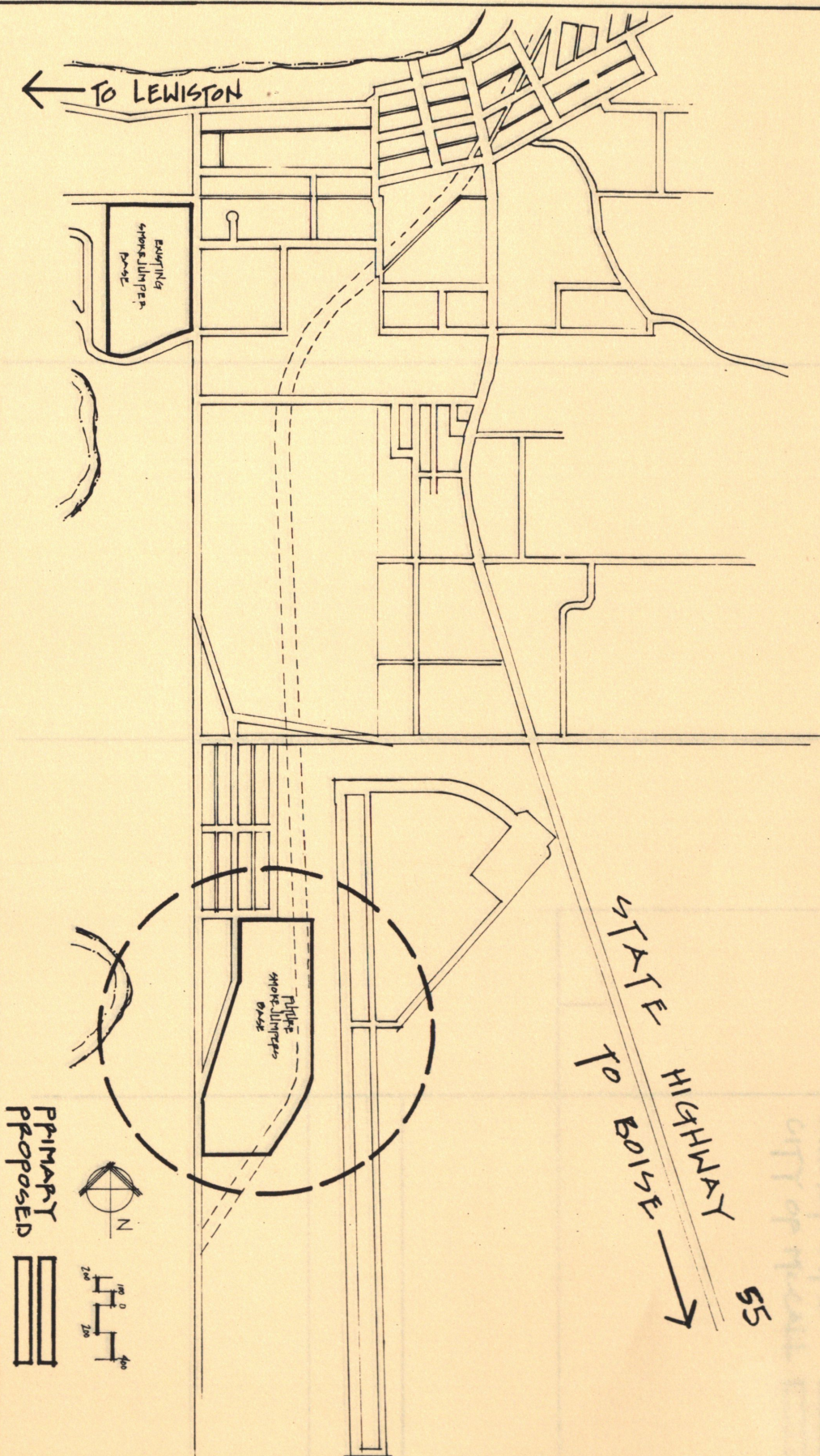
In April 1944 the Weiser and Idaho National Forest were consolidated and renamed Payette National Forest. In that year the jump unit increased to 19 men, many of them conscientious objectors, and jumped on 17 fires. By 1947 there were 50 smokejumpers stationed at McCall; many of them were World War II veterans.

The first smokejumper housing was reconstructed Civilian Conservation Corps barracks moved to the nurse grounds in 1947. They served as loft, barracks, and mess hall until new facilities were constructed in 1956. McCall started training their own jumpers in 1947 rather than Missoula. By 1959 a trailer court, new barracks, laundry, and a new loft were completed and are still being used today.

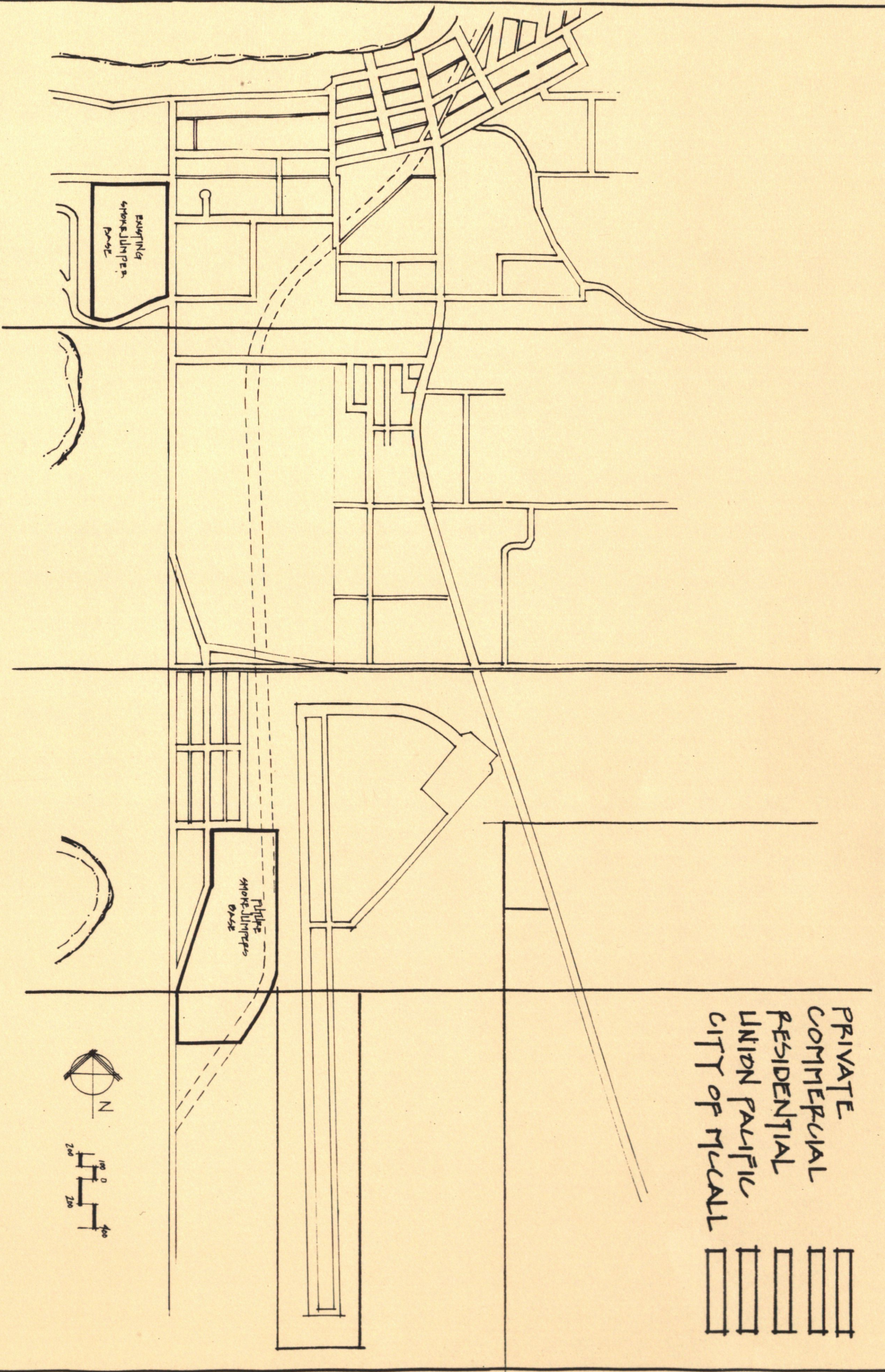


McCALL - SITE

MCCALL - CIRCULATION



PRIVATE
COMMERCIAL
RESIDENTIAL
UNION PACIFIC
CITY OF MCGALL



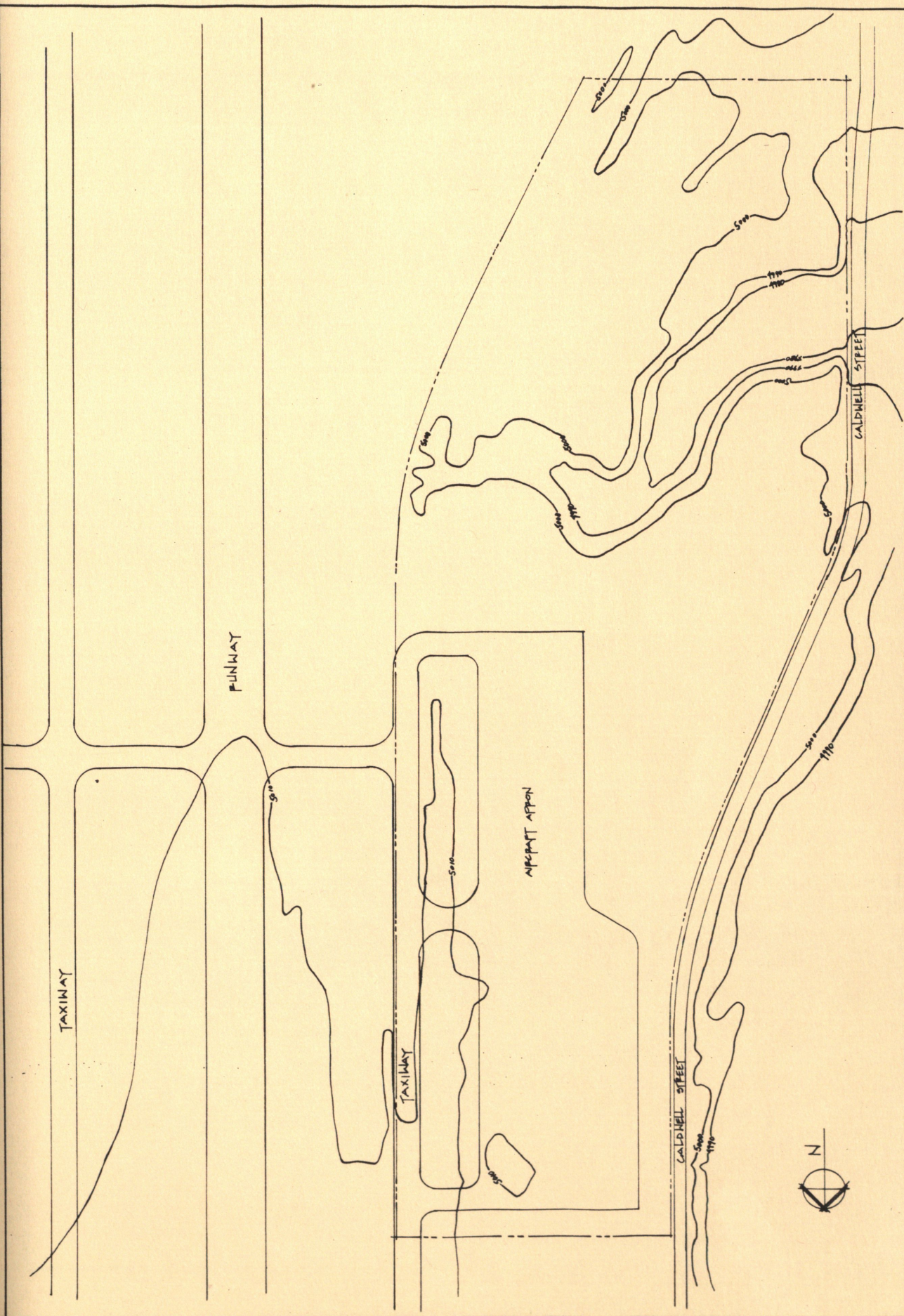
MCGALL - LAND OWNERS

SITE AND ENVIRONMENT

The site is located adjacent to the McCall City Airport between the west boundary and Caldwell Street, approximately one mile south of the existing facility on Mission Street. This location is readily accessible to the airport runways and provides increased opportunity to develop a smokejumper complex which can function more efficiently and provide improved capability to respond to fire emergencies more rapidly. An airport related site is logical and it is not constricted by roads.

The site offers a good potential to accommodate aircraft operations, related retardant delivery and smokejumper buildings. The site is principally in public ownership and has a stand of trees that could be included in the housing or training areas. The site also contains the present railroad right-of-way with a built-up surface which will be removed. The Union Pacific Railroad service has been permanently abandoned and the tracks and ties removed.

There are numerous minor existing man-made structures which will be eliminated. There are overhead powerlines which will have to be relocated to the right-of-way of Caldwell Street or relocated underground.



SITE -

CONTEXT

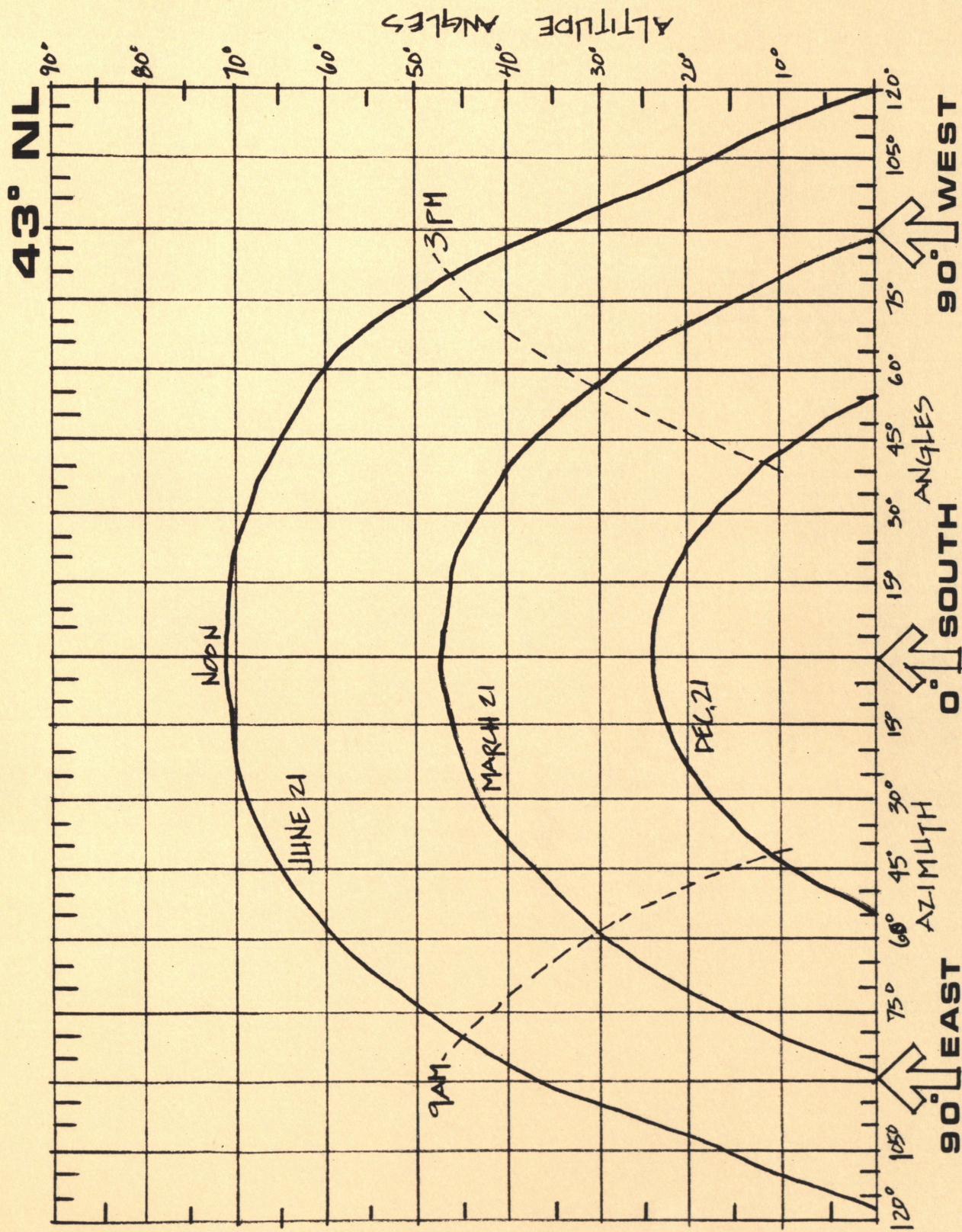
CLIMATE

CLIMATE

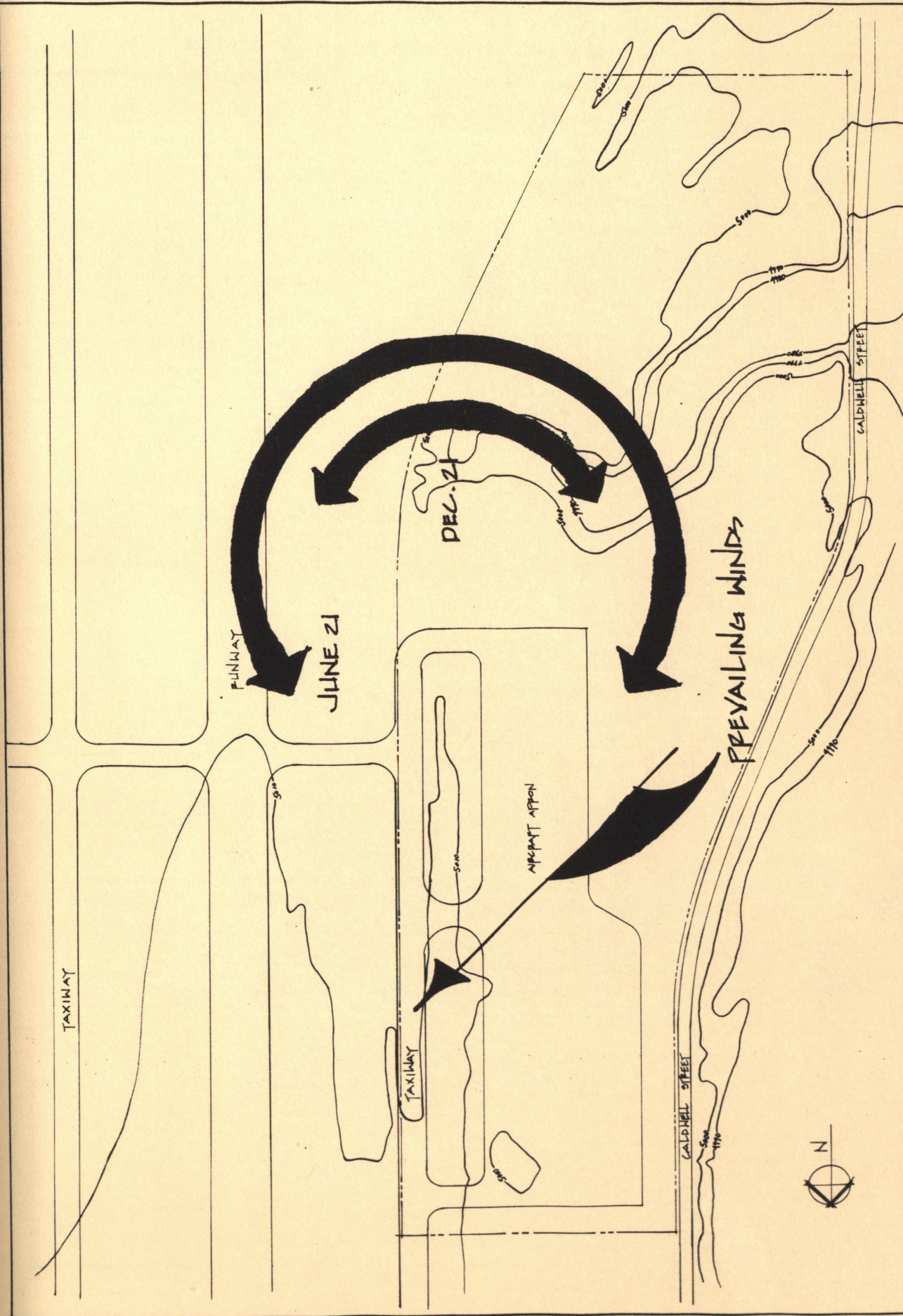
Large seasonal storm systems and local topography play major roles in the climate of McCall which sits in the Payette National Forest. A large low pressure system that dominates the weather from about November to April causes the area's cool, moist winters. A major high pressure system generally replaces this low, and results in a hot, relatively dry period from July through September. Mountain barriers to the west in Oregon claim most of the eastward moving summer precipitation before it reaches Idaho. Other local topographic features serve to shadow and channel the precipitation and other climatic conditions.

Annual precipitation of the Forest varies from 12 inches at lower elevations to over 60 inches in the high country, McCall's average is 25 inches. Some areas receive only a "skiff" of snow while other areas are snow covered for more than 8 months of the year. Above 4,000 feet, most of the annual precipitation occurs as snow with maximum accumulations occurring around April 1. Major winter rainstorms, which can pose landslide and flood threats, occur approximately every 10 year.

Elevations on the Forest range from 1,500 feet to over 9,500 feet, McCall being at 5,000 feet. At higher elevations, the frost-free period can last less than 30 days and winter temperatures can drop to -40 degrees F. At lower elevations, the frost-free period can last as many as 180 days and summer temperatures can reach 120 degrees F. McCall's annual average temperature is 40.7 degrees F., and the prevailing winds come from the southwest.



SITE - SUN & WIND



CONTEXT

GEOGRAPHY

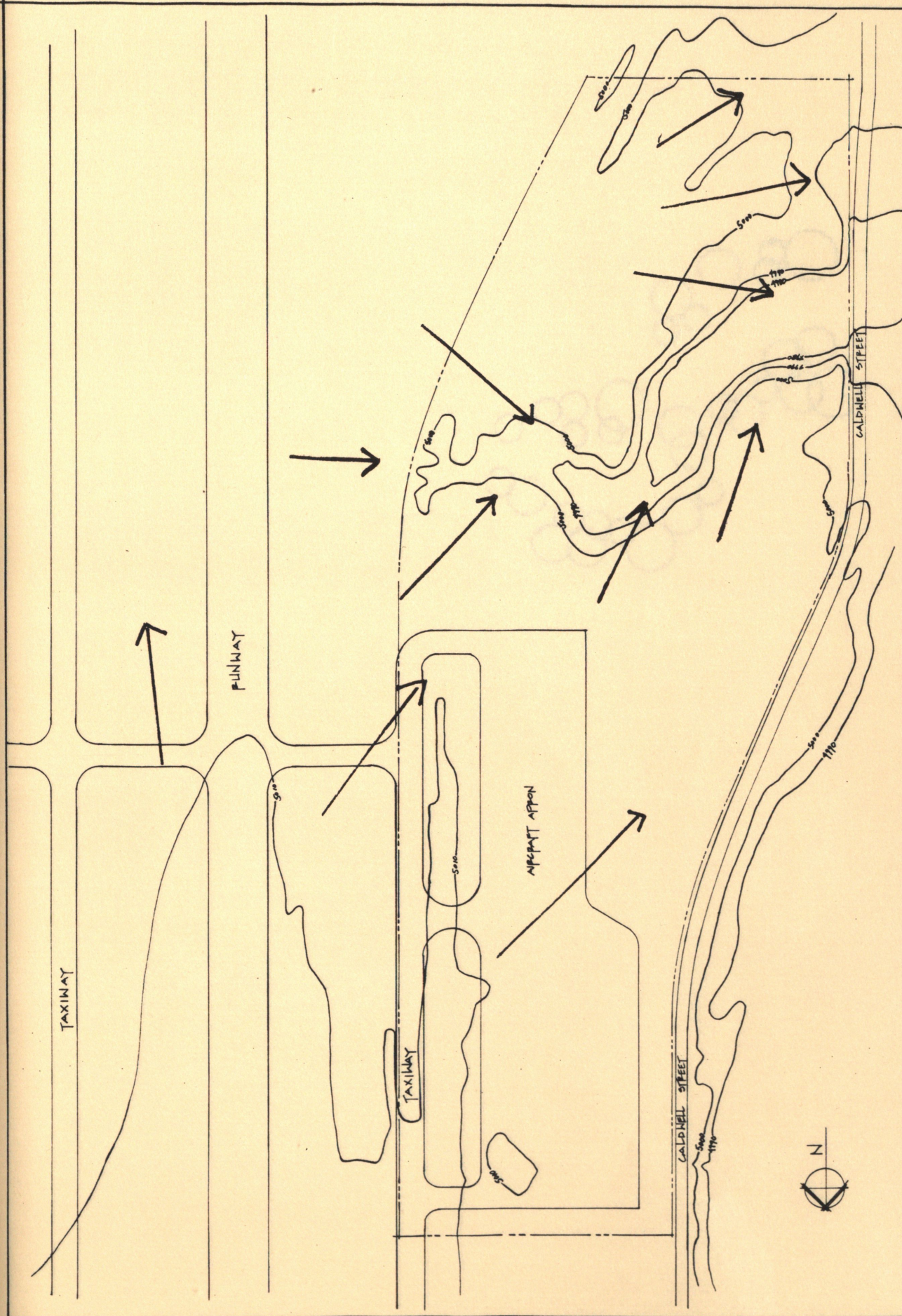
GEOLOGY

McCall is located on a geological formation known as the Idaho Batholith. This intrusive igneous formation originated approximately 62 million years ago when a hot mass of magma slowly forced its way up through the earth's crust and merged as a large mass of granite. The Batholith covers approximately 16,000 square miles in central Idaho and western Montana, and is composed chiefly of coarse-textured quartz monzonite with minor amounts of granodiorite, quartzdiorite, and finer textured rocks.

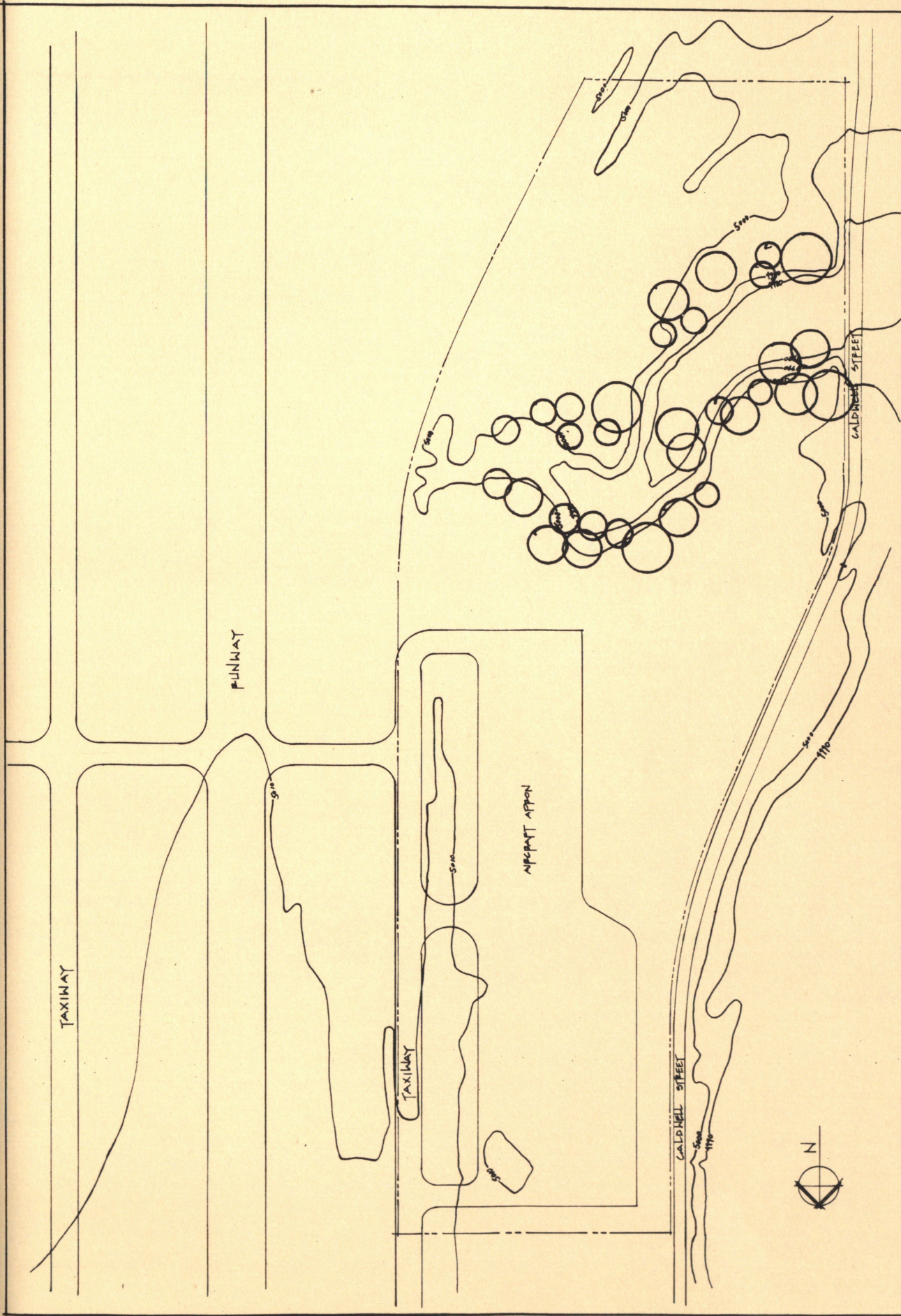
VEGETATION

The site has scattered stands of Lodge Pole Pine, Yellow Pine, and Douglas Fir trees and a prominent gully which can be utilized as permanent landscape features.

New planting should be selected from species which are common to the McCall area. For example, foundation plantings or ground covers could be Potentilla or Oregon Grape rather than junipers which are not native to this location. Douglas Fir, Western Larch and Yellow Pine plus ornamental varieties of Blue Spruce are appropriate for the larger conifers on the site. For quicker growth and color in the deciduous trees and shrubs, deep rooted species should be selected due to the gravelly nature of the subsoils.



SITE - DRAINAGE



SITE - VEGETATION

CONTEXT

SENSORY

SENSORY

The site is separate from McCall but is a significant part of the McCall Airport. Other than the forested gully to the south the site is relatively flat and barren. The gully enhances the site by adding diversity to the landform and vegetation. The new smokejumper base will not be immediately influenced by surrounding buildings since there are none.

The surrounding mountains allow for pleasant viewing 360 degrees around the site. Caldwell Street is only used by the few residents that live to the south. The site is peaceful and quiet and compliments the sounds and activities of the airport and runway.

The solemn and barren character of the site will allow forms and image of the new smokejumper base to develop without much contextual restrictions.

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- John Harper, Squad Leader, Missoula
- Greg Anderson, Smokejumper Foreman, West Yellowstone
- Susie Carmichael, Forest Dispatcher, West Yellowstone
- Steve Betlach, Squad Leader, Lincoln
- Smokerjumpers: Paul Basette
Kurt McChesney
Bob Kautz
Dennis Lefeldt
Glen Anacker

Other

Idaho Power Co., McCall
Soil Conservation Service, Payette NF
Valley County Assessor's Office, Cascade

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