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# **A RETIREMENT HOME**

**FOR  
BUTTE, MONTANA**

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**MARCH 12, 1968**



A RETIREMENT HOME FOR BUTTE, MONTANA

Part I

Undergraduate Thesis in Architectural Design

By

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**Conditions**

**Creating**

**A**

**Need**





## WHO ARE THE ELDERLY?

Government statistics define the elderly as people 65 or over. Retired people may be said to be anywhere from 50 or over. Some people of course retire at an even earlier age.

Because of the changing pattern of family life, with the three-generation home gradually fading out, the elderly person of today has lost his place in the family. He no longer holds prestige for wisdom once accorded him by his sons and daughters, or is he well known by his grandchildren as the great story teller of tales in the past. Compulsory retirement has cut him off from many friends of all ages who he has worked with for years. As a result more and more retired people are being forced to look for housing of their own. 5

## FACTORS CREATING A NEED FOR RETIREMENT HOMES

There are many factors that indicate a substantial increase in the number of homes for the aged to be built in the future.

The fact that fewer retired people are living with their families and the population is steadily increasing are important spurs to this kind of construction. The number of people 65 and over is increasing at the rate of 2,000 a day which indicates that an active building program is essential simply to meet current needs.<sup>3</sup>



Another factor creating a need for more building is greater availability of funds. With social security benefits along with retirement pensions, many older people are now able to pay for better living accommodations and care than they could before. At the same time, federal and, in many instances, state funds have made possible long-term, low-cost loans that ease the financial load of new construction.

A third factor is the steady rise of the average life span of people living in the United States due to their better state of health. Medical science has eliminated many of the causes of early death, and many more people are reaching the later years in a more vigorous and healthy state than their forebears. The combination of improved health and increased income enables people to live independently much longer than they could formerly. The average age of people living in homes for the aged has increased 10 years to about 80 years old in the last two decades. <sup>4</sup>

#### LOCAL CONDITIONS CREATING A NEED

Every city in the United States has varying needs for retirement homes according to local conditions. Butte is a mining city primarily and consequently there are not many enterprises to attract young people. As



a result over 50 percent of the people that live in Butte are 50 or over. This fact was obtained from a survey made by a group of Butte citizens interested in creating new industry and business to attract and keep younger people in Butte. In the United States in 1960, there were 16,559, 580 persons 65 and over. This is 9.2 percent of the total population so it can be seen that Butte has an extremely high percentage of elderly people.

Elderly people have about three choices as to where they can live: 1. they can live with their sons and daughters and their families if they have any, 2. they can live in a home of their own if they can afford one and if they can find one suitable for their needs, and 3. they can live in a retirement home if any are available. As was already discussed, elderly people are living with their families less all the time. Although retired people, on the average have a larger income than ever before they still find it difficult to buy and maintain a home of their own. Presently there are no retirement homes in Butte.

Butte also has a rather unique problem and that is that some residential areas of Butte are being re-located due to the expansion of the open-pit mining.



Therefore the residential districts in Butte are constantly moving further south across what is known by Butte people, as the "flats". As was customary of most towns in earlier days, people of Butte built their homes as close to their work as possible. These people, who are mostly retired now, are being bought out and forced to move by the expansion of the pit. Their homes are mostly old buildings and not worth very much money and as a result most of these people cannot afford new homes. Eventually the Anaconda Company will buy all the property north of Park street up to and including Walkerville. The need for more retirement housing as a result will become even greater in the future.



# WALKERVILLE





**Local**

**Conditions**





Butte, located in the rocky mountains of Southwestern Montana, is one of the richest mining areas in the state, and perhaps one of the most important in the world. Known to many as "the richest hill on earth," its mines and open-pit mining produce mainly copper today, although other non-ferrous metals are still mined. For example, from 1880 to 1966 total production showed 16.8 billion pounds of copper, 5 billion pounds of zinc, 4 billion pounds of manganese, 850 million pounds of lead, 650 million ounces of silver, and over 2.5 million ounces of gold. <sup>5</sup>

#### HISTORIC

Butte was founded in 1864 by two prospectors from the gold camp of Virginia City, Montana who found gold along the banks of Silver Bow Creek. Other prospectors followed in search of this gold and it was these early inhabitants of the area that named "Butte" after the peak that stood by itself to the northwest of the valley. Today residents of Butte refer to this peak as "Big Butte".

Butte has a history of great wealth, growth, conflict, and decline as have most towns that thrive on mining.

who migrated from the mines in Cornwall, England.



Gold mining thrived until 1870 when it was replaced by silver mining. It wasn't until 1876 that copper was mined and smelted by W. A. Clark who came to Butte from Bannack. From then on copper became the main interest.

It wasn't long before Clark found stiff competition from Marcus Daly who came to Butte in 1876 and F. Augustus Heinze who came in 1889. From 1889 to 1905 "the richest hill on earth" became an underground battlefield with competitors flooding each others tunnels, stealing ore, and in anyway making the others mines inoperable. After 20 years of war Clark won out and his Anaconda Copper Mining Company became dominant. The company still owns and operates all mining interests in the Butte area.

Butte was incorporated by the Legislative Assembly on Montana in 1893.

With increased production of copper in the 1880's the population and importance of Butte grew, and by 1890 over 40,000 people lived in Butte and its surrounding suburbs: Walkerville, Centerville, and Meaderville. One reason for this large increase in population was the extensive influx of Irish miners who migrated from the mines in Cornwall, England.



Exploration in 1915 to prove the hill had sufficient ore deposits led to the discovery of additional ore suitable for open-pit mining. Today the open-pit mining done in the "Berkeley Pit" yields approximately 17,500 tons of ore daily.<sup>5</sup>

#### GEOGRAPHICAL

Butte is located in Southwestern Montana at a latitude of 45 degrees 57 minutes, longitude of 112 degrees 30 minutes west and at an average elevation of 5500 feet.

Butte's geography is somewhat unique and also very picturesque in that the city is located in one of the few natural bowls in the world made up of surrounding mountains; the east ridge of the Rocky Mountains, the snow peaked "Highlands", and the mountain after which it was named, "Big Butte".

Butte's main business district and older residential areas are located on the hill to the north of the valley where the majority of the mines are located. The reason for this closeness is simply that due to lack of adequate transportation in Butte's early days, people naturally tried to live and shop as close to their jobs as possible. Today, however, the majority



of the population lives in the valley, known as the "flats" to local people, where there is more room and better land to build on, and of course transportation is no longer a problem. Business is moving down on the flats more and more; this is partly due to the fact that the majority of the population lives on the flats and partly because the expansion of the Berkely Pit will eventually swallow the old business district as well as the rest of the hill.

As mentioned earlier, Silver Bow Creek runs through the valley and along with its tributaries forms the headwaters of the Clark Fork river which makes up a part of the Columbia "iver. 4

Butte is located in Silver Bow County and the county seat is located there. 1

Butte has a strategic location in relation to the nation's major highway system. It is a transportation hub for highways running east, west, north and south. Interstate 15 runs through Butte going north and south and interstate 90 going east and west.

#### SOCIAL AND ECONOMIC

The population of Butte and the urban area around Butte makes up just about the entire population of





Map compiled from base © The H. M. GOUSHA Co.



Silver Bow County. There are only about 600 people who do not live around and in Butte. The population for Silver Bow County in 1960 was 46,454 according to the United States Census. The population had been at a steady decline since before 1930 and was at its lowest ever by 1960. <sup>1</sup> Since then it has begun to rise somewhat.

However, due to the recent copper strike which is now in its eighth month of bargaining, the population is thought to have taken somewhat of a decline again.

Butte is just now beginning to depend less and less on the mining industry for its economy and one reason for this is the great decrease in man power needed to operate the industry due to automation and the Berkeley Pit.

Some interesting comparisons of the population between 1950 and 1960 show an increase in the percentage of people 55 years and older as well as an increase in the percentage of people from 0-14 years of age while there is a decrease in the percentage of the population in the middle age brackets gives evidence to the developing concern over the aging population in the county.

The total labor force in 1950 was 18,600, but by 1960 only 15,400, a drop of about 3,200. Just about all this loss in the labor force was accounted for by



# Population Data

## U.S. POPULATION 65 AND OVER

| Year | Population, millions |
|------|----------------------|
| 1950 | 12.3                 |
| 1955 | 14.1                 |
| 1960 | 15.8                 |
| 1965 | 17.6                 |
| 1970 | 19.5                 |
| 1975 | 21.9                 |
| 1980 | 24.5                 |

SOURCE: U. S. Bureau of the Census, Current Population Reports, Series P-25, No. 187, November 10, 1958, p. 17.

## U.S. POPULATION 65 AND OVER IN QUASI-HOUSEHOLDS

|                     | 1950    | 1980      |
|---------------------|---------|-----------|
| In quasi-households | 701,785 | 1,403,570 |
| institutions        | 385,419 | 770,838   |
| other               | 316,366 | 632,732   |

NOTE: Figures for 1950 are from Henry D. Sheldon's THE OLDER POPULATION OF THE UNITED STATES, John Wiley & Sons, New York (1958), p. 202. Figures for 1980 are based on U.S. Bureau of the Census population projections, 1950-1980; the assumption is made that the predicted doubling of the total population aged 65 and over would result in a similar doubling of population.



# INCOME OF PERSONS 65 AND OVER

| Men                                    |           |         |           |                           |
|----------------------------------------|-----------|---------|-----------|---------------------------|
|                                        | Total     | Single  | Married   | Widowed<br>or<br>Divorced |
| Number                                 | 5,558,000 | 358,000 | 3,842,000 | 1,358,000                 |
| Per cent                               | 100.0     | 100.0   | 100.0     | 100.0                     |
| with income                            | 94.6      | 91.3    | 96.8      | 89.0                      |
| without income                         | 5.4       | 8.7     | 3.2       | 11.0                      |
| Per cent of those<br>those with income | 100.0     | 100.0   | 100.0     | 100.0                     |
| \$1 - \$1,999                          | 62.0      | 77.1    | 56.0      | 76.9                      |
| \$2,000 - \$3,999                      | 22.2      | 17.3    | 24.8      | 15.7                      |
| \$4,000 - \$5,999                      | 9.9       | 3.9     | 11.9      | 5.1                       |
| \$6,000 and over                       | 55.8      | 1.7     | 7.3       | 2.3                       |
| Women                                  |           |         |           |                           |
| Number                                 | 6,887,000 | 550,000 | 2,420,000 | 3,917,000                 |
| Per cent                               | 100.0     | 100.0   | 100.0     | 100.0                     |
| with income                            | 72.3      | 84.1    | 59.4      | 78.9                      |
| without income                         | 27.7      | 15.9    | 40.6      | 21.1                      |
| Per cent of<br>those with income       | 100.0     | 100.0   | 100.0     | 100.0                     |
| \$1 - \$1,999                          | 90.0      | 72.2    | 96.1      | 89.6                      |
| \$2,000 - \$3,999                      | 7.4       | 19.2    | 2.9       | 7.9                       |
| \$4,000 - \$5,999                      | 1.7       | 5.0     | 0.7       | 1.7                       |
| \$6,000 and over                       | 0.9       | 3.6     | 0.3       | 0.8                       |

SOURCE: U. S. Bureau of the Census, Current Population Reports, Series P-20, No. 81, March 19, 1958, p. 12



POPULATION OF BUTTE

| Year            | City   | County | Approximate percentages |
|-----------------|--------|--------|-------------------------|
| 1950 Census     | 33,251 | 48,422 | white - 99.1%           |
| 1960 Census     | 27,877 | 46,454 | non-white - 0.9%        |
| 1970 projection | N.A.   | 50,000 | foreign born - 8.4%     |

SOURCE: Industrial Development Research Council, Registered Community Audit, Form #3, July 1, 1967, p. 1.



the mining industry. It would be expected that when a city loses over 3,000 workers out of 18,000 that workers in all trades will suffer. The three major groups to suffer were, however, construction, transportation, and trade groups. All other groups increased in number. The economy was effected, but not badly enough to cause a depression in the Butte area. <sup>1</sup>

#### CLIMATIC

Since Butte rests in a pocket surrounded by mountains it has little wind in contrast to many cities in western Montana. There is, however, much cold air drainage into the valley from the surrounding mountains and this may produce some very low temperatures in winter. Because of the altitude, temperatures are much cooler for this latitude than are normally expected. The maximum temperature seldom reaches 90 degrees, and there has only been one time that it reached 100 degrees maximum and that was on July 22, 1931. Maximum temperatures of zero have been recorded as early as October and as late as April and they occur about 43 times a year. The minimum temperature ever recorded in Butte was -52 on February 9, 1933. It is possible to have freezing temperatures anytime of the year, but they are less likely to occur from May through August.



Precipitation varies from as little as 6.38 inches in 1935 to as much as 16.93 inches in 1948. The normal precipitation for one year is 12.67 inches. However, more than two-thirds of this amount is recorded during the growing season, April through September. The wettest months of the year are May and June and usually one-third of the total precipitation for the year falls in these two months. Snowfall in Butte is relatively light, the average being 50 inches a year. 4

Butte has a high number of clear, sunny days per year due to the fact that cloud formations that are often broken up by the Pintlar Mountain Range northwest of Butte do not form again until they are part Butte. Butte has more sunny days a year than Pheonix, Arizona. The wind most often comes from the northwest.



**Site**

**Conditions**





## SITE ORIENTATION

The site is located on the south eastern fringe of the city of Butte. It will be reached from Green Lane which is a street directly to the west of the site. It is approximately one acre in size and the location can be seen from the enclosed map. The elevation is about 5,450 feet at this point as the terrain in the valley slopes down to the south for several miles.

## ADJACENT ENVIRONMENT

The eastern view from the site overlooks the seventeenth and eighteenth holes of the Butte Country Club Golf course. The country club is on the east side of the seventeenth and eighteenth holes<sup>a</sup> little to the north. To the south of the Country Club is the Country Club Addition which is a housing project that started two years ago and is still being developed. There are several homes on the site already, however. Behind the housing can be seen the Rocky Mountains which form the Continental Divide. To the south can be seen open country for approximately 8 miles to where a very picturesque view of the Highlands is seen. To the west is residential developments with "Big Butte" in the background.



To the north is also residential areas with the "Richest Hill on Earth" in the background.

#### TOPOGRAPHY

The site itself is almost flat as is the land adjacent to it on the south, west and north. There is about a 20 foot drop from the site to the golf course which allows for an excellent view of the course.

#### PREVAILING WINDS

As was stated before, Butte has only minor wind conditions and this site will offer no exception to the case.

#### TRAFFIC PATTERNS

Traffic on Green Lane will be at a minimum as it is a dead end street, and will not change in the foreseeable future. Traffic can move easily from the site to the downtown business district and also to the uptown business district. This can be done by going north to Elizabeth Warren avenue and traveling west to Harrison avenue where one will turn and travel north again directly into the downtown business district. In going to the uptown area one has simply to

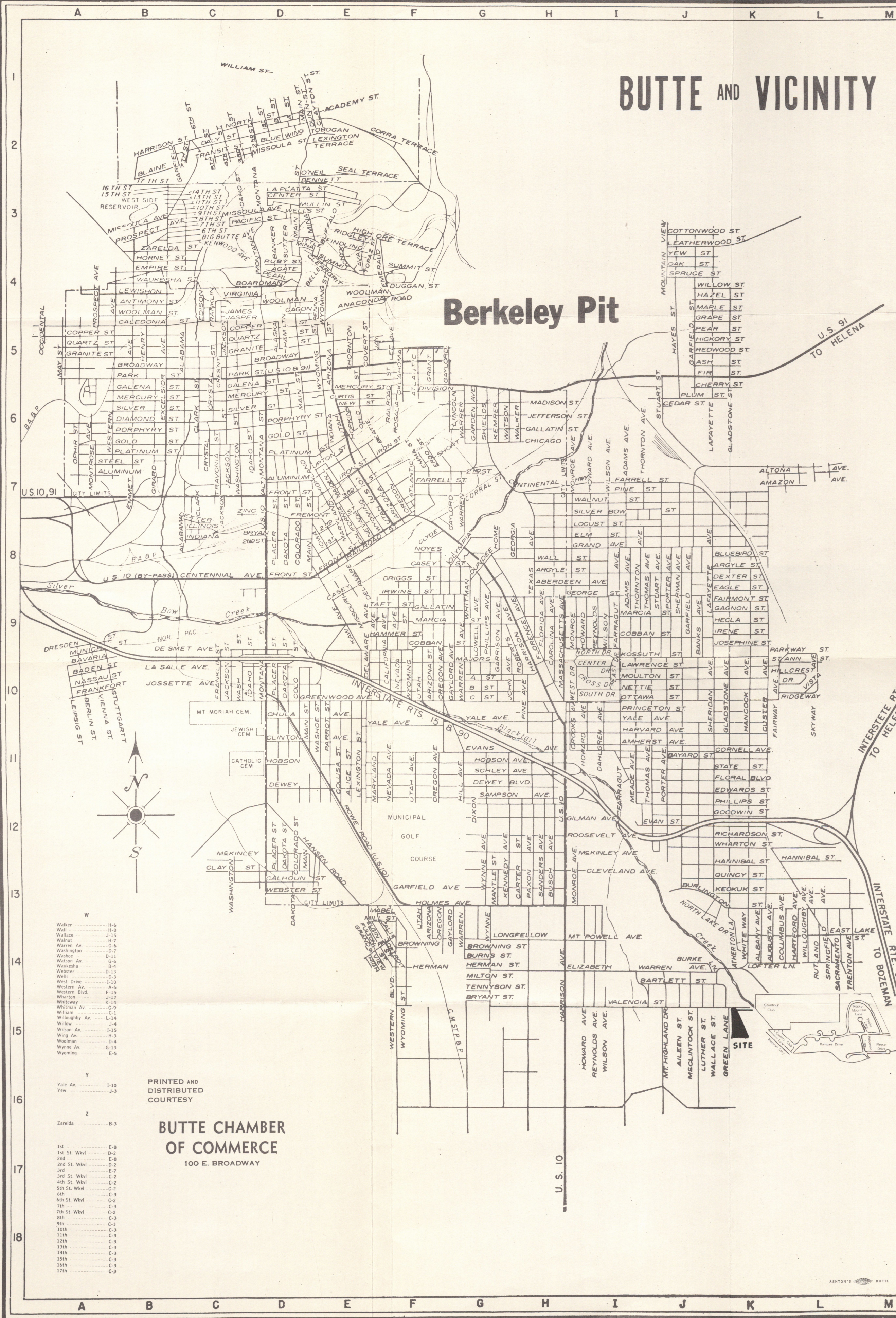


BUTTE STREET INDEX GUIDE

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BUTTE AND VICINITY



BUTTE CHAMBER OF COMMERCE  
100 E. BROADWAY





— Country Club - Located east  
of the site

Home located in the Country —  
Club Addition - east of site







— View from the site looking  
to the north



View from the site looking —  
to the east



— View from the site looking  
to the south



View from the site looking —  
to the west



turn onto the interstate 15 and 90 at the Harrison interchange and travel west to the Montana Street interchange where one can reach the uptown business district by traveling north. Saint James Community Hospital is located near the uptown business district; the Silver Bow County Hospital is located 15 blocks from the site.

#### ZONING REGULATIONS

This area has experienced a great amount of new residential construction in past years, and it is in this southeast direction from the city that most construction has been and is expected to take place. Homes in this area are, in most cases, of a high standard.

There is at present no zoning or land use restrictions outside the city limits. In this case state and federal building codes will probably be followed.

#### VEGETATION AND OTHER NATURAL FEATURES

The site has an abundance of trees on it which are nearly all cottonwoods; there are a few Jack Pines. There are trees along the east side of the site at about 20 foot intervals which separate the site from the golf course. There are also trees along the west side of the



site separating the site from Green Lane.

There is approximately three inches of topsoil on the site. More may have to be moved in to plant grass. Presently there are only sagebrush and wild grasses growing on the site in addition to the trees.

Soil conditions are not definite but tests were made for the apartment building directly east of the site and it was found that there was 18-24 inches of course sandy loam over fairly course textured sand. The bearing strength was found to be high.

Juniper trees are supposed to grow well in this area as is Bluegrass Fescue Clover. 4

#### AVAILABILITY OF UTILITIES

There are water, gas, and power lines easily available for this site. There is also a metro sewer main available at Elizabeth Warren street which is  $1\frac{1}{2}$  blocks away. Power and telephone lines have been run underground in the Country Homes Addition and will probably be run underground here.

At present cable television facilities are <sup>not</sup> available, but they should be within the next year according to the Butte Cable TV service.



# **Function Of The Building**





## BUILDING DESIGN let should be available for mobility

Both the interior and exterior of a retirement home should have the expression of a residential character, giving a home-like atmosphere suitable to the local environment and climate conditions. The design should be visually appealing and effectively related to the size, shape, and topography of the site. The design must be functional and provide for the safety, health and general welfare of occupants who will be of retirement age. may store large belongings such

Because the occupants are retired people, some general criteria should be considered: illumination

1. The accommodations should be small and compact, both for economy and convenience, minimizing the problems of housekeeping.
2. Fireproof construction should be used to allow for maximum safety of the occupants.
3. The home should be pleasant, liveable and a source of pride and affection for the occupants. perature in all storage rooms,
4. A high degree of privacy should be provided.
5. The home should be air-conditioned to allow for maximum comfort of the occupants at all times. mechanical ventilation. All bath-



6. Facilities should be available for hobbies and crafts.
7. There should be lounging areas which can be used for meetings or other group activities.
8. There should also be out-of-door facilities such as landscaped sitting areas and recreation areas.
9. There should be storage space outside of apartments as well as inside in order that occupants may store large belongings such as trunks etc.
10. A higher degree of artificial illumination than is normal should be used in all areas where the needs of older persons shall be provided.
11. An adequate heating system shall be employed to maintain a temperature of 80 degrees Fahrenheit in all bathrooms, 75 degrees in all other habitable rooms and corridors and a lower temperature in all storage rooms, workrooms, and other similar spaces.
12. Kitchens and bathrooms that do not have windows in exterior walls shall be provided with mechanical ventilation. All bathrooms, especially, a good view since retired people will be spending a great deal of time indoors.



rooms and kitchens may be mechanically ventilated if so desired.

13. The arrangement of living units, workshops, recreation and hobby rooms, as well as the use of suitable building materials and methods of construction should be utilized to reduce the transmission of sound.

14. Non-skid flooring is of great importance in a building of this type to prevent falls. Highly glossy floors should also be avoided since they can give the psychological effect of being slippery although they may not be.

15. Smoothness and levelness is important for floors of this type and wherever possible thresholds should be avoided.

16. Wide door openings are desirable for persons using wheelchairs or crutches, and for the passage of stretchers.

17. Large, easy to grasp door knobs should be used.

18. Sliding doors on closets help to prevent accidents that occur with swinging doors that are left open.

19. Windows should provide ventilation, light, and especially, a good view since retired people will be spending a great deal of time indoors.



sink, a The heights of windows should permit a reasonable view while comfortably seated.

20. Vertical circulation should be kept to a minimum as this is one of the major problems of the aged. Whenever possible it should be avoided altogether. Ramps are preferred

over stairs because a wheel chair can be manipulated up them. Multi-storied buildings must have elevators. <sup>2</sup>

accessible and hard to clean areas should be avoided.

### LIVING UNITS

In all areas of the home it must be kept in mind that retired people are more likely to need wheel chairs and crutches than any other occupants. For this reason

With this criteria a living unit may consist of a one-room efficiency type, or may include one or two-bedroom units. A one-room efficiency type would consist of a living and sleeping area combined with a

small kitchen and dining area, either incorporated into one room or directly adjacent to the living area. In addition to this there would be a bathroom

as well as closets and storage space. The one and two-bedroom units would include separated rooms for medicine cabinet, and towel storage. Here again the bathroom may have to be a little larger than

All living units shall have kitchen facilities which will include as a minimum the following: a



sink, a three burner stove and oven, refrigerator, work space in the form of a counter top, storage for utensils, dishes, cutlery, and food. Since elderly people will live here, stooping or reaching to gain access to any of these areas of the kitchen should be held to a minimum.

As a safety precaution, electric instead of gas ranges should be used; floors should be non-skid material. Garbage disposals should be used and inaccessible and hard to clean areas should be avoided.

In all areas of the home it must be kept in mind that retired people are more likely to need wheel chairs and crutches than any other occupants. For this reason corridors and all their passage ways within the living quarters must have railings and allow ample room for such passage.

The dining area is no exception and therefore there should be ample room for a person to manipulate a wheel chair to the table.

In the bathroom the minimum requirements are: toilet, lavatory, bathtub or preferably a shower, medicine cabinet, and towel storage. Here again the bathroom may have to be a little larger than in a wheel chair to maneuver. Closet space for a retired couple will be smaller than for most other couples although there should be ample storage space.



normal to accommodate wheel chairs. It is a good idea to have a rather large medicine cabinet since elderly people usually have more medicine to store than the average person. A shower seems to satisfy the needs of the aged better than a tub because they do not have high sides to climb over and there is less chance of falling asleep.

The living room should consist of living room furniture situated in both a pleasing and functional arrangement. Since this is the most used room in the home, it should utilize an imaginative handling of materials, color, detail, and scale which will help in adding zest and graciousness. A good plan will permit more than a single arrangement of furniture so that the pattern of living for different tenants of differing tastes can be approached in different ways and also to create a new atmosphere for all families when desired.

The bedrooms should consist of typical bedroom sets with perhaps larger night stands so that medicine, facial tissues, and other articles will fit on the top of them within easy reach of the occupants. There should be ample space around the bedroom for a person in a wheel chair to maneuver. Closet space for a retired couple will be smaller than for most other couples although there should be ample storage space.<sup>3</sup>



## COMMON SERVICES

In addition to private living quarters, a retirement home also consists of common facilities for use by all. These common rooms are the core of any type of congregate living. "If a home for the aged is to be a 'home' it must be one in which the residents are part of a communal society, although each remains at all times an individual personality." <sup>3</sup> The privacy of his apartment permits the resident to maintain his individuality; the communal rooms allow residents to share ideas and experiences with others.

There must be an emphasis on small intimate groupings. There can be privacy in the midst of activity. Provision should be made for the proper arrangement of furniture, lighting, and drapes within the common rooms so as to highlight the selectivity of friendship within the larger group. Attractive decor should be part of every room. It should blend the furnishings so as to minimize the institutional aspect. No longer are drab browns and tans vital to proper maintenance. <sup>3</sup>

### Lounge

The lounge should be near the main entrance but not part of a public lobby. The need for small groups



and private conversations should be recognized. Residents should be able to talk with friends and relatives without having to move furniture from one part of the room to another. The lounge can be used by larger groups for recreational purposes such as films, concerts, plays, dances, and parties. A pantry might be located adjacent to the lounge, to facilitate the serving of refreshments and to encourage volunteer organization to participate in the programs. 6

#### The Recreation Room

It may be necessary to use the lounge for recreation, but if funds and space permit, a separate area for this purpose is preferable. This room should be adaptable to various kinds of programming -- movies, dancing, lectures, concerts, and the like. If possible this room should be divided into smaller areas when desired with the use of some kind of room dividers. There should be ample storage space adjacent to the recreation room for storage of chairs, tables, and other equipment to be used for parties and special events.

The recreation room should also be adaptable for use of religious services if so desired. 2



### Garden and Patio

The garden and patio should be a functional part of the total structure and must be considered in the over-all planning. With proper shade, comfortable furniture, and space for outdoor sitting, the modern concept of bringing the out-of-doors into the house can be effected in the home for the aged. Concerts, picnics and cook-outs, shuffleboard, croquet, and other activities can take place in the garden during the summer months. 3

### Library

Although the home I am designing is not large enough to allow for a library in its budget, I feel it is necessary to incorporate a small bookshelve in the lounge with periodicals, and recent and fresh material that would be appealing to individual tastes. Occupants of the home may also want to contribute to the collection.



# Aesthetics





One of the most important things that must be taken into consideration about a retirement home is the fact that people live there, and it is the responsibility of the architect to make that place feel like a home to its occupants.

It is the architect's responsibility to provide a background for living; no one can say for sure what effect a building may have on its occupants, but the architect, through his work, can help an unsure citizenry to a more adequate and richer way of life. A well designed building is never crowded but has adequate space to house all the functions for which it was intended. The apartments in this building should be small enough to keep house work to a minimum, but large enough to fulfill their functions and to make living in them as pleasant as possible.

In order to make an apartment as pleasant as possible, it is not only necessary to design the interior of the apartment carefully, but also to design surrounding areas in the building in a functional and pleasant arrangement. Then too, the building must relate to the site and its surround-



ing environment in a way that is fitting to its particular function.

One of the greatest hazards involved with a building of this type is that of creating an institutional appearance or atmosphere. Probably no greater mistake could be made on the part of the architect than if he designed the retirement home in such a way that it gave it's occupants the feeling they were confined to an institution. Therefore it is necessary to avoid the institutional look both on the interior and exterior of the building. There are at least two ways of avoiding such a look on the exterior: (1) To build a low rise complex using materials most commonly associated with residential construction and to incorporate residential design elements into the building, and (2) To build an apartment complex anywhere from two stories up in which the overall appearance would be one of an apartment house rather than an institution. In the interior the hospital plan must be avoided where there are reception desks and then long wide corridors with nothing but doors on both sides. The plan must be broken up to give each apartment more of an individuality and definitely more privacy. The hospital



plan crowds as many people as possible into as small a space as possible in order to fulfill its function; this must be avoided in a retirement home. It is also very difficult to feel good when you are either visiting someone or you are a patient at an institution. This is only natural since institutions are created to house sick people. A retirement home, on the other hand, is not created to house sick people at all, but rather people who are at the retirement age and do not have a particular desire to live among people of all ages, but instead, people of their own age.

This brings us to one of the most important things that the architect must accomplish when designing such a place, and that of course is to develop a mood that is warm, cheerful, and informal. As was already discussed, avoiding the hospital plan is one way to help give these moods. The location of the site can help greatly to create the correct mood. Since a residential feeling is desired, the home should be located more around a residential area than a business or commercial area. The use of residential building materials and furnishings also helps as well as does the proper use



of color, both on the interior and the exterior of the building. Warm and cheerful colors should be used at all times. Tan or brown colors are no longer necessary. Obtaining the proper aesthetics for a retirement home is the most important step in creating a successful design and the proper environment in which retired people would desire to live.



# Economics





Cost is an important factor in building of any type. In order to justify the cost of a building or complex of buildings there must be a potential market for such facilities.

As has already been stated, there are millions of people in the pre-retirement or retirement age brackets who could afford new housing. According to the census bureau, in 1959, one-third of non-farm families headed by a person of retirement age had incomes of \$4,000 or more a year. In 1958, three-fourths of families headed by people 55 to 64 years old had incomes of \$3,000 or more.

The buying power of older people is naturally growing fast also. The Department of Health, Education, and Welfare stated that in 1958, people of pre-retirement and retirement age had incomes totaling about \$30 billion, compared with \$22 billion in 1954. Taking the amount of increase in four years as \$8 billion, the total income of pre-retirement and retirement aged people must have been at least \$46 billion in 1967.

The Social Security Administration found that in 1960, 88% of people 60 and over were employed and (or)



received social security benefits, compared with 52% in 1950. Once again this figure is steadily increasing and helps to justify the feasibility of retirement housing. There are no current figures to pinpoint the assets of people in the retirement market but a Federal Reserve study of older person's finances in 1955 showed that the average couple or single person 60 and over had a net worth of \$8,400.00. All statistics indicate that this net worth is considerably more at present.

(2) I don't think that there is any doubt that retirement age people are available and have the money to buy or rent retirement housing in the United States. Butte, I feel, has a greater problem than most areas in the United States and therefore there is an even greater need for such housing. My reasons for the previous statement are these: (1) Butte at present, has never had any kind of retirement housing, (2) There has only been one apartment house built there since 1925 and that is out of the price range of the average retired person, (3) At present over half the people living in Butte are 50 and over. The reason for the large percentage of retired people



in Butte is quite simple. There is nothing at present, in Butte to encourage younger people to live there. These facts were pointed out by a Butte businessman, Paul Hostenstein.

There are, I would say, two types of retirement homes, (1) A retirement home with infirmary facilities, medical personnel, and aids to help the aged in their daily activities. This type of facility would consist of public dining room, lounges and recreation facilities. Such things as laundry would be done by personnel. (2) A retirement home with private dining facilities, public lounges and recreation as well as private living quarters. This type would contain laundry facilities for the people to use. There would be no medical facilities or personnel available. I am designing the second type of retirement home for several reasons. One reason is that the first type of retirement home is much more like a nursing home and Butte is fortunate enough to have a few of these. A retirement home of this type is for people who are ill and (or) cannot take care of themselves due to their age. The majority of retired people, however, do not fall into this

The Warmth Calculator Method lists four (4) classes of apartment buildings:



category so why should they pay for care they do not need. Another reason is the environment that the second would consist of as against the first. The first type is more institutional and that is something I want to keep away from.

The cost of the first type of home would be greater than the second. The National Committee on the Aging in 1957 revealed that the cost of building a home for the aged (with infirmiry facilities) ranged from \$8,000 to \$12,000 per bed. A home without such facilities would naturally be less. Hillcrest Homes in Bozeman, cost approximately \$1,810,000. The approximate cost per bed was \$15,000. The major reason for fluctuation in cost is the time that the building is being constructed and the location where it is being constructed. Because construction costs, site and site improvement costs, operation and maintenance costs will not be known until the preliminary design is complete, the segregated cost method of estimating cannot be used at this time. The best method to use at this time would probably be the Marshall Calculator Method for apartment buildings. The Marshall Calculator Method lists four (4) classes of apartment building: and there are an abnormally large number of people of retirement age in that area.



Class A -- Buildings having fireproofed structural steel frame with reinforced concrete or masonry floors and roofs.

Class B --- Buildings having reinforced concrete frames and concrete or masonry floors and roofs.

Class C -- Buildings having masonry exterior walls and wood or steel roof structure.

Class D -- Buildings having wood or light steel frame and roof structures.

Class C construction lists under its excellent type of construction \$14.90 per square foot. If for each person or for each bed there were 500 square feet of space including hallways, lounges, recreation, washing facilities as well as living quarters, and this figure is a maximum amount needed, then the cost per bed would be \$7,450.00. This figure includes everything. It is a rough estimate but about the best that can be accomplished at this stage of the project.

I don't think there will be any problem to fill a home of this type in the Butte area due to the fact that there are no such homes now and there are an abnormally large number of people of retirement age in that area.



# Design



APARTMENTS FOR ELDERLY  
PERSONS, Scarborough,  
Ontario. Chapman & Hurst,  
Toronto, Ontario, Architects.  
One of two similar buildings  
both painted 100% with  
Pratt & Lambert products.



I am designing this home to contain approximately 50 apartment units. I am figuring that 50 percent of the occupants will be married couples and the remainder will be single, divorced or widowed. Tables I and II give a good idea of space required for such living units. <sup>2</sup>

Since Butte already has a number of rather old apartment houses that do not cost much to rent and since there has been only one apartment built in the last thirty years I feel that it is necessary to build a high quality home that will give retired people all the luxury and all the extras they desire.

Retired people today are as active and vigorous as middle aged people were a few decades ago. Earlier generations were satisfied merely to wait out their remaining days, but today's shorter work week, increased leisure, and longer period of retirement emphasize the need for ways to occupy one's time and for the optimal environment in which to enjoy it. It is with this feeling towards the retired people of today that I intend to design my retirement home.

|           |    |     |     |     |
|-----------|----|-----|-----|-----|
| HL-D      | 24 | 240 | 240 | 240 |
| LR-DH     | 2  | 240 | 240 | 240 |
| LR-D-BR   | 2  | 240 | 240 | 240 |
| LR-BR     | 2  | 240 | 240 | 240 |
| K-D       | 2  | 110 | 110 | 110 |
| L+D area  | 2  | 150 | 150 | 150 |
| Kitchen-D | 2  | 80  | 80  | 80  |



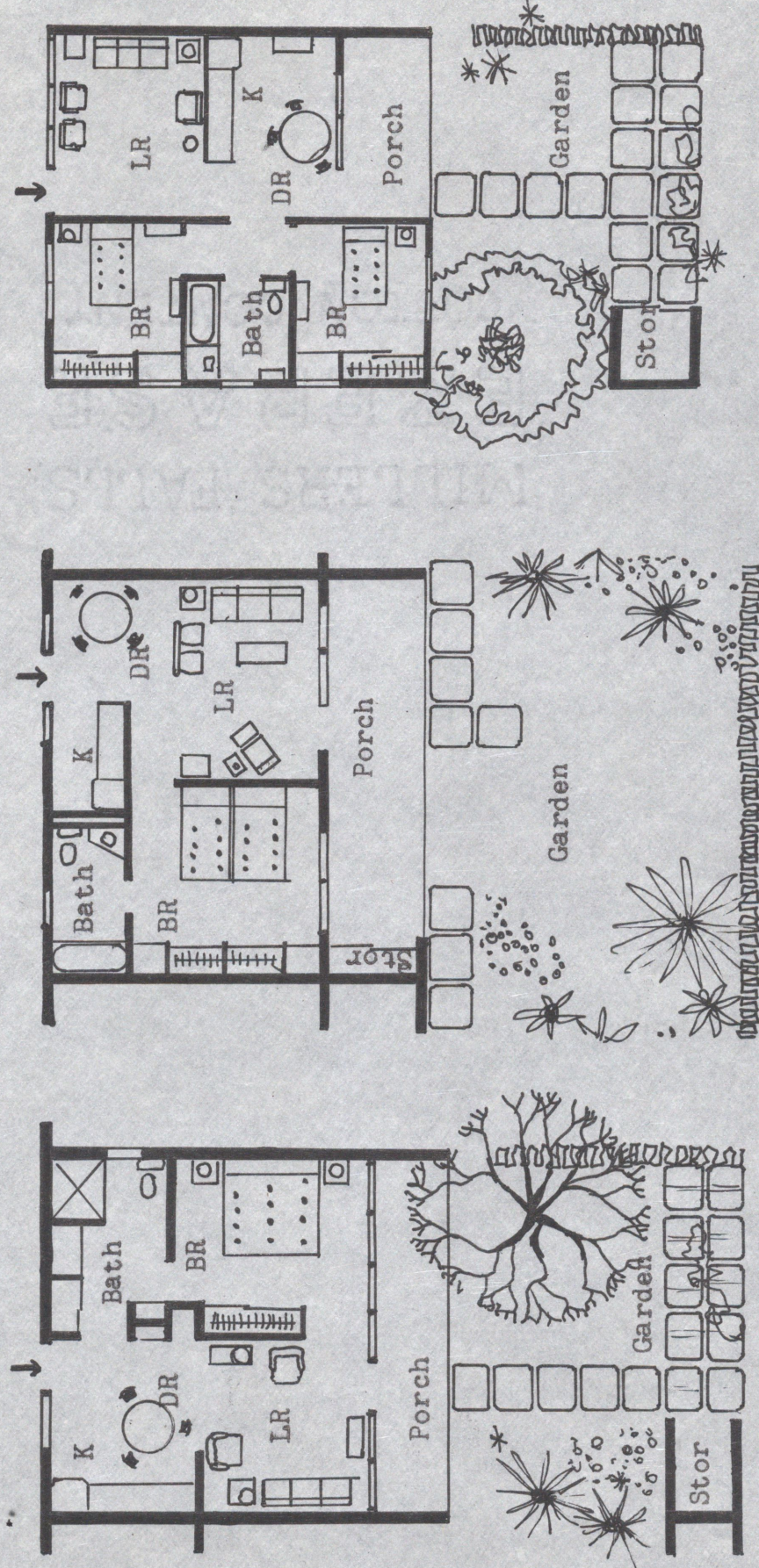
Table I  
Allowable Room Count and Minimum Room Sizes for  
Separate Rooms

| Name of Space       | Room Count    | O-BR                | 1-BR | 2-BR | 3-BR | Least Dimension |
|---------------------|---------------|---------------------|------|------|------|-----------------|
|                     |               | Min. area (sq. ft.) |      |      |      |                 |
| LR                  | 1             | -                   | 160  | 160  | 170  | 11'-0"          |
| DR                  | 1             | -                   | 100  | 100  | 110  | 8'-4"           |
| K                   | 1             | -                   | 60   | 60   | 70   | 5'-4"           |
| BR                  | 1             | -                   | 120  | 80   | 80   | 8'-0"           |
| K'ette              | $\frac{1}{2}$ | 40                  | 40   | -    | -    | 3'-6"           |
| Total BR            | -             | -                   | 120  | 200  | 280  | -               |
| Other               | 1             | -                   | 80   | 80   | 80   | 8'-0"           |
| $\frac{1}{2}$ -Bath | $\frac{1}{4}$ | -                   | -    | -    | -    | -               |
| Bath                | $\frac{1}{2}$ | -                   | -    | -    | -    | -               |
| Foyer               | $\frac{1}{4}$ | 20                  | 20   | 20   | 20   | 4'-0"           |
| Porch               | $\frac{1}{4}$ | 70                  | 70   | 70   | 70   | 6'-0"           |
| Terrace             | $\frac{1}{4}$ | 120                 | 120  | 120  | 120  | 8'-0"           |

Table II  
Allowable Room Count and Minimum Room Sizes for  
Combined Spaces

| Combined Space | Comb. Room Count | LIVING UNITS WITH   |      |      |      |
|----------------|------------------|---------------------|------|------|------|
|                |                  | O-BR                | 1-BR | 2-BR | 3-BR |
|                |                  | Min. area (sq. ft.) |      |      |      |
| LR-D           | $1\frac{1}{2}$   | -                   | 200  | 200  | 200  |
| LR-DR size     | 2                | 240                 | 240  | 240  | 260  |
| LR-D-BR        | 2                | 240                 | -    | -    | -    |
| Lr-Br          | 1                | 190                 | -    | -    | -    |
| K-D            | $1\frac{1}{2}$   | 100                 | 110  | 110  | 110  |
| L-D area       | 2                | -                   | 150  | 150  | 160  |
| K'ette-D       | 1                | 80                  | 80   | -    | -    |





Examples of what apartments in a retirement home might look like

Not drawn to scale



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A RETIREMENT HOME FOR BUTTE, MONTANA

William J. Merriam

It is my belief that a retirement home should be a non-institutional place that offers retired people the privacy of their own home as well as the advantages of group living.

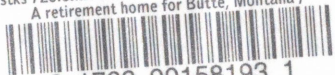
Therefore I tried to avoid the institutional look and to give my building a residential appearance by using materials and shapes indigenous to residential construction.

It has often been said that one is as old as he feels and as long as you keep active you feel much better. For this reason I have created areas in which people can work in crafts; play pool, cards, shuffle-board, horseshoes, golf; work in gardens; and also areas in which they can just relax and socialize or have dances if they desire. A kitchen is provided for parties or group dinners and there is also a public TV room and a library.

One problem involved with the design of apartments for older people is that of storage space. Over the years most people accumulate a large number of belongings and therefore they need more space than average.

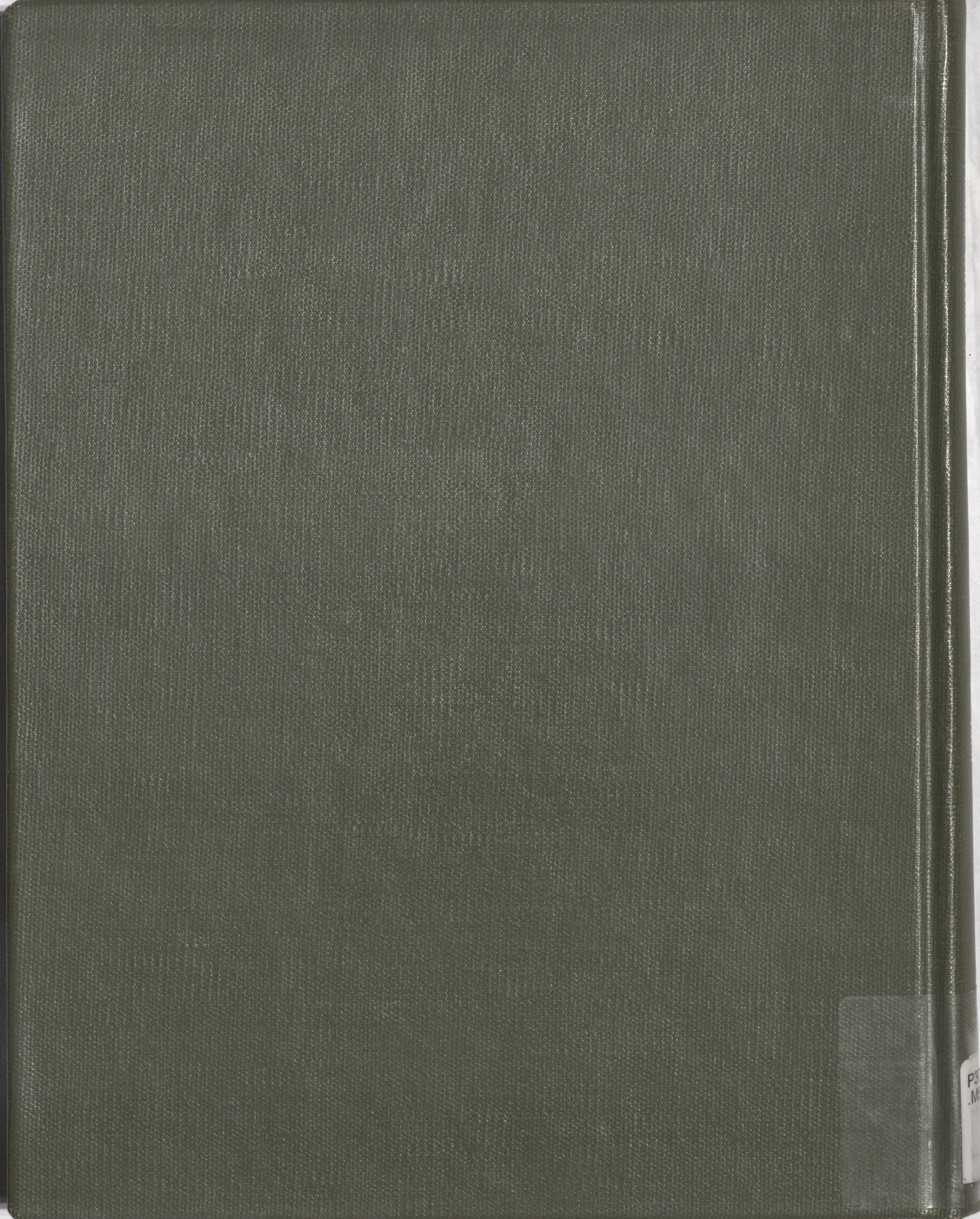
One last thing that I took into consideration in this design was that 54% of the retired people in this country are married and, as a result, I have 24 double units and 20 single units or about 54%.



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