Shelter for the Homeless

P378
.R561

Montana State University Library, Bozeman

A Shelter for the Homeless:
A Sociological Approach to Design

Ann Gustafson Robinson

A thesis submitted in partial fulfillment

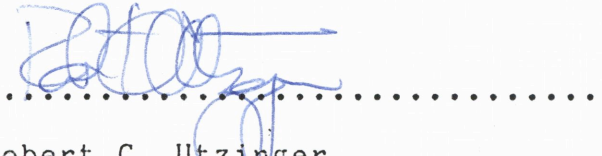
of the requirements for the degree

of

Bachelor of Architecture



Christian Bergum
Thesis Advisor



Robert C. Utzinger
Director, School of Architecture

Montana State University Bozeman, Montana March, 1986

T10.6
M76
R56
P378
.R561

Statement of Permission to Copy

In presenting this thesis in partial fulfillment of the requirements for an advanced degree at Montana State University, I agree that the Library shall make it freely available for inspection. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by my major professor, or, in his absence, by the Director of Libraries. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Ann G. Robinson ..... 3.4.86 .....

Ann Gustafson Robinson

Ordering Principle of the Design Process

A normative model of the design process can be established as one of:

- Establishing goals and directions from needs and desires
- Defining these goals in terms of available resources
- Identifying activity patterns and the psychological requirements for attaining a satisfying end product, and
- Establishing the required architectural elements to cater to these needs.

Adapted from

Jon T. Lang and Charles Burnette

Designing for Human Behavior[1]

Table of Contents

	Page
A. Ordering Principle of the Design Process	iii
B. Table of Figures	v
C. Needs and Desires	1
D. Goals and Directions	11
E. Resources Available	12
History of the Site	13
Character of the Site	26
F. Activity Patterns and Psychological Requirements	34
Facility Functions	38
Diagrams	48
Special Considerations	58
Space Descriptions	67
Space Program	93
G. Architectural Solution	97
H. Footnotes	114
I. Bibliography	117
J. Appendix A - Social Services Code of New York	122
K. Appendix B - Building Code Requirements	129

Table of Figures

Page

A. Map of Greater New York City..... 17

B. Map of Staten Island..... 18

C. Map of Stapleton and Vicinity..... 19

D. Site Map..... 20

E. Staten Island Analysis Maps

Growth of Staten Island..... 21
Population Changes..... 22
Population of Greater New York..... 23
Population Density of Staten Island..... 24
Poverty Areas on Staten Island..... 25

F. Context and Site Photographs..... 29

G. Climate Data..... 36

H. Traffic Flow Diagram..... 50

I. Access and Circulation Diagram..... 52

J. Proximity Diagram..... 54

K. Environmental Consideration Matrix..... 56

L. Zoning Diagrams..... 58

M. Architectural Solution..... 100

Needs and Desires

During the first three months of 1983, an average of 4,783 people were sheltered each night in New York City's emergency shelters; during the first three months of 1984, an average of 6,236 were sheltered nightly[2]. Although surveys differ, Governor Mario Cuomo has estimated that there are sixty thousand people living in the streets of New York City[3]. As Congressman Bruce Vento (D.- Minn) has remarked about the problem of homelessness throughout the country, "We shouldn't be diverted by an argument about numbers. The obvious fact is that we have an ever growing number of homeless people."[4] John Philips, AIA, chairman of AIA's Housing Committee, echoed this remark in an address before an AIA conference on "Housing the Homeless", " ... The numbers are unimportant. There are homeless people in this country and we need to do something about it."[5]

In order to understand the problem of homelessness and to do something about it, it is useful to examine the major causes behind the recent rise in homelessness, the demographics of the homeless population, the peculiar problems of homeless people, and what action has been taken. To quote Ronald Willis, senior mental health specialist with the U.S. House of Representatives, "You can't assume you know what these people want until you know them."[6]

Major Causes of Homelessness

1. Recession

The nation is currently prosperous, but many jobs lost in the recession of 1982 have not been replaced. Many people formerly employed in blue-collar positions in the steel, manufacturing and oil industries have not been able to find work. Without jobs or employable skills, these people have added to the numbers of the homeless.[7]

2. Cuts in Social Services

Severe cuts in the budgets of most Federal social services programs have dramatically reduced the amount of aid available. Many people who were formerly receiving welfare or other aid are no longer eligible for these benefits. Some of the people no longer receiving aid become unable to meet their expenses, and become homeless.[8]

3. Restrictions on Subsidies for Public or Low Income Housing

The amount of subsidized or inexpensive housing available is not keeping up with the growth in the number of low-income singles, couples and families. With subsidies unavailable, enough alterna-

tive housing is not being produced, and many are unable to find affordable housing.[9]

4. Urban Renewal

Many older buildings within cities have been torn down or renovated. These buildings with their low rents are critically important housing for low-income people. When these accommodations are disposed of, many people are unable to find other affordable housing.[10]

5. The Closing of Large Mental Institutions

A recent effort to close large state-run mental institutions has left large numbers of people on the streets without employable skills, without social skills and without money. Since there are few halfway programs, many of these people do not receive the aid they are eligible for, help in learning job skills or help finding a place to stay.[11]

The Demographics of the Homeless Population

The homeless population includes young and old people, men and women, single persons and family groups, as well as all races and all geographic and social backgrounds. More than two-fifths of the homeless

suffer from chronic health problems and an estimated one-third are mentally ill. In addition, a study by the Coalition for the Homeless indicates that one-third have a chemical dependence problem. The degree of education varies, with four-fifths having at least a General Education Diploma. Most have had employment difficulties, and nearly half had been unemployed for two or more years.[12]

Special Problems of the Homeless

Although each subgroup of the homeless population has its own peculiar needs, they all share a common problem: the physical and emotional effects of life on the street. These problems go beyond a simple need for shelter, and include a need for security and individual dignity.

The state of homelessness involves more than the absence of food or shelter. A home is a private place where a person can retreat from public view, much as an actor goes offstage to prepare for the next scene. A homeless person, by definition, has no home -- no place where he can exist offstage. Since the homeless person has no safe place to rest and recuperate, he must be constantly on guard. For the homeless person, "onstage" and "offstage" have no meaning -- he can be attacked where he sleeps and must perform private functions in public places.

In order to reintegrate homeless persons into society, it is necessary to provide them with an opportunity to re-create their own private and public selves. Shelter which is provided should supply food and shelter and a place where a homeless person can re-establish his identity.

Types of Action Being Taken

The homeless person perceives no positive social role. The homeless person has no family, friends, or job to support his perception of himself as a useful member of society. He exists outside everyday society and survives any way he can. He begs for money, scavenges for food, and relieves himself in public spaces. These actions and the high-profile behavior of some homeless people help to alienate the homeless from society.

Shelters for the homeless provide security and can help them regain a social role on some level. Because of the diversity of the homeless population, many different kinds of shelters have evolved.

Temporary shelters:

A temporary shelter's primary purpose is to house homeless people who desire shelter. The average length of stay in a temporary shelter

is a week or less, accounting for half of all shelter usage. These shelters are large, and many have not attempted to treat the the social needs of the individual resident. This approach is justified in the attempt to provide for the physical needs of as many homeless as possible. Recently, temporary shelters have been trying harder to meet the social needs of their residents.[13]

Some possible residents of the temporary shelter may be homeless because of a momentary housing crisis, subsequently alleviated by the shelter resident himself. Others have been homeless for longer periods of time, and are in need of semi-permanent or long-term shelter. Many of these people also need some degree of physical or psychosocial rehabilitation. Referral services provided by the staff of any shelter should help to relocate these residents to their best advantage.[14]

These larger shelters often have a reputation for violence.[15] For this reason many homeless people, especially women, do not seek or receive available shelter or assistance.

Semi-Permanent Shelter:

A semi-permanent shelter is a destination shelter. It should function not only to provide for the physical needs of the resident, but to provide social rehabilitation to help the homeless person regain

competence within society. A resident's length of stay in a semi-permanent shelter could run from two weeks to five months or more. Residents needing shelter and rehabilitation for much longer than five months should be referred to a permanent shelter, or to another long-term care facility, if one is available. Semi-permanent shelters vary from small to large in size. They also vary in the degree of social rehabilitation provided for the resident.[16]

This type of shelter is the most able to provide for all of the needs of homeless people. Its smaller size can allow more effective rehabilitation to take place, and its regular rate of turnover allows the semi-permanent shelter to accommodate a good percentage of those in need.

Permanent Shelter:

A permanent shelter is also a destination shelter. It serves the needs of those people who will need a great deal of care and rehabilitation if they are ever able to rejoin society. Many of this population are severely physically or mentally ill, and at this time it is difficult to obtain alternative housing for those so disabled. The low turnover rate of residents, whose average length of stay is a year or more, restricts the permanent shelter to providing for the needs of

long-term residents. A permanent shelter is both a facility to care for homeless and a facility to care for the severely physically or mentally ill.[17]

Goals and Directions

On a basic level, a shelter for the homeless should provide food, a secure sleeping space and medical assistance. Beyond the basic level, a shelter should respond to the residents' psychological and emotional needs for self-reliance skills and social interaction. Self-reliance skills such as job training and learning to cook and care for oneself will help residents function in society when they leave the shelter. Because of the isolating nature of homelessness, social interaction should be supported at all levels from passive observation to interaction with others in the shelter community, in small or large groups.

This thesis addresses the design of a shelter for the homeless which will respond to their need for social and self-reliance skills as well as meet their basic physical needs. This facility will also attempt to provide services for non-resident homeless people as well as to generate income to reduce the shelter's reliance on outside funding.

Resources Available

History of the Site

Staten Island was originally settled by the Dutch in the early 1600's. It has been occupied ever since. Staten Island is the most suburban and residential of the boroughs of the city of New York. Until 1964, when the Verrazzano Bridge linking Brooklyn and Staten Island was completed, the island was composed of several distinct villages. At that time, the only way to reach the island from New York was by the ferry to St. George on the North Shore. The population of the island was around 200,000.[18] After the bridge linked Staten Island by car to the rest of New York City, its population grew very quickly. This growth was the result of a large number of people who wanted to move away from the dense boroughs of Brooklyn and Queens. Suburban developments sprang up all over the island. These developments occurred along the commuter train line, away from the already-settled north shore. Today, the population of Staten Island is about 375,000.[19] It is densely settled, but low in scale. There are few buildings over 5 stories and none over 15 stories.

It is a truly suburban community. Most of the residents work in Manhattan, in one of the other boroughs, or in New Jersey. The only

major industry is the residential-service industry, including local banks, grocery stores, restaurants, pizza parlors, movie theaters, and car dealerships. The villages are composed of a cluster of services, and are surrounded by the original residential construction and suburban infill. Much of the construction in the original villages, especially those on the north shore, dates from the late eighteenth and early nineteenth centuries.[20]

The last few years have seen the beginnings of a gentrification process on the north shore of Staten Island, near the ferry terminal. The north shore was one of the first places on the island to have been settled with laborers instead of farmers, and it has long been one of the poorest sections of the island. The renewal process now taking place, due to a migration away from the high rents and overcrowding on Manhattan, is classic in its conversion of vacant buildings and low-rent apartments and SRO hotels into condominiums, flower shops, gourmet groceries, and elite cafes.

Stapleton, the village on the north shore where the site is located, is two stops on the train south of the ferry terminal at St. George (see maps following). Formerly the site of a shipbuilding

industry and a shipping terminal, Stapleton is now primairily residential.

Stapleton is beginning to show signs of renewal and gentrification. Several elite cafes, bars, and antique shops have opened in Stapleton recently, and the city square and some of the older buildings have been rehabilitated. The Stapleton Community Local Development Corporation of Staten Island is doing its best to perpetuate this trend.

The hub of the Stapleton community is Tompkins Square, an urban square which is bounded by commercial activity on all four sides. At the foot of the Square runs Bay Street, a major vehicular artery and bus route. The Square has plenty of trees and benches and, as discovered by many, is an enjoyable place to sit during the warmer months.

Stapleton, along with most of the urban areas of New York City and New Jersey, has seen a large increase in the numbers of homeless people in the last few years.[21] Urban renewal, now occurring in Stapleton, often decreases the amount of low-income housing available. Tompkins Square is shady and comfortable, and is a popular hangout for local homeless people. Their presence is upsetting to the merchants and

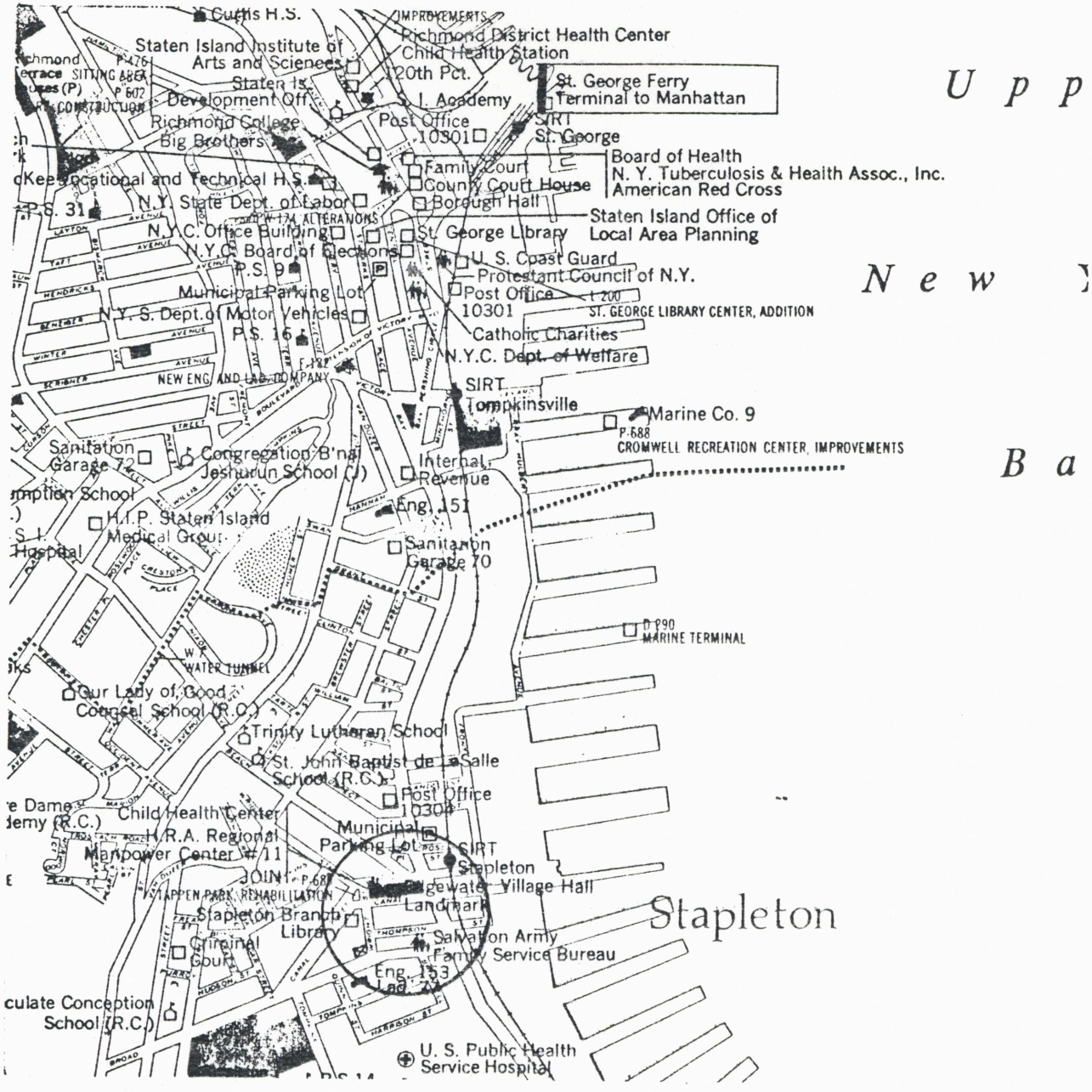
townspeople of Stapleton. Stapleton would like to present a clean and hospitable image to upscale settlers and capitalize on this opportunity to improve the locally depressed commercial climate.



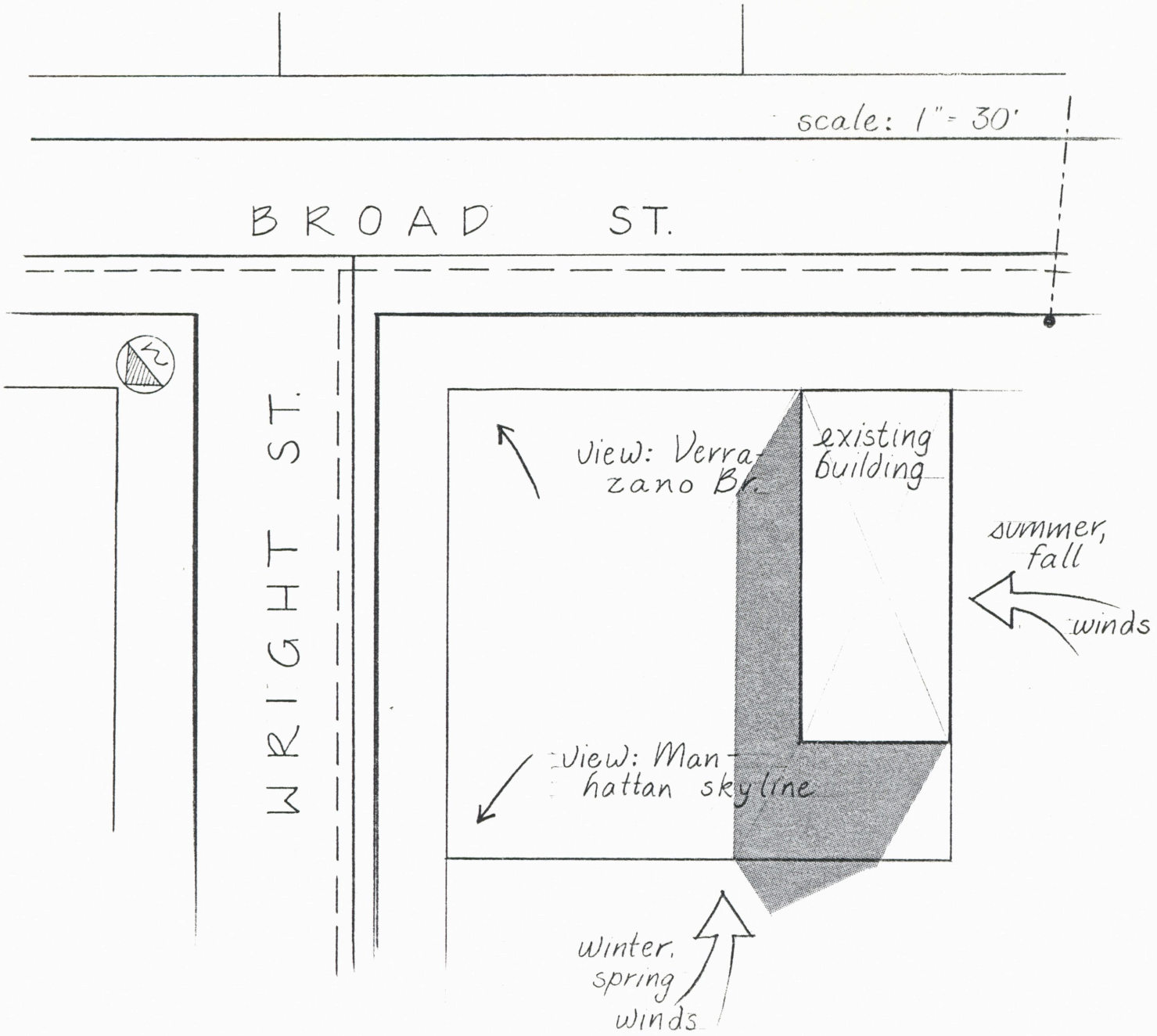
24

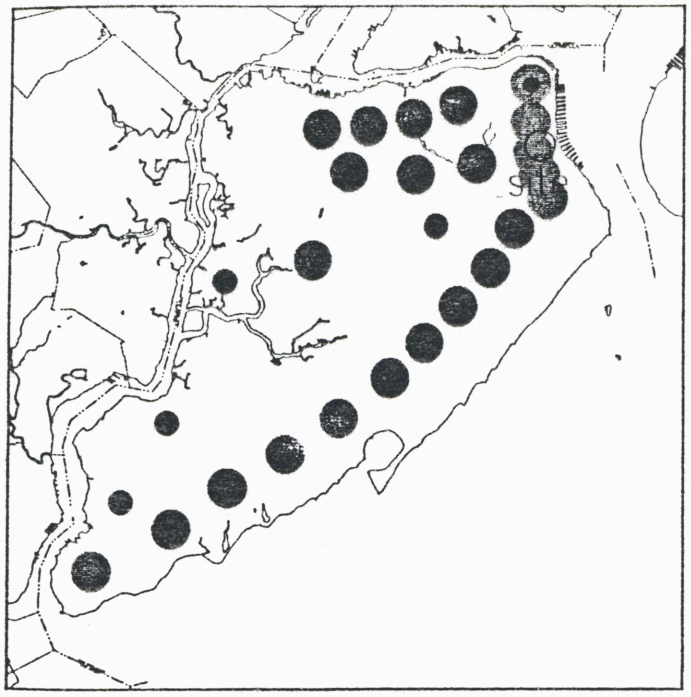

NORTH RICHMOND
MID-ISLAND
SOUTH RICHMOND
Howland Hook
Old Place
Richmond
West New Brighton
Randall Manor
Tompkinsville
New Brighton
Graniteville
Meiers Corners
Castleton Corners
Westerleigh
Sunnyside
Clifton
Rosebank
Shore Acres
Fort Wadsworth
Fairview
Manor Heights
Emerson Hill
Todt Hill
Old Town
Grasmere
Arrochar
Bloomfield
Willowbrook
Chelsea
New Springville
Travis
Lighthouse Hill
Richmondtown
Midland Beach
New Dorp
Oakwood
Oakwood Beach
Bay Terrace
Greenridge
Arden Heights
Great Kills
Woodrow
Huguenot
Pleasant Plains

25


Curtis H.S.
Staten Island Institute of Arts and Sciences
Richmond District Health Center
Child Health Station
20th Pct.
St. George Ferry Terminal to Manhattan
S. I. Academy
Staten Is. Development Off.
Richmond College Big Brothers
Post Office 10301
SIRT St. George
Board of Health
N. Y. Tuberculosis & Health Assoc., Inc.
American Red Cross
Family Court
County Court House
Borough Hall
Staten Island Office of Local Area Planning
P.S. 31
N.Y. State Dept. of Labor
N.Y.C. Office Building
N.Y.C. Board of Elections
St. George Library
U. S. Coast Guard
Protestant Council of N.Y.
P.S. 9
Municipal Parking Lot
Post Office 10301
ST. GEORGE LIBRARY CENTER, ADDITION
N.Y.S. Dept. of Motor Vehicles
P.S. 16
Catholic Charities
N.Y.C. Dept. of Welfare
NEW ENG. AND LAB. COMPANY
SIRT Tompkinsville
Marine Co. 9
P-688
CROMWELL RECREATION CENTER, IMPROVEMENTS
Sanitation Garage 72
Congregation B'nai Jeshurun School (J)
Internal Revenue
Eng. 151
H.I.P. Staten Island Medical Group
Sanitation Garage 70
D-890
MARINE TERMINAL
W.T. WATER TUNNEL
Our Lady of Good Counsel School (R.C.)
Trinity Lutheran School
St. John Baptist de La Salle School (R.C.)
Post Office 10304
Child Health Center
H.R.A. Regional Manpower Center #11
Municipal Parking Lot
SIRT Stapleton
Edgewater Village Hall
Landmark
Stapleton Branch Library
Salvation Army Family Service Bureau
Criminal Court
Eng. 153
Lad. 4
U. S. Public Health Service Hospital
Stapleton

26

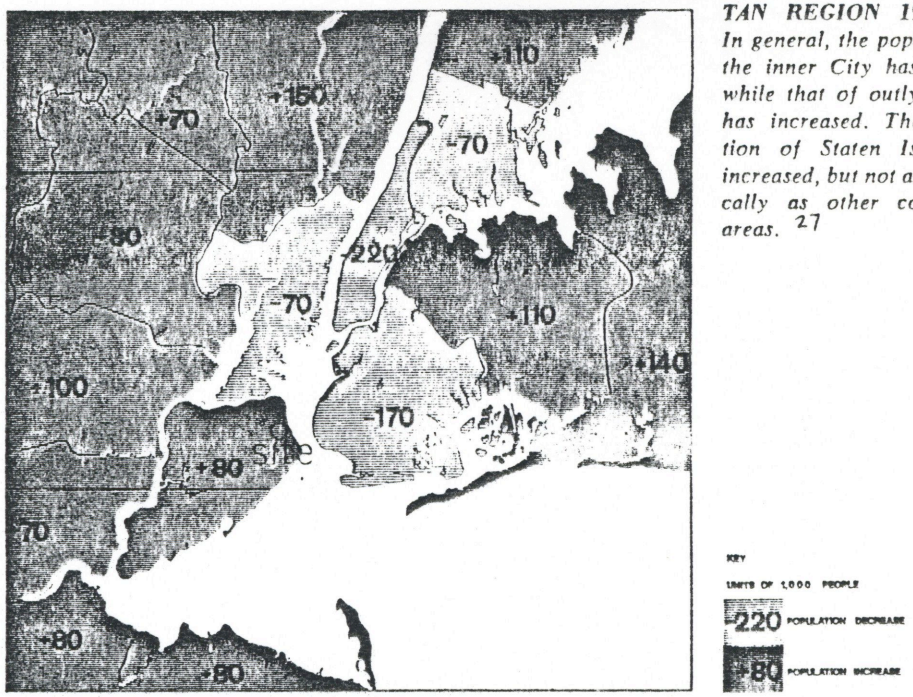

scale: 1" = 30'
BROAD ST.
WRIGHT ST.
existing building
View: Verrazano Br.
summer, fall winds
View: Manhattan skyline
winter, spring winds
water
sewer
electric

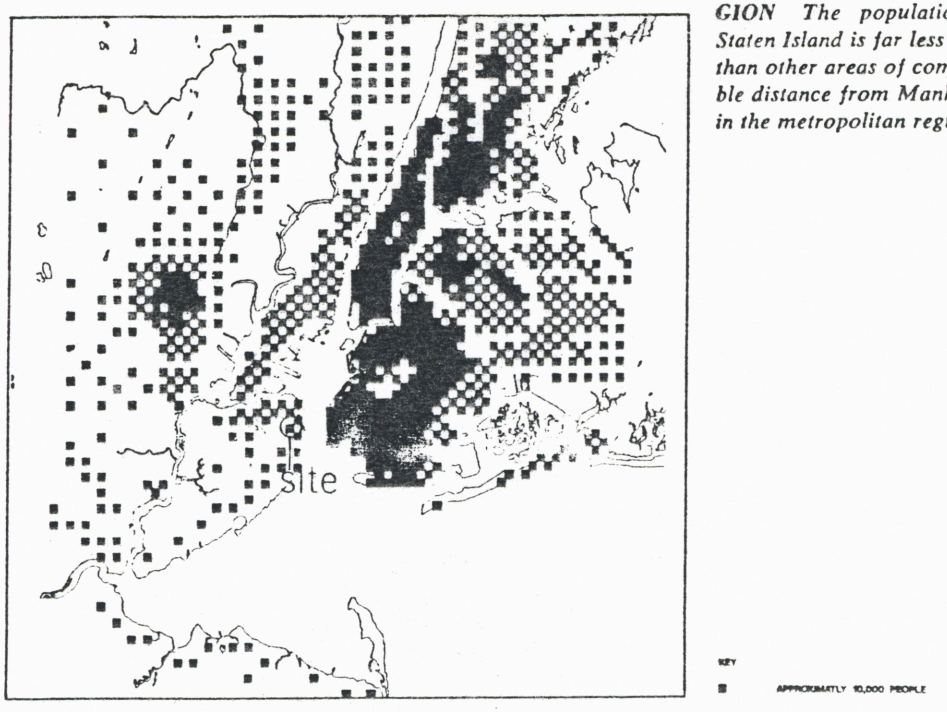


GROWTH OF STATEN ISLAND 1866-1964 *The SIRT, extended to St. George in 1886 and to the north shore shortly thereafter, accelerated the pattern of population growth along railway lines. St. George, with its consolidated rail and ferry terminals, became the natural county seat, replacing Richmondtown in 1898. West shore communities shrank in relative size as pollution and lack of mass transportation reduced the desirability of these areas.* [27]

POPULATION CHANGES IN NEW YORK METROPOLITAN REGION 1950-1970

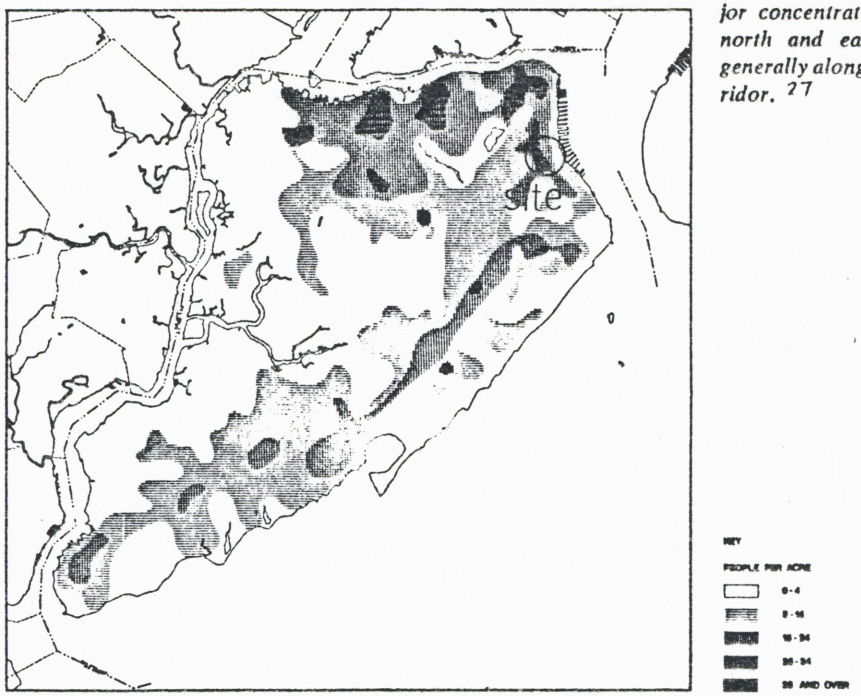
In general, the population of the inner City has declined while that of outlying areas has increased. The population of Staten Island has increased, but not as dramatically as other comparable areas. [27]

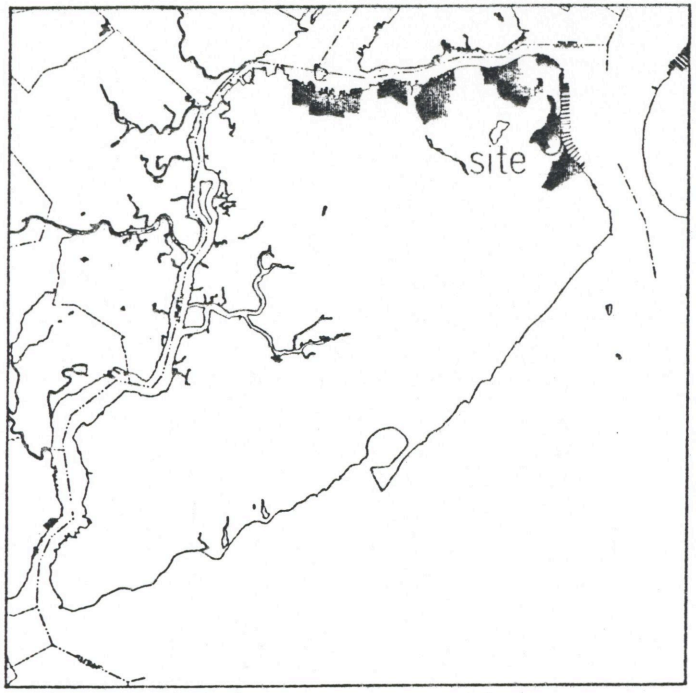




POPULATION OF NEW YORK METROPOLITAN REGION *The population of Staten Island is far less dense than other areas of comparable distance from Manhattan in the metropolitan region.* [27]

POPULATION DENSITIES *Population densities show major concentrations along the north and east shores and generally along the SIRT corridor.* [27]





POVERTY AREAS *The six designated poverty areas on the island center around the oldest north and east shore communities where there is considerable physical deterioration.* 27

Character of the Site

The language of Staten Island's built environment varies from suburban sprawl to medieval townships. In Stapleton, the residential context runs from two or three story attached brick walk-ups to large, three- or four-story Second-Empire houses. Many of these houses were once single residences, but have since been broken up into flats. A common material used to refinish these houses is asbestos shingle brick, usually tan in color. Most of the houses are run down compared to finer restored houses just north of Stapleton, but they are of modest quality.

In Stapleton, the commercial zone overlaps the residential. Many brick or stucco corner grocery stores are mixed in with the residences, although most are closed down. The major commercial buildings on Bay Street and around Tompkins Square are two- to five-story attached buildings. Most are brick, but some are of wood or stone construction.

Most of these buildings were built in the late 19th or early 20th century. They are worn, but could be restored or reused. None of these buildings was originally high-style, and if restored they would not have that kind of appeal. Several which have already been restored

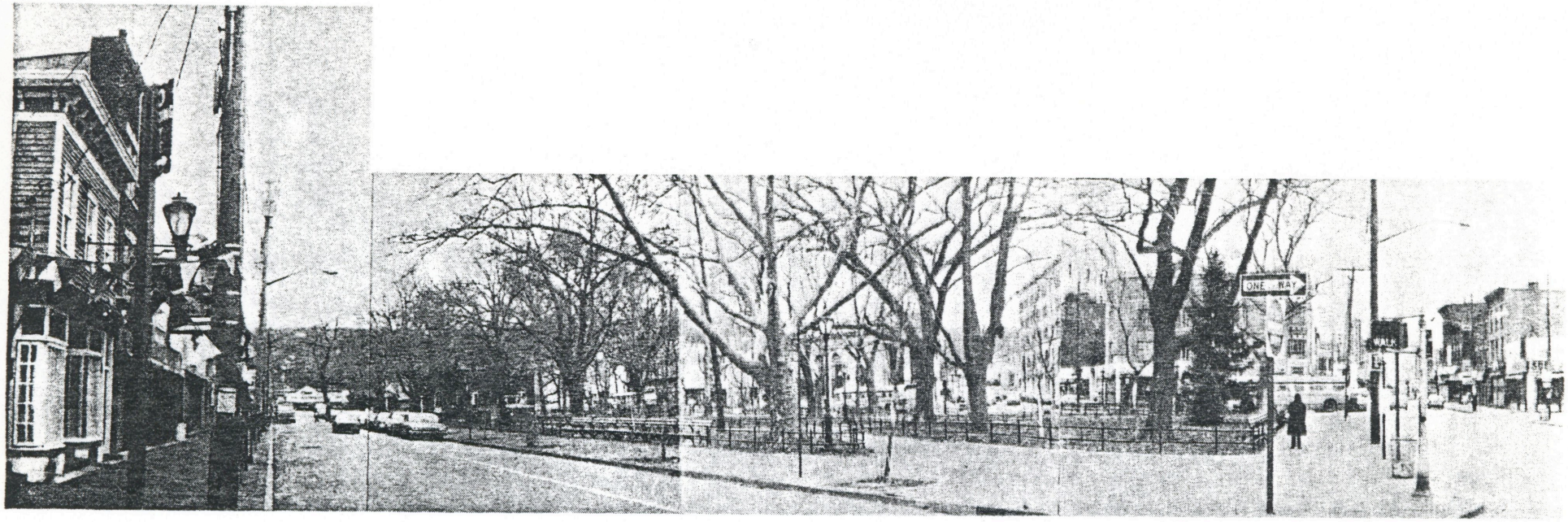
are situated on Tompkins Square, including a brick and stone library, a brick church and gazebo on the square itself, and a unique stone bank which occupies an acute corner site.

The site is situated on Broad Street, a residential street one block east of Tompkins Square. The buildings nearby are three- to five-story attached residential structures of brick or wood construction. Many have the tan or gray asbestos shingle brick applied over the original siding.

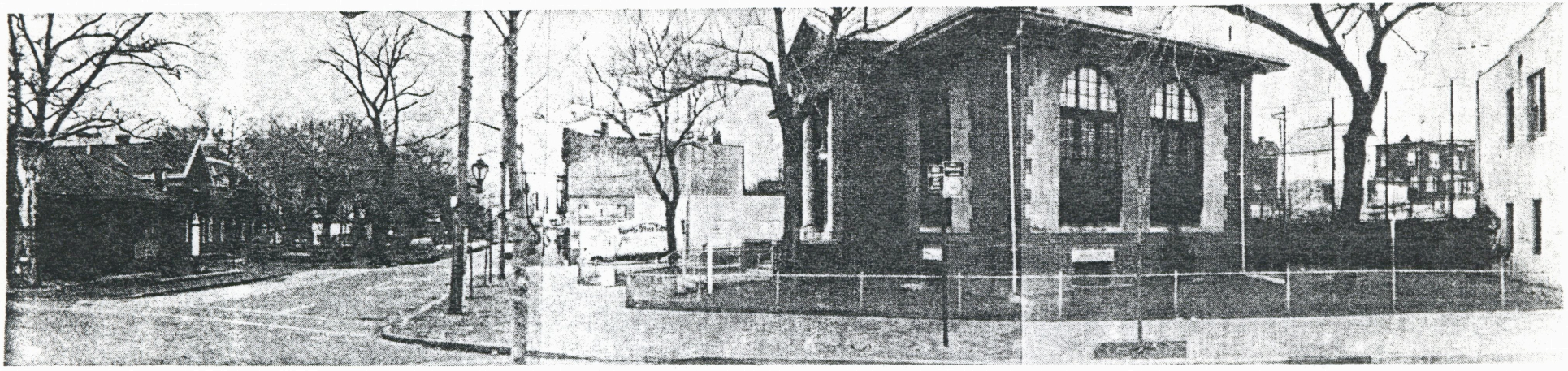
It is a quiet neighborhood not far from the major vehicular arteries of Bay, Van Duzer, and Canal Streets. The city buses and the commuter train (one block north of Bay Street) add to the noise generated by general auto traffic, especially during rush hours. During rainy weather, the foghorn at the ferry terminal in St. George is loud enough to be heard at the site. Since the site is screened from the busy streets by at least a block, these incidental noises do not cause a significant noise problem.

The best views from the site are the Manhattan skyline to the northwest and the Verrazzano Narrows Bridge to the northeast. They are not always visible when the air quality is poor. The view of the Manhattan skyline is screened from the ground level, but the bridge is

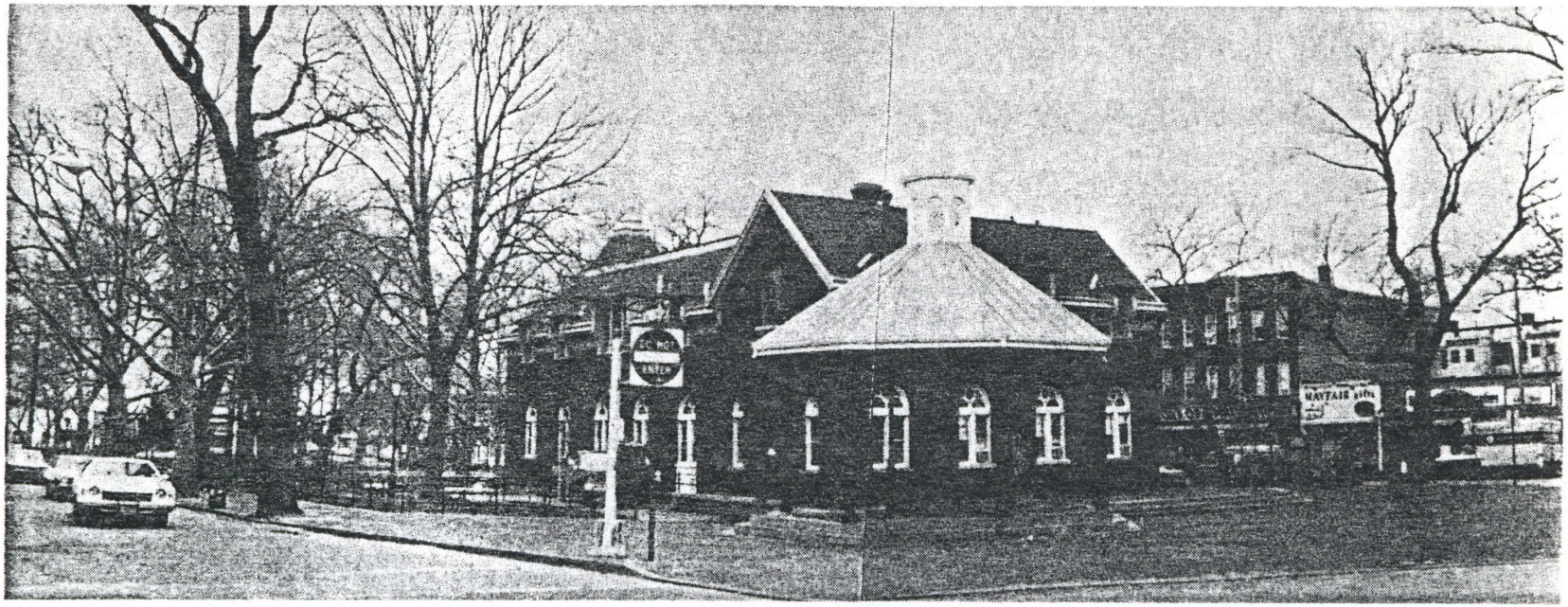
close enough and large enough to be seen from any level. Of the restored buildings on Tompkins Square, only the bank can be seen from the site itself.



Tompkins Square looking west from Bay Street and Water Street.



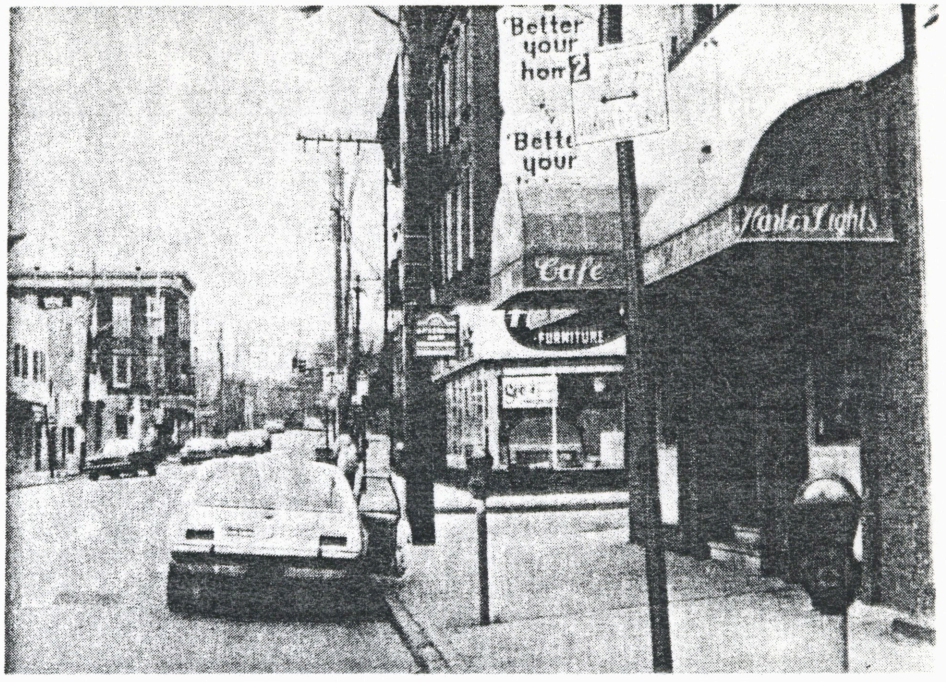
Restored church and library. Looking north at Tompkins Square from Canal Street and Water Street.



Restored church on Tompkins Square seen from the west.



Nearby cafe, typical of the neighborhood.



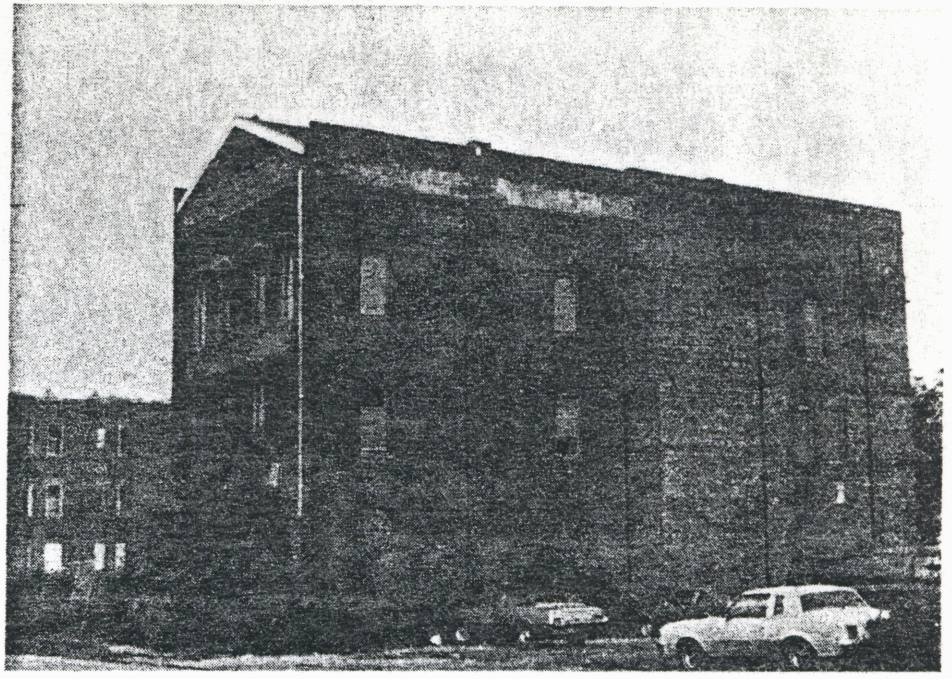
Another cafe ón Bay Street.



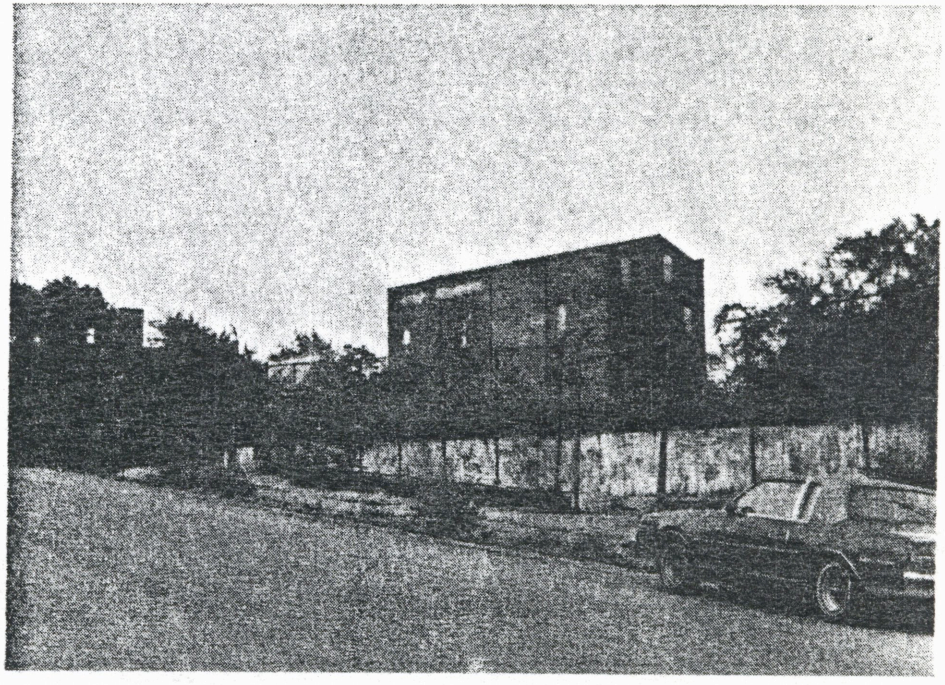
Approaching the site on Broad Street.



Existing building, south and west elevations.



Existing building, south and east elevations.



East and north elevations, seen from Wright Street near Tompkins Square Park.

CLIMATE DATA

	J	F	M	A	M	J	J	A	S	O	N	D	Annual
Mean number of days maximum temperature 90°F and above	0	0	0	0	1	4	7	5	1	0	0	0	18
Mean number of days minimum temperature 32°F and below	23	22	16	4	0	0	0	0	0	0	6	22	91
Normal total heating degree days Base 65°F	1029	935	815	480	167	12	0	0	36	248	564	933	5219
Hours of sunshine	154	171	213	237	268	289	302	271	235	213	169	155	2677
Mean sky cover in tenths 10 = total	6.2	5.8	5.9	5.2	5.8	5.7	5.6	5.2	5.0	5.0	5.8	6.0	5.7

Activity Patterns

Psychological Requirements

Facility Functions

A shelter for homeless people must attempt to serve the diverse needs of these people. Their physical, social, and personal needs must be addressed. In addition, the shelter should provide an atmosphere which encourages homeless people to seek and receive aid. The shelter should be concerned with its financial perpetuation, try to reduce its reliance on outside funding.

Physical Needs:

A principal function of the shelter is to provide for the immediate physical needs of its guests. It must provide a quiet, safe place to sleep for all of its residents. The character of the sleeping place can be refined to serve social needs, but a proper bed with clean linens is required. Another very important physical need is the need for nutritious, sanitary food, served on a regular basis. Residents also need toilets, sinks, and showers with which to care for themselves. Often in need of medical or psychological care, the homeless need a place to receive this care. Space for these activities to take place must be provided.

A list of spaces which are mandatory to serve the physical needs

of the homeless includes:

Sleeping areas

Kitchen and dining area

Adequate and convenient hygiene facilities

Space for medical and psychological treatment

Social Needs:

The social needs of the homeless person are magnified. A homeless person is alienated from other people and from society. To help residents regain trust in their environment and in other people, a sense of security must be established. The homeless person must be assured that he is safe and no longer defenseless. A private, safe place to sleep, retreat to, and store belongings can help provide this basic feeling of security. Knowing that the points of entry into the shelter are protected by the staff can add to that feeling of security.

After regaining trust in the shelter living environment, the homeless resident needs to relearn how to function as a member of a group or society. Various levels of social involvement should be available to encourage this rehabilitation. This diversity will help

meet the needs of each shelter resident, since each may be comfortable at a different level of socialization.

Levels in the socialization process range from the passive observation of others to active involvement with small and large groups. Opportunities for socialization which should be architecturally encouraged include the passive observation of other residents, interaction with the staff, involvement with a roommate or neighbor, interaction with an immediate neighborhood, extended neighborhood relationships, interaction with the entire shelter community, and interaction with society outside of the shelter.[23]

Spaces which are required to serve these social needs are:

Resident rooms:	Single or double, provided with a locking door and lockable storage space. Grouped to form small neighborhoods.
Bathroom facilities:	Shared with only a few other residents. Lockable toilet and shower stalls.
Entry lobby:	A place to watch traffic flow. A point of surveillance between the shelter and the outside world.
Community spaces:	Places for groups of varying sizes and varying needs of privacy to meet. The community room, the club room, and the dining area are included here.

Public spaces: A place to interact with the general public on a limited basis. Encourages shelter residents to feel themselves to be regular citizens rather than wards of the institution.

Personal Needs:

The homeless person needs assistance with the practical elements of coping with society. Most homeless people are not receiving and do not know how to receive the aid for which they are eligible, which helps to keep them at the poverty level they have reached.[28] They need assistance in applying for and receiving this aid. Homeless people also need help learning how to provide for themselves. They often need to learn employable skills, to learn how to get and keep a job, and to learn how to be a good tenant. Help finding employment and housing will also be needed. Residents may additionally need help learning to cook, clean, and maintain hygiene habits.

Spaces used to serve these needs are:

Aid Counseling space: To provide counseling in receiving aid and job training.

Facility Kitchen: Provides an opportunity to learn job skills in a low-pressure environment.

Laundromat and Cafe: Opportunities to learn job skills in less-insulated environments.

Resident Kitchen:	Allows residents to learn personal cooking skills.
Laundries:	Allow residents to learn to do their own laundry.
Bathroom facilities:	Secure and convenient place for residents to maintain personal hygiene. Emergency access for staff should be provided.
Entry lobby:	Bulletin boards for posting rental notices and employment notices. Telephones for public and resident use.

Non-Resident Assistance:

A two-sided approach should be used by the shelter toward homeless people who are not residents. The shelter should offer services which will make life on the street easier. They should also help people to get themselves off the street. These services should be provided without social stigma. Some services which could provide this help include a place to turn in cans and bottles for money, a place to shower, use the restroom and get clean clothes, a place to get information about housing and employment, and a place to use the telephone. The shelter should also encourage people using these services to seek shelter, and should provide a small amount of emergency shelter as well as referral to other shelters.

It is very important that the shelter appear safe and approachable to these homeless people, and encourage them to use the services provided. However, the primary intent of this facility is to provide for the social and physical needs of its semi-permanent residents, not to assume full-time care responsibility for an unlimited number of people. A large population would decrease the quality of the rehabilitation provided for each resident, since space is limited.

Spaces which will help to serve people living on the street:

Recycling Center: Should welcome people to cash in bottles and cans, unlike local groceries which are often hostile. The recycling center should have access to entry lobby of the shelter.

Public Shower: A place where homeless people can go to wash themselves or use the toilet. Should provide security for those using the showers or toilets, security for their belongings, and have clean clothes available. The public shower should also have access to entry lobby.29

Entry Lobby: Bulletin boards for employment and housing information, telephones and the service desk should be easy to reach from the main entry.

Financial Perpetuation of the Shelter:

The shelter facility should support itself as much as possible. In order to do so, the shelter needs a means of generating income. In this facility, the need to generate income will be met by a public cafe and a public laundromat.

The cafe will primarily seek a clientele from the local area. It will also be available to shelter residents for socialization on a limited basis. The cafe will have a limited menu, and will serve sandwiches, soup, and desserts as well as coffee, espresso, cappuccino, beer and wine. These food items are sinmple and inexpensive to prepare. To reduce costs, the shelter and the cafe will share kithchen facilities.

In character, the cafe should appear friendly, clean, and comfortable. It should not try to compete with the elite cafes and lounges on nearby Bay Street, which would alienate both shelter residents and the local residents. It is important that the cafe does not cater to the down-and-out, but tries to reach the working and middle class groups which live nearby. The cafe must be visually disassociated from the shelter to encourage patronage by the general

public and to reduce their reservations about patronizing a shelter-run cafe.

The public laundromat is for the use of the community. It will contain coin-operated washers and dryers, tables for folding, chairs and tables in a waiting area, and vending machines. It will serve not only to generate income for the cafe, but to increase the general level of activity in the shelter area. This will increase the visibility of the cafe and will help it to draw a clientele from the local residents. This activity will also help to involve the shelter in the community and will help residents feel a part of their surroundings.

Parking for cafe and laundromat patrons does not need to be supplied. The shelter, cafe, and laundromat are in a safe neighborhood and there is a sufficient quantity of on-street parking nearby. If the cafe and laundromat became successful beyond the needs of the shelter, excess profit could be used to support other programs for the homeless.

Spaces needed to support the cafe:

Street entrance
Seating
Service access

Kitchen
Restrooms

Spaces needed to support the laundromat:

Washers, dryers
Street entrance
Waiting area

Staff:

The duties of the staff members -- three or more as required by the Social Service Code of New York[30] -- are many and diverse. In order for the staff to perform these duties efficiently, certain architectural guidelines should be followed.[31]

Duties of the staff:

a. Managing the finances and day-to-day operations of the shelter.

b. Managing the employees of the shelter: kitchen, cafe, recycling shop, public shower, and custodial.

c. Arranging linkage services (doctor, psychologist, aid counselor) for the benefit of the residents.

d. Providing active surveillance of the complex to discourage crime.

e. Organizing group activities to further social rehabilitation, including tenant meetings, club meetings, special dinners, et cetera.

Guidelines:

a. Provide direct circulation throughout the entire complex from the central space of the main office.

b. Provide an office large enough for the staff members and required equipment, as well as a meeting area.

c. Provide a place for the staff to retreat from the demands of shelter residents and related duties.

Diagrams

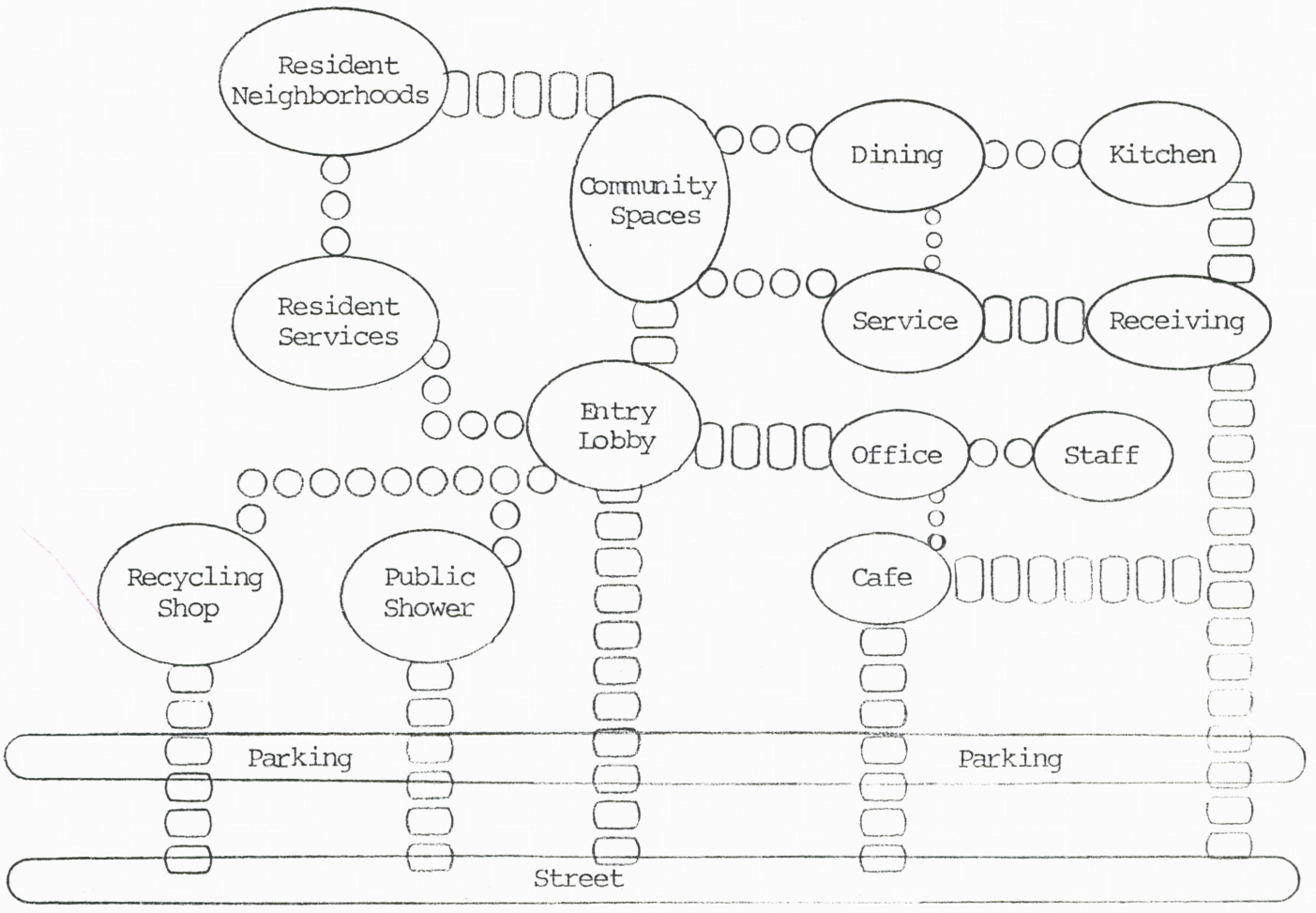
Traffic Flow

This diagram shows the major divisions of the shelter and the degree of their relationship to one another. The entry lobby and community spaces are each a focus of circulation, encompassing much of the circulation between secondary spaces.

SPACE INTER-RELATIONSHIPS

TRAFFIC FLOW

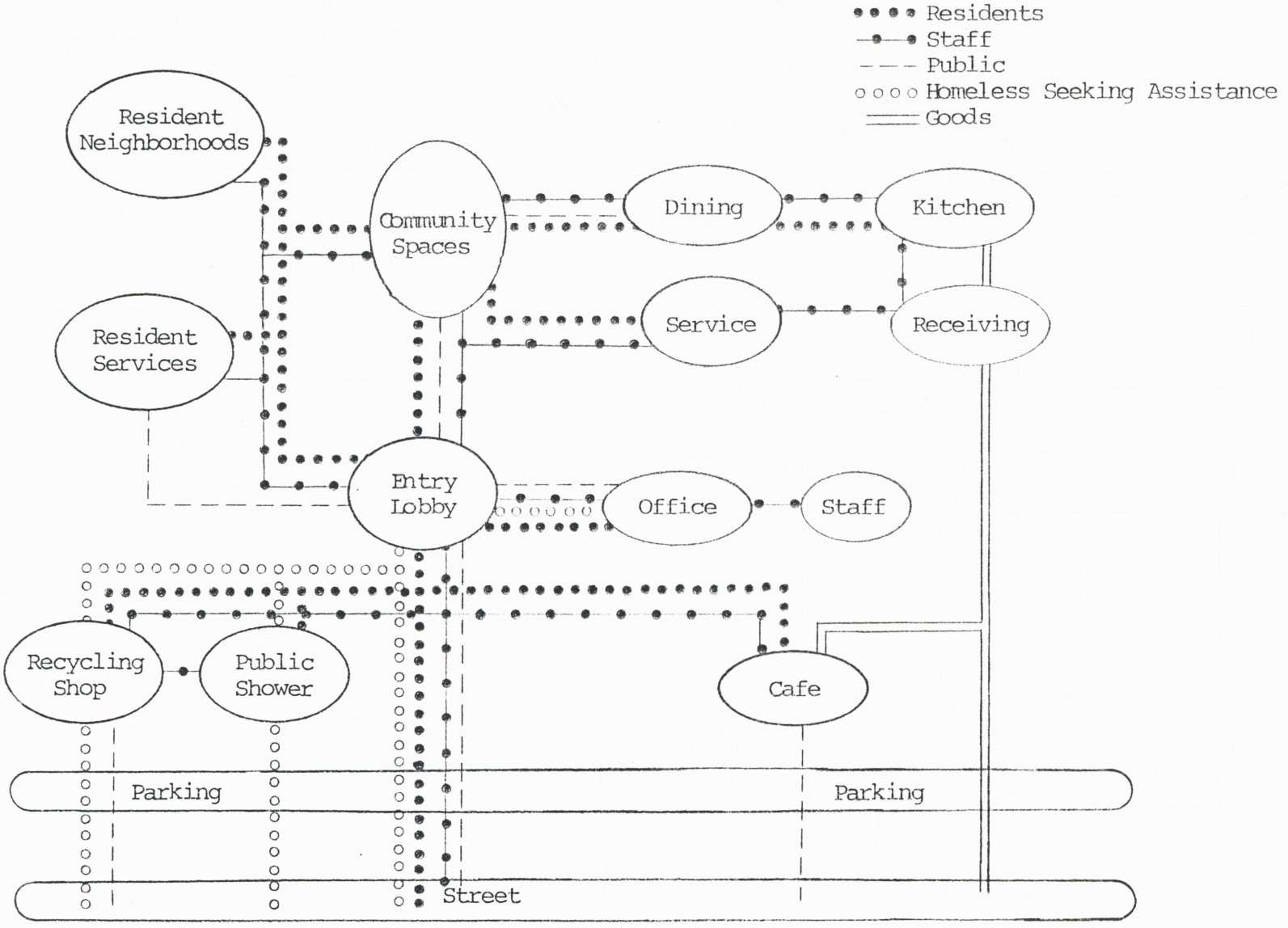
MAJOR LINK
INTERMEDIATE LINK
MINOR LINK



Access and Circulation

This diagram shows the circulation and access routes of various users within the facility. User groups include homeless people seeking aid, residents, staff, the general public, and the flow of goods in and out of the facility.

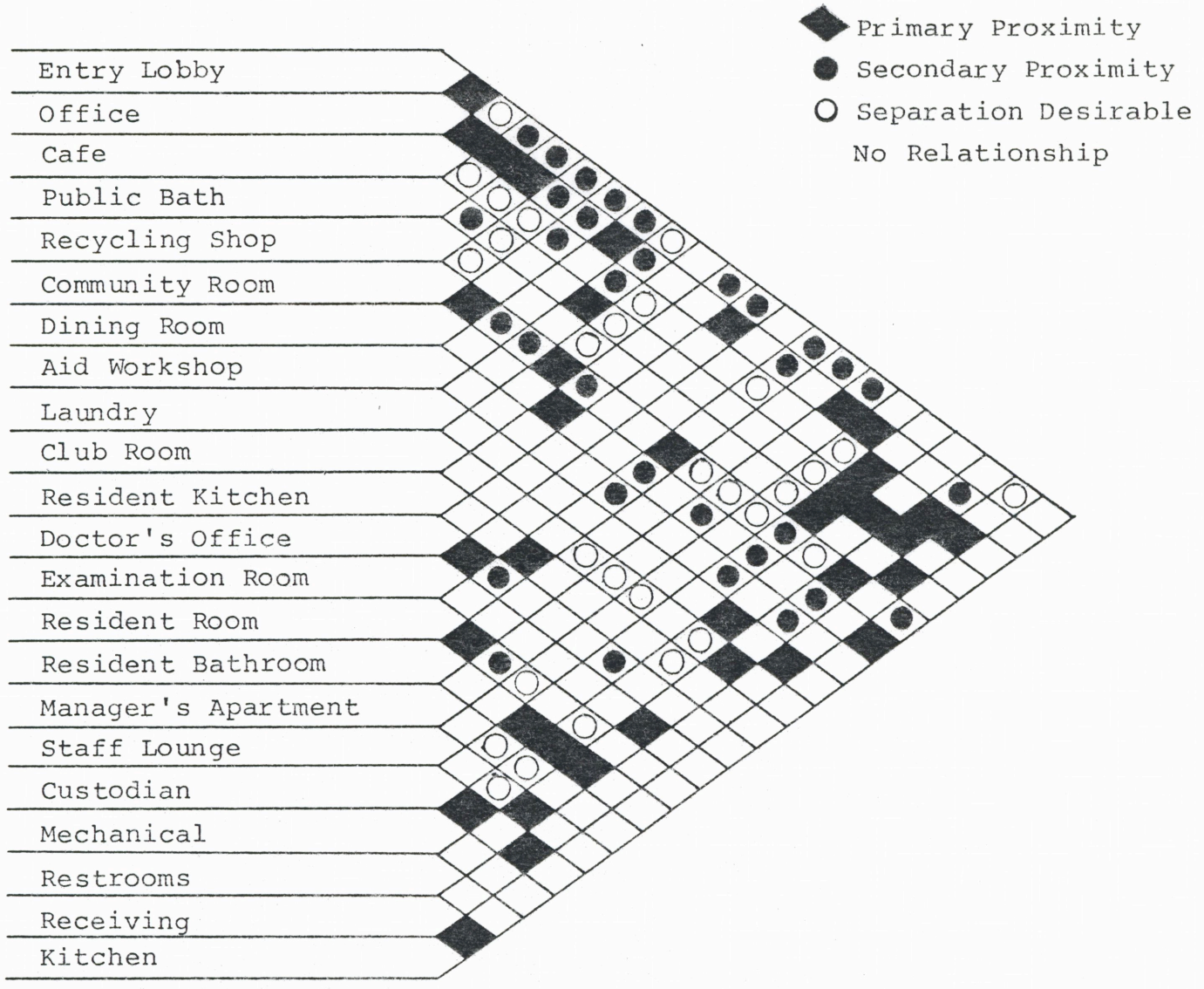
ACCESS AND CIRCULATION



Proximity Matrix

This matrix relates the separate areas of the facility to each other with respect to location. Considerations involved in determining the proximity of one space to another include required physical association, user traffic flow within the shelter, security, and ease of access.

PROXIMITY DIAGRAM



Environmental Considerations

Environmental factors are important to the psychological health of both residents and staff, especially in the compact living arrangement of the shelter. The following graph shows the relationship between environmental influences and components of the shelter.

ENVIRONMENTAL CONSIDERATIONS

3 - Desirable
2 - Moderately desirable
1 - Slightly desirable
0 - Undesirable

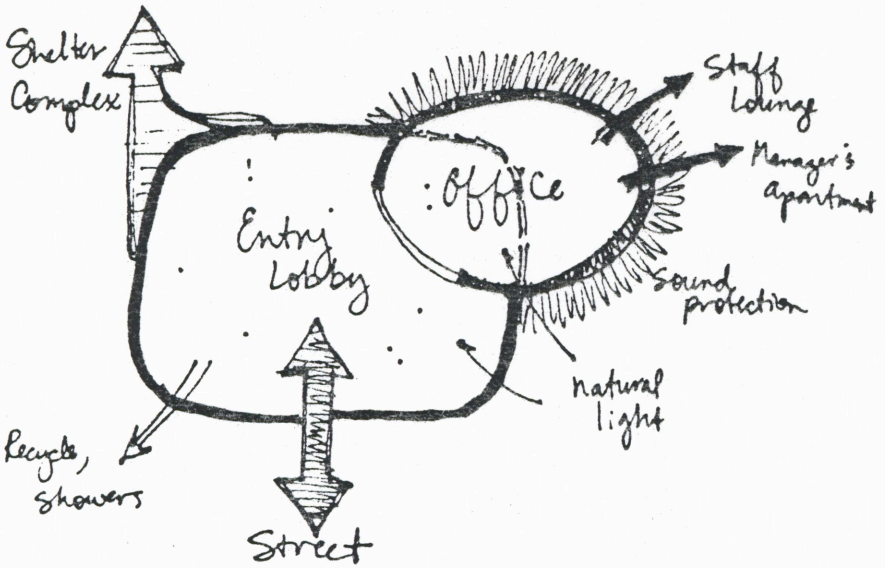
	natural light	shielded from noise	view	security measures	odor control	resident view
Residential						
Resident rooms	3	2	3	3	2	3
Resident showers/toilets	2	2	0	3	2	3
Staff						
Office	3	1	2	3		3
Staff lounge	3	3	3	2		
Manager's apartment	3	3	3	3	1	
General Public						
Cafe	3	1	2	3	2	1
Public bath	2		0	3	3	1
Recycling center	2			3	2	1
Laundromat	3			2	2	
Social						
Community room	3	1	2			3
Dining area	2	2	1			3
Club rooms	2	2	2			3
Resident kitchen	1	1	1		1	3
Entry lobby	3	1	2	3	3	3

ENVIRONMENTAL CONSIDERATIONS

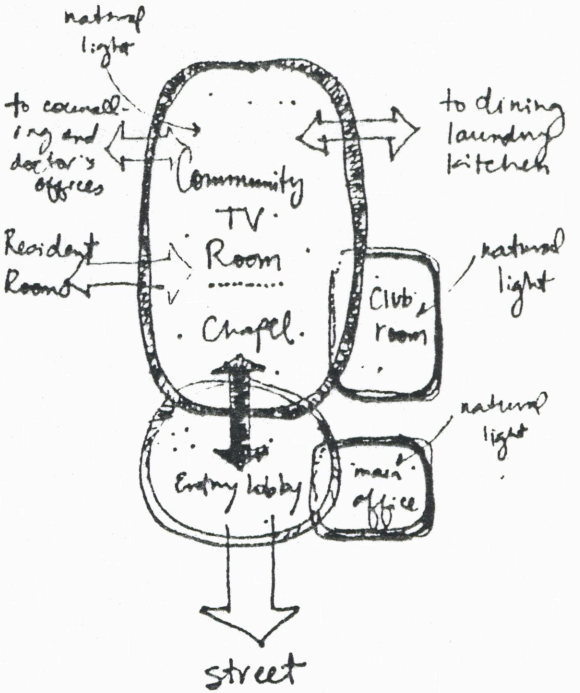
3 - Desirable
2 - Moderately desirable
1 - Slightly desirable
0 - Undesirable

	natural light	shielded from noise	view	security measures	odor control	resident view
Resident Service						
Counseling space	2	3	1			2
Doctor's office	2	3	0			2
Examination room	0	3	0	2	2	0
Laundry/linen	1		1	3	3	1
Kitchen/food storage					2	0
Restrooms	0		0		2	0
Building Service						
Custodial space				2	1	
Mechanical/circulation	1					
Receiving				3		

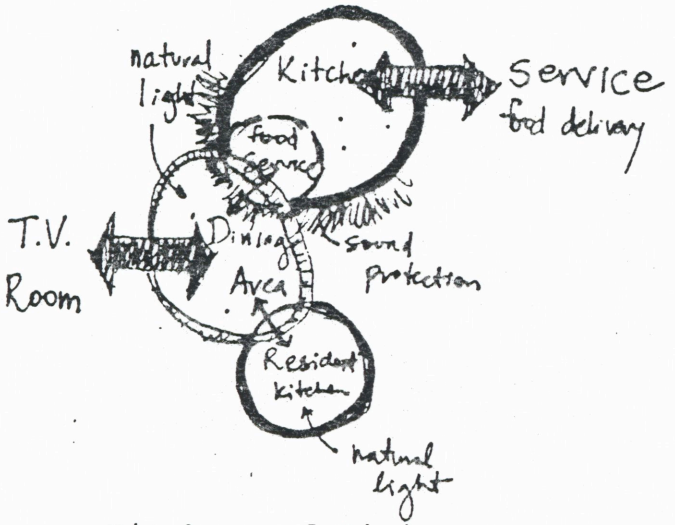
ZONING DIAGRAMS



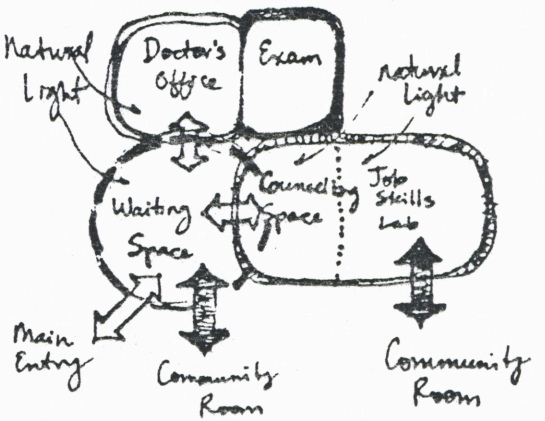
Main Entry



Community Room

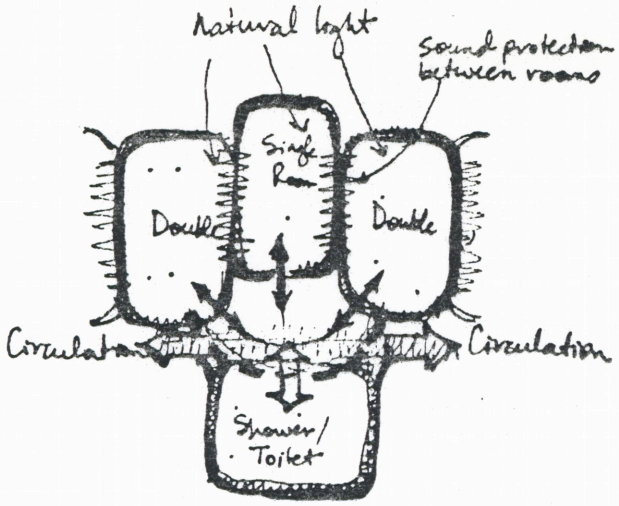


Kitchen and Dining

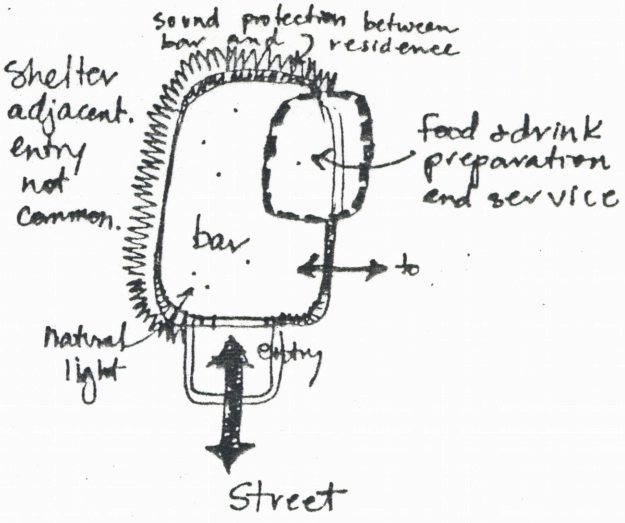


Resident Services

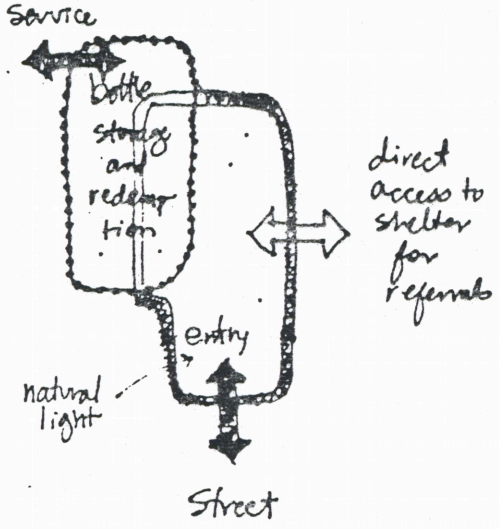
ZONING DIAGRAMS



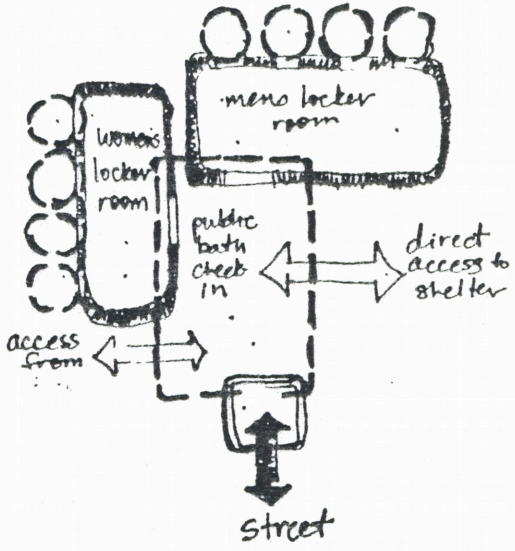
Resident Neighborhoods



Cafe



Recycling Shop



Public Bath

Special Considerations

Special Considerations

Several influential factors should be considered when designing the shelter. Some of these factors result from the special needs of homeless residents. Other factors apply to any facility for group living. Explained below, these factors include the behavioral aspects of group living, the visual image of the shelter, the flexibility and adaptability of the shelter, and compensation for sensory limitations.

32

I. Behavioral Adjustment

Several behavioral aspects help to describe the relationship between the activity of residents and the various spaces within the shelter. These behavioral factors influence almost any group living arrangement, and were originally used to describe conditions in elderly housing. Since the residents of the shelter are in such great need of social rehabilitation, these factors and their architectural implications are amplified in importance.

A. Social Community

People who share a physical space also become neighbors. Neighboring includes the sharing of social ties, providing support to others, receiving support from them in times of need, and the sharing of information. Each resident of the shelter would be at a different level of social rehabilitation. The facility must accommodate each of their levels.

B. Offensive Surveillance

Some individuals will feel that their privacy is invaded by those residents whose major social activity is the observation of comings and goings in the circulation areas. Both of these groups should be accommodated as much as possible, perhaps by providing alternate circulation routes.

C. Commitment

The degree of psychological and physical effort expended by a resident to reach a destination within the shelter. The costs of traveling to an area include time, exercise, fear of cliques, risking loss of face, and finding the destination spaces empty upon arrival. These costs are weighed against perceived rewards, which include socialization, observation, and a change of view. The shelter needs to be designed so that travel to the dining rooms and community rooms, critical to social rehabilitation, do not have a high measure of commitment relative to the residential areas.

D. Group Privacy

A need for private space for some groups. These activities could include clubs, groups of neighbors, residents and their guests, or card-players. This provides a place for residents to socialize in small groups, in addition to the individual space of resident rooms and large group space in the community and dining rooms. Care must be taken that this space does not become clique-dominated, which can be achieved by manipulation of views and circulation.

E. Personalization

An individual's need to change his environment to correspond with personal taste and lifestyle. This occurs on the private level in the arrangement of furnishings and pictures. If the community and club spaces are to truly function as part of the resident's home, residents must be allowed to personalize these spaces as well. Architecturally, the provision of movable furniture and the avoidance of rigid interior design schemes -- particularly those with built-in level changes -- can help to encourage this personalization.

F. Orientation

The process of comprehending one's environment. This includes an understanding of which paths go where within the

facility, as well as a sense of location with respect to the surrounding neighborhood. This can be provided with adequate signage, the use of signs visually different from one another (for those familiar with the facility), views to the outside, and the use of plants, textures or colors specific to various spaces.

33

II. Visual Image

It is important that the shelter blends in with the surrounding area and does not appear to segregate the sheltered from the general public. It should also strive for an appearance of safety and security, to encourage residents and unsheltered homeless to trust the shelter itself.

A. Exterior

1. Respond to the needs of various users.

    a. residents
    b. homeless
    c. public
    d. staff

2. Respond to contextual setting.
3. Respond to and maximize site conditions.
4. As much as possible, try to use inexpensive, long-lasting, low maintenance materials.
5. Create an image of security.

B. Interior

1. Different spaces should be designed appropriately for the user's needs (see Space Program).
2. Should maintain a residential, neighborly atmosphere, not an institutional feeling.

34

III. Flexibility, Adaptability, and Expandability

These three considerations focus on the need for the shelter to be more than a roof overhead and a place to receive medical care. The shelter must provide for all of the needs - physical and social - of its residents within a limited amount of space and on a restricted budget. This could cause a conflict between various spaces and uses, and requires careful planning of circulation and multiple use of space.

A. Flexibility

1. The entry lobby should provide circulation and orientation for each of its diverse groups of users.
2. Interior spaces should be planned to serve as many needs as possible, to enable the shelter to function as efficiently as it can.

B. Adaptability

1. Residential aid spaces (doctor's office, aid counselor's office) should be able to respond to fluctuations in resident needs.
2. Resident rooms should be able to be personalized by the resident, as should community rooms.
3. Entry lobby and community rooms should be adaptable to the needs of the various users.

C. Expandability

It is unlikely that this facility will ever expand, other than to generate other shelters with a similar attitude towards rehabilitation. Therefore, expansion should not be a factor in the design.

35

IV. Sensory Compensation

Some residents of the facility, including those who are elderly or those who are mentally ill, will require special manipulation of sensory areas throughout the shelter. This

compensation for and enhancement of sensory areas will help these special groups of residents to function more effectively within the shelter. Cues of this nature can be visual, aural, tactile, olfactory, or intuitive.

It is important, however, that this manipulation not interfere with others' use of the shelter, since not all residents will be elderly or mentally ill.

A. Visual Techniques.

Many elderly suffer from visual disabilities, including blurred vision, blindness, color loss, and a reduced zone of vision. The mentally ill resident has no vision loss, but is less perceptive of detail within the visual environment. The following guidelines help to compensate for the visual differences of these groups.

1. Color

   a. Color may complement or inhibit a space.
   b. Luminous warm colors suggest alertness, muscular activity, and action.
   c. The designer should be sympathetic with the emotional state of the user, rather than trying to change it.
   d. Surface size is a factor.
      1) small - use strong bright colors.
      2) large - use soft pastel colors.
   e. Avoid the over-use of patterns.

2. Signage

   a. Exterior

      1) Should not call special attention to the shelter.
      2) Should clearly show how to enter the various portions of the facility.

b. Interior

1) Directory for facility.
2) Signage to call out walls, floors, rails.
3) Room and corridor identification signs.
4) Signage for disaster evacuation.
5) Signs should have:
   a) high contrast
   b) symbols to supplement words.

3. Lighting

Lighting is also a very important visual compensation tool. Properly designed lighting enhances safety and aesthetic considerations.

a. Design artificial lighting as if no other sources were available.
b. Consider the quality of a lighting system first.
c. Avoid glare by:
   1) reducing output
   2) moving the light source
   3) increasing background lighting
d. Use transitional lighting between light and dark areas.
e. Use incandescent lighting to provide a home-like character.

B. Aural Techniques

1. General

a. Avoid annoying background noise.
b. Remember that some noises can be soothing.

2. Exterior Sounds

a. Residence areas should be screened from high noise areas.

b. Some exterior sounds - the sounds of passersby, children, or birds - are pleasant, and should enter the shelter.

3. Interior Sounds

a. Mechanical equipment should be insulated and isolated from residential, office, and community space.
b. Pleasant and unpleasant sounds should be segregated both vertically and horizontally.

C. Tactile Techniques

The sense of touch is very important to those who do not have full use of their other senses. In particular the elderly rely on tactile impressions, but all users can incorporate tactile response into their perceptions of a space.

1. Walls should have a variety of texture and pattern to increase diffusion of light and thus reduce glare, and also to provide pleasant surfaces to touch.

2. Floors should be warm and resilient. Use washable synthetic carpet.

D. Olfactory Techniques

The senses of smell and taste are very persuasive and can suggest a variety of responses on the part of the resident. It is very important within the shelter to maintain cleanliness, yet avoid an institutional character. Therefore, appropriate cleaning measures must be maintained, and spaces producing offensive or institutional odors must be properly ventilated. Some odors, such as cooking odors, are positive influences on the residential character of a space, and should not be fully ventilated away from community and residential areas.

E. Safety and Climate Control

It is important that the residents and other users of the shelter feel safe and comfortable to ensure a residential atmosphere. Two factors which are extremely important are security and safety systems, and climate control. Many shelters have a reputation for violence. Therefore, it is doubly important to establish and promote a feeling of security to help achieve social rehabilitation.

1. Security

These elements should be visually pronounced to reassure residents.

a. Fire alarm system
b. Fire extinguishers
c. Smoke detectors
d. Panic hardware
e. Locks on drawers and cabinets (as required by the Social Services Code)36
f. Lockers for staff members
g. Entry surveillance to avoid the presence of suspicious figures.
h. User-operated locks on toilet stalls and showers.
i. Entry situated on a well-travelled street.
j. Outdoor spaces well-lit at night.
k. Non-slip surfaces as required.
l. Avoid pockets of space which are not under formal or informal surveillance
m. Keep public traffic out of residential area

2. Climate Control

a. Temperature in resident rooms should be kept at 70o, slightly higher than normal.
b. Spaces should be comfortably cooled in summer.
c. Avoid drafts which are annoying.
d. Provide direct sunlight in all resident, community, and staff spaces.

Space Descriptions

Functional Unit: Entry Lobby

Description of User:

Residents, staff, visiting service providers, general public, homeless seeking aid.

Description of Activity:

Greet and provide information to residents, service providers, guests, and those seeking aid. Surveillance of entry. Informal resident lounge.

Proximity Requirements:

Administrative office, doctor's office, aid counseling office, resident community room, public shower, and the street.

Furnishings and Equipment:

Lounge seating for 10, service desk and space for consultation with incoming homeless.

Other Requirements:

Public telephones, bulletin boards for housing and employment referral, and foyer. Natural light and ventilation are required.

Considerations:

The lounge should be a friendly place which encourages socializing and is inviting to incoming homeless, but it should also maintain an atmosphere of security.

.....

Functional Unit: Main Office

.....

Description of User:

Three to six staff people on duty at any time. Should be accessible to residents if necessary.

Description of Activity:

Admitting new residents, bookkeeping, facility surveillance and maintenance, and liaisons with residents and service providers.

Proximity Requirements:

Entry lobby, staff lounge, access to all areas of the shelter, both public and private.

Furnishings and Equipment:

Two desks, file cabinet, typewriter, telephones, service counter. Plenty of storage space for shelter records (cabinets, shelving).

Other Requirements:

Small conference room for conferences of up to four people. This is considered part of the main office space.

Considerations:

Should receive natural light, with windows of low sill height so seated staff may have an unobstructed view. Conference area should have sound protection.

Functional Unit: Staff Lounge

Description of User:

Staff or guests. No residents.

Description of Activity:

Private time, office work.

Proximity Requirements:

Office, entry lobby, restrooms.

Furnishings and Equipment:

Movable lounge furniture, rug, shelving, television.

Other Requirements:

Sound control from nearby rooms is very important.

Considerations:

Natural light and views are desirable. Should be relaxing and comfortable, a place for staff to get away.

Functional Unit: Counseling Office

Description of User:

Visiting employment counselor, visiting social services aid counselor, residents.

Description of Activity:

One-to-one or group counseling to get help in receiving aid, help learning job skills or help solving personal problems.

Proximity Requirements:

Entry lobby, office, community room, doctor's office, restrooms.

Furnishings and Equipment:

Desk and chairs, filing cabinet, long work tables and chairs, shelving for job-training related materials.

Other Requirements:

Should not be institutional in character. Residents should feel welcome in this space, as it is very important to their rehabilitation. Privacy of entry should be maintained.

Considerations:

Natural lighting is very important. Should have sound protection from community rooms.

Functional Unit: Doctor's Office

Description of User:

Visiting psychologist/psychiatrist, visiting medical doctor, visiting R.N., residents.

Description of Activity:

Consultation with patients.

Proximity Requirements:

Entry lobby, office, community rooms, resident rooms, examination room, restrooms.

Furnishings and Equipment:

One desk, two chairs, shelving, file cabinets.

Other Requirements:

Should have a comforting atmosphere obtained through use of materials such as wood, carpet, and others which will soothe the initially distrustful resident.

Considerations:

Natural lighting is essential. Views are not desirable. Sound control from other noisier rooms is also essential.

Functional Unit: Doctor's Examination Room

Description of User:

Visiting professionals, residents.

Description of Activity:

Physical examination of resident by medical doctor or nurse.

Proximity Requirements:

Doctor's office, restrooms.

Furnishings and Equipment:

Sink, examination table, storage cupboards.

Other Requirements:

There should be no windows in this space, but it should be made as pleasant as possible for the resident.

Considerations:

Sound control from nearby rooms is very important. Adequate ventilation is very important.

Functional Unit: Community Room

Description of User:

Residents. Staff as necessary.

Description of Activity:

Social area. Can be used for small groups or large groups. Major activities include TV watching, people watching, and other social activities on various levels. Can be used as a chapel.

Proximity Requirements:

Entry lobby, circulation to resident's rooms, dining area, doctor's office, aid counseling shop, club room, resident kitchen, and bathrooms.

Furnishings and Equipment:

Large color TV, movable lounge furnishings, tables, plants, window seats.

Other Requirements:

Should be furnished and constructed to achieve a warm friendly atmosphere, as opposed to an institutional one.

Considerations:

Natural light is very important. Sound protection for rooms around the community room is desirable.

Functional Unit: Dining Area

Description of User:

Residents, staff, small number of guests.

Description of Activity:

Dining three times a day. Food picked up and dishes deposited, cafeteria style, by person dining.

Proximity Requirements:

Kitchen, community room, resident kitchen, bathrooms.

Furnishings and Equipment:

Tables with chairs to provide social interaction as desired by the person dining. Long counter for food pick-up, counter for dish drop-off, silverware canisters, drink servers.

Other Requirements:

Sound protection for rooms surrounding the dining area.

Considerations:

Natural light is very important. Design should encourage social interaction between residents.

Functional Unit: Resident Kitchen

Description of User:

Residents

Description of Activity:

Preparing own meals or meals for friends. Socializing.

Proximity Requirements:

Dining area, community room.

Furnishings and Equipment:

One residential stove with range and vent hood, refrigerator. As much counter and cupboard space as possible. Double sink, waste disposal, utensils, dishes, dish storage.

Other Requirements:

Easy to clean surfaces. Adequate ventilation very important. Should be friendly and inviting.

Considerations:

Natural light is very important.

Functional Unit: Club Rooms

Description of User:

Residents, staff as necessary.

Description of Activity:

Small group meeting, more private than the larger community room. Card playing and other hobbies can take place.

Proximity Requirements:

Community room, resident rooms, bathrooms.

Furnishings and Equipment:

Movable lounge furniture, table.

Other Requirements:

Must have a warm, personable atmosphere. Should be more private than the community room, but not so private it becomes the domain of a select few residents.

Considerations:

Natural light is essential.

Functional Unit: Resident's Room: Single

Description of User:

Resident, guests.

Description of Activity:

Sleeping, changing clothes, private time, socializing, personal hygiene.

Proximity Requirements:

Must have easy access to community rooms, bathroom, laundry, and entry lobby. Neighbors should be nearby.

Furnishings and Equipment:

Bed, locking closet, desk, mirror, chair, sink, rug.

Other Requirements:

Sound control from adjacent rooms is very important. Ventilation is very important.

Considerations:

A window for both natural lighting and ventilation is required by code. The room should provide the resident with a home as much as possible. A view is recommended. It is very important that the resident be able to individualize his space. Furniture should not be fixed.

Functional Unit: Residents' Room: Double

Description of User:

Residents, guests.

Description of Activity:

Sleeping, changing clothes, private time, socializing, personal hygiene.

Proximity Requirements:

Restroom, shower, neighbors' rooms, community rooms, entry lobby.

Furnishings and Equipment:

Two beds, two desks, two chairs, two locking closets, one large mirror, sink, rug.

Other Requirements:

Sound control from adjacent rooms is very important. Ventilation is very important.

Considerations:

Natural lighting and views are important. Window should be large so both residents can use it. Furniture should not be fixed, so that the room feels like a home.

Functional Unit: Resident Bathroom

Description of User:

Residents

Description of Activity:

Showering, personal hygiene.

Proximity Requirements:

Residents' rooms.

Furnishings and Equipment:

One toilet, shower, and lavatory for every three residents.

Other Requirements:

Tiled walls and floor with drain for ease of cleaning. Large mirror over lavatories. Shower rather than bath should be provided for ease of cleanup.

Considerations:

Should have natural light, but no views. Must have the appearance of a home bathroom.

Functional Unit: Manager's Apartment

Description of User:

Manager, family and guests.

Description of Activity:

Living quarters - bedroom, living room, bathroom, kitchen, dining room, and storage area.

Proximity Requirements:

Office, entry lobby. A private entry would be ideal, but is not required.

Furnishings and Equipment:

Manager provides own furnishings. Kitchen appliances supplied.

Other Requirements:

Sound protection is very important.

Considerations:

Natural lighting is extremely important. Manager should not have to sacrifice all living quality. Apartment should not, when the door is closed, appear to be part of the main facility.

Functional Unit: Kitchen

Description of User:

Kitchen staff, resident employees.

Description of Activity:

Serving and storage of hot foods brought in, three meals a day. Preparation of food items for sale in the cafe. Cleanup activities.

Proximity Requirements:

Service access, dining room, bathrooms, cafe.

Furnishings and Equipment:

Work tables, cold and dry storage areas, waste disposal, utensil storage, industrial oven and range, microwave, food service area, cleaning closet, pots and pans, dishes, silverware, and paper goods.

Other Requirements:

Should have tile walls and floor with drain for ease of cleaning. Needs to have a steam table for prepared foods brought in.

Considerations:

Natural light is not important. Ease of service and waste disposal are very important.

Functional Unit: Linen Room

Description of User:

Staff

Description of Activity:

Storage of clean linens, exchange with service truck, dispensing of clean sheets and towels to residents.

Proximity Requirements:

Service access.

Furnishings and Equipment:

Shelves on all walls. Carts in which to move soiled linens. Dutch door for dispensing linens to residents.

Other Requirements:

Easy to clean surfaces.

Considerations:

Natural light is not required.

Functional Unit: Receiving

Description of User:

Staff, resident employees.

Description of Activity:

Delivering clean linens, food, supplies. Disposing of dirty linens, waste. Collection of cans and bottles.

Proximity Requirements:

Linen room, kitchen, recycling center, laundromat.

Furnishings and Equipment:

Double doors, service access.

Other Requirements:

Protection against theft or vandalism is very important.

Considerations:

Natural light is not required.

Functional Unit: Custodial Space

Description of User:

Custodian, staff.

Description of Activity:

Storage of cleaning materials.

Proximity Requirements:

Custodial space in easy reach of all areas.

Furnishings and Equipment:

Mop sink, shelving.

Other Requirements:

Use of materials which are easy to clean.

Considerations:

Natural light is not required.

Functional Unit: Mechanical Space

Description of User:

Staff, custodian.

Description of Activity:

Custodian break room, mechanical equipment.

Proximity Requirements:

Near laundry.

Furnishings and Equipment:

Furnace, hot water heaters, etc. Table and chairs, shelving.

Other Requirements:

Equipment should be mounted so as not to cause building to vibrate. Mechanical noises should be controlled.

Considerations:

Natural light is not required.

Functional Unit: Cafe

Description of User:

General public, shelter residents as they see fit, public or shelter-based employees.

Description of Activity:

Soup, sandwich, dessert, coffee, and beer or wine service.

Proximity Requirements:

Food and drink preparation room, bathrooms, corner of Wright and Broad streets (for maximum activity), custodial space. No common entry with shelter.

Furnishings and Equipment:

Small tables and chairs to seat approximately fifty patrons. Color TV on wall.

Other Requirements:

Should have very good sound protection and visual separation from main shelter area. Must be secure from theft and vandalism.

Considerations:

Should have natural light and the atmosphere of a cafe, not a dark pub. Needs to be comfortable and clean, and should not be reminiscent of the nearby shelter. Use of the cafe by the general public is important.

Functional Unit: Cafe Kitchen

Description of User:

Employees. Maximum of three employees and a manager. Optimally, employees would consist of rehabilitated shelter residents gaining job experience.

Description of Activity:

Soup, sandwich, dessert, and drink preparation; dishwashing and clean-up.

Proximity Requirements:

Service access for deliveries and for waste removal. Must be near a restroom per code requirements. Should be combined with shelter facility kitchen.

Furnishings and Equipment:

Cold storage, dry storage, cleaning closet, eight-foot work table, dishwasher, microwave oven, conventional range and oven, garbage cans, utility sink. Cooler for wine and beer storage.

Other Requirements:

Should have tile walls and floor with drain for easy cleaning. Should also have a small espresso/cappuccino maker.

Considerations:

Only cold sandwiches or those which can be microwaved will be prepared. Desserts would be brought in from the main kitchen or contracted in.

Functional Unit: Laundromat

Description of User:

General public, paid staff, resident employees. Shelter residents will not use this laundry.

Description of Activity:

Washing, drying, and folding of laundry. Waiting between loads.

Proximity Requirements:

Service access. Main entrance should be on the street.

Furnishings and Equipment:

Coin-operated washers and dryers, tables for folding laundry, and chairs.

Other Requirements:

Should have tiled walls and floor for ease of cleaning. Adequate ventilation is important.

Considerations:

Views are not required.

Functional Unit: Recycling Shop

Description of User:

General public or homeless people, one or two employees.

Description of Activity:

Turn in bottles or cans for 5¢ deposit. Probably open only a few hours a day to minimize costs.

Proximity Requirements:

Must be located on the street. Shelter entry should be nearby.

Furnishings and Equipment:

Cash register. Six or seven large bins into which different types of containers are sorted, can crushers, and a few chairs for those waiting.

Other Requirements:

Must be secure from theft. Must have very good fresh-air ventilation system. Should have tile floor with drain for cleaning. Some natural light is desirable.

Considerations:

The objective of this space is to encourage local homeless to take advantage of the shelter or public bath by getting them close enough to talk to without a stigma of charity. This space should be as welcoming as it can be, since local stores avoid redeeming cans for the homeless.

Functional Unit: Bottle Storage and Processing

Description of User:

One or two staff people.

Description of Activity:

Sorting and packing cans and bottles for delivery to recycling companies.

Proximity Requirements:

Must have service access, could be through front door of recycling shop.

Furnishings and Equipment:

Large, deep shelves for storage of sorted, packed material. Sink and mop sink for cleaning. Should have tile walls and floor with drain for ease of cleaning.

Other Requirements:

Should be secure from theft. Adequate ventilation is required.

Considerations:

Natural light is not required.

Functional Unit: Public Bath

Description of User:

Homeless persons, staff person.

Description of Activity:

Provides shower and toilet facilities for those without them. The check-in area provides surveillance of the area as well as a secure place to store belongings. Homeless people can be referred to the shelter from the check-in area.

Proximity Requirements:

Must be located on the street. Shelter entry should be nearby.

Furnishings and Equipment:

Staff desk. Storage space for clean and dirty towels, for soap and shampoo for users, and for toilet paper and cleaning supplies. Two bathrooms, each with toilet, lavatory, shower and locker.

Other Requirements:

Secure from vandalism. Should have tile walls and floor with drain for ease of cleaning. Good ventilation is essential.

Considerations:

Natural light is desirable.

Space Program

Typical Space Demand

Residents:	Twenty to twenty-five
Staff:	Four to six on duty at all times. One of these occupies the manager's apartment.
Public:	Four to five per day: General public within shelter proper.
	Ten per day: Those redeeming deposit bottles.
	Fifty to seventy-five per day: Cafe patrons.
Homeless Seeking Aid:	Twenty per day redeeming deposit bottles.
	Ten per day showering.
	Fifteen per day asking for food.
	Fifteen per day asking for shelter.
	Fifteen per day using employment and housing boards or public telephone.
	Forty per day estimated total, due to overlap.

Space Breakdown by Function

		(in square feet)	
Residential			
Resident rooms, single	6 x 100	600	
Resident rooms, double	7 x 150	1050	
Resident bathrooms	7 x 75	525	
		2175	= 28%
Staff			
Main office		300	
Staff lounge		100	
Manager's apartment		600	
		1000	= 13%
General Public			
Cafe		950	
Recycling shop		300	
Laundromat		300	
Public bath		300	
		1850	= 24%
Social			
Community room		175	
Dining area		175	
Club room		125	
Residents' kitchen		125	
Entry lobby		200	
		800	= 10%

Space Breakdown by Function, continued.

Resident Service

Counseling office	150	
Doctor's office and examination room	170	
Linen room	100	
Kitchen	300	
Restrooms	200	
	920	= 11%

Building Service

Custodial	150	
Mechanical/Circulation	850	
Receiving	150	
	1150	= 14%
	7895	= 100%

Architectural Solution

Architectural Solution

Jon T. Lang's intelligence model of the design process provided the structure of this approach to the design of a shelter for homeless poeple. Within this model, an architectural solution should attempt to meet the needs of its users. The primary needs of homeless people, as determined in research, are: physical shelter, personal safety, reintegration into society and self-reliance. Design principles which respond to these needs include physical characteristics which reinforce security, the behavioral aspects of community living, and providing facilities for learning self-reliance skills.

Security: Passive and active surveillance are important to establishing security. In the shelter, all entrances from the outside can be seen by staff at the front desk. There are no closed social spaces in the building--all have at least a circulation path overlooking them.

Social Community: Residents may need various levels of socialization at different times. Opportunities for socialization within the shelter range from complete privacy to interaction with the whole population of the

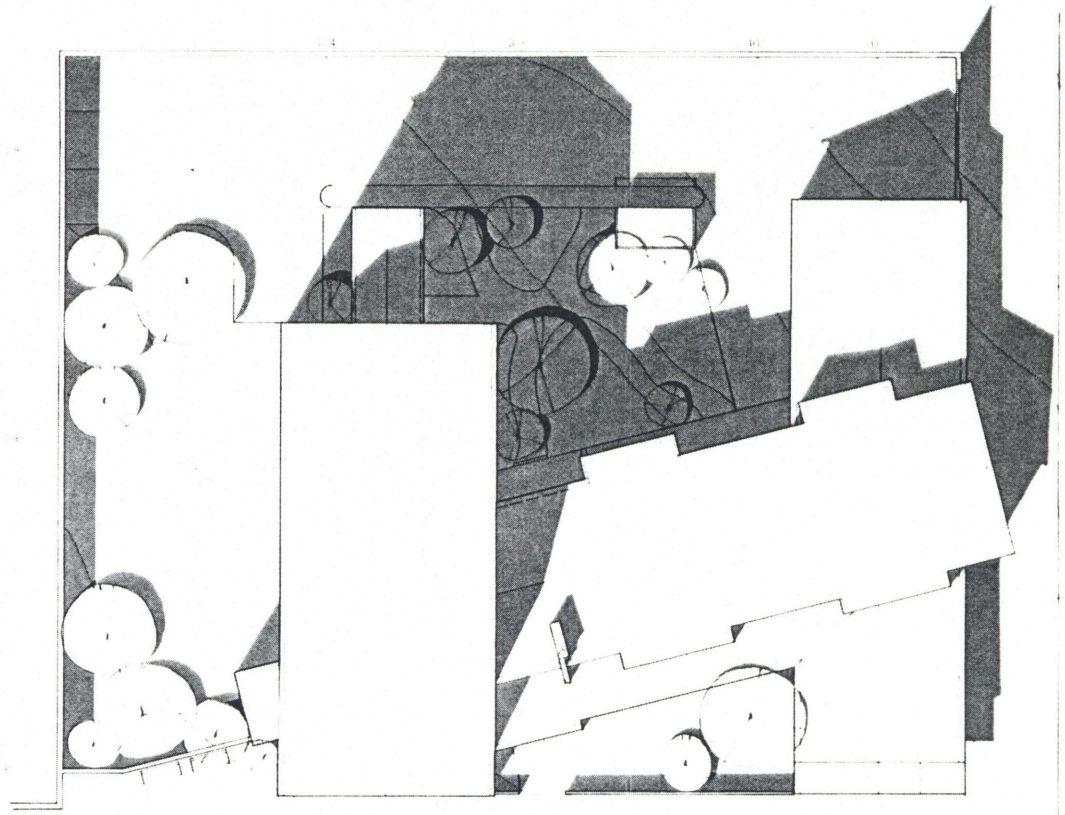
shelter. Levels in between these extremes are places to watch others, roommate relationships, neighborhoods, and other places for small groups to meet.

Commitment: The socialization process is aided when the risk of traveling to a social space is minimized. Work areas are neutral and reduce the risk of using a space. Being able to preview an area reduces the risk involved in entering. All social spaces in the shelter can be previewed from some point, and most have a neutral work area such as kitchen facilities or a laundry.

Self-Reliance: The shelter offers opportunities and facilities for the resident to practice self-reliance skills. These facilities include laundries, a kitchen, and private bathrooms where residents can learn to care for themselves, a counseling space where tenant and job skills may be learned, a telephone, and the recycling shop, laundromat and cafe where they can gain work experience and earn money.

A Shelter
for the
Homeless:

A Sociological
Approach
to Design



Site Plan



East elevation

Scale 3/16" = 1'

Personalization

No fixed furniture or changes in floor plane are used. Residents can rearrange the furniture as they please and influence the character of their social area.

Security

The main office provides surveillance of both outside entrances. This surveillance keeps undesirable people out of the shelter and allows residents to feel safe in the shelter.

Self-Reliance

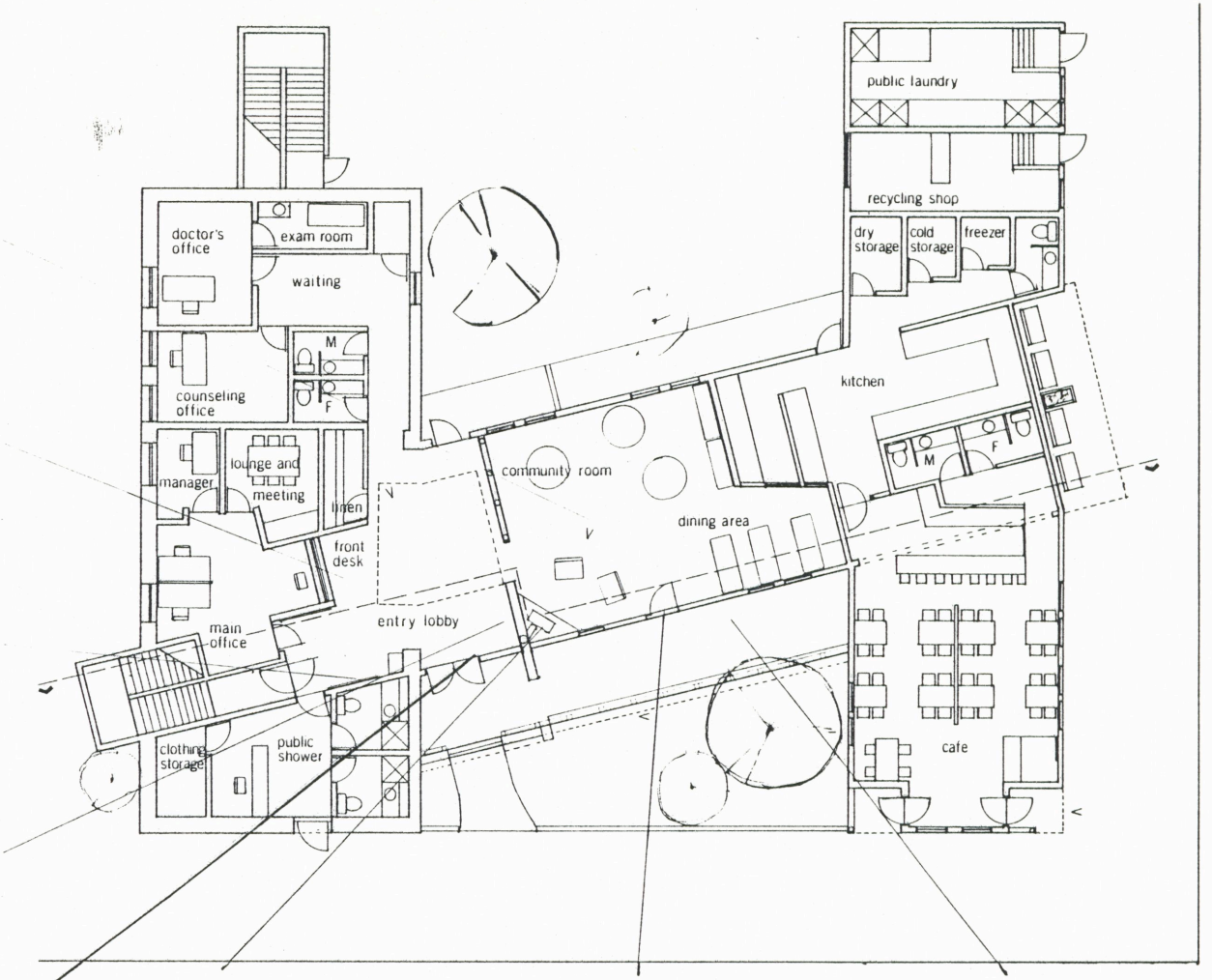
To help residents move from the shelter into society, bulletin boards for the display of housing and employment information and a telephone for residents' use are provided. They are located on the circulation path to encourage their use, but are shielded from the public main entry lobby.

Passive Observation

A seating area in the entry lobby allows some passive observation of entrance activity to occur. This seating can also be used while waiting at the door for transportation.

Offensive Surveillance

The main entrance and the circulation path to the residential area are screened from the community room to provide privacy to residents as they come and go.



Social Community

The wood stove provides a gathering point in the community room and helps divide the large community room into smaller spaces.

Commitment

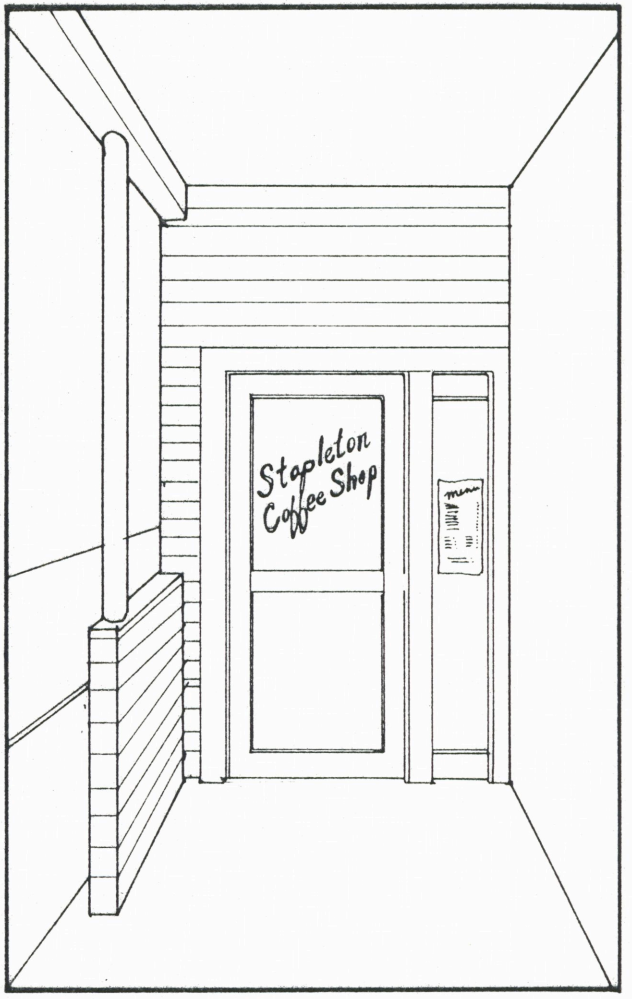
The glass door connecting the community room to the sitting porch enables a resident to look out onto the porch and reduces the cost of traveling to the porch social area.

Passive Observation

From the porch, residents can observe passing traffic. The porch helps to establish interaction between residents and society outside the shelter environment.

First floor

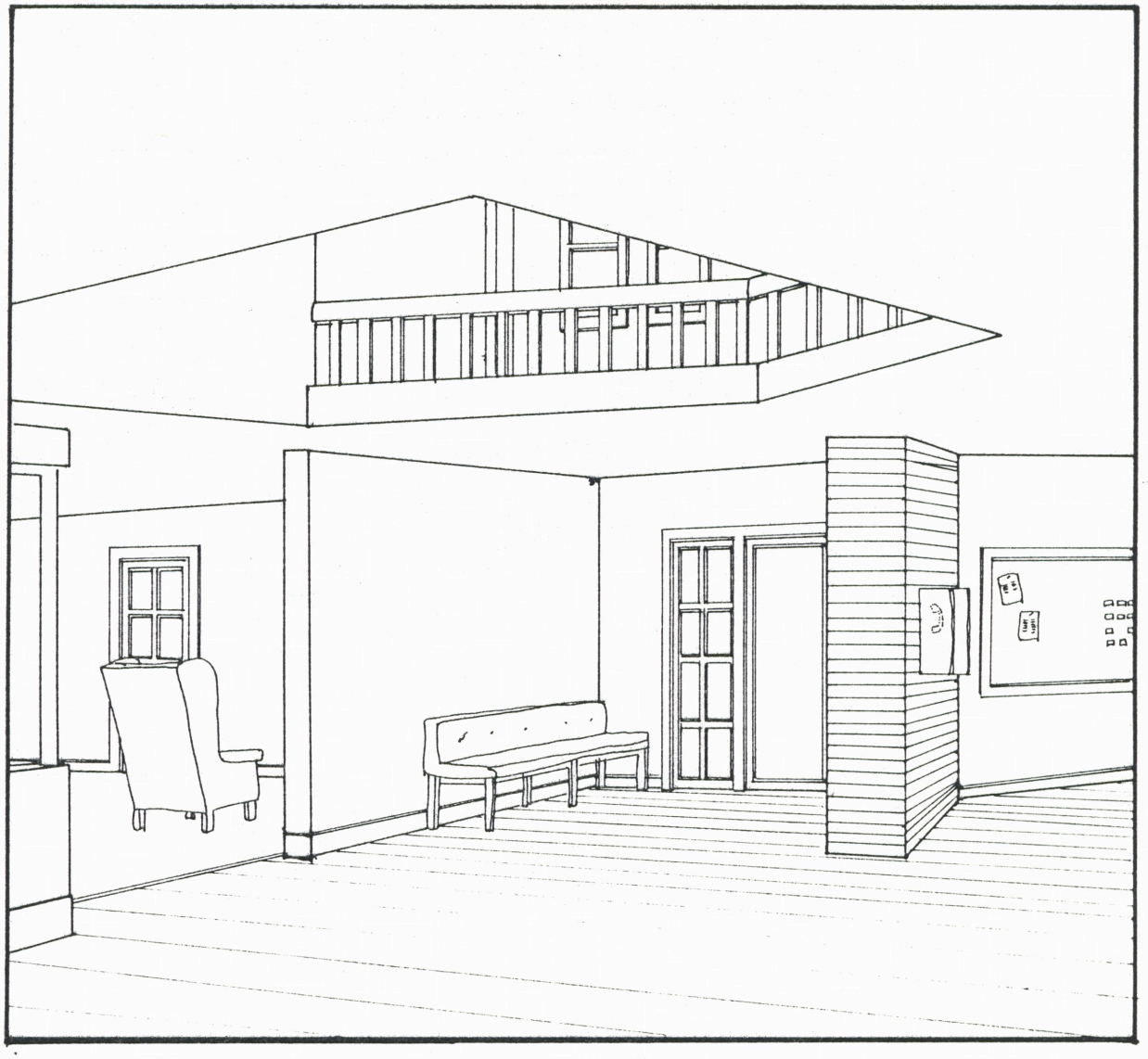
Scale 1/8" = 1'



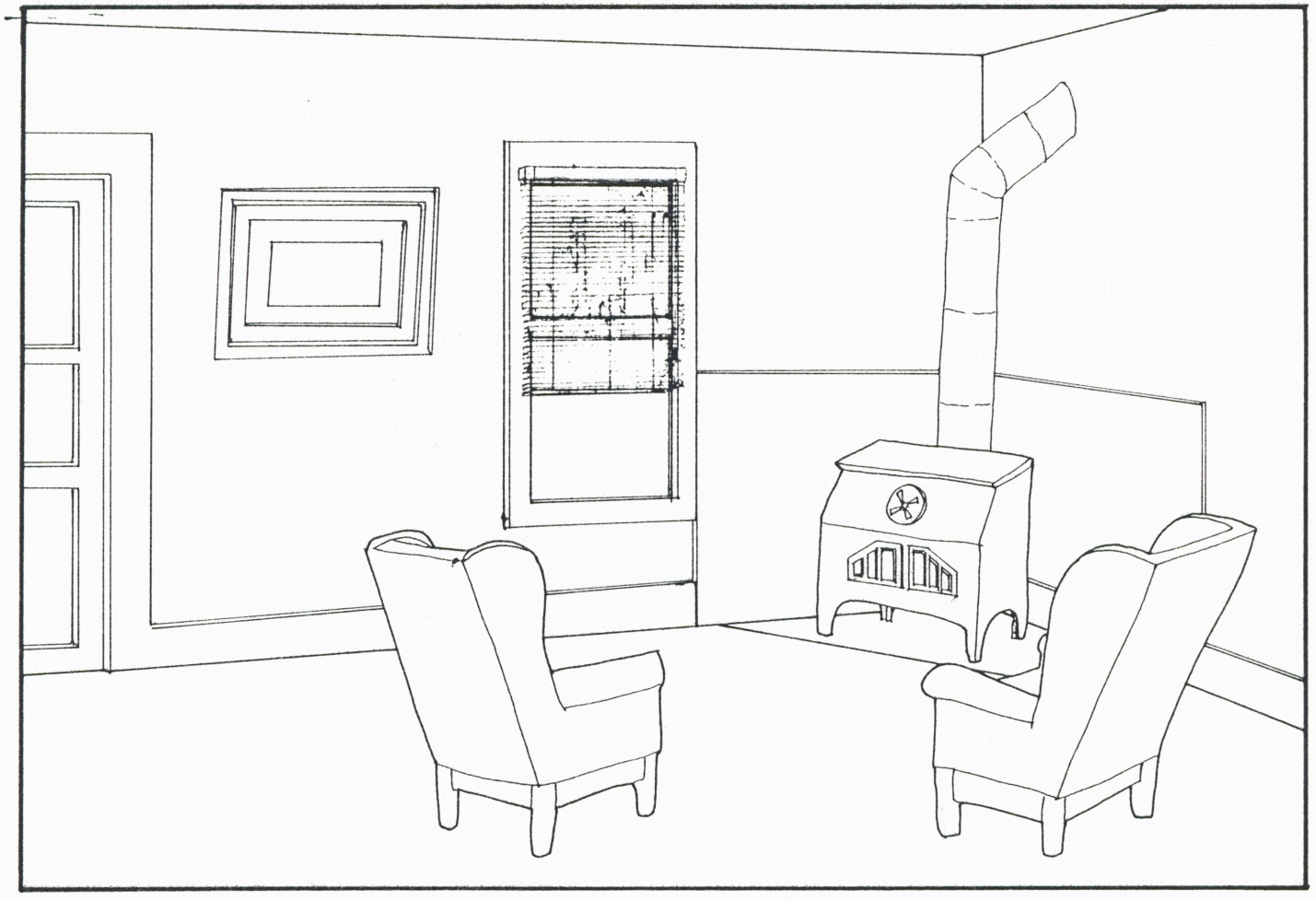
Café entry



Main entry



Entry lobby



Community room

Self-Reliance

The residents' kitchen provides an opportunity for residents to relearn or improve self-maintenance skills. It also helps to establish independence from the services and care provided by the shelter.

Commitment

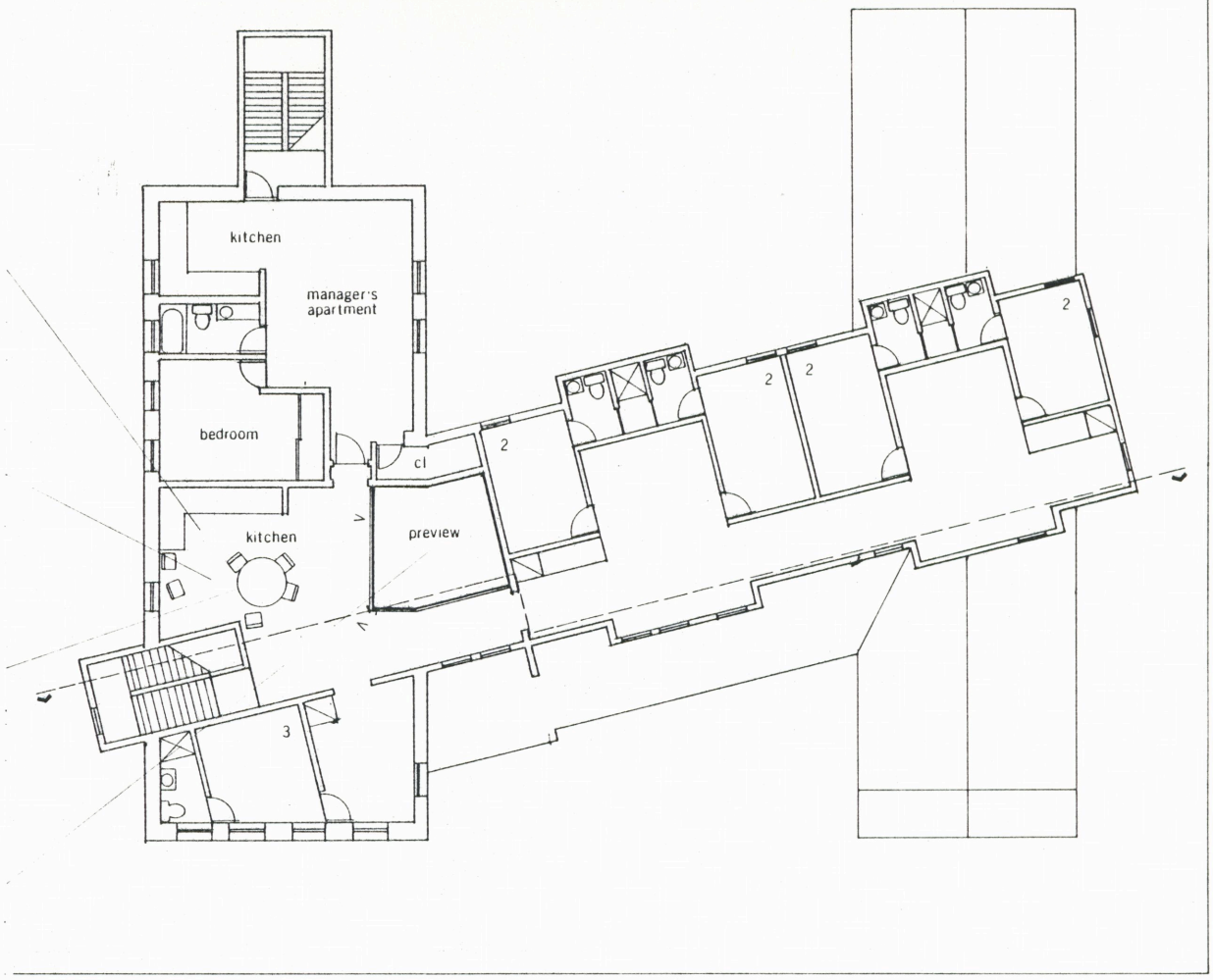
The neutral kitchen work area and surrounding social spaces are visible from the circulation path. The commitment required to enter this space is therefore low, and it is less likely to become dominated by cliques.

Social Community

The social area surrounding the residents' kitchen provides a semi-public transition between the private and semi-private residential neighborhoods and the public community areas downstairs.

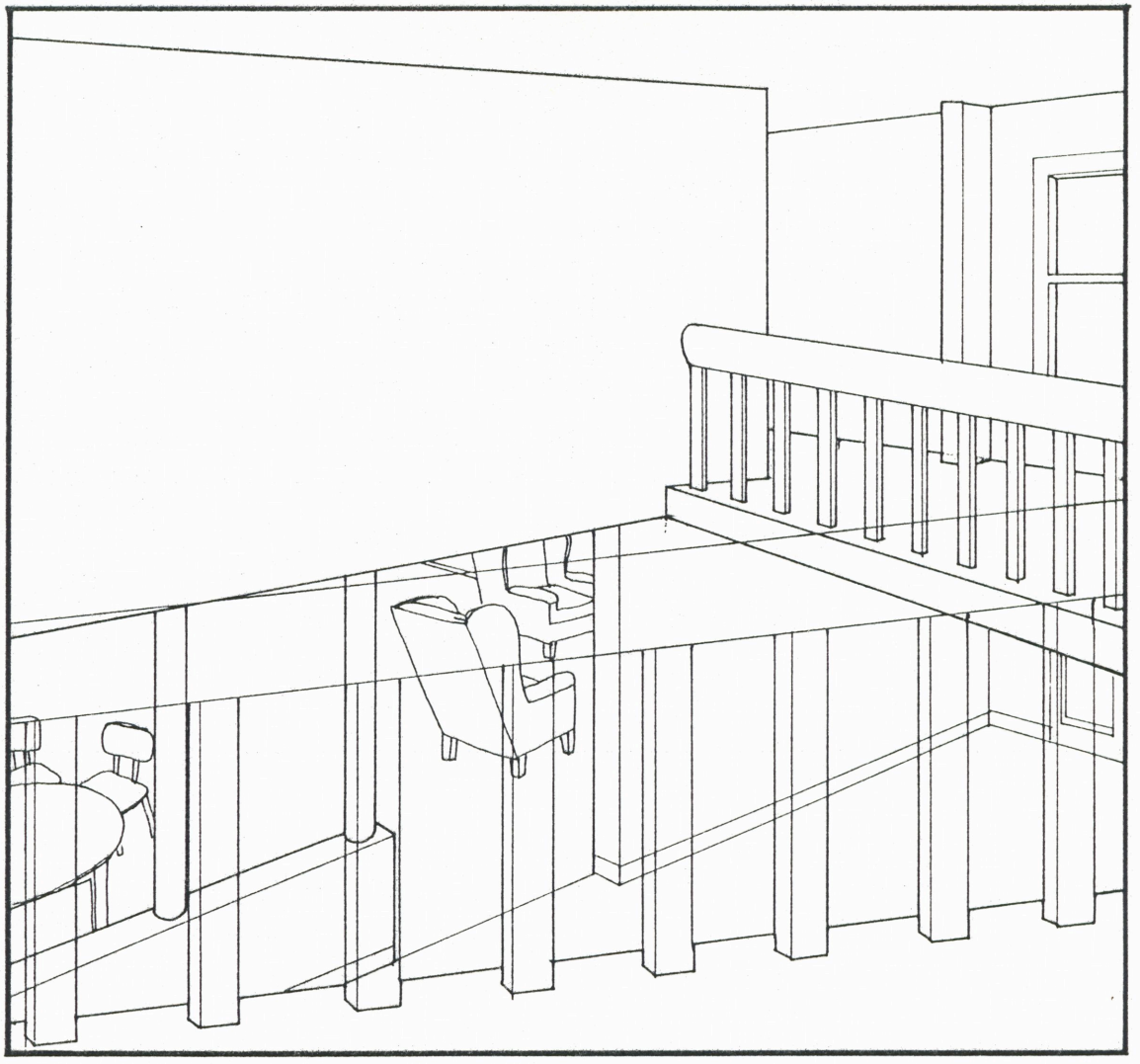
Commitment

Residents can observe the community room on the first floor from this balcony. The preview reduces the cost of traveling to the less-protected public spaces downstairs and encourages residents to travel from their rooms into more public areas.

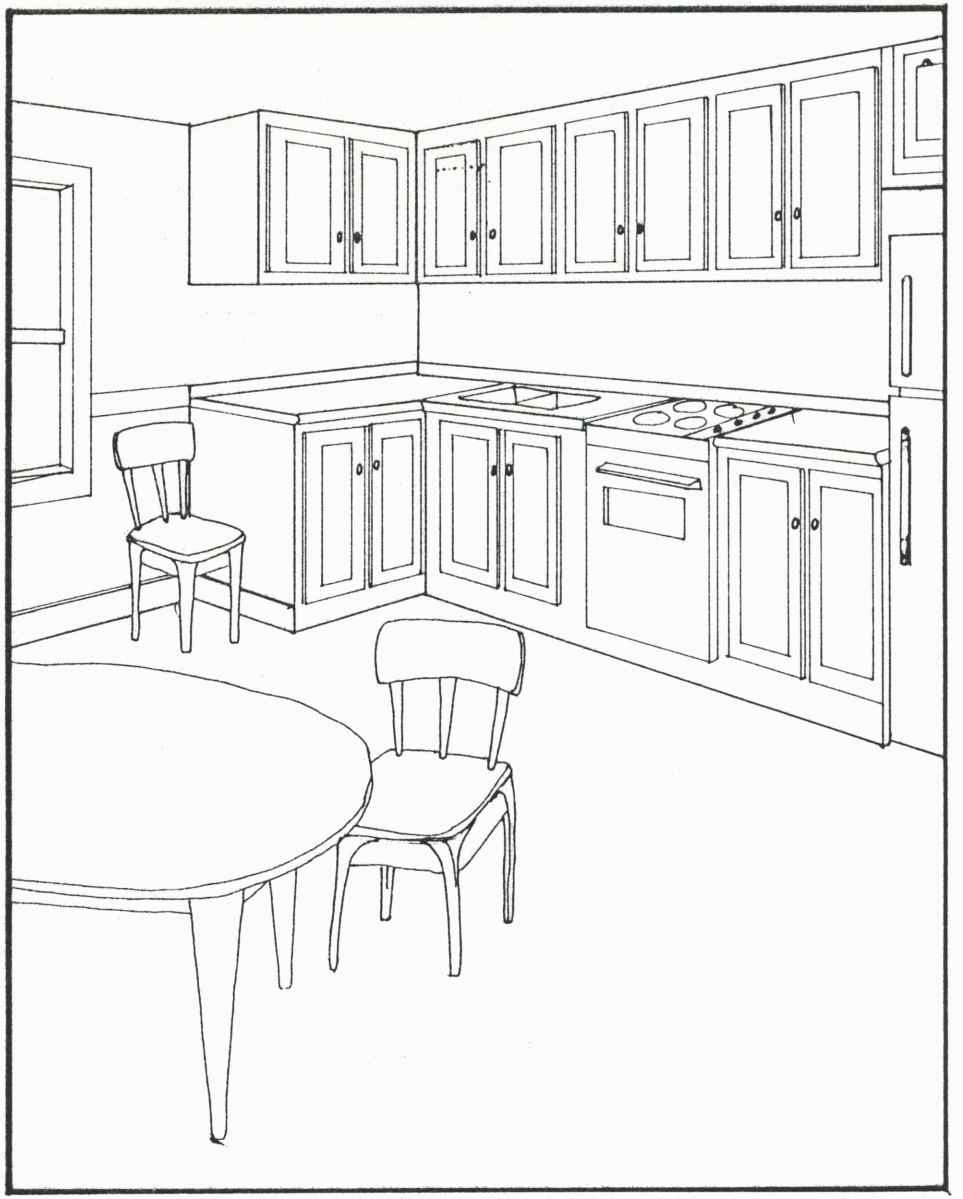


Second floor

Scale 1/8" = 1'



Preview to first floor



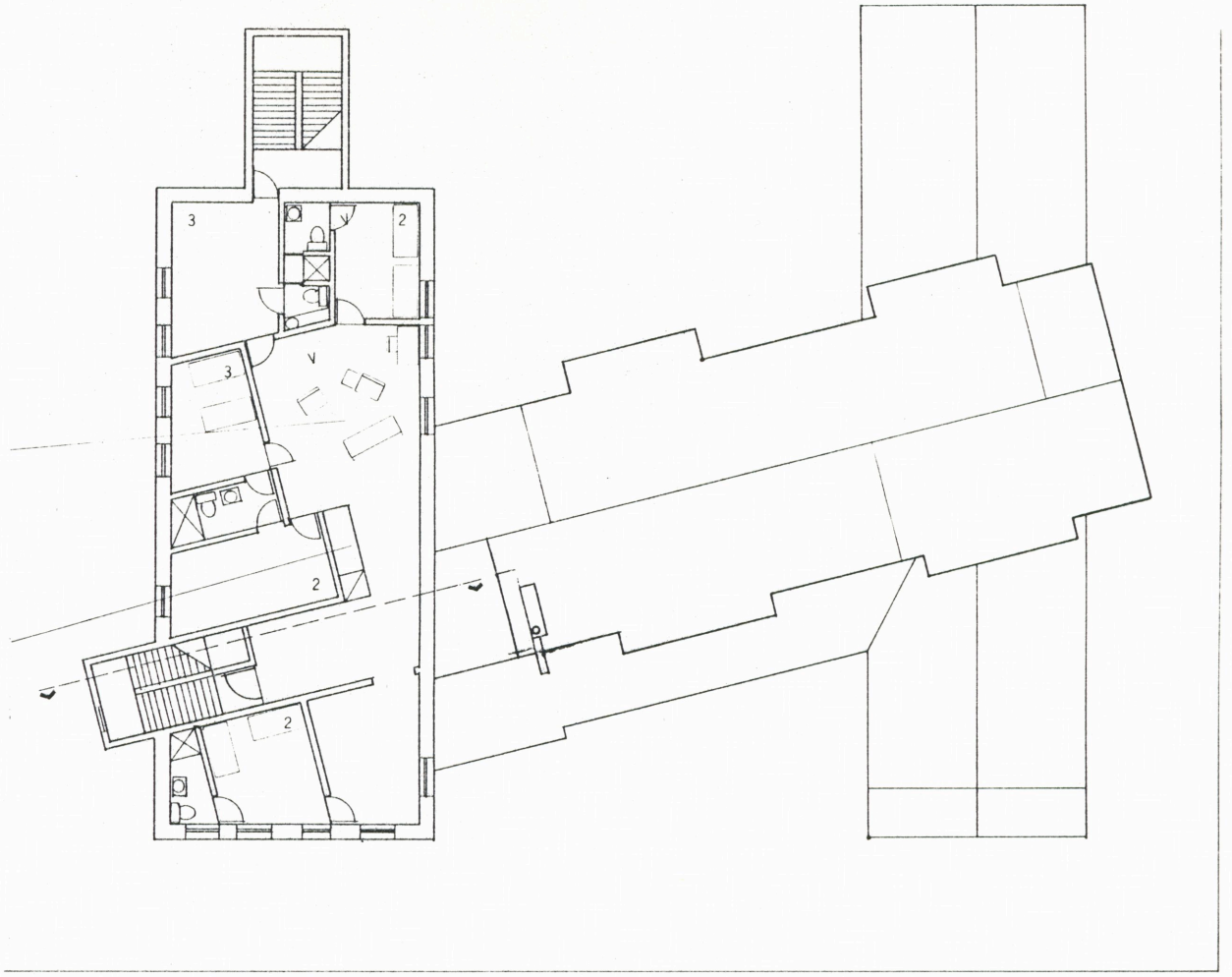
Residents´ kitchen

Social Community

The semi-private neighborhood social space provides a territorial place where residents can socialize with each other on a more personal level or relax by themselves in a somewhat secluded space.

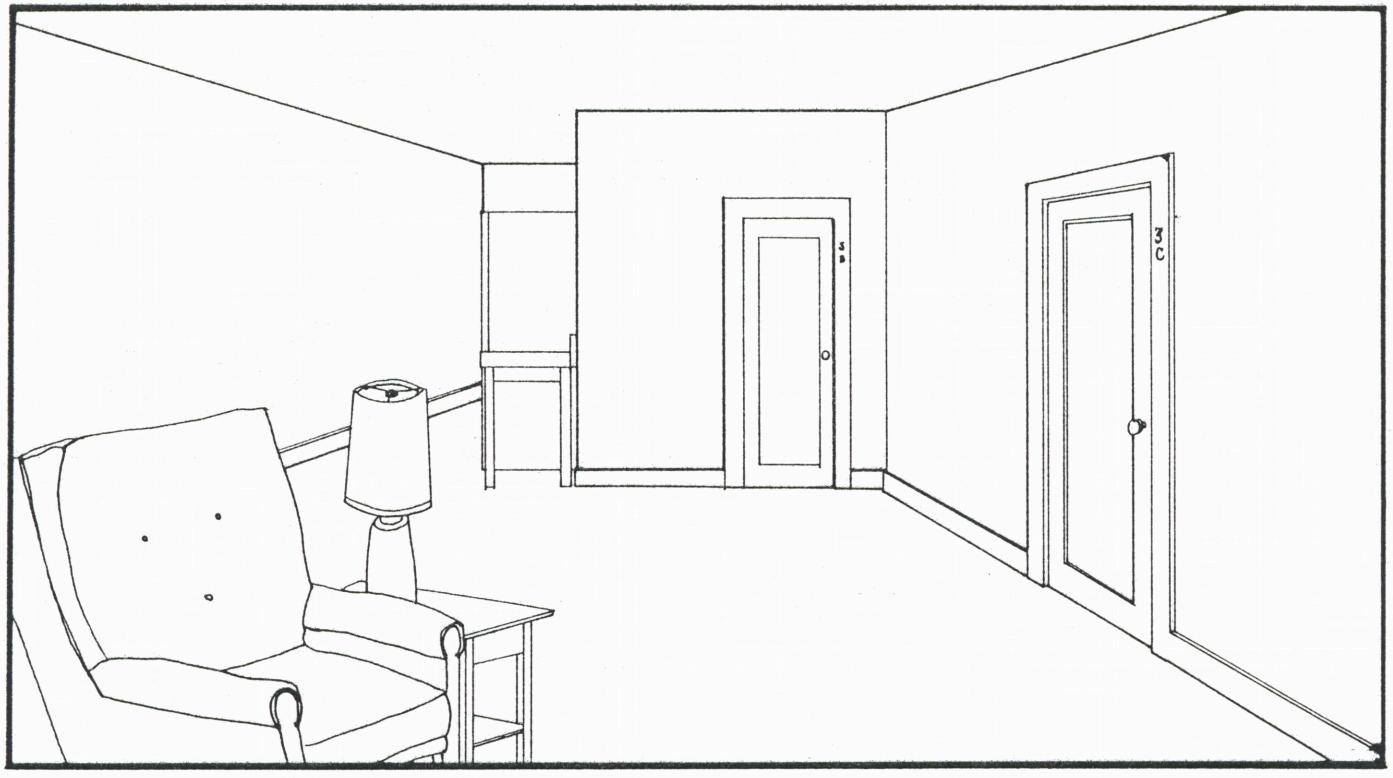
Commitment

The neutral laundry work area reduces the cost of entering the neighborhood social area and provides a stepping stone into the social space.

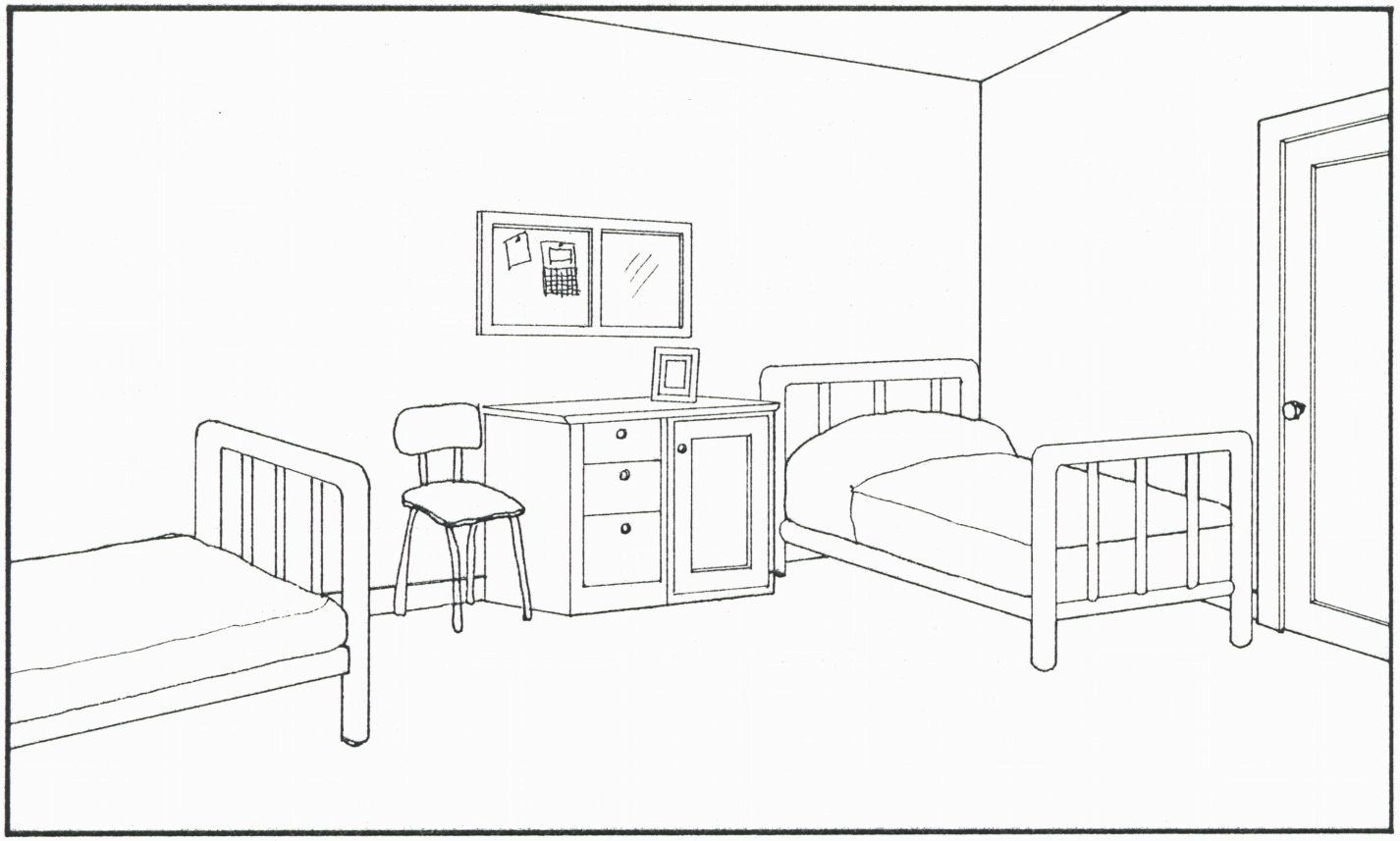


Third floor

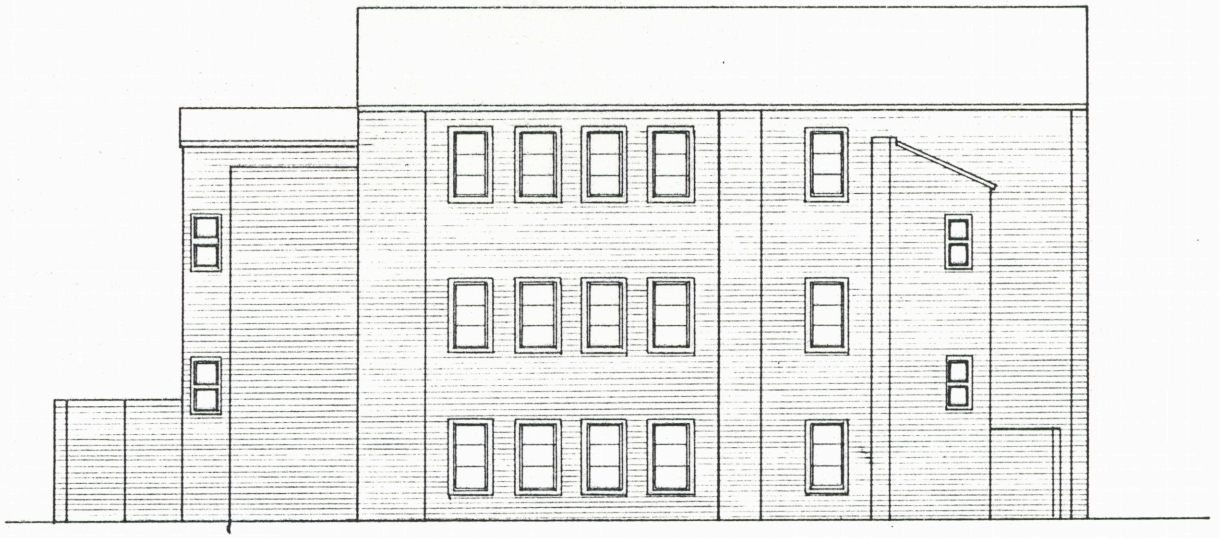
Scale 1/8" = 1'



Neighborhood



Resident room



Southwest elevation

Scale 1/8" = 1'



Section looking east

Scale 1/8" = 1'

Footnotes and Bibliography

FOOTNOTES

[1] Lang, Jon, and Burnette, Charles, "A Model of the Designing Process, Designing for Human Behavior, Dowden Hutchinson, and Ross, Inc., Stroudsberg, PA, 1974, p. 47.

[2] The Safety Network, Volume 2-6, December 1984.

[3] Greer, Nora Richter, American Institute of Architects Housing Committee Proceedings "Housing the Homeless", American Institute of Architects, Washington, D.C., October, 1985, p. 5.

[4] Ibid., p. 5.

[5] Ibid., p. 5.

[6] Ibid., p. 18.

[7] The Safety Network, Volume 2-6, December 1984.

[8] The Safety Network, Volume 2-8, February 1985.

[9] Lawson, Simpson, "Housing the Poor: A Lost Priority?" Architecture, October, 1983, pp. 62-64.

[10] Erickson, Rosemary, and Eckert, Kevin, "The Elderly Poor in Downtown San Diego Hotels," The Gerontologist, Volume 17, no. 5, 1977, p. 446.

[11] The Safety Network, Volume 2-5, November 1984.

[12] Coty, Michael J., ed., St. Paul Coalition for the Homeless Emergency Survival Report, Sept. 1984, p. 2-11.

[13] The Safety Network, Volume 2-5, November 1984.

[14] The Safety Network, Volume 2-6, December 1984.

[15] Perkins, Joseph, "New Institutions for the Homeless," The Wall

Street Journal, February 26, 1985.

16 Perin, Constance, "The Social Order of Environmental Design," Designing for Human Behavior, p. 62.

17 The Safety Network, Volume 2-3, September 1984.

18 New York City Planning Commission, Plan for New York City: A Proposal, MIT Press, Cambridge, Massachusetts, 1969, pp. 4-5.

19 Ibid., pp 4-5.

20 Ibid., pp 4-5.

21 The Safety Network, Volume 2-6, December 1984.

22 The Safety Network, Volume 1-12, June 1984.

23 Howell, Sandra, Shared Spaces for the Elderly, Massachusetts Institute of Technology, 1976, pp. 9-10.

24 New york CIty Planning Commission, Plan for New York City, MIT Press, Cambridge, Massachusetts, 1969, p. 3.

25 Ibid., p. 9.

26 Ibid., p. 38.

27 Ibid., p. 13.

28 The Safety Network, Volume 2-4, November 1984.

29 The Safety Network, Volume 1-12, June 1984.

30 The Social Services Code of New York, Section 494.8f8.

31 The Social Services Code of New York, Section 494.8fi-x.

32 Howell, Sandra, Shared Spaces for the Elderly, pp. 9-10.

33 Poyner, Barry, Design Against Crime, London, Butterworths, 1983, pp. 40-42.

34 Alexander, Christopher, "A City is Not a Tree," Architectural Forum, April 1965, p. 62.

35 Lawton, M. Powell, "An Ecological Theory of Aging Applied to Elderly Housing," Journal of Architectural Education, September 1977, pp. 8-10; Howell, Sandra, Shared Spaces for the Elderly, p. 106.

36 The Social Services Code of New York, Section 494.10o7xo.

BIBLIOGRAPHY

ENVIRONMENTAL STUDY

Alexander, Christopher. The City as a Mechanism for Sustaining Human Contact. Berkeley, CA: Institute of Urban and Regional Development, Center for Planning and Development Research, 1966.

Alexander, Christopher. "A City is Not a Tree." Architectural Forum. April 1965, pp. 58-62, May 1965, pp. 58-61.

Alexander, Christopher. A Pattern Language. New York: Oxford University Press, 1977.

Brolin, Brent C. and Zeisel, John. "Mass Housing: Social Research and Design." Architectural Forum. July-August 1968, pp. 66-71.

Canter, David, and Walker, Elizabeth. "Environmental Role and Conceptualizations of Housing." Journal of Architectural Research, August, 1980, pp. 30-35.

Cooper, Clare C. Easter Hill Village. New York, The Free Press, 1975.

Dunster, David, ed., Architectural Monographs Number 5: Michael Graves, London, Academy Editions, 1979.

"Effects of the Living Environment on the Mentally Retarded." Progressive Architecture. January, 1980, p. 135.

Epp, Gayle; Georgopulos, Diane and Howell, Sandra. "Monitoring Environment-Behavior Research in the Design Process." Journal of Architectural Research, March 1979, pp. 12-21.

Erickson, Rosemary and Eckert, Kevin. "The Elderly Poor in Downtown San Diego Hotels." The Gerontologist, Vol. 17, No. 5, 1977.

Gans, Herbert J. "Planning and Social Life: Friendship and Neighbor Relations," American Institute of Planners Journal. May 1961, pp. 134-140.

Good, Lawrence R., and Hurtig, William E. "Evaluation: A Mental Health Facility, Its Users and Context." AIA Journal, February 1978, pp. 38-41.

Greer, Nora Richter. American Institute of Architects Housing Committee Proceedings "Housing the Homeless", American Institute of Architects, Washington, D.C., October, 1985.

Hawley, Amos H. Human Ecology. New York, The Ronald Press, 1950.

"Housing Research and Development: Post-Occupancy Study of HUD Assisted Housing." Progressive Architecture, January, 1980, p. 134.

Howell, Sandra. Designing for Aging: Patterns of Use, MIT Press, Cambridge, Massachusetts, 1980.

Howell, Sandra. Shared Spaces in Housing for the Elderly. Massachusetts Institute of Technology, 1976.

Keller, Suzanne. The Urban Neighborhood. New York, Random House, 1968.

Lang Jon, ed., Designing for Human Behavior (Community Development Series). Stroudsberg, PA, Dowden, Hutchinson, and Ross, Inc., 1974.

Lawson, Simpson. "Housing the Poor: A Lost Priority?" AIA Journal, October, 1983, pp. 62-64.

Lawton, M. Powell. "An Ecological Theory of Aging Applied to Elderly Housing." Journal of Architectural Education. September, 1977, pp. 8-10.

Lawton, M. Powell and Nahemow, Lucille. "Social Science Methods for Evaluating the Quality of Housing for the Elderly." Journal of Architectural Research, March 1979, pp. 5-11.

Leibowitz, Bernard; Lawton, M. Powell; and Waldman, Arthur. "Evaluation: Designing for Confused Elderly People." AIA Journal. February 1979, pp. 59-61.

Montgomery, Roger. "Comment on 'Fear and House-as-Haven in the Lower Class.'" American Institute of Planners Journal. January 1966, pp. 31-37.

New York City Planning Commission, Plan for New York City: A Proposal, MIT Press, Cambridge, Massachusetts, 1969.

Pastalan, Leon. "Designing Housing Environments for the Elderly." Journal of Architectural Education, Sept. 1977, pp. 11-14.

Pastalan, Leon. "The Empathetic Model." Journal of Architectural Education. September, 1977, pp. 14-16.

Perin, Constance. With Man in Mind. Cambridge, MA, The MIT Press, 1970.

Poyner, Barry. Design Against Crime. London, Butterworths, 1983.

"Private Space: Habitability of Apartments for the Elderly." Progressive Architecture. January 1979, p. 99.

Rainwater, Lee. "Fear and House-as-Haven in the Lower Class." American Institute of Planners Journal. January, 1966, pp. 23-31.

Rapoport, Amos, House, Form and Culture. (Foundations of Cultural Geography Series, ed. by Richard E. Dahlberg), Englewood Cliffs, NJ, Prentice-Hall Inc., 1969.

Rush, Richard. "The Age of the Aging." Progressive Architecture. August 1981, pp. 59-63.

Sarason, Seymour, The Psychological Sense of Community, San Francisco, CA, Jossey-Bass Publishers, 1974.

Schermer, George, and Associates. More Than Shelter: Social Needs in Low and Moderate Income Housing (Research Report No. 8, for the National Commission on Urban Problems). Washington DC: U.S. Government Printing Office, 1968.

Schmertz, Mildred F. "Housing in Islam." Architectural Record. August 1979, pp. 87-92.

Silverman, Jane. "Housing the Still Independent if Not so Active Elderly." Housing. November 1981, pp. 64-49.

Skinner, B.F., Walden Two. New York, New York, Macmillan Publishing, 1948, 1976.

Sommer, Robert. Personal Space: The Behavioral Basis of Design. Englewood Cliffs, NJ: Prentice-Hall, 1969.

Stephens, Suzanne. "Hidden Barriers." Progressive Architecture. April 1978, pp. 94-97.

Studer, Raymond and Stea, David. "Architectural Programming, Environmental Design, and Human Behavior." Journal of Social Issues. October 1966, pp. 127-136.

Van der Ryn, Sim and Silverstein, Murray. Dorms at Berkeley: An Environmental Analysis. Berkeley, CA: Center for Planning and Development Research, 1967.

CASE STUDIES

"Bricks in the Service of Brains," Architectural Record. June 1983, pp. 86-93.

Community Service Society of New York, Shelter Development Project. New York, NY, 1981.

"Designed to Fit In: The Arbour Hospital, Jamaica Plain, MA." Architectural Record. June 1983, pp. 94-97.

Dixon, John Morris. "Competition for Longevity: Architects Housing, Trenton, NJ." Progressive Architecture. August 1981, pp. 69-71.

Gaskie, Margaret. "Rx: Environment-Building Types Study 589: Mental Health Care Facilities." Architectural Record. June 1983, p. 85.

"A Hybrid Hospital and Home: Wyman-Gordon Pavilion, Harvey, Illinois." Architectural Record. June 1983, pp. 98-101.

Morton, David. "Congregate Living: Captain Clarence Eldridge House, Hyannis, MA." Progressive Architecture. August 1981, pp. 64-68.

"Petersburg Psychiatric Institute." Architectural Record. May 1980, p. 120.

"Scenes from Village Life: Center for the Elderly, Buia, Italy." Architectural Record. August 1983, pp. 108-109.

Schmertz, Mildred F. "Human Settlements: Building Types Study 488." Architectural Record. May 1976, pp. 95-99, 107-160.

Stephens, Suzanne. "The New Gray Neighbor: Woolf House, San Francisco, CA." Progressive Architecture. August 1981, pp. 72-75.

USER STUDY

Bahr, Howard M. "The Gradual Disappearance of Skid Row." Social Problems. Summer 1967, pp. 41-45.

Coty, Michael J., ed. St. Paul Coalition for the Homeless Emergency Survey. Sept. 1984.

Brill, Steven. "Attorney for the Defenseless." The Esquire 1984 Register. Volume 102, No. 6, December 1984, pp. 245-248.

"Housing the Unhoused." Housing Committee Symposium, American Institute of Architects, St. Paul, MN, September 16-18, 1984.

Karlen, Neal and Greenberg, Nikki F. "Down and Out in Washington." Newsweek. January 7, 1985, pp. 15-17.

Perkins, Joseph. "New Institutions for the Homeless." The Wall Street Journal, February 26, 1985.

The Safety Network, Volumes 1-12 through 3-7, New York, New York, National Coalition for the Homeless, June 84 - January 86.

APPENDIX A

SOCIAL SERVICES CODE OF THE STATE OF NEW YORK

494. Adult Residential Care Programs Standards for Shelters for Adults

494.2 A "Shelter for Adults" is defined as an adult care facility established and operated for the purpose of providing temporary residential care, room, board, supervision, information and referral, and where required by the department or otherwise deemed necessary by the operator, social rehabilitation services for adults in need of temporary accommodations, supervision, and services. Not applicable to facilities housing less than 20 people.

-- Program must include facilities for provision of physical needs and supervision, and should contain facilities for social rehabilitation.

494.3g Limitations of Shelter Capacity:

i) Municipality of 500,000 or more, 200 beds
ii) SMSA not including a municipality of 500,000 or more, 100 beds
iii) Other locations, 50 beds

-- Staten Island is legally part of New York City, but has only 300,000 residents. Upper limit 100 beds.

494.4b The operator shall not accept or retain any person, except on an emergency basis, who:

1. Causes danger to himself or interferes with care and comfort of other residents.
2. Is in need of social, religious, cultural, or dietary regimen not supported by the facility.
3. Is in need of a level of medical, mental health or nursing care not provided by the facility.
4. Incapable of ambulation on stairs unless first floor room is available.
5. Is under 18 years of age.

494.4e Operator shall assist persons who are accepted on an emergency basis and who are not appropriate for retention to relocate within 72 hours of admission.

-- Don't need to design for the handicapped or severely mentally or physically ill.

494.6b3 The operator shall provide for the safekeeping and accountability of resident funds.

-- Resident needs clear access to main office.

494.6c1 Each resident must receive a personal allowance as stipulated by Social Services Law 131-o.

-- Each resident will have a certain amount of self-sufficiency, and will not be totally dependent on the shelter.

494.7d 7. Resident shall have the right to privacy when caring for personal needs.

10. Resident shall not be locked or restrained in a room at any time.

12. Resident shall be permitted to leave and return to the facility at reasonable hours.

13. Resident shall not be obliged to perform work.

-- Private toilets and showers are required.
-- Shelter's function is dependent on the homeless population's desire for shelter.

494.8 Social rehabilitation staff shall be available on the site at least 5 days a week, including evenings for periods sufficient to meet resident needs.

-- Social services must have its own operating space and not infringe upon community space.

494.8e i-vi
Social Rehabilitation Services shall include:

i. Assistance in applying for income entitlements.
ii. Assistance in securing employment assessment, job training, and job placement services.
iii. Assistance in obtaining permanent housing.
iv. Assistance in securing supportive social and mental health services.
v. Provision of program of individual and group activities to sustain resident's physical and psychosocial functioning. Must be available days and evenings.
vi. Provision of case management counseling.

-- Adequate space for resident aid services must be provided.

494.8f1 i-x.
Supervision services shall include but shall not be limited to:
i. Intake
ii. Recording a daily census
iii. Monitoring residents to identify changes in behavior which may indicate the need for assessment and service.
iv. Surveillance of the grounds, facility and residents to prevent theft and resident harm.
v. Handling individual emergencies
vi. Conduct fire drills
vii. Investigate incidents of resident endangerment, injury, or death.
viii. Guidance to assure residents receive proper nutrition.
ix. Guidance to assure personal hygiene is maintained.
x. Guidance to assist residents in dressing appropriately for weather and activities.

-- Staff must have ease of access and control in all areas of the shelter.

494.8f10 Supervisory staff on duty and onsite as related to population

Resident Census	Staff Required
1-19	1
20-40	3
41-80	3
81-120	4
121-150	5
181-200	6

494.10o9

i. Single occupancy: 80 ft2 per resident minimum.
ii. Two or more occupants: 60 ft2 per resident minimum.
iv. No more than thirty beds per room.
vi. All bedrooms shall be above grade.
xi. Each bedroom shall have lockable storage for residents, large enough for winter clothing.

- Standard resident rooms may be used as bunk rooms in case of emergency, as long as minimum space requirements are not violated.
- No resident rooms can exist in the basement.
- Each resident needs a secure place for his belongings.

494.10o8 Required:

i. One toilet, one lavatory per ten residents, one tub or shower per fifteen residents.
viii. Light and ventilation for sleeping areas shall be by means of windows in an outside wall.

- Adequate toilet facilities must be planned for.
- Each resident room must be situated to have an exterior window.

494.10a

1. Every facility shall have dining and leisure space.
2. Bedrooms and corridors don't count as dining or leisure space.
3. Space for dining: 12 ft2 per bed for first 50 beds, 10 ft2 per bed thereafter.

4. Space for leisure: 12 ft per bed.
5,6. Can double up or be reduced a little with written permission.

- Combination of dining and leisure facilities could be used to conserve space.

494.10;6
A complete change of bed linens and towels shall be provided to each resident at entry, at least once a week, and more often if needed.

- Facility needs to be able to process a large amount of linen each week. Can be either in-house or contracted services.

494.9g
Each shelter shall have food preparation and service facilities; however, off-site food prep may be permitted if nutritional and sanitary standards are demonstrated and maintained.

- Shelter must have a kitchen adequate to prepare 2 meals a day, but may contract out food service, thus reducing the shelter's dependence on its own kitchen and staff.

494.10e 1,2
1. No resident shall occupy any portion of the third or higher floor on a building of wood frame construction.
2. No resident shall occupy any portion of the seventh or higher floor in a building of ordinary construction.*

* as defined by the State Building Code

- existing masonry building is satisfactory

494.9b
Must provide a minimum of a breakfast and an evening meal.

494.8g3
The operator shall utilize and cooperate with external services providers and shall:
i. permit residents to meet in privacy with service providers

- Separate space must be allocated for resident aid services.

494.8 f14
In facilities of 20 or more persons, one of the staff required between 11 p.m. and 7 a.m. may be permitted to sleep.

- Staff bedroom needs to be provided.

494.10g7
Smoke barriers of at least one hour fire rating shall be installed between floors. May be constructed at top or bottom of the stairway.

- Keep this in mind while designing stair access to upper floors.

494.10g8
There shall be two means of egress from each floor designated for public or resident use.

494.10g9
The means of egress shall be remote from each other and freely accessible at all times.

494.10g10
A fire escape may be approved as a second means of egress if there is free access to it.

494.10g15
Prohibited Fire Hazards:
i. Smoking in other than designated areas.

ii. Cooking appliances in resident's room.
iii. Portable space heaters.
- Residents should be provided with a kitchen for their own use.
- Mechanical systems must be adequate.

APPENDIX B

BUILDING CODE REQUIREMENTS

TABLE NO. 5-A—WALL AND OPENING PROTECTION OF OCCUPANCIES BASED ON LOCATION ON PROPERTY

TYPES II ONE-HOUR, II-N AND V CONSTRUCTION: For exterior wall and opening protection of Types II One-hour, II-N and V buildings, see table below. Exceptions to limitation for Types II One-hour, II-N and Type V Construction, as provided in Sections 709, 1903 and 2203 apply. For Types I, II-F.R., III and IV Construction, see Sections 1803, 1903, 2003 and 2103.

GROUP	DESCRIPTION OF OCCUPANCY	FIRE RESISTANCE OF EXTERIOR WALLS	OPENINGS IN EXTERIOR WALLS
A See also Section 602	1—Any assembly building with a stage and an occupant load of 1000 or more in the building	Not applicable [See Section 602 (a)]	
	2—Any building or portion of a building having an assembly room with an occupant load of less than 1000 and a stage 2.1—Any building or portion of a building having an assembly room with an occupant load of 300 or more without a stage, including such buildings used for educational purposes and not classed as a Group E or Group B, Division 2 Occupancy	2 hours less than 10 feet, 1 hour elsewhere	Not permitted less than 5 feet Protected less than 10 feet
	3—Any building or portion of a building having an assembly room with an occupant load of less than 300 without a stage, including such buildings used for educational purposes and not classed as a Group E or Group B, Division 2 Occupancy	2 hours less than 5 feet, 1 hour elsewhere	Not permitted less than 5 feet Protected less than 10 feet
	4—Stadiums, reviewing stands and amusement park structures not included within other Group A Occupancies	1 hour less than 10 feet	Protected less than 10 feet
B See also Section 702	1—Gasoline and service stations, storage garages where no repair work is done except exchange of parts and maintenance requiring no open flame, welding, or the use of highly flammable liquids 2—Wholesale and retail stores, office buildings, drinking and dining establishments having an occupant load of less than 50, printing plants, municipal police and fire stations, factories and workshops using material not highly flammable or combustible, storage and sales rooms for combustible goods, paint stores without bulk handling. Buildings or portions of buildings having rooms used for educational purposes, beyond the 12th grade, with less than 50 occupants in any room	1 hour less than 20 feet	Not permitted less than 5 feet Protected less than 10 feet

GROUP	DESCRIPTION OF OCCUPANCY	FIRE RESISTANCE OF EXTERIOR WALLS	OPENINGS IN EXTERIOR WALLS
	5—Aircraft repair hangars	1 hour less than 60 feet	Protected less than 60 feet
I See also Section 1002	1—Nurseries for full-time care of children under the age of six (each accommodating more than five persons). Hospitals, sanitariums, nursing homes with nonambulatory patients and similar buildings (each accommodating more than five persons)	2 hours less than 5 feet, 1 hour elsewhere	Not permitted less than 5 feet Protected less than 10 feet
	2—Nursing homes for ambulatory patients, homes for children six years of age or over (each accommodating more than five persons)	1 hour	
	3—Mental hospitals, mental sanitariums, jails, prisons, reformatories and buildings where personal liberties of inmates are similarly restrained	Permitted in Types I and II-F.R. buildings only [See Section 902 (b)]	
M[1]	1—Private garages, carports, sheds and agricultural buildings	1 hour less than 3 feet (or may be protected on the exterior with materials approved for 1-hour fire-resistive construction)	Not permitted less than 3 feet
	2—Fences over 6 feet high, tanks and towers	Not regulated for fire resistance	

[1]For agricultural buildings, see Appendix Chapter 11.

R See also Section 1202	1—Hotels and apartment houses Convents and monasteries (each accommodating more than 10 persons)	1 hour less than 5 feet	Not permitted less than 5 feet
	3—Dwellings and lodging houses	1 hour less than 3 feet	Not permitted less than 3 feet

TABLE NO. 5-B—REQUIRED SEPARATION IN BUILDINGS OF MIXED OCCUPANCY
(In Hours)

	A-1	A-2	A-2.1	A-3	A-4	B-1	B-2	B-3	B-4	E	H-1	H-2	H-3	H-4-5	I	M[1]	R-1	R-3
A-1		N	N	N	N	4	3	3	3	N	4	4	4	4	3	1	1	1
A-2	N		N	N	N	3	1	1	1	N	4	4	4	4	3	1	1	1
A-2.1	N	N		N	N	3	1	1	1	N	4	4	4	4	3	1	1	1
A-3	N	N	N		N	3	N	1	N	N	4	4	4	4	3	1	1	1
A-4	N	N	N	N		3	1	1	1	N	4	4	4	4	3	1	1	1
B-1	4	3	3	3	3		1	1	1	4	2	1	1	1	4	1	3[1]	1
B-2	3	1	1	N	1	1		1	1	1	2	1	1	1	2	1	1	N
B-3	3	1	1	1	1	1	1		1	1	2	1	1	1	4	1	1	N
B-4	3	1	1	N	1	1	1	1		1	2	1	1	1	4	N	1	N
E	N	N	N	N	N	4	1	1	1		4	4	4	4	1	1	1	1
H-1	4	4	4	4	4	2	2	2	2	4		1	1	1	4	1	4	4
H-2	4	4	4	4	4	1	1	1	1	4	1		1	1	4	1	3	3
H-3	4	4	4	4	4	1	1	1	1	4	1	1		1	4	1	3	3
H-4-5	4	4	4	4	4	1	1	1	1	4	1	1	1		4	1	3	3
I	3	3	3	3	3	4	2	4	4	1	4	4	4	4		1	1	1
M[1]	1	1	1	1	1	1	1	1	N	1	1	1	1	1	1		1	1
R-1	1	1	1	1	1	3[1]	1	1	1	1	4	3	3	3	1	1		N
R-3	1	1	1	1	1	1	N	N	N	1	4	3	3	3	1	1	N	

TABLE NO. 5-C—BASIC ALLOWABLE FLOOR AREA FOR BUILDINGS ONE STORY IN HEIGHT
(In Square Feet)

	TYPES OF CONSTRUCTION								
	I	II			III		IV	V	
OCCUPANCY	F.R.	F.R.	ONE-HOUR	N	ONE-HOUR	N	H.T.	ONE-HOUR	N
A-1	Unlimited	29,900	Not Permitted						
A) 2-2.1	Unlimited	29,900	13,500	Not Permitted	13,500	Not Permitted	13,500	10,500	Not Permitted
A) 3-4	Unlimited	29,900	13,500	9,100	13,500	9,100	13,500	10,500	6,000
B) 1-2-3[1]	Unlimited	39,900	18,000	12,000	18,000	12,000	18,000	14,000	8,000
B-4	Unlimited	59,900	27,000	18,000	27,000	18,000	27,000	21,000	12,000
E	Unlimited	45,200	20,200	13,500	20,200	13,500	20,200	15,700	9,100
H) 1-2[2]	15,000	12,400	5,600	3,700	5,600	3,700	5,600	4,400	2,500
H) 3-4-5	Unlimited	24,800	11,200	7,500	11,200	7,500	11,200	8,800	5,100
I) 1-2	Unlimited	15,100	6,800	Not Permitted	6,800	Not Permitted	6,800	5,200	Not Permitted
I-3	Unlimited	15,100	Not Permitted[3]						
M[4]	See Chapter 11								
R-1	Unlimited	29,900	13,500	9,100[3]	13,500	9,100[3]	13,500	10,500	6,000[3]
R-3	Unlimited								

TABLE NO. 5-D—MAXIMUM HEIGHT OF BUILDINGS

OCCUPANCY	TYPES OF CONSTRUCTION								
	I	II			III		IV	V	
	F.R.	F.R.	ONE-HOUR	N	ONE-HOUR	N	H.T.	ONE-HOUR	N
	MAXIMUM HEIGHT IN FEET								
	Unlimited	160	65	55	65	55	65	50	40
	MAXIMUM HEIGHT IN STORIES								
A-1	Unlimited	4	Not Permitted						
A) 2-2.1	Unlimited	4	2	Not Permitted	2	Not Permitted	2	2	Not Permitted
A) 3-4	Unlimited	12	2	1	1	1	2	2	1
B) 1-2-3[1]	Unlimited	12	4	2	4	2	4	3	2
B-4	Unlimited	12	4	2	4	2	4	3	2
E[2]	Unlimited	4	2[2]	1	2[2]	1	2[2]	2[2]	1
H-1	Unlimited	2	1	1	1	1	1	1	1
H) 2-3-4-5	Unlimited	5	2	1	2	1	2	2	1
I-1	Unlimited	3	1	Not Permitted	1	Not Permitted	1	1	Not Permitted
I-2	Unlimited	3	2	Not Permitted	2	Not Permitted	2	2	Not Permitted
I-3	Unlimited	2	Not Permitted[3]						
M[4]	See Chapter 11								
R-1	Unlimited	12	4	2[5]	4	2[3]	4	3	2[3]
R-3	Unlimited	3	3	3	3	3	3	3	3

TABLE NO. 17-A—TYPES OF CONSTRUCTION—FIRE-RESISTIVE REQUIREMENTS
(In Hours)
For Details see Chapters under Occupancy and Types of Construction and for Exceptions see Section 1705.

BUILDING ELEMENT	TYPE I	TYPE II			TYPE III		TYPE IV	TYPE V	
	NONCOMBUSTIBLE				COMBUSTIBLE				
	Fire-Resistive	Fire-Resistive	1-Hr.	N	1-Hr.	N	H.T.	1-Hr.	N
Exterior Bearing Walls	4 Sec. 1803 (a)	4 1903 (a)	1	N	4 2003 (a)	4 2003 (a)	4 2103 (a)	1	N
Interior Bearing Walls	3	2	1	N	1	N	1	1	N
Exterior Nonbearing Walls	4 Sec. 1803 (a)	4 1903 (a)	1	N	4 2003 (a)	4 2003 (a)	4 2103 (a)	1	N
Structural Frame[1]	3	2	1	N	1	N	1 or H.T.	1	N
Partitions – Permanent	1[2]	1[2]	1[2]	N	1	N	1 or H.T.	1	N
Shaft Enclosures	2	2	1	1	1	1	1	1 1706	1 1706
Floors	2	2	1	N	1	N	H.T.	1	N
Roofs	2 Sec. 1806	1 1906	1 1906	N	1	N	H.T.	1	N
Exterior Doors and Windows	Sec. 1803 (b)	1903 (b)	1903 (b)	1903(b)	2003 (b)	2003 (b)	2103 (b)	2203	2203

N—No general requirements for fire resistance. H.T.—Heavy Timber.

[1]Structural frame elements in the exterior wall shall be protected against external fire exposure as required for exterior bearing walls or the structural frame, whichever is greater.

[2]Fire-retardant treated wood (see Section 407) may be used in the assembly, provided fire-resistance requirements are maintained. See Sections 1801 and 1901, respectively.

Chapter 19
TYPE II BUILDINGS

Definition

Sec. 1901. The structural elements in Type II fire-resistive buildings shall be of steel, iron, concrete or masonry.

The structural elements of Type II One-hour or II-N buildings shall be of noncombustible materials.

Walls and permanent partitions of Type II-F.R. buildings shall be of noncombustible fire-resistive construction except that permanent nonbearing partitions of one-hour or two-hour fire-resistive construction, which are not part of a shaft enclosure, may have fire-retardant treated wood (see Section 407) within the assembly.

Type II One-hour buildings shall be of noncombustible construction and one-hour fire resistive throughout except that permanent nonbearing partitions may use fire-retardant treated wood (see Section 407) within the assembly, provided fire-resistive requirements are maintained.

Walls and permanent partitions of Type II-N buildings shall be of noncombustible materials.

Materials of construction and fire-resistive requirements shall be as specified in Chapter 17.

For requirements due to occupancy, see Chapters 6 to 12 inclusive.

Structural Framework

Sec. 1902. Structural framework shall be as specified in Chapter 27 for iron and steel, Chapter 26 for concrete and Chapter 24 for masonry.

Exterior Walls and Openings

Sec. 1903. (a) **Exterior Walls.** Exterior walls and all structural members shall comply with the requirements specified in Section 504 and the fire-resistive provisions set forth in Table No. 17-A. For fire protection of exterior walls as determined by location on property, see Table No. 5-A for Type II One-hour and Type II-N buildings.

EXCEPTIONS: 1. Nonbearing walls fronting on streets or yards having a width of at least 40 feet may be of unprotected noncombustible construction.

2. In Groups R, Division 1, and B Occupancies, exterior bearing walls of Type II-F.R. buildings may be of two-hour fire-resistive noncombustible construction where openings are permitted.

3. In other than Group H Occupancies, exterior nonbearing walls of Type II-F.R. buildings may be of one-hour fire-resistive noncombustible construction where unprotected openings are permitted and two-hour fire-resistive noncombustible construction where fire protection of openings is required.

4. In a Group B or M Occupancy a fire-resistive time period will not be required for an exterior wall of a one-story Type II-N building, provided the floor area of the building does not exceed 1000 square feet and such wall is located not less than 5 feet from a property line.

(b) **Openings in Walls.** All openings in exterior walls of Type II-F.R. buildings shall conform to the requirements of Section 504 (b) and shall be protected by a fire assembly having a three-fourths-hour fire-protection rating when they are less than 20 feet from an adjacent property line or the center line of a street or public space.

No openings shall be permitted in exterior walls of Type II-F.R. buildings housing Groups A, E, I, H and B, Divisions 1, 2 and 3 Occupancies less than 5 feet from the property line, and no openings in Groups B, Division 4, R, and M Occupancies less than 3 feet from the property line.

For fire protection of exterior wall openings of Type II One-hour and Type II-N buildings as determined by location on property, see Section 504 and Table No. 5-A.

Floors

Sec. 1904. (a) **Wood Sleepers.** Where wood sleepers are used for laying wood flooring on masonry or concrete fire-resistive floors of Type II-F.R. buildings, the space between the floor slab and the underside of the wood flooring shall be filled with noncombustible material or fire-stopped in such a manner that there will be no open spaces under the flooring which will exceed 100 square feet in area and such space shall be filled solidly under all permanent partitions so that there is no communication under the flooring between adjoining rooms.

EXCEPTION: Firestopping need not be provided in such floors when at or below grade level in gymnasiums.

Floor construction of Type II One-hour and Type II-N buildings shall be of noncombustible material, provided, however, that a wood surface or finish may be applied over such noncombustible material.

(b) **Mezzanine Construction.** Mezzanine floors and supporting members shall be of one-hour noncombustible construction or of heavy timber construction as specified for floors in Section 2106 (e).

Not more than two mezzanine floors shall be in any room of a building.

No mezzanine floor or floors shall cover more than 33⅓ percent of the area of any room.

Stair Construction

Sec. 1905. Stairs and stair platforms of Type II-F.R. buildings shall be constructed of reinforced concrete, iron or steel with treads and risers of concrete, iron or steel. Brick, marble, tile or other hard noncombustible materials may be used for the finish of such treads and risers. Stairs of Type II One-hour and Type II-N buildings shall be of noncombustible construction.

Stairs shall be designed and constructed as specified in Chapter 33.

Roof Construction

Sec. 1906. Roofs shall be of noncombustible construction, except that in Type II-F.R. and Type II One-hour buildings, roofs may be as specified in Section 1806.

Roof covering shall be a fire-retardant roofing as specified in Section 3203.

Special Provisions for Group B, Division 2 Office Buildings and Group R, Division 1 Occupancies

Sec. 1907. Type II-F.R. buildings shall comply with the special provisions on high-rise buildings in Section 1807.

Section 505 b, c

(b) **Areas of Buildings Over One Story.** The total area of all floors of multistory buildings shall not exceed twice the area allowed for one-story buildings. No single floor area shall exceed that permitted for one-story buildings.

(c) **Basements.** A basement need not be included in the total allowable area, provided such basement does not qualify as a story nor exceed the area permitted for a one-story building.

Section 506 c

(c) **Automatic Sprinkler Systems.** The area specified in Section 505 may be tripled in one-story buildings and doubled in buildings of more than one story if the building is provided with an approved automatic sprinkler system throughout. The area increases permitted in this subsection may be compounded with that specified in paragraphs 1, 2 or 3 of Subsection (a) of this section. The increases permitted in this subsection shall not apply when automatic sprinkler systems are installed under the following provisions:

1. Section 507 for an increase in allowable number of stories.
2. Section 3802 (b) 5 for Group H, Divisions 1 and 2 Occupancies.
3. Substitution for one-hour fire-resistive construction pursuant to Section 508.

Table 24-1

TABLE NO. 24-I—MINIMUM THICKNESS OF MASONRY WALLS

TYPE OF MASONRY	MAXIMUM RATIO UNSUPPORTED HEIGHT OR LENGTH TO THICKNESS	NOMINAL MINIMUM THICKNESS (Inches)
BEARING WALLS:		
1. Unburned Clay Masonry	10	16
2. Stone Masonry	14	16
3. Cavity Wall Masonry	18	8
4. Hollow Unit Masonry	18	8
5. Solid Masonry	20	8
6. Grouted Masonry	20	6
7. Reinforced Grouted Masonry	25	6
8. Reinforced Hollow Unit Masonry	25	4
NONBEARING WALLS:		
9. Exterior Unreinforced Walls	20	2
10. Exterior Reinforced Walls	30	2
11. Interior Partitions Unreinforced	36	2
12. Interior Partitions Reinforced	48	2

Chapter 20
TYPE III BUILDINGS

Definition

Sec. 2001. Structural elements of Type III buildings may be of any materials permitted by this code.

Type III One-hour buildings shall be of one-hour fire-resistive construction throughout.

Structural Framework

Sec. 2002. Structural framework shall be of steel or iron as specified in Chapter 27, concrete as in Chapter 26, masonry as in Chapter 24, or wood as in Chapter 25 and this chapter.

Exterior Walls, Openings and Partitions

Sec. 2003. (a) **Exterior Walls.** Exterior walls shall be constructed of noncombustible materials and shall comply with the fire-resistive requirements set forth in Section 504 and Table No. 17-A.

EXCEPTIONS: 1. Nonbearing walls fronting on streets, or yards having a width of at least 40 feet may be unprotected when entirely of noncombustible material.

2. In other than Groups H and I Occupancies exterior nonbearing walls may be noncombustible one-hour fire resistive where unprotected openings are permitted and noncombustible two-hour fire resistive where protection of openings is required.

3. In Groups R, Division 1, and B Occupancies exterior noncombustible bearing walls may be two-hour fire resistive where openings are permitted.

4. Approved fire-retardant treated wood framing may be used within the assembly of exterior walls as permitted by Exceptions 1, 2 and 3, provided the required fire resistance is maintained and the exposed outer and inner faces of such walls are noncombustible.

5. Wood columns and arches conforming to heavy timber sizes may be used externally where exterior walls are permitted to be unprotected, noncombustible construction or where one-hour fire-resistive noncombustible exterior walls are permitted.

(b) **Openings in Walls.** Openings in exterior walls shall conform to the requirements of Section 504 (b) and shall be protected by a fire assembly having a three-fourths-hour fire-resistive rating when they are less than 20 feet from an adjacent property line or the center line of a street or public space.

No openings shall be permitted in exterior walls of Groups A, E, I, H and B, Divisions 1, 2 and 3 Occupancies less than 5 feet from the property line and no openings in Groups B, Division 4, R and M Occupancies less than 3 feet from the property line.

(c) **Partitions.** Bearing partitions, when constructed of wood, shall not support more than two floors and a roof.

Stair Construction

Sec. 2004. Stairs in buildings not exceeding three stories in height may be constructed of any material permitted by this code.

In buildings more than three stories in height, stairs shall be constructed as required for Type I buildings.

Stairs shall comply with the requirements of Chapter 33.

Roofs

Sec. 2005. Roof coverings shall be as specified in Chapter 32 and Section 1704.

TABLE NO. 33-A—MINIMUM EGRESS AND ACCESS REQUIREMENTS

USE[1]	MINIMUM OF TWO EXITS OTHER THAN ELEVATORS ARE REQUIRED WHERE NUMBER OF OCCUPANTS IS OVER	SQUARE FEET PER OCCUPANT[2]	ACCESS BY MEANS OF A RAMP OR AN ELEVATOR MUST BE PROVIDED FOR THE PHYSICALLY HANDICAPPED AS INDICATED[3]
1. Aircraft Hangars (No Repair)	10	500	Yes
2. Auction Rooms	30	7	Yes
3. Assembly Areas, Concentrated Use (without fixed seats) Auditoriums Bowling Alleys (Assembly areas) Churches and Chapels Dance Floors Lodge Rooms Reviewing Stands Stadiums	50	7	Yes[3,4]
4. Assembly Areas, Less-concentrated Use Conference Rooms Dining Rooms Drinking Establishments Exhibit Rooms Gymnasiums Lounges Stages	50	15	Yes[3]
5. Children's Homes and Homes for the Aged	5	80	Yes[3]
6. Classrooms	50	20	Yes
7. Dormitories	10	50	Yes[3]
8. Dwellings	10	300	No
9. Garage, Parking	30	200	Yes[6]
10. Hospitals and Sanitariums—Nursing Homes	5	80	Yes
11. Hotels and Apartments	10	200	Yes[8]
12. Kitchen—Commercial	30	200	No
13. Library Reading Room	50	50	Yes[3]
14. Locker Rooms	30	50	Yes
15. Mechanical Equipment Room	30	300	No
16. Nurseries for Children (Day-care)	6	50	Yes
17. Offices	30	100	Yes[3]
18. School Shops and Vocational Rooms	50	50	Yes
19. Skating Rinks	50	50 on the skating area; 15 on the deck	Yes[3]
20. Stores—Retail Sales Rooms Basement Ground Floor Upper Floors	 [7] 50 10	 20 30 50	 Yes Yes Yes
21. Swimming Pools	50	50 for the pool area; 15 on the deck	Yes[3]
22. Warehouses	30	300	No
23. All others	50	100	

Section 3302 b-e

(b) **Width.** The total width of exits in feet shall be not less than the total occupant load served divided by 50. Such width of exits shall be divided approximately equally among the separate exits. The total exit width required from any story of a building shall be determined by using the occupant load of that story plus the percentages of the occupant loads of floors which exit through the level under consideration, as follows:

1. Fifty percent of the occupant load in the first adjacent story above (and the first adjacent story below, when a story below exits through the level under consideration).

2. Twenty-five percent of the occupant load in the story immediately beyond the first adjacent story.

The maximum exit width required from any story of a building shall be maintained.

(c) **Arrangement of Exits.** If only two exits are required they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exits.

> **EXCEPTION:** Where exit enclosures are provided as the required means of egress and are interconnected by a corridor conforming to the requirements of Section 3304 (g), exit separations may be measured in a direct line of travel within the exit corridor. Enclosure walls shall be not less than 30 feet apart at any point in a direct line of measurement.

Where three or more exits are required, they shall be arranged a reasonable distance apart so that if one becomes blocked the others will be available.

(d) **Distance to Exits.** The maximum distance of travel from any point to an exterior exit door, horizontal exit, exit passageway or an enclosed stairway in a building not equipped with an automatic sprinkler system throughout shall not exceed 150 feet or 200 feet in a building equipped with an automatic sprinkler system throughout. These distances may be increased 100 feet when the last 150 feet is within a corridor, complying with Section 3304. See Section 3317 for Group E Occupancy travel distances.

In a one-story Group B, Division 4 Occupancy classified as a factory or warehouse and in one-story airplane hangars the exit travel distance may be increased to 400 feet if the building is equipped with an automatic sprinkler system throughout and provided with smoke and heat ventilation as specified in Section 3206.

In an open parking garage, as defined in Section 709, the exit travel distance may be increased to 250 feet.

(e) **Exits Through Adjoining or Accessory Areas.** Exits from a room may open into an adjoining or intervening room or area, provided such adjoining room is accessory to the area served and provides a direct means of egress to an exit corridor, exit stairway, exterior exit, horizontal exit, exterior exit balcony or exit passageway.

> **EXCEPTION:** Exits are not to pass through kitchens, storerooms, restrooms, closets or spaces used for similar purposes.

Foyers, lobbies and reception rooms constructed as required for corridors shall not be construed as intervening rooms.

MONTANA STATE UNIVERSITY LIBRARIES
3 1762 10079286 8