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REDEVELOPMENT OF AN URBAN AREA IN MONTERREY, MEXICO

by

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A THESIS SUBMITTED
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ABSTRACT

REDEVELOPMENT OF AN URBAN AREA IN MONTERREY, MEXICO

JACQUES RODRIGUEZ

The disordered and deficient growth of Latin American cities, fundamentally provoked by intense migratory influx and a lack of realistic planning, justifies reconsideration of the premises and goals of technical plans which are being developed for many of these cities. The most pressing necessities facing Latin American cities in the near future ought to be given priority in an objective hierarchy of both short range and long range needs of the population of these cities. The conditions under which new immigrants and poor people live in these cities requires the immediate attention of planners and policy level governmental officials. The plans they make and the priorities they set should be addressed to the problems which the people themselves indicate are most pressing. Planning and governmental action to solve these immediate problems should be related to long range programs which are designed gradually to upgrade the quality of life in cities.

This study focuses on a slum neighborhood in a typical Latin American city, Monterrey, Mexico. The study addresses itself to the problems of one neighborhood in the overall context of city wide planning.

A central purpose of the study is to compare the immediate problems of a typical poverty neighborhood (as expressed by the people in the neighborhood and my own observations) to an overall plan for the city recently developed by the Monterrey City Planning Department. Another objective is to compare my own ideas for redeveloping the neighborhood with those of the city master plan, on the one hand, and what I learned about needs from neighborhood residents, on the other. My purpose is to lay the ground work for a redevelopment plan that is realistic in the short run and feasible in the long run.

The Comprehensive Plan for Monterrey has not been officially adopted by local authorities. Once the plan is adopted, actual implementation would require a housing code, land control, specific exercise of power of eminent domain and other legal instruments, as well as the appropriation of resources for both short range and long range follow through. However, is the conclusion of this study that no such actions should be taken until modifications are made in the present Plan which take into consideration the needs and desires of the people who live in the community, because most of them are in such precarious circumstances that disturbing them would require prior planning involving rehousing, relocation, or some other specific form of assistance.

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INTRODUCTION

INTRODUCTION

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Being a chilean architect I believe the direct observations and interviews in the neighborhood have provided a sound basis for criticizing the current city master plan. In the end I took my principal cues for a redevelopment plan from these observations and interviews in the neighborhood selected for this study.*

Monterrey is today the second economic pole of the country. Mexico City is the first. Demographically, Monterrey is the third in population, following Mexico City and Guadalajara.

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* Questionnaire form used for interviews is in the Appendix.

Monterrey is also the principal center of the Northeast Region of the country. One and a half million inhabitants live in an urban area of 27,000 acres, representing a gross population density of 45 persons per acre. Monterrey, like the majority of industrial cities in developing countries, has had an accelerated demographic growth: between 1950 and 1960 its population doubled. Five and a half million people are expected to be by the year 2,000.

The neighborhood selected for redevelopment is located within an area which constitutes one of the possible "Optimum Cities"* of the Comprehensive Plan for Monterrey. This area is one of the most deteriorated of the city, close to downtown, densely populated by low and middle income, lacking public services and facilities.

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* "Optimum City" is one of the stages of the "urban structural organization" proposed by the Comprehensive Plan. It is basically an agglomeration of ten to eighteen neighborhoods or 6,000 to 20,000 families.

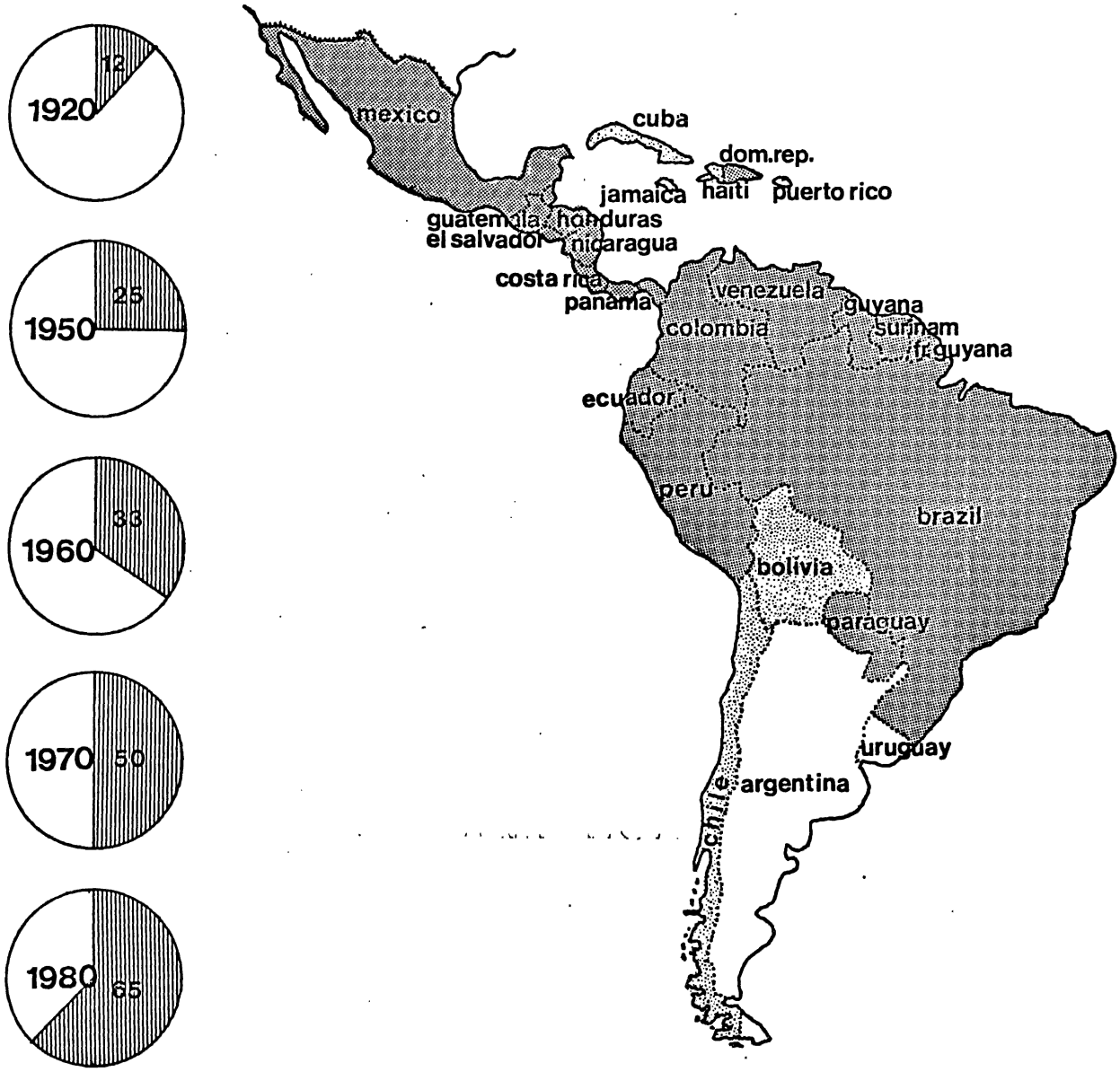
Some Basic Facts about Urbanization in Latin America

The average of the annual population growth rate in Latin America is 3.2%; more than three times that of the United States. By 1990, if present projections hold up, there will be close to 600 million Latin Americans aggravating every economic and social problem now facing the hemisphere. At this moment one of every two Latin Americans is under the age of 18, by the 1980's one of two will be under 14. How to feed, clothe, house, educate and find employment for the growing legion of young people are the essential questions in the decades ahead.

In the entire hemisphere, slightly more than half the population live in cities. By 1980, the total will be 60-65%, and by 1990 or shortly after it will be 75%. Latin America, which is already more urbanized than Europe, will probably add 100 million city dwellers in the next fifteen years. Mexico City, as an example, grows by more than 350,000 people each year. If the rate continues, the present population of 8 million will just about double in 20 years.

The root of Latin America's urban dilemma is the too rapid population growth rate in relation to the capacity of the economy to support the numbers. While the population of the Latin American

LATIN AMERICA



PERCENTAGE OF POPULATION IN CITIES

YEARLY INCREASE IN POPULATION

- 1-1.9
- 2-2.9
- 3-3.9 percent

countries is growing at the rate of more than 3% a year, the population of cities is growing at the rate of 5 to 7% a year.

There is small comfort in Latin America, an area of underdeveloped economies, that the plight of cities is world wide. Some Latin Americans may realize that the cities of the United States are also faced with decay and poverty. But Latin Americans are primarily concerned with their own problems.

All Latin American cities have slum conditions and problems that would stagger U.S. city planners. With the unchecked population spiral and the massive migration of country people to the glamour and glitter of the cities, urban slum conditions have become progressively worse. Millions of people in Mexico City, in Rio de Janeiro, Sao Paulo, Buenos Aires or Santiago, Lima or Bogota, live in poverty conditions which should be regarded as unacceptable because they are degrading to people. The Organization of American States (OAS) estimates that half the population of Latin America's cities are in a sub-subsistence situation and that the percentage will grow in the next decade.

Some general approaches to these problems outlined include:

1) Finding ways to meet acute housing shortages. Latin American nations must construct one million dwellings in urban areas

each year during the next five years to overcome the present housing gap. By 1975, this need will rise to one and a half million dwellings a year. The cost of such a construction could amount to $50 billion by the year 2,000, a large portion of which surely must be financed by foreign sources.

2) Placing urban problems as priorities among overall national goals. Increased international monies must be attracted into housing, education, and transportation deliberately diverted from huge intrastructure projects typically undertaken in the 1960's.

3) Redistribution of population. Latin American nations could follow the example of Mexico and Venezuela in establishing new cluster cities outside the major metropolitan areas. The new cluster cities should include essential services and, where possible, a sound self sufficient economic base.

Some city planners wonder if migration from the countryside to the city can be curbed. Unhappily, this seems unlikely simply because the countryside itself is in many instances overpopulated . . . Farm families have large numbers of children, many of whom cannot be effectively employed on the farms and

agricultural mechanization is increasingly cutting back on the number of farm workers needed.

In any case, cities continue to be very attractive to members of farm families and, finding rural life a hopeless struggle for subsistence, they move to the city into slum areas called a "callampa" (literally a mushroom) in Chile, a "favela" in Rio, a "barriada" in Lima, a "villa miseria" (misery town) in Argentina. Whatever they are called, the slum is much the same from city to city and from country to country. As a consequence of the rural to city migration a whole new culture of poverty has developed in every Latin American city during the past two or three decades. Hopefully government officials and urban planners can muster the resources and will in the period ahead in a renewed effort to provide housing, education, and jobs for the burgeoning urban populations of the hemisphere.

Definitively the Latin American metropolis is an accurate reflection of the social and economic reality of these countries, the typical characteristics of which are:

a) Huge urban concentrations;

b) Rapid growth of urban populations;

c) Increasing deficits in public services;

d) The presence of marginal people;

e) The phenomenon of centralism;

f) The problem of the countryside (el problema del campo).

The latter two characteristics are peculiar to Latin American countries and they require an immediate solution. Centralism* is the fundamental problem of urbanism in Latin America because mushrooming populations of destitute people place near impossible demands on public services and facilities. The "human scale" of cities is lost and squalor creates more squalor. Problems of growth get out of hand and beyond any ones ability to cope with them. The conditions attributable to centralism are traceable to the grossly uneven living conditions between the countryside and the city which force people to migrate.

Urbanization in Mexico

Migration of people from rural areas to cities is a common demographic feature of Mexico. These movements of population are adversely affecting the urban structure of the whole country.

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* Centralism is the typical urbanization phenomenon of Latin American nations wherein most people migrate to one or sometimes two rather than to several urban conglomerates.

The huge amount of population capital, industry and professional elites moving into Mexico City's Metropolitan Area leave the rest of the country debilitated and exposed to a progressive impoverishment and, of course, threaten Mexico City itself with the unmanageable problems associated with centralism. Heavy immigration to the capital and to cities like Monterrey and Guadalajara has been stimulated by such factors as the persistent low real income among peasants and industrial development fostered by the government's policy of "Mexico for the Mexicans," a nationalistic slogan giving primary emphasis in economic development to Mexican interests. Thus Mexico is already attempting to counter the deleterious effects of the centralism so common to other countries of Latin America. In Mexico, however, present demographic and economic conditions may restrict decentralization of economic development to four or five powerful poles or "regional capitals."

The distribution of population usually follows railroad and major highway networks. This factor is important for distribution and redistribution of people. The rapid growth of population in Mexico depends, basically, on the development and improvement of new communications networks. Such networks constitute a basic factor in a deliberate policy of economic-demographic polarization. In the Mexican case, Mexico City is

the geographic center which has stimulated a centripetal organization of communications in the country. This "centripetal organization" needs to be modified to encourage and control the economic and demographic development in several regional centers.

The regional economic and demographic centers could be: in the north at Mexicali-Tijuana, an area of great urban dynamism; Culiacan-Mazatlan, an area of exceptional agricultural productivity; Ciudad Juarez-Chihuahua, an area of great economic potential because of proximity to El Paso in the U.S.; and Monterrey-Saltillo-Laredo, an area with a huge industrial production. In the center: Mexico City, the capital city and traditionally a very strong population magnet; Guadalajara-Tepic-Colima, an area of significant commercial attraction; and Coatzacoalcos, an area which holds a strategic interlacing position. In the south: Oaxaca with agricultural possibilities; and Merida a center of tourist attraction (see page 15).

Several of these places should be encouraged to develop as regional centers within the next decade or two given the design and implementation of a vigorous national planning policy which included as a key element the construction (or improvement) of

rail and highway network. Careful planning studies and judicious establishment of priorities among types of economic development would lead to the selection of the places deserving earliest implementation.

The Monterrey Region

The Northeast Region where Monterrey is located is composed of four states: Coahuila, Nuevo Leon, Tamaulipas, and San Luis Potosi. The population growth rate in this region has been higher than that of the country: 4 to 4.5% a year versus 3.5%. Sixty percent of its population actually live in urban concentrations.

The relatively high level of the region's economic development is due to its modern industry and agriculture (consolidated, mechanized farms). The services received by the population for improved social and economic comfort are excellent. In 1955 27% of total Mexican exports were from this Region.

The combination of large land area and a relatively low population, various irrigation works, and rich mines, stimulated an early industrial growth based in the efficient use of these resources and "materias primas." This activity led to an

important accumulation of capital which generally was reinvested in the Region.[1] The development of railroads and roadways accelerated economic growth. The proximity and influence of the United States provided a lucrative market for certain products and a comparative basis for technical improvements.

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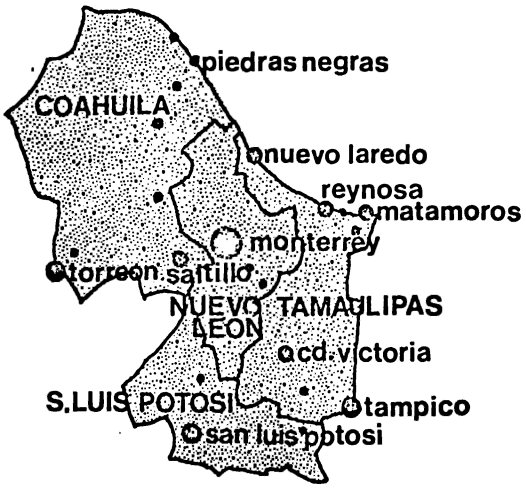
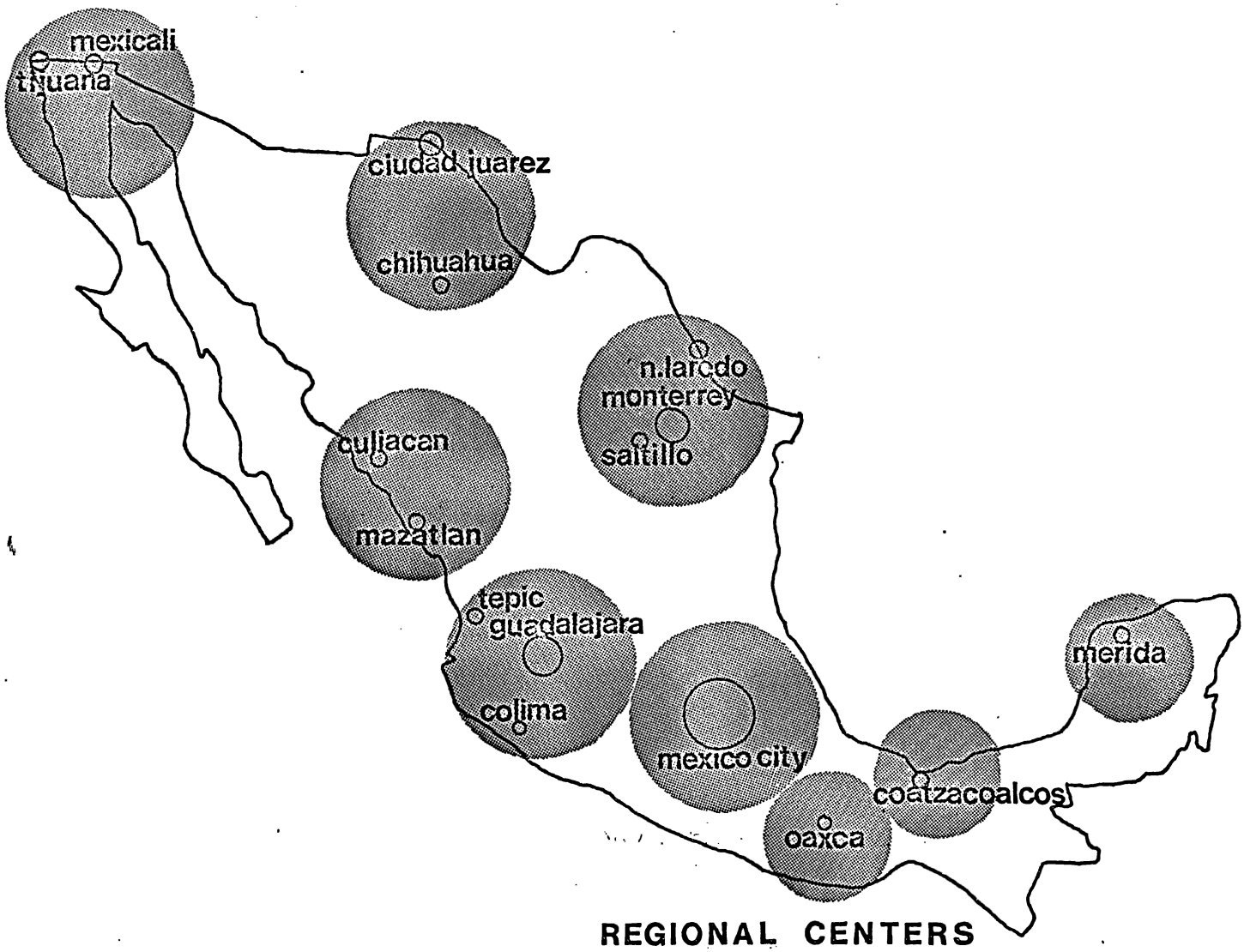
[1]Secretaria de Economia, D.G.E. Anuario Estadistico 1955-1956, page 72

MEXICO



NORTHEAST REGION



REGIONAL CENTERS

1 MONTERREY

The City of Monterrey

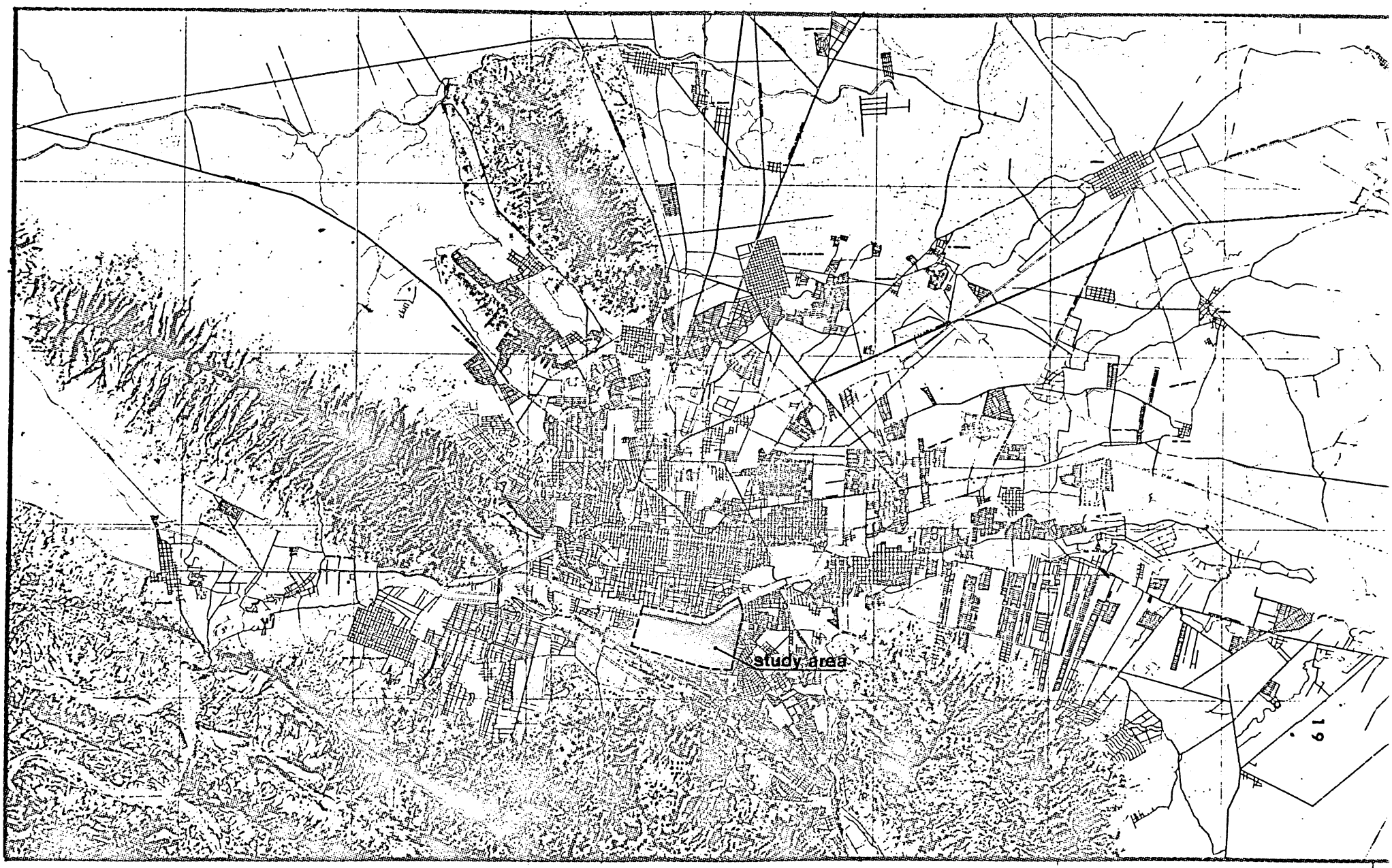
Monterrey was founded in 1596 by Diego de Montemayor, who rigorously applied specific Spanish laws for the creation of a city established by King Philip II. From the beginning, the original thirty-four inhabitants had to face the adversity of arid lands, typical of the north part of the country. Floods and hostile nomadic Indians also made the colonization process very difficult. In addition, poor national communications kept Monterrey small and unimportant until the late 19th century.

Near the end of the 18th century Monterrey annexed close to 200 acres. The population was mainly located in what today constitutes downtown. The road leading to the city of Saltillo had provoked some linear growth toward the west.

At the beginning of the 19th century the population increased to more than 10,000 living on the area of approximately 1,250 acres. The city was laid out in a square form, extended in an east-west direction. The arrival of the railroad in 1882 was the first important economic injection to Monterrey. The rail connection with Laredo opened the way to a large-scale smelting and heavy industry enterprise originally financed by American and other foreign groups.

Favorable state legislation, especially in 1888, plus active and efficient local government fostered Monterrey's economic growth as one of the most energetic and up-to-date urban complexes in Latin America. In addition to its heavy industries, fabricating plants and processing units, Monterrey now has hundreds of light manufacturers which produce beer, cigarettes, pottery, glass, textiles, cement, processed foods, plastic, and other products.

Monterrey's growth has been very rapid during the present century and particularly in the last two decades. Shortly after the arrival of the railroad, the city had 2,500 acres and a population of 70,000 inhabitants. The industries were located mainly to the north and Monterrey began, for the first time, to grow toward the south where the Santa Catarina River had been a strong barrier because of periodic flooding. Industry played an important role in the development of the city. In the 1950's the city sprawled and passed the boundaries created by industries and railroads. New housing projects for workers developed and several small towns around the city gradually became part of one big urban agglomeration with 10,000 acres and half a million people.



AREA METROPOLITANA DE MONTERREY

DIRECCION DE PLANIFICACION GOBIERNO DEL ESTADO DE NUEVO LEON

1969

0.5 1 2.5
kilometers

In the 1960's the population reached a million inhabitants and the metropolitan area has continued to grow. Only the nearby mountainous natural barriers have inhibited growth. More industries set on the north and east were surrounded with new housing areas for workers. Monterrey is presently a vigorous industrial city with most of the demographic characteristics typical of Latin American cities.

Monterrey's Comprehensive Plan

Since 1967 Monterrey has had a Comprehensive Plan which constitutes an important official instrument in ordering existing urban development and in organizing and guiding future growth of the city. The plan traces an urban structural organization which is based on four levels of social organization in the city and the concomitment scale of public facilities at each level. The first level is the "domestic group" (80-200 families); second, the "neighborhood unit" (500-2,000 families); third, the "optimum city" (6,000-20,000 families); and fourth, the "Federation City" (6 to 9 optimum cities). I will describe and analyze these four levels at a later point in the study (page 26).

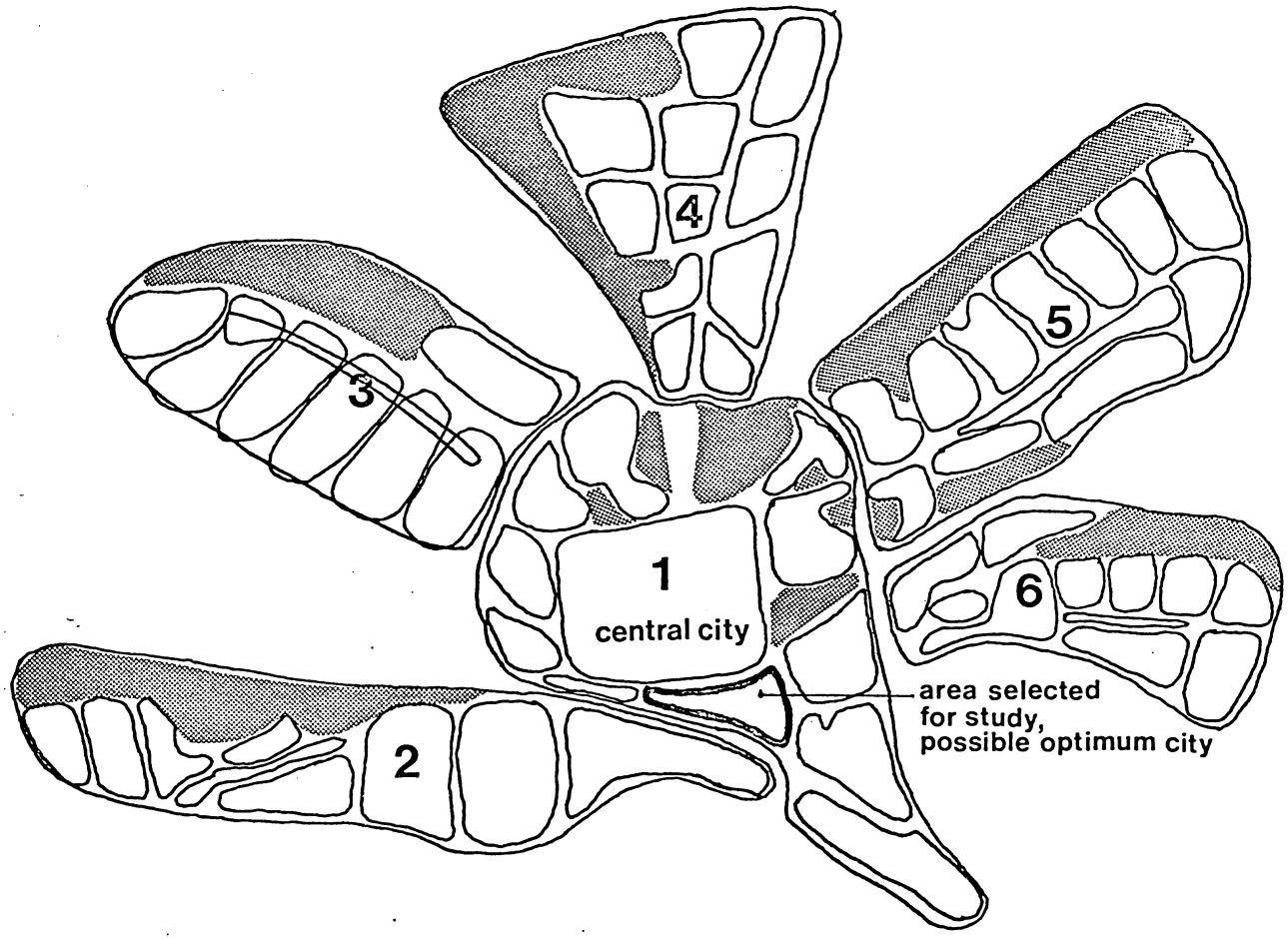
According to the urban structural organization, the Comprehensive Plan proposes an expansion of the city through six carefully structured "Federation Cities." These six cities would have the industry, commerce and related facilities necessary to function as semi-autonomous urban units. Each "Federation city" would be organized to follow the hierarchical organization of optimum cities, neighborhoods, domestic groups. These six "Federation cities" would together form what is called "Exapolis 2,000" (exa=six, polis=city) denoting the ultimate development of the metropolis by the year 2,000. The total of the Exapolis in the year 2,000 is expected to be 5.5 million.

The Comprehensive Plan is more oriented to accommodating future urban growth in new areas than to redeveloping existing ones. Since I am mainly concerned with the restructuring of existing blight areas, I selected a deteriorated urban area which happens to be one of the possible optimum cities within the Central Federation City (actual Central City) proposed by the Comprehensive Plan (see page 23).

The goals of the Comprehensive Plan can be more easily achieved in presently undeveloped areas contiguous to Monterrey than in sectors of the city which require redevelopment; land use

control can be more easily applied in the former than in the latter. In developed sectors, such as the neighborhood adjacent to downtown which I have chosen as the focal point of this study, any future planning is redevelopment planning means uprooting, or in some way disturbing, large numbers of people who are almost certain to be in precarious economic circumstances. I have no substantial quarrel with the Comprehensive Plan as it is proposed to apply to undeveloped portions of the metropolitan region. But I take strong issue with its implications for developed sectors which contain a predominant portion of poor people and new immigrants. While the Comprehensive Plan is vague about its immediate or eventual impact on neighborhoods such as the one I have chosen for study, the possible alternatives for its implementation are clear:

1) eventual clearance of the area and redevelopment as an extension of the contiguous downtown area (this alternative is specified in the Comprehensive Plan);
2) partly, perhaps gradual, clearance of a portion of the neighborhood to make way for commercial development as an extension to downtown;
3) redevelopment of the area as a residential section in the interest of preserving the present community.

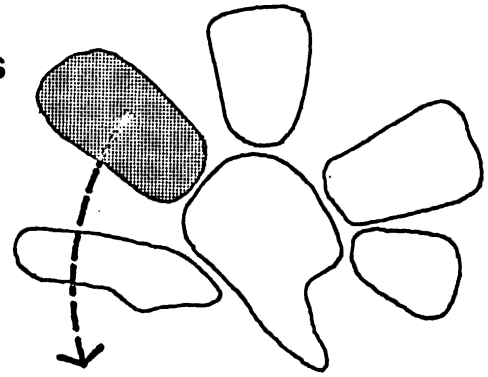


EXAPOLIS 2,000 SIX FEDERATION CITIES :
ONE CENTRAL AND FIVE SATELLITE

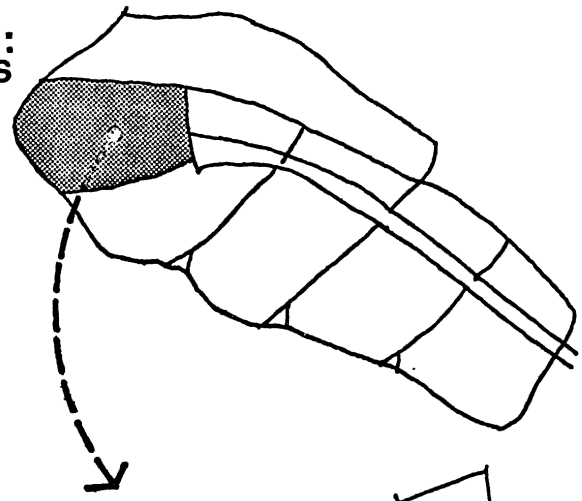
How far can the criteria and norms stated by the Comprehensive Plan be applied to such an area? This is one of the questions this thesis attempts to answer. Before turning to this issue, let me first describe in some greater detail the urban structural organization in the Comprehensive Plan.

URBAN STRUCTRURAL ORGANIZATION

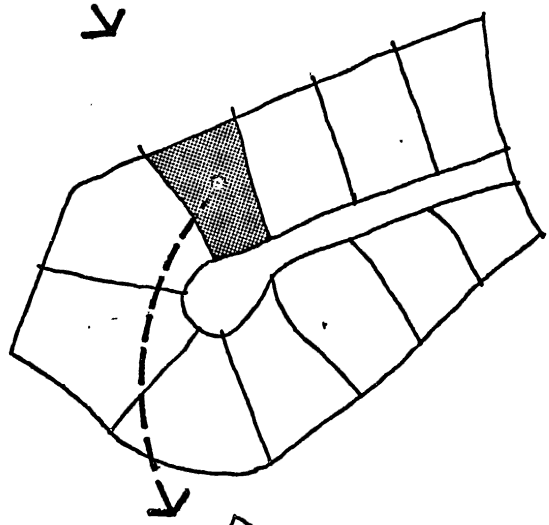
1 EXAPOLIS:
SIX FEDERATION CITIES



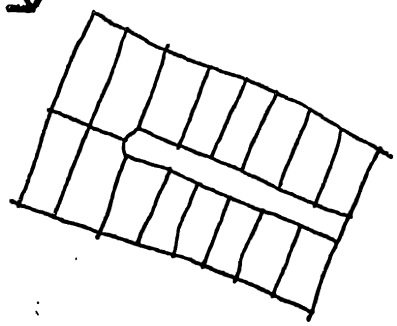
2 FEDERATION CITY:
SIX TO NINE OPT. CITIES



3 OPTIMUM CITY:
6,000-20,000 FAMILIES



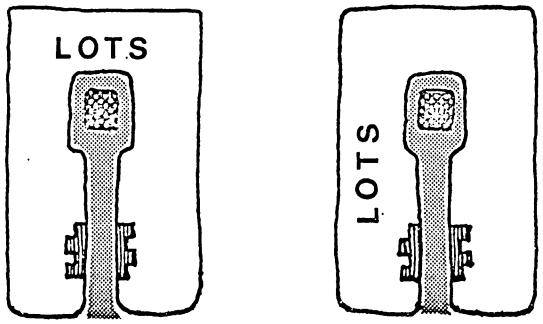
4 NEIGHBORHOOD:
500-2,000 FAMILIES



The Urban Structural Organization

a) Domestic group

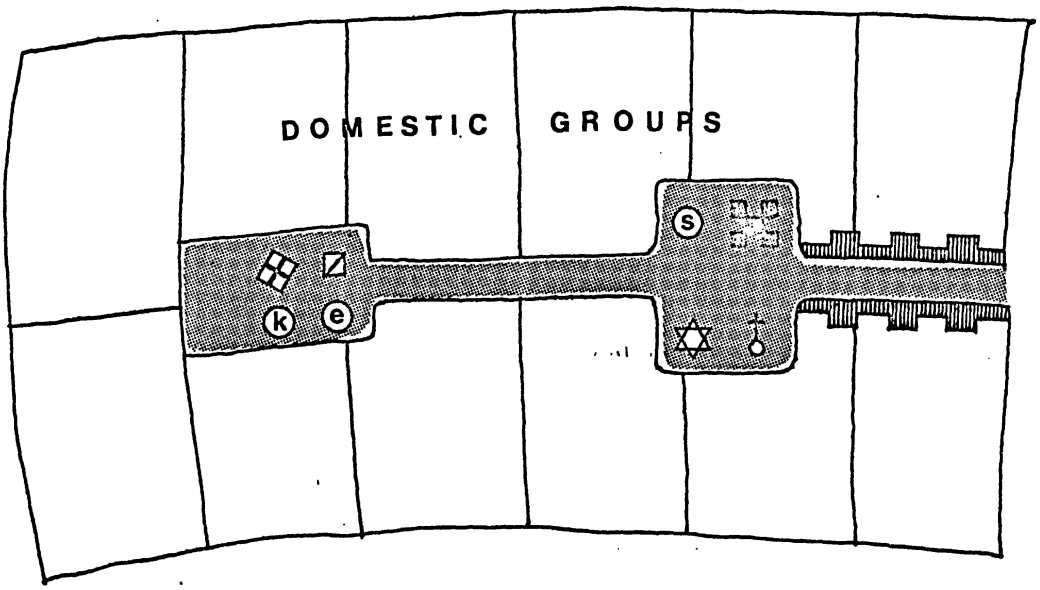
The domestic group constituting eighty to two hundred families is characterized by natural communal relations; people meet daily along certain streets. The human components of this group are the house wife and the child of preschool age. The facilities necessary for such a limited community is an open area where children can play and fundamental commercial conveniences. A path to facilitate an adequate pedestrian circulation is also required.



PLAY AREA
COMMERCE AREA
GREEN AREA

b) Neighborhood

There are certain criteria which define the number of persons constituting a neighborhood unit. According to each particular country's standards and the size and age of the city, this unit usually has a population ranging between 500 and 2,000 families. The dimensions of a neighborhood are determined by the child's maximum walking distance from the most distant dwelling unit to the school and adjacent recreational places (approximately half a mile). An ideal element of neighborhood design is the planned protection of schools and residences from traffic circulation.



The neighborhood unit is formed by easily identifiable homes, common open areas and is provided with "elements" which satisfy the communal necessities of its inhabitants. Communal needs are usually satisfied by some type of neighborhood center. The neighborhood center may be composed of a public school, playing areas, a plaza, a chapel, a multiple activity center with library, conference and exhibition rooms. At this scale the variety of activities helps increase the participation of the residents.

The neighborhood is the basic element in the structural organization of the Comprehensive Plan. An urban structuring by neighborhoods theoretically aids in restructuring the city as a whole. As Lewis Mumford pointed out, "neighborhoods exist as a fact of nature, whether or not we recognize them or provide for their particular functions . . . Neighborhoods are composed of people who enter by the very fact of birth or chosen residence into a common life."[2]

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[2]Mumford, Lewis, The Urban Prospect, Harcourt, Brace and World, Inc., New York, 1968, page 59.

Neighbors, at the same time, are simply people who live near one another, united primarily by the proximity of their dwelling units and by common interests. Physical proximity makes neighbors conscious of each other by sight, and known to each other by direct communication, by intermediate links of association or by rumor (" . . . neighborliness rests solely on the fact of local cohabitation . . ."). [3]

The neighborhood is based, essentially, on the needs of families to have access to common cultural facilities: the school, the library, the meeting hall, the cinema, the church. To have such institutions within easy reach of the home is a guarantee of their utilization. Having them outside the neighborhood, as is the case in the neighborhood I observed in Monterrey, is to discourage their use and therefore their utility to people. Additionally, much time and energy is wasted in transportation. As in any social organization the neighborhood cannot be a self-enclosed unit. It is self contained with respect only to domestic and community functions.

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[3] Ibid., page 59.

Admittedly neighborhood planning as with any site planning can be most easily achieved in new areas where the entire site can be initially planned. In the old quarters the existence of established streets and property lines make new planning very difficult and expensive. But people have to live somewhere and if there is to be any hope of having open space and other amenities in the future, a more efficient pattern of building must be developed for such overcrowded and haphazardly developed areas as the one studied in Monterrey.

The urban planner has a very limited range of options open to him in such cases. Some of the constraints are economic (who is to pay for the needed improvements?); others are social or cultural (the people in the neighborhood studied pretty well like things the way they are except for lack of basic utilities and, as shall be demonstrated later on, feel threatened by any prospect of substantial redevelopment); some are political (is the city, state or national government ready to divert public resources to slum redevelopment?). Basically a redevelopment plan will serve either to support the existing social order in a community or it will cause radical change as

urban renewal authorities in the United States have learned (sometimes to their grief) during the past two decades.[4]

Logically the only way to house more people is either to extend the present pattern of sprawl and cover vastly more land, or to use less land and increase its carrying capacity. I believe the latter is the correct approach and should be pursued by the government and planning officials of Monterrey simply because higher density solutions to housing are less costly, make more efficient use of city land, and economical development allow of infrastructure and facilities. Also more people can live closer to jobs, schools, and other necessities.

Urban experts have generally held that "reconstruction of society can only proceed on the basis of rebuilt homes, neighborhoods and cities."[5] Thus, in recent years

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[4]See for example an account of the West End urban renewal project in Boston as depicted by Herbert Gans in The Urban Villagers, Free Press of Glencoe, New York, 1962; and Mark Fried in Grieving for a Lost Home in The Urban Condition, ed. Leonard J. Duhl, Basic Books, Inc., New York, 1963.

[5]Reiner, Thomas, The Place of the Ideal Community in Urban Planning, University of Pennsylvania Press, Philadelphia, 1963, page 112.

the trend has been to reconstruct existing neighborhoods in an effort to preserve communities and to improve the quality of life within them.

The neighborhood concept raises some interesting problems of design: what degree of isolation should be accorded the neighborhood besides the inevitable separation made by major traffic arteries?; how can the phenomena of status and class affiliation be encouraged? (In fact, this has been encouraged in the United States by zoning ordinances and deed restrictions).

Ideally neighborhoods should be representative of the whole city. The mixture of social and economic classes within a neighborhood might have its correlate in a mixture of housing type and densities of occupation. In the neighborhood it is necessary to recover that sense of intimacy and innerness that has been disrupted by the increased scale of cities and the spread of transportation. It is a main premise of this study that neighborhood unit organization is a viable answer to the "giantism" and efficiency of the overcentralized metropolis. The well organized neighborhood in fact represents decentralization of community activities into local

units so that centralized facilities do not become congested and difficult to use. The fact that many of the significant activities of the city are occasionally used and lie outside the neighborhoods does not lessen the importance of neighborhood functions.

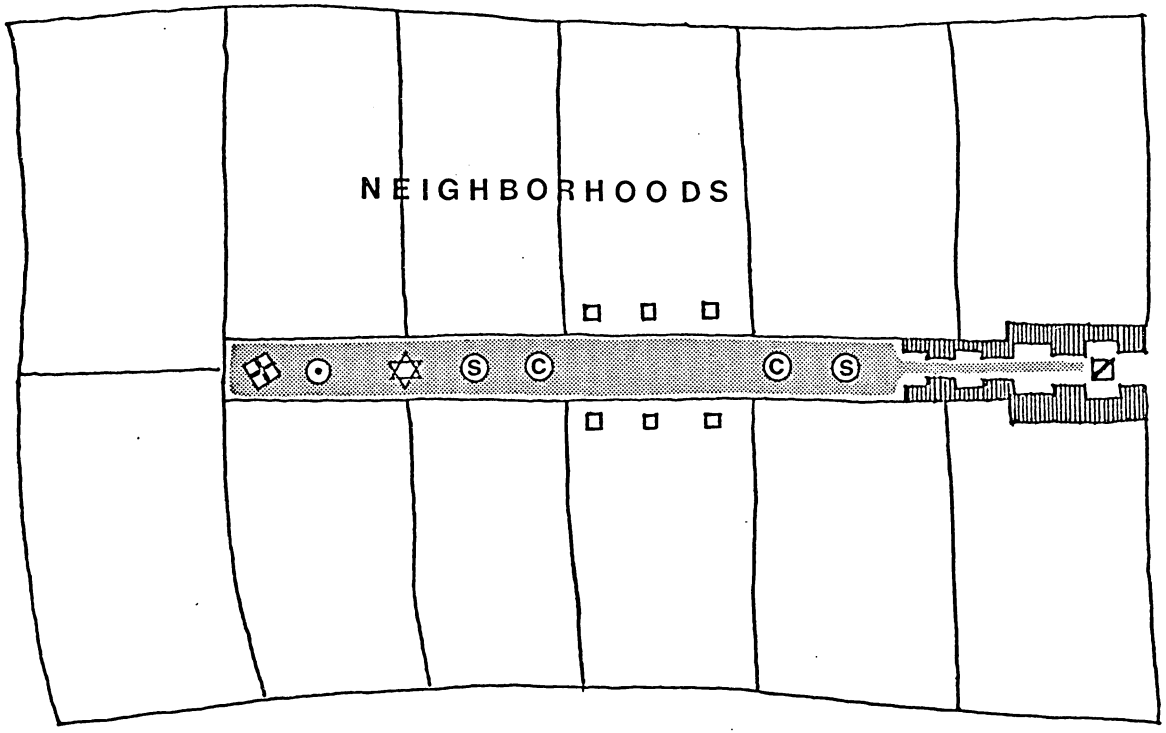
In summary, the neighborhood unit is a social fact; it exists in an imperfect form even when it is not articulated on a plan or provided with the institutions needed by a domestic community. By conscious design and provision the neighborhood could become an essential organ of an integrated city.

c) Optimum City

The neighborhood unit, as we have observed it, is not self sufficient to satisfy all the educational, cultural, recreational, commercial, and administrative necessities of its inhabitants. A larger number of inhabitants is required for the total functioning of cities. Such an urban organization is obtained by an agglomeration of ten to eighteen neighborhoods or 6,000 to 20,000 families (an average of 5 persons per family, the Latin American case, at a total population in the order of 30,000 to 100,000 inhabitants). With a sufficient economic base such an agglomeration would allow the financing of the total range of necessities without long distance movements of people.

The optimum city might have its own core or "optimum center" to facilitate urban integration of neighborhood units. The establishment of such city-wide facilities as colleges and commercial schools, cultural and entertainment activities would enable people to participate in all activities existing at the neighborhood scale plus many that can be provided only on a city-wide scale.

The name "optimum city" recognizes the fact that at such a physical-demographic dimension social needs are satisfied at a lower cost of physical energy, time and money.

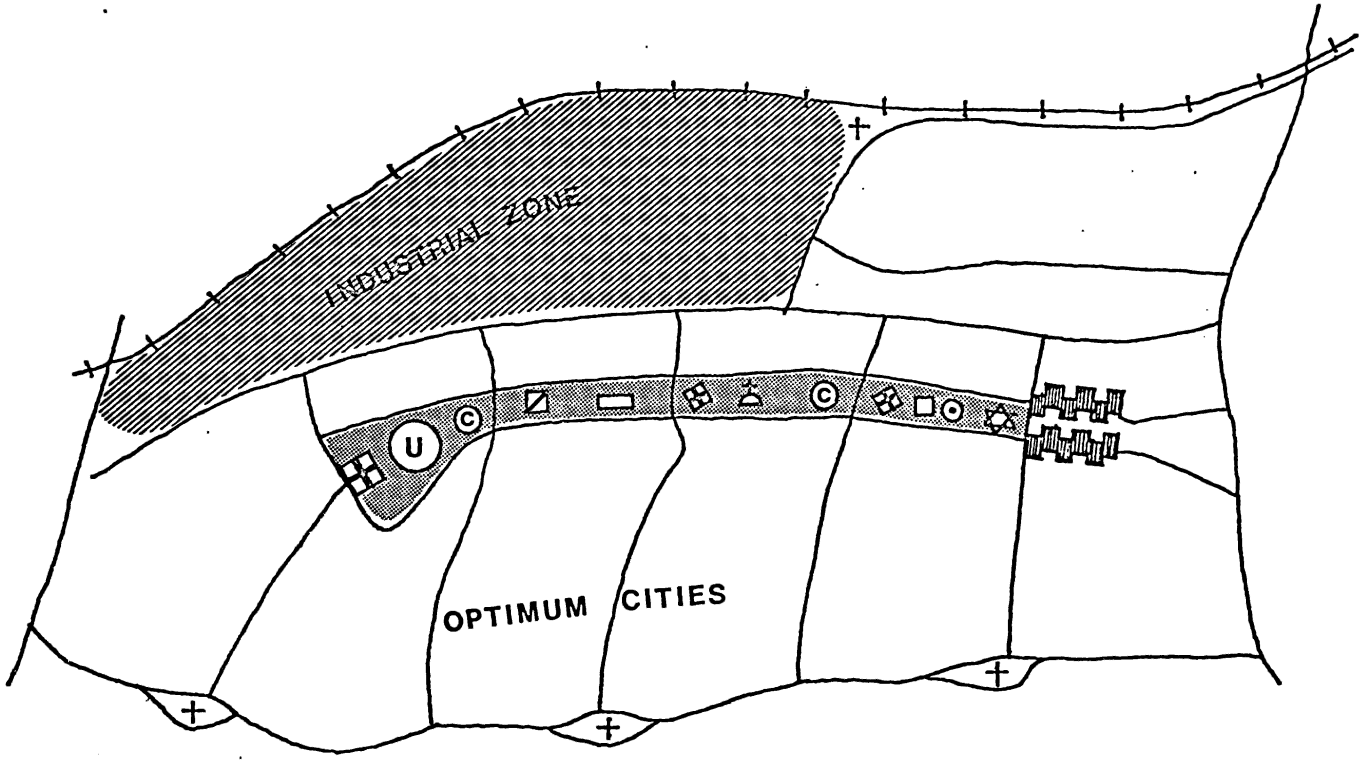


OPTIMUM CITY

- Ⓢ SENIOR H.SCHOOL
- Ⓒ COMMERCIAL SCHOOL
- ⊙ CIVIC CENTER
- PARK
- SHOPPING CENTER
- HEALTH CENTER
- CINEMA
- THEATER
- ADMINISTRATIVE BLDG.

d) Federation City

The model city is the biggest urban complex within the metropolis and comprises six to nine optimum cities. Here certain facilities occur that can only be provided on a massive (metropolitan) scale and thus its equipment is much more extensive than the other urban units. University campus, medical center, large shopping centers, stadium, theatres, specialized libraries, public offices and administrative buildings, and cemeteries are some of its principal components.



FEDERATION CITY

- U UNIVERSITY
- © COLLEGE
- PARK
- CIVIC CENTER
- SPORT CENTER
- SHOPPING CENTER
- RELIGIOUS CENTER
- HOSPITAL
- STADIUM
- SHOW CENTER
- ADMINISTRATIVE BLDG.
- CEMETERY

2 THE STUDY AREA

Historic Facts

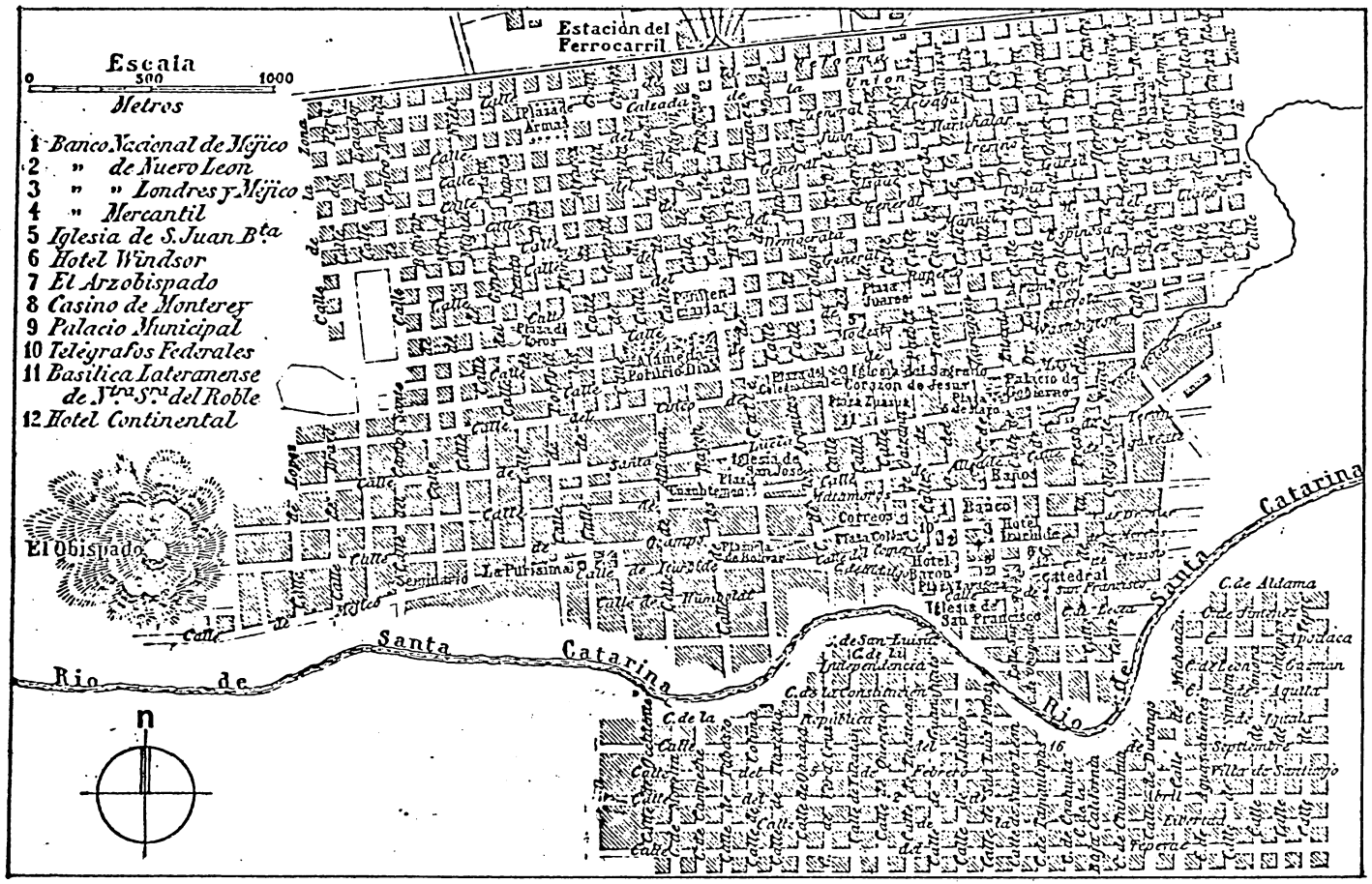
The study area, a deteriorated neighborhood in Monterrey, originated with the arrival of several rural immigrants mainly from the State of San Luis Potosi in the year 1860. Those people came to Monterrey looking for new jobs. They found excellent, high and fresh lands for living adjacent to the Santa Catarina river. The colony they founded was named "San Luisito."

It was not until 1906 that the construction of a concrete bridge made it possible for the Colony to integrate with Monterrey. Innumerable floods of the river in the following years, and a particularly catastrophic one in 1909, inhibited rapid growth of the area.

In 1910 with the Independence Centenary Aniversary the Colony changed its name to "Colonia Independencia" as it is known today. Since that year the labor class has populated the area thanks to its low land value. A few blocks, limited to the North by the River and to the South by the Loma Larga Hill, were occupied by those people. Shortly thereafter the Colony grew to the East, the best natural ventilation zone, creating a new colony: "Nuevo Repueblo." Growth to the West was slow.

The River's canalization and the construction of four new bridges in 1951 increased the area's development and insured continuing growth. Further growth in the 1960's spilled over onto the skirts of the Hill, which began to be occupied by newcomers.

The desireable orientation, the proximity to downtown, and the land's natural soil qualities are some of the area's characteristics that have made possible rapid growth in the past few years.



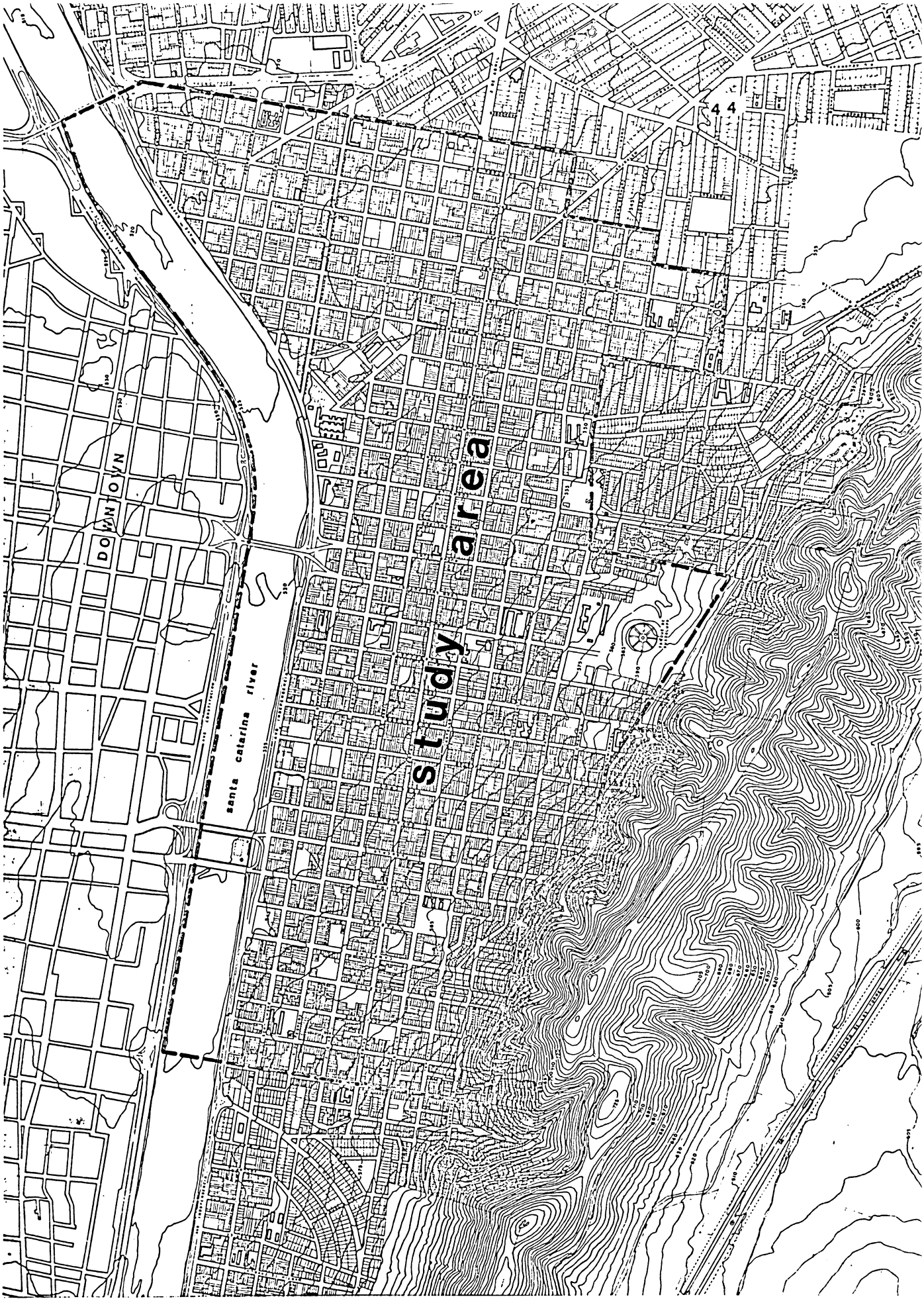
MONTERREY AND STUDY AREA BEFORE RIVER'S CANALIZATION EARLY 1900

Physical Facts

The study area is bounded on the north by the Santa Catarina River and Independencia Avenue, heavily trafficed artery paralleling the River in an East-West direction. To the South is the Loma Larga Hill. To the East is Paricutin Street and the main Tecnologico Avenue, another important artery and entrance to the city from the South. To the West is S. Pena street which separates the study area from a higher income area known as Colonia Pio X.

The study area occupies approximately 800 acres and has a population of one hundred thousand inhabitants. The gross population density is 125 persons per acre, almost three times that of the rest of Monterrey (45 per acre). This density does not take into account the people now occupying the skirts of the Hill.

Organization of blocks and consequently the street patterns do not relate to the terrain's topographic conditions which has an eight percent declivity in the direction Northeast to Southwest. The classic Spanish block, approximately 300 feet square is systematically repeated throughout the entire area.

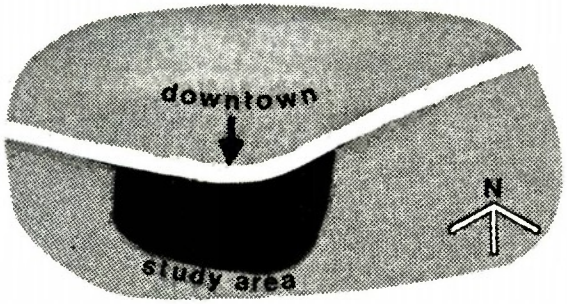


MONTERREY, MEXICO

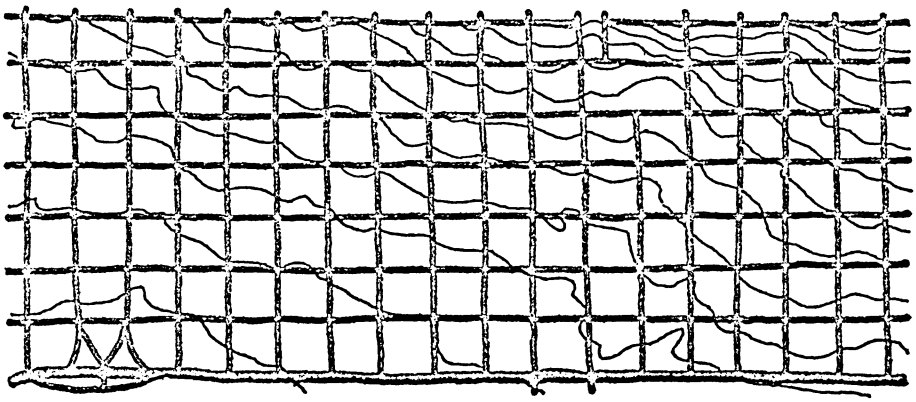
colonias:
independencia
nuevo repueblo

0 0.15
miles

N



STUDY AREA GENERAL VIEW LOOKING SOUTH



STREET NETWORK

Such a rigid organization has provoked a street network opposed to the course of the topographic curvatures. It seems there should exist a differentiation between streets according to the functions they serve, yet all of the streets are similar two width avenues. Most of these are not paved or pavement works are incomplete. There are very few trees. The lack of drainage in many sectors results in floods of waste matter waters. The area appears as a dirty, powdery and unhygienic place where neither the pedestrian nor the car can easily circulate. In fact, buses serving the area can only use two or three of the streets.

From the standpoint of the professional planner the area suffers from a lack of indispensable public services. There

is no electricity in several streets and in many dwelling units. Water and gas exists mainly in the north part of the area. Only a few blocks have sanitary sewers.

There are important visual geographic features in the area: the Santa Catarina River and the Loma Larga Hill.

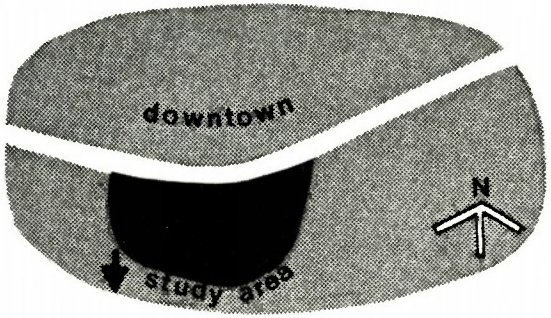
1) The River as a recreational place.

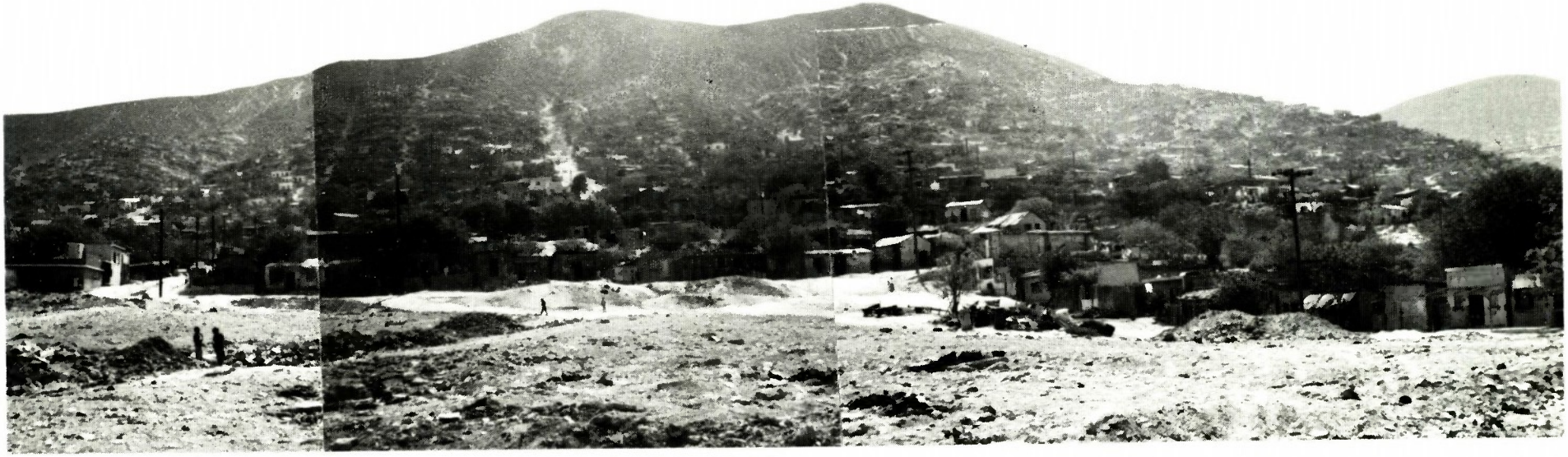
When one asks himself, what is unique about Monterrey? One answer has to be "its River." A river that runs through the city from East to West constituting one of the most important elements of Monterrey's landscape. The river bed is 600 feet wide, at 15 feet depth, and 2 mile length adjacent to the study area (Colonias Independencia and Nuevo Repueblo). But its most peculiar characteristic is that it has remained dry since the last flood eight years ago, impassively waiting for a new rising of its waters. Actually the river is wholly abandoned and sometimes used as a dumping place. It is also being used as a recreational area for the low income classes living nearby. There is no apparent concern for its potential use.

"Let us go to the River" is what the youngsters say when they wish to play. Several soccer fields and baseball diamonds give the place a real vitality. It is the essential center of recreational activities. Weekends find it flooded with people. In addition the river is an important pass way for the area's neighbors who walk to downtown. Ambulant there sell the most curious articles. In this instance the river also functions as a market place.

2) The Hill as a real and dangerous slum area.

Loma Larga Hill, the adjacent area that has recently been absorbing new immigrants from outside Monterrey has been developed by very poor people who could not locate homes in the older neighborhoods typical of the study area. Loma Larga, therefore, is an overflow area for people who are even worse off than the ones in the study area. Should the study area be cleared by the city in all probability many of the families would be forced to go to Loma Larga and other parts of the city which are already critically crowded and in bad condition.





LOOKING SOUTH TOWARD LOMA LARGA HILL

The Loma Larga Hill is the North boundary of the area, 600 feet high and very steep. Due to the absence of trees the new and very poor construction presents serious erosion problems. These adverse characteristics, however, have not impeded the alarming rate at which it has been occupied by immigrants. Like the Colony Independencia the proximity to downtown has speeded settlement of the hill. The settlement process is typically Latin American in which sites are illegally taken by marginal and rural populations who build their shanties overnight. Of course these settlers will remain in these conditions if a public housing policy is not adopted that includes relocation to appropriate houses with sanitary and other minimal facilities. The direct or indirect relationships between this "slum area" and the study area no doubt have aggravated the planning problems of the latter.

Most of the neighborhood land in the study area is used for residential purposes, which makes necessary an analysis in depth of the characteristic housing situation. Other activities of education, commerce, culture, and recreation were physically disorganized and functioning very badly at the time of the study.

Several schools are arbitrarily located and unrelated to the number of students and the area served by each school. Fourteen elementary schools, three junior-senior, two commercial schools and one industrial school were actually functioning:
a) in old and declining buildings lacking in basic services, playgrounds and areas for future possible expansion.
b) in overcrowded conditions due to the huge number of people of school age. Elementary and high school in Mexico are free and elementary is obligatory.

Commercial activities take place in a very large number of small stores and trinket shops spread throughout the area. Most stores are simply an extension of the house using the room facing the street; a current situation in low income areas that allows the impoverished residents to improve their incomes or to have one if there is no other source. Only one street in the neighborhood concentrates a greater number of stores within a certain "category." There are no real shopping centers. More than sixty percent of the people shop only in the area and cannot afford to shop any where else. Commerce on the streets plays an important role with ambulant salesmen who offer their products (mainly food) in improvised structures. In such conditions, this spontaneously generated commerce

satisfies the minimum demands of the people. Four recently established banks complete the commercial activities of the area.

There are no industries in the neighborhood except for pottery and shoe making in houses. Mechanic's shops and two or three small brick factories are the balance of working places.

The neighborhood lacks cultural facilities. There are no museums, auditoriums, libraries, media centers or any places that would permit the promotion of cultural activities. A recently inaugurated civic center has begun to offer some services to the community. Its goal is to upgrade the cultural and educational level of the people with courses, conferences, lectures, concerts, scenic representations, and sports which try to bring out the people's skills. The center also offers dental assistance. Four churches fulfill the spiritual needs of the neighborhood.

Recreational activities are minimal because of the lack of places and buildings where such activities can take place. The river site and streets are the main places used for these purposes. One plaza in the whole area poorly serves the

community as a meeting and gathering place. Four old, deteriorated theatres are the only buildings functioning as amusement centers.

Four small clinics with limited resources serve the health needs of the people. A few drug stores and a couple of doctors also serve the neighborhood. There is no fire or police protection.

The sector of the neighborhood chosen for a special analysis of housing needs is a seventy-two block area located between the two main bridges. In order to establish a diagnosis of the existing housing I classified the dwelling units in four categories:

a) "Tugurio,"
b) Jacal or hut,
c) Declining, and
d) Residential or good.

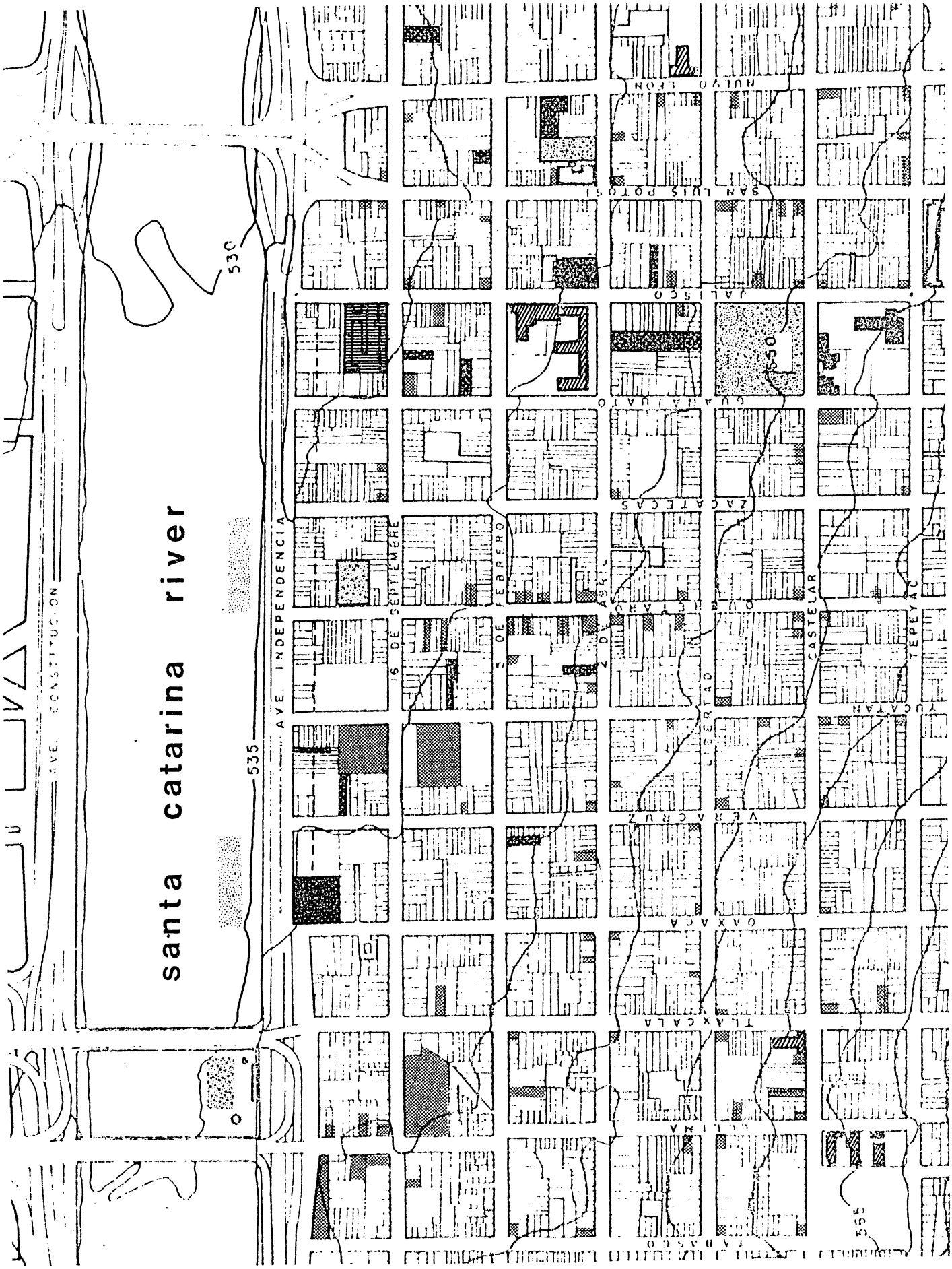
a) "Tugurio" (or circular room) is a dwelling where a single room is used as bedroom, dining room, living room and even sometimes as a kitchen. These dwellings are usually old

houses subdivided to shelter several families. Most have no individual bathrooms or privy; common services located in the yard are shared by neighbors as the solution for sanitary needs.

b) Jacal is a temporary construction type of dwelling built with second hand use materials. This kind of "house" has mobility which gives it a temporary character even though it is likely to remain in place for a long period of time. Wood and paper board are the main structural components; the floor is earth. This primitive type of dwelling is one of the most common among Latin American worker classes.

c) Declining housing are dwellings next to tugurio's zones. Declining units are over populated and grown old. They require urgent repairs and some services; they are often a latent tugurio.

d) Residential are dwellings in relatively good physical conditions and have most services. They may readily become declining ones if there is not adequate and continuing maintenance.



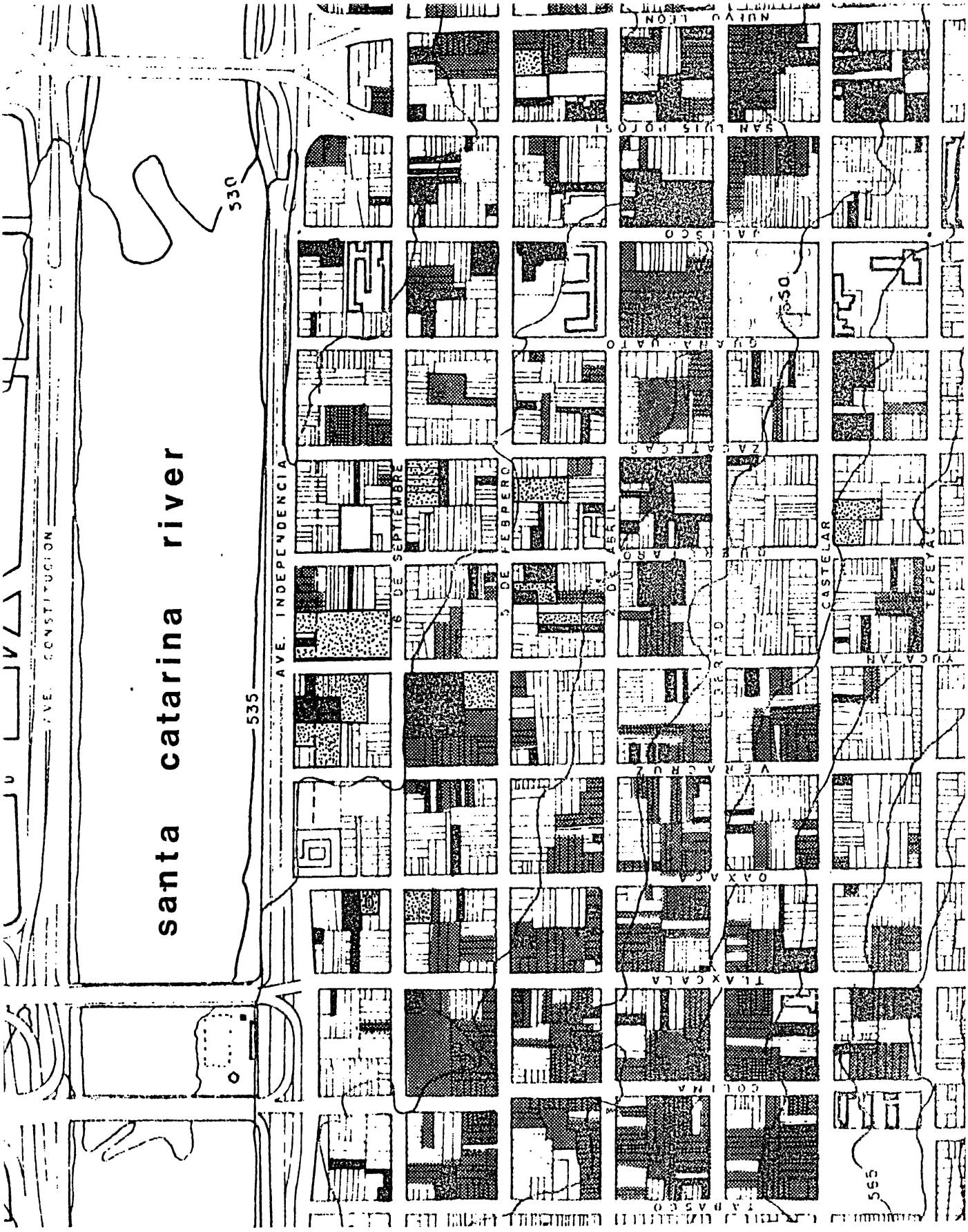
72 BLOCK AREA

LAND USE

- commercial
- educational
- recreational
- health
- religious

0 100 300
feet

N



72 BLOCK AREA

HOUSING DIAGNOSIS

tugurio & jacal — residential

declining — vacant

0 100 300

feet

N

HOUSING TYPES

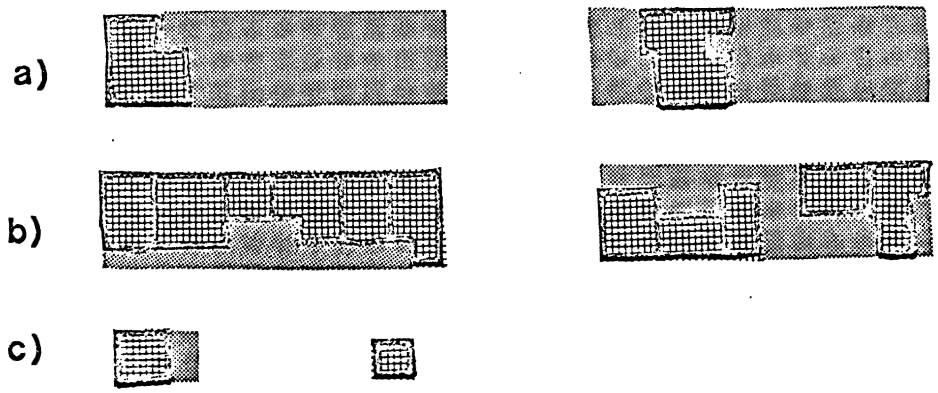
JACAL RESIDENTIAL

DECLINING

TUGURIO JACAL

The housing diagnosis plan confirms the fact that the residential class of dwellings are very few. There is always the possibility that they will deteriorate into declining ones. Because of the reduced number of jacal units these are shown with the "tugurio's" which exist in every block. There are few vacant sites. In general the whole sector is in advanced state of deterioration. According to the 1969 census the study area was in worse condition than the sector selected. Thus the study area had an 80% of "tugurios" and jacals, 19% of declining and 1% of residential units.

Subdivision of blocks varies from one block to another depending on the type of dwellings. It is difficult to establish the exact number of lots and even more difficult to count houses by block: an average number would be 50 to 60 per block. The irregular lots are generally 30 feet of street frontage and a variable depth ranging from 15 to 120 feet. If we simplify these different situations we have three prototype lots:



a) Typical well defined lots for residential or fairly good units are 30 feet of street frontage and approximately 120 foot depth. The dwelling unit may or may not have a front yard but it usually has a backyard, which facilitates natural ventilation. Diagrams b) and c) illustrate lots occupied by "tugurios." They are sometimes quite deep, allowing space for two or more "tugurios," or they are very small with only one dwelling unit. In both cases the area left for yard is minimum or none.

Practically all dwelling units are one story and randomly distributed. Land values depend more on the type of house than the location (in proximity to important streets). Thus, there is a wide variance of land values ranging from ten to seventy dollars per square meter.

Another interesting aspect related to housing is tenacy. Fifty percent of the people living in the study area are home owners as well as land owner. Seventy percent of the tenants rent the houses ($25 to $35 per month) which includes the land. The remaining tenants rent only the land ($10 to $15 monthly rent) building their own jacals or "tugurios." This land

tenacy situation has become more grave in the last years because it is an easy, rapid and economic way of solving the shelter problem.

To sum up, the principal deficiencies or inadequacies found in the dwelling units are related to:

a) sanitation (health)

b) security (safety)

c) habitability (comfort)

a) Sanitation. Most houses lack basic sanitary services. This deficiency ranges from complete absence of services, on the extreme case, to the lack of certain bathroom equipment. The essential causes of the deficiencies are: lack of water and drainage services, and the inability of residents to pay the cost of domiciliary connections. Another deficiency is the fact that there is not an adequate place for the kitchen; the preparation of food takes place anywhere with resulting inconvenience and unhygienic conditions.

b) Security deals with general construction deficiencies found especially in roofs that do not guarantee any kind of protection (i.e. paper board, straw, or sheet metal).

c) Habitability. Deficiencies include: earth floors, no glass in doors and windows, poor lighting and ventilation, and overcrowded to the extreme. There is no relation between the built area and the number of people living in it.

Social Facts

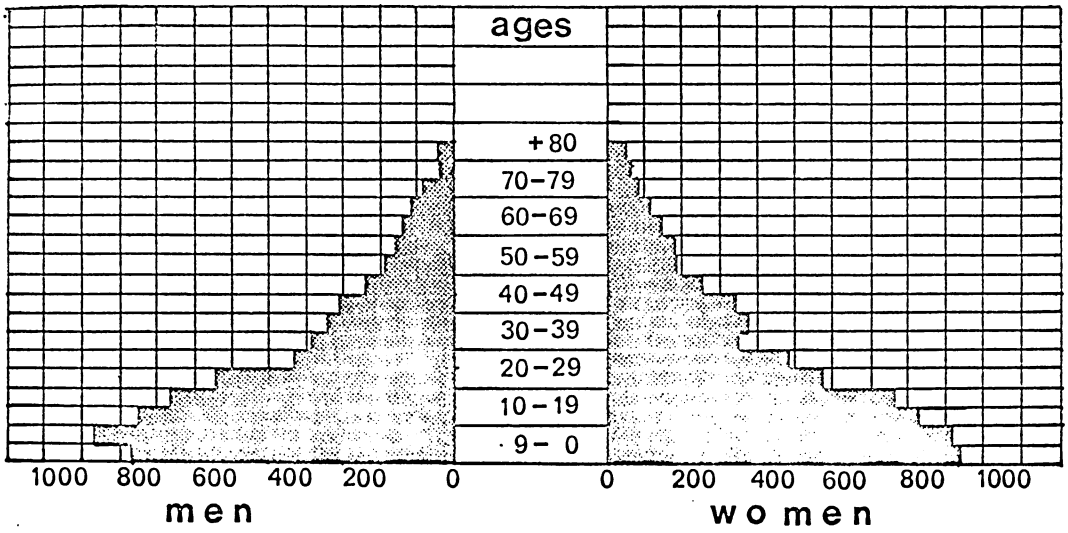
Although the area does not show an imminent decline in population, it can be called a "gray area" because it serves the vital social purpose of providing housing for the poor and migrants that have been streaming into Monterrey during recent decades.

The analysis of social aspects of the area is mainly based on my personal observations during periodic visits and interviews of fifty families selected at random. The observations and interviews took place in February and March 1971 in the same 72 block area used for the housing diagnosis. The 1969 Census data completed the information obtained in the sample.

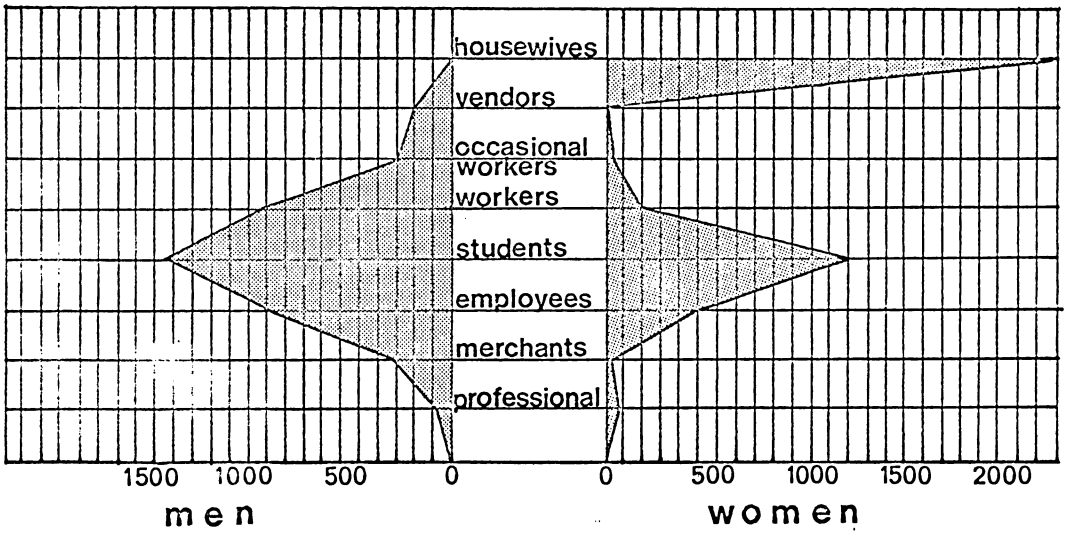
More than 13,100 persons were living in the 72 block area in 1969. There were approximately 2,000 families (6.5 persons per family). The age pyramid indicates the high percentage of children and youngsters (about 60%) from which future demographic growth can be estimated.

The occupations shown on the respective graph are: professionals, merchants and ambulant salesmen, employees, workers, and eventual workers, students, and housewives. The women are

AGE PYRAMID



OCCUPATIONS



principally occupied as housewives (because families are large) and as students. Most men are students and employees or workers. The huge number of students is an accurate reflection of the age pyramid with a major proportion of the people at school-age. Finally the economically productive occupations are basically in the hands of professionals, employees and workers (manufacturing and construction) who are employed outside the area in places such as downtown, industrial areas and new housing development sectors. They reach their working places by bus (only one percent have cars). Very few merchants and ambulant salesmen work within the area. The unemployment rate is 15%.

Most of the students attend elementary and junior-senior high schools located in the area and most of them reach school by foot.

There is high mobility within the area. According to personal interviews many families remained in determined sectors of the area for a long period of time. When they improve their economic situation they buy a house or a piece of land in a different sector of the area. The mobility index illustrates this phenomenon. Very few people have been able to move to

better neighborhoods outside the area. The area and particularly the 72 block area is relatively stable and not a staging area.

Mobility Index**

N = 50 families

Place: \ years:	10 or more	less than 10 more than 5	5 or less
Monterrey	48	2	0
Neighborhood	44	3	3
Present house	20	9	21

**Interview questions:

How long have you lived in Monterrey?

in this neighborhood?,

in the present house?.

Most of the population of the study site is low income constituting what is called the "proletarian class." Four percent earn between $5 and $20 a month and eight percent more than $20 and less than $30, which is insufficient even for basic maintenance. Fifty percent has a monthly income between $30

and $55 which hardly covers the need for food, clothing and shelter. Only two percent make the highest income which is between $210 and $340. These figures clearly indicate the miserable conditions of a great number of people.

Interviews were done on the basis of an open ended questionnaire (see Appendix). The objective of the interviews was to discover from the stand point of the residents the more immediate problems and necessities in the area.

The urban planner can achieve real success in projecting needs of a community only through an analysis of the conditions and expectations of the people. With this in mind I was first struck by the actual living conditions of the people. They were more than poor; they were miserable and had developed a "culture of poverty." Oscar Lewis defined this "culture of poverty" as a "predominant life style which cuts across and overlies the ethnic and square/non square life styles." This kind of culture has carried the individual to a state of conformism where he adapts himself to the prevailing standards and customs. At the same time he becomes a resigned and very pessimistic person ("it is enough what God has given us"). In such conditions expectations are mainly those of subsistence,

the minimum necessary insofar as food, clothing, and shelter are concerned.

The "culture of poverty" is also characterized by abnormal relationships between family's members. Moral and social problems are created due to promiscuousness within the dwelling unit. (A high number of people living in one room).

My intention here is not to go deeply into the so called "culture of poverty," but to point out some of its aspects found during my investigations in the study area.

I found general apathy when I asked questions such as:
-"What do you like most in your neighborhood?"
-"What do you like least in your neighborhood?"
-"What would you like to see done in the area?"

Most answers to the first question were related to convenience of location with respect to place of work, for example downtown or factories. ("I walk to work" . . . "Most jobs are close by"). Other answers pertained to quietness of the area which used to be a delinquency area. They feel secure because there are not delinquents or thieves any more (. . . "We had

many perverse people"). They attribute this change to the fact that several schools have been built ("There were only three schools for the whole area and bad people every where, now people are nice and there are plenty of schools"). A few residents argued the point of quietness and complained about the many bars in the neighborhood ("It is not possible . . . three canteens in my street"). What residents liked least was the lack of services and dirtiness of the streets.

Several people did not know what to answer because they had never experienced any of the basic amenities of normal city life. Moreover, some of them have so many elementary personal problems of life sustenance that they have hardly ever considered such facilities as a neighborhood recreational center. Indeed among such people, there is no concern for the progressive deterioration observed in the area (. . . "This neighborhood has everything I need . . . 'shopping centers,' schools, churchs, banks . . . what else can I ask for? . . ."). The provision of services (electricity, water, gas and sewerage), paving of the streets and some green spaces were the only things most people wanted to see done. But some were skeptical even of these services because they did not know how

they could afford to pay for them even if the services could be made available. Aspirations related to housing were simply to make repairs and improvements of some of the existing deficiencies and to introduce sanitary services. They also wondered who would pay the cost, and whether such improvements would ever really be available to them.

Some people were opposed to any kind of redevelopment. Unconcerned with the progressive deterioration they cannot see how any official redevelopment would benefit them. In fact, certain respondents seemed to fear that redevelopment would mean demolition of existing housing with no replacements for them: ("I would not like an improvement of the neighborhood because I am afraid I would have to leave for who knows where . . .")

Apathy among the people is also reflected in a minimum of communal life. They do not care what is going on because they are concerned, primarily with their many personal problems. As such they are individualists and realists. Although residents have been living in the area a long time they do not know each other very well and only occasionally get together. Although some have noticed a recent change of attitude among their

neighbors ("People are more friendly now"). Nevertheless the neighborhood has developed no leaders who might somehow encourage community activities among the residents.

Actually, many of the residents like the neighborhood in spite of the progressive deterioration and lack of services and feel there is very little choice for a better place to live. From their stand point they have witnessed substantial progress in the past few years. They call this progress "modernization" which means the construction of a few new houses, paving of some streets, and the provision of utilities in some sectors. ("Ten years ago there were only two streets paved and with no public light. You could hardly walk in the area or get out of the house because of the dirtiness and darkness everywhere").

From the question, "What do you do during weekends?", I discovered that activities of leisure are very simple: most people stay at home watching television, reading, sewing, working in the house (housewives) because they cannot afford to go anywhere else. They also go to church. ("I never go out . . . it is too expensive." I don't like to go out." "I stay at home . . . as every day . . . the same routine . . .

working in the house"). Most children play on the streets or go to the River; sometimes they organize competitions.

To the question, "What kind of recreational and entertainment places does the neighborhood offer?", most of the answers were: the River and the bars. Some residents indicated the theatres and a plaza which happens to be the only one in the entire study area. ("The River is the only place where I have fun" . . . "There are no places where you can go" . . . "I meet my friends in the bars . . . "). Thus, sport in the River and tequilla in the bars are escapes from the problems of daily life.

In summary, most residents like living in the area, and they do not really believe that any amelioration of their living conditions will occur or that any other sector of the city they could afford would be better. For this reason most residents want to remain in the area as long as their economic conditions are not improved. They do not see any reasons for leaving the present neighborhood. Moreover, the neighborhood has been their home for many years and a place close to their working places. They feel more secure there than anywhere else.

Their first and strongest desire is to stay.

However, they do want municipal authorities to take care of the area; to pave and to clean the streets, to provide the minimal utilities and public services (power, water, gas, drainage, sewerage). There is an imperative need for such services as sanitary, washing and kitchen facilities. These needs are primary and basic for decent, humane living.

Neighbors want and need to improve their dwelling units and to have green spaces, playgrounds where children can play and parks or plazas where people gather.

3 PROPOSAL

PROPOSAL

Once the conditions and characteristics of the study area and the conceptual part of the Comprehensive Plan for Monterrey were established I found myself faced with the dilemma of how to approach the problem of redevelopment.

It would be naive to assume that the urban structural organization of the Comprehensive Plan is a practical guide to redevelopment of the study area. The Comprehensive Plan assumes not only that whole new communities will be created where none presently exist, but also that old sites such as the study area will be cleared or partly cleared and rebuilt. The Plan calls for subdividing the area into several neighborhoods and providing them with basic facilities. Its full implementation requires that the entire site be cleared and rebuilt with houses, community facilities, commercial structures, and other supporting activities.

The situation and the living conditions of the people in the study area on the one hand, and the ideal formulation of the Comprehensive Plan on the other, induced me to lay out two basic alternatives for redeveloping the area. These

alternatives take into account the wants and needs of the neighborhood residents and also take into account the long range requirements of city wide development as visualized by the Comprehensive Plan.

These alternatives are:

A) A short range plan to solve immediate and urgent problems of the area.

B) A long range plan to incorporate the study area in the overall plan for the city. This long range plan is in effect a substitute for the more utopian formulation of the city's Comprehensive Plan. The new long range plan is intended to relate more realistically to the needs and wants of the neighborhood. At the same time it takes into consideration the city's requirements: for example, expanding central commercial development.

A) THE SHORT RANGE PLAN OR PILOT PLAN

The short range plan for the neighborhood under study is basically addressed to the physical problems which the people themselves indicated are most pressing. It does not claim to eliminate poverty, for such a goal would require special

programs to upgrade social and economic levels of the people. The short range plan seeks only to improve housing and to provide some community institutions now missing. The intent of the plan is to "save" the neighborhood from further physical deterioration and to preserve it as a residential community for the people who live there.

1. Improvement of Housing

The plan for improvement of housing is based on deficiencies found in the diagnosis of the existing housing. In order of priority the aspects to be considered in such improvements are:

Sanitary services and a place for kitchens;

Provision of public services (water, power, sewer, gas, drainage);

Other constructive improvements in the dwelling unit itself (the repair of roof, doors, windows and general housing accessories).

Sanitary services with basic kitchen utilities can be introduced practically and economically in prefabricated units to be installed in conjunction with simultaneous provision of public services. Such improvements satisfy the need for individual cleanliness, hygienic food preparation and durability with

minimum maintenance. Prefabricated units also can be installed at a lower cost than a bathroom and kitchen built in the traditional way. Such objectives can be accomplished by providing residents with either common or individual prefabricated sanitary and kitchen units.

Common facilities would accommodate several families at a time. It would be necessary for the municipal government to acquire convenient sites for such facilities. The great number of families living in each block (about 50) would require at least one common facilities center per block. Some streets would have to be closed and used for this purpose. These common centers would have to be common centers built by the local authorities. Residents would pay a small users fee to cover maintenance costs. Common facilities would greatly improve the living conditions of the people but not of the housing itself.

These centers could be an economical and feasible solution to the sanitation problem because they concentrate all the required services in a few places, thus reducing the cost of fittings and lines (drainage, sewerage, water, electricity, gas). However, common facilities may not be the best way to satisfy the need for individual cleanliness and hygienic food

preparation. They would be remote from most dwellings and their effective use by the people would require substantial change of long standing habits. Such change might not be possible without a great deal of public education.

Individual units, however, could be introduced in all these dwelling units where these services are missing or incomplete.

The study area, an existing urban fabric, has an incomplete infrastructure and a disorganized built form especially of residential buildings. These characteristics make difficult the introduction and integration of new forms to the existing structure.

To solve these problems a new infrastructure network can be proposed. A network built approximately 15 feet in height and based on elevated ceramic tubes carrying all services (sewerage, water, electricity, gas, and power). These pipe lines could be supported by light steel columns along most of the streets in the south-north direction. Such streets can be easily used because of their insignificant traffic.

The sanitary units could be built above the existing dwelling units and connected by secondary tubes to the main pipe lines.

The sanitary unit itself is also supported by a metallic structure and provided with a stairway.

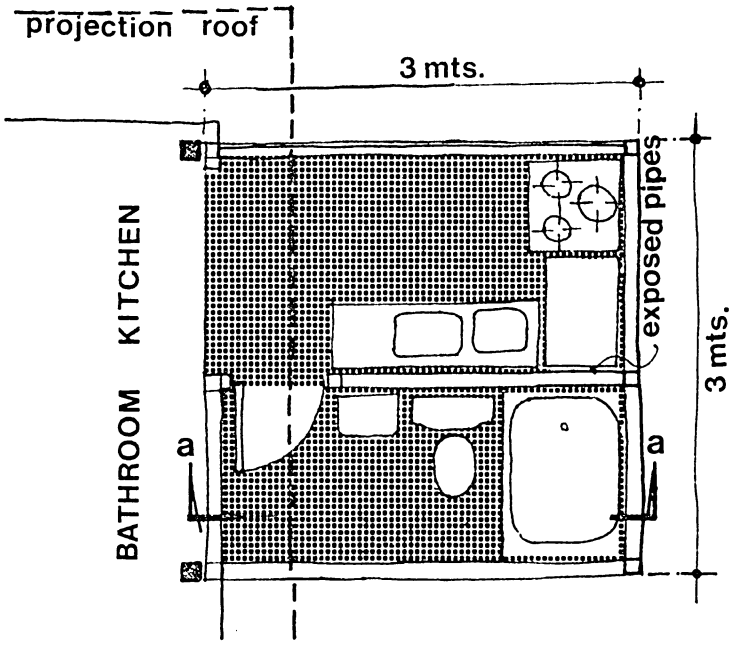
However, it is not possible to build a new network either in all streets or upon existing houses because such a design would require closing the entire area to vehicles and demolishing many houses. For these reasons it is necessary to finish the construction of the incomplete infrastructure existing in the east-west streets. The infrastructure once completed would allow introduction of sanitary units in houses facing such streets.

The same sanitary unit then can be placed in either two levels: ground level or above the house level. Unfortunately the solution with the sanitary unit above the house level probably would not be economically feasible.

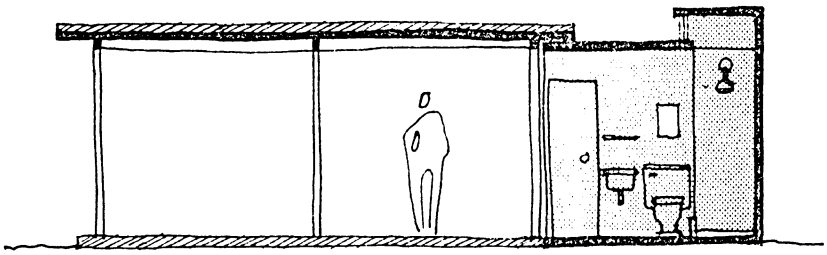
One feasible solution is individual units placed at ground level and manufactured of prefabricated elements that can be easily mounted or dismounted. Such elements are fabricated of panels of cement-asbestos, a fire resistant material. The sanitary unit is a module of 3 meters square (9'-9"x9'-9") and has two areas: one for bathroom with shower, toilet, and

washstand and the other for kitchen with stove, sink and laundry. According to the needs of each particular dwelling unit, the unit could be divided into subunits for the purpose of serving distinctly bathroom or kitchen needs. The installment of two separate subunits in the same house would increase fitting and line costs.

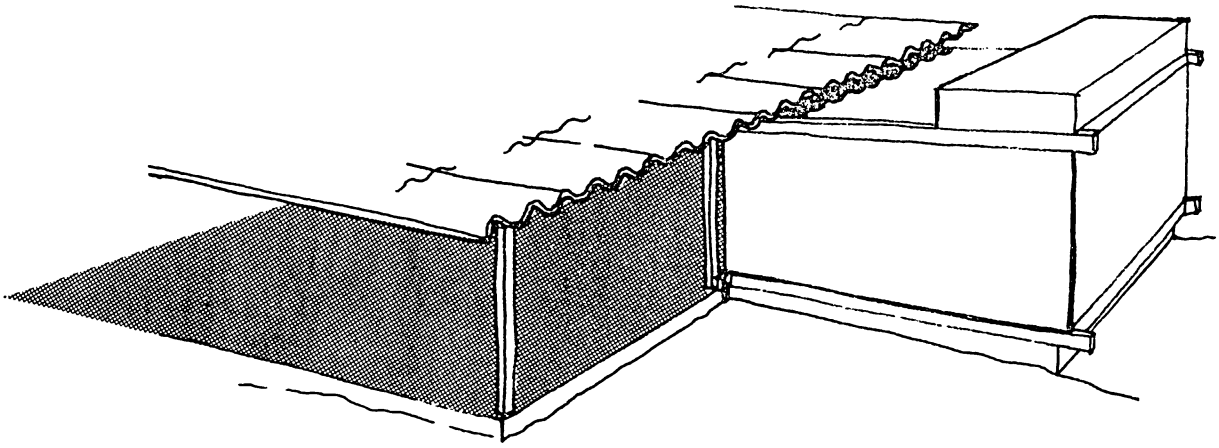
Other improvements of housing would include construction of permanent roofs and floors, installment of premanufactured doors and windows and increasing the built area. Construction of roofs and floors would be in two stages. The first is simply the construction of the square modular shelters. The objective is to protect the existing dwelling from adverse climatic conditions. The basic intent is to solve shelter problems. The design of these structures is based on standard and modulated elements, 3 meters square. According to the necessities of each family, one, two or more roof modules may be erected. Thus, flexibility is considered in the design to accommodate growth and change. The roof itself could be of different kinds: laminated cement asbestos panels and metallic structure, structural laminates of cement asbestos and beam system or simply prefabricated slabs of light weight concrete. Metallic columns support the roof. The floors may be of concrete.



SANITARY UNIT PLAN

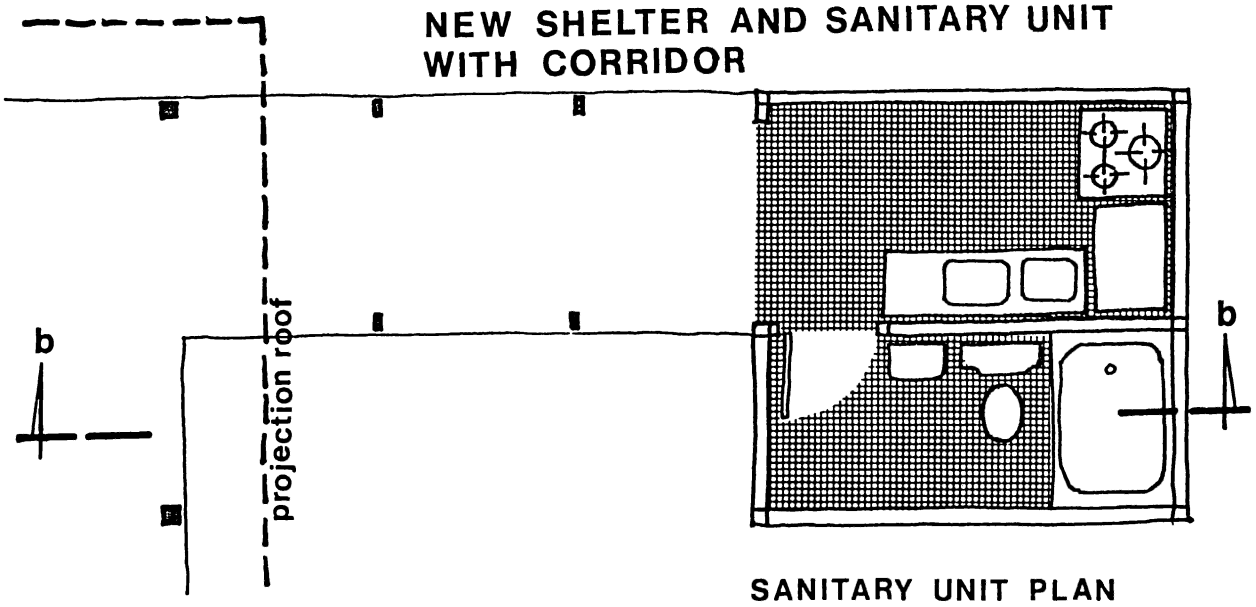


SECTION a-a

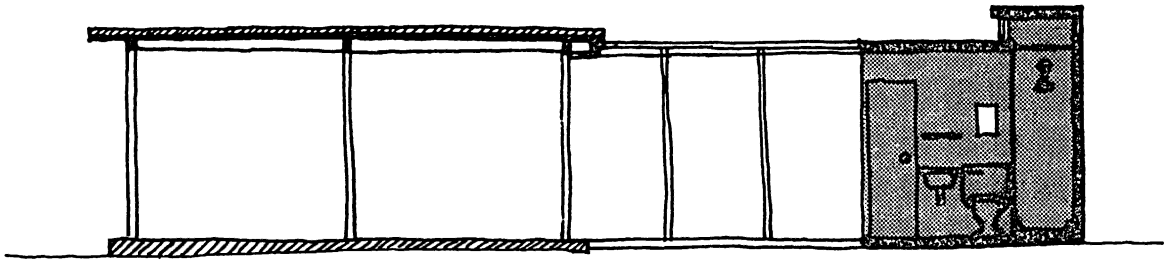


PERSPECTIVE

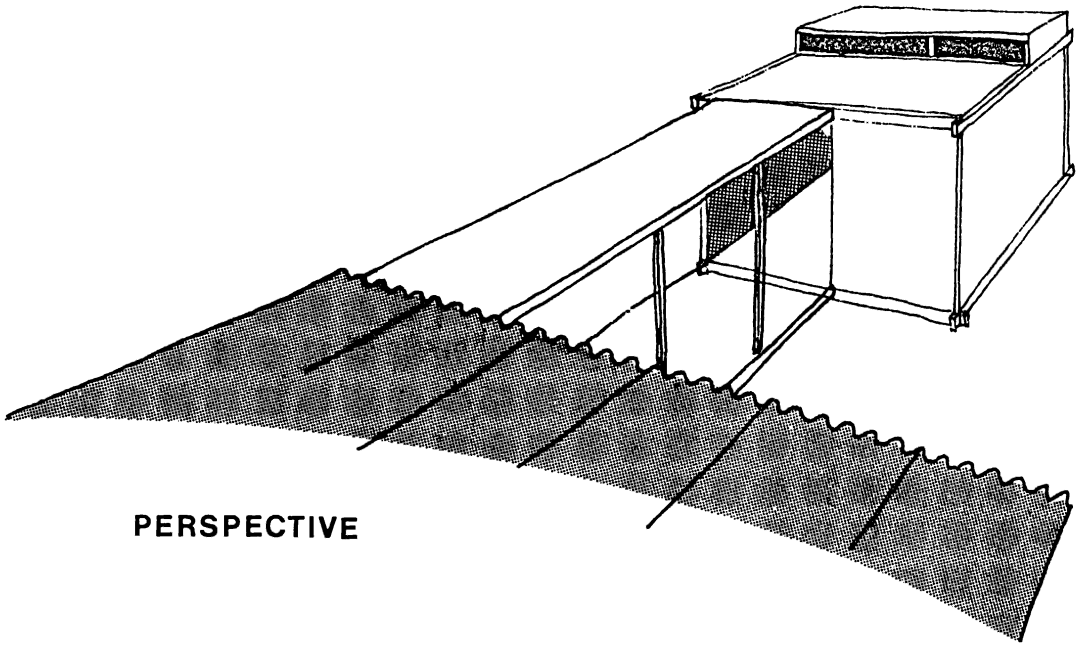
NEW SHELTER AND SANITARY UNIT WITH CORRIDOR



SANITARY UNIT PLAN

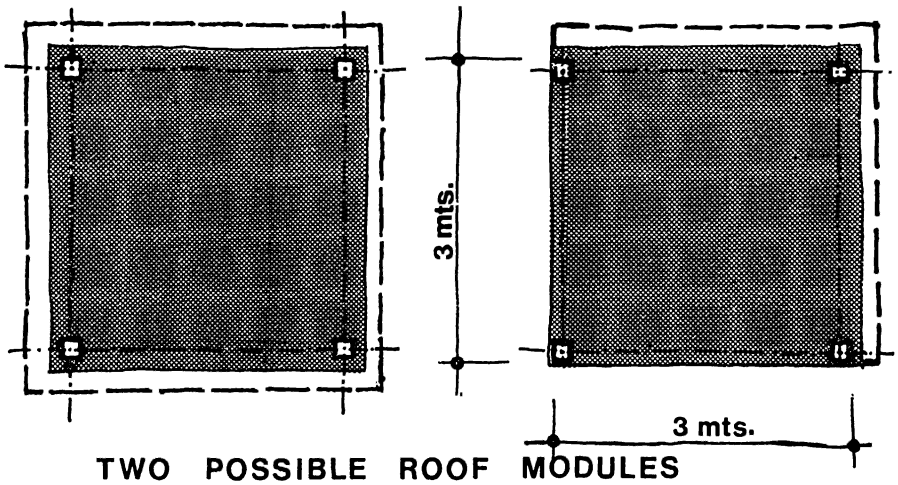


SECTION b-b

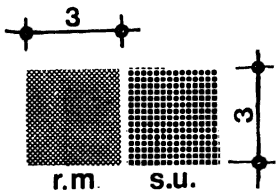


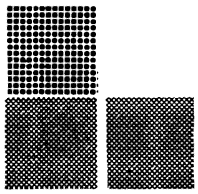
PERSPECTIVE

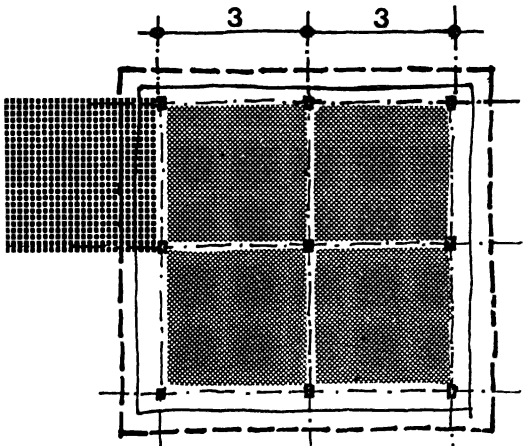
ROOF MODULES



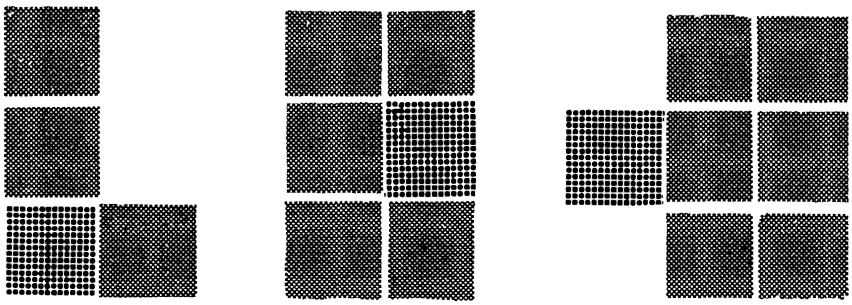
TWO POSSIBLE ROOF MODULES





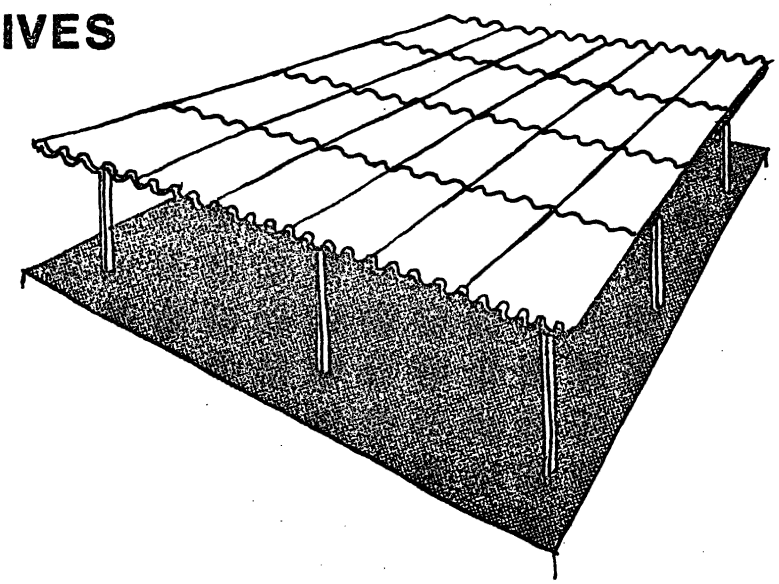


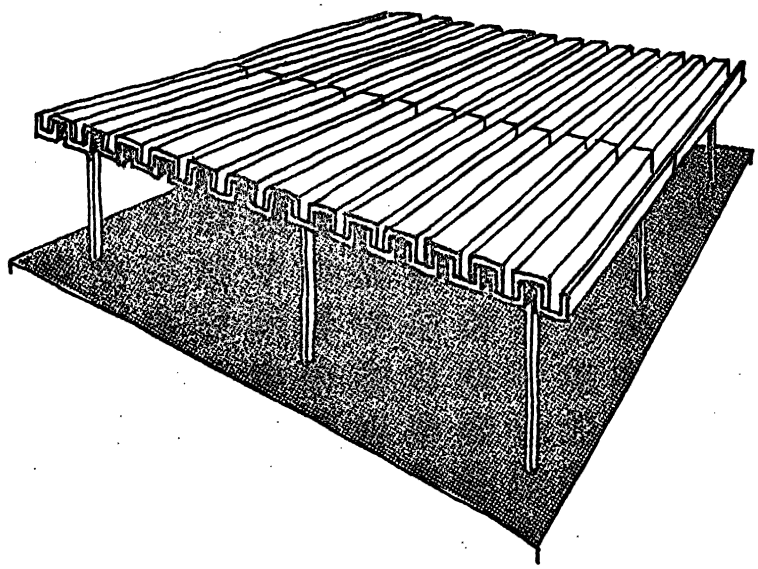
ROOF MODULES r.m.
SANITARY UNIT s.u.

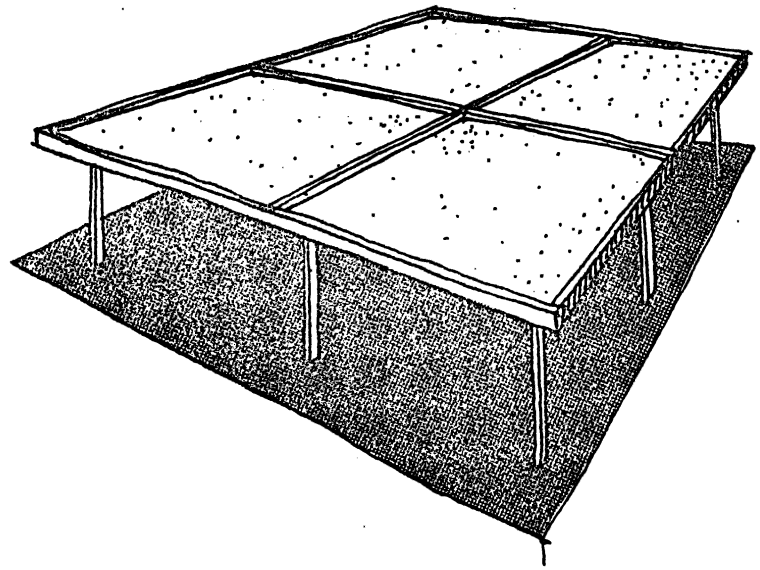


ALTERNATIVE SOLUTIONS

ROOF ALTERNATIVES







The second stage is the transformation or reconstruction of the old house. The objective is to encourage the dweller to solve his own problems. The dweller could, with technical assistance, transform, repair or simply rebuilt his deteriorated house, a self-construction system based on the dweller's needs. Such a system would be better and cheaper than the usual public housing policy of building expensive new dwellings that may or may not meet the needs of their dwellers.

Installment of manufactured doors and windows utilizing durable materials is a way to avoid rapid deterioration. This improvement is mainly applicable to the declining housing type.

The last action to be undertaken is an increase of the built area in those dwelling units where there is no relation between the rooms and number of dwellers (crowded to congestion). The increase might be accomplished using the roof modules.

2. Community Institutions

In addition to the improvement of housing, the Pilot Plan provides for new community institutions. It is necessary at this point to differentiate community facilities from community

institutions. Community facilities are those we have established, tabulated and systematized. They are:

education (elementary, secondary, technical, educational park);

culture (cultural centers, libraries, museums);

health (pharmacies, small clinics, hospitals);

recreation (play grounds, parks, athletic centers);

commerce (shopping centers, convenience centers); and

service (including fire and police protection).

These community facilities must be a component of a long range plan which establishes their goals, sizes, hierarchy and location.

Community institutions are those typical of lower class neighborhoods. They are the most difficult to handle and to predict, but at the same time, the most important ones. They are those in which adults make their own patterns and express their personal points of view. They are unpredictable institutions that are formed, that vary and exist due to cultural influences. For these reasons they are idiosyncratic: the bars, cafes, poolrooms, informal neighborhood gatherings, parties, and the obvious social and political power so strongly manifested by the Mexican people.

Juvenile gangs are almost always present in a poverty neighborhood. They play an important role in the community activities which in this case take place on the streets and river.

The Pilot Plan is designed to satisfy the needs of such community institutions. The Plan should provide "empty spaces," empty shells for adult community institutions; demountable structures that can be placed anywhere (i.e., some streets, vacant sites, on the river), and flexible enough so they can be multi-use or multi-purpose (convertible, adaptable, expandable). The provision of such structures is intended to encourage community activities now lost in the study area.

Children and youth must also utilize some of the many streets and the river as green areas with those same multi-use structures for the development of gang-group activities.

B) THE LONG RANGE PLAN

The long range plan takes into consideration the needs of residents in the study area and simultaneously addresses itself to the overall planning problems of Monterrey. This plan makes

use of some of the proposals suggested by Monterrey's Comprehensive Plan. Only portions of this master plan are endorsed by the author and incorporated in the long range plan.

The design attempt is to develop a program which is pragmatic and feasible within the foreseeable future. The ultimate intent is gradually to upgrade life in the study area, and to extend such improvements to the city wide scale when resources permit. For the purpose of this investigation the area under consideration is dealt with as a paradigm for Monterrey and possibly for other Mexican cities.

Considerable time was spent by the author in the neighborhood, so that policies suggested may be tested as to their objectivity and feasibility. General guidelines for physical development are based on the author's reconnaissance of the study area, in addition to the open ended questionnaire discussed earlier.

The recommendations which are based on the suggestions of the Comprehensive Plan have been adopted because they directly affect the study area and also the overall plan for the city. They are:

1. Provision of recreational facilities on the Santa Catarina River bed to cater to the recreational needs of residents in the study area as well as to the inhabitants of the entire city. A Metropolitan Park containing both active and passive recreation for children, teenagers, and adults where such facilities can be accommodated: ball grounds and gymnasium, plazas and wooded areas for reading and relaxing, space for civic meetings, open air theaters, fairs, esplanades, and parking spaces. To accomplish all this, it would be necessary to provide for flood protection. One possible scheme could be a deep and narrow canal on one side of the river bed. The construction of easy access for both vehicles and pedestrians (bridge and tunnels) to the recreational facilities are also required. The potential use of the river as a recreational place should be focused first on that area adjacent to the study area.

2. Monterrey is the capital of the State of Nuevo Leon and also of the Northeast Region. Therefore a government complex is proposed which will house the three state government functions; Legislative Assembly, Judicial Court and Government Palace. The site selected for this complex is in the study area, a 20-acre plot facing Independencia Avenue and the double bridge south of the

river. According to the Comprehensive Plan this location is proposed for such a complex for symbolic and strategic reasons, (very good accessibility and on the central north-south axis of the city). Although the construction of this complex would require clearing of six residential blocks, it would vitalize and integrate the study area to the city.

3. Update the traffic network by widening existing streets (i.e., avenues parallel to the river) and the construction of new arteries to increase the accessibility of the Central Business District from South Monterrey. One of the proposed connections is located adjacent to the government complex in the north-south axis of the city. This thoroughfare will become a reality if Loma Larga Hill is tunneled through. The number of streets running north-south through the study area could be reduced considerably as these neighborhood roads are in poor condition and carry little traffic.

Additional recommendations that form part of the long range plan are:

4. Extension of central commercial activities across the river to meet the demands of the growing population. These new

commercial activities should develop south of the present core along the main thoroughfare.

5. To keep all present population in the study area and to effectuate gradual redevelopment. The intent is to maintain the present residential character of the area by relocating a minimum number of residents at any one time. Also, it is necessary to provide alternative and temporary housing which can be occupied in rotation by families whose dwelling units are being improved, upgraded, or wiped out.

6. To redevelop land adjacent to the river as multi-family housing to cater to the needs of low and middle income families. Such new developments are needed if present land for residential use is developed for commercial or other supporting activities.

7. To provide community facilities and higher land use along the major arteries running north-south. Thus, three main facility centers have to be developed. One, in the study area center as an extension of the commercial area to provide those facilities required by more than 100,000 residents: senior high schools, commercial schools, civic

center, health center, cinemas, theaters, administrative buildings, shopping centers and green areas. All these supporting activities are recommended by the so-called Optimum City. The other two centers meet the needs of the adjacent neighborhoods and provide facilities such as: kindergartens, elementary and junior high school, plazas and green areas, multiple activity center, everyday shopping (convenience) centers, small clinic, church and administrative buildings.

8. As suggested in point seven, the study area should be broken down into smaller neighborhood units. This will not only break the monotony of the existing gridiron pattern, but also enhance the possibilities of integrated environment. In this manner the neighborhood unit may become an essential organ of an integrated city.

The implications of the Comprehensive Plan in the study depend upon the possible alternative policy choices to be selected by the city. These alternatives are:

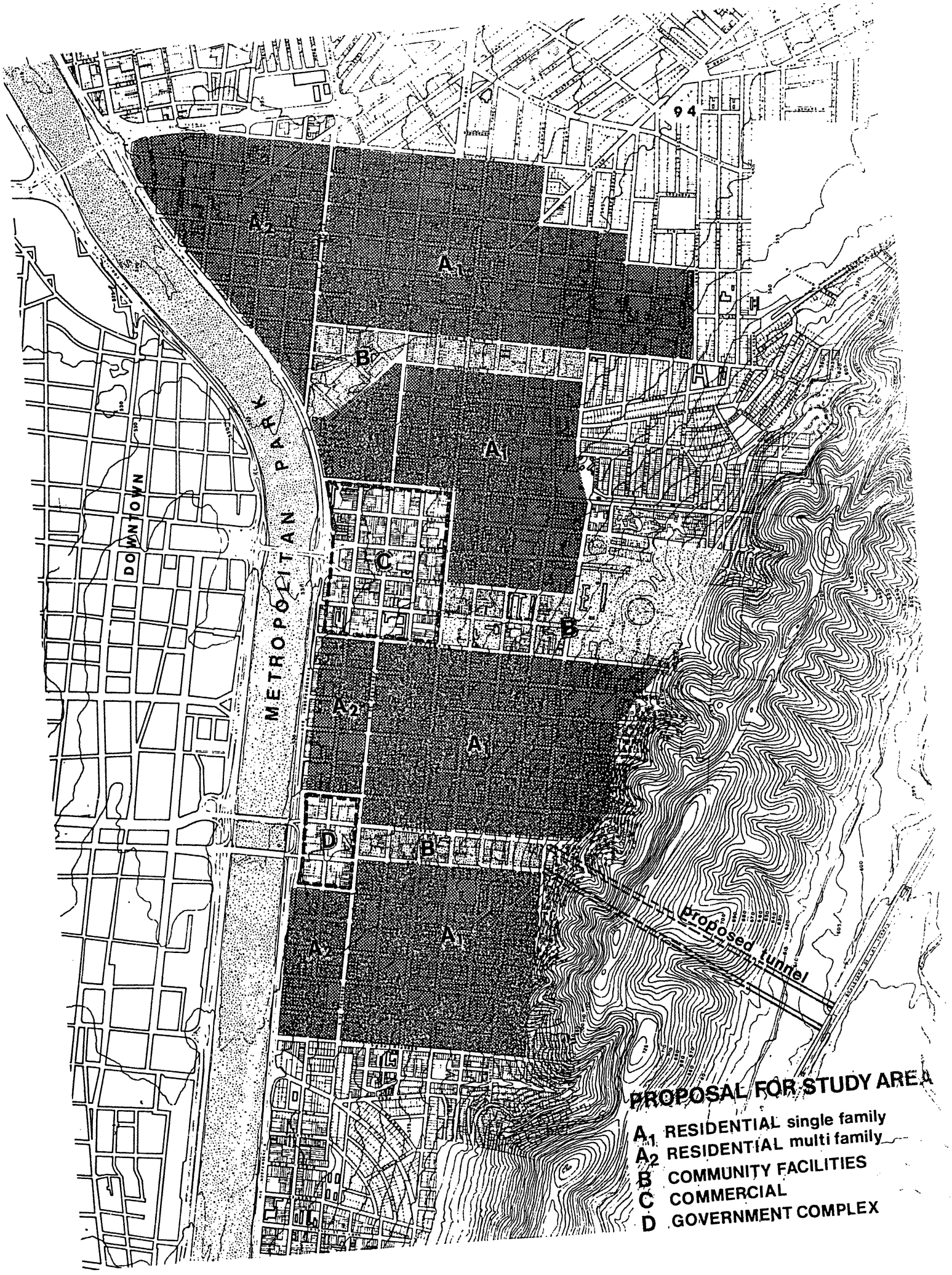
1. A large-scale clearance of the area in an effort to rebuild it with new developments intended for a middle or upper-class market. In this case, the ideal urban structural organization formulated by the Comprehensive Plan (domestic

group, neighborhoods, Optimum City) could be easily achieved. The entire clearance could also be intended to redevelop the area as an extension of the contiguous downtown area or for any other purpose.

2. To await the gradual abandonment of the area and to defer any redevelopment until few people are left; thereby site acquisition costs will have fallen to lower levels. Such policy could allow the same developments as stated in point one.

3. Redevelopment of the area gradually, so that new housing and supporting activities can be developed at the same time that the demand for the old units decline.

The latter alternative comes closest to the interest of the people living in the study area. It is in this sense that the long range plan is suggested: to preserve the present community as far as possible.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A2
A1
B
A1
C
B
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A1
D
B
A2
A1
DOWNTOWN
METROPOLITAN PARK
proposed tunnel
PROPOSAL FOR STUDY AREA
A1 RESIDENTIAL single family
A2 RESIDENTIAL multi family
B COMMUNITY FACILITIES
C COMMERCIAL
D GOVERNMENT COMPLEX

CONCLUSIONS

A redevelopment plan ought to give first priority to the desires of people living in the area to be redeveloped; their problems, expectations and aspirations have to be considered. Here, the interviews play an important role. The validity of the inquiry and personal observations are an efficient tool to discover the wants and needs of residents. In the case of a foreigner to the Mexican culture, as is the author, this inquiry was fundamental.

There are immediate problems in the study area, a typical poverty neighborhood, that are not considered by the Comprehensive Plan for Monterrey. These immediate problems reflect the primary and basic needs of sanitation facilities: space for bathing, washing, cooking. The desire of the residents to remain in the area is also an important consideration in a redevelopment plan.

There is an urgent need for short range programs in Latin American cities to solve immediately the problems the people themselves indicate are most pressing. These short range programs, as suggested in the Pilot Plan of this investigation, must be very specific (precise) and addressed exclusively to the

needs and wants of the people living in a determinate area. In this sense, a redevelopment of a blight area can simply mean an improvement of housing and, hence, the entire living condition. Short range programs must be responsive and realistic.

Long range programs are also necessary because they provide a guide in the gradual upgrading of the quality of life in cities. Most cities in Latin America have long range programs or comprehensive plans which usually are too ambitious and utopian. This is the case with Monterrey's Comprehensive Plan, an excellent theoretical study for guiding future urban growth but without specific considerations for the redevelopment of deteriorated areas.

Only a few general recommendations are suggested by the Comprehensive Plan for the study area. Although these recommendations are oriented to solving city wide problems they are used by the author in the proposed Long Range Plan to vitalize and relate the study area to the city.

The Comprehensive Plan for Monterrey has not yet been officially adopted by the city government. This adoption is an essential first step to the implementation of the Comprehensive Plan

itself and to the success of any short range or Pilot Plan that may be immediately proposed. Once plans are adopted, the actual implementation requires such instruments as housing codes, land control, power of eminent domain and other legal considerations. The appropriation of resources for the actual implementation is of course the final step.

In Monterrey the Comprehensive Plan is still in political limbo and will remain there until the local government acts upon it. It is to be hoped that no such action is taken until modifications are made in the Plan that consider the needs of existing neighborhoods which house people who are nearly helpless to improve their living conditions without strong public assistance. Disturbing them, in the absence of plans for rehousing or relocating involving governmental assistance, would be irresponsible.

Further investigation is now needed to determine:

1. The chances for the adoption of a public statement in the form of local ordinance policies,
2. The definition of instruments of implementation,
3. The funding of the concept: reevaluation of the existing municipal structure.

APPENDIX
BIBLIOGRAPHY

QUESTIONNAIRE FORM

BLOCK:	ADDRESS:			# FAMILIES:	HOUSE:	OTHER:	OWN:	RENT:
PERSONS:	AGE	SEX	OCCUPATION	Place of work or School	Mean of Transportation	Time to Reach Work		INCOME

HOW LONG HAVE YOU LIVED IN

MONTERREY?: THE NEIGHBORHOOD?: THE HOUSE?:

WHAT DO YOU LIKE MOST IN THE NEIGHBORHOOD?:

WHAT DO YOU LIKE LEAST IN THE NEIGHBORHOOD?:

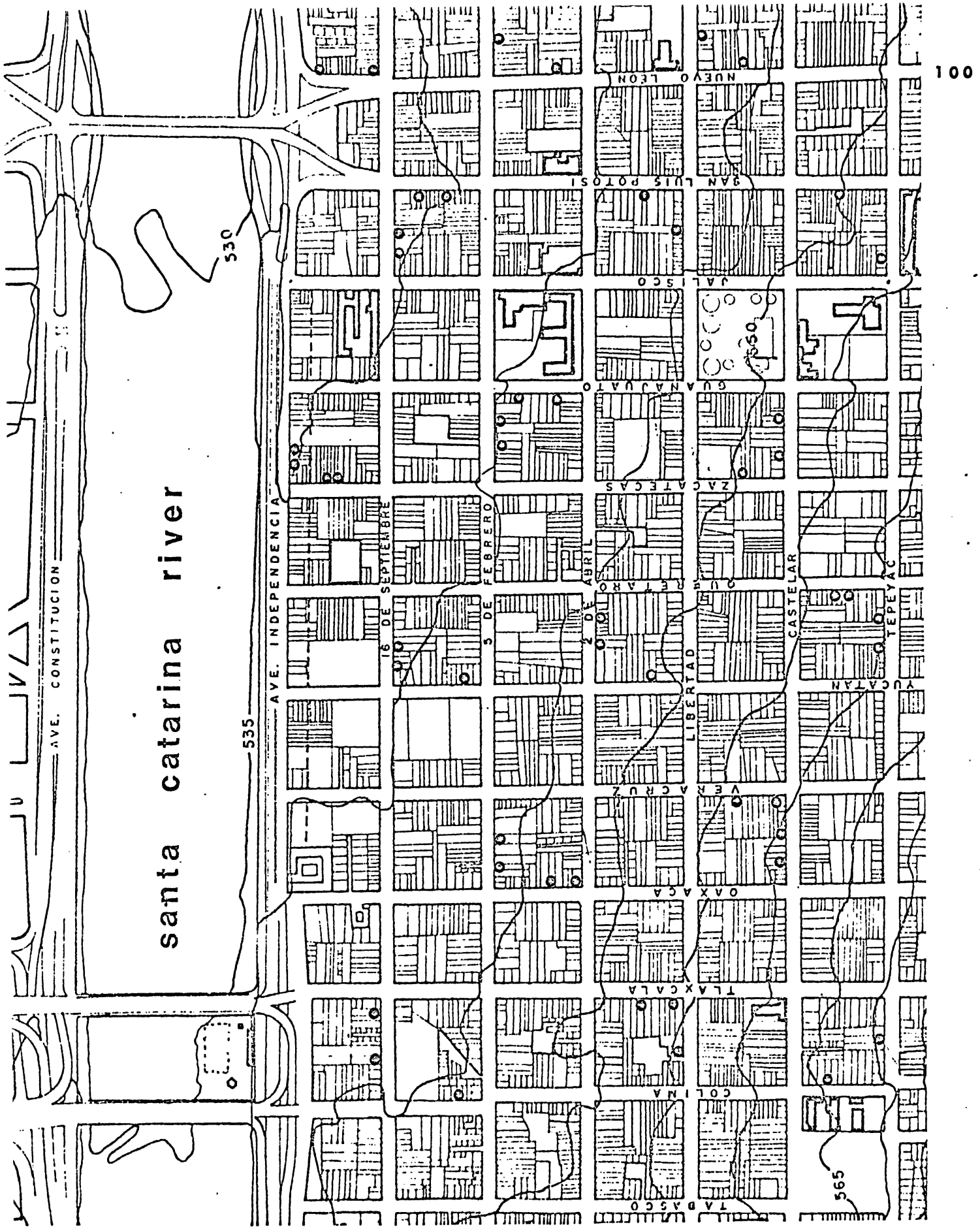
WHAT WOULD YOU LIKE TO SEE DONE IN THE AREA?:

WHAT DO YOU DO IN WEEKENDS?:

WHAT KIND OF RECREATIONAL AND PLACES OF ENTERTAINMENT DOES THE NEIGHBORHOOD OFFER?

DO YOU PLAN TO MOVE?:
IF YES, WHY?:
WHERE?:
WHEN?:

OBSERVATIONS:



72 BLOCK AREA

HOUSES INTERVIEWED

0 100 300
feet

N

THE STUDY AREA

THE HILL

THE MAIN STREET

THE RIVER

BIBLIOGRAPHY

CHERMAYEFF, Serge and ALEXANDER, Christopher, Community and Privacy, Doubleday and Company, Inc., Garden City, New York, 1965.

DUHL, Leonard J., Editor, The Urban Condition, Basic Books, Inc., New York, 1963.

FAVA, Sylvia Fleis, Editor, Urbanism in World Perspective, Thomas Y. Crowell Company, New York, 1968.

FRIEDEN, Bernard J., The Future of Old Neighborhoods, The M.I.T. Press, Cambridge, Mass., 1964.

GANS, Herbert J., The Levittowners, Vintage Books Edition, Random House, Inc., New York, 1969.

GANS, Herbert J., The Urban Villagers, Free Press of Glencoe, New York, 1962.

GRUEN, Victor, The Heart of Our Cities, Simon and Shuster, New York, 1967.

MUMFORD, Lewis, The Urban Prospect, Harcourt, Brace and World, Inc., N.Y., 1968.

REINER, Thomas A., The Place of the Ideal Community in Urban Planning, University of Pennsylvania Press, Philadelphia, 1963.

WHYTE, William H., The Last Landscape, Doubleday and Company, Inc., Garden City, New York, 1968.

DIRECCION GENERAL DE PLANIFICACION, Direccion del Plan Regulador para Monterrey:

Plan Regulador de Monterrey, Nuevo Leon Y Municipios Vecinos, 1963.

El Futuro Urbano de Mexico: El Marco Nacional como Antecedente para la Planeacion urbana de Monterrey, 1967.

El Plan Director de la Subregion Monterrey, 1967.

SECRETARIA DE ECONOMIA, D.G.E., Anuano Estadistico 1955-56.