

HOUSING

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IZTAPALAPA FROM THE AIR

THE HOUSING PROBLEM

Beginning in the 1930s, Mexico City saw a surge in population growth. Fuelling this growth was a government push towards import substitution, a strategy aimed at economic growth by encouraging increased national industrial production of items traditionally imported. The resulting industrial growth, especially in larger cities and predominantly in Mexico City, prompted a migration trend from rural areas to the cities.

This migration trend combined with a high birth-rate saw Mexico City's population double every 15 years through much of the 20th century and was translated into an urban housing problem that persists today.

Until the 1950s, when population growth rates reached their greatest levels, most housing demand was met through rental housing in the central part of the city. (HIP Romero, 11) This type of housing, the *vecindad*, was a remodeled colonial building with rental rooms and an open interior court. Residents shared kitchen and washroom facilities and often lived with very marginal conditions. Increasing demand on these rental properties led to rent hikes excluding vulnerable low-income families. The government responded with laws freezing rents which remained in force until the 1990s. These laws led to the elimination of low-cost rental housing.

Spontaneous Settlements

As options for shelter in the city grew scarcer, people evolved other solutions. Families would rent land, sometimes at exorbitant rates and build their own inexpensive shacks usually without services, sometimes illegally connecting to city services. Other options included squatting on inner city public land or organizing overnight 'invasiones' where entire communities would grow overnight or over the weekend when officials would not be present to oust the squatters. By the time the officials can mobilize to take action, enough settlement has taken place to make any attempt at evicting the squatters difficult or politically embarrassing. (Pyatok, 11)

Popular or Informal Settlements

The majority of newcomers seek housing at the city's edge. These houses are built outside established regulations which if followed would exclude between 70 to 80% of the population from obtaining housing (HIP Romero, 13). Most of the land sold for this use is land in poor locations where higher cost housing can not be built profitably. This land is sold on the informal market by speculators who often promise services in the future, however in most cases, utilities and roads are never built. (Pyatok, 11) Another source of land is the *ejido*, communal farming land which is often sold illegally to speculators who

then re-sell it after quickly subdividing it for residential purposes. In both cases, legal ownership is never acquired by the new owner.

Autoproduccion and Autoconstruccion are two Spanish terms that describe methods commonly used in the production of popular housing (most of the housing built in Mexico). Autoproduction describes the most popular method of construction where the owner will hire labour under his or her supervision for a construction project. Autoconstruccion is where the owner undertakes a construction project with no professional help.

Early Government Housing Programs

Early attempts at confronting the housing crisis at the government level through the design and construction of social housing by professionals under the control of public agencies met with limited success. These projects were constructed and sold as a finished unit to the population in need of housing. Many problems plagued this method of housing development including, high per-unit costs due to bureaucratic administration and excessively high building standards and construction techniques. The resulting housing was inflexible and unresponsive. It did not match the variety and complexity of the needs of the users. Additionally, due to the lack of citizen participation in the design of housing and residential neighborhoods, these complexes bred political and social apathy (Pyatok, 9). Housing solutions based on the concepts of the dominant classes -small but wealthy portion of the Mexican population that dominates Mexico's financial and political systems- are out of step with the needs and desires of Mexico's popular classes (HIP Romero, 12).



Nonoalco-Tlatelolco housing project, built in the 1960s

Social Housing and the Social Production of Housing

“Dwelling is both a personal and social process of life.” – Michael Pyatok

Emerging concepts in the area of social housing are starting to realize the benefits that can be obtained when the users are included in the housing design process. Pressured by institutions like the World Bank and national and international NGO's, Mexico's government in the early 1980's began to realize the benefits of autoconstruccion in meeting the growing housing needs. Credit for private housing projects was made available through organizations like Mexico's Instituto del Fondo de la Vivienda para los Trba-

jadores or INFANOVIT. Money for Mexico's national housing programs is now collected through a 5% tax on all workers' salaries.

In 1993, the housing credit system was modified by the incoming government. In its current form credits are given primarily to citizens in the higher salary ranges, a system that sees the poor subsidizing the middle-class. Currently the major recipient of the system designed to provide housing to Mexico's poor are households making over 5 minimum incomes.

The Mexican minimum wage (per day) for 2005 is: 46.80 NP or 4.32 USD
Servicio de Administration Tributaria (Mexico, 2005)

There are: 25,000,000 dwellings in Mexico
 4,000,000 were built by social housing programs within the last 15 years.
 16,000,000 were built in the informal market through Autoproduction.
 3,000,000 were built by Mexico's commercial housing market.

Taken from class notes.

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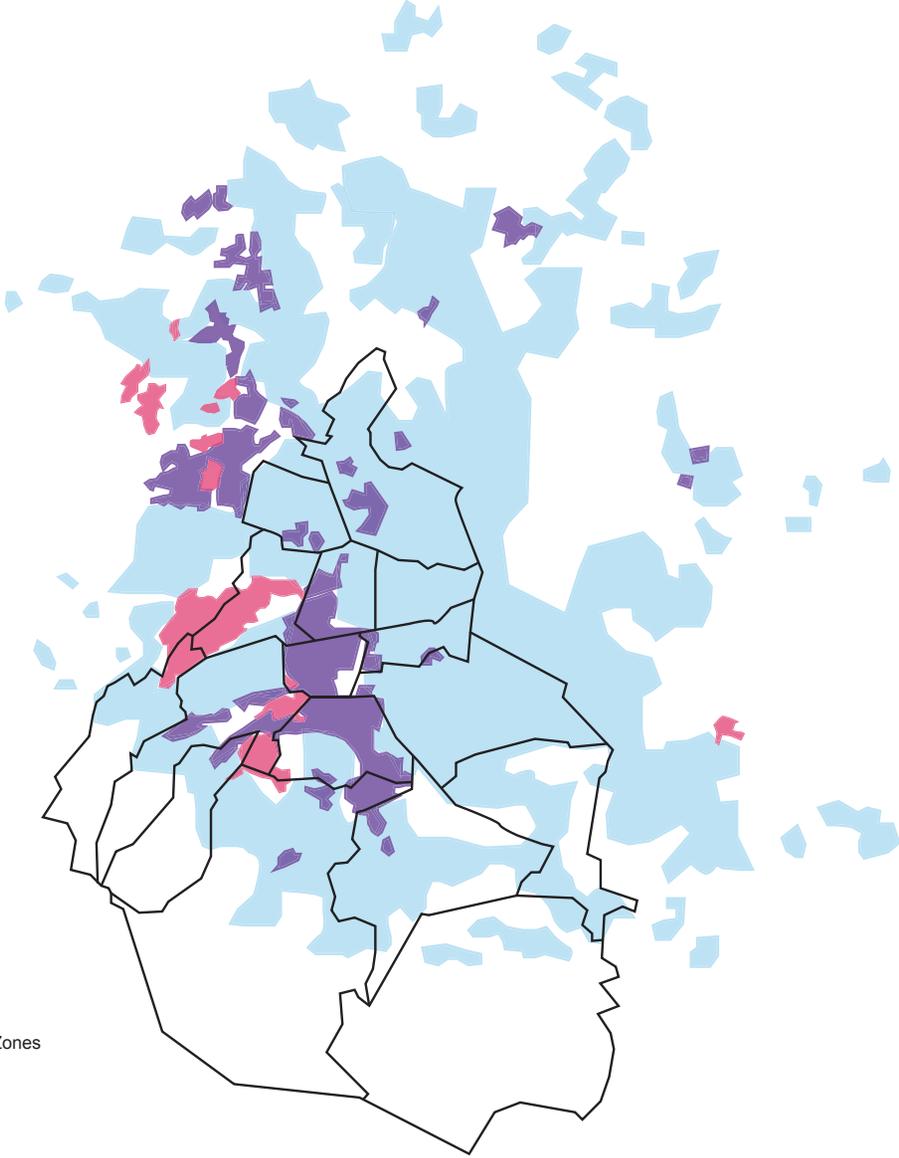
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Notes from the class: Diseño Participativo en Arquitectura, Prof. Gustavo Romero, UNAM, Facultad de Arquitectura, 2006-1 Agosto-Dec.

HOUSING DISTRIBUTION

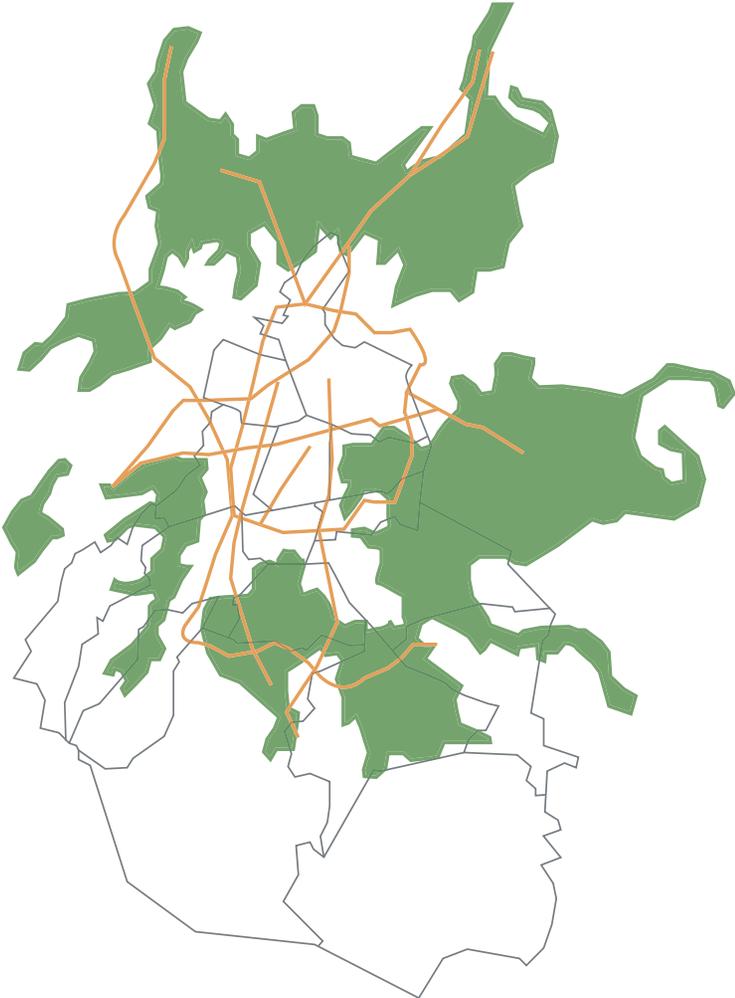


Housing Distribution: Residential Zones

- Populat Settlements
- Middle Residential
- High Residential

CONAPO, 1998

IRREGULAR SETTLEMENTS AND
AUTOCONSTRUCCION



Location of Irregular Settlements
■ Low-income Settlements
— Principle Roadways

SOURCE: WARD, 1991 in ZMVM 1er edicion, 2000. LCM Fernando Romero.

EVOLUTIONARY DESIGN A Methodological Framework

In the book *Habitat Social Progresivo, Vivienda y Urbanización* Evolutionary Housing is defined as (translated from Spanish):
A process of transformation based on adaptable technologies. These technologies interact in an incremental way. The process is based on the participation of the users in the design and management stages, creating and sustaining a strong social involvement and integration (strategy for overcoming poverty) and the betterment of housing conditions based on a framework of sustainable development.

The authors of the book *Habitat Social Progresivo, Vivienda y Urbanización* have proposed a methodology to address Evolutionary Housing as a technique for designing housing that reacts to the needs of the client in a progressive, dynamic and sustainable way. As a way of further defining and understanding the methodology, the authors have broken it up into 6 characteristics which define the evolutionary process. These characteristics are: flexible, participative, systemic, prospective, strategy, and sustainable.

Flexible:

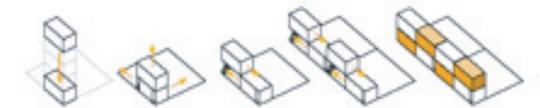
The development of the method will initially consider aspects that were expected and others that may arise from the dynamic process which must be considered and incorporated. It is this feedback and the variables of time, unforeseen external factors and changes in the perception of the problem that enrich the process.

Participative:

The design of the methodology should be a function that responds to the habitational necessities of the particular community and user. This succeeds only when the subjects are actively involved in the decision-making process, a continuous process of learning and agreement.

Systemic:

A systemic vision permits us to observe the problem with a complete understanding where each aspect receives a more complete significance due to its reference to the collective process. This methodological condition permits us



photos:
elementalchile.org
Domus 886 November 2005

to address the problem structurally and not with partial solutions which may dilute the effectiveness of the response.

Prospective:

Conceiving a desired future, with present knowledge and a global vision. The methodology should consider in equal measures, the present situations and visions of a possible future.

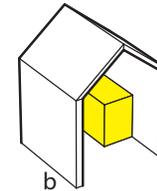
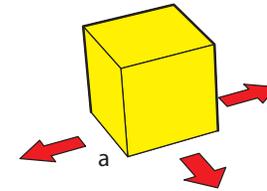
Strategy:

The methodology is understood in this way when the process is capable of generating a result that brings to light a series of actions to produce the necessary changes to transform the initial reality into an agreed, desired, possible future. This process holds the following objectives:

- recognize the characteristics of the situation
- determine the necessity for change
- define what is the change and identify priorities
- plan the strategies of change
- provide the instruments that bring about the change
- implement the strategies

Sustainable:

Sustainability is understood as a process that supports social equity in the framework of social justice as agreed upon in the Brown Agenda. A sustainable human development.

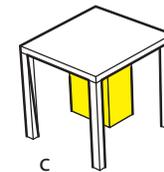


Evolutionary Schemes

Basic Evolutionar Nucleous - Initially only the functional core of the house is built to be expanded on (a).

Shell House - The entire envelope is built and the interior partitions and finishings are added as needed (b).

Structural Supports - The functional core and surrounding structure are built initially. The structure is cladded and finished as needed in the future (c).



MEXICO CITY HOUSING TYPOLOGY MATRIX

Morphology

Access

Single Family
Detached

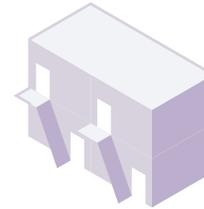
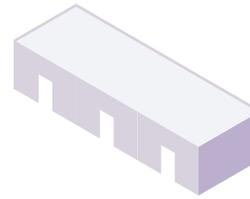
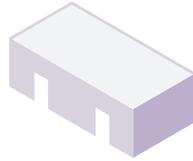
Duplex

Row House

Walk-up

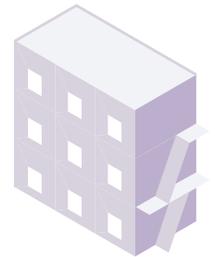
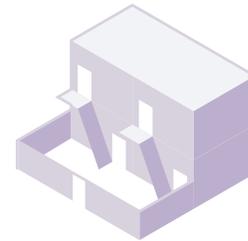
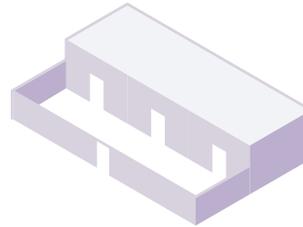
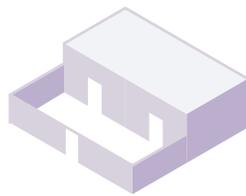
Apartment

Private

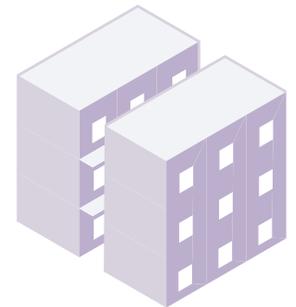
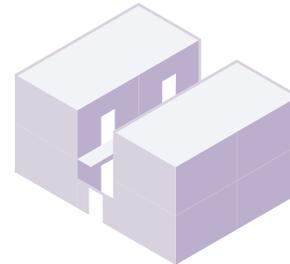
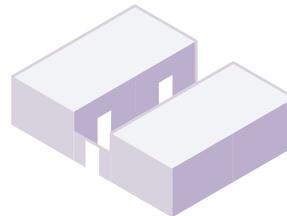
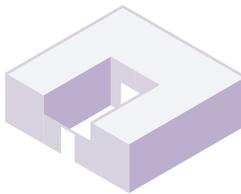


Compact

Shared



Courtyard



Growth
Potential
(secondary)



PARTICIPATORY DESIGN

Participative design is a method developed in part by Hanno Webber and Michael Pyatok and used by architects as a way of designing and developing housing projects that meet the needs of their users in a fundamental and effective way. This is achieved through the participative involvement of the client throughout the process of design.

The Participative Design methodology responds to the generic, prototypical mid-century housing solutions found throughout the world, based on the modern architectonic, cost and/or space efficient designs that ignored the needs of the users. These simplistic solutions ignored the complexities of the needs of the clients and the resulting buildings were unable to adequately provide a solution to the housing problem.

A solution arrived at using the participative method will, through its evolution from a participative process of dialogue between the involved actors, be a more complex solution based in realities not perceived needs. Christopher Alexander, John Habraken, and Rodolfo Livingston are three main practitioners using participative methods in housing design. Each has a distinct process of design that includes methods for understanding the problem and working with the involved actors to find a solution.

Alexander developed a method he called Pattern Language, where he sought to recognize patterns of daily activities and rituals and design spaces to reinforce these patterns. Habraken developed the Supports methodology that organizes the space for living into special use, general use, and service space. Livingston used a series of games and questionnaires as a way of ascertaining the needs of the users in a non-confrontational and unbiased way.

The actual methods of participative design vary by practitioner and project. The general process follows a cycle of client participation through interviews and questioning by the architect or architects involved and the graphical presentation of options. Options presented to the client in a language – usually graphical – that he or she can understand, are an important part of the process. In general it is important, to ensure maximum client input into the final solution, that the architect presents to the client options or possible solutions at each stage of the design. Only through continued client-architect communication and collective decision making will a true participatory process develop that will lead to a product that will adequately match the clients present and future needs.

The goal of this project is to apply the methods of participatory design to a real-world design problem. The development of options at each stage, allows for client participation in the decision making and design process.

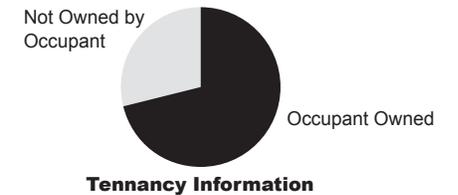
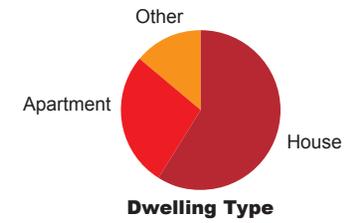
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Romero, Gustavo, and Rosenda Mesias ed., La Participación en el Diseño Urbano y Arquitectónico en la Producción Social del Hábitat. Mexico, DF: Cytod, 2004.

Minimum and Maximum Rents for D.F
(As advertised in Newspaper El Universal)

| | Minimum Rent | Maximum Rent |
|------|--------------|--------------|
| 1990 | \$107 | \$1,960 |
| 1991 | \$100 | \$2,690 |
| 1992 | \$100 | \$1,670 |
| 1993 | \$166 | \$1,670 |
| 1994 | \$122 | \$2,600 |
| 1995 | \$83 | \$3,300 |
| 1996 | \$74 | \$2,290 |
| 1997 | \$75 | \$2,530 |
| 1998 | \$108 | \$2,290 |

ZMVM 1er edicion, 2000. LCM Rernando Romero

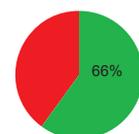


Características seleccionadas de las viviendas particulares habitadas, 2000. INEGI

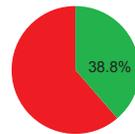
Access to Services

| | Running Water | | Sewage | | Electricity | |
|------------------|---------------|-------|--------|-------|-------------|-------|
| | 1990 | 2000 | 1990 | 2000 | 1990 | 2000 |
| Mexico (Country) | 77.1% | 85.2% | 62.0% | 75.4% | 87.5 | 95.4% |
| Federal District | 95.7% | 97.6% | 93.3% | 97.7% | 99.3 | 99.8% |

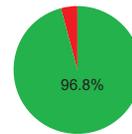
IVIENDAS PARTICULARES PROPIAS POR DELEGACIÓN, INEGI



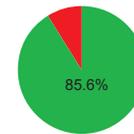
Households with Telephones



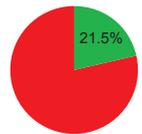
Households with Automobiles



Households with Televisions

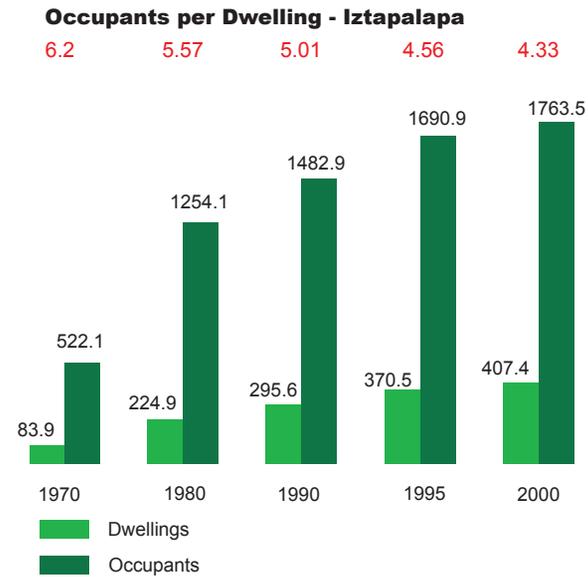


Households with Refrigerators



Households with Computers

Características seleccionadas de las viviendas particulares habitadas, 2000. INEGI



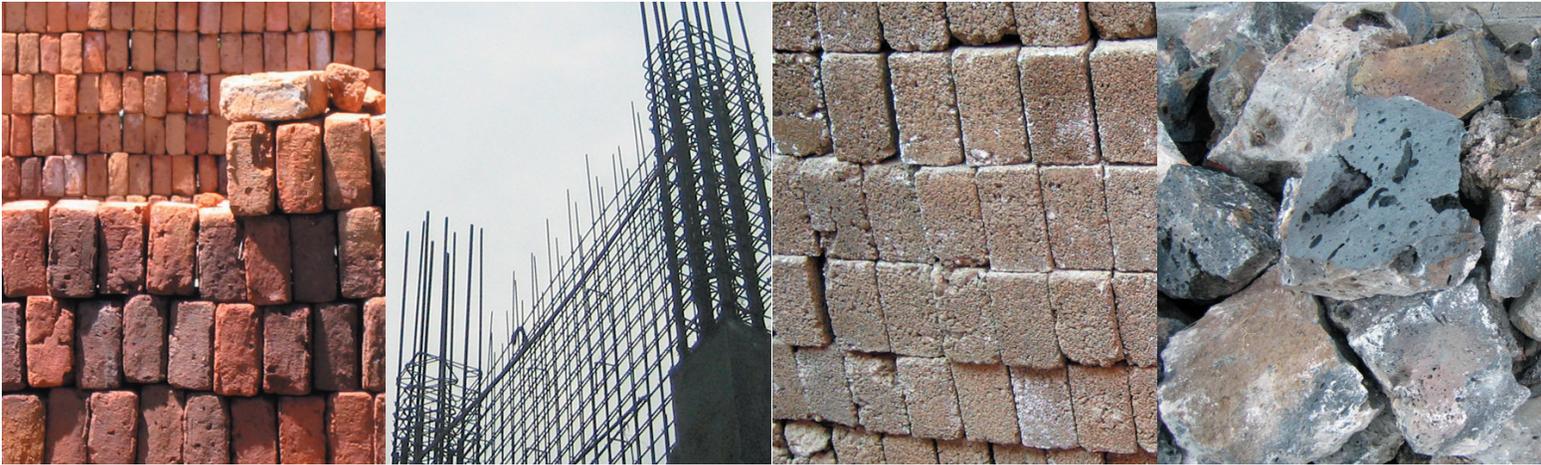
During the last 30 years, Iztapalapa has been the recipient of the majority of external and internal migration within and to Mexico City. Migration to Iztapalapa over recent years has accounted for 83.7% of the city's total, in the process most of the vacant land has been exhausted. It is important to note that in addition to housing immigrant population new to Mexico City, Iztapalapa is a recipient of a large number of internal migrants moving out of more central neighbourhoods within the city.

As shown by the *Occupants per Dwelling* graph, Iztapalapa has seen a steady decline in the number of occupants per dwelling. This is an important indicator of improving living conditions in the region. At the same time, this indicates a greater need for housing.

In 1990 74% of the population in Iztapalapa owned their house, up from 43.7% in 1960.

Of 369,633 houses in Iztapalapa, 360,403 have city water. This is a drastic improvement on the 83,907 houses that had city water in 1960.

CONSTRUCTION MATERIALS



MEXICO CITY HOUSING



