BETWEEN WALLS AND INFORMAL SETTLEMENTS

AFFordable housing as an Urban Regeneration strategy
in the North-West Mexican Border Region

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INTRODUCTION
01. Tijuana Walls and Informal Settlements.
This thesis is a specific research of the south side of the transborder region of San Diego/Tijuana and its drastic housing deficit caused by continuous migration and uncontrollable population growth. Together, the city of Tijuana in the Mexican side and the city of San Diego in the American side conform the largest urban agglomeration that borders this two countries.

Focusing on a thorough understanding and critical approach of Tijuana’s historical spatial planning and its consequential housing developments, the research aims to prove how border industrialization and contemporary housing policies have promoted the uncontrollable and unsustainable dispersed urban growth responsible for the dramatic spatial and social divisions that are represented in the morphology of the city. Using this critical analysis and projecting into the city’s immediate future in regards to its housing development, the thesis will give answers to the following inquiries: How the socio-economic trends have affected the inner city? Why are the disadvantage citizens marginalized in the periphery while the inner city has the capacity of further densification? What are the strategies to return or encroach upon the inner city in order to increase the housing stock in a sustainable way? Finally, seeking through mapping, design, planning, organization and evaluation, an alternative urban strategy is given for affordable housing that provides increased urban integration, greater densification and social cohabitation while promoting a needed urban regeneration tactic for the highly deteriorated fabric of the center of Tijuana.

The problematic of this specific case exist in many underdeveloped countries around the world, where the cities are not capable to cope with the phenomenon of migration, nevertheless the nature of Tijuana is much more complex due to its dialectic environment and its closeness and attraction with the first world. The thesis is submersed in this context and deal with the a gap between the citizens and the right to the city and to proper housing.

key words: industrialization, migration, population growth, housing deficit, densification, affordable housing.

1. INTRODUCTION

1.1 BETWEEN WALLS AND INFORMAL SETTLEMENTS

The northwestern side of Mexico was the place where I was born and became an adult. The city of Monterrey, my hometown, is one of the most developed and neoliberal cities in the country, and perhaps the richest one. An americanized city with “Beverly Hills” like shopping streets, and expensive private schools where the children arrive with a chauffeur and a body guard on their backs. In this kind of environments it is hard to realize the poverty of the other side of the Mexico, but so I did. In year 2000 I moved to Tijuana, a city in the western side of the border next to the richest state of the U.S., California. Then I found out what Mexico was really about.

I opened my practice as an architect together with my partner down there, in a territory full of fenced houses and communities and informal settlements, where its uneven geography is framed and cutted by a big border wall dividing not only political spaces, but societies and dreams. (fig. 01) The confrontation with the reality was quite strong, my misconception of the living conditions of the city, people in a continuous emergency state, made it even worst, and it was more striking having the possibility to experienced the two sides of the border, the perfection of San Diego versus the corrupted state of Tijuana.

My everyday life during the four years of my stay was to think how is it possible to inhabitate in such a neglected territory, a place that once used to be something and now seems to be no ones land. After my third year there producing architecture and dealing with such living conditions, I started to understand its dynamic and I saw for the first time its charm, but before my complete understanding, (after three assaults in a row) I had to left it behind and move to Rotterdam. The insecurity was enormous, so we have to find another place.

I left with an emptiness and thirsty of more, so I decided to change the direction of my practice to bring perhaps a little hope to this extreme territory. The community of architects and artist in Tijuana is huge and strong, we are dealing with different issues in diverse scales, we have some visions for the future, my thesis which deals with the provision of housing is just one of those.

1.2 PROBLEM FIELD

The city of Tijuana has grown in dependence of the development and demands of its neighbor state, California. It has served as an entertainment oasis, as a bridge for unskilled workers and as a industrial machine. These three processes have originated positive (economic) as well as catastrophic
02. Tijuana Housing
results (spatial and social) regarding urbanization. In the last decades, the border industrialization and the lack of housing regulation have promoted an uncontrollable and unsustainable urban growth responsible of the spatial and social divisions that are nowadays represented in the morphology of the city. Physical and societal fragmentations and inequalities are mainly expressed in the housing sector. Some of the most crucial problems are related with: the phenomenon of migration and its temporal accommodation, the high rate of growth, the deficit of affordable housing, the disassociation of the government with the housing industry and the lack of long-term spatial planning. Nowadays migrants and locals form an uneven territory where dispersion and informality have been critical issues. This jointly with a considerable deficit of housing, neglected neighborhoods and the lack of primary services and infrastructure, have crossed the limits of survival in the most critical cases. The public and private sector haven’t been able to fulfill the demands for such dissipated development in a sustainable way. The growth of the city is 2.25 hectares per day.

1.3 OBJECTIVES AND RESEARCH QUESTIONS

The purpose of this study is to acknowledge, through an analytical process, the current condition of housing in the south side of the border, and therefore, through a design proposal, reveal the mechanisms to relief the shortage of housing responding to migration and population growth. The aim is to propose, in neglected and low density areas, alternative ways of living to accommodate in a sustainable way the future generations of Tijuana’s inhabitants. The posture is conceived taking action of current failures, pursuing new strategies for inhabitation and cohabitation within the inner city and not in marginal territories. The final goal is to propose in a specific area of the city, the city center, affordable housing for a large segment of the population as an urban regeneration strategy.

Using critical analysis and projecting into the city’s immediate future in regards of housing development, the thesis will give answers to the following enquiries: what are the political and economic aspects that assisted the production of the space in this border city? how are defined the different urban ecologies in this transborder territory? how socio-economic trends have affected the inner city? why are the citizens marginalized in the periphery while the central area of the city has the capacity of further densification? what kind of strategies are necessary to return or encroach upon the inner city in order to increase the housing stock in a sustainable way? and who would be the main actors involved in such strategies?

1.4 SOCIETAL AND SCIENTIFIC RELEVANCE

The practice of the government regarding housing and spatial planning in Latin American countries have distanced from the necessities of our societies, especially after the first structural changes established by global neoliberal strategies in the 70’s. The gap between federal and municipal government and citizens has been growing creating deficit of attention in some of the primary rights of the people, as it is the case of housing. Nowadays the practice of the urban planner and designer must concentrate in bridging this gap, stimulating new ways of accommodation of heterogenous social structures in collective and sustainable living spaces, looking for the well being of the citizens. The societal relevance of the thesis is in regard to this kind of compromises that our practice must have with our current society and future generations. It is necessary to acknowledge that housing is one of the primary rights of the people, and in this specific case the deficit of house units, the uncontrollable growth and the erroneous management of the housing industry sector have position the city in an alarming state. The different instruments taken for this purpose in this study are conceived to change the structure of the urban and living environment of the city giving to the citizens once more the right to the city (Lefebvre 1968, p.147), to central areas, in order to cease marginalization and to stimulate urban consciousness and cohabitation. In the other hand, the scientific relevance of this study is related with the research and design process proposal. Firstly, it is important to acknowledge that there is a lack of research and planning related with the issue of housing in the south side of the border. There are not master plans, regulation or any long term planning in inner city areas related with living accommodation and urban regeneration. The public and private sector have focused their agenda in other sort of practices where the interest are directed towards the acquisition of profit not in the construction of the city or the well being of the inhabitants. For this reason, the thesis opens up new possibilities for urban regeneration, integration and densification related with the issue of housing.

Secondly, the design process, the methodology, is based regarding the facts mentioned above. An strategy is proposed taken several actions not only by the urban planner or specialist, but also by the community, the public and the private sector. This partnership is common in many countries, but in Latin American cites it is hard to conceived. In this specific case the community play an important role and is the one rewarded with most of the benefits of the action taken in the process. The idea is to open a dialog between different parties for long term planning.
THEORETICAL FRAMEWORK
03. Assembly Industry and Housing in the North-West Mexican Transborder Region.
2. THEORETICAL FRAMEWORK

2.1 THE TWOFOLD PROCESS OF INDUSTRIALIZATION AND URBANIZATION IN THE NORTH-WEST MEXICAN TRANSBORDER REGION

The twofold process of industrialization and urbanization has caused a rupture in the traditional life and morphology of the cities (Lefebvre, 1968). Economic and socio-spatial transformations have led fragmented urbanities. The outcome of the cleavage is a series of mutant urban processes highly associated with the relation between labor and housing, such as, extension and abandonment of city districts, displacement and replacement of dwellers, and eviction and forgetfulness of the marginal; suburbanization, gentrification and homelessness.

These sort of urban processes have resulted in city divisions with heterogeneous quarters, in ‘developed’ countries as well as in ‘undeveloped’ ones. This paper reviews this double process (industrialization and urbanization) and its consequent urban phenomenons from a general frame to a contextual one, focusing in the North-West Mexican transborder region, and enfasizing in the city of Tijuana. A two million third-world tranfrontier metropolis that emerged subsequently Mexico’s border industrialization, and lost control of its growth after the incursion of global forces (foreign investors, transnational workers, etc), and the North American Free Trade Agreement (NAFTA).

The structure of the paper is in four sections. The first one starts up with a general chronological review of the industrialization and urbanization process, from the beginning to the end of the last century. This section includes an overview of the spatial and social restructure of cities, the new organization of production and the outcome of these urban processes; suburbanization, gentrification and homelessness. The second part continues with a more specific review regarding the process of economic growth and urban development in ‘developed’ and ‘undeveloped’ countries.

The third section follows up different approaches related with the heterogeneous divisions that have emerged in the cities in direct relation with the industrialization and urbanization process, and the late phenomenon of globalization. Finally, the last part deepen into the different urban ecologies of the North-West Mexican transborder region and the city of Tijuana.

2.2 THE TWOFOLD PROCESS

Industrialization and Spatial Restructure of Cities

Henri Lefebvre (1968) in his book ‘Le droit a la ville’ illustrate us how the double process of industrialization and urbanization has been a conflicting process in the last century with its two inseparable aspects: growth and development, economic production and social life. Urban concentrations stimulate and accelerate the accumulation of capital, so it explains the fact that the first centers of production were mainly located within urban centers, but as soon as the space was not enough and limited for the concentration of the means of production, emerging industry tended to settle outside the urban cores producing its own urban centers, small industrial towns, and cities. Lefebvre (1968) explains how this centers of production have been able to live and reproduced not only absent of any urban and social life, but deteriorating the old urban features of its closest city cores. In this sense he talks about an induced process, ‘implosion-explosion’, where the phenomenon of massive peripheral growth extends over large parts of the territory, sometimes crossing borders, surrounding, assaulting and deteriorating not just one, but several old city centers. This could be seen in large industrial belts of urbanization, for instance, among others, the west Mexican-American transborder region.

Marcuse (1988) agrees with this process explaining that with the production of such vastly great metropolitan areas, and the advances of transportation technology -first railroads, then trolleys, then automobiles- people start moving to the emerging centers of production leaving behind old structures of the city. Cleavage between different neighborhoods emerge stimulating new urban process, such displacement and relocation of different groups and activities. Nevertheless, the improvements in transportations are not the only cause of the mobility. The main reason is the necessity of vast amounts of land for the new means of production (cheaper outside the city), as well as the consumer preferences of the workers, both conditions stimulate greater urbanized areas, decentralization and suburbanization; large factories as well single-family houses.

Industrialization and Class Restructure of Cities

Technical developments in the ways of production have stimulated spatial restructure, but also the relation between workers and capital.

According to Marcuse (1988) the industry grown giving low wages to the workers and profitting vast amounts of capital. In the state of oppression and exploitation the workers realized the necessity for decent wages to get decent housing and power of consumption, so then it was conceived that if they were able to buy what is in the market, the industry could get more profit of it, so it did happened. The so called Fordist compromise was born. Mass market and mass production arose and not only in the means of goods but as well in single-family suburban homes. So, the process of suburbanization, and mass produced housing emerged with its owner-occupied detached houses occupying vast extensions of land, with severe ecological consequences,
but with a “worker’s stake in the system, a commitment to keep working and stop complaining, and at the same time keep buying, keep consuming, keep the profits rolling in the point of production” (Marcuse 1988, p.191). At this moment, as Lefebvre (1968) explains a big social change arose taking away the consciousness of the people regarding productivity and urban life to focused more in a sense of consumption. This condition can not be generalized to all citizens, many stayed working and living in inner city areas without the rewards of this process getting low wages and being unable to fulfill their necessities of proper housing.

Under these circumstances complex socio-spatial relations start arising, but as Marcuse (1988) explains, the technical changes in the way of production of the 1960’s changed dramatically the panorama when the demands of industrialization changed, with the employment of workers with engineering, financial, commercial, advertising and marketing skills, and the laid-off of less skilled workers; “jobs were de-skilled, wages reduced, fewer workers were needed and the number of the poor increased” (Marcuse 1988, p.192).

The disadvantaged workers, and mainly the victims of racial oppression expressed their dissent with diverse civil rights movements in the 1960’s in many cities world wide. The crisis was not only dealing with poverty and the difference of classes, as Marcuse explains (1988), but also with the so-called “ urban fiscal crisis” or “cleansing crisis”; the less skilled working class was not longer needed, so they were not able to survive paying their house as in previous times, the outcome; large working-class housing areas were abandoned and the emergence of the homeless.

At this point the changes in the cities were not limited to spatial divisions but also to social stress. The economic and social gap started increasing, with a not coming back. In addition the government starts at this moment focusing on the new ways of capital accumulation and disassociating with the city and its citizens. The stressed working class was pressured to move to other districts, either to neighborhoods in decay (American cities) or to peri urban areas (Latin American cities), some districts changed their functions and some others were abandoned, and the state was not willing to invest in the maintenance of public facilities of the neighborhoods were the remnants of the poor and unemployed were settled down.

New Organization of Production

The next period starting approximately three decades ago, could be seen as another crisis-generated attempt by capitalism to restore the key conditions for its survival (Soja, 1996). The emergence of centralization and concentration of capital ownership, combining diversified industrial production, finance, real estate, information processing, entertainment and other service activities, resulted in new flexible spaces of production with different cores in many local and global locations.

According to Sassen (1991) this restructure of the economy led to a growing centralization in order to regulate economic activities in many cities that act as a management centers of international networks organized in a global scale. Marcuse (1988) explains that the contemporary ways of production, which are related with technical, professional, managerial and financial office work, require different uses of the physical space. While the manufacture industry is organized in the periphery of the city, the new economic processes evoke the reclaimed of inner city districts. Districts with highlights and amenities (waterfronts, views, parks, accessibility), as well as suitable residential and commercial structures that are occupied by working class or unemployed citizens. The outcome; gentrification.

Suburbanization, Gentrification and Homelessness

Economic and socio-spatial changes have emerged from the double process of industrialization and urbanization restructuring today’s cities. The most relevant urban phenomenons, which are highly related with the labor and housing market are the following.

Suburbanization, an urban process which decenters de city, it refers to the displacement of people and production activities to outer areas of the city. Suburbanization still latent nowadays, no matter the place, ‘developed’ and ‘undeveloped’ countries, or the changes in the modes of production. It is not only related with the labor and housing market but it is also consequence of the people’s desire of consumption and commodity.

Gentrification, an urban process highly related with the labor and housing market. “It is the revitalization of working-class residential areas through physical up-grading with consequent displacement of lower-income households by upper income ones, and it is both a spatial and class phenomenon” (Marcuse, 1988, p.194).

Today the gentrified neighborhoods are former abandoned areas, that were left behind with the displacement of the first ways of production from central areas to peri urban ones. The disadvantaged citizens were settled down there sometimes legally, sometimes as squatters. Then with the new changes of production from industrial to service economy, these poor tenants are once more displaced. In ‘developed’ counties the evicted citizens have found living space in areas lacking of state maintenance, with the worst urban and housing conditions, forming inaccessible ghettos, or even some are relocated in the streets, as it is the case of the United States. In the other hand, in ‘undeveloped’ countries, such in Mexico, they are expelled to misery belts around cities, on illegal properties without primary services. Gentrification promotes the dispossession, concea-
ment and forgetfulness of the poor; homelessness.

Homelessness is an evolutive urban phenomenon and is highly related with the processes of labor and the shape of the cities, in which those take place (Marcuse 1989). When the centers of production change their spatial demands and establish in the habitat of the unemployed and disadvantaged citizens, the land value raises and these groups are simultaneously expelled. The sigh of the poor is disturbing for the new productive areas, so they are in most of the cases, hidden, relocated but never rehoused. Marcuse argues that gentrification not only requires a spatial movement from households in gentrifying areas, but as well from the consciousness of the gentrifier. While some citizens disappear from public eye, some others emerge enjoying the closeness of work, the accessibility to the new luxurious amenities and the life of the city.

In sum, cities have shifted in the last century from fordist to a post-fordist society, from manufacturing to a service economy, from national to global organization of production, distribution and services. This transformations have stimulated the movement of people and activities, expanding cities, abandoning metropolitan areas, restructuring old urban centers and promoting the segregation between different groups of citizens.

2.3 URBANIZATION AND OVER-URBANIZATION

The common denominator of urbanization, and its consequent urban processes related with labor and housing (suburbanization, gentrification and homelessness) is always the process of economic development; industrialization or de-industrialization. In this sense Castells (1972) explains that urbanization and economic development differ in ‘developed’ and ‘undeveloped’ countries, regarding two dimensions: “technological and economic progress on one hand, demographic characteristics in the other”. He argues with a series of analysis pointing that the higher the economical and technological level is, the lower the demographic growth. And he adds, that there is a relation between the industrial diversification and technological development, and the level of urbanization. The higher the diversification of the industry, the higher is the percentage of the population in metropolitan zones. He observes as well that in ‘underdeveloped’ countries the acceleration of the urban growth is higher than the one in ‘developed’ countries in the process of industrialization, most of the times without the expected or equal economic growth. He adds that the urbanization in progress nowadays in ‘underdeveloped’ countries is not the same as the one experienced already by ‘developed’ ones. For instance, when the level of industrialization reaches a certain degree in ‘undeveloped’ counties, the level of urbanization goes further, beyond a desired balanced, creating “over-urbanization” (Castells, 1972). This phenomenon emerges as an obstacle for development. The concentration of massive population deteriorate the performance of the cities; the availability of services and the quality of living decrease. In addition industrialization in ‘undeveloped’ counties as it is the case in Mexico (and Latin America) has caused the following problems; disintegration of the urban and rural society, inequality of living between town and countryside, a negative balance of migration (the movements goes beyond the capacity for absorption of the new productive systems) and disorganization of the traditional cultural systems. From this analysis Castells (1972) deduces the distinction between ‘generating’ and ‘parasitical’ cities. The first one encourage economic growth, the last one impedes it.

In sum, the structure of the cities not only depend of the process of economic development but as well on its immediate context which reacts in different ways to the same sort of production system. For instance, the rewards of economic growth differs from ‘developed’ to ‘undeveloped’ countries.

2.4 CITY DIVISIONS

The urban phenomenons (suburbanization, gentrification and homelessness) that have shaped the structure of today’s cities have originated social and spatial divisions in urbanized and over-urbanized centers of economy. These fragmentations have changed and progressed in complexity. Lefebvre (1968) refers to this urban separation with the term of ‘dual city’ town and country, bourgeois and proletarian. In the other hand Castells (1972) agrees with this belief, but with certain criticism and with a further division shifting the ‘dual city’ into a ‘tripartite city’, adding the informational sector. Finally Marcuse (1993) visualize such divisions with a higher degree of complexity with his theory of the ‘quartered city’, where the contemporary city is divided not only in two or three turfs but in several ones, physically and socially.

Each vision is focused in a particular context, in a certain time, and with a specific relation between industrialization and urbanization. Even though these theories could be generalized in cities with similar features and processes, it is impossible to refer to two cities being alike. For this reason the study of the divisions of the cities must be contextual and circumscribed in its own modes of production and social life. It requires great effort and nowadays it is even more hard to realize that there are complex urban panoramas of dual, tripartite and quartered cities together in some industrial and post industrial belts in some regions world wide, and some other urbanities even more complex are on its way of reproduction. For instance the west Mexican-American transborder region, an area constituted by one of the most prolific economic regions of the United States in the north,
and by one of the most exploited industrial (assembly) areas of Mexico in the south. Here the twofold process of industrialization and urbanization has been hit by the atrocious phenomenon of globalization creating a new transfrontier urbanism, which holds a dispersed quartered city in the north, and a heterogeneous, multi-fragmented and over-urbanized city in the south. Marcuse (1993) gives a detail explanation of what a quartered city is with its five divisions; luxury housing, gentrified, suburban, tenement and abandoned city. Then it is not hard to visualize the morphology of San Diego (and Los Angeles) in the north side of the border. Even when the visualization of the quartered city is based in great metropolises of the east coast, the ones in the west coast follow similar patterns but in a sprawling way. But how is it possible to describe the divisions in the heterogeneous urban structure of the south side of the border? Herzog (2003) makes a magnificent description of Tijuana’s hybrid divisions and classified them in seven urban ecologies, which include spaces formed by industrialization and global economic actors. Spaces that represent regional and local responses to globalizing forces.

2.5 THE OUTCOME OF INDUSTRIALIZATION AND GLOBAL FORCES IN THE NORTH-WEST MEXICAN TRANSBORDER REGION

Tijuana has been a platform for the new global factory (assembly industry), the bridge and the homeland of national and international migrants, and the place for experiments in expanded trade and cross-border consumerism. These conditions have set the city in a complex process of urbanization caught between paradigms; local and global, north and south, urban and suburban, first world and third world, urbanization and over-urbanization (Herzog, 2003).

According to Herzog (2003) seven urban ecologies have emerged in the last decades as a result of industrialization and globalization in Tijuana, a two million third-world border city susceptible to mass migration and over-urbanization (Castells, 1972). These seven urban ecologies are classified as follows: global factories zones, transnational consumer spaces, global tourism districts, post-NAFTA (North American Free Trade Agreement) neighborhoods, transnational community places, spaces of conflict and invented connections. (fig. 04)

Global Factories Zones, are large and sprawled industrial parks where foreign assembly plants (maquiladoras) are settled to produce electronic devices and other consumer goods with cheap labor to be shipped to markets in United States and other developed countries. Maquiladoras have created labor for millions of Mexican immigrants which arrived from the south to participate in these cheap labor enclaves. This extended zones are located in suburban areas of the city, and have been the primary cause of its expansion (east) and fragmentation. They resemble to the U.S. suburban industrial parks with the difference that here they are surrounded by low income residential areas and slums where the majority of the workers live. (fig.03)

Transnational Consumer Spaces, are large commercial corridors full of international, mainly American, chains that have changed the identity and the everyday life of the city which has been controlled by global marketing strategies. These spaces are located in some beach fronts and core areas of the city. The most important one -Zona Rio- emerged after a critical process of gentrification in a vast extension of land a few kilometers away from the old international port of entry. This zone of consumption runs from north to south crossing big part of the city.

Some of these spaces have been transformed from traditional Mexican outdoor spaces to scenografic American shopping centers after the NAFTA and the entrance of all sort of American enterprises. Many of them shared the space with middle and high income residential zones.

Global Tourism Districts, are areas totally recreated for international tourism. According to Herzog “the central premise of tourism design is the manipulation of visitors’ experience of place to maximize profit” (2003, p.126). These areas are created to satisfy the expectations and necessities of the visitors. The main example lays in the old city center -Revolution Avenue-. This street was the first commercial street in the city and used to have a strong allure and identity. Today it has become a mexicanized Disneyland holding many craft-shops, bars, cabarets and nocturne centers.

Post-NAFTA Neighborhoods, are residential areas that arose directly or indirectly by the industrialization and global economy of the border. Herzog (2003) makes a valuable recognition regarding the traditional social geography of the Mexican border in relation with the U.S. pattern. In contrast to its counterpart, in Mexico, wealthy neighborhoods are located in central areas of the city, adjacent to downtown, or along commercial corridors. Middle, low and poor income neighborhoods are settled in the surroundings of the city core, the farthest the poorest. The traditional rich enclaves or gated communities, which look like the Californian suburban neighborhoods, are zones where wealthy local and foreign Mexican citizens live, as well as, U.S. and other foreign residents. Middle and working class citizens, as it was mention before are dispersed around the global factories zones. The rest, migrants and low income citizens live on the edges of the city, far from the urban activities and the centers of production in squatter communities of substandard housing (colonias populares). Transnational Community Places, Herzog (2003) refers to this places as nodes and public gathering spaces that
change the notion of the border wall, from a militarized space to a part of the community. Some decades ago the areas close to international borders used to be vast empty areas of land, buffer zones without any sort of community life (Europe and America). Today globalization has opened up border territories to new community transformations. It is possible to see this clearly along the Mexican-American border where dozens of cities drawn together. Herzog (2003) goes deep in this condition in the transborder region of Tijuana-San Diego where old differences are forgotten and urban neighbors become part of a common transnational living and working space. The linkages between these two cities include the existence of international commuters, transnational consumers, global factories, cross-border land and housing markets (Herzog, 2003). Nowadays around 15,000-20,000 Americans reside in Tijuana's coast, and other some thousands of Mexicans are moving to Latin communities in the north side of the border. The global economy of the area has opened new opportunities for certain groups of people stimulating binational lifes. For some residents the boundary has blurred, for some others it remains stronger than ever.

**Spaces of Conflict**, are the areas adjacent to the seventy five kilometers long border wall. A militarized fence made by corrugated metal landing mats recycled from the Persian Gulf War, which has been duplicated and enlarged in the last years to remind us the tension embedded in the two border cities. In one hand the wall and the multibillion U.S. border security system is a product of U.S.-Mexican immigration and drug smuggling policies. In the other hand, both governments enthusiastically talk about the rewards of the NAFTA, its consumer goods and billions of dollars that can cross through the same physical border.

**Invented Connections**, are the areas adjacent to the old international port of entry, the small town of San Ysidro (20,000) and the old city center of Tijuana (1000,000). Both areas encounter each other in a speculative point. A space which used to be a community and gathering place for the binational citizens in the area, and which has been transformed into a space or violence, abandonment and urban decay. The residents of the south side have been evicted due to the speculation of private and public groups. Urban plans, regarding a new international crossing, have stopped the development of the area, raised the land value and stimulated the displacement of activities.

2.6 CONCLUSION

The double process of industrialization and urbanization explained by Lefebvre (1968) was developed through the last century in an gradual way in many great cities world wide stimulating, besides economic growth, social and spatial restructure. In contrast, many other cities, mainly in undeveloped countries, did not experienced in the same time and way the arrival of this process and its rewards, such is the case of Tijuana, in the North-West Mexican transborder region.

Firstly, it is important to acknowledge that this city initiated the process some decades later on, together with some other forces and changes in the ways of production, for instance the phenomenon of globalization. The arrival of such economic powers in such vulnerable place, happened fast and with atrocious results. In a interim of forty years this transfrontier territory practiced an intense industrialization and an over-urbanization, that provoked the lost of its traditional urban morphology, and cohesion of its society.

Secondly, it is critical to point out that the rewards of industrialization, besides migration and overpopulation in this specific case, have not been precisely economic growth and the well being of the inhabitants, but fragmentation, marginalization, and social and economic polarization. This has given as an outcome the formation of the already mentioned seven unparallel urban ecologies (Herzog, 2003), which have a tight relationship not only with Lefebvre’s twofold process, but as well with the opening of markets -NAFTA- and the restructuring of a new global economic and social landscape. These unique urban environments are highly related with the labor and housing market, product of the new economic powers and their spatial needs, which are reflected in the production of diverse urban phenomenons, such as, suburbanization, gentrification and homelessness (Marcuse, 1988).

Finally, it is necessary to assume that the physical and social transformation of the cities -the abandonment of city districts, the displacement and replacement of its dwellers, the eviction of the disadvantaged ones, and the sprawl in the periphery- is an on going process hard to battle and must be seen as a mutant one, with an uncertain direction.

The challenge of our practice is to act in regard to the progressive new forces of production (in each specific context), and its physical needs, which have been the consequence of the spatial and social cleavage of the cities. In the case of the North-West Mexican transborder region the already described seven urban ecologies must be treated in a different way regarding its nature and complexity. Due to its close relation with the U.S. and its influence, transnational economic development, and transnational and local communities must be critical issues to act upon. The greatest urban domain of Tijuana belongs to the one of housing. The sprawling post-NAFTA neighborhoods and their unbalance composition are issues to set in front of the agenda. The reflection towards our practice is the following; are there any possible strategies to confront such dissipated economic and urban growth in this tranfrontier territory? is it possible
to give back, by means of urban planning, its own identity to this parasite city? is there any possibility to return social cohesion and equality? to belong to the city and not to the periphery? to be part of the economical system, and not to be exploited by it?

REFERENCES


METHODOLOGY
05. Methodology
3. METHODOLOGY

3.1 METHODOLOGY PROCESS

It is compulsory in the process of strategic planning the implementation of a set of methods and techniques to achieve the main goal within a certain period of time. In this specific case the process is divided in three phases; Comprehension, Intervention, and Evaluation. (fig. 05)

A. Comprehension

The first step deals with a comprehensive understanding of the city and the specific site of intervention, the city center. Three different sort of analysis must be carried on; Economic, Socio-Demographic and Spatial Analysis.

Economic Analysis. Understanding of historical changes in the economy, the current systems of production, income flows, and employment. City and district scale.

Socio-Demographic Analysis. Understanding of historical and current socio-demographic changes; growth rate, migration and poverty distribution. City and district scale.

Spatial Analysis. Understanding through mapping of the spatial conditions of the city (city scale) and the intervention area (district scale). The enquiry will be highly related with the issue of housing.

City Scale:
- City Administrative Districts
- City Structure and Growth
- City Infrastructure
- City Poverty Distribution
- City Irregular Property

District Scale:
- Zona Centro Urban Features
- Zona Centro Urban Infrastructure
- Zona Centro Divisions
- Zona Centro Land Value
- Zona Centro Road Networks
- Zona Centro Land Use
- Zona Centro Public and Green Areas
- Zona Centro Housing

A field trip to the site is required, where besides the physical analysis, a series of interviews will be made. This interviews are critical for the design process and are made to key persons involved in the development of the city and the area of intervention.

Arq. Luis Duarte Mora

Subdirector of the Municipal Planning Institute of Tijuana (IMPLAN), Tijuana.

Arq. Teddy Cruz
Associate Professor, Department of Urban Cultures, University of California, San Diego.
Principal of Estudio Teddy Cruz and Community-based nonprofit organizations in San Diego, Tijuana and New York.
Visiting Professor at City Collage, New York and Harvard University, Boston.

Ing. David Espinoza
Director of Habitamex (Housing Developers), Tijuana and Northwest Mexico.
Former director of Casas ARA (Housing Developers), Tijuana and Northwest Mexico.
Former director of Viveica (Housing Developers), Tijuana and Northwest Mexico.

B. Intervention

The second step is to organize the information acquired in the comprehension process once the main concerns are acknowledged and synthesized. Taking into account these results it is possible to see the opportunities and weaknesses, and to identify certain areas where the main goal of the strategy could be realized, but it is time focusing in a specific zone and taking action in the design process.

The execution of the design process is located in the western area of the city center and it is divided in four phases: Identification, Occupation, Rehabilitation and Cohabitation.

Identification.
The first step is focused in the identification of the house and building units susceptible for rehabilitation, as well as main roads, city roads and public facilities, such as parks, schools and commercial areas, with potential for further upgrading. The results will be concluded in a series of maps;

- Recognizing the house and building units that have been neglected or abandoned, as well as the empty parcels. This process is conceived to identify the current typologies and constructions qualities, as well as function of those structures. In the other hand identifying the most potential blocks or sections within the area for further regeneration.

- Recognizing the main roads, city roads, streets and alleys that must be upgraded for better accessibility and connectivity within the rehabilitated area and the adjacent neighborhoods.

- Recognizing the commercial and public area, such as parks, schools, sport and civic centers, located within the neighborhood. The intention is evaluating if they fulfill the require-
06. Space Susceptible for Occupation.
ments for the number of inhabitants that already live there and to measure what will be necessary with the eventually increasing of the housing stock.

**Occupation.**
The second action deals with the implementation of a program to occupy or take further action in the different lots, and building units suggestible for rehabilitation. (fig. 06)

The main goal is to identify the owners of the old structures or land to be rescue, to introduce a rehabilitation strategy, and to set out diverse community programs for the development of such a strategy. (there has been some successful community programs within the city, see section 2.3.2).

There are different kinds of properties in the area of intervention, some are own by private parties, (individual and collective) and some others by the government, so different kind of programs should be made to create greater integration, densification, and housing and urban renewal.

The spaces that are own by the state will be taken immediately for further rehabilitation, the ones that are private properties will get into a process. Some of the propietors hopefully would join the community programs, some others won’t, it is a complex process.

The community program will be developed with the help of different initiatives; federal, neighborhood, private, international and educational. This initiatives will be part of a main framework, which must be directly connected to the Municipality of Tijuana and the Municipal Institute of Planning through a Neighborhood Housing Committee. This association will perform as an interface between local government and the different initiatives. In this specific case one Neighborhood Housing Committee is proposed for the area, and it is a pilot project that could be developed in other areas of the city.

A survey trip will be made to the region with the aim of interviewing some of the owners of the area, the director of the Municipal Institute of Planning, some local Urban Planners, and the director of urban cultures of the University of California, which is one of the precursors of affordable housing and community programs in both sides of the border.

Some study cases will be taken as example. The results will be presented in a set of diagrams with an explanation of the process.

**Rehabilitation.**

This action deals with the urban regeneration strategy and the design process.

A clear strategy is proposed and the means for its accomplishment.

**Cohabitation.**
The last action deals with the stimulation of social interaction within the neighborhood. The intention is to propose new ways of urban and social integration to prevent urban unconsciousness, individualization and segregation. The upgrading and implementation of public areas, commercial corridors and civic institutions within the neighborhood is compulsory in the design process.

**C. Evaluation**

Evaluating and monitoring are requirements of any strategic planning, it is compulsory to develop an appropriate procedure for their implementation, and to make sure that all the participants understand these procedures.

Evaluating. Verification of the achievement of the objectives of the strategic planning, by collecting diverse data related with the results, such as number of house and building units rehabilitated and constructed, number of community organizations and community programs, upgrading results, connectivity, internal and external improvement as well as uncertainties.

Monitoring. Supervision of the progress of the design project in accordance with the strategic planning. Monitoring indicators which relate to the key objectives.

**3.2 INTENDED END PRODUCTS**

The outcome of the thesis will precede the main three phases of the methodology with the following results:

a) Comprehension: A well structured economic, spatial and socio-demographic analysis of the city and the area of intervention. A set of maps with text reference, chronological diagrams and statistics.

b) Intervention: A well developed community program related with the strategic planning. The creation of a framework and different partnerships. A detailed urban regeneration strategy with long-term visions in the area or intervention, proposed in different phases. The development of one specific area with approximately 10 blocks.

c) Evaluation: An evaluation with the objectives and the final results, and a list of uncertainties and recommendations.
### Time-Working Plan

#### November

- **Feedback**: 14-15 Nov
- **Editing**: 21-22 Nov
- **Presentation**: 28-29 Nov

#### December

- **Economic Analysis**: 4-5 Dec
- **Socio-Demographic Analysis**: 11-12 Dec
- **Spatial Analysis**: 18-19 Dec
- **Study Trip**: 25-26 Dec
- **Identification**: 1 Jan
- **Occupation**: 8 Jan
- **Rehabilitation**: 15 Jan
- **Cohabitation**: 22 Jan

#### January

- **Feedback**: 9-10 Jan
- **Editing**: 16-17 Jan
- **Presentation**: 23-24 Jan

#### May

- **Feedback**: 8-9 May
- **Editing**: 15-16 May
- **Presentation**: 22-23 May

#### June

- **Economic Analysis**: 5-6 June
- **Socio-Demographic Analysis**: 12-13 June
- **Spatial Analysis**: 19-20 June
- **Study Trip**: 26-27 June
- **Identification**: 3 June
- **Occupation**: 10 June
- **Rehabilitation**: 17 June
- **Cohabitation**: 24 June

#### July

- **Feedback**: 2-3 July
- **Editing**: 9-10 July
- **Presentation**: 16-17 July

#### September

- **Feedback**: 1-2 Sep
- **Editing**: 8-9 Sep
- **Presentation**: 15-16 Sep
- **Evaluating**: 22-23 Sep
- **Monitoring**: 29-30 Sep

#### October

- **Feedback**: 6-7 Oct
- **Editing**: 13-14 Oct

#### November

- **Feedback**: 20-21 Nov
- **Editing**: 27-28 Nov

### Colors Used

- Light Green: hand in report
- Blue: presentation
- Dark Green: final presentation
3.3 TIME-WORKING PLAN

The research and design process will be developed in a time frame following each of the methodology steps. (fig. 07)

3.4 DISCIPLINES AND MENTORS

Urban Design - Prof. Ir. Henco Bekkering
Spatial Planning - Dr. Ir. P.L.M. Stouten
Urban Renewal and Management - Dr. D. Sepulveda
COMPREHENSION PHASE
08. Tijuana Location

09. Tijuana Border Wall in the Pacific Ocean
4. COMPREHENSION PHASE

4.1. TIJUANA

The research and design project is located in North America, in the city of Tijuana, which occupies the west corner of the north frontier of Mexico. (fig. 08) It limits to the north with one of the richest states of the U.S., California, and together with Los Angeles, Orange County and San Diego in the northern side of the border, it constitute the biggest urban agglomeration of the west coast.

Tijuana is one of the busiest borders in the world. Spanish speakers “offers the useful distinction between la linea (the line), to the physical and jurisprudential border with its 300 million individual crossing each year, and la frontera (the frontier) to the distinctive, 2000 mile-long zone of daily cultural and economic interchange it defines, with an estimated 10 million inhabitants” (Davis 2000, p. 27). (fig.09)

4.2 HISTORICAL CONTEXT

4.2.1 Political-Economy Overview

Tijuana has been radically transformed in its short life time in strong dependance with California, its neighbor state. Its urban development is linked with its history which is framed in four main periods related with its governance and economic growth (fig. 11);

Foundation and Golden Age.

Tijuana was a dusty rancho with great scenery own by a family before its formal foundation as a city, no more than 120 years ago in 1889. After prohibition and puritan policies in the U.S. the city started its golden age with the trade of leisure at the beginning of 1910’s when gambling was introduced in the municipality, reaching its golden years in the 20’s and 30’s under a Mexican dictatorship (Porfiriato). The city attracted many U.S. visitors, as well as investors, which runned the majority of the leisure enterprises.

National Reform and Prohibition of Vice Industry.

After being a gambling spa for Los Angeles movie industry, the city together with the whole country went into a national reform in the late thirties bringing huge changes in the border region. The new nationalist government (sexenio) forbid the vice industry, with the closure of the luxurious casinos. Many U.S. investors went away.

Emergence of Massive Migration and Frontier National Program.

Tijuana became a boomtown during the World War II and Vietnam War when the U.S. began to import mexican cheap labor on a large scale with the Bracero Program, a temporary labor contract of unskilled workers from the 40’s to the 60’s. Many migrants started arriving to the region during those years. This project was played along with the Frontier National Program in the early sixties with the aim of brightening up Mexico’s borders.

The goals of such program were not accomplished and drastic changes happened afterwards, economic and social, with the emergence of the maquiladora (assembly) industry in the sixties and the incursion of the Border Industrialization Program in 1972.

Neo-Liberalization.

The new maquiladora economy marked the beginning of a complete new era of opening markets that changed the landscape of the whole territory with the North American Free Trade Agreement (NAFTA) in 1994. This period is characterized by the privatization of state-owned companies, the complete opening of markets and the optimization of conditions for capital accumulation.

The neoliberal utopia of the border economy pointed out a terrible national level of social and economic polarization, as well as unemployment. Wages had no relationships with workers cost of living, actually the maquiladoras wages started in a very low level and fall in the 90’s by at least 20 percent, the exploitation has been terrible. In recent years NAFTA has failed to raise wages, stabilize internal interest rates or reduce the need to emigrate (Davis, 2000, p.30).

The economy of Tijuana is based not only in the maquiladora industry which contributes 46% of the income of the inhabitants. The service sector, including tourism, occupies the 53%, the city continues offering a wide range of leisure to the Californian inhabitants. The rest, 1% goes to agriculture. Mexican border transactions that not pass through federal customs together with the maquiladora related expenditures in San Diego, accounted for about 2 percent of San Diego’s GRP (gross regional product). The importance of Tijuana to the San Diego economy has grown. In the other hand visitors from San Diego and other cities spend several hundreds millions that, together with the maquiladora industry provide a great value, approximately 15 percent of GRP (gross regional product). It should be noted that the economy of San Diego is some twenty times larger than that of Tijuana (Ganster, 1999). This significant economic asymmetry between the two neighboring cities is central to the realities of the binational region. Tijuana is a city in a developing country with few resources to provide services to its citizens. San Diego, by contrast, is one of the wealthiest cities in the world.

The two banks of the river created a new space in one of the
10. Tijuana's City Growth
11. Tijuana Population, Growth Rate and History Time-line
12. Tijuana Assembly Industry
4.2.2 Urban Development, Spatial and Social Divisions

The city growth has been mainly in four distinctive phases. The first phase, from 1900 to 1930 during its fundation and golden age. The second phase, from 1940 to 1950, during the national reform and prohibition of vice Industry. The third phase, from 1960-1970 with the Frontier National Program, the emergence of massive migration and the assembly industry. Finally, the last one, from the 80’s to today, the time of crises and the change to Neoliberal State. (fig. 10, 11)

The city started blooming mainly from the 20’s to the 30’s in a valley located a few kilometers away of the first communities in San Diego and the international border, in El Centro district. Tijuana’s traditional core was developed in this area surrounded by the first neighborhoods, following the art deco and modernist trend. Luxurious casinos, hotels, spas and a famous hippodrome were part of the structure and economy of the city, attracting huge amounts of visitors and investors. After the national reform in the late 30’s the city started changing dramatically, the gambling was prohibited and many leisure enterprises were forced to closed. It was compulsory to clean the image of the city.

Along with these radical changes the border traffic started changing its flow direction, not being only from north to south, but also the other way around with the opening of opportunities for unskilled workers. The incursion of the Bracero Program stimulated massive migration to the area, unfortunately this condition changed rapidly and many Mexican where deported back to Mexico and settled down in Tijuana, in El Centro district. During the 1940’s Tijuana’s population nearly tripled from 22,000 to over 65,000, with a annual population growth of 11.40%. Many residential neighborhoods arose during this period in the surroundings of the city center.

Tijuana as many other border cities started growing rapidly, and as a response the government implemented the National Frontier Program in the 60’s with the aim of attending the emerging necessities; urban infrastructure, housing, social cohesion, as well as a new image to the country in its different ports of entry. Many of the projects proposed during that period were accomplished with great results, many others were difficult to achieve due to economic and political issues. Unfortunately the program did not last for along time, and many of the goals were forgotten with the change of government and the lack of continuity.

The most important change related with this program in Tijuana was the canalization of the Zona Rio that was necessary to give more space to a very important area of the city that was able to connect its former districts with the new ones that were arising with the emergence of the maquiladora industry in the east side of the city. This two drastic changes were part of the 60’s and 70’s period.

During these years the assembly industry started blooming in the north-eastern and south-eastern side of the city as part of the Border Industrialization Program. (fig. 07,08,09)

Large-scale industrial developments in the Mexican border have influenced the process of urban development. Land use planning has accommodated the demands of industrialization by zoning large parcels as the Ciudad Industrial (the biggest industrial park) and implementing road and utility infrastructure programs to facilitate (and subsidize) industrial development. The maquiladora industry has been a magnet for workers and it has attracted enormous semi-informal communities in its surroundings in illegal land, that later were legalized and transformed into colonias and mass produced housing areas with legal property.

These new urbanized territory started growing totally detached to El Centro district, and strength its position with the opening of the second port of entry in the east in this new area, the Mesa de Otay district, in 1985.( fig.12)

It is important to point out that this district opened its door almost exclusively for goods and for high rank employs living in San Diego’s luxurious gated communities, that commute daily to work southbound. A limited amount of inhabitants of this area have the opportunity to cross to the other side. In the meanwhile El Centro district, since the foundation of the city, has been the entrance for tourism and local commerce, and the exit for all the privileged inhabitants portable of U.S. visas going from south to north to live the popular Californian dream.

At this point it is possible to see the spatial and social divisions that the city started creating. These two areas, the center and the industrial zone stood out as two different entities with a shared common space, the Tijuana River. (fig. 16)

The Tijuana River as it was mention before went into a drastic change during the east expansion years, and after a terrible series of floods. Its canalization has been one of the most important urban regeneration projects in the city and one of the most dramatic cases of irregular settlements relocation. In 1924 was the first attempt of displacement, mainly for security and healthy reasons, but the place was infested again in the following years. Then in 1947 there was a second effort relocating 300 houses at the top of a hill in the adjacent neighborhood, Cononlia Libertad (Liberty Neighborhood), the closest to the San Ysidro checkpoint (east) in the north area of the city. One more time the effort was in vain, in less than 10 years 1500 families were settled again in the same area. Then in 1955 a piece of land was donated to open space for these people. After an exhausting effort in 1970 the canalization of the river was proposed by the government, it consisted in 400 hectares of pauperism, where people survived in depressing state with social problems and deficit of public and sanitary services. This time severe confrontations and deaths paved the way to the modernization of the city, at that time
13. Tijuana Administrative Districts and Neighborhoods
most strategic locations of the city, from north to south (it was made in several phases). The Zona Rio emerged as a spinal cord jointly with the Tijuana River, linking several urban areas and giving a face to the city (fake one, it has been Americanized in the last years) and the whole country with the most transited port of entry in the world in its north side. The city was distributed along the river, the industrial area in the northeastern part, the wealthy and traditional neighborhoods to the south, the city center to the north-western side.

The project accomplished its main goals, many areas next to the river were rescue and wide highways were traced with business, commercial, cultural and residence centers. The structure of the new area, as well as its traffic system was conceived with stretch relation with the U.S. San Ysidro port of entry. Unfortunately the northern area, with its american scale, shopping centers, Mc Donald’s and many other commercial chains vanished the original identity of the city. It seems that part of San Diego transgressed the uneven landscape of Tijuana. As in many Mexicans and Latin American cities, it was not sufficient to have one rehabilitation plan for a growing organism. The canalization offered a critical upgrade to the city but the Zona Rio was not planned for the growing boom of the 1900’s (6.75%) and the current century. Some other large-scale urban plans emerged afterwards but no other had been accomplished with positive or huge transformative results.

In recent years with the NAFTA and the propagation of the assembly industry, many mexican workers kept arriving from the central and southern area of the country, with the hope of employment, or of transit to the other side for a better life, legally or illegally. The opportunities of crossings have changed through the decades, and more after the construction of the physical wall in 1996 and the Operation Gatekeeper. Nevertheless no matter the level of surveillance, the wall has been permeable, stimulating incessant efforts for crossing, and even more in time of economic crisis, like in the last decades (80’s and 90’s). The city of Tijuana has been accumulating all the newcomers that haven’t succeed in their task in an urban structure without the capacity to hold such a volatile population. The majority of these people look for a way of living in squatted territories, creating huge misery landscapes. The city has been dealing with this condition mainly in the east and south side of the city.

Regarding urban transnational relationships, there is a significant reciprocal link between the north and south side of the border, mainly in terms of economy and environmental issues, which have a common interest between the two nations, nevertheless there are not much political and social affairs regarding migration and common urban and housing development. The most striking relationships regarding housing have been in one hand, transnational cooperatives that have helped the development of some low income neighborhoods, and in the other hand the formation of mexican transnational communities. These two conditions will be further explained.

In many cities of Mexico the government has not been able to manage the expansion of the new global metropolis, as it is the case in Tijuana, where economic growth and neo-liberal policies have given the city a new economical position but at the same time, this changes have stimulated negative conditions such as social and phisical inequality, and disassociation with the state. The uneven development has created fragmentation among different districts, and the panorama for the following years seems to get even worst with the lack of growth regulation and the deficiency of urban management.

4.3 CURRENT CONDITION

After a brief historical overview it is possible to acknowledge the process of the production of Tijuana’s urban space, which has been highly related with political and economical changes. Within Tijuana’s Municipality, there are currently nine administrative districts (fig. 13). Four of them lay down next to the international border. The local governmental and territorial unit in Mexico is the municipality, thus the term Tijuana refers to its densely urbanized area as well as the surrounding region that is circumscribed on the north by the international boundary, on the south by the Municipality of Rosarito, to the east by the municipality of Tecate and on the west by the Pacific Ocean.

The acknowledgement of the city’s historical background is quite helpful in the understanding of many of the current conditions that Tijuana is dealing with, such as dysfunctional infrastructure and fragmentation, migration patterns and population growth, as well as shortage of housing and decline in quality of the existing housing stock. This different issues will be explained in three general sections; socio-demographic profile, urban management, and housing.

4.3.1 Socio-Demographic Profile.

Baja California’s State Population Council (CONEPO) estimated that in 2005 the population of Tijuana was 1,410 700. These estimates are used by state and local agencies for planning purposes, but the real figure, counting the volatile population, is now over 2 million. One of the factors for Tijuana’s demographics is that the city has a large floating population of people that recently arrived, and in transit to the United States, many of those stay in the southern side, many others are able to cross, and some more have been deported. This includes migrants from Central American countries and elsewhere on their way to the United States as undocumented immigrants. (fig. 14) The floating population also includes in-
14. Migration Routes and Patterns
individuals who reside outside of the municipality and commute to work in Tijuana.

The annual population growth rate in the city has been changing dramatically in the second half of the last century (fig.08). Tijuana’s annual population growth increased to the rate of 6.75 percent between 1990-1995 and diminished in the last decade to 4.9 percent, which still quite high compared with the national rate 1.16 percent (2006).

According to Baja California’s State Population Council in the last five years approximately 193,000 persons arrived from abroad to the Tijuana’s State, the 11% from the U.S., the 88% from different cities of Mexico and the rest from Latin American countries. The 60% of this percentage was settled in the municipality of Tijuana. The 56 percent of Tijuana’s population in 1990 was born elsewhere in Mexico. However, even if migration into Tijuana were to cease, the city would still grow due to the large number of women that in the coming years will be in a reproductive age. The population in Tijuana is quite young, 24.2 percent is 14 years old or less. This condition provides great challenges providing adequate living accommodation and employment.

There are three different kinds of migration in the border region; transmigrantes (legals) or commuters, braceros and the illegals. It is critical to have a brief overview due that their occupy an important part of the population of the city.

The transmigrantes or commuters are the ones that have the possibility to cross the international border without any limitation, sometimes they are stopped by the migration officials to check their papers (passports or visas). These commuters have different variations. First we have commuters that are mexicans or mexican-americans that work in San Diego and live in Tijuana, and the other way around, americans or mexican-americans that live in San Diego and work in Tijuana. Secondly residents of Tijuana, mainly high-medium class mexicans that go towards north to visit some relatives and friends, or to satisfy theirs necessities of shopping and entertainment, and the other way around american residents that visit Tijuana for similar reasons.

Many mexican-americans, U.S. citizens who are descendants of Mexicans are well integrated but some are not, and they are known has Chicanos, a term that has been politicized and sometimes has a offensive connotation, it refers of being “neither from here, nor from there”, it is a mixture of cultures from both countries and they many times struggle of being accepted into the Anglo-dominated society of the U.S. while maintaining their cultural background. Chicanos have created a new sub-culture instead of being integrated into the american mainstream culture.

Many chicanos also live in Tijuana with an unclear identity, most of the times they speak english instead of spanish. In the U.S. the Chicano majority are descendants of rural indigenous mexicans (braceros).

The braceros are the unskilled agriculture and railway workers that were part of a bi-lateral short contract between Mexico and United states between the 40’s and the 60’s. Many of these workers worked under terrible conditions and where sent back to Mexico after the accomplishment of their work with a few dollars in their hands, some others after struggling with clandestinity were able to stay in U.S. territory. They were the ones that open the door to millions of mexican migrants. Nowadays there are some temporary work programs under the Bush administration that will allow once more laborers to apply for a work visa (6 years) in order to cross legally. Under the plan is that an estimated of 11 million of illegal immigrants that are already in the U.S. could apply to become legals (Frears ; Fletcher, 2005).

Many of the inhabitants of Tijuana were participants of the Bracero Program, many others are still waiting for new opportunities to come.

The Illegals migrants are unemployed mexicans from all over the country that risk their life trying to cross to the U.S. (1,500 per day are arrested in the San Diego border area according to the U.S. attorney in San Diego), many of them died or are assassinated in the intent. They have found the Mexico -U.S. journey even harder since the initiation of Operation Gatekeeper in 1994. Since then patrols from the U.S. border police have led to higher fees among the coyotes, those who smuggle immigrants across the border. A third of the money (7,000 million usd in total according to the U.S. Department in year 2000) that undocumented persons pay to be crossed by smuggles ends up in the pockets of Mexican and U.S. immigration Officers (Comision de Poblacion y Fronteras 2000).

Many of the illegals migrants are temporary settled in Tijuana, some rent a small living space and some others stay in temporary shelters as Casa del Migrante (House of the Migrant). The Tijuana’s natives are approximately the 40 percent of the population or even less and they are descendants of families from all over Mexico, these families have arrived to the border territory in time of crisis, (the usd dollars rules over the mexican peso in the region) many of them are the owners or workers of the entertainment and business sector.

There is an hybrid mixture in the society and a big gap of identity. Many inhabitants have diverse identities at the same time, one could be a Mexican but also Chicano, having a U.S. citizenship and living in Tijuana’s eclectic cultural landscape, where English and Spanish naturally coexist.

Tijuana has been called the third nation, it is not Mexico neither the United States, it is an independent space left behind by central government, and a dependent entity of its neighbor state, it is adhered to the US frontier, a triple layered wall that lays against Tijuana itself. This paradox brings uncertainly in
15. Urban Structure
the identity of the society, and it is quite visual in the urban space, the north side has been mexicanized with multiple ghettos and traditional marketplaces (8,455,926 of mexican live in California census 2000) and the south side has been americanized with suburban fenced enclaves and american enterprises.

4.3.2 Urban Management

Accelerated urban growth without a proper master plan has created serious problems for urban services in Tijuana. Municipal authorities recognized that if drastic measures are not taken soon, the city will experience a significant decline in quality of life. There is a shortage in housing, adequate parks and green areas, as well as basic services such as running water, sanitation, vehicular and pedestrian circulation and electricity. In addition, the inhabitants of the peri-urban areas do not have access to essential community services such as day care centers, primary commerce and educational centers. The lack of community infrastructure and migration has resulted in a lack of social cohesion and high levels of violence and crime. In the other hand lack of zoning enforcement has produced combinations of incompatible land use, such as the close proximity of industry that uses dangerous chemicals and residential areas.

Another bottleneck in effective planning for the urban development of Tijuana is the presence of federal and state-controlled lands within, and adjacent to, urbanized areas. These are not always subject to municipal efforts to establish consistent land use plans.

Tijuana’s surface street system is barely adequate to meet present needs. Approximately 50 percent of the paved streets are in poor repair and many newer residential and other areas lack paving, contributing significantly to the regional air pollution through production of dust. Lack of adequate peripheral belt routes around the city, overpasses at busy intersections, and bridges across the channelized Tijuana River contribute to congestion. Extremely heavy truck traffic linked to the maquiladora industry and international trade has contributed to the deterioration of the roads and congestion.

One of the main reasons of the unplanned development has been the lack of financial resources, the corruption of many political figures that have touched this territory and the single three-year term of each administration which have frustrated efforts to develop long-term planning. Nevertheless, there have been efforts addressing the urban infrastructure problem; there are two important examples. The first one is the PAU (Urban Action Plan) program, which aim was to handle large-scale infrastructure needs with broad impact, and the second Manos a la Obra (Hands over Work), which was conceived as a tool to provide desperately needed social infrastructure in the districts of Tijuana. (both launched in 1993)

The PAU consisted of more than 40 distinct public works strategically linked to open major bottlenecks, correct danger spots, and integrate the city’s infrastructure. Nearly 90 kilometers of streets and boulevards accounted for about two thirds of the value of the PAU works. In addition, another 10 percent was devoted to purely flood control, not counting drainage works embedded in roads. Improvements of existing roads plus equipment and facilities made up the balance. The total projected cost of the PAU reached US$170 million. In the end, the PAU was composed of streets, paving, drainage, culverts, bridges, sidewalks, and other works (Campbell; Katz, 1996).

The Manos a la Obra (Hands over Work) program proposed 6,000 projects together with the communities, 2,700 were approved and 2,450 were accomplished. The investment was 11,700 000 usd, approximately the 40 percent was funded via in-kind and from the communities themselves. The remaining 60 percent was divided between contributions from the state, local governments and federal transfers (World Bank,1998). This program was incorporated within COPLADEM (Committee of Planning for the Municipal Development) a planning arm of the local municipality. The operative structure of this organization centers upon neighborhood associations which are formed by representatives from the community and who are chosen through open elections. These associations serve as the vehicle for identifying and developing projects.

According to World Bank (1998) given the extensive line of projects and community involvement generated, the municipal government recognizes the need to conduct a diagnostic of the current and proposed institutional arrangements of the Manos a la Obra program, as well as assess the impact of the program in an effort to refine it so that it becomes a self-sustaining community investment fund, capable of financing community projects and forming strategic alliances with the private sector to leverage additional financial support, with an objective of becoming fully autonomous.

After the Manos a la Obra program, in 1998, the implementation of three intuitions where presented in the border region with the aim of addressing the rapid urbanization, The Infrastructure Investment Fund (FINFRA), the Community Development Investment Fund (CDIF) and the Border Finance Institution (BFI).

The goal of the first one is to promote private sector participation in the development of basic infrastructure by providing financial support. The second one, a semi-autonomous, functions with the help of the first one, its purpose is to provide financing support to low-income communities, it takes the form of a public or private trust, community groups present projects for neighborhood improvement. The third one is a formal financial entity managed and funded by the private sector which would specialize in micro-credit for home improvement, micro enterprise development and community infrastructure projects. (for the formal and informal sector)
16. Tijuana City Divisions
The BFI has been helped by private sector groups, locals and internationals as the World Bank. The programs mention above are some of the ones that have been dealing with urban infrastructure, they have accomplished important changes but unfortunately the excessive growth in the south side of the border has produced unreach-able solutions, the uneven geography has been under pressure, when it heals in one side many others wounds appear in the other.

The deficit of financial support, the deterioration and lack of infrastructure in certain areas of the city and the deficit of regulation and long term urban planning has been some of the main issues regarding urban management. This together with the privatization of the housing industry have given as a result an uncontrollable urban development and fragmentation.

4.3.3 Housing

According with Secretary of Economic Development of Tijuana, the housing stock is divided in four groups; the high, middle and low income housing, as well as social housing (fig. 17). The high income housing or residential housing occupy the 9% of the housing units of the city with dwellers that earn 10 times or more the minimum wage (4.66 usd per day 2007). The middle class housing with other 9% is hold by families with salaries between 6 or 10 times the minimum wage. Then there is the so called interes social or social housing, very different of the european terms, with the 22%, in this case the wage of the owners drops to 3 to 6 times the minimum wage. Finally the rest of the housing, 60%, is own by workers with income of less than 3 times the minimum wage.

According to the INEGI (2005) the 69.3% of the population live below the poverty line. Tijuana’s families require at least six minimum wage salaries to fulfill their daily needs.

There are approximately 423 601 house units in the Municipality of Tijuana. Less than 1% are collective and the rest are partic-ular houses. The 84% of the individual houses are occupied, the 12% are vacant and the rest, 4% have a temporal use. The occupied particular housing is divided in different typologies; individual or free standing housing (62%), appartments (21%), vecindades (7%) azoteas, mobile houses, shelters and occupied spaces without house fuctions (1%) and the rest (9%), have not specification (this data does not include the population without housing). The population distribution in each house unit is in average 3.9. (INEGI, 2005)

This data tell us that the great majority of the dwellings in the city reside in free standing-houses, horizontally, and that the housing dispersion within the territory is totally unsustainable and anti-ecological. The new periphery developments are towards ecological conservation areas. Having this condition, by year 2025 the urbanization will consume most of the eco-logical and agricultural areas. Nowadays the density in Tijuana is 1,114/km2 and in San Diego 259/km2.

The annual demand for housing in the Municipality of Tijuana in 2005 was of 36, 238 units divided in the different groups. Together the economical, social and medium housing occupy approximately the 75% of this demand.

In the meanwhile the housing supplied was of 7,535 units. The 68.87% of the houses built were for the interes social group, the 15.26 % for the low-medium group, 15.87% for the high-medium and resedencial group, and 0% for the economical group. (Hipotecaria Nacional, 2007).

There is a huge deficit of housing in Tijuana and it is expect-ing to increase in the following years. At the same time, there is significant amount of neglected buildings and empty hous-es linked to ownership of mexicans that work long terms in the U.S. Many old dwellings have deteriorated and many others are been built with low standards of quality. Some of these units are target for the big amount of people that work in San Diego and live in Tijuana, this condition, together with the constant migration, has created a big pressure in the housing market. In addition a huge amount of housing are self constructed in illegal land. The occupied properties are in private as well as public land.

In the big scale, the previous analysis showed that the city has been divided in two main areas, Tijuana (central/west region) and the so called, New Tijuana (east/south region). (fig.16) The first area holds the core areas of the city and the old residential neighborhoods with the majority of the middle and high income housing units. In the other hand the New Tijuana holds the low income and interes social units. This area was born in illegal land taken by migrants and holds now between 700,000 and 1,000 000 inhabitants. The majority of them nowadays are related in one way or another to the assembly industry. Approximately 50 percent of the residents of the east side live in compact properties, in crowded urban conditions, and 80 percentage of the households don’t have sewage system and running water. According to INEGI (2005), in New Tijuana one of four persons live in a house with a dirty floor (sand floor, and most of the times with walls and roofs made out of recycled materials), in the meanwhile the 95 percent of the houses in Tijuana side have solid floors.

The number of slums surpass the formal city in the periphery as well as in some central areas crossing from one hill to ano-ther forming a huge landscape of uneven development. The irregular settlements, the low-middle income gated communities, together with the affluent neighborhoods are disperse in a disconnected but continuous geography, an amorphous urban mass forming a city, which is ranked as the fastest grow-ing urban center in the whole country. (fig. 15)

Regarding dwelling, the government has been disassociated with the housing developments of the last decades in Tijuana,
### Housing Typologies

<table>
<thead>
<tr>
<th>ECONOMICAL 60%</th>
<th>MIDDLE CLASS / INTERES SOCIAL 22%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>75%</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

- **ECONOMICAL 60%**
  - earn 3 times or less the minimum wage
  - all sort of sizes
  - self made with recycled materials

- **MIDDLE CLASS / INTERES SOCIAL 22%**
  - earn 3 to 6 times the minimum wage
  - 38 to 70 m²
  - mass produce housing

---

17. Housing Typologies
HIGH MIDDLE CLASS 9%

earn 6 to 10 times the minimum wage

71 to 83 m²
mass produce and individual housing

RESIDENTIAL 9%

earn 10 times or more the minimum wage

84 to 143+ m²
individual housing
18. Poverty Distribution
opening the door to private companies, which have created unsustainable and dehumanized developments.

To fulfill the demand of housing hundreds of constructions companies from central Mexico have arrived to this remote territory to flood the landscape with a sea or suburbanized developments in the periphery of the city. The role of the public sector has been mainly towards the incorporation of public infrastructure in the new developed areas, in many cases just partially, and implementing organisms as INFONAVIT, the main mexican federal leading agency for low-cost housing, that is mainly focused in this region giving credits to low and middle income families. This credits are given to buy one of the units made by the private developers.

The average housing value and size is as follows (Hipotecaria Nacional, 2005):

<table>
<thead>
<tr>
<th>Class</th>
<th>Value</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economical/Social</td>
<td>$19,569</td>
<td>37 m2</td>
</tr>
<tr>
<td>Middle Class</td>
<td>$31,724</td>
<td>70 m2</td>
</tr>
<tr>
<td>Upper Middle Class</td>
<td>$66,638</td>
<td>83 m2</td>
</tr>
<tr>
<td>Residential Class</td>
<td>$119,569</td>
<td>143 m2</td>
</tr>
</tbody>
</table>

Economical, social and middle class families have struggled in the last decades with the issue of housing, to buy a middle class unit, potential buyers which earn less than $360 usd per month are able to qualify for a mortage of up $14,120 usd (INFONAVIT). The right for primary services and accommodation has now an expensive and sometimes unaffordable cost. The government gives credits to the families and subsidize the minimum amount of public infrastructure, the developers reproduce the house units in cheap land outside the city. The government allied with private developers have given terrible results; mass produced housing with 27-37 m2 of living space with poor quality construction and lack of urban infrastrucure. Many developers have asked for greater subsidies to government to fulfill the necessities of the people, but the public sector hasn’t been able to do it for financial reasons.

The influenced of the californian suburbanization has caused critical impacts in the south side of the border. Having these conditions; deficit, compactness and not affordable housing, the private developers keep taken has an example the sprawled american communities with hundreds of alike freestanding units in a cartoon like mexican way, creating thousands of unsustainable hectares all over the territory. (fig. 20)

The economic and social polarization in the city as in many other third world cities is huge. So many of the families belonging to the highest income class, have migrated to San Diego’s neighborhoods a few kilometers away from the international border to mexican communities. Some families have done it for security reasons, some others following the American Dream, many of these families even own a property in both sides of the border, many locals recalled that Chula Vista (south district of San Diego) is the most beautiful neighborhood of Tijuana, even when it is in San Diego territory. In the last decades many affluent neighborhoods in the westnortheen side grown in the hills of Tijuana, close to old luxurious clubs and golf courses, these areas hold a small percentage of the population but sometimes huge amounts of land. The traditional high income areas are 4 to 5 kilometers away from the border port of entry and their dwellers have a close relation with San Diego and its shopping centers, in the other hand they don’t have much physical relation with the rest of the city, perhaps for working reasons but not for social interaction. Many middle-high class families have opted for Playas de Tijuana, a satellite district to the east that emerge en the 70’s, in front of the Pacific Ocean, which offers a relaxed environment, great scenery but quite poor accessibility and lack of services and amenities. (fig. 18)

In general the city, as well as its inhabitants have been quite disassociated with the central area of Mexico, the great projects of social housing which solved many of the dwellings demands in the last century in the country, never arrived to these remote land, in the other hand Tijuana has been associated with the individualize way of life of the Americans. There isn’t any urban development of housing made by the public sector in the whole city with the qualities that a citizen deserved. All the affordable housing are made by private developers which main interest is not the social well-being but maximizing the profit. The consequences can be seen in the periphery of the city, with thousands of poor quality mass produced housing. What guides public and semi-public initiatives is not a conception of urban planning, it is simple the goal of providing as quick as possible at least cost, the greatest possible number of units. The new housing estates are characterized by an abstract and functional character; the concept of habitat brought to its pure form of state bureaucracy (Lefevre, 1996, p.79). The goal of the housing industry in Tijuana is to give roof and shelter to the dwellers, for them that is housing about. In the meanwhile the citizens must adjust to the the worst living conditions; excluded from the city without any closeness to transportation, civic centers or social integration.

According with Lefebvre (1968) with suburbanization a process is set into motion which de-centers the city. Isolated from the city...from places of production, available from a sector of habitation for scattered firms, the proletariat will allow its creative capacity to diminish in its conscience. Urban consciousness will vanish.

Nowadays the families that dwell the new row house developments in peri urban areas feel excluded, isolated and without any values. The social marginalization and lack of participation in the city has produced a communal lack of interest, as well as a search for differentiation.
19. Tijuana's Housing Developments surrounding Maquiladoras.
The families as soon as they have an extra income try to ade-
quate their living space to their on way adding extra spaces,
such as garages, entrance-gates, dormitories and so on. The
necessity for ‘inhabitation’ is obvious in many ways. First within
the dwelling area, secondly in its adjacent context. ‘Inhabitat”
could be seen as “the plasticity of the space, its modeling and
the appropriation by groups of individuals of the conditions of
their existence. ...a complete way of living which is inscribed
and signifies itself in this habitat”.(Lefevre ,1968, p. 77).
This inhabitation can be seen in the series of collages that
appear day after day in the mass produced housing develop-
ments, (fig. 19,20) In the other hand the desire ‘to inhabit' the
city, to take part in a social life, is clearly far from the everyday
life.

Unfourtunatelly the urban consiousness and life in the city
center has changed dramatically due to the lack of urban re-
newal in the last thirty years. Old neighborhoods have been
neglected by the government, recently the focus of attention
has been mainly in the new peripheral developments. The de-
terioration of the city center is in such a high degree that it
seems that it went through a fatal incident.

The inner city holds many freestanding units as well as apart-
ments in an emergency state that have changed their function,
many are abandoned or in very bad condition, these areas
have good accessibility and own all sort of public services,
unfortunately their dwellings areas have decreased over the
years for security reasons. These districts used to be residen-
tial neighborhoods for middle and high income families, with
valuable commerce and public spaces, nowadays are just in
the memory of a few inhabitants.

Deregulation, privatization, suburbanization, the lack of prop-
er housing construction, and spatial planning in Tijuana have
been some of the most critical issues regarding the topic of
housing. Nevertheless, there have not been creative approac-
hes to cease these conditions and to stimulate a sustainable
and compact city for future generations.

Housing renewal has not ever been adressed in any urban
plan agenda in the city. This matter has put in decline the ex-
isting households, setting in alarming state the provision of
living acomodation for future generations. Housing renewal
and the implementation of new strategies for the supply of
housing is one of the main topics of this study.

20. Housing Developments in the Periphery.
21. Housing in the Periphery Hills
4.4 TIJUANA PROBLEM STATEMENT

After the acknowledgment of the production of Tijuana’s urban environment and the current conditions related with urban management, socio-demographic changes and housing, it is possible to visualize the main failures and concerns to propose a strategy for further development. The problematic regarding social and urban structure is quite complex and dramatic, nevertheless the conditions of the current living accommodation, the migration process, the unceasing growth, the unreachable demand of housing and the actions taken by the government and private housing developers are the central issues of this specific study. (fig. 21)

In summary the main problems in the city related with housing are the following.

1. Housing Deregulation. The development of housing has been autonomous and uncontrollable, without regulation, and long-term plans and visions. The government has been detached from housing construction and spatial planning.

2. City Decentralization. New centers of production and commerce have caused deterioration in the city center. The emergence of the assembly industry and the rehabilitation of the Zona Rio have displaced the government attention and its agenda. This condition has promoted the movement of many activities from the inner city to different areas of the city, shifting its function and identity.

3. Privatization of House Industry. The central and local government have been detached of the provision of housing. The housing industry has been mainly in hands of private developers and construction companies, which believe in maximizing profit not in the well being of the inhabitants.

4. Lack of Housing Renewal. There are not plans or visions regarding housing renewal taken by the government. The housing stock is in decline, more than the 50% of the house units are in one or more of these conditions: deteriorated, abandoned, with tenure problems, in process of completion and self made with recycled materials

5. Unaffordable Housing. The central and local government has not been able to invest in social housing programs or in subsidies for affordable housing. Large investments have been focused in the provision of urban infrastructure. The realization of new housing states are controlled by the private housing industry, which are the ones setting the price of the house market. The aid that the citizens receive from the central government is through federal housing credits. Unfortunately many workers have not the possibility to apply for this kind of credits to get an affordable housing.

6. Deficit of Primary Services. The emergence of informal settlements have cause a big gap between the citizens and the basic services, such as electricity, running water, sewage and so on. Many neighborhoods are legalized every year but the majority still lacking one or more services.

7. Marginalization. The new mass produced and informal housing developments are settled in the periphery in the surroundings of the assembly industry and some misery belts, far from any urban interaction creating spatial and social isolation and disintegration.

8. Dispersion. The growth of the city has been horizontal, causing catastrophic environmental results, the majority of the new housing states are developed with freestanding housing typologies consuming in alarming state ecological reserves.

9. Suburbanization. The suburban sprawl of the affordable mass produce housing and gated communities has already showed to be unsustainable. The more the suburban belts grows around the city, so more grows the gap to the city.

10. Alienation. The middle and high income families live in gated communities or fenced properties. Many high income families have migrated to San Diego’s neighborhoods.

4.5 AIMS AND DESCRIPTION OF THE DESIGN PROJECT

4.5.1 Design Project Aims

The aim of the design project is to ameliorate the deficit of housing creating alternative ways of inhabitation in inner city areas, playing along with upgrading the current urban infrastructure and housing stock. The objective is to give to the inhabitants once more the “right to the city” (Lefebvre, 1996, pag. 47) and to proper housing, preventing further exclusion and marginalization in unsustainable areas. The main issues to accomplish the goal are the following.

1. Ameliorate the dispersion in the periphery.
2. Decrease the gap between periphery and inner city.
3. Increase housing stock.
4. Stimulate densification.
5. Increase urban integration
6. Promote urban and housing renewal
7. Promote heterogeneous neighborhoods stimulating cohabitation.
8. Decrease social inequalities
9. Return urban consciousness
10. Enforce long-time spatial-social planning.

4.5.2 Design Project Description

The design project will be the outcome of a series of trans-
22. Zona Centro Features

01. Pedestrian Corridor from Port of Entry
02. Border Wall/ International Highway
03. Low Income Neighborhoods (Castillo)
04. Middle Income Neighborhoods (Altamira)
05. High Income Neighborhoods
06. Tijuana River and Via Rapidas (Fast Track)
07. Zona Rio (Commercial/Living Area)
08. Colonia Libertad
09. International Port of Entry
10. Revolution Avenue (Touristic)
11. Blvd. Agua Caliente (Old Corridor)
12. Highway Junction (San Diego-Los Angeles)
13. San Ysidro, CA
14. U.S. Border Closest Neighborhoods
15. Tram Station (San Diego-Los Angeles)
formations led by an urban regeneration strategy in a specific inner city area of Tijuana. The strategy will be based in affordable housing and it will be a pilot project which could be implemented in other inner city areas. The strategy will be focused in the recognition and upgrading of local urban features, rehabilitation of the current housing stock and vacant spaces, the upgrading of urban infrastructure, the implementation of public and recreational spaces, the incorporation and improvement of public services (such as communication and transportation, sports and recreation, education and culture, health care and urban services) and the regulation of land use.

Having a clear vision of the steps to follow in a district scale, a quadrant of approximately 10 blocks will be taken to propose a schematic design of the neighborhood. Afterwards, to finalize and to offer a better understanding of the design proposal, one of those blocks will be chosen to develop a detail design at a block scale.

### 4.6 DESIGN PROJECT LOCATION

Rehabilitation and construction of new housing can be a driver of urban regeneration, not only in vacant sections of the city as it is the case of Tijuana, but also in neglected commercial districts without life, with high potential of rehabilitation and inhabitation. Areas without housing means spaces susceptible to fear and criminality. The old city center of Tijuana, called Zona Centro, is one of these areas, it was the first quadrant of the city, planned and developed before its formal foundation. It was a former commercial and residential area which was partially abandoned after the sixties with the emergence of other kind of centralities, such as the Zona Rio and the assembly industries in the periphery of the city. Zona Centro has played an important role in the development of the city, but today even with its strategic location it has become a neglected and isolated urban space.

### 4.7 ZONA CENTRO

The Zona Centro is located in the district of El Centro, and its definition is the following (fig. 22):

- **North**, international border and International Avenue.
- **West**, housing hills holding the low income colonia Castillo.
- **East**, Zona Rio and Sanchez Taboaba Boulevard.
- **South**, housing hills holding the low income colonia Altamira, and Agua Caliente Boulevard.

The northeastern area is linked to the pedestrian entrance to the city from the main U.S. port of entry, the San Ysidro checkpoint, all the visitors that pass over Mexican territory walk through this corridor. From this entrance to the west the three layered wall lays towards the Pacific Ocean, creating a big dam (the density is quite higher in the south side of the border).

The entry corridor holds a huge flow of people which are carried to the south through the most touristic and surreal street, Revolution Avenue. It is one of the oldest streets in the history of the city. It gives life to the whole area with all sort of trade and entertainment along it and in its surroundings. Some historic buildings remain active in this zone, some have been totally forgotten, neglected without their original function.

In the east side of Zona Centro there is a space that performs as an interface between the old center and the new one, Zona Rio, there is a big traditional Market Place and some offices.

The west area is the most silent and less dense with a housing land use program. Unfortunately it is one of the most unattended areas of the city with deteriorated buildings. It is possible to find units of housing with modernist accents totally unattended with neon lights and big advertisements covering their front sides. It is hard to know what are the functions of these valuable spaces, sometimes they are used as cheap motels, offices or storage rooms.

The whole district, the eastern (commercial) and the western (housing) side, work together in the day time with reciprocal activities, but at night it is divided in a 24 hrs nocturne center, and an isolated and dark dwelling area.

The eastern side is the most transited and connected urban area of the district, in the meanwhile the western side is quite the opposite. Nevertheless, both sides are part of one big urban island. The entire core, even when it is well located, has many problems of accessibility.

The west area has a huge potential for urban intervention, its old buildings, wide avenues, vacant spaces and location, can open new opportunities for cohabitation. It is quite conceivable here to bring new life, to increase the housing stock, and to revive an area forgotten by the inhabitants and government with plenty of amenities and infrastructure. This whole area can act as a catalyst for regeneration in the region bringing new residents from the periphery, there is an opportunity to encroach upon the city.

### 4.7.1 Zona Centro Divisions

The Instituto Municipal de Planeacion of Tijuana, IMPLAN (Municipal Institute of Planning), has divided the area in seven main sections related to some socioeconomic variables (fig. 23):

- **Zone 01.** Border Crossing Area, it holds the San Ysidro Check Point and Mexico Entrance.
- **Zone 02.** Tolerance Area or Red District, it holds many legal and illegal centers of adult and child prostitution.
- **Zone 03.** Touristic Area, it holds a touristic corridor.
23. Zona Center Zones
Zone 04. Housing Area, it holds mainly housing.
Zone 05. Housing and Service Area, it holds housing and private and public services as schools, day-care centers, health centers, etc.
Zone 06. Medical Services and Commerce Area, it holds public and private services and the majority of medical centers in the area, as well as commerce areas.
Zone 07. Service and Commerce, it holds public and private services and commerce areas.

4.7.2 Zona Centro Demographic Aspects

Depopulation

It has been explained that the growth rate in the city of Tijuana keeps growing, nevertheless the area of study, the Zona Centro according with the IMPLAN has an annual population decrement of -1.27%. In 1990 the area had 33,075 inhabitants, amount that diminished in year 2000 to 29,126, this means that in one decade the area experienced a depopulation of 3,949 inhabitants and 496 households.

The tendency of depopulation, in contrast with the increment of economic activity shows that there is a substitution of housing for commercial and services uses.

The main causes of depopulation are the following:
- The change of residential land use to uses of more profit value.
- The physical deterioration and abandonment of housing.
- The physical decline in quality because of the high rate of rotation of residents.
- The high rates of insecurity, conflict areas, youth delinquency, illegal public commerce, indigents, beggars and poor child in the streets.

According to the IMPLAN (2005) the rates of depopulation and economic growth from 1990 to year 2000 in the different areas of the Zona Centro is the following.

<table>
<thead>
<tr>
<th>Area</th>
<th>Depopulation %</th>
<th>Economic Growth%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 01</td>
<td>19.4</td>
<td>05.6</td>
</tr>
<tr>
<td>Zone 02</td>
<td>10.5</td>
<td>05.9</td>
</tr>
<tr>
<td>Zone 03</td>
<td>26.0</td>
<td>26.6</td>
</tr>
<tr>
<td>Zone 04</td>
<td>10.1</td>
<td>13.4</td>
</tr>
<tr>
<td>Zone 05</td>
<td>05.2</td>
<td>04.3</td>
</tr>
<tr>
<td>Zone 06</td>
<td>00.3</td>
<td>18.2</td>
</tr>
<tr>
<td>Zone 07</td>
<td>28.0</td>
<td>26.0</td>
</tr>
</tbody>
</table>

Transit Population and Migration

Migration is one of the main components of the population of Tijuana. The Zona Centro is the area that receive this kind of population and then it is distributed to different areas of the city. According to IMPLAN (2005) in year 2003, 7,874, 109 pedestrians were registered crossing from Mexico to the United States via San Ysidro Checkpoint, an average of 21,573 daily; 17,368, 166 passengers by car and 109,203 in public transport (bus). The 96% of this crossing are by residents of Tijuana and San Diego, the rest are visitors.

In the other hand approximately 200 persons are deported daily and around 15,563 comes from other parts of the city to work in the area, which are also part of the transit population. The IMPLAN (2005) estimates that approximately 45,000 persons impact the area every day. The Zona Centro has a big impact with this high level of transit, which demands urban infrastructure and equipment.

Demographic Profile

The population, as it was mention before, is based in transit and migrant residents. According to the IMPLAN the profile of the Zona Centro residents is the following:
- The 60.82% haven’t lived outside other areas of the city.
- The 73.54% of the inhabitants are from other parts of Mexico, the 21% are originally from Tijuana, the 1.2% are from other countries and the 3.32% is not specified.
- The 57.03% of the people lives there because they work in the area or close to it; the 20.39% because they own a property in the area, and the 16.11% because of the cost of the rent.

Economic Aspects

The Zona Centro has a strong relation with the south of California, and its transborder exchanges, and it has experienced different changes during the last year due to the movement of certain functions to other centralities. Different analysis of the IMPLAN (2005) show that the economic activities that remain in the area are related with tourism, commerce and activities related with health care.

4.7.3 Zona Centro Urban Structure

Land Use

According to the IMPLAN the land use is defined as follow :
- Commerce and Services
- Housing
- Industrial
- Public Equipment or Services (communication and transportation, sports and recreation, education and culture, health care and urban services)

The land use for housing has diminished, it is concentrated in specific areas, such as zone 4 and 5, in other areas such as 6 and 7 this use has changed dramatically.
24. Zona Centro Patrimonial and Vulnerable Areas
ZONA CENTRO TRAFFIC
AND ROAD NETWORK

- MAIN LOCAL ACCESS
- DISTRICT OCTAGONAL ROADS
- CITY ROADS
- INTERNATIONAL CONNECTION
- TEMPORARY INTERRUPTED ROADS
- OVERCROWDED ZONE
- CENTER ZONE LIMIT
- SAN YSIDRO CHECKPOINT

USA
MEXICO

25. Zona Centro Traffic and Road Network
ZONA CENTRO HOUSING QUALITY

BAD CONDITION
REGULAR CONDITION
GOOD CONDITION
GREEN AREAS
ZONE CENTRO LIMIT
SAN YSIDRO CHECKPOINT

26. Zona Centro Housing Quality
58
Land Value

The value of the Zona Centro varies from one block to the other and it is highly related with the economic functions of the area. According to the IMPLAN (2005) the highest values are located in the zone 3, which is a patrimonial zone, and zone 7, which has commercial and service functions. The lowest values are located in the zones 2, 4 and 5, mainly in the north area, which is the most vulnerable one. (fig.24)

Land Tenure

The Zona Centro is defined almost in its totality as private ownership. The majority of the historic buildings are owned by private parties. This condition has caused the deterioration and even the demolition of valuable buildings, which has helped in the lost of identity of the area.

Transit Flow

The Zona Centro has a high flow of vehicles. According to the IMPLAN (2005), the 30% of the journeys to the area are related with shopping, the 20.5% with work, the 18.2% with education and recreation and the rest to other activities. The public transport is quite poor in the area, this condition increases the amount of private vehicles. In the other hand load transportation is necessary to support the diverse economic activities.

The transit system works over its capacity in commercial areas generating accidents and traffic jams, mainly in zones 1, 3 and 7. In residential areas it works under its capacity. For instance in zones 2, 4, 5 and 6 wide avenues are constantly empty. Towards the north area the streets, alleys and avenues are in very bad condition, some of them are closed, without an access to main roads of the city.

Road Network

The Zona Centro is formed by an orthogonal system which is connected to some of the main roads of the city. It runs from north to south and from west to east (fig. 25). The main connections are towards the east linking the area with the international border, the Zona Rio, the Via Rapida (fast track road) and the Agua Caliente Blvd. The north, west and south side are very bad connected to the city.

4.7.4. Zona Centro Housing

Housing Tendency

The tendency of housing is highly related with the one of population. The rate of housing growth had in the period of 1990 to year 2000 a decrement of -0.54%. The commercial activities have been changed the housing areas to commercial ones, as well as the changes in land value, housing areas offer more profit with commercial use, as it is the case in zone 3 and 7. The concentration of housing areas are mainly located in zones 4, 5 and 6. These three zones hold 7,784 properties, the 35% with the housing land use; 18% are one family houses and the rest, 17%, are apartments (IMPLAN, 2005)

2. Housing Quality

The quality of the housing stock is in decline, the depopulation and the decrement of households have generated the abandonment of big housing areas and the lack of interest in their renewal. (fig. 26)

The physical condition of the housing stock is the following (IMPLAN, 2005):
- The 99% of the floors are made out of concrete, wood and mosaic.
- The 30% of the walls are made out of light and precarious materials. The 68% are made out of brick and concrete block.
- The 56% of the roofs are constructed with light and precarious materials. The 43% with concrete and block.

Regarding primary services:
- The 95% of the households have running water, sewage system and electric energy.
- The 90% of the houses require and have gas to cook.

Housing Density

The Zona Centro holds single-family households, as well as multifamily (apartments) buildings. The last ones are properties with high amount of rent spaces and offer mixed use, commerce in the first level, and housing in the upper ones. The north zone represent the area with more multifamily buildings, and with a high degree of overcrowding, many spaces are subdivided and rented by week or month. This condition has generated a decline in the quality of the physical space and an unhealthy environment.

According to the IMPLAN (2005) the north area (zone 1 and 4) holds 215 properties with multifamily housing use, the 24.1% is in good quality, the 60% is in regular condition and the rest 15.8% is in precarious shape.

Housing Features

Some of the most important characteristics of the households of the Zona Centro are the following (IMPLAN):
- The 55.64% of the housing buildings have not a facade in front of a public street.
- The 33.20% of the families have lived in the area for about
27. Zona Centro Local and International Connections
1 to 5 years. The 18.83% for 6 to 10 years and the 20.45% for more than 20 years.
- The 71.40% of the households are rented, the rest 24.85% are have a private ownership.
- The 62.07% of the houses hold 1 to 3 residents and the rest, 34.36% hold 4 to 6 persons.
- The 70.24% of the households are inhabited by one family, the rest 25.35% share the space with more than one family.
- The 54.53% of the households have one family member that works in the Zona Centro.
- The 59.83% of the households own one parking space.

4.8 ZONA CENTRO PROBLEM STATEMENT

After the acknowledgment of Zona Centro physical, economical, and demographic aspects it is possible to visualize the main problems that have provoked the stagnation of the district, as well as the opportunities that the area has for a further rehabilitation.

1. Decrement of residents and households due to critical changes in functions and activities. This condition have deteriorated physically the whole area generating a huge void in the core of the city with high rates of insecurity and criminality.

2. High rates of transit, 21,500 persons cross daily from U.S, to the Mexican side, 45,000 impacting the Zona Centro.

3. Commercial dependence with the U.S. tourism, commerce and health care services are the main economical inputs.

4. High traffic in areas of consumption, services and leisure. The 68% of the journeys to the area are not from residents.

5. The land tenure is mainly private ownership, but only the 24% of the owners live there, the rest rent the spaces.

6. High rates of migration, the 73% of the residents are not originally from Tijuana.

7. The majority of the multifamiliar housing is rented by week or month generating high rates of rotation, deterioration and unhealthy environments.

8. More than half of the housing have not a facade in front of the public road generating insecure streets and alleys.

9. More than half of the households have one family member that works in Zona Centro.

10. Only 60% of the households own one parking space.

Some of the main opportunities of the Zona Centro for further rehabilitation are the following:

- Connectivity. The city center has an exceptional location, less than 1km from the main port of entry, with good international and local connections, in one of the most dynamic zones of the metropolitan area. (fig. 27)

- Low density. The city center has the capacity to increase its density in the west side (housing area), to accommodate Mexican commuters citizens, American citizens and local workers. There is a big amount of Mexican commuters citizens that live in Tijuana and work in San Diego and have many problems regarding accommodation and transportation, the majority have settled in the periphery due to the lack of affordable housing in the inner city, and spend approximately 3 hours in crossing the city and the checkpoint every-morning. They cause huge congestions in the city and the port of entry area. The relocation of this people in the northern area of the city (Zona Centro) will ameliorate this kind of problems, in this area they can commute walking to the other side of the border to catch the tram than goes to San Diego and Los Angeles core areas.

In the other hand the city center can open new markets of housing to American citizens (mainly Mexican background) that are already moving to the city of Tijuana looking for cheap properties. Many Americans and Mexican-Americans that used to live in San Diego are now living in Tijuana but the only options for accommodation are far away from the border, in the periphery or close to the coast (20,000 already reside there).

Finally the city center can also accommodate the workers of the tourist and service sector that are settled mainly in the central area of the city.

- Weak Identity. The rehabilitation of the old city center can reestablish the identity of the city, and give to the region a new position. The upgrading of the residential area can perform as a catalyst for further development in its adjacent areas. It can attract also different kind of tourism and local enterprises, which could help in the economy of the area.

- Available Space. The city center holds many historic and valuable buildings and spaces that has been neglected in the last decades with high potential of renewal. Many of this structures are vacant or have change their uses losing in many cases its former value. The infrastructure of the area; big blocks, wide avenues, and pedestrian corridors, have also the capacity to increase its density and to enlarge their areas to fulfill new necessities.

- Undefined Social Structure. The whole area has a social mixture which could give the opportunity to accommodate different kinds of dwellers.
INTERVENTION PHASE
Housing and Commerce State in Zona Centro
5. INTERVENTION PHASE

In Tijuana, and many cities of Mexico, it is argued that mechanisms for planning, land use and controlling urban expansion have failed to achieve their aims. Most of this failures are made due to lack of partnership between the different sectors inside the city, unclear visions or strategies, ambiguous targets, misinterpretation within actors, and governmental discontinuity.

In this section of the thesis, seeking through analysis, mapping, design and planning an urban regeneration strategy is given providing urban integration, densification and cohabitation. Promoting at the same time a needed urban regeneration tactic for the highly deteriorated fabric of Tijuana’s city center. (fig.28)

First a definition of urban regeneration will be explained, as well as a description of the main issues to address in an strategic planning.

5.1 URBAN REGENERATION

Roberts and Sykes (2000) define urban regeneration as a comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, physical, social and environmental condition of an area that has been subject to change. According to them urban regeneration should:

- be based upon a detailed analysis of the condition of an urban area;
- be aimed at the simultaneous adaptation of the physical fabric, social structures, economic base and environmental condition of an urban area;
- attempt to achieve this task of simultaneous adaptation through the generation and implementation of a comprehensive and integrated strategy that deals with the resolution of the problems in a balanced, ordered and positive manner;
- ensure that a strategy and the resulting programs of implementation are developed in accord with the aims of sustainable development;
- set clear operational objectives which should, wherever possible, be quantified;
- make the best possible use of natural, economic, human, and other resources, including land and existing features of the built environment;
- seek to ensure consensus though the fullest possible participation and co-operation of all stakeholders with a legitimate interest in the regeneration of an urban area;
- recognise the importance of measuring the progress of strategy towards the achievement of specified objectives and monitoring the changing nature and influence of the internal and eternal forces which act upon urban areas;
- accept the likelihood that initial programmes of implementation will need to be revised in-line with such changes as occur;
- recognise the reality that the various elements of a strategy are likely to make progress at different speeds.

5.2 STRATEGIC PLANNING

According to Peter Roberts and Hugh Sykes (2000) partnership, strategy and sustainability are the main approaches that determine and drive successful urban regeneration. They enable urban regeneration to be more than the sum of its constituent parts and they provide a basis for comprehensive and integrated action.

Partnership

Urban regeneration has provided a laboratory for the development of partnership. (Roberts ; Sykes 2000). Unfortunately in Tijuana partnership has been mainly in hands of the public and private sector in very disproportionate way, without comprehensive and integral plans. The achievement of the rehabilitation of the western area of the city center requires the support and participation of different partners; the property owners and the community as well as the public and private sector, for this reason it is compulsory to find out the right mechanisms towards a reciprocal benefit.

Strategy

Strategic planning produce a range of benefits, including the provision of a framework, the establishment of a basis for further definition of the roles and commitments developed within a partnership, the introduction of an approach that can help in the planning of individual projects and the provision of a method, as well as the provision of the basis for sustainable development. (Peter Roberts and Hugh Sykes, 2000)

To achieve the main goal of the project it is critical to have a clearly articulated strategy.

Sustainability

According to Peter Roberts and Hugh Sykes urban regeneration should promote the balanced development and management of the economy, society and environment. It places particular emphasis on safeguarding the interest of future generations and upon the equitable distribution of costs and benefits.

The city center of Tijuana has been deteriorated because there has not been an even development, the economy of the area has been the main focus of interest, it has been di-
rected towards the tourist and service sector. Certain zones have been important points of interest for the local government and investors, and others have been left behind. In this regard, the strategy proposes the insertion of new services and civic centers that could change the economic means of the area, transforming it from global to global-local, to decrease the dependence with tourism-commerceservice and to increase a sustainable relationship of resident-commerceservice.

The strategy is focused in a balanced development, with partnership and sustainable visions. Ameliorating the unbalanced is one of the aims, the target area is the one that has been most neglected and the proposal deals with recycling spaces. The utilization of unused structures gives dramatic social and environmental changes.

In one hand the owners upgrade their properties, share benefits with the community, the private and the public sector, and give the chance to other citizens to move to the central area of the city. The empty areas will be full of life improving the quality of the living environment and the everyday life of the inhabitants.

In the other hand the occupation of space in the periphery cease with the upgrading and the construction of new housing stock in areas that have the capacity of increasing density. The rehabilitated areas even when they don’t seem to have a direct environmental ambitions, they do and in enormous proportions.

5.3 AFFORDABLE HOUSING AS AN URBAN REGENERATION STRATEGY

After a clear understanding of what an Urban Regeneration is, what it should achieve, and the mechanisms to accomplish it, it is possible to propose an urban regeneration strategy for the Zona Centro.

The strategy is based in the implementation of affordable housing stimulating at the same time urban and housing renewal, and in order to accomplish it a sequence of actions are given;

01. IDENTIFICATION of the vacant, neglected, and stagnated spaces of the west area of the zona centro for the development of affordable housing, the failures in urban infrastructure and the locals features that characterize the area and its physical environment. (fig.29)

02. OCCUPATION of the vacant, neglected and stagnated spaces by the implementation of a district committee that is able to stimulate partnership with public and private sectors, including the community and the property owners. It is critical to work in a win-win team, with common interest and reciprocal benefits.

03. REHABILITATION of current urban infrastructure recognizing local features, transforming the areas with the highest rate of decay into dwelling areas with affordable housing, stimulating further housing renewal in adjacent areas.

Urban infrastructure renewal is crucial in any urban integration process and upgrading of any housing development. It is compulsory to recognize the current local urban features that are part of the everyday life of the Zona Centro inhabitants (alleys, borders, topography, house typologies, etc. For instance it is necessary to upgrade and transform some semi-public spaces into public ones increasing the recreational areas with different programs. In the other hand it is crucial the implementation of formal pedestrian corridors to improve the flow of people within the area, and the incursion of new mechanisms to upgrade the public and private traffic system to connect the neighborhoods within the district, and the district with the city and the crossing border.

04. Stimulation of COHABITATION through participation, spatial communal occupation, and the implementation of new programs connected one with each other by common public spaces. Visualization of clear targets for the development and upgrading of the housing units. It is critical to analyze the possible sort of dwellers in the area, the rehabilitation is meant to fulfill the necessities of a wide spectrum of inhabitants, it is critical to create a mixture with equal grade of benefits. The newcomers must also fit in the current social structure which is not well defined. The integration of the new inhabitants with the former neighbors is critical, so it is conceived to incorporate new cultural, sport and educative centers within the area to promote social integration.

The development of the strategy, and its four main actions, are highly related with the first phase of the thesis, the Comprehension phase, each proposal is a response to historical and current failures in the formal and informal development and manage of the city. The Identification, Occupation, Rehabilitation and Cohabitation process will be explained in detail in the following sections, and in the last part of the thesis, the Evaluation phase a working time schedule will be given showing the time of development and stakeholders of each specific action.
30. Current Urban Infrastructure Zona Centro
1. CURRENT URBAN STRUCTURE

The urban structure of the Zona Centro is quite simple, nevertheless it is circumscribe in a unusual context. (fig.30) Sharp orthogonal quadrants defines it, forming a reticula that do not go beyond its limits due to natural obstructions, hills, and political divisions, the border. It bounds to the north with the international border wall and with the international highway, a city road that connects the city center with the western districts and with the coastal highway. (A regional main road that links the south of the Baja California peninsula with Tijuana and the international Border.)

Many of the streets that flow towards west and south end in a hill. There are just a few streets that go beyond this limit connecting the Zona Centro with the housing areas that lay over the hills.

The eastern side is the one that opens to the city, and the one that is next to the main crossing border, The San Ysidro Port fo Entry.

In the following points the traffic infrastructure will be further explained as well as the location of the public services and other important characteristics.
31. Available Spaces Zona Centro
2. VACANT AND NEGLECTED SPACES

The Zona Centro has a significant amount of vacant and neglected spaces, for instance, parking garages, alleys, abandoned constructions and parcels, etc. (fig. 31)

The alleys are one of the main physical features of the Zona Centro, they constitute an access to many of the properties that do not face to a main street, and are recognized as dark and insecure spaces. There are formal and informal alleys, with asphalt and sandy ones, darks and illuminated.

The other vacant or neglected spaces are part of the landscape of the area, parcels with blind graffiti painted walls, or junk cars exposed together with recycle parts or materials from the U.S. Many of these sort of spaces are located in the core of the blocks, near the inner alleys, or in main streets, and are connected in many cases one with each other forming greater spaces.
32. Public Services Zona Centro
3. PUBLIC SERVICES

Day care centers, elementary schools, high schools and junior high schools are located in the area, giving service to its residents and other inhabitants of the city. (fig.32) Sports and Recreational centers are limited to a few in the area, not satisfying the necessities of the area. Medical centers in the area are quite common, but for very specific customers, mainly Americans. A clinic for the residents of Zona Centro and its surroundings is located in the north area with primary services. Commercial centers are all over the area but only a few are recognized with such function for its size and type of sales.
33. Traffic Infrastructure Zona Centro
4. TRAFFIC INFRASTRUCTURE

The traffic infrastructure follows the octogonal grid of the blocks, with wide avenues and doble circulation. Neverthe-
less the connection of the district with the city is not good
enough. Some of the roads that run west-east provide the
access to the zone keeping the traffic flowing, but many oth-
ers don’t function well, there are also important intersections unfuctional within the area. The roads that run north-south
are mainly secondary or inner district streets, just a few of
them connect the district with the main avenues of the city.
The majority of the roads that bound north are obstructed
ending in the border wall and the international highway that
runs parallel to it. (fig.33)
GOVERNMENTAL INITIATIVES

Private Initiatives

Educational Initiatives

International Initiatives

Community Initiatives

Zona Centro Housing Committee

Assets: Micro-Credits and Infrastructure Investment

Local Government

Rehabilitation of Urban Infrastructure

Federal Government: INFONAVIT (National Workers Housing Fund Institute)

Provision of credit for Housing

Developers, small, medium and large Construction

Rehabilitation of old structures, construction of new infrastructure,
removal of urban public spaces

Entrepreneurship & Large Investments

Universities and Research Institutes

Creation and Implementation of Urban Planning

Assets: Planning, Architectural and Urban Knowledge

Assets: Funding

Property owners, community & district entrepreneurs

Management, selection and implementation of small scale programs

Assets: Social Capital, Property & Small Investments

34. Zona Centro Housing Committee
Once the vacant and neglected spaces of Zona Centro have been identified, it is possible to continue towards the second step, the occupation phase, which deals with the implementation of a housing committee, to take further action in the ready to upgrade, or free spaces.

This committee will be in charge of the management, the selection and the implementation of the different housing and urban renewal programs within Zona Centro. It will be linked with the Municipality to legalize such programs, and with different initiatives to make it real, such as governmental, private, community, educational and international. (fig.34)

Community Initiatives. The most important initiative for the development of the whole process is the one held by the community, for instance the housing block. Almost the totality of the properties are own by private ownership, and the majority of them don’t live in those properties, they are rented to other families or commercial enterprises. This means that in order to start further steps of the strategic planning it is necessary to create a community program able to organize the owners of each of the lots of the blocks and to stimulate them to participate in the strategic plan process.

The idea is to introduce the strategic plan and the potential of the land (among other things, greater densification with housing, commercial and recreational use), as well as the different parties involve. At the same time to open a dialog between the owners and the current residents for the coming improvement of the living space.

Community Initiatives. The community initiatives will work in a bottom-up process. The owners and residents of the current living, working or vacant spaces first of all decide to participate with their property, then communicate their necessities and desires, and finally work with the different parties involve.

The main assets of the community initiative are social capital, property and small investment.

Once the community initiative has agreed to participate with a piece of land or property to upgrade, the other initiatives can take further action, always dealing with the housing committee as an interface.

Private Initiatives. The private initiatives are represented by developers; small, medium and large construction companies and local enterprises. Their main assets are entrepreneurship, and medium and large investments. This initiatives are an essential part of the strategic planning due that they are able to invest in the renewal of housing and urban infrastructures, the construction of new housing and public spaces.

Governmental Initiatives. Federal initiatives are essential for the implementation of the strategic planning mainly by economic means. Micro credits for housing are one of their main assets, such INFONAVIT (National workers Housing Fund Institute). In the other hand it is necessary the participation of the federal and local government in order to renew urban infrastructure, for instance in the investment of new public and private traffic systems.

Educational Initiatives. Research Institutes and local and international universities are also an essential part of the housing committee. They are in charge of making real the necessities and desires of the community initiatives. The role of these sort of organizations is mainly the development of long term plans for housing and urban infrastructure, so they work jointly with the community and private initiatives, and in special cases with the international ones as well.

International Initiatives. This type of organizations could help in specific cases with funding, for instance in projects (parks, sports and cultural centers) where there are not help from private initiatives or government and there are strategic plans that could be implemented with alternative financial aid from NGO’s or sponsors.
35. City Scale Train System
After the identification and occupation phase, it is possible to start the rehabilitation process. In the first instance, the city and the whole district is taken into account to propose the needed urban transformations for the further development of housing, afterwards a quadrant of approximately 10 blocks is taken to exemplify in detail the proposal of the configuration of the blocks and its relation with the district, finally a block is taken presenting one of the possible housing interventions and its relation with the block. This phase circumscribes the following actions.

1. Implementation of new public traffic system to connect the district with the city and the border, and to link as well different neighborhoods of the district.
2. Creation of new city-district-border connections and circuits within the district to improve the flow of traffic.
3. Selection of vacant or stagnated spaces for future housing and public recreational areas.
4. Creation and upgrading of public recreation areas.
5. Creation of pedestrian corridors from north to south and to east to west linking the current and new public recreational areas, public services and different neighborhoods.
6. Creation of commercial corridors related with new pedestrian corridors, public transportation, recreational areas and new and former public services.
7. Alternative Development of Affordable Housing.
   a. Selection of area of intervention.
   b. Classification of blocks.
   c. Selection of pilot blocks.
   d. Recognition of vacant and stagnated spaces.
   e. Recognition of formal and informal alleys.
   f. Definition of public plateaus.
   g. Densification of stagnated spaces, creation of new pedestrian corridors and extension of public plateaus.
   h. Stimulation of further densification and rehabilitation of the blocks. Emergence of new public areas and corridors.

It is important to mention that the Alternative Development of Affordable Housing is also part of the Cohabitation section. And that the schedule of the development of each specific point and the stakeholders involved are given in the last section of the thesis, the Evaluation Phase.
36. Light Train System in Zona Centro
The northwestern line is vital for the Zona Centro, it crosses the district diagonally with six stops in strategic points moving the 45,000 persons that daily impact the area, plus the current residents and the newcomers of the new housing developments. (fig.36)

The light train stops are approximately 600 meters apart one from each other. And the line could be reached from the current international pedestrian border easily, it is less than 800 meters from the nearest station. In the other side of the border is a tram station that connects the border with many areas of San Diego, including the city center, as well as the Los Angeles and its metropolitan area. So the implementation of this public transport systems is not only ameliorating the traffic problems of the city of Tijuana, it is connecting many areas of the city itself and at the same time is stimulating the flow from north to south and form south to north crossing the international boundaries.
TRAFFIC INFRASTRUCTURE PROPOSAL

BORDER WALL
CITY-DISTRICT BORDER CONNECTION
PRIMARY ROADS / CITY-DISTRICT CONNECTION
CIRCULATION IMPROVEMENT
CROSSINGS IMPROVEMENT

37. Traffic Infrastructure Proposal
2. CREATION OF CITY-DISTRICT-BORDER CONNECTIONS AND NEW INNER DISTRICT CIRCUITS

The circulation towards north is the most fragmented, the proposal is to keep some of the roads obstructed and let some others open up to the international highway with new crossings and the possibility to run towards the west and the east. This will create new north-south circulations and new connections and access. In the other hand some dysfunctional intersections are fixed in the north to give way to new west-east circuits. New flows emerge in the least transited area ameliorating the excessive traffic in other areas of the district, for instance the streets adjacent to the Revolution Avenue, the most transited street in the area. (fig.37)
38. Total and Partial Block’s Renewal
3. SELECTION OF VACANT AND STAGNATED SPACES FOR TOTAL AND PARTIAL BLOCKS RENEWAL

The blocks with the worst quality in housing, the most devaluated in price and the most vulnerable have been set for a total regeneration for housing. Some other blocks with already recreational use or with features for future public spaces have been set for those programs. And finally the vacant or neglected spaces within blocks have been visualized for partial housing renewal of the block in strong relation with the current housing stock and the new one. (fig.38)
A. Green area with playground, community center, migrant housing and market.
B. Green area with community center, playground, sport fields and school.
C. Current green area with playground and kiosk.
D. Green area with playground, community center and tourist attractions.
E. Green area with community center, playground and exhibition center.

39. Recreational Public Areas
4. TRANSFORMATION OF ABANDONED AND STAGNATED SPACES INTO RECREATIONAL AREAS AND HOUSING BLOCKS.

Four new recreational areas emerge from stagnated spaces; a truck’s parking garage (A), an dysfunctional sport and public area (B), an abandoned governmental property (D) and an abandoned museum(E). One current functional recreational area is kept, a park that has been part of the district since the beginning of the city. (fig. 39) These five new public areas cover almost in their totality the housing neighborhoods of the district providing areas with diverse programs stimulating social interaction. The new spaces are meant to be used by the old and young generations of residents of Zona Centro as well as for the immigrants, temporal residents and visitors.
40. Pedestrian Corridors.
5. CREATION OF PEDESTRIAN CORRIDORS

Some of the wide avenues are transformed into pedestrian/vehicular corridors. These circuits connect the recreational public spaces, the touristic area, the old and future pedestrian crossing border and the different housing areas within the district. (fig.40)

The pedestrian corridor number 01 is the one that runs along the train railways connecting the west central area of the district with the eastern area, the more commercial one. This commercial passage has been conceived to carry a high amount of local people and to distribute them into the district.

The pedestrian corridor number 02 is the one that runs parallel to the previous one but in the north area, it links the park A, B and D and the people living around this public areas with the international pedestrian crossing. Its flow of people is mostly local.

The corridor number 03 is the one that runs north-south in the middle of the district, it is the more local, it connects the north and the south, from the border line and the sport park to the Teniente Guerrero Park in the south and its adjacent neighborhoods.

The corridor number 04 is the one that runs diagonally in the northeastern side of the district connects several parks and tourist attractions, as the pedestrian entrance from the U.S., the Revolution Avenue, the Handicraft Market and the Red District. It is a passage used in a greater extend by tourist and visitors, nevertheless all the residents must use it to cross to the other side of the border.

The last pedestrian corridor is the number 05, it runs along the border wall and the international highway and it is one floor elevated, it functions like a noise barrier for the new housing neighborhoods and gives and open view to the north side of the frontier. A view that is always searched by migrants and broken families of migrants. It connects the neighborhoods of the northern area of the district with former and new recreational areas with the pedestrian crossing to the U.S. It has a medium traffic, with visitors and local people.
41. Commercial Corridors
6. CREATION OF COMMERCIAL CORRIDORS

Commercial corridors are proposed following the new pedestrian passageways. The commercial areas make a shift, instead of being concentrated in one single zone they run in strategic zones of the district connecting at the same time the old points of consumption, and the new and old nodes of recreation. In the housing zones the new commercial areas bring life to the urban structure with some public streets and some other more private. (fig.41)

The most public areas of the district get connected with these new corridors stimulating even more social interaction, mixing the current residents, the newcomers and the temporal visitors.
42. Vacant Spaces in Zona Centro
7. ALTERNATIVE DEVELOPMENT OF AFFORDABLE HOUSING.

The development of Affordable Housing is part of the Rehabilitation and Cohabitation process, it deals with the increment of the housing stock in Zona Centro and the stimulation for further housing renewal. The proposal is made for a specific area of Zona Centro, which is explained in this section, but it is important to mention that it could be applied in other inner city areas of the Tijuana.

First a selection of a quadrant within the intervention area is chosen in order to make a scheme proposal of the configuration of the blocks, its relation with each other and the context. Then a block is taken to propose in detail the configuration of the block, a building scheme and the relation between public and private space.

In order to address the densification and upgrading of affordable housing in Zona Centro, a series of actions are followed.

a. Definition of codes.
b. Selection of intervention area.
c. Classification of blocks.
d. Selection of pilot blocks.
e. Recognition of vacant and stagnated spaces.
f. Recognition of formal and informal alleys.
g. Definition of public plateaus.
h. Densification of stagnates spaces with affordable housing, creation of new pedestrian corridors and extension of public plateaus.
i. Stimulation of further densification and rehabilitation of the blocks. Emergence of new public areas and corridors.
SYMBOLS

Multifamiliar Housing Floor Plan

- a. main facade = surface with main entrance, main natural ventilation and illumination.
- b. blind facade = surface without windows, ventilation and illumination.
- c. secondary facade = surface with natural ventilation, or natural illumination, or corridor, or all the above mentioned.

Unfamiliar Housing Floor Plan

- a. main facade = surface with main entrance, main natural ventilation and illumination.
- b. blind facade = surface without windows, ventilation and illumination.
- c. secondary facade = surface with natural ventilation, or natural illumination, garage, or all the above mentioned.

Multifamiliar Elevation

Unfamiliar Elevation

BLOCK AND PUBLIC AREAS PARAMETERS

1. A surface greater or equal to the 30% of the building’s land must be used as a public space for the block’s community, the building’s ground floor can be taken into account.
2. All the multifamily areas must be connected to the block public space, main and secondary streets by public and semi-public passageways.
3. The inner passageways connected to streets must be greater or equal to 4 m.
4. The block must contain at least one playground, exclusive designated for recreational use by children, and one multimodal community center.
5. Parking garages are compulsory and can be shared between buildings and houses. They must be located underground or behind main facades.
6. The parking garage entrances must have maximum a clearance of 6 m wide and 4 m height.
7. The configuration of the block must provide pleasure, and comfort, at minimum this will include open space, sunlight, fresh air, and good accessibility.
8. The public and semi-public space of the block must be shared between the block’s residents without limitations. Visitors could do use of it with some community restrictions.

43. Symbology and Block and Public Parameters.
Michael Sorkin (1993) express that the design of any city demands a theory of the desirable. Such theories lodge in a space between nature, culture, technology, politics and economics on the one hand, and a set of physical visions, on the other. In these section the aim is to create a set of parameters that could define those physical visions for the construction and rehabilitation of these specific district. The idea is to create buildings that might lead to an attractive and progressive clarity of social relations. According to Sorkin in a culture of fragmentation, architecture must resist both such oversimplified approaches as well as an approach which merely aestheticizes the confusions of the contemporary, an urbanism in which mere irregularity substitutes for actual variety. Having these ideas it is compulsory to support and nurture the diversity of the urban environment of the district but at the same time proposing certain parameters to avoid the current problems that the area is facing; physical and visual disconnection between neighborhoods, poor accessibility to dwelling buildings, visual confusion and insecurity in alleys and depopulated streets, and unhealthy buildings with lack of ventilation and illumination.

It is compulsory for these section a deep analysis of the current visual, physical and social conditions of the area, a field trip specialized in this matter must be done to accomplish the desirable results, nevertheless some general parameters are proposed which could lead to determine some more much detailed. (fig. 43, 44)
BUILDING PARAMETERS

1. The separation of two main facades facing each other must be greater or equal to 15 m no matter the height.
2. The separation of a main facade facing a blind facade must be greater or equal to 10 m no matter the height.
3. The separation of a blind facade facing a blind facade can be greater to 4 m or equal to 0 m no matter the height.
4. The separation of a secondary facade facing any type of facade must be greater or equal to 5 m no matter the height.
5. The separation of a main facade and a sidewalk must be less or equal to 3 m.
6. The angle of two perpendicular facades, with one main facade, must be greater or equal to 90 degrees.
7. The angle of two perpendicular secondary or blind facades, must be greater or equal to 25 degrees.
8. The 50% of the surface of the building's roof must have a public program for the block community.
9. The apartments facing to a street must have a direct contact with the exterior. There should be at least one or two windows in half of its facade, this means that a terrace can be proposed only if it occupies the other half. It is not allowed to propose a terrace in the full facade.
10. The parking garage must be underground or at the back of the building.
1. The separation of two main facades facing each other must be greater or equal to 10 m no matter the height.
2. The separation of a main facade facing a blind facade must be greater or equal to 10 m no matter the height.
3. The separation of a blind facade facing a blind facade can be greater or equal to 0 m no matter the height.
4. The separation of a secondary facade facing any type of facade must be greater or equal to 5 m no matter the height.
5. The separation of a main facade and a sidewalk must be less or equal to 3 m.
6. The angle of two main or secondary facades must be more or equal to 90 degrees.
7. The parking garage can not occupy more than half of the facade of the house.
45. Area of Intervention.
b. Selection of Intervention Area.

The area of intervention is selected due to its characteristics; the majority of its surface has a housing land use, there is a change from residential to other uses with more profit value, the residents are constantly changing, there is a population decrement, the quality of housing is in decline and there are considerable rates of insecurity and conflicted areas. (fig. 45)

In the other hand it has an exceptional location, available space for further development, primary services and lack of position within the city and the adjacent border region.
46. Classification of Blocks.
c. Classification of Blocks.

The blocks are classified in six typologies related with some physical features, for instance; location, type or housing (unifamiliar or multifamiliar), availability of space and the different combinations of these ones. (fig. 46)

A. House with free space
These blocks are formed by private properties with unifamiliar housing. Most of the time these sort of blocks have narrow alleys in the center reaching some of the properties that have not facade to the main streets. In other cases they have big parking areas or vacant lots in inner block areas and in the edges.

B. House with apartments and free space
These blocks are assembled with private properties constituted by a combination of buildings, the majority with very low density, for instance unifamiliar housing, and some with high density, for instance multifamiliar buildings. In addition alleys, parking and vacant lots share the space of these blocks in different sizes, shapes and locations.

C. Housing
These blocks are assembled by unifamiliar housing with private ownership with very low density. The majority of the houses in these sort of blocks have a private garden in the back and are totally fenced. The materials vary from house to house, the majority are made out of hard materials, such as concrete block, brick or wood.

D. Free space with housing
These blocks are mainly made-up by free spaces with private ownership, for instance parking and vacant lots. These spaces share the space in some cases with alleys and unifamiliar housing with very low density.

E. Apartments with housing and free space
These blocks are mainly formed by multifamiliar housing with three or four floor apartments in private property. They share the space with unifamiliar housing and some free spaces, such as alleys, parking and vacant lots.

F. Housing with free space next to the border
These blocks have the most neglected private properties in the area. They are formed by unifamiliar housing made out of light materials, for instance small shacks and temporal constructions. In addition they share the space with free spaces, mainly vacant lots. These blocks are next to a high traffic highway and the international border wall.

G. Recreational area
These blocks are own by the government and are open to the public. They have different programs, such as playgrounds, sports fields, and resting areas.
47. Pilot Blocks
d. Selection of Pilot Blocks.

Ten blocks are selected to propose a design scheme in the area of intervention. They are located in an extremely low dense area close to the border, with low land value and great potential for further rehabilitation. (fig. 47)

Some of their physical features are the following; (fig. 48)

- Wide streets in bad state with low flow of traffic;
- Streets bounding north are obstructed, its adjacent areas are used as a parking space and most of the time are dirty and painted with graffiti.
- Vacant spaces full of junk, providing a negative visualization of the area in one hand, and creating insecure sidewalks in the other hand.
- Housing with poor quality, very deteriorated. Many with the front facade facing to formal or informal alleys.
- Familiar commerce with substandard facilities.
- Lacking of public areas, the sidewalks are the only spaces where public life could be manifested, nevertheless they are in very bad condition.
- Fenced properties creating insecure sidewalks.
- Visual and physical confrontation with border wall.
48. Current Condition
Vacant spaces with junk yards

Street end confronting border wall

Fences in vacant and dwelling spaces

Houses with familiar commerce
49. Conferred Blocks
Here is a visualization of the conferred blocks, some are marked for recreational area, some for recreational and housing and some other exclusively for housing. The blocks will be rehabilitated in different phases, it means that the transformation will be in a process of several years. (fig. 49)
e. Recognition of vacant and stagnated spaces.

The spaces available for further intervention are identified, they vary in location, form and size. (fig. 50) Each space offers diverse options to the block, and the sum of all in one specific block gives even more and more complex alternatives.

Here is possible to visualize the transformations of the urban renewal; the implementation of pedestrian corridors, the rehabilitation of the sidewalks and the incursion of the new public transport system. The light train crosses this area providing to the residents better accessibility and mobility to other areas of the city and the international crossing border.
51. Recognition of Current Formal and Informal Corridors
f. Recognition of formal and informal alleys.

The alleys of the district are quite characteristic, in this specific case the area has seven formal alleys. Nevertheless many more that wave the urban structure of the blocks remain unknown. (fig.51)
Public Plateaus
Each block has its own characteristics, they may differ in the number of lots, dwellings, and vacant spaces, as well as in their immediate context and physical and social relationships.

The proposal is to define in inner block's areas a common space for the block's community. This will be called a public plateau. (fig. 52)

The public plateau varies with diverse shapes and sizes which are highly related with the vacant spaces available in its specific block. Some blocks for instance won't have the capacity of creating a public plateau.
PHASE 01 OSMOSIS SCHEME

- BORDER WALL
- PEDESTRIAN CORRIDOR
- PUBLIC PLATEAUS EXTENDED
- CURRENT CORRIDORS
- AVAILABLE SPACE
- PROPOSED MULTIFAMILIAR HOUSING
- PROPOSED UNIFAMILIAR HOUSING

53. Phase 01
h. Densification of stagnates spaces with affordable housing.

A design proposal of each of the blocks to be rehabilitated will be given, with different options related with the financial support of private enterprises and the involvement of the property owners and the community. The final design proposal should be made taking into account many aspects, for instance public, private, and community investment, timing, codes, new dwellers, current dwellers, new business and public and civic areas.

The first phase is expressed with the emergence of scattered housing buildings within the area with a few or without a physical relationship in many of the cases. These new buildings will circumscribe the public plateaus that have been already defined. (fig. 53)
The second phase deals with further densification of the available spaces. The blocks obtain little by little a certain shape following the already set building codes, providing a community environment and clear distinction between public, private and commercial areas. This will be explain further in the following section, the Cohabitation phase.

In addition to the construction of new housing, the public plateaus are extended and new corridors emerge linking inner block areas and other blocks as well as near public and recreational spaces. (fig. 54)
The third phase will provide further densification, new buildings emerge, some more corridors are created and the inner public areas consolidate their form and function. At the same time former houses are renewed creating partial or full relationship with the new public areas. (fig. 55)
56. Courtyards and Recreational Areas
The recreational areas and the block’s courtyards start to create a bound one with each other during the process of the construction of affordable housing. The main idea is to create a close visual and physical relationship between dwellers and nature in open public spaces in one hand, and to stimulate social interaction in the other hand. (fig. 56)
57. Alleys and Courtyards

- BORDER WALL
- TRAIN LINE/STATION
- PEDESTRIAN STREET
- COMMERCIAL CORRIDOR
- PUBLIC COURTYARD
- SEMIPUBLIC COURTYARD
- TOURISTIC/COMMERCIAL AREA
- CURRENT HANDICRAFT MARKET
- CURRENT GREEN AREA
- PROPOSED GREEN AREA
The cohabitation phase develops along the rehabilitation of the district, neighborhood and block. It deals with physical and social changes in the everyday life of the current and new residents.

In response to the current housing developments in the peripheries, where the families are limited to acquire a small plot of land with living substandard isolated of any urban interaction, the affordable housing densification scheme in Zona Centro answers the question of how to cohabitate instead of habitate. How to appropriate the space and make yourself part of it, how to care about your space and your neighbor’s backyard which is also yours. Collectivity has been forgotten in our life where individualism and voluntary and involuntary segregation have been some of the most common practices.

The whole proposal recognizes the lack of public areas and collectivity, as well as the few areas with local productivity which could increase making the area economically sustainable without dependence of foreign visitors. The development of these deficiencies besides bringing quality of life of the residents, socially, physically and economically could offer a different identity to the district.

The connection of alleys, new corridors and courtyards with the new pedestrian and commercial corridors is one of the actions of the strategy that can raise the interactions between residents, small business entrepreneurs, foreign and local visitors. The idea is to provide a greater amount of services and civic centers in these specific spaces to reduce the amount of journeys to other parts of the city constructing at the same time a sense of community where everyone could get a reciprocal benefit.

The cohabitation phase is explained with three different approaches, one is the alternative development of affordable housing following certain codes and lineaments, this approach was already explained due to it is also part of the rehabilitation phase. The other two approaches are the following:

1. **Connection of Corridors and Courtyards with Pedestrian Corridors, Commercial and Public Areas.**

The inner block corridors and courtyards play an important role in the everyday life of the newcomers and the current dwellers of the district. These areas have a strong relationship with the immediate context; commercial corridors, high traffic streets, quiet streets, recreational spaces, the border corridor, the train line, etc. (fig. 57)

The blocks adjacent to the new and old commercial corridors become more public than the blocks far from any commercial enterprise.

The public blocks get more profit of visitors, so certain kind of activities can arise if the block committee accepts such practices. The semi-public blocks get more privacy and less social interaction.
58. Alleys and Courtyards Connection Neighborhood
The former fenced blocks are open stimulating physical and social interaction from inner block areas to main streets, recreational areas, pedestrian and commercial corridors. A sort of a micro urbanism emerges within the current urban structure where the corridors wave one with each other stimulating different sorts activities. The way of cohabitate is through simultaneity, frictions and interchanges. (fig.58)
59. New Program
2. INSERTION OF NEW PROGRAM.

Recreational public areas, as well as pedestrian and commercial corridors have been created within the district offering a great amount of possibilities. In the neighborhood scale, in the area of intervention, it is possible to visualize what kind of activities could emerge and how they can play a role in the everyday life of the residents. As it was seen before each recreational public area has a different program and is connected one with each other, in these specific case, the park proposed in these neighborhood offers a space for relaxation and commercial activity. In the south side its a quiet park with some playgrounds and open spaces, and in the north side it becomes an important venue for commercial purposes. A temporal market place is proposed along the commercial corridor in front of a the elevated corridor that connects the park with the elevated border corridor. A passage that has been propose to allocate migrants in transit and a work space for them, where they can get some profit during their staying. In these in-between space a school is also proposed and a open air auditorium for the community. The park besides these sort of interactions is directly connected in all directions with the inner corridors and alleys of the adjacent blocks. (fig. 59)
BLOCK DESIGN PROPOSAL
GROUND FLOOR SCHEME

- BORDER WALL
- REHABILITATED SIDEWALK
- PROPOSED SIDEWALK
- PUBLIC PLATEAU
- PUBLIC PLATEAU EXTENTION
- CURRENT CORRIDOR
- PROPOSED CORRIDOR

HOUSING AREA
VERTICAL ACCESS
COMMERCIAL AREA
PARKING ENTRANCE
PLAYGROUND
MULTIMODAL COMMUNITY CENTER
GARBAGE CONTAINERS AND MAIL BOXES

HOUSING ECONOMIC TYPOLOGY

- ECONOMICAL 28-37M2 00
- MIDDLE CLASS 38-70M2 15
- HIGH MIDDLE CLASS 71-83M2 07
- RESIDENTIAL 84-143M2 00

60. Ground Floor Scheme
The design of the blocks varies from one block to another, it is closely related to a series of variants; number of lots, owners, available space, type of housing, land use, existence of alleys, inner program and boundaries.

In this specific case the block is connected in the north to a pedestrian corridor and to the west with a public recreational area. Both sides have a commercial land use. The other two sides bound with other housing blocks with housing land use exclusively.

It is important to mention that there are many possibilities for a design proposal in each block, and that they are highly related with the decision of the land owners, the community and the investors. All of these parties must agree in a final proposal in which all are able to get benefits some in short, some in long term.

The proposal of this specific block consist in five housing buildings related one with each other with a central public space and an additional one in an area where is not possible to construct due to the codes previously implemented. (fig. 64).

The ground floor consist in a configuration where the public commercial areas are well delimited. (fig. 60) In the west facade a series of commercial spaces are proposed, where the access are facing to the park and the public sidewalk. Together with these entrances are the ones to some of the housing buildings and the block courtyard. Two housing buildings give form to this facade.

The north facade has less lineal meters of commerce due to the configuration of the available spaces but they are in front of one of the main pedestrian and commercial corridors. The access to the parking garage and to one of the old corridors is also located in this block facade, which is formed by two small housing buildings.

The south facade has only one property left for rehabilitation, a deep small lot with a few possibilities for development. Nevertheless it is very useful for the connection of the inner block public area and its surroundings and for the implementation of new program. This facade has a couple of housing buildings, one facing the street, the other facing one of the courtyards.

The center area of the block has different schemes of apartments some small, some with a little bit more space. The spaces are very flexible by means that you can buy one or two spaces and then you can create a small portico in one side or the other. Options can arise depending the privacy that wanted to be reach. Nevertheless the ground floor is the most public due to the program that it handles; community center, playgrounds and corridors as connectors. The scheme of the upper floors is also flexible and it certain
areas it stimulates social interaction, for instance the second and the fourth floor offer a semi-public terrace for the block residents and they can be accessed in different ways. (fig. 62)

It is critical to acknowledge that the flexibility of the building depends on local and regional political, economical and social changes. This means that if there is a strong change in both sides of the border, for instance an economic crisis, then the users of the buildings must also change because socio-demographic changes in the area. In this transited area big changes can occur in short periods of time; if a specific project was conceived for local working families and the economy gives a drastic change which may affect the market, then the project could also be changed. If the working families leave the city looking for other opportunities, or they are just not able to move to a new house, because there are not more credits for housing. Then there must be other sort of users, for instance, the mexican-americans that must move from USA to Mexico looking for a way of survival in a more economic environment. There will be transnational workers willing to live in Mexico and work in the USA. In another drastic economic or social adjustment, for instance where the economy is rising, new working families come to the city, credits are given and the type of dwellers change once again.

PARKING GARAGE

The parking space is proposed underground, but it could be flexible depending on the economical condition of the block committee. The other option could be partially underground, this means that the whole structure of the buildings could be rise approximately 1.5 meters. In this specific case the parking could be solve this way. In many other blocks, where the properties are small or very elongated, the parking space must be developed over the ground floor following the idea that it must be hidden from the streets. This means that some alleys could kept their former function, as a car passage for accessibility or there could be implemented another sort of corridor specially for vehicles. (fig. 61)

COURTYARD

The courtyard is formed by the public plateaus that where explained previously and the old and new corridors that connect inner block areas with the district’s streets, adjacent blocks, commercial and public spaces. (fig. 65) The courtyard can change in size and shape during the evolution of the block. It could expand or reduce. The idea is to have recreational open space in lots that are empty and that already have a development plan. In the meanwhile of the completion of the block these spaces can be used, some are going to be transformed little by little and others may appear in the middle of the full block development. (fig. 62)
63. Floor Schemes
64. Isometric Block Scheme
BLOCK SCHEME

---------------------------- COLLECTIVE PUBLIC SPACE
---------------------------- HOUSING BUILDING

---------------------------- MULTI MODAL COMMUNITY CENTER
---------------------------- PARKING ENTRANCE
---------------------------- PLAYGROUND

---------------------------- COMMERCIAL AREA

---------------------------- NEW CORRIDORS

---------------------------- CURRENT CORRIDORS

---------------------------- GREEN SPACE

---------------------------- PUBLIC PLATEAU

---------------------------- EXTENTION OF THE PUBLIC PLATEU

---------------------------- CURRENT MULTI-FAMILIAR HOUSING

---------------------------- CURRENT UNI-FAMILIAR HOUSING

---------------------------- BLOCK

---------------------------- UNDERGROUND PARKING
BLOCK SECTION IN RELATION WITH ADJACENT BLOCKS AND INTERNATIONAL BORDER & PRIVACY LEVEL IN PUBLIC SPACES

65. Block Section
STRATEGY ISOMETRICS
SCHEME PHASE 01

- Construction of an Elevated Border Corridor with Parking Garage Underground
- Construction of New Pedestrian Corridors
- Rehabilitation of Current Sidewalks
- Definition of Public Plateus in Available Spaces
- Construction of the First Housing Buildings
- Construction of the New Northern Train Line and Strategic Train Stations
SCHEME PHASE 02

FURTHER CONSTRUCTION OF HOUSING

EXPANTION OF PUBLIC PLATEUS
INSERTION OF NEW PROGRAM BETWEEN PHASES

- Creation of a migrant house and a handcraft workshop and open auditorium
- Construction of a high school
- Construction of community centers
- Construction of playgrounds
- Definition of a market area
SCHEME PHASE 03

FURTHER HOUSING DENSIFICATION
SCHEME PHASE 04

REHABILITATION OF CURRENT HOUSING
PARKS, RECREATIONAL CORRIDORS AND COURTYARDS SCHEME
COMMERCIAL CORRIDORS SCHEME
CORRIDORS DESIGN PROPOSAL
EVALUATION PHASE
66. New Housing in the Old: Structure of Zona Centro
6. EVALUATION

6.1 EVALUATING AND MONITORING

The last phase deals with evaluating and monitoring the urban regeneration strategy. According to Moore and Spires (2000) the availability of financial and other forms of support for projects and programmes is normally tied to the provision of an acceptable framework for monitoring and evaluation. The task of these two processes is closely linked with policy development both at a strategic level and when specific projects are being designed and implemented.

Monitoring and evaluating is closely related to the establishment of aims and objectives, it is important to be clear what is measured, and the judgment of the achieved is closely linked to the political and cultural context. Moore and Spires (2005) explain that monitoring and evaluation are considered as an integral part of the cycle of urban regeneration, and that cycle starts with:

1. the identification of the challenges to be address;
2. it continues through the various process of planning and strategy.
3. it then progresses to the point of implementation.
4. and eventually to completion.

In the comprehension and intervention phase the first three points have been addressed, and the fourth one would be, as it was mention before, the completion of the whole urban regeneration strategy. In this cyclical process it is critical to set a clear phasing or schedule of the development of the strategy in order to monitoring and evaluating the progress. A performing work table has been developed based in the three main phases of the whole Urban Regeneration Strategy; Comprehension, Intervention and Evaluation. (fig. 67)

Each of the specific phases has its own divisions, measures and steps to follow. In addition, in order to have a clear knowledge of the participants involve in each action, the different stakeholders are indicated.

It is important to point out that the whole development of the urban regeneration strategy of the Zona Centro is conceived in a period of 20 years, and that the first six years are critical. After that period the first results are given and the first evaluation is implemented, after it a series of similar assessments will be made in intervals of no more than four years.

From the implementation of the Strategy Objectives until the completion of the whole urban regeneration of the area, and parallel to each evaluation process, special management is taken through monitoring.

The purposes of monitoring and evaluation according to Moore and Spires (2005) are;

1. Checking the progress of a project or programme against specified targets in a systematic and transparent manner.
2. Reviewing the original targets or actions.
3. Judging the outputs of the scheme and the added value it brings.

In the first point it is important to create different tables of progress, pointing out the target level and the achievement, for instance measuring concepts related with economical, physical and social matters.

1. Economical Progress; Commercial development, jobs created, companies attracted, private sector investment, etc.
2. Physical Progress; Conferred land, property offered for housing development, number of new houses, number of renewed houses, streets upgraded, square meters transformed into a recreational area, linear meters of pedestrian corridors, typology of new program, vehicular traffic patterns, pedestrian traffic patterns, etc.
3. Social Progress; Number of new residents, background and current status of new residents, formal and current community involvement, number of participants offering social capital, number of visitors to the area, quality of living conditions, formal and current collective activities, social relationships, and social appropriation of space.

In the second point a revision must be made taking into account the main plan or strategy identifying any new challenges which may emerge. For instance what must be changed if any of the stakeholders that was willing to participate sets backwards in the middle of the strategy development, or certain actions can not be done or can not be completed in its totality because of lacking of investment. Then an alternative must be developed in order to continue and accomplish the main goals.

At the end of each period of evaluation it is necessary to evaluate the level of performance and the causes and consequences of any significant shortfalls or overshoots compared with the targets and goals specific (Moore and Spires, 2005). So it is important to recognized and judge the variations and the results on the unexpected to prevent in future phases of development any given problem or undesirable event.
**Statement**

Tijuana’s Problem analysis

**Socio-demographic**

**CITY SCALE**

- Center for Cohabitation and Urban Conflict
- Federal Government
- Municipality
- Municipal Planning Institute
- Community
- Private Developers
- National and International Universities and Research Centers
- International NGO’s

Implementation of a district committee with diverse initiatives for urban regeneration of the intervention area

**DISTRICT SCALE**

- Center for Cohabitation and Urban Conflict
- Federal Government
- Municipality
- Municipal Planning Institute
- Community
- Private Developers
- National and International Universities and Research Centers
- International NGO’s

**INTERVENTION PHASE**

- Emphasis on community centers and playgrounds
- Insertion of new programs
- Creation of affordable housing in offered available spaces
- Alternative development of affordable housing
- Transformation of abandoned and stagnated spaces into public recreational areas
- Selection and acquisition of vacant and stagnated spaces for total and partial renewal
- Creation of city-district-border connection and inner district circuits
- Rehabilitation of current railways
- Implementation of new public transport system

**MONITORING**

- Emergence of inner public spaces in blocks and expansion towards pedestrian and commercial and public areas
- Connection of corridors and courtyards with pedestrian corridors and commercial and public areas
- Change of land use along pedestrian corridors
- Creation of pedestrian corridors
- New services (schools, markets, cultural centers, migrant houses, etc)
- Creation of affordable housing in conferred blocks
- Change of land use along pedestrian corridors
- Creation of pedestrian corridors
- New services (schools, markets, cultural centers, migrant houses, etc)
- Creation of affordable housing in conferred blocks
- Change of land use along pedestrian corridors
- Creation of pedestrian corridors
- New services (schools, markets, cultural centers, migrant houses, etc)
- Creation of affordable housing in conferred blocks

**EVALUATION PHASE**

- EVALUATION 02
- EVALUATION 03
- EVALUATION 04

**AFFECTIVE HOUSING AS AN URBAN REGENERATION STRATEGY**

- Southeastern line
- Southeastern line
- Southeastern line
- Southeastern line

- National initiatives and Educational Initiatives
- National initiatives and Educational Initiatives
- National initiatives and Educational Initiatives
- National initiatives and Educational Initiatives

- National initiatives and Private Initiatives
- National initiatives and Private Initiatives
- National initiatives and Private Initiatives
- National initiatives and Private Initiatives

- National initiatives, Educational Initiatives and Community
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- National initiatives and Educational Initiatives
- National initiatives and Educational Initiatives
- National initiatives and Educational Initiatives
EVALUATION FRAMEWORK FOR URBAN REGENERATION IN ZONA CENTRO

OBJECTIVE'S REVIEW

PHYSICAL
- Economic Sustainability of the Area
- Social Integration
- Cohabitation

ECONOMIC
- Construction of Affordable Housing
- Urban and Housing Renewal
- Improvement of Living Conditions
- Improvement of Connectivity

ACTIVITY MEASURES

PHYSICAL
- Implementation of New Public Transport System
- Improvement of District-City Connection and Access
- Improvement and Increment of Pedestrian Areas
- Improvement of Housing Access
- Improvement of Healthy Conditions
- Improvement and Increment of Housing Stock with Definition of Coaks
- Renewal of Streets

ECONOMIC
- Inward and Outward Investment
- Implementation of Platform for Commercial Development
- Provision of Construction Credits

SOCIAL
- Attraction of Heterogeneous Residents
- Stimulation of Cohabitation
- New Education, Cultural and Recreational Centers
- Multisector Participation
- Stimulation of Collectivity

OUTPUTS AND OUTCOMES MEASURES

PHYSICAL
- City and District Traffic Reduction
- District-City-Border Pedestrian and Vehicular Connectivity
- Stimulation of Inner District Pedestrian Journeys
- Decrement of Periphery Sprawl
- Housing Accommodation in Inner City Area
- Housing Regulation

ECONOMIC
- Land value added
- New enterprises formation
- Distribution of Commercial Areas
- Increment of employment
- New local and international position of Zona Centro
- Economical Independece

SOCIAL
- Violence and Crime reduction
- Social Integration
- Self Organization and Participation
- Constructing the City
- Cohabitation
- Emergence New Social Relationships
- Redefinition of the Everydaylife

GROSS IMPACTS

PHYSICAL
- Building Capacity in Inner City Areas
- City-District-Border Connectivity
- Decrement of Periphery Sprawl
- Sustainable Densification

ECONOMIC
- Valued Added
- Investment in the Area
- Jobs

SOCIAL
- Coletivity
- Safety
- Participation
- Cohabitation

MEASURING THE DROPOS OUTPUTS OVER THE PERIOD OF THE STRATEGY DEVELOPMENT IN RELATION WITH THE CITY

CONTERFACTUAL

MEASURING THE ADDITIONALTY, UNEXPECTED ENDOGENOUS CHANGES, DIRECT AND INDIRECT IMPACTS

CITY AND DISTRICT NET IMPACTS

Housing Deregulation
- Devaluation of Land Value
- Concentration of Commercial Areas
- One-sided Commerce and Services
- Change of Activities Continuity
- Privatization of House Industry

Housing and Urban Infrastructure Decay
- Lack of Connectivity
- Increment of Periphery Sprawl
- Substandard Housing Construction
- Increment of City and District Traffic
- Decrement of Housing in Inner City Areas

MEASURING THE OUTPUTS WITHOUT THE IMPLEMENTATION OF THE STRATEGY

Increment of Violence and Crime
- Social Integration
- Marginalization
- Decrement of Residents
In order to accomplish the monitoring and evaluation purposes a framework of Evaluation is offer identifying; strategy objectives, initiative inputs, activity measures, economical, political and social changes, outputs and outcomes measures to give as a result the gross impacts. (fig. 68)

Having these last resultant it is critical measuring it over the period of the strategy in relation with other areas of the city or the district itself where the strategic planning has not been implemented, this in one hand. In the other hand a measure of the contra factual must be done, for instance, what would be the outputs without the execution of the strategy.

At the end a City and District Net Impact are given taking into account the additionally, the unexpected endogenous changes in the strategy and the direct and indirect impacts.

Evaluation and monitoring are critical tools in any urban regeneration project but even more in this sort of territories where the economical, and social complexities could give drastic changes in short periods of times.

The strategy is conceived as a flexible process where many variants may change. Checking, reviewing and judging those changes may lead to the full completion of the goals in the desired period of time. As it was mention before, in the section of Alternative Development for Affordable Housing, there are not only local changes that may affect the interest of the strategy but there are regional and even global changes that may influence in the development. The issue is how to tackle these transformations in this dialectical environment. The example of the variation of dwellers in the 20 period of time of the strategy gives us an insight of the possibilities and changes. Besides of being a flexible process it is a relational one where every variant may affect the final effect. If there is an economic crises lead by United States for instance, as it was mention before, the production means of the area may be reduced (assembly industry), so the working families may leave to other cities less vulnerable looking for new opportunities, housing credits will be frozen, so there won’t be these sort of market. The housing sales will cease for those working families that were the most important target at the beginning. So those families will be changed, for instance, to mexican-americans US residents that need to move south of the border in order to have housing possibilities. So the dynamics of the area also may change, and may give a drastic shift once more when the economy switches in a positive way.

This is a good example to conclude the Evaluation phase and to point out that these sort of flexibility could only work out with an strong partnership, organization and clear aims and targets.
68. Tijuana Periphery.
7. CONCLUSION

7.1 RIGHT TO THE CITY

The main questions have been fully expressed. The economic and socio-demographic trends, assembly industry and migration-growth rate, have changed the living environment of Tijuana’s metropolitan and peri urban areas, causing a dissipated and uncontrollable development. The public and private sector have failed to fulfill the requirements for living accommodation, giving as a result an autonomous uneven expansion. (fig. 68) The government has been focused in the north-east side of the city, optimizing the conditions for capital accumulation and economical interests, focusing in the assembly industry and leaving behind the city center and other parts of the city.

Many city centers have been rescue from decay in the last decades, in most of the cases the interventions have stimulated the total expulsion of its inhabitants, rehabilitation from tabula rasa. The rewards of gentrification have resulted in social stress, and have satisfied the middle and high income circles, leaving the rest excluded of any urban life. The thesis is conceived as an alternative ameliorating these sort of conditions, more than preventing, provoking the opposite; the incorporation of different social structures in the same living environment, to be more specific in central areas of the city.

In Mexico as in many places in Latin America, it has been difficult to opt for this kind of proposals, due to the enormous social and economic polarity. Nevertheless Tijuana even when it is part of Mexico and Latin America has its own way of living, its hybrid composition and idiosyncrasy makes it a candidate for such sort of proposals to exemplify the current structure of cities and its on going process of cohabitation.

The content of the thesis not only responds to give the right to the city to all its inhabitants, and to rescue the city center from decay. It also deals with the creation of a flexible strategy for the construction of the city, a mechanism lead by its constituents in an organized way, for the good of its constituents.

The Affordable Housing as an Urban Regeneration Strategy proposed in the city Center of Tijuana, is a pilot project that can be implemented in other inner city areas of the city, as well as in other cities along the Mexican border region. At the same time it could be flexible enough to be enforced under different conditions following its main parameters with a shift of its variants.
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