

Title	Gated communities and large scale residential developments in Santiago, Chile, 1995/2005 ¿consequences of urban regulation?
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GATED COMMUNITIES AND LARGE SCALE RESIDENTIAL DEVELOPMENTS IN SANTIAGO, CHILE, 1995/2005 ¿CONSEQUENCES OF URBAN REGULATION?

Abstract:

Santiago has been growing rapidly during the last decade and most of the new housing development within the consolidate area, around the periurban areas and even more in the periphery, just in the edge of the city, is taking place under a type of housing called “gated communities”. There are all kind of them, smaller, medium and bigger, insert in the traditional urban grill or outside it, for low, medium and high income people.

In the last five years we can realize that the scale of gated communities is increasing, both in number and in sizes, generating a fragmented city that is changing the urban image, the urban structure and the way of living the city.

This paper is the starting point a new research that wanted to look at the impact or the influence that changes in the urban legislation that has took place in the last decade has contributed to an increase in this way of building the city. We are taking specifically about the urban regulation that has define three types of intervention in urban areas or for creating urban areas, they are the zone called ZODUC (Zona de Desarrollo Urbano Condicionado), the zone AUDP (Area de Desarrollo Urbano Prioritario), and the Project called PDUC (Proyectos con Desarrollo Urbano Condicionados). They define the scale of the project or the minimum hectares of the zone, the regulation within the zone and the percentage of social housing they should include, the development in stages, and other specific regulation. Finally the law, Ley de Copropiedad Inmobiliaria (1997), that has allow the development of the condominium or gated communities.

We will like to answer questions as follows:

- Is this new legislation benefiting the entrepreneurs, the new residents or the city as a hole?
- Why is that people is choosing this way of living, more and more enclosed, with services and amenities only for the residents, is that people doesn't want to share with different people?
- Why building entrepreneurs prefers to developed this kind of housing development, is just because it is easier, it increase their profit, why they have convinced the new families so rapidly?
- It is only a problem of security or also a matter of status, social and economic?
- How the new communities integrated the “traditional city”?, do they integrated?

Introduction:

Recent research around the urban expansion of Santiago shows that a new housing development is appearing, they are large scale projects mainly residential but also commercial. Some authors have defined the residential ones as “new enclosed cities”, but are they really cities? What do we understand by city or urban life?

As many other Latin American cities, Santiago is facing significant changes in its urban structure due to gated communities (in Chile condominium), at the beginning small or medium condominium and now huge projects that included several condominium in a project that has the intention of becoming a city but ends in condominium that not integrated themselves and that they share common facilities just in principle, but in reality they don't really had the intention to share.

This paper is based in an initial review in order to start a new research with the purpose of evaluating the impact in the urban structure and in the increase of condominium of some urban legislation that has been approved, specifically in the Metropolitan Region of Santiago. This is based in the recognition that the peripheries of most Latin American metropolis, Santiago included, have modified their images during the last decade and also their main characteristics due to the residential expansion. At the same time, just beside or for this residential projects have appeared new private motorway and big commercial projects (malls). All this has generated a fragmentation not just urban (in the consolidated area) but also periurban, both in the borders of the consolidate city or in the middle of rural areas with the apparition, in the case of Santiago, of a new type of urban area, the ZODUC (Zonas de Desarrollo Urbano Condicionado), Urban developed areas under certain conditions.

Urban expansion of Santiago

In the last years many studies have stated that Santiago is experiencing a significant grow, mainly horizontally. Ducci, 2002, MINVU 1978, Miranda 1977, say that Santiago has grows in almost 1.350 hectares per year during the period from 1992 to 2002. This tendency has been permanent and it is considered that the Metropolitan Master Plan has not been able to cope with the lack of equity in the urban development of the different boroughs of Santiago and control the negative impacts of the urban expansion.

As we can see in the following illustration, the expansion of the city in the period between 1998 and 2003 is mainly to the periphery, in all directions. To some directions is expansion oriented to low income people and in other direction is oriented to high income families.

There are many reasons that can explain this expansion, among them, we can mention the following:

- The sustained growth of the national economy during the decade of the 90' has generated an increase in family's income and then more possibilities of buying a house
- The diversification and expansion of the housing finance system has allowed better credit conditions, long term mortgages, and lower interest rates.
- Chilean family prefers houses instead of flats and ownership instead of renting.
- The tenure of cars has become easier and accessible for almost all socioeconomic level.

Beside this we must recognised that this expansion has produced several negative impacts:

- Deficit in urban services and infrastructure
- Not relationship between the new urban areas (developed by private developers) and the places where the government was doing it's investment
- Increased in social segregation in the territory
- Expulsion of the poorest to the periphery of the city.
- Lack of urban land and increase in the price of the urban land.

All theses reasons conduces the Chilean Ministry of Housing and Urbanism to propose some changes in urban legislation for the Metropolitan Region in order to try to control and planned the future urban expansion.

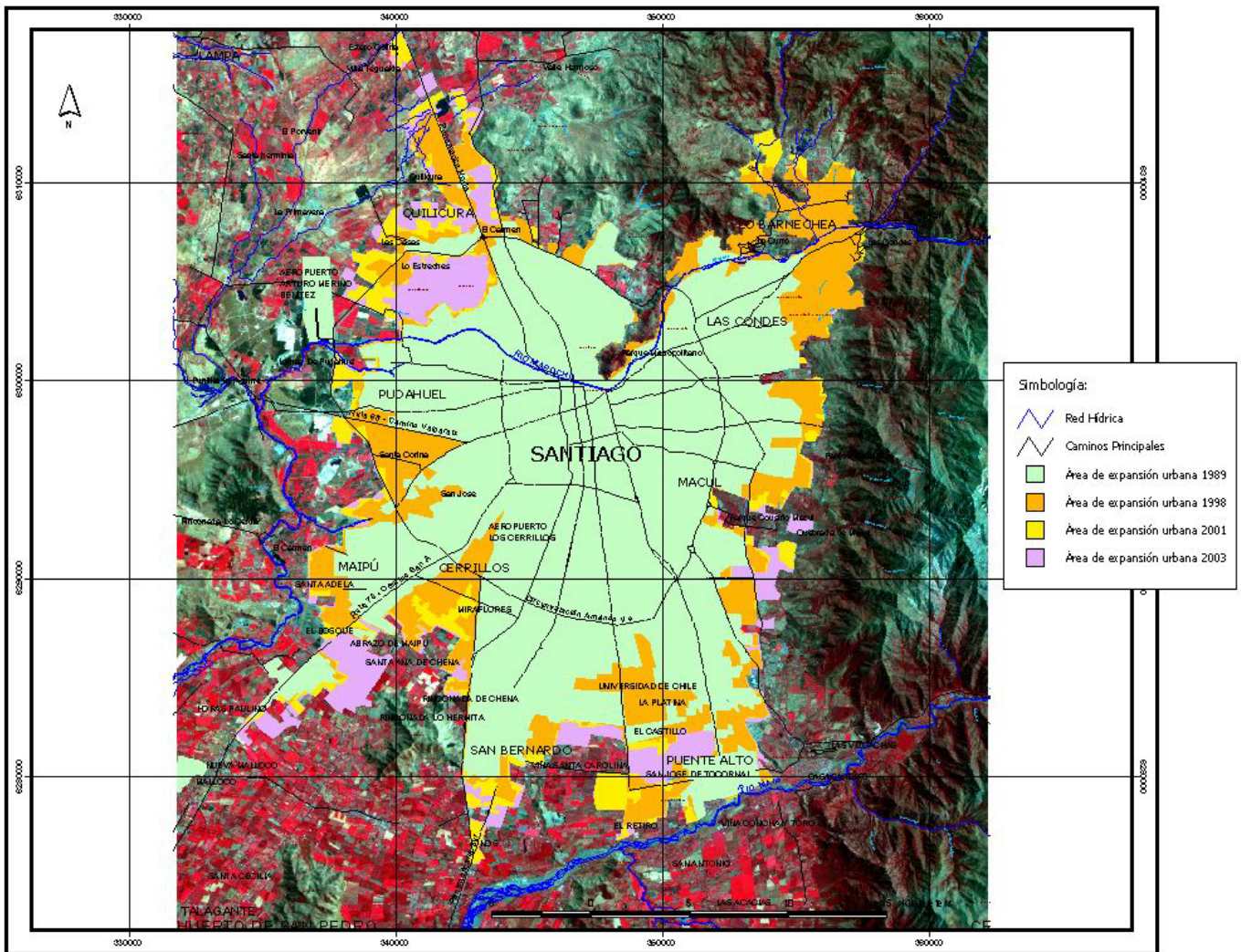


Figure 1: Evolution of the urban expansion of Santiago, 1989, 1998, 2001 y 2003.
 Source: Paper Hugo Romero and Fernando Ordenes

Changes in urban legislation

In 1998, the Chilean government initiated a process of changes in regulating of the Metropolitan Plan of Santiago (PRMS), in order to developed new urban areas. This change was done in order to modify some problems in the urban expansion of Santiago as we have mention before.

The main problems at that time were:

- The need to rationalize the cost of urban expansion and define tendencies for the location of the different activities.
- It was necessary to include a system of regional compensation for metropolitan expansion.
- It was important to give the chance to private sector to planned new urban areas with a strong urban design component.
- Developed way in which social housing can be integrated.
- Local government was not involved in the process of urban and regional management.

In general terms, ZODUC are zones where the urban development on the part of private is allowed, beyond the limits fixed by the PRMS, under certain conditions, that mainly aim to protect the quality of this zone, the reduction of impacts and to stimulate the private developers to invest. For this a series of requirements is given that each project must fulfil and that will be analyzed case to case by the Metropolitan Regional Council.

The specific requirements of these areas must be stated at the beginning of the project, while they asked for approval:

1. They have to develop a total area of not less than 300 hectares as a hole piece generating minimum densities, with an average density of 85 inhabitants / hectares that assure a self-sufficient critical mass and uses that contemplates services, equipment

and productive or commercial activities. The area can also include areas with an exclusive use for parks, green areas or ecological reservation.

2. Reduction of impacts in the system of transport, the atmosphere, sewage system, waters rains, etc.

3. Compensation of the use of agricultural land (of some specific categories) and the rehabilitation of other land with less agricultural value.

4. Integration, through the incorporation of houses with social subsidy.

5. Participation, through the previous approval of the projects, of the municipalities before being presented or displayed to the Regional Council.

These zones proposed the development of greater residential projects that can be done exclusively in one of the three metropolitan areas of the country Santiago, Valparaíso and Concepción and they are defined as a way of planning and development with the intention of creating integrated urban areas with diversity and good services. They are oriented to the planning and management of new urban land through the developed of proposal and the provision of infrastructure and urban services. That means that they should provide not only houses but facilities, green areas and include a percentage of land for social housing.

One of the main advantage there are seen in this kind of projects is that they can become like “satellite cities” that are developed under define urban regulation.

This ZODUC are basically oriented to high/middle and high income families so they are planned as residential areas exclusively for them and they consider only 5% of their area to social housing projects.

In this context we will present the first two projects developed under this new regulation.

Residential Projects under the new regulation under special conditions (ZODUC)

Two of the first projects developed among the regulation of the ZODUC, in the north of Santiago, in the borough of Colina (Chacabuco Province) are Piedra Roja (Red Stone) and Valle Norte (North Valley).¹

Piedra Roja is located in Chicureo, in lands that for years have belonged to the Rabat family, in areas close to the wine yards belonging to the same family. At certain point the family realizes that the price of land in that area was increasing so they decided to move their wine yards to another area and developed this residential Project join with other entrepreneurs.

Piedra Roja it is seen as the largest residential Project that has been developed in Chile, with an area of 1.060 urban hectares. It is expected that nearly 12.500 families (nearly 60.000 inhabitants) will live once it will be finished. It is oriented mainly to families belonging to the socioeconomic segment ABC1, (high income).²

The project is composed of many areas that are called “small neighbourhood” or condominium. By now there four of them: Las Bandadas, Las Flores, Los Bosques and Los Portones. The actual neighbourhood altogether must have nearly 1.250 sites or houses. The area of the sites goes from 350 to 850 sqmts. The area of the houses goes from 140 to 270 sqmts., and finally the prices goes from US \$ 175 to 315 million. Some of these condominiums sell different types of houses or sell sites and the family hired the building construction of the house. Each of these condominiums is independent one from the other, and have there own access with private security. The roads are interior for each condominium.

There is a lagoon (4 hectares) close to the commercial area and the nautical club, and several schools.

¹ There is also under construction in this same area the Project called La Reserva, that we are not presenting in this ocaasion because it presents a planning and management model a little bit different to the other two. At the same time we can mention that it is Developer with a planning and management model with some differences with the other two projects. It also has an area of ecological preservation and parcels as Valle Norte. One of the main differences was that design of the houses was asked to well known architects, so the project offer different design to match the expectation and needs of the new families.

² ADIMARK, is a market and opinion research enterprise that using the data base of the 2002 National Census developed a model to classify the socioeconomic level of Chilean families based in two aspects, the first the level of education of the head of household and the tenure of a selection of items (shower, hot water, color TV, Frigidaire, washing machine, microwave, car, TV cable, PC / Internet). In base on this two aspects families are classified in 5 socioeconomic levels ABC1, C2, C3, D and E, were the ABC1 group is the best one because they have all the items requested and the head of household has at least university education.

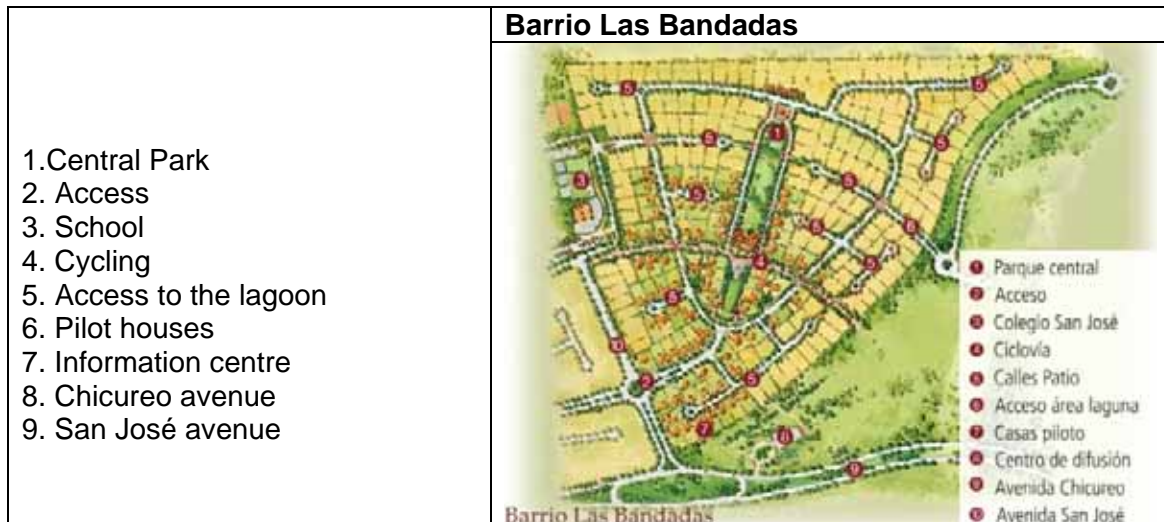


Figure Nº 2: Neighbourhood Las Bandadas, Piedra Roja

Source: web page www.piedraraja.cl

There is also a more exclusive area, called La Hacienda de Chicureo, associated to a golf club, the sites and the houses are bigger (average of 1.000 sqmts. for the sites and 300 sqmts. the houses). In this case the houses have different architectural design according to their owners demand.

Piedra Roja beside La Hacienda is also a place where you can have access to an integral urban development with it's own big commercial area, different types and sizes of schools, parks, cycling, a club nautical beside the lagoon, a horse club, etc. (nearly 200 hectares) all these in a natural environment, quiet and save, close to La Dehesa in Lo Barnechea a borough of the east (wealthy area of Santiago). It is important to mention that although all these services are mainly oriented to the people who live in Piedra Roja, most of the clubs are open to other families of Chicureo, if they fulfil the clubs conditions.

Valle Norte³ is also located in Chicureo, in the borough of Colina, they define themselves as an auto sufficient city with an area over 1.600 hectares, from which 514 hectares correspond to urban land, 535 hectares are for parcels and the rest of the 559 hectares are an ecologic reservation. The same as Piedra Roja they consider within the project areas to school, parks and clubs and they offer an expedite connection with another of the wealthy areas of the east, the borough of Vitacura.

As we will see later, the developers of both projects spend over US \$ 17.500 thousand in two main roads that were needed for the Project, Pie Andino and Radial Nor Oriente, mainly to make the project more attractive to families with connection with the east area of the city.

³ Similar to these projects are Nordelta in Buenos Aires (urbanize in 1999 in an area of 1.600 hectares, building residential area for nearly 80.000 inhabitants belonging to high income families, developed separated from the rest of society with strict measure of security) and Alphaville in Sao Paulo that is developing a city for 30.000 inhabitants with a lot of other urban services within it.

Big scale Residential Projects, not developed under ZODUC

Although the changes in urban legislation have allowed, among others, the development of the two previous projects, there are other projects that I will want to present in this paper in order to show that both projects are not necessary a new way of building the city, but definitively a new scale of inclusion or exclusion, if we look at them from the inside or the outside.

I am taking of three other projects that have similarities and differences with Piedra Roja and Valle Norte, but without any doubt they are also changing the image of the city and in one way or another contributing to more exclusion and less services next to the residential areas.

I am taking of **Ciudad Satélite de Maipú, Parque Cousiño Macul and El Remanso de Las Condes**, all of them are located in the border of the consolidated area of the city.

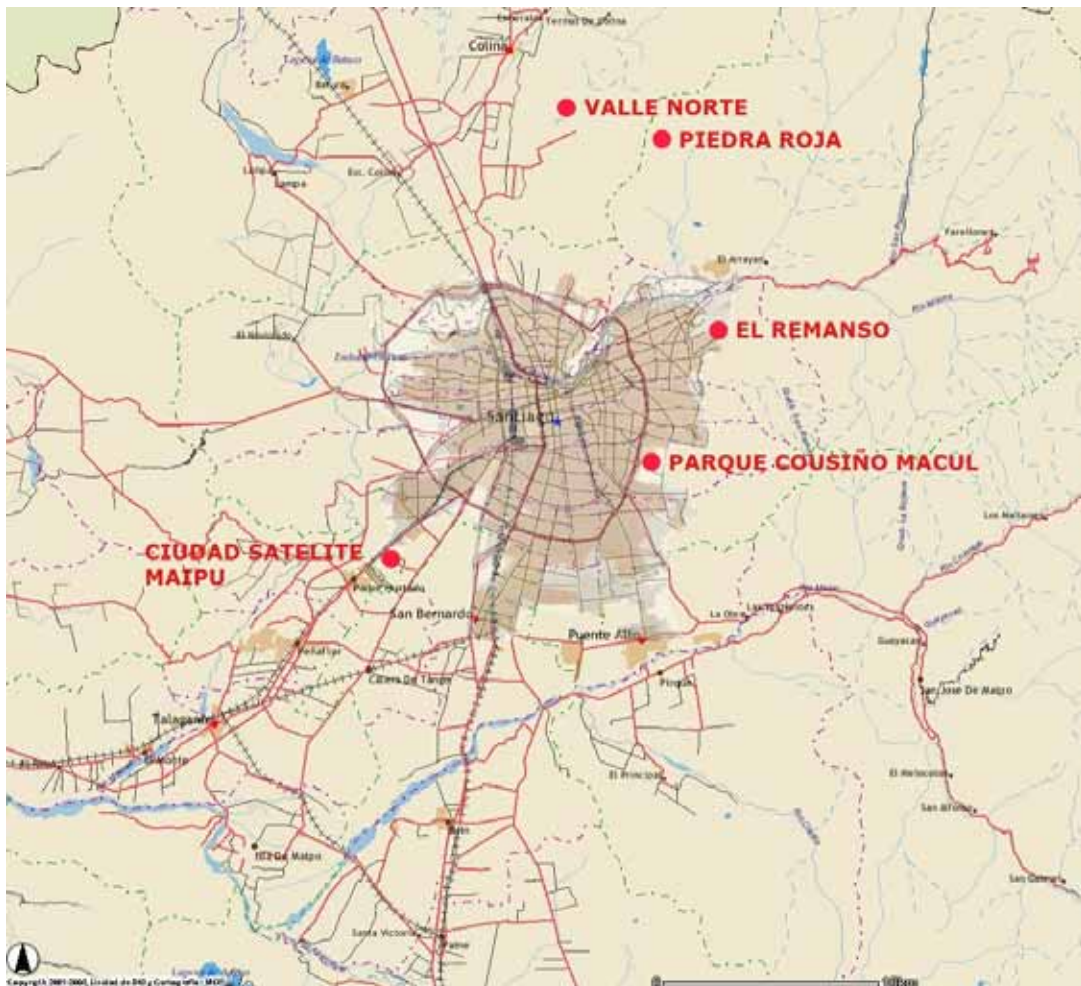


Figure Nº 3 Residential projects in the Metropolitan Region of Santiago




Source: author elaboration

Ciudad Satélite de Maipú

It was nearly 20 years ago that started one of the first biggest and new urban developments in the way to Melipilla⁴. In 1990 a new developers took over the project and from then on it became the first big residential project characterized by having also different neighbourhood, clear access (not closed at the beginning) the street infrastructure according to the number of houses and a central park. In the first stage, the project built houses that faced the street, and in the main area were located the commerce, the school, the church, supermarket, and other facilities for the new families. Later on the new neighbourhood started to become condominium so they limited their access, but they combine houses facing the street and the park and others within the condominium.

This was the first project that was developed just in the border of the city at the time it started, something that it has become very common nowadays. In these two decades the Project has consolidated itself, but we can realize that there is a great difference between the first stage, open and much more integrated, and mainly allowing diversity of uses. The second stage is characterized by being a sum of similar type of condominium with controlled access and only residential use. It was design and planned oriented to middle class mainly from the same borough.

Today they live in Ciudad Satélite de Maipú around 8.000 inhabitants in its many neighbourhoods.

Master Plan indicial	Actual Master Plan
	
<p>The first stage of the project, basically beside the Central Park Avenue show an image more traditional of the residential development of different areas of Santiago, in some cases adapting the same houses for installing a shop.</p>	

⁴ Melipilla is a small city close to Santiago



Figure Nº 4: Ciudad Satélite de Maipú

Source: autor elaboration

Nowadays, SOCOVESA, the Developer is offering three types of houses in four new condominiums, Patagonia I y II, Barrio Austral y Barrio Marino. All of them offer a green area with a playground, controlled access and their own gate which that will provide safety for the families.

El Remanso de Las Condes

The developers define this Project as “a new urban zone in Las Condes, surrounded by nature in a place of dimension and characteristics incomparable”. It is a unique place in the area of Los Domínicos, in the old farm called Santa Rosa de Apoquindo. With an area of 535 hectares it is much more than a residential Project, it is really a new urban zone planned and design for all who dream to live with their families in the middle of nature but in the heart of the city.

The project also is composed by a number of condominiums; the first one is Barrio la Península.

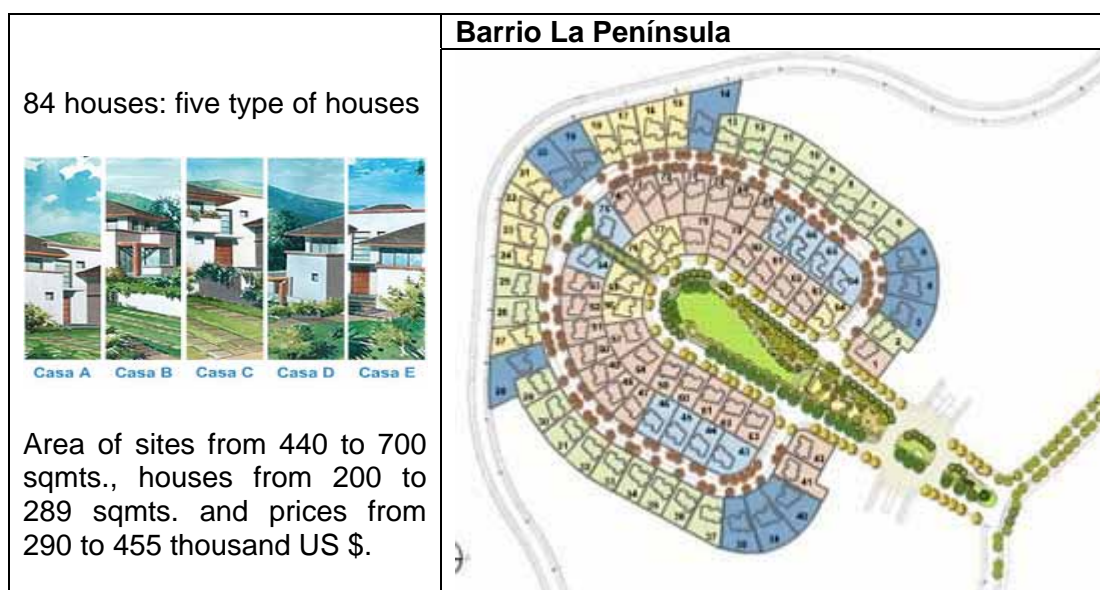


Figure Nº 5: Neighbourhood La Península, El Remanso de Las Condes

Parque Cousiño Macul

This Project was initiated around 1998 and was offer as the “perfect city”. It is also a project that includes almost 2.000 houses for different types of socioeconomic families. It is developed under the model of condominium, at the moment there are three: Los Valles, Vista Cordillera y La Hacienda, and they are now starting a fourth one with the first blocks, instead of individual houses. These blocks will have 8 to 9 stores with nearly 400 flats within an area of 1.5 hectares of green area. The price of these flats goes from 70 to 105 thousand US \$.

The Project was developed in lands of a traditional Chilean family also related with the production of wine. At the beginning at the beginning of the decade of the 90 they decided to move some plantation to Buin (the same what later happened with Piedra Roja) and developed this land for residential development. The project includes among others different commercial areas (mall), education and sports.




The image of the project	Other uses	Different type of housing
		

Figure N° 6: Parque Cousiño Macul

Source: author elaboration and web page www.crillon.cl

Differences and similarities among the five projects

1. All of them are mainly oriented to one or two socioeconomic level of families: Piedra Roja, Valle Norte and El Remanso are oriented to families in the level of ABC1. Parque Cousiño Macul to level C1 and some ABC1 and Ciudad Satélite to level C2 or C3.

Although the first two, built under the considerations of a ZODUC, that has the intention of promoting a certain diversity, and should have generated a certain mixture, at the moment it is very little, and definitively there is not yet any social housing and it is difficult to imagine they could be included within the project.

2. All these projects, of course mainly Piedra Roja and Valle Norte, depend highly on the use of cars and they have played an important role in the construction of new urban

highways. This two projects invest a considerable amount in two highway, Pie Andino and Radial Nororiente. The first one has a length of 10.5 kms. and was initially a private road, now it has become a public road but of course who mainly benefit of it are the families living in the area of Chicureo. Piedra Roja has a bus that goes and come with a fixed frequency to La Dehesa, in no more than 20 min.

The other main way Radial Nororiente, it is a private highway of 16 kms. length, with tunnels under construction, of 7,6 kms. length and connects directly with the borough of Vitacura, also in the east area of Santiago.

There are other highways that connect with Vespucio Norte Express and Autopista Central, highway under private concession, high speed and where you have to pay to use them. Avda. del Valle, another private highway, 6 km length connect the residential projects of Chicureo with Vespucio Norte Express.

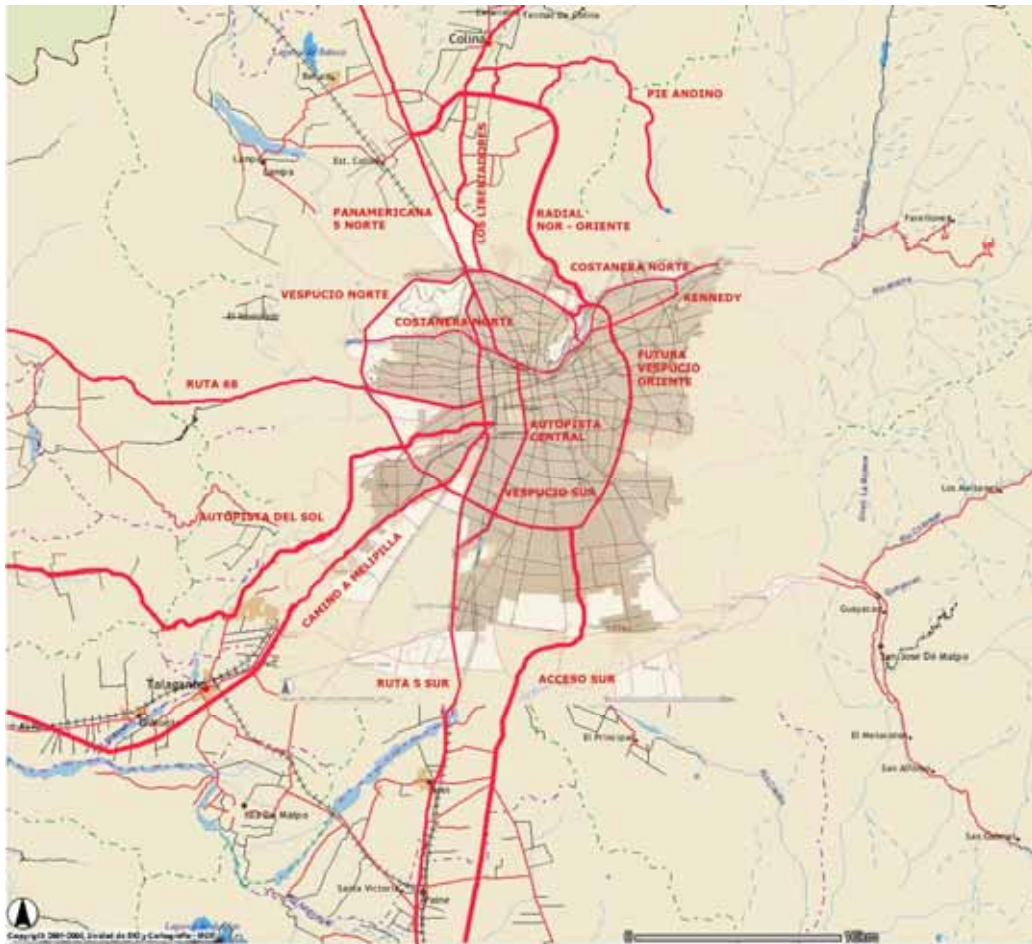


Figure N°7: New highways and residential projects

Source: author elaboration

3. There are all long terms projects that will finish there development after 10, 15 or 20 years, so it is difficult to estimate the real impact that they could have in the city at the end. Another issue is that most of the families who go to this projects are young families with small children, so we can ask what is going to happened when they became teenagers or when they wanted to live their own lives?, this project will generated enough attractions for them? Do they will be able to diversify themselves or will continue as projects very homogeneous in terms of the type of people who lives in?

4. Another issue is that although on one way or another all the projects define themselves as new urban areas or even more as new cities, we will share that it is difficult that we can consider them as cities. If we consider that the three main characteristic of cities are diversity, heterogeneity in activities and inhabitants were there the existence of public space it is essential for people to interact and were we can find different types of families (according to their composition and their socioeconomic level), it is difficult we can see them as cities. May be we will only considered cities in terms of their sizes (number of persons) or their purpose "sleeping cities".

5. We can recognized in all of the projects, even Ciudad Satélite, that it is oriented to a lower socioeconomic level that all of them have an important consideration to urban design, even more we can see many influences of the American movement know as "new urbanism" by the design of different neighbourhood, pedestrian path, introducing other uses (commercial, education, sports, etc.) all oriented to improve the quality of life of residents of the project.

6. All the families independent of their socioeconomic level they are all in this projects attract by what the developers offer them: security, safety and natural environment, in some of them "good view of the city", contact with nature, good services, exclusivity, good neighbours, finally the sense that they are improving their quality of life, etc.

Name of the Project	Ciudad Satélite de Maipú	Parque Cousiño Macul	Piedra Roja	Valle Norte	El Remanso de las Condes
Location	Km 21 to Melipilla	A. Vespucio / Quilín / Consistorial / Los Presidentes	Chicureo	Chicureo	San Carlos de Apoquindo
Borough	Maipú	Peñalolen	Colina	Colina	Las Condes
Area (hectares)	---	350	1.060	1.600	575
Starting year	1986	1998	2002		2004
Developers	SOCOVESA	Crillón	Sociedad Chicureo Society, Developers S.A, Manquehue, Hispano Chilena, SIPSA	Fernández Wood, ECSA, Almagro	DICAL
Investment (million US\$)	---	1.000	1.800	700	----
Conectivity	Autopista del Sol	Vespucio	(ex Pie Andino)	(ex Pie Andino) Radial Nororiente	---
Nº of houses	2.000	8.000	12.500	4.000 a 5.000	1.000
Size of sites	250 / 300 / 350	500 / 700	350 / 500 / 600 / 850 / 1.000 / 1.200 sqmts.	140 / 240	400 / 500 / 600 / 700
Size of houses	110 / 125 / 140	140 / 180 / 240	140 / 150 / 180 / 270	500 / 700	200 / 230 / 280
Price of houses (thousand US \$)	105 to 175	140 to 210	175 to 430	175 to 280	290 to 455 US \$
Socioeconomic sector	Middle income (C2 / C3)	Middle and high income (C2 / ABC1)	High income (ABC1)	High income (ABC1)	High income (ABC1)

Table Nº 1 Residential Projects in the Metropolitan Area of Santiago

Source: Information of the developers and web pages (www.piedraraja.cl / www.vallenorte.cl / www.cousiñomacul.cl / www.elremansodelascondes.cl)

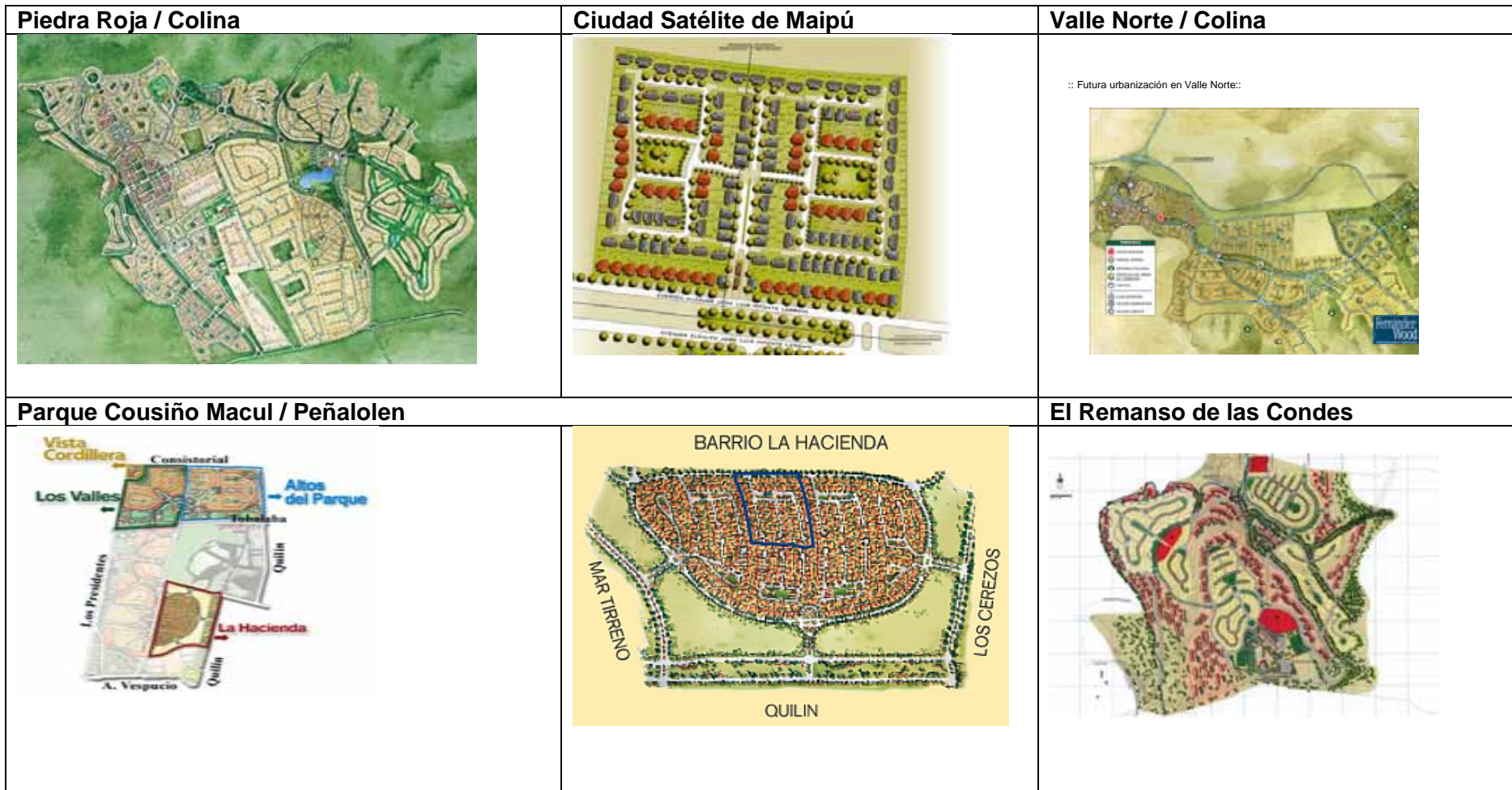


Figure Nº 8: Urban Design of Project

Source: author elaboration in base of information in web pages

Final Considerations

One of the main characteristic of the urban development in Latin American cities is that they becoming are more and more fragmented, they are developing and creating urban units of different sizes within the city, in the periurban of the city and outside the city. Units that don't integrated among them, some could be better considering the number, diversity or quality of their services, but will be basically for use of the residents. At the same time we can see that these units have no intention in generating a city with more equity, by sharing the different facilities that each part can have.

The new urban structure, as we have said, has nothing to do with the traditional city we all have in mind, the new units are underlying individualism instead of society and diversity, the exclusion instead of the inclusion. At certain point we could have think that this new cities, this form of thinking, planning and designing a big or huge piece of land could finally solve the problem of the small gated communities, but now we realize that these have become more gated communities trying to pretend they are belonging to a big project.

Finally, in the case of Santiago, although the urban regulation (ZODUC) have allowed the apparition of this big residential development, it is not the only reason for the increase of residential projects from all different sizes and oriented to different socioeconomic level. It seems that from now on it is very difficult to think that the city will continue expanding and growing in another way but condominiums. At the same time the influence of what it is happening in many Latinoamerican cities it is also very important, both to the developers and to families, as some authors recognised, this is another consequence of globalization, middle or high income families are more and more looking for lives isolated, more individualist and enclosed.

References:

Fernández V., 2005, "Urban fragmentation and urban development of gated communities in two boroughs of the great Santiago: Huechuraba and Peñalolen", III International Symposium, Territory, control and enclosure, Pretoria, March 2005

Hidalgo R., 2005, "De los pequeños condominios a la ciudad vallada: las urbanizaciones cerradas y la nueva geografía social en Santiago de Chile (1990-2000)", en EURE, vol. 30, N° 91, 29-52

Borsdorf A. and Hidalgo R., 2005, "Los Mega-Diseños residenciales vallados en las periferias de las metrópolis latinoamericanas y el advenimiento de un nuevo concepto de ciudad. Alcances en base al caso de Santiago de Chile, Scripta Nova, Revista Electrónica de Geografía y Ciencias Sociales, Universidad de Barcelona, Vol. 9, número 194