

KURABÚ DE JUANAMBU

How does a single building design can positively or negatively affect an urban neighbourhood sector in Cali, Colombia?

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POLITECNICO DI TORINO

MSc Program in Architecture for Sustainable Design

Master's Degree Thesis

Academic year of 2019-2020

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To my family, specially my sister, who is everything to me.
None of this would have been possible without them.

To my friends who were there from the beginning and to
those who have come along the way.

To TAG Estudio Arquitectónico, my team and support.

Thank you.

INDEX

0

Abstract

CHAPTER I

Colombia

13

CHAPTER II

Valle del Cauca - Cali

30

CHAPTER III

Comuna 2 - Juanambú

53

Urban Framework

1. Urban Planning Normative:

The territorial ordering plan (POT) and its related design planning main rules.

2. Urban planning tools of reference

3. Analysis of the relationships between the project area and the other significant parts of the city

93

CHAPTER IV

Building in a sector

1. How does a single building design can positively or negatively affect an urban neighborhood sector in Cali, Colombia?

2. SWOT

CHAPTER V

Cases of study

107

1. Energy Living

2. Bioclimatic Prototype of a Host and Nectar Garden Building

3. El Matorral

CHAPTER VI

Competencies

135

1. Kairos

2. Hayedo

3. Insula Living

CHAPTER VII

Project: Kurabú de Juanambú

154

1. Urban strategies

2. Urban proposal

3. Architectural design

CHAPTER VIII

Conclusions

191

CHAPTER IX

Bibliography

194

ABSTRACT

KURABÚ de Juanambú is a project that takes place in Cali, Colombia. It started as a project at the office where I did my internship (TAG Estudio Arquitectónico) where now I am currently working. With the professional support of Vincenzo Tirelli and the work team, the first idea was to develop a residential building that would comply with the regulations of the place, that would be an economically, socially, and environmentally viable project.

That is why I selected this project as my thesis project, not because I have been in charge of it and I feel a great responsibility with myself, and with my work team, but also with the people who will inhabit the space, and with the community in general in Cali, because I am a faithful believer that a project, whatever it may be, can have a positive or negative impact on the sector.

Cali, Valle del Cauca in general has given me a lot, and as a representation of the love and respect I have for this wonderful city, even though I am now a master's student at the Politécnico di Torino I wanted to develop a thesis in Colombia because I feel that everything I learned during my career and nowadays in my master's degree must be the fundamental pillars to create, build and develop a better future in my native country.

Valle del Cauca is one of the most important departments in the country and the one that has accompanied me personally for practically my entire life. That is why I decided to give back with this project a little bit of what it deserves, in one way or another to contribute to a better future.

From the hand of Professor Mario Artuso and Professor Silvia Gron, the idea is to further analyse the urban part and how to make a city from a project, that is why we started the thesis with a key question: **¿How does a single building can positively or negatively affects a sector?** My interest turns to understand which are the points that makes a project a beneficiary for the community and which are nots, and why. The idea is to base me on references that I have been able to analyse and to understand what things they have had developed and in what way to be able to use it and implement the positive aspects in my project. The project is not only habitable inside but can create a city from the outside and from what it can provide to the neighbourhood community.

Then started from a larger scale, the city of Cali in general, finding the important points of it, the dispensable places, the busiest, we continued down the scale to a neighbourhood scale such as “Barrio Juanambú”, to find the particularities of the sector. What we find, how it is developed, how are the accesses, the connections, the inhabitants, and even what are the competencies of neighbourhood projects to see what we have to do differently to be the ones who draw attention to having a differential building that is capable of creating a city, and not just an interior experience.

At this point, when I feel like I have all the proposed scenarios to face a project that will begin to be built at the beginning of 2022 and that will not only remain on paper as a project of a university career, but rather a project that will create history, and that in my hands to be capable of meeting the expectations of everyone who is an inhabitant of the building itself, a citizen who passed by and is attracted to the quality of the building and the quality of life that implies in the sector. That is why having carried out not only a building but also a master plan to give greater benefits to the sector by developing a sustainable project with the environment and also with the city, economically, and with the society.

¡Let's begin!

OBJECTIVES

Urban Planning Normative

Recognize the regulations to carry out the development of a project and what are the tools to take into account.

Building in a sector

Answer the question: How does a single building design can positively or negatively affect an urban neighborhood sector in Cali, Colombia?

Development of a project

According to the research of the normative at the sector, the urban analysis, some references and the analysis of the competences of the sector, be able to develop the project in order to take into account the research of how a single building affects positively a neighborhood and design the project that achieves the answers.





Latin America map [Fig. 1]. Susana Cadavid

CHAPTER I

COLOMBIA

EARLY COLOMBIA

According to Lambert (n.d.) Before the arrival of Europeans, the Amerindians were the ones who lived in our country by fishing and hunting, and some of them lived thanks to agriculture.

Alonso de Ojeda was a Spanish man who lands for the first time in Colombia around 1500. But it had to pass 33 years for the first Spanish settlement in 1533 when Cartagena and Santa Marta were founded. In 1538 Bogotá, our capital city was founded. However, in 1564, Colombia became the general captaincy and for this reason, the colony prospered, and to keep this title many African slaves were brought there.

Nevertheless, Napoleon gave the order to make his brother king of Spain in 1808, even though many people in the Spanish colonies were against this new king. That is why in 1810, the majority of Colombia declared its independence, but, it did not last long.

This happened again in 1815 and 1816 were some of the Spanish re-conquered the area causing that in 1819, Simón Bolívar defeated the Spanish at the Battle of Boyacá. Finally, Colombia, Panama, Venezuela, and Ecuador formed a new nation that was called the Republic of Colombia.

The Republic of Colombia was affected by regional differences causing the breakup of the new country. After this Bolívar became dictator in 1828, but two years later in 1830 resigned, consequently Colombia and Panama were separated from Ecuador and Venezuela.

During the 19th century, Colombia was the place for 8 civil wars to happen, in 1849 the political differences started and 2 branches, the important ones, one the conservative, representing landowners and the Catholic Church, the other one was the one that represented the liberal, as the merchants and artisans. This process continued and in 1899 the Thousand Day War happened and then in 1903, Panama decided to become an independent nation. (Lambert, n.d.)

MODERN COLOMBIA

Lambert (n.d.) Says that Colombia was generally peaceful, and the economy developed at the beginning of the 20th century, this was because of the exports of coffee increased. In 1948 another civil war broke out, this civil war was called La Violencia.

As I explain early Colombia had always been divided into liberals and conservatives, but the murder of Jorge Eliecer Gaitán, one of the liberal politicians on April 9, 1948, was the spark that lit the fire because the army was on the side of the conservatives causing that in 1953 the General Gustavo Rojas Pinilla became dictator.

In 1957, something new happened, and General Rojas decided to share the power, this means that between 1957 and 1974 he was switching between the Liberal and Conservative bands.

At the same time, Colombia was being hit by the operation of the guerrillas, in the 1960s, 10 years later the cocaine production started to be so important till 1980s and with this the drug traffic, generating big violence. The consequently early 1980s, Colombia was hit by a severe recession.

In the 21st century, the situation in Colombia improved, the violence decreased after 2002, and the economy grew too fast having as a result that poverty and unemployment decreased too. In 2009 at the same time as the world Colombia suffered the recession, but the economy soon recovered. And not only was it recovered for it but also the severe floods in 2010. However, tourism in Colombia is growing. Today Colombia is constantly developing, and the population is around 50 million. (Lambert, n.d.)

GOVERNMENT AND ADMINISTRATIVE DIVISIONS

The government of Colombia takes place within the framework of a presidential participatory democratic republic as established in the Constitution of 1991.

The democracy of Colombia works as the citizens give power to the rulers through voting, in this way who is elected represents us and makes the decisions of the country. To be able to vote, citizens must be of legal age, in Colombia, this is equivalent to being over 18 years old and having the respective identity card. Colombia’s problem is that voting is not compulsory, and for this reason, abstention in the country is one of the highest in Latin America.

BRANCHES OF PUBLIC POWER:

The branches of power exist because in this way the concentration of power can be avoided. Therefore, the Government of Colombia (n.d.) states that each of them fulfills different functions and are independent of each other.

- Legislative branch: Create laws and can modify existing ones. It is represented by the Congress of the Republic.
- Executive Branch: Responsible for complying with the laws and the Constitution. It is represented by the President, vice president, ministers, governors, mayors, and heads of administrative departments.
- Judicial Branch: Administers justice and resolves population conflicts. It is represented by the Supreme Court of Justice, the Constitutional Court, the Council of State, the Superior Council, the courts, and judges.

Colombia is divided into 32 departments and one capital district, which is treated as a department (Bogotá).

The departments where there are more people in conditions of extreme poverty are Chocó, with 49.9%, La Guajira, with 47.9%; Córdoba, with 40.3%, followed by Magdalena, with 36.1%, and then Sucre, which has 35.7%.

12º 27’ 46 “N and 4º 13’ 30”S

Intertropical zone.

As previously mentioned, Colombia is in South America, to the north.

It is the only country in South America that has coasts on the Atlantic and Pacific oceans. And it is also crossed by the Andes mountain range and the Amazon plain.

CLIMATE

The climate of Colombia is characterized for being tropical presenting variations within six natural regions and depending on the altitude, temperature, humidity, winds, and rainfall. The diversity of climate zones in Colombia has tropical rainforest, savannas, steppes, deserts, and mountain climate.

- Warm climate: Temperatures exceed 24°C - Below 1000 meters high.
- Temperate climate: Temperatures between 17°C and 24°C. - Between 1000 and 2000 meters high.
- Cold climate: Temperatures between 11°C and 17°C. - Between 2000 and 3000 meters high.
- Alpine conditions of the wooded area and the treeless grasslands of the moors: Temperature below 0°C - Above 4000 meters high.

RELIEF

Colombia is made up of the three Andean mountain ranges, it has a mountainous system apart from the Andes, it presents inland, coastal plains and valleys.

HYDROGRAPHY

Colombia has a favorable wealth in many ways, one of them is the hydrographic sources that take place in the Pacific, Caribbean, Ca-tatumbo, and Atlantic.

ECONOMY

The Colombian economy is based on the production of primary goods for export, and the production of consumer goods for the domestic market.

One of its recognized activities is the cultivation of coffee, occupying one of the main exporting places worldwide since the beginning of the 20th century, it has been internationally recognized due to the quality of its beans.

Colombia currently ranks fourth in Latin America as an oil producer and regarding minerals, the production and export of gold, emeralds, sapphires, and diamonds are recognized.

In agriculture, floriculture and banana crops are recognized as important, and textiles, automotive, chemical, and petrochemical industries are carried out in the industrial sector.

AGRICULTURE

As previously mentioned, Coffee is the main crop. Colombia occupies third place in the world production level and the first in the production of soft coffee. Coffee is grown in the departments of Caldas, Antioquia, Cundinamarca, Norte de Santander, Tolima, and Santander because its characteristics at altitude are perfect for its production.

It is also recognized crops such as:

- Cocoa
- Sugar cane
- Rice
- Plantain
- Banana
- Tobacco
- Cotton
- Cassava
- African palm
- Tropical flowers
- Semi-tropical flowers

FISHING AND FORESTRY

By having two seas, Colombia has the privilege of finding more than 2000 different species of fish, among them the best known as: trout, tarpon, sailfish and tuna.

Regarding forestry, cultivation, and forest care, it can be said that most of the wood extracted in Colombia is obtained illegally.

MINING

Regarding mining, oil and gold are recognized as the main products. Other minerals that are also mined are: • silver • emeralds • platinum • copper • nickel • coal • natural gas.

The oil industry is under the control of a national company and various concessions to foreign capital.

TOURISM

Colombia has presented greatly increases in the topic of tourism, thanks to the growth one of the best publishers in the world categorized it as one of its top 10 destinations worldwide. Currently, tourists from the majority of America and Europe do not stop entering, and internally the country continues to grow compared to previous years. Colombia is recognized for having seven sites declared a World Heritage Site by Unesco.

CULTURE

HANDICRAFTS

According to the location, crafts vary, vueltiao hats, woven baskets, artisan backpacks, woodwork, weaving, and stones stand out. All of these are mostly made by pre-Colombian tribes.

PAINTING

It is no secret to anyone that the most recognized author is Fernando Botero, although David Sanzur and Omar Rayo are also currently known.

ARCHITECTURE

We found buildings from the Colonial era in cities such as Cartagena, Villa de Leyva, but also modern buildings in the Capital and Antioquia. However, in the other corners of Colombia we can see how colonial and modern architecture mix to make spectacular buildings.

LITERATURE

The well-known Gabriel Garcia Márquez is responsible for obtaining the Nobel Prize for Literature in 1982 with his work One Hundred Years of Solitude. Until now the most recognized in this field.

MUSIC

There is a great variety of musical genres throughout the Colombian territory, among which they are most recognized are: The vallenato, the cumbia, and the joropo. Among the most famous singers worldwide we have Shakira, Juanes, and Carlos Vives.

GASTRONOMY

In the field of gastronomy, it is a delight, we find the arepas, the ajiaco, the sancocho, the tray paisa, the tamale, the veal a la llanera, the pata-rashca, the chontaduro, among others.

Colombian culture is born from the inheritance of indigenous peoples, such as the Muiscas, Taironas, Quimbayas, and Zenúes, pre-Colombian peoples who have contributed a lot to our country ancestral, in addition to the arrival of the Spanish and their traditions and African customs, which they incorporated thanks to slaves at the time of colonization. That is why the Colombian culture is characterized by so much cultural wealth.

Due to the location of each region, we can find cultural differences between the same regions. Among the best known we find: the “cachacos” of the Cundiboyacense highlands, the “paisas” of Antioquia, the “llaneros” settlers of the Llanos Orientales, the “vallecaucanos / vallunos” located in the Valle del Cauca, the coastal people who live on the Caribbean coast and the Santander residents of Santander. All of them present cultural differences that place Colombia in a multicultural nation, thanks to the wealth of customs, traditions, dance, music, and different gastronomy.

According to Cultura Colombiana (n.d.) the colombian culture is recognized for:

BIODIVERSITY

FAUNA AND FLORA

Colombia is one of the mega-diverse countries in biodiversity, ranking first in bird species. As for plants, the country has between 40,000 and 45,000 plant species, equivalent to 10 or 20% of total global species, Colombia is the second most biodiverse country in the world.

“According to the 2019 Biodiversity Information System in Colombia, there are 51,330 species registered in the country, with more than 1,920 bird species, 528 types of mammals, and 1,521 species of fish.” (Colombia, second-greatest biodiversity in the world, n.d, Well-known as the second-most biodiverse country in the world, para. 1.)

In Colombia, you can find 5 natural regions according to the different reliefs, ecosystems, and climates.

Currently, according to Bell (2018) that says that thanks to a report from the World Wildlife Fund WWF, we know that nearly half of the ecosystems that exist in Colombia are in a critical state, due to the extraction of oil and minerals.

Mariposa [Photo 10]. El Campesino



Orquídea [Photo 11]. Jardín Botánico Bogotá

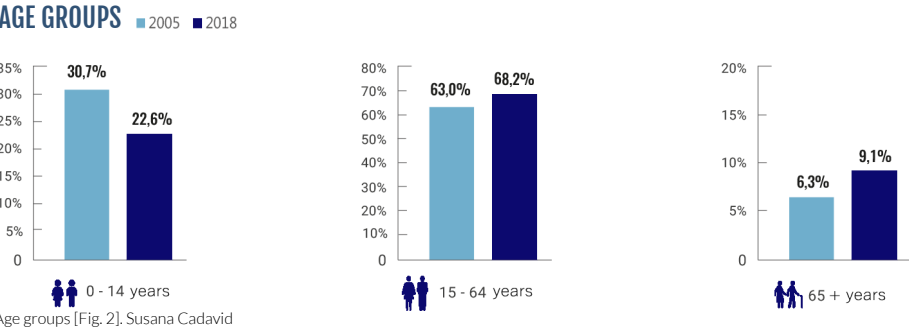
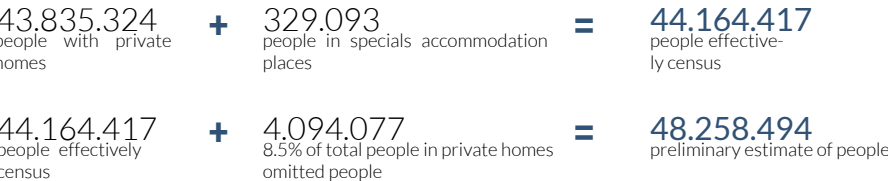


Colibrí [Photo 12]. J. Barreto



DEMOGRAPHY

¿HOW MANY ARE WE?



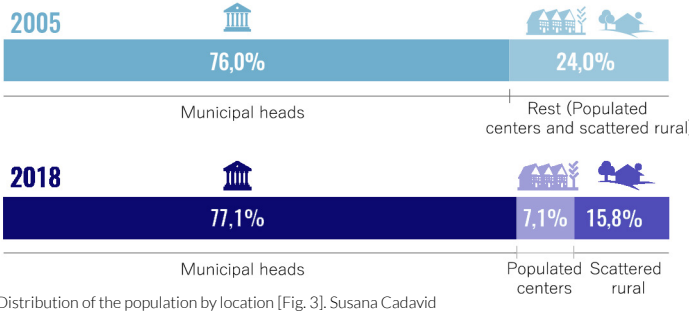
According to DANE, Colombia in 2020 is supposed to have a population of around 50 million people.

It is possible to see that the most population nowadays is between 15 - 64 years old, but we can see a big difference in the birth-rate because it fell systematically since in 1967; the average number of kids was 6.7 per woman, in 2010 it went down to 2.1 and in 2015, 2 were reported.

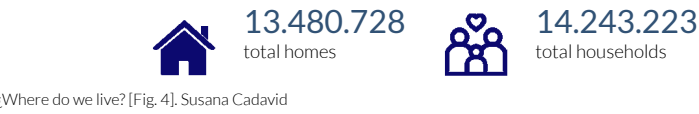
One of the reasons is because of the socioeconomic conditions of the families, which were rated by 94% of the participants as precarious, deficient or insufficient, explained Diana Muñoz, professor at the Institute of the Family at the University of La Sabana, according to the poll to 1.527 people.

¿WHERE ARE WE?

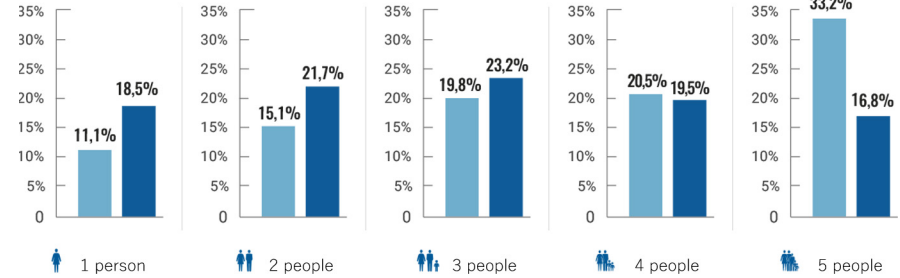
DISTRIBUTION OF THE POPULATION BY LOCATION



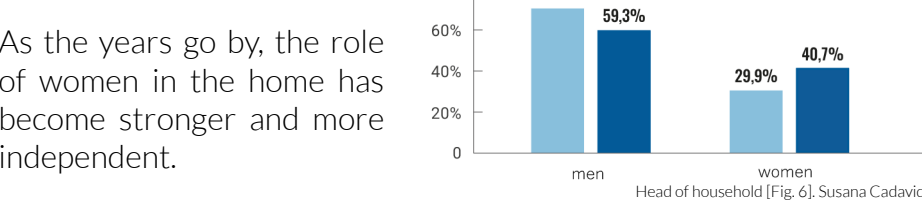
¿WHERE DO WE LIVE?



HOUSEHOLDS ACCORDING TO NUMBER OF PEOPLE

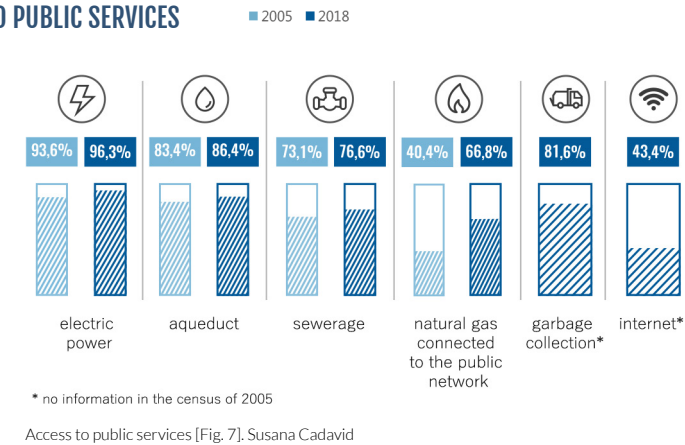


HEAD OF HOUSEHOLD

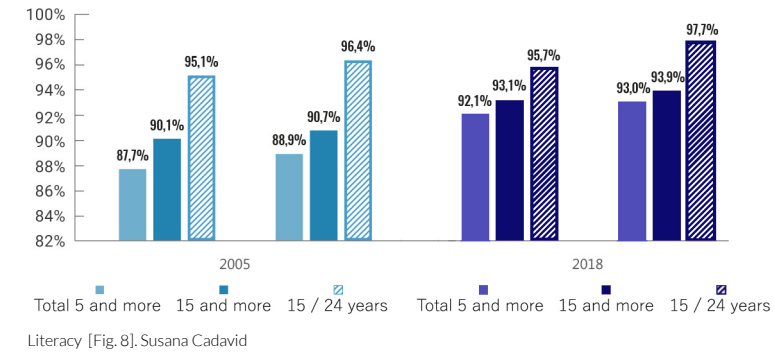


As the years go by, the role of women in the home has become stronger and more independent.

ACCESS TO PUBLIC SERVICES

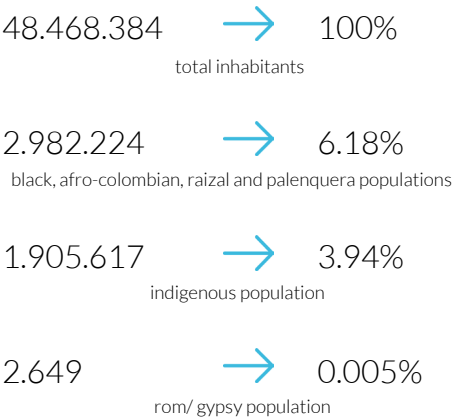


LITERACY: READ AND WRITE



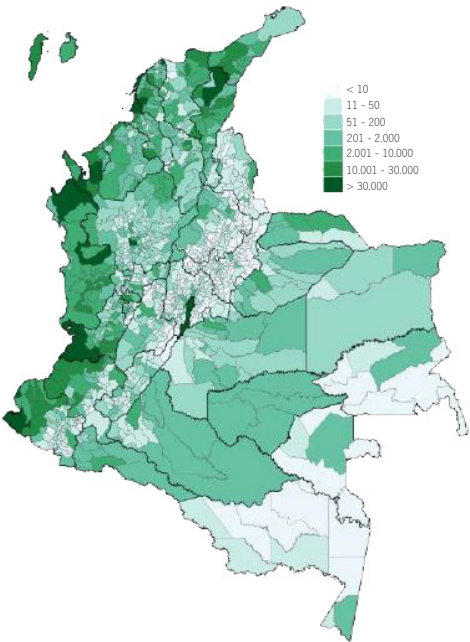
¿WHO ARE WE?

POPULATION 2018

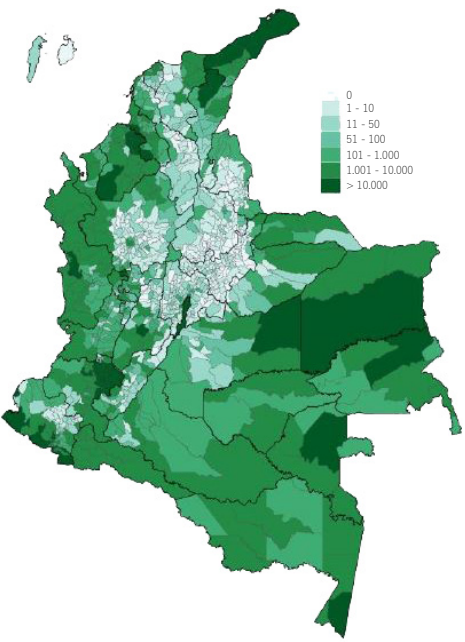


GENERAL LOCATION

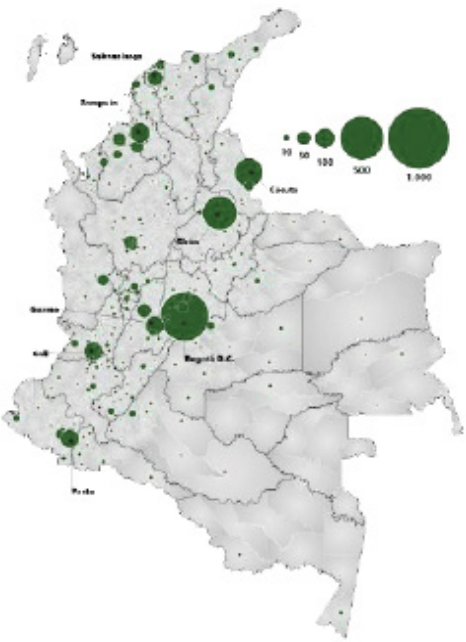
black, afro-colombian, raizal and palenquera populations



indigenous population



rom/ gypsy population



In Colombia we are divided into different populations, there are the Afro-Colombians, the indigenous population, the ROM, and the rest of the population. In the upper maps, we find the population location of each of these, from large quantities to minimal quantities. We can say then that depending on each of these populations their predominant location also varies, this is due to the customs that each one of them has and their location preferences, for example, Afro-Colombian culture predominates on the border with the Pacific Ocean, while the indigenous population is mostly located in the Amazon, each one of them has its connection with nature in a different way and is equally respectable.

CONCLUSIONS

This first chapter was based more on a chapter of location and general information about the country called Colombia, this in order to show those who do not know any of the important things that are in it. Information such as the location, the most emblematic places, a bit of history, how the political party and the government of the country are divided, how it works, general aspects such as the economy, culture and diversity, and a little more about the population and their demographics. All this in order that the reader can understand a little more a project of a larger scale to a minimum scale, which will be the development of a house in a sector of one of the most important cities in Colombia, called Cali, which will be which we will continue to contextualize in the next chapter.



Colombian map [Fig. 12]. Susana Cadavid



Valle del Cauca map [Fig. 13]. Susana Cadavid

CHAPTER II

VALLE DEL CAUCA – CALI



Lago Calima [Photo 13]. Baquianos

VALLE DEL CAUCA

Valle del Cauca is one of the most important departments in Colombia, thanks to its location and economy, it has an average climate of 24 °C, making it ideal for tourism, considering the architectural development with European influence that took place in the region.

The department of Valle del Cauca is divided into 42 municipalities and 88 townships, among which we have as main: Buga, Caicedonia, Buenaventura, Cartago, Palmira, Roldanillo and Tulúa.

To contextualize the subject a bit, the territory of the department of Valle del Cauca is made up of four physio-graphic units, called “La Llanura del pacífico, La Cordillera Occidental, El Valle del río Cauca, and El Flanco Occidental de la Cordillera Central”. These allow Valle del Cauca agriculture to be the most important and varied in the country, with technical crops of sugar cane, coffee, cotton, soybeans, and sorghum. For these reasons, El Valle del Cauca is the third department in industrial production, commercial, transport and banking activities stand out, favoured to a great extent by the port of Buenaventura, which is one of the most important in Colombia.

- Surface: 22,140 km²
- 1.9% of the national territory
- Population: 4´660.438
- Year of creation: 1910
- Capital: Cali
- 1,783,546 inhabitants

LIMITS

- North: Departments of Chocó and Risaralda
- East: Departments of Quindío and Tolima
- South: Department of Cauca
- West: Pacific Ocean and the department of Chocó.

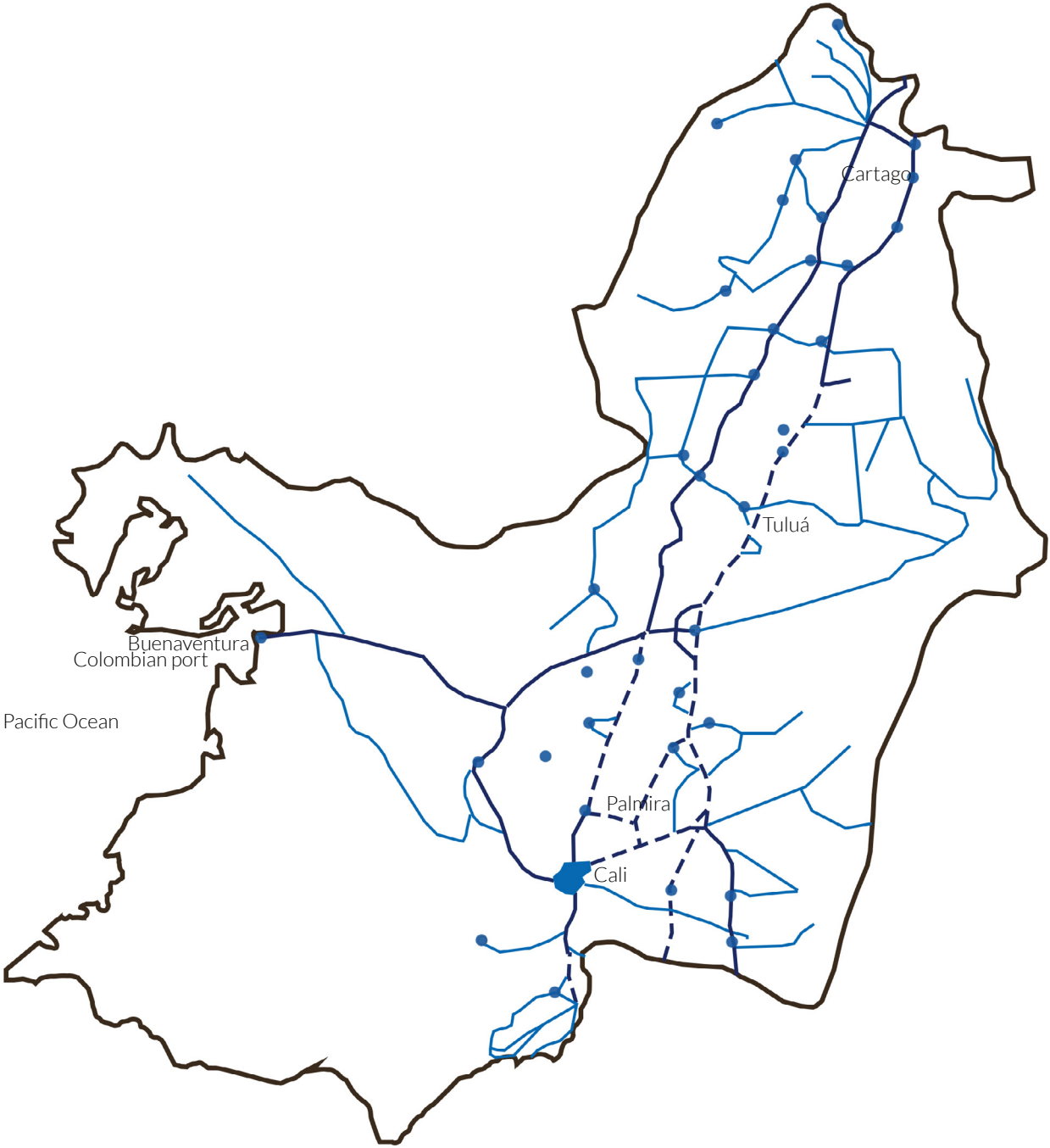
WAYS OF COMMUNICATION

Regarding the communication routes of the department of Valle del Cauca, we find that its road system centers on the north-south axis that is part of the Pan-American Highway and runs through the flat area of its territory, finding that almost all municipalities communicate by highway with the main cities of the department, with the integrated area of Cali and the most important cities of the country, this in order to have constant connection between cities.

Buenaventura, however, constitutes the main Colombian port, which is located on the Pacific Ocean, which can be reached by large vessels, having good natural conditions and adequate port facilities, it is then managed by the Sociedad Portuaria Regional de Buenaventura SA However, the Cauca River allows, unlike the port, the navigation of small boats; however this means of transport is little used.

The department has an airport network located in the municipalities of Palmira, Buenaventura, Cartago and Tuluá. And finally we find as communication routes the international airport “Bonilla Aragón”, located in the municipality of Palmira and which provides the service for the city of Cali, being one of the airports with the greatest movement nationwide.(Departamento del Valle del Cauca, n.d.)

- Municipality / City
- - - National highway in territorial concession
- ==== Territorial paved national highway
- Secondary highway



Ways of communication [Fig. 14]. Susana Cadavid



Cali, Colombia | Photo 141 | D.A. Rendon

The capital of Valle del Cauca is a city that has tourist attractions with a history, a very active cultural life and musical rhythms that have made it famous all over the world.

The musical rhythms of Cali, thanks to its ethnic richness, range from the currulao of the Pacific coast to the great protagonist of the city: salsa, a contagious and frenetic rhythm that is part of the country's culture.

For this reason, Cali is distinguished in Colombia as the 'Rumba Capital' and, in the world, as the 'Salsa Capital', because street parties and dancing are characteristic.

It is the capital of the department of Valle del Cauca and the third most populated city in Colombia.

Cali is one of the main sports centers in Colombia. In 2019 it has been awarded by the World Travel Awards as a cultural destination city in South America, thanks to its cultural, sports and tourist offer.

LIMITS

- North: Municipality of Yumbo and La Cumbre
- Northeast with Palmira
- East with Candelaria.
- South is the municipality of Jamundí,
- Southwest: the rural area of Buenaventura
- Northwest: Dagua

LOCATION

The city is one of the main economic and industrial centres of Colombia, in addition to being the main urban, cultural, economic, industrial, and agrarian centre in the south-westerly part of the country and the third nationwide after Bogotá and Medellín.

The urban area of the city is divided into 22 communes, these in turn are divided into neighbourhoods and urbanizations. The rural area is divided into 15 townships, these in turn are divided into sidewalks.

CLIMATE

The climate is tropical savanna. The dry seasons run from December to February and from July to August. The rainy season runs from March to May and from September to November.

HYDROGRAPHY

The main river of the city and the department is the Cauca river, the part corresponding to the municipality comes from the mouth of the Jamundí river to the limit between Cali and Yumbo

HISTORY AND URBANIZATION PROCESS

The maps developed on this page and the next one is a graphic explanation of how the urban growth of Santiago de Cali developed from its beginnings to what it is now. We can find that Cali expands more than everything to the east and south due to the terrain of the valley, since we found the mountain range towards the west.

1536 - 1780



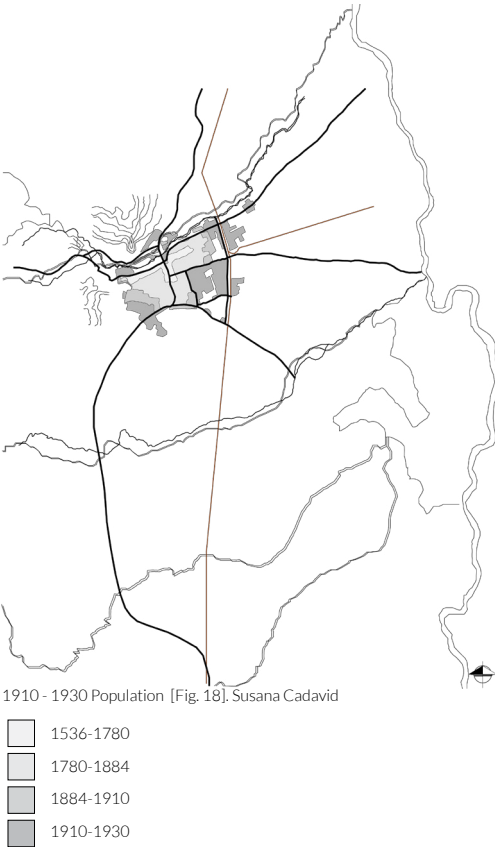
1780 - 1884



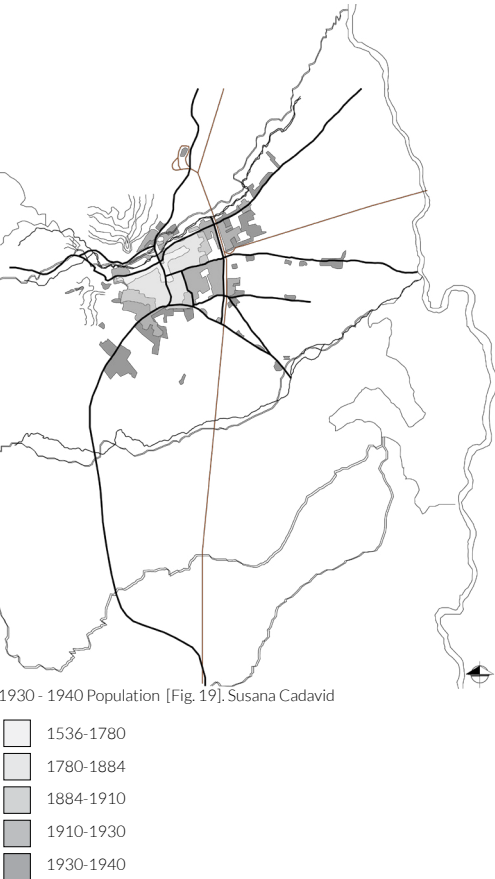
1884 - 1910



1910 - 1930



1930 - 1940



HISTORY AND URBANIZATION PROCESS

The maps developed on this page and on the previous one are a graphic explanation of how the urban growth of Santiago de Cali developed from its beginnings to what it is now. We can find that Cali expands more than everything to the east and south due to the terrain of the valley, since we found the mountain range towards the west.

1940 - 1950



1940 - 1950 Population [Fig. 20]. Susana Cadavid

- 1536-1780
- 1780-1884
- 1884-1910
- 1910-1930
- 1930-1940
- 1940-1950

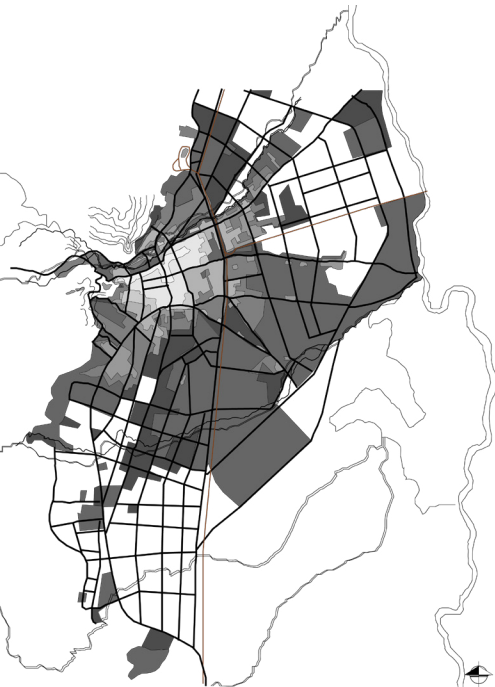
1950 - 1960



1950 - 1960 Population [Fig. 21]. Susana Cadavid

- 1536-1780
- 1780-1884
- 1884-1910
- 1910-1930
- 1930-1940
- 1940-1950
- 1950-1960

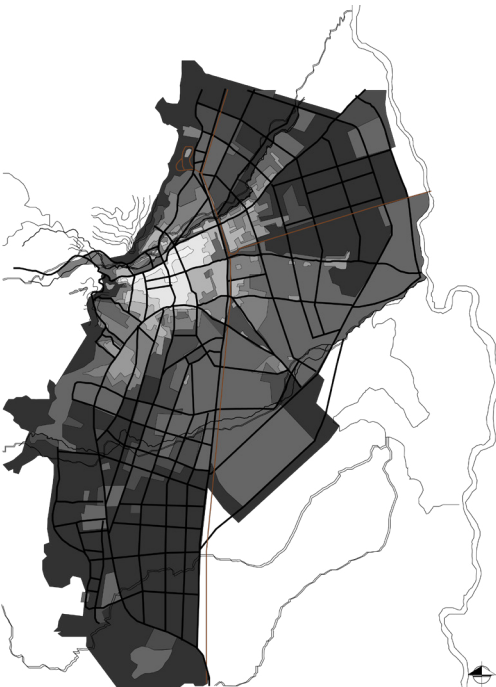
1960 - 1970



1960 - 1970 Population [Fig. 22]. Susana Cadavid

- 1536-1780
- 1780-1884
- 1884-1910
- 1910-1930
- 1930-1940
- 1940-1950
- 1950-1960
- 1960-1970

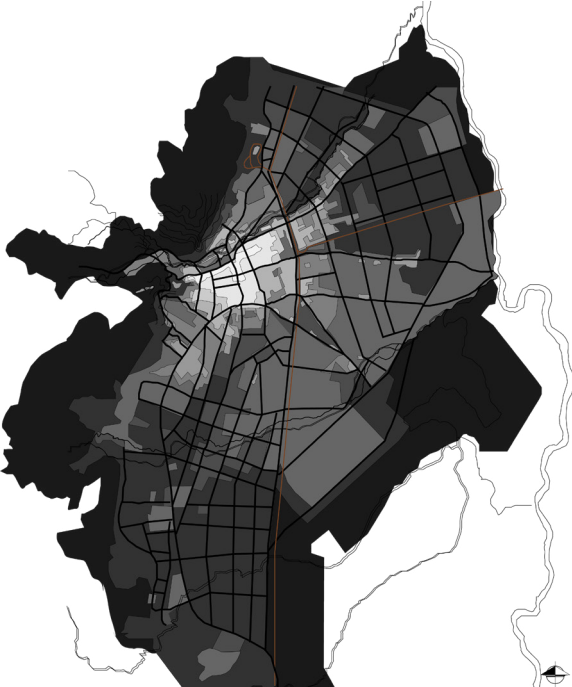
1970 - 1980



1970 - 1980 Population [Fig. 23]. Susana Cadavid

- 1536-1780
- 1780-1884
- 1884-1910
- 1910-1930
- 1930-1940
- 1940-1950
- 1950-1960
- 1960-1970
- 1970-1980

1980 - 1990



1980 - 1990 Population [Fig. 24]. Susana Cadavid

- 1536-1780
- 1780-1884
- 1884-1910
- 1910-1930
- 1930-1940
- 1940-1950
- 1950-1960
- 1960-1970
- 1970-1980
- 1980-1990

ABOUT THE ORIGIN

In the case of Cali, early in the year 1563, the presence of a miscegenation between Spaniards, Indians and mulattoes has been already latent.

“Synthesizing the above information, with more than 40 years of existence Cali was no more than a village inhabited by about one hundred families. This last figure is essential for us to try to sketch a first portrait of the town: corresponding to one hundred lots, and these must occupy 25 blocks of lots; added to the Plaza Mayor and the lots and blocks of the institutions (Cabildo, Barracks, Prisons, Chapel and Convents) indicate an urban area of no less than thirty blocks. (April, n.d, as cited in Equipo Patrimonio Cultural Material, Secretaría de Cultura, 2004, Algo sobre el organ section, para. 2)”

INDIANA CITY

The Equipo Patrimonio Cultural Material, Secretaría de Cultura, (2004) tells us how since the beginning of the 18th century and with special emphasis on moments in which the low presence of Spaniards stands out, the number of inhabitants did not exceed 50. However, later in the year of In 1777 it is allowed to know that there was a population of up to 5,384 people in the city, where almost 2000 people were enslaved and a number of 42 people had ecclesiastical positions.

However, the social distinction is reflected in the place where these people live with ecclesiastical positions such as: local authorities, masters and noble people were located in the La Merced neighborhood and, contrary to them, a population towards the neighborhoods of San Francisco, Santa Rosa and San Nicolás.

As in any colonial American city, we find that urbanistically there was a grid layout through a radial center, which was the well-known square where the government institutions were installed and from which the streets were outlined in an orderly manner and specific and socially hierarchical sectors were formed. That is why at the beginning this squared city was the base of the entire system of justice, administration, defense and the Church during the colonial period.

REPUBLIC CITY

The statistical data provided by April are the following:

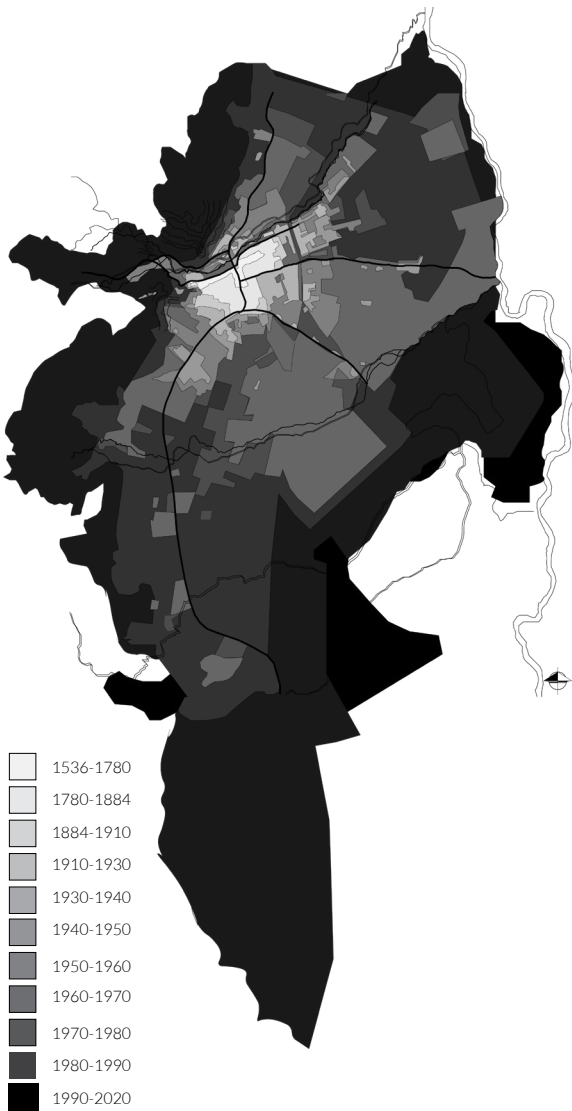
Demography stagnant for decades, in 1870 the city did not exceed 12,742 inhabitants (E. Vásquez), and was at the same demographic level as in 1843. In such a way that Palmira was almost equal in score and very prosperous, with 12,390 inhabitants. In 1884 it still did not reach 15,000. Luis Valdivia indicates a population of 25,528 inhabitants, equivalent to 82.2% of the total municipal population ... 1,023 urban owners and 914 rural owners (almost half), for a total of 1,937, figures that tend to show the agrarian persistence in the urban economy, in the habitat and in mentalities. (April, n.d, as cited in Equipo Patrimonio Cultural Material, Secretaría de Cultura, 2004, Ciudad republicana section, para. 2)

If we continue with the information provided by In this regard, during the Equipo Patrimonio Cultural Material, Secretaría de Cultura, (2004) we could find that during the period of 1860-1890, the maintenance and creation of public roads was generated, which one or the other They wanted to improve communication and commerce between Cali and the current municipalities of Jamundí, Yumbo, Candelaria and Palmira. In addition, over the Cauca River, more than three passes were carried out through Ferris that improved in this way the control of agricultural products that entered Cali, increasing the collection of taxes for the Municipal Council.

Finally, one of the works that added greater importance was the improvement of the road to Buenaventura, since this allowed the export of the products and raw materials that arrived at the Port of Juanchito by steam navigation that began to take place continuously towards the end from the 1880s.

Although speaking of important works, we could say that the one with the greatest impact was the beginning of the construction of the Pacific Railroad in 1871, which arrived from the Port of Buenaventura to the city of Cali in 1915.

1990 – 2020



1990 - 2020 Population [Fig. 88]. Susana Cadavid

MODERNIZATION PROCESS IN CALI 1910 – 1960

The creation of the department of Valle del Cauca was an administrative and territorial change that redefined the social and economic life of the south west of Colombia according to the Equipo Patrimonio Cultural Material, Secretaría de Cultura, 2004, whereby assigning Cali as its capital generated a series of events and works that accounted for a change in mentality in the social groups that made up the city. Some of these changes were: the creation of the first Chamber of Commerce, the foundation of the Archdiocese of Cali, the creation of the Municipal Tramway which communicated the city center with the Juanchito river port, the creation of the Electricity Company and the creation of the telephone company, among other works that played an important role in the economic, social and cultural development of the new department.

However, for the years 1920-1930 Cali had gone from a population of 26,358 in 1910 to a population of 75,670 by 1928

“There was an urban growth where the transfer of the upper and middle classes that inhabited the founding center to the urbanizations of the north and south of the city was seen” (Equipo Patrimonio Cultural Material, Secretaría de Cultura, 2004, Proceso de modernización en Cali 1910-1960 section, para. 2)

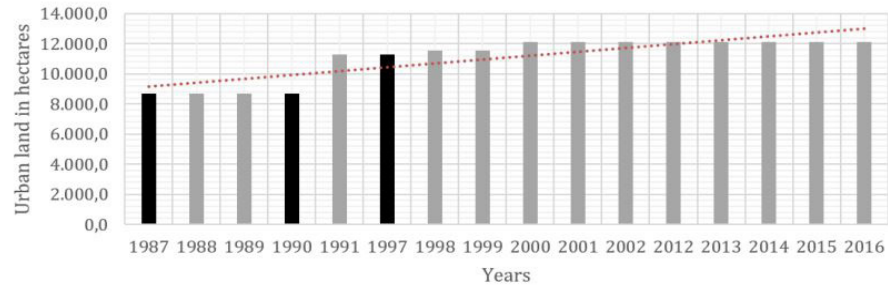
It was 20 years later in 1948, that Cali led the creation of a decentralized autonomous entity that promoted the development of the region which gave rise to the Regional Autonomous Corporation of Valle del Cauca (CVC).

Finally and as the Cali Fair is known today, which in its time was known: The International Sugar Cane Fair. Its creation generated an industrial boom and urban development in which the city positioned itself in the seat of the cultural world by being recognized as the city of musical memory or world capital of salsa

URBAN PROCESS IN CALI 1970 – 2020

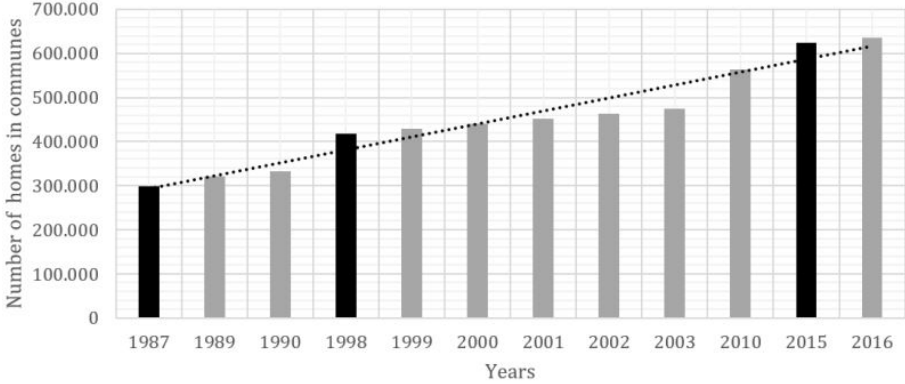
It then affects economic globalization processes, generating a fragmented city where we find a formally planned downtown part and the development of an informal city both in the hillside area and to the east. Due to this growth, the city reached the administrative limits, in this way the Integrated Mass Transportation System of the West MIO is created, the city went from having a population of 858,929 inhabitants in 1970 to being a city that contains in its daily life a population greater than that registered in the 2018 Census, which is 2,119,901 inhabitants

Habilitation of urban areas in Cali



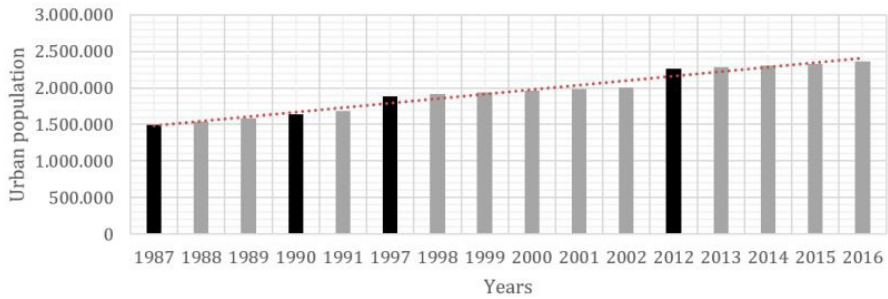
Habilitation of urban areas in the municipality of Santiago de Cali from 1987 to 2016 [Fig. 78]. Urban areas associated to Population Groth and Transformations produced by Migration - Gustavo Adolfo Arteaga, Diego Alexander Escobar García, Carlos Alberto Moncada Aristizábal

Number of homes in the communes of Cali



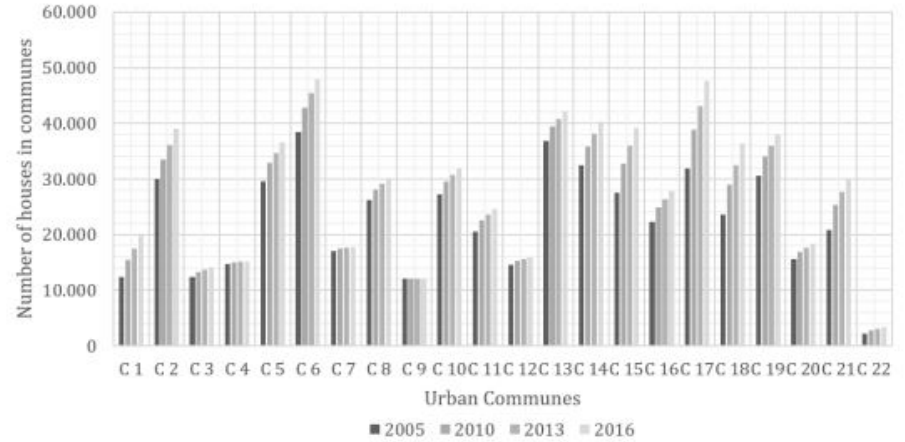
Number of homes in the communes of the municipality of Santiago de Cali from 1987 to 2016 [Fig. 80]. Urban areas associated to Population Groth and Transformations produced by Migration - Gustavo Adolfo Arteaga, Diego Alexander Escobar García, Carlos Alberto Moncada Aristizábal

Trend of population growth in Cali



Trend of population growth in the municipality of Santiago de Cali from 1987 to 2016 [Fig. 79]. Urban areas associated to Population Groth and Transformations produced by Migration - Gustavo Adolfo Arteaga, Diego Alexander Escobar García, Carlos Alberto Moncada Aristizábal

Number of homes built by communes in Cali



Number of homes built by communes from 2005 to 2016 in the municipality of Santiago de Cali. [Fig. 81]. Urban areas associated to Population Groth and Transformations produced by Migration - Gustavo Adolfo Arteaga, Diego Alexander Escobar García, Carlos Alberto Moncada Aristizábal

TOURISM

There are a wide variety of nightclubs, restaurants, and shopping centres throughout the city. In the city you can find entire neighbourhoods dedicated to tourism, for example Granada, one of the most traditional neighbourhoods in Cali, with several gourmet restaurants, fashion stores and boutiques, located in the west of the city. Another place to visit is La Sexta or Avenida Sexta, and Menga which has become the most popular area for dancing. There are many types of nightclubs there, as well as restaurants and hotels. This area is often called a "pink zone" and is in the north very close to the Chipichape shopping centre.

According to Departamento del Valle del Cauca. (n.d.-b) some of the most important places to know in Cali, Colombia are:

- Zoológico de Cali • Museo del oro calima • Avenida San Joaquin • Carrera 66 • Parque del Perro • El gato del Río • Río Cali • San Antonio • El peñón • Menga • Juanchito • Km 18 • Farallones de Cali • Cristo Rey • Cerro de las 3 cruces • Sebastian de Belalcazar

Cali along with Valle del Cauca is the third economic centre of Colombia being a point of national and international economic exchange. The city is an obligatory step from / to the south of the country, and with the border with Ecuador, and is connected to the world through the seaport of Buenaventura.

The department contributes significantly to the national economy. According to DANE statistics for 2005, the agricultural sector, the Valley contributes 5.37% of the national production, which is relatively low compared to Antioquia (15.48%) or Cundinamarca (12.81%). In fishing products, the Valle del Cauca region ranks first, contributing 36% of the country's total production. Regarding non-metallic minerals, the department contributes 8.15% of the added value of all Colombia.

The economy is divided into industry, commerce, the public sector, and financial institutions.

You can take advantage of your walks through Cali to taste traditional gastronomy, which blends Spanish, indigenous, and African heritages, giving a unique flavour to each dish. This is how true delicacies are born, such as “arroz atollado, las empanadas vallunas, el sancocho de gallina, la sopa de tortillas, el aborrajado valluno, las tostadas de plátano verde con hogao, la chuleta valluna and los tamales”

In addition, the sugar cane that grows in Valle del Cauca gives rise to a great variety of sweets, such as manjar blanco, las cocadas, el cholado y el champús, una rica bebida hecha con maíz, lulo, piña, canela y melado de panela.

Without a doubt, one of the unique experiences of the city is the Cali Fair, which is held in December to say goodbye to the year to the rhythm of salsa. This impressive fair has the presence of great artists of this genre who meet in a Super concert.

In addition, the fair is completed with cultural and sporting events.

Other important celebrations are the Petronio Álvarez Pacific Music Festival, which takes place in August, and the World Salsa Festival.

LITERATURE

During the 19th century, Jorge Isaacs stood out with the romantic novel María from 1867; Isaías Gamboa, poet and educator; and Eustaquio Palacios with his historical novel El Alferez Real from 1886.

Already in the twentieth century, the work of the playwright and poet Enrique Buenaventura, the novelist and chronicler Arturo Alape, the Cuban based in Cali Alberto Dow, the writer and movie buff Andrés Caicedo, the short story writer Harold Kremer, the non-existent Jotamario Arbeláez, the novelist and essayist Fernando Cruz Kronfly, the journalist writer Umberto Valverde and the poet Julián Malatesta.

SALSA CALEÑA

Salsa is not originally from Colombia or Cali, but despite this, the city has generated a cultural identity around this musical genre and its respective dance.

CURIOSITIES

Some of the curiosities that Información de Cali. (n.d.) tell us are:

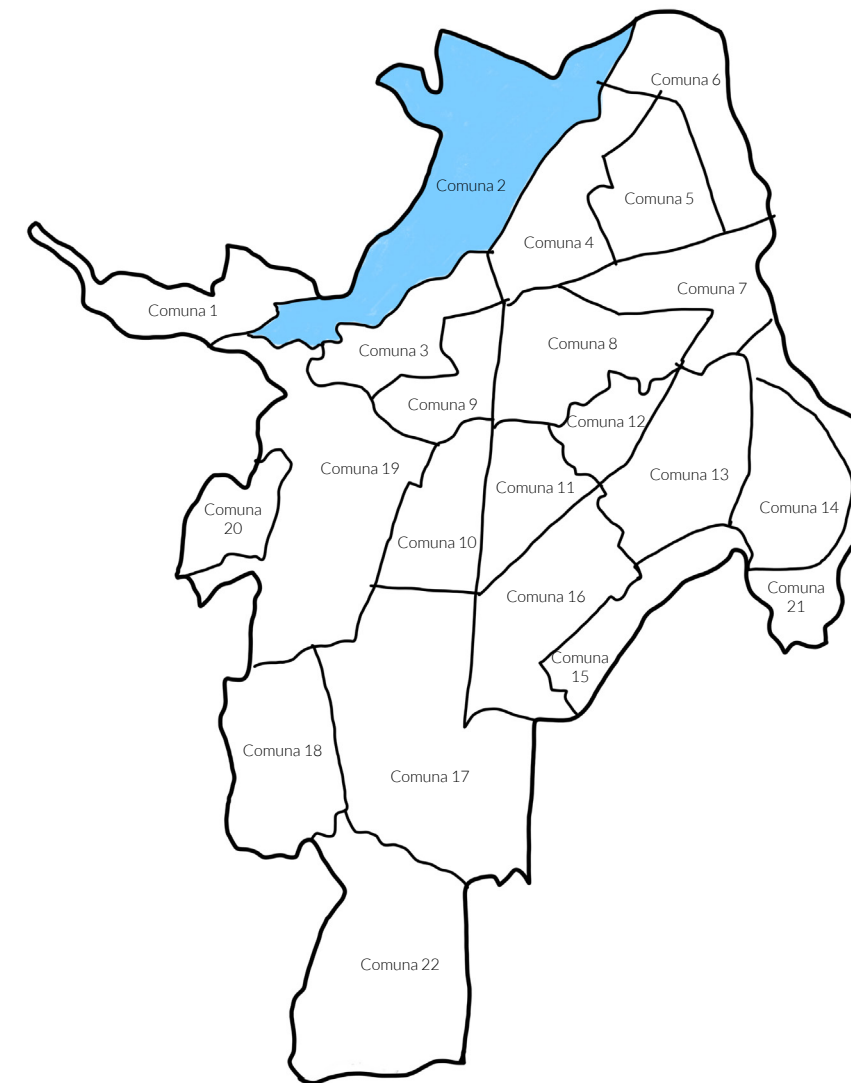
- The department of Valle del Cauca is the main producer of the sugar consumed in the country.
- Calima Lake produces some of the fastest winds in the world and the first winds of Colombia throughout the year.
- 3 UNESCO declarations: Santuario de Fauna y Flora de Malpelo (2006), Músicas de Marimba y Cantos tradicionales del Pacífico Sur Colombiano (2010) and El Paisaje Cultural Cafetero in (2011).
- Cali was selected by The Swiss Tourism Award as the Capital of Creativity, Salsa and Happiness.
- Cali has more than 90 Salsa schools, which makes it the city with the most salsa schools per square meter.
- The only city in Colombia with 2 monthly Salsa presentations of international recognition.



Parque del Ingenio [Photo 15]. Ruta del Sirirí

CONCLUSIONS

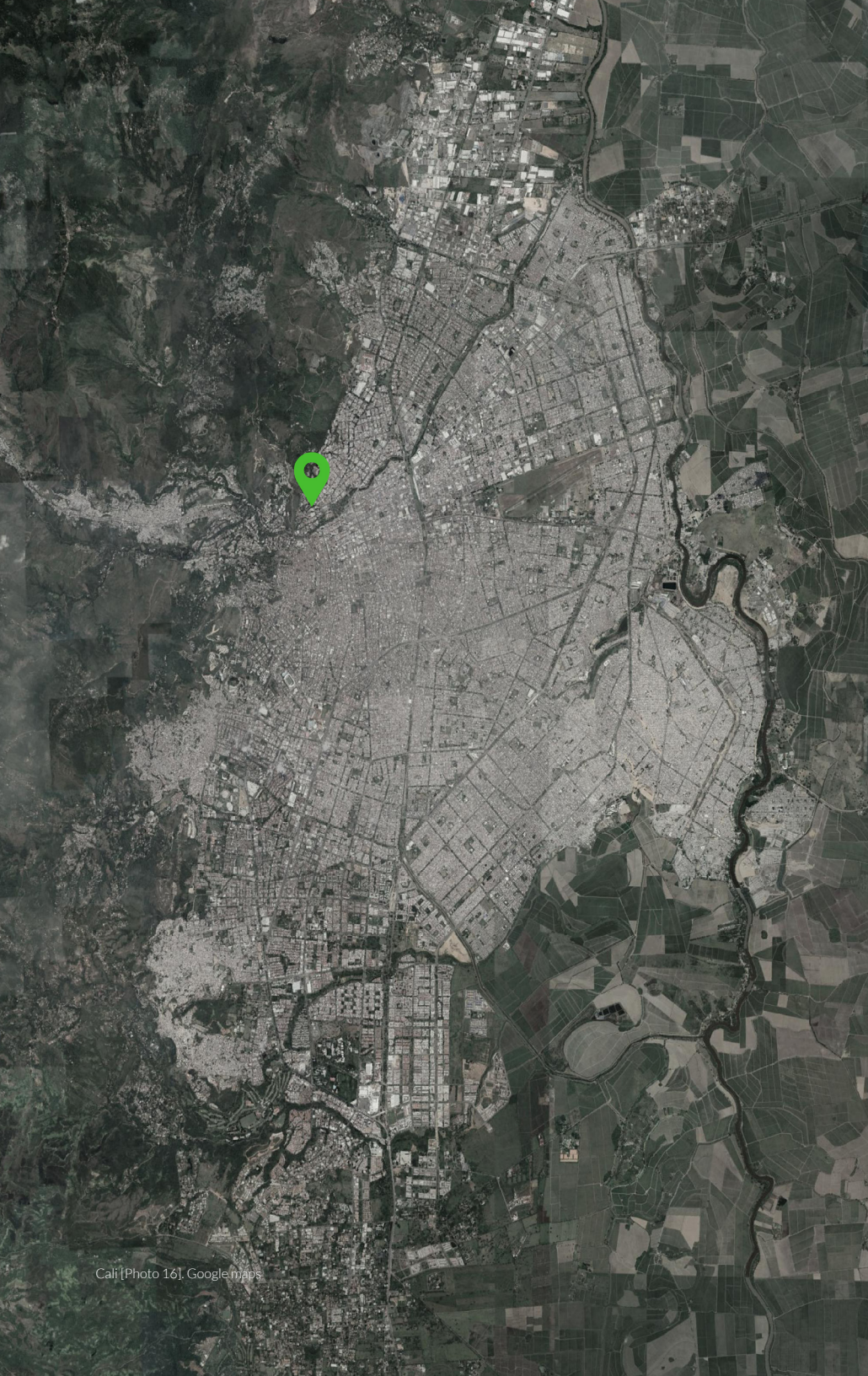
In the era of design, architecture and construction, the importance of knowing the environment is no secret to anyone. That is why this chapter was dedicated to the city of Santiago de Cali, taking into account its general location and how it relates to the main roads of the department of Valle del Cauca, from here we can relate it to the development and urban growth of the city since as we see the city is directly connected with this important road in the north-south direction and its growth is generated not only in that direction, but also from west to east, taking into account that the western mountain range is reflected on The entire perimeter of the city, thus generating that for security due to the morphology of the soil, we find a lower density of houses near the mountain range, and a higher density towards the valley area, where the city really grows disproportionately. Over the years the city has been expanding in a constant growth where social classes (graphs that will be explained later) are stratified according to where people live and their social stratum. We can then affirm that our project is located in an upper stratum sector, which has all the conditions and qualities so that the human beings that inhabit it can have a dignified life.



Santiago de Cali, Comuna 2 [Fig. 25], Susana Cadavid

CHAPTER III

COMUNA 2 – JUANAMBÚ



Cali [Photo 16], Google maps

URBAN FRAMEWORK

CONTEXT

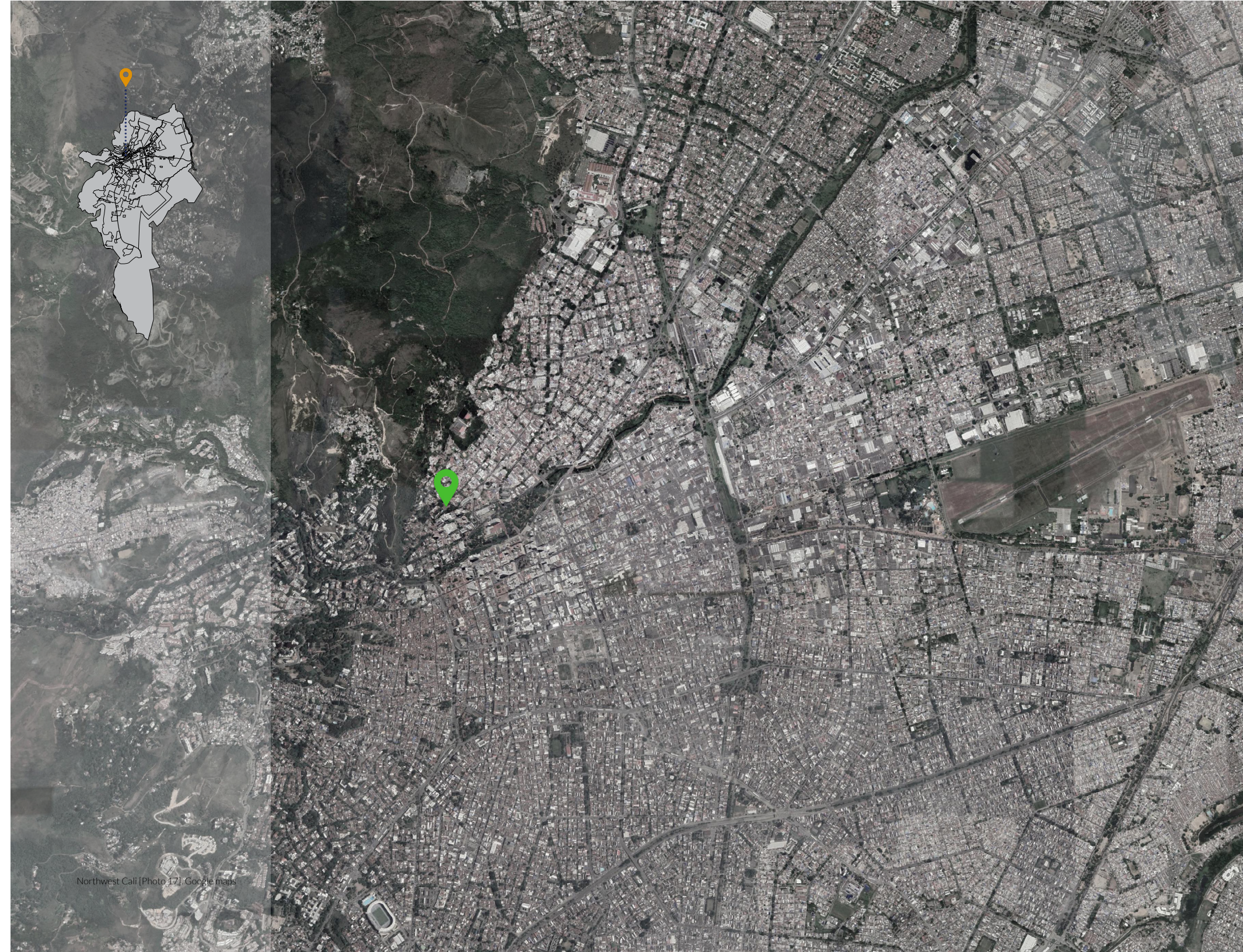
The Juanambú neighbourhood is located in the north-west of the city of Santiago de Cali, in the Cauca Valley, Colombia. The idea of this chapter is to demonstrate why the area where the project will be developed is convenient. Let's start then by saying that Juanambú is a neighbourhood that is characterized by its tranquillity, its good location with the sector and with the adjacent neighbourhoods that are known to meet the needs of the inhabitants who live around it, either for leisure activities, entertainment, go to eat, do cultural activities, or simply enjoy the nature that accompanies the sector.

Thanks to the proximity to the Cali River, and the cliffs, the Juanambú sector enjoys the great breezes in the afternoon, the river accompanies the winds being a conductor of climatic comfort, and being part of the urban equipment that nourishes the neighbourhood.

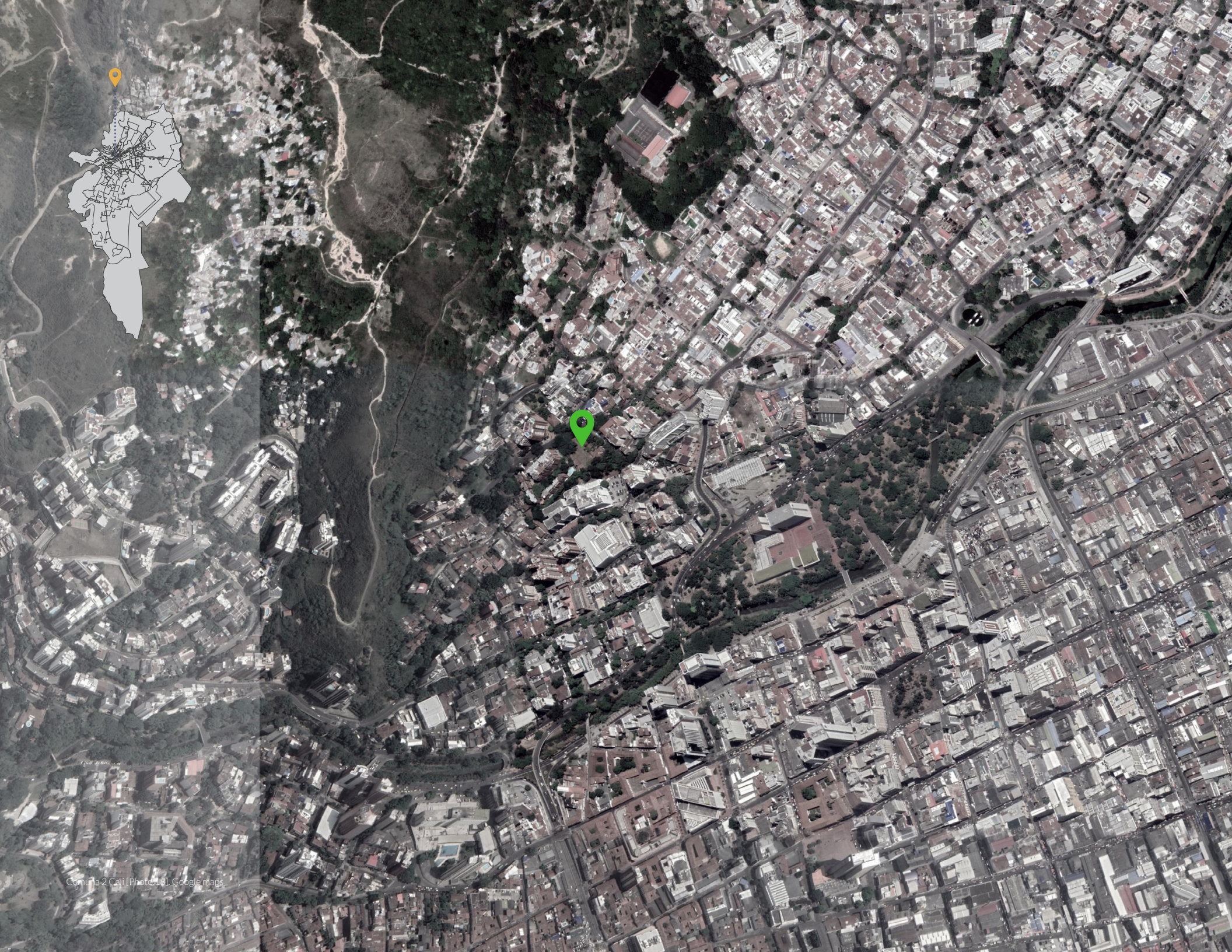
The Juanambú neighbourhood, has the proximity to public transport, which has not been fully resolved so far as it can be compared with large metropolises, or even with Torino, however, the location allows them to be accessed without so many difficulties in terms of routes, and travel time.

Being a purely residential sector, it can be recognized that the neighbourhood is a neighbourhood that leads to the tranquillity of the inhabitants, and allows one way or another to enjoy the city, without the need to be in constant noise pollution.

This is just a preview of what a detail will be explained later in the chapter, about the advantages of the location of the project in the Juanambú neighbourhood.



Northwest Cali [Photo 17], Google maps



Comuna 2 Cali [Photo 18], Google maps

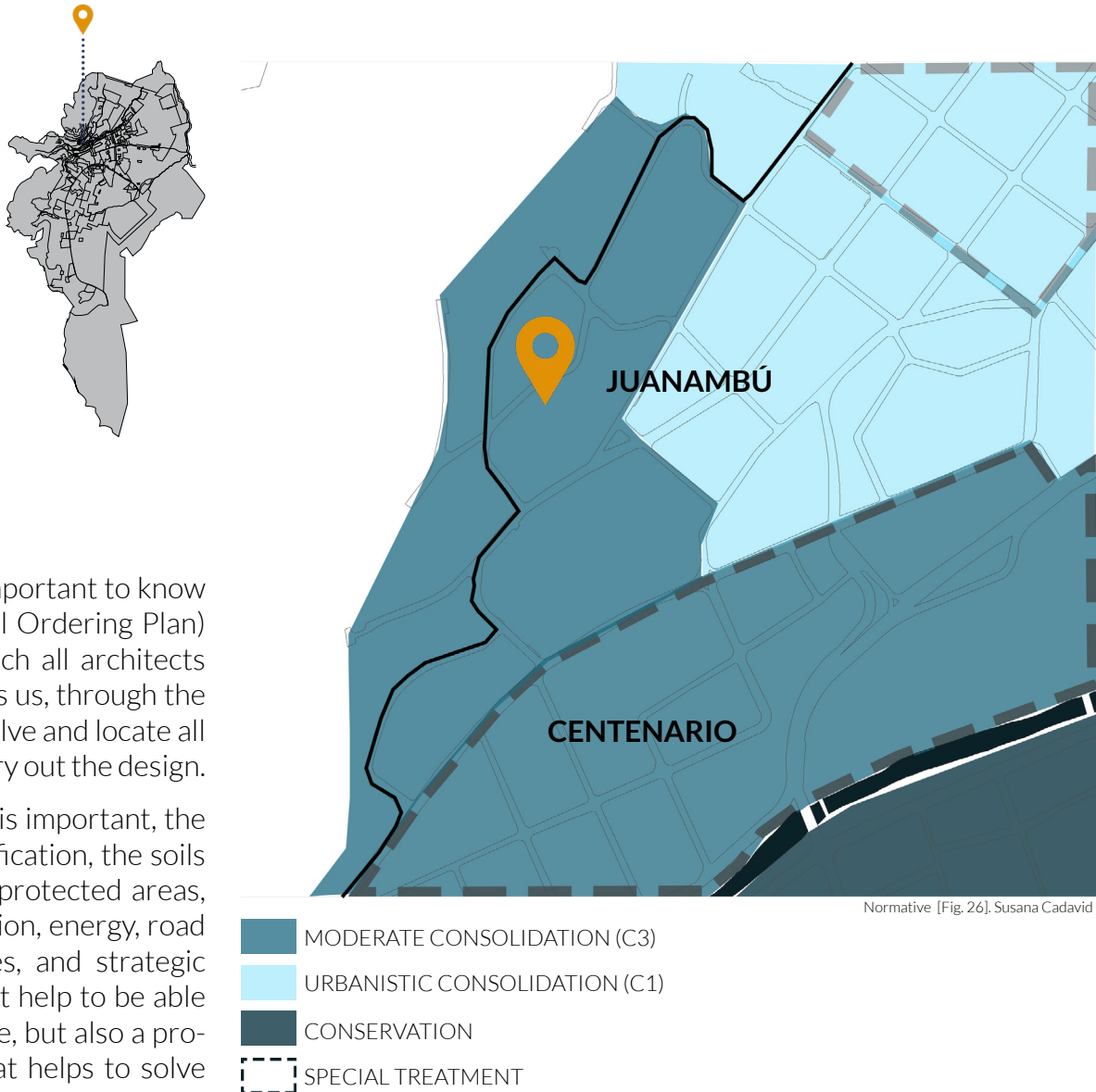


Juanambú Cali [Photo 19], Google maps

1. URBAN PLANNING NORMATIVE: THE TERRITORIAL ORDERING PLAN (POT) AND ITS RELATED DESIGN PLANNING MAIN RULES

In Colombia, to carry out any type of building it is important to know all the previous maps. We have the POT (Territorial Ordering Plan) which is currently in force since 2014 and by which all architects abide when designing a new project. The POT shows us, through the Accord 0373 Maps of 2014, 55 maps that help us solve and locate all doubts about the sector in which we are going to carry out the design.

However, it also depends on us as architects that it is important, the maps range from the ordering model, the soil classification, the soils by threat, the slopes, the ecological structure, the protected areas, the goods, the supply of drinking water, transportation, energy, road ranking, equipment, treatments, construction rates, and strategic projects, among others. That they really are of great help to be able to carry out a project not only in the individual sense, but also a project that conforms to the city, that contributes, that helps to solve the problems of the sector, and a project that communicates in every way the inhabitant with the city that is made up every day and we are responsible.



According to the dynamics of construction and design in Colombia we have: A base plan that explains what treatment our work zone has (as we see in fig. 26) and as explained later what it means to be in the moderate consolidation, however we also have 3 important factors:

- The construction index: that according to the area of the lot we can know how many square meters we can occupy on the first floor.
- The base construction index: it allows us to know how many square meters, we can have built in our entire project.
- The additional construction index: which can be carried out if you pay for each of the raised square meters built.

MODERATE CONSOLIDATION

Article 312. Moderate Consolidation - C3. Sectors of the city from which a process of change has been generated in the urban pattern, since it has constructive dynamics, which has modified the conditions of the original model, in which it is sought to consolidate the new urban pattern.

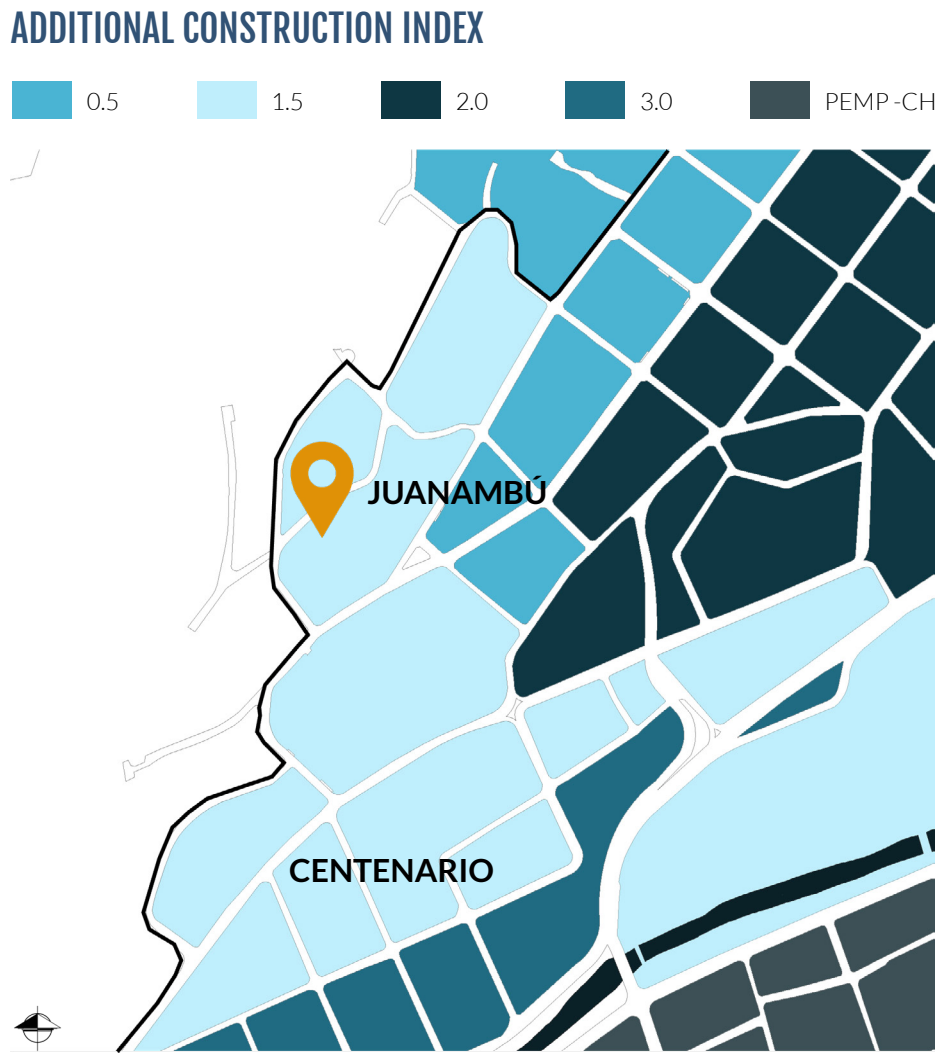
CONSTRUCTION INDEX

| NET RESIDENTIAL AREAS | | | | |
|-----------------------|---------------|-------------|--|-------|
| projects by uses | residential | | codes CIUU: 0,30, 5220, 5511, 5512, 5519, 5590, 8710, 8730, 8810, 8890 | mixed |
| property size (m2) | single family | multifamily | | |
| till 80 | 0,8 | | | |
| 81-250 | 0,8 | | 0,7 | 0,5 |
| 251-600 | 0,7 | 0,7 | 0,5 | 0,6 |
| 601-1000 | 0,6 | 0,7 | n/a | 0,5 |
| 1001-3000 | n/a | 0,6 | n/a | 0,4 |
| 3001-5000 | n/a | 0,5 | n/a | n/a |
| 5001-10000 | n/a | 0,3 | n/a | n/a |
| 10001-20000 | n/a | 0,3 | n/a | n/a |
| more than 20000 | n/a | 0,24 | n/a | n/a |

Table 1



Base Construction Index [Fig. 27]. Susana Cadavid



Additional Construction Index [Fig. 28]. Susana Cadavid

In this order of ideas, we find that to carry out all this procedure we take into account the following:

- The area of the lot in square meters
- Construction index: 0.6
- The base construction index: 2.0
- The index of additional construction: 1.5

To have the results of these data we must perform these multiplications:

- Lot area x 0.6 (occupancy index)
- Lot area x 2.0 (base construction index)
- Lot area x 1.5 (additional construction index)

So,

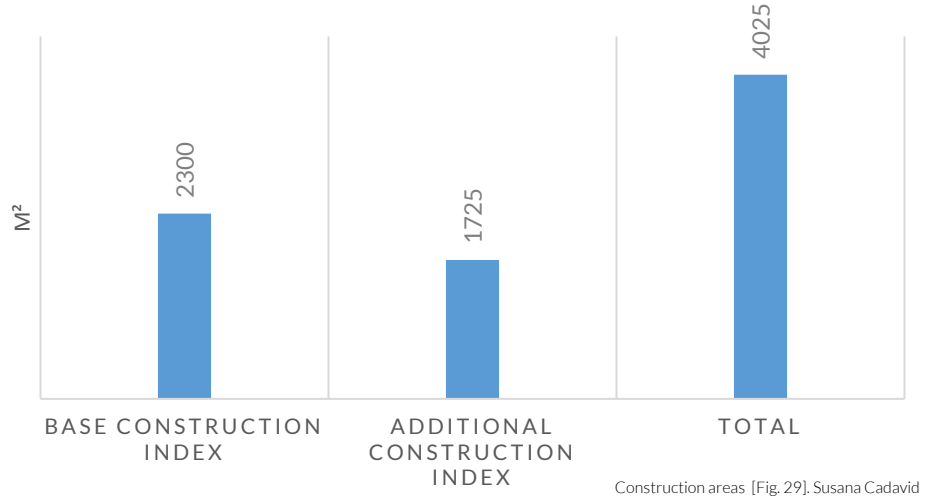
- 1150m^2 (area) x 0.6 (occupancy index) = 690m^2 of 1st floor occupancy.
- 1150m^2 (area) x 2.0 (base construction index) = 2300m^2 built
- 1150m^2 (area) x 1.5 (additional construction index) = 1725m^2 built

If we add then the base construction area plus the additional construction area, we will obtain: 4025m^2 which would be the maximum square meters to which our project could reach, without forgetting that on the first floor no more than 690m^2 can be built.

Each of these procedures must be carried out by anyone who has a lot and wants to develop a project to ensure that the city is not overcrowded and that each one respects the limits set by the POT, for the benefit of the Cali community and for the nature that surrounds us.

RESUME OF DATA FOR CONSTRUCTION AREAS

- Lot area: 1150m^2
- Lot status: Not built, enclosure wall
- Treatment: Moderate consolidation (c3)
- Activity area: Net residential
- Occupancy index: 0.6 = 690m^2 of 1st floor occupancy
- Base construction index: 2.0 = 2300m^2 built
- Additional construction index: 1.5 = 1725m^2 built
- Top construction index: 3.5 = **4025m^2 built**



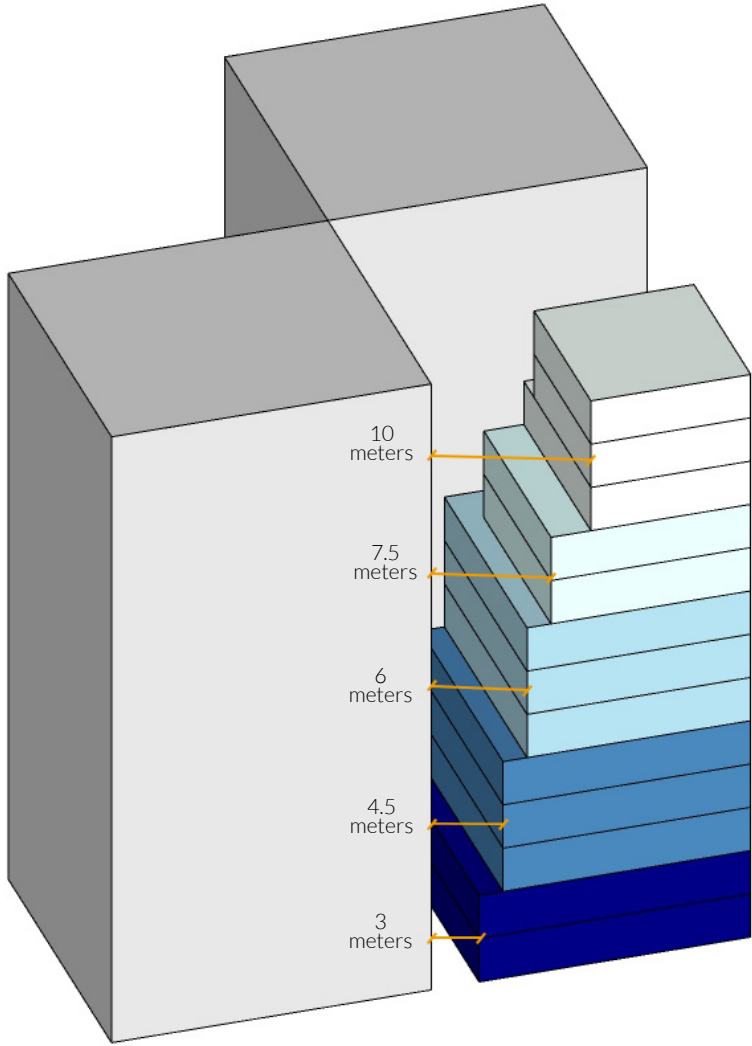
DISTANCE TO RESPECT BETWEEN BOUNDARIES

In order to understand the normative of Cali, Colombia the following paragraphs are the translation of the norms of the Plan de Ordenamiento Territorial of Concejo de Santiago de Cali (2014) as:

- 1. Set back:** To achieve the licensed build-ability, the following conditions must be met with respect to subsequent information:
- a. In buildings between dividing estates, subsequent setback will be required from the ground level or from the upper plate of the basement, with the dimensions established in the table of subsequent insulation. In the corner properties, all the isolations will be considered as lateral set back, starting from the ground level or upper plate of the semi-basement; In any case, the lighting and ventilation patio that is compliant must comply with the minimum dimensions established in paragraph 10 of this article.
 - b. When opposing dividing premises are included, the subsequent setback can be eliminated, but in any case it must comply with the ventilation and lighting regulations established in this Agreement. Opposite dividing estates are understood to be those that share the rear boundaries.
 - c. Subsequent isolations will be governed by the provisions of the following table:

| number of floors | rear distance |
|------------------------|-------------------|
| from 1 to 2 floors | 3 meters |
| from 3 to 5 floors | 4,5 meters |
| from 6 to 8 floors | 6 meters |
| from 9 to 10 floors | 7,5 meters |
| from 11 to 12 floors | 10 meters |
| from 13 to more floors | 1/3 of the height |

Table 2



Set back [Fig. 76]. Susana Cadavid

- 2. Lateral sets back:** to achieve the licensed buildable area, the following conditions must be met with respect to lateral set back information as:
- a. Adjoining buildings may be attached. When a building exceeds the height of an adjoining building, it must leave side set from the adjoining height, taking into account the total number of floors of the building, as established in the side setback table.
 - b. When a building does not adjoin another, it must be governed by what is established in the lateral set back table, except when the Urban Planning Unit determines the standard.
 - c. The lateral set back is staggered according to the height of the building
 - d. Lateral setback must be governed by the provisions of the following table:

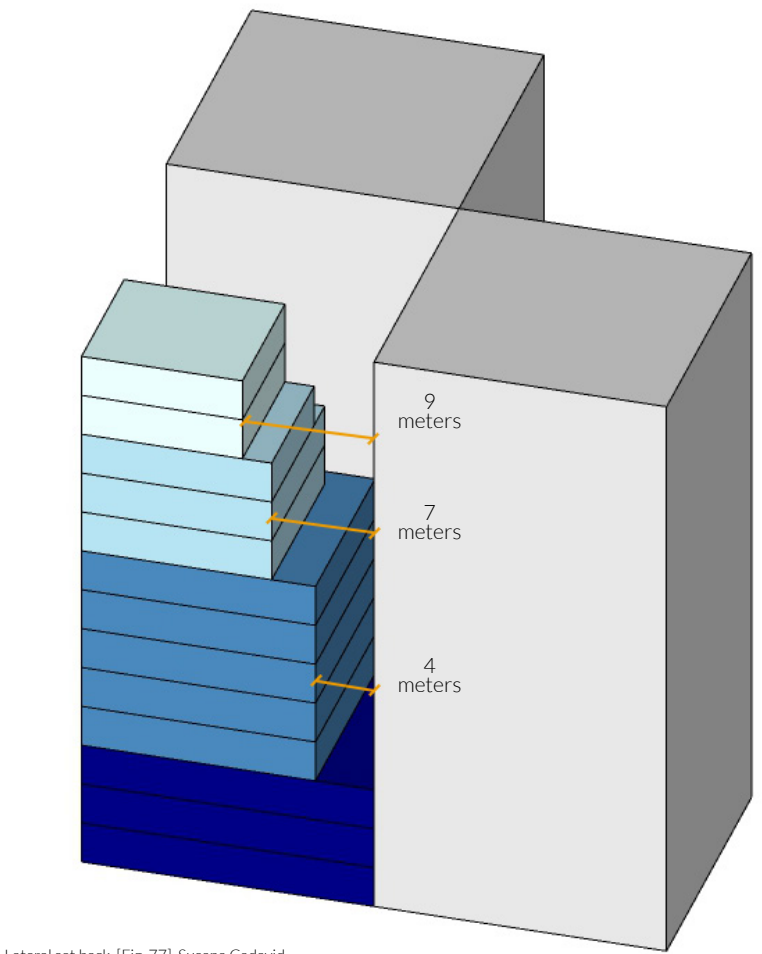
| number of floors | rear distance |
|------------------------|-------------------|
| from 1 to 3 floors | 0 meters |
| from 4 to 8 floors | 4 meters |
| from 9 to 11 floors | 7 meters |
| from 12 to 13 floors | 9 meters |
| from 14 to more floors | 1/3 of the height |

Table 3

The insulation should be measured starting from the ground level or top plate of the semi-basement.

e. The building or buildings for residential use that are developed on a property or in a group of properties that add up to an area equal to or greater than 1,500 square meters (1500m²) must provide insulation against neighbouring properties from the ground or plate level. Top of the semi-basement. Isolations should be calculated according to the tables for subsequent isolations and against neighbouring properties.

f. When the subsequent isolation coincides with the isolation against neighbouring properties, the greater should be left.



Lateral set back [Fig. 77]. Susana Cadavid

3. Set back in clusters: The minimum insulation between buildings belonging to a group will be governed by the following provisions:

- a. Buildings of up to five (5) floors: between butts three (3) meters, between butt and facade of four and a half meters (4.5) and between facades of six (6) meters.
- b. Buildings of six (6) to (10) floors: between butts four (4) meters, between butt and facade five and a half meters (5.5). And between facades seven (7) meters.
- c. Buildings from eleven (11) to fifteen (15) floors: between butts five (5) meters, between butt and facade six and a half meters (6.5) and between facades eight (8) meters”

According to what have been explained at the beginning of this chapter, for the realization of this project, I have selected the next maps as the main maps, which I will explain below why they are important and how later in the project it is expected to make known the why, the how and why the following maps were taken into account:



ECOLOGY STRUCTURE

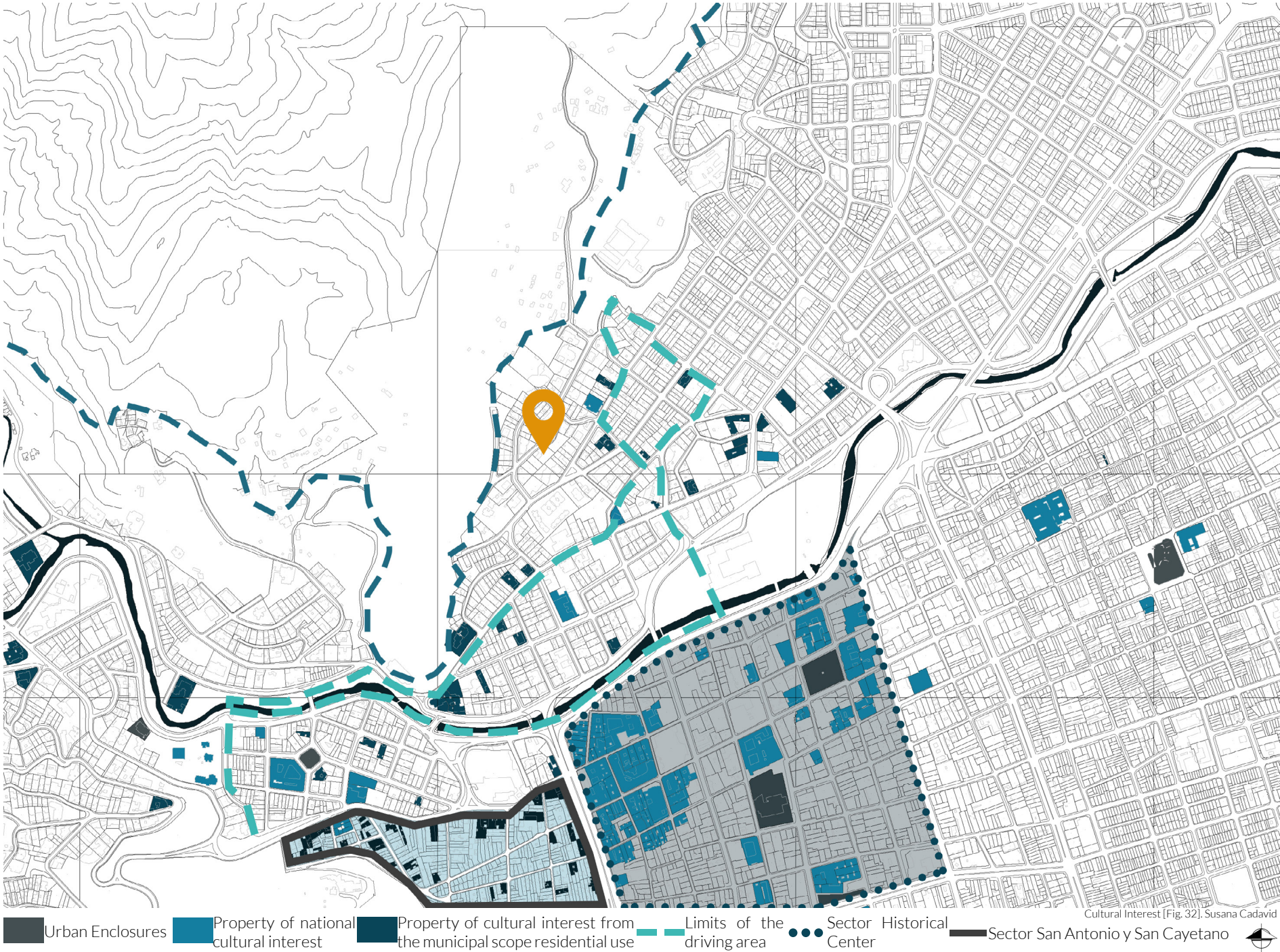
The city of Cali has been characterized by having many green corridors among its road corridors that visually feed the city, give citizens a break, and that constantly makes up the city. That is why it is important to focus on these ecological corridors to see how far they are from the area to be treated, how close they are if they can be observed through a direct visual connection, or in what way a neighboring corridor can be generated to the sector.





CULTURAL INTEREST

According to the Colombian population, the cultural importance is gaining more and more strength, it is already more normal to hear someone talk about plays, theatre, museums, than before. This is something that I found fascinating about Italy while I was doing my master's there, the idea of being able to go on a Saturday afternoon to a museum, to a park to spend the afternoon, that culture of what you have in the city and how you Take advantage it seemed incredible to me, that is why I have decided to use this map to be able to recognize that the area to work is really close to all the tourist part of the culturally speaking sector. We can find too many museums, libraries, traditional houses and even a whole neighborhood that is part of the heritage. This in order to create that cultural connection with what exists, without leaving aside what we are creating.

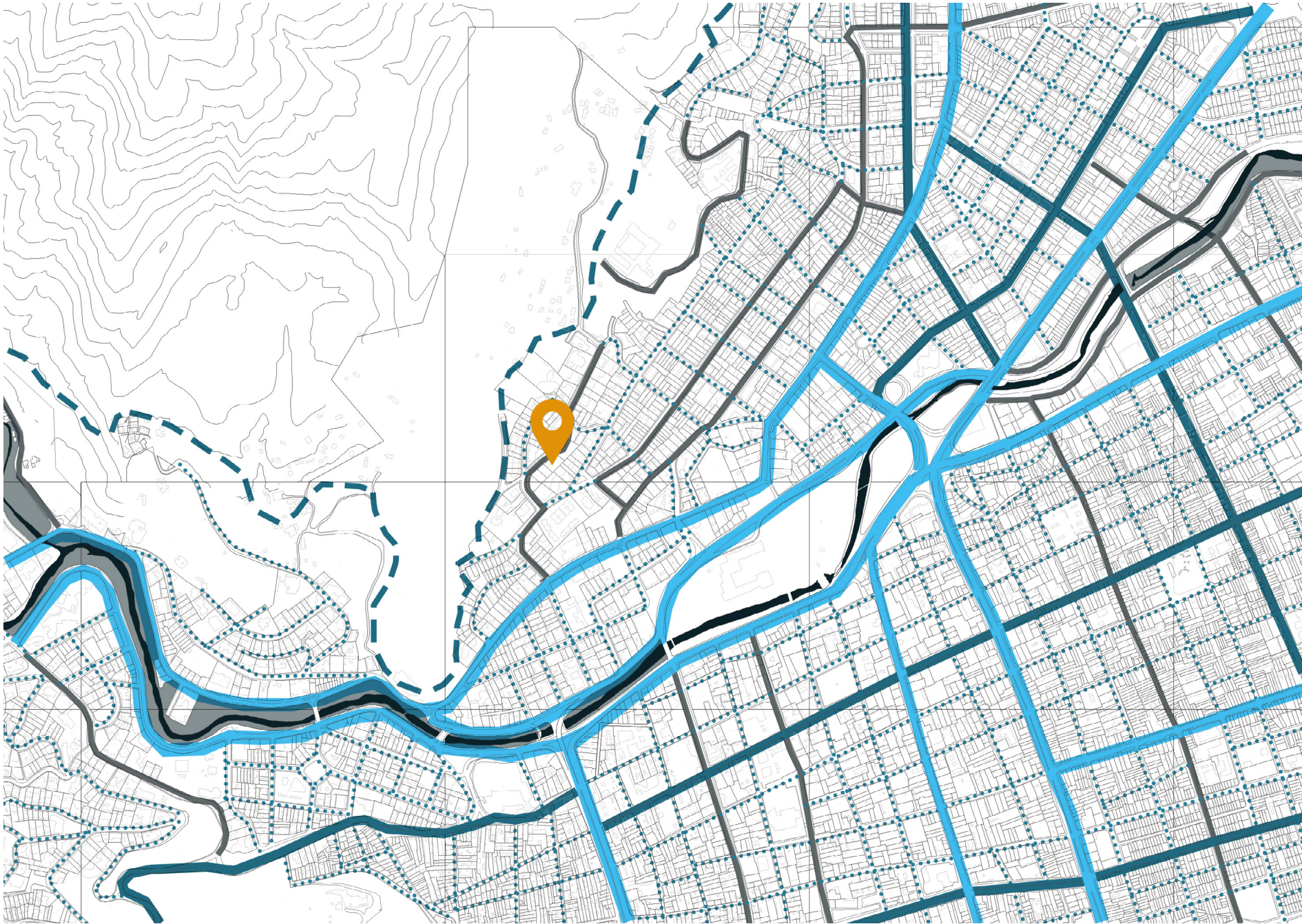


Cultural Interest [Fig. 32]. Susana Cadavid



ROAD HIERARCHY

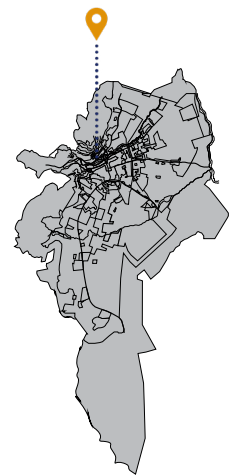
It is always important to know how to get to a place, how to get out of it and how the connections really are. That is why this map is key to find the accesses to the lot, and to be able to recognize that there is so much noise pollution in the sector depending on which road is in front of the project, to be able to take action when opening or closing to her.



■ Road main artery
 ■ Road secondary artery
 ■ Collector road
 ●● Local road

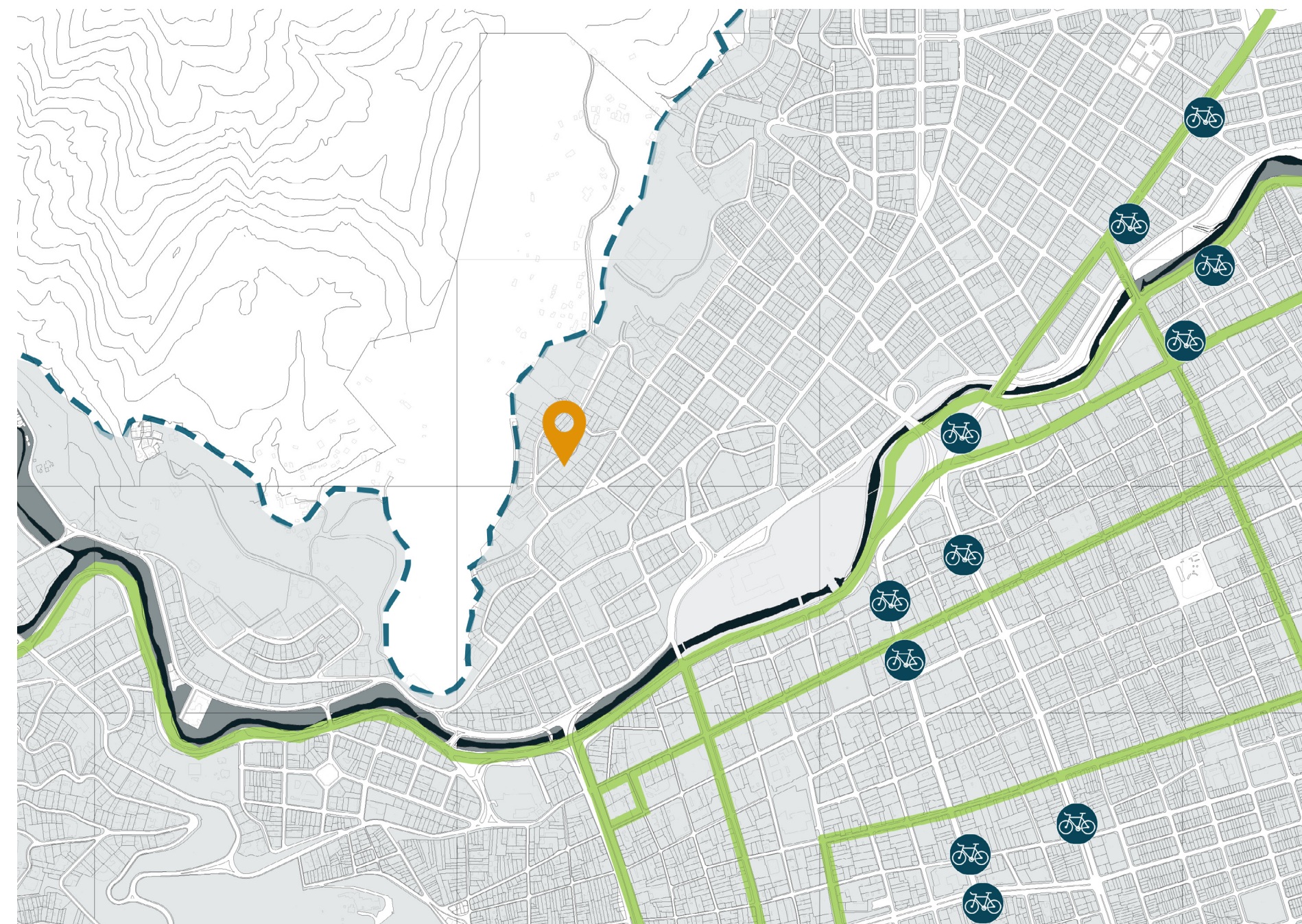
Road Hierarchy [Fig. 33]. Susana Cadavid





BIKE PATHS

This map seemed interesting to me because the Colombian culture is changing more and more towards environmental improvement, human beings every time we realize that a traffic jam can take up to 3 - 4 hours a day depending on the city in which that we live, the distances that we have to cross and the hours at which we make our journey. That is why more and more people are using public transport (which, if I compare it again with Torino, public transport is 10 times better than here in Cali) but little by little we are shaping the city that allows them to citizens we can calmly enjoy these routes that give us more life. That is why, although the cycle routes are only as proposals to be carried out, it seems important to take them into account in order to see how far or close the project will be to them, or how I should do to connect the proposed cycle routes with the draft.



Proposed bike path

Bike parking proposed

Bike Paths [Fig. 34]. Susana Cadavid



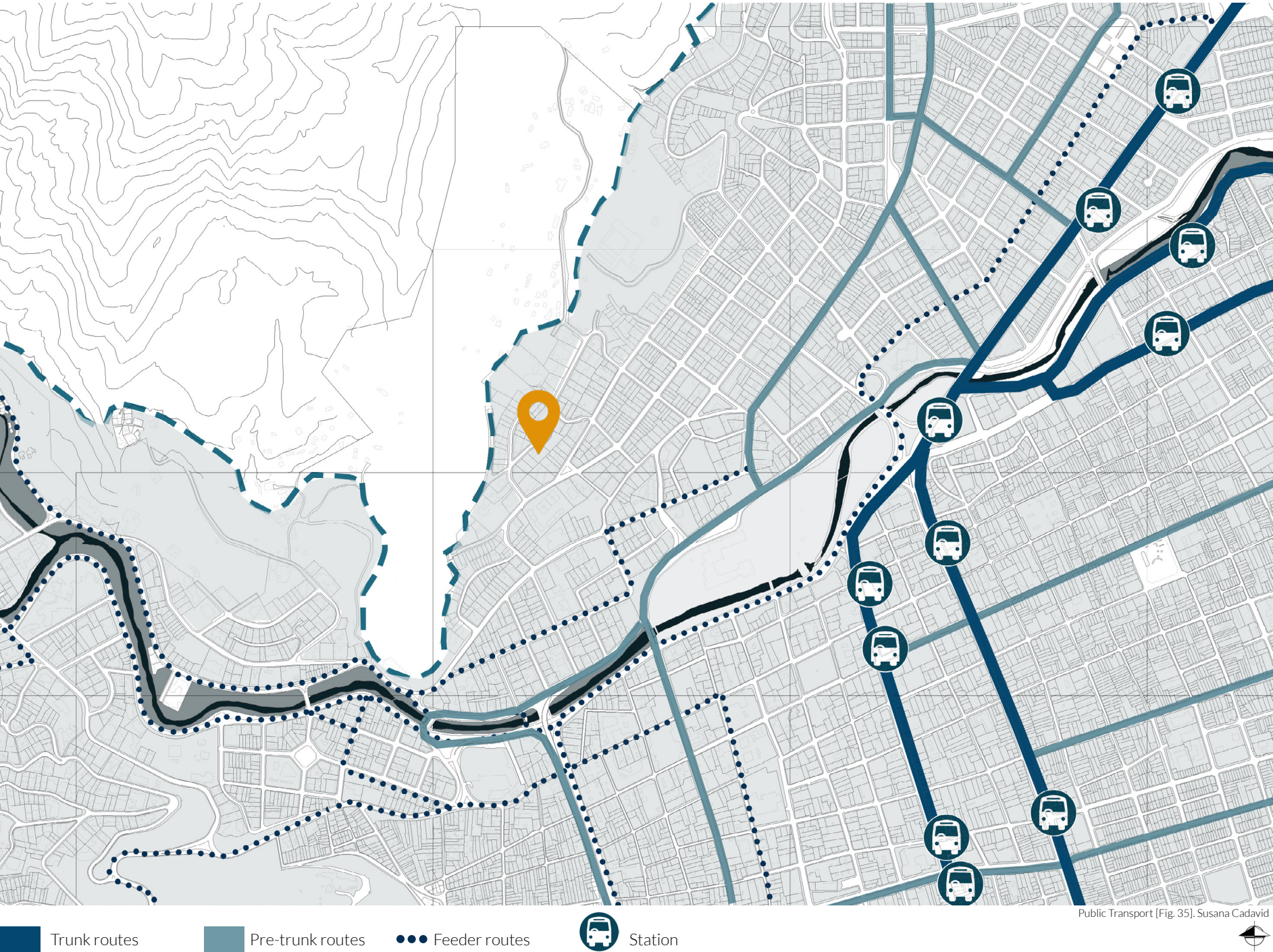


PUBLIC TRANSPORT

As I mentioned earlier, public transport in Cali, Colombia, or in general in all of Colombia is used incorrectly, since there is a lot of insecurity in them, people do not fully trust in using it, the distances it travels and where The arrival of public transport, which is known as the MIO (Massive Integrated Western) system, does not cover the largest number of sectors of the city and therefore people prefer to use private transport (which only generates greater vehicle concentration and more traffic but also pollutes)

However, citizens do not have that sense of belonging to the city and to the things that the city offers us as such, it is very sad to observe how the MIO stations and the buses themselves are damaged by scratches, graffiti, which only damage the image of public transport that the city has.

However, we can see how there is a feeder route that passes close to the work area (two streets below) that allows more direct communication with the city. And further down the feeder route, we find the pre-trunk route, which is the one that distributes the trunk through the city.



Public Transport [Fig. 35]. Susana Cadavid



EQUIPMENTS

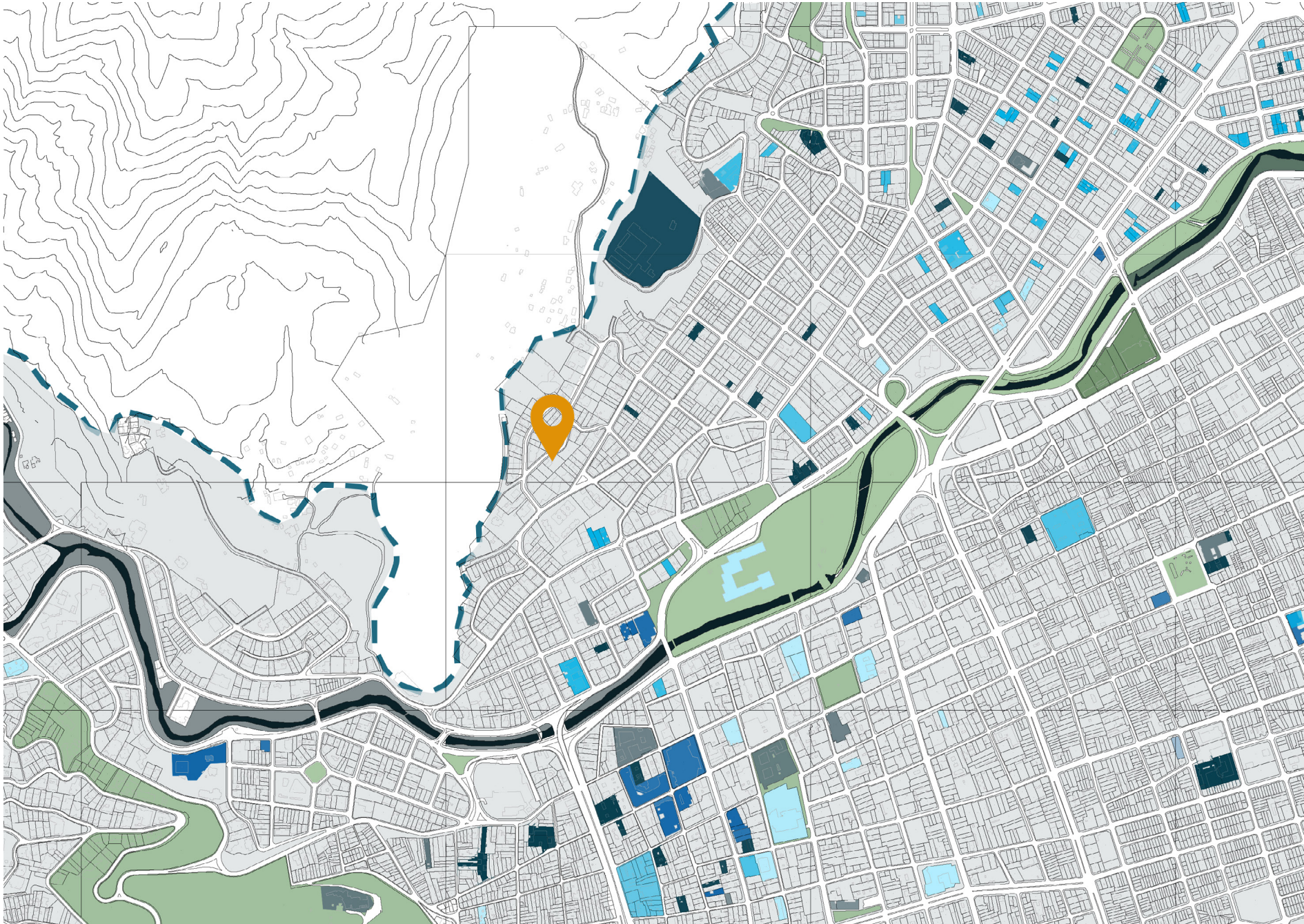
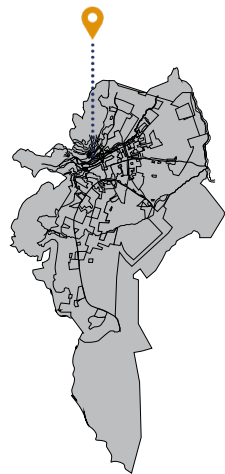
It is important to recognize what urban facilities we have around the project to see in what way they can be complemented with it, or in what way we can connect our project with them. Around our sector, we find as urban collective facilities primarily education centers, which allows us to recognize that the sector is a sector where pedestrian traffic is provided and provides safety by having so many educational centers nearby, in addition, these we also have a nearby health center and a cult. Without leaving aside, as we mentioned above, that the sector is strategically located near all the cultural and heritage areas such as San Antonio, however, it also has neighboring cultural facilities.

Another of the main facilities in the sector is a shopping center called Centenario, which houses all kinds of supplies for daily living, which strengthens the importance of the project's location.

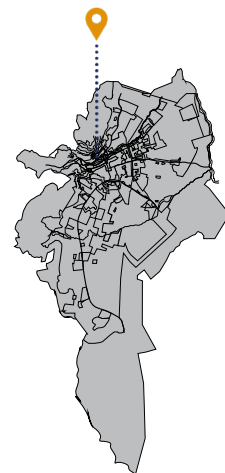
Neighboring the sector, there are all kinds of well-known restaurants to spend the afternoon - night, there are several hotels that are considered well located due to their proximity to Simón Bolívar Park and La Retreta Park, and the current Bulevar del Río, which is one of the most popular attractions for tourists.

As for the basic urban service facilities, we only find the public administration headquarters.

It could then be concluded that being close to educational centers, couples with young children who go to schools and can have their education close to home could be considered as the main user objective in order to save transportation costs to the school. And in time to travel distances. Due to the proximity to all the cultural part, it is also possible to have older young people who want to become independent, live close to all the cultural part, and the wealth of identity that is needed to generate that sense of belonging and create a city.



Equipments [Fig. 36]. Susana Cadavid

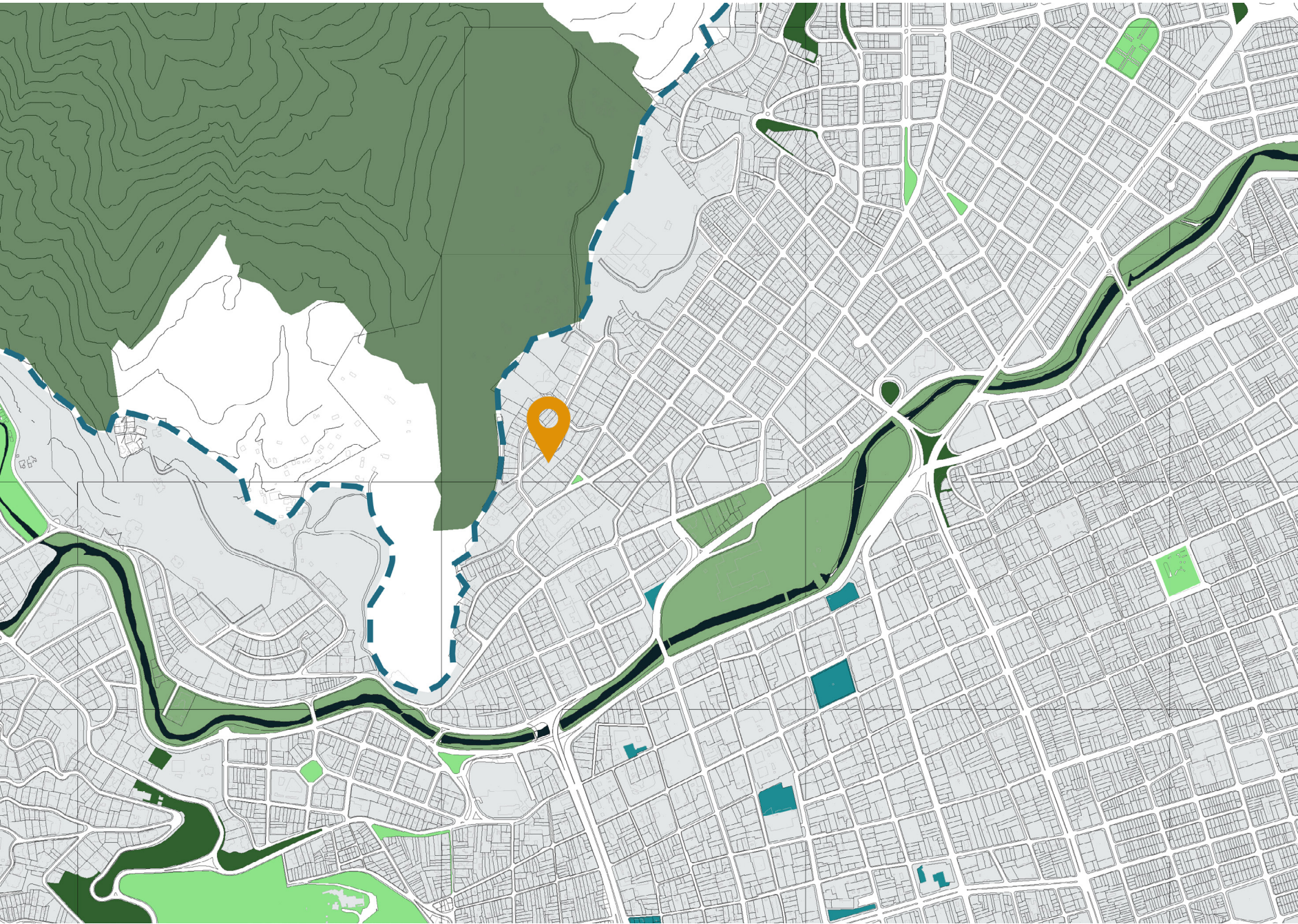


PUBLIC SPACE

One of the most emblematic places in the city is the Bulevar del Río, which is known for being the pedestrian street that collects all the history of how the city began, the traditional architecture, and one of the main churches of the city. The park of the poets, the retreta park, the Simón Bolívar park, and the Jairo Varela square, which are in the sector of the mayor’s office, the notary, and the government of the city. All these spaces are accompanied by the Cali River that runs through part of the city, generating public green spaces that can be used as public spaces for the benefit of the city’s inhabitants.

That is why we find a succession of nodes of public spaces that hug the river depending on the location, if, for example, we continue to the east of the city we will find Los Gatos del río, which is another well-known space that provides the community a pedestrian crossing to jog, walk, exercise, sit and watch the river, chat and enjoy the restaurants around.

All these spaces refer to the environmental corridor that the city has in that sector, giving in one way or another greater impact to the society that inhabits and enjoys this environmental wealth.



Park
 Square
 Green area
 Eco-park
 Environmental corridor

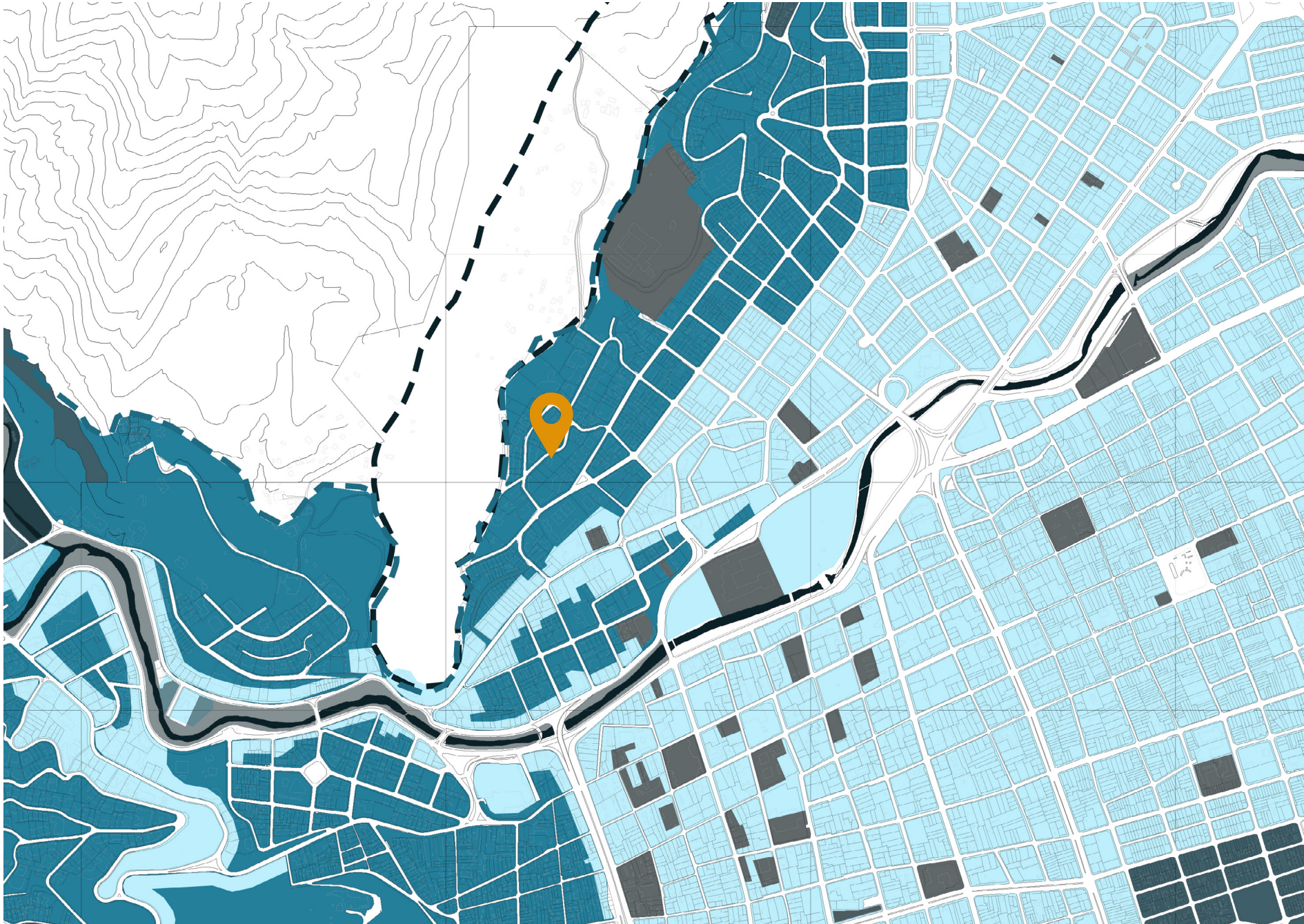
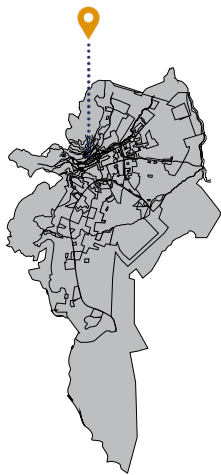
Public Space [Fig. 37]. Susana Cadavid



AREA OF ACTIVITY

In the land-use plan, different typologies are developed for the adequate distribution by activity areas in the city, such as mixed activity area (residential and commercial), industrial activity area, residential activity area net, and area of predominant residential activity and endowments. That is why we find that only residential activity areas can be developed in the sector.

Personally, I consider that this has its advantages and disadvantages if we talk about the city since the city is sectorized and allows everyone to know if they need things from the industrial zone and they know where to go, in this case, one would not worry about security either, noise pollution, visual pollution, and especially environmental pollution. However, when we talk about other types of services that are sectorized and are services that one could use almost daily, it becomes more of a complex issue since it generates more displacements between services, more congestion for the same reason, and more fragmentation between the apples of the sector. Some places around the world can work as a good example of this, at it has several services in the same block solving many traffic congestion, more recognition among the citizens of the sector, greater security in the neighborhood since each one knows the other, and therefore greater communication and creation of the city as such.



Net Residential Mixed Equipments / Endowments Predominant residential

Area of activity [Fig. 38]. Susana Cadavid



STRATIGRAPHY

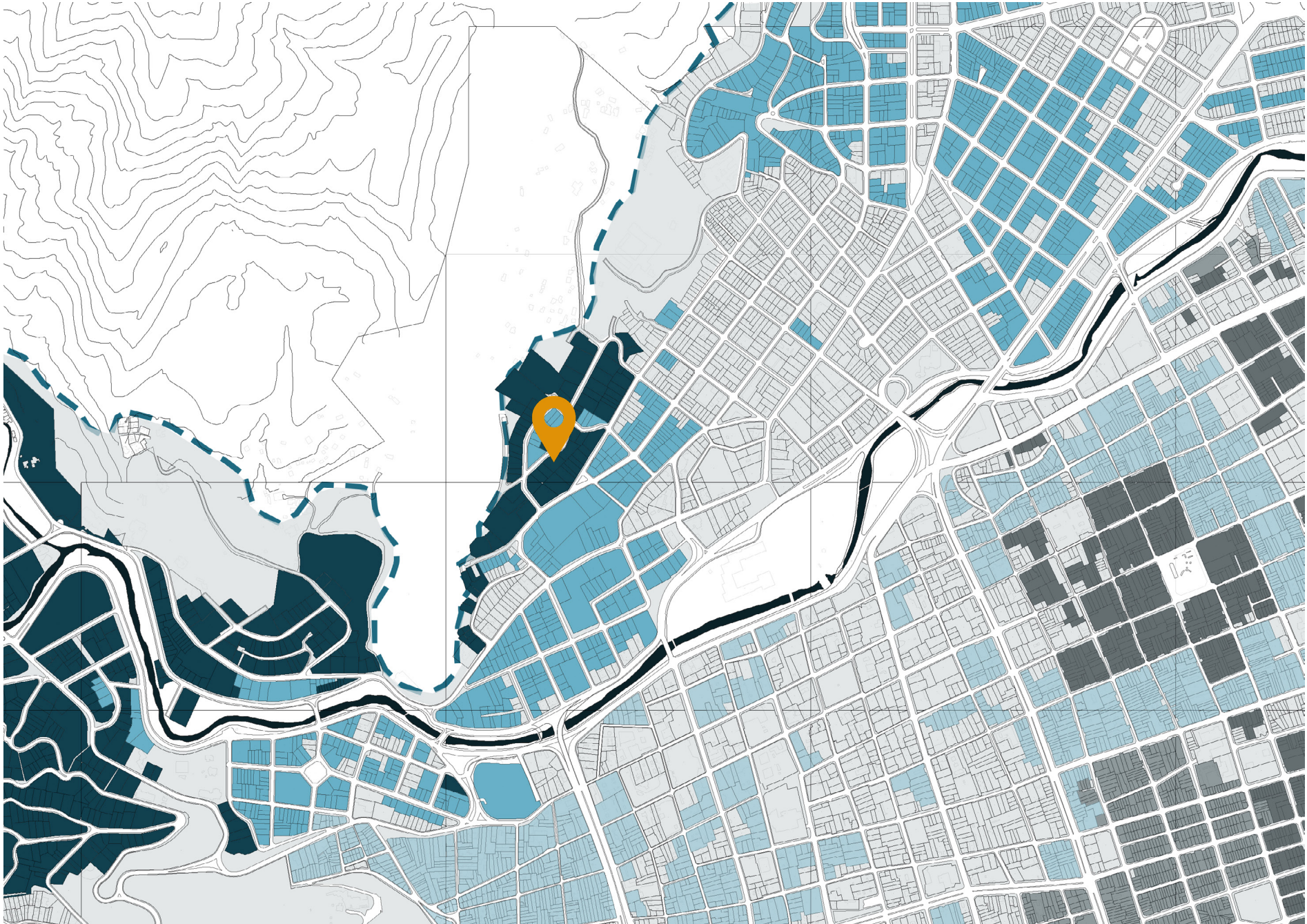
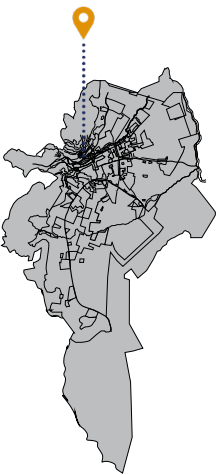
In Colombia we find zoning by social strata, where housing is actually built in a certain sector for a certain social class that is seen thanks to the rates of public services, the social strata range from 1 to 6, where 1 is the poorest and 6 the richest. In this order of ideas, strata 6 pays the most in public services and taxes, and stratum 1 the opposite.

We could even mention that of the highest social strata such as 5 and 6, a percentage is paid for strata 1 and 2, such as 20%. 20% of what is charged on services for these strata is destined for the lowest social class.

This map is important to be able to recognize what type of project would be in accordance with the social stratum, depending on the location. Since it is useless to develop a social interest housing project in stratum 6 (as is the case of the work area to be developed) for many reasons, including:

- The people who would go to live there, if they really do, would not be in a position to pay for public services in full.
- The finishes of a social stratum house and the spaces in terms of size are not striking for a stratum 6 society, since they remain small and do not include luxurious ones.
- Due to communication with public transport, which in this case is scarce, it would significantly affect those lower strata in terms of ease of transport, since normally strata 6 are those that have private transport and that is why the Public transport also does not reach the site to be intervened.

That is why it is important to know this map since it solves some questions regarding the objective of the project to be carried out.



Social class 6 Social class 5 Social class 3 Social class 2 Social class 1 Social class 4

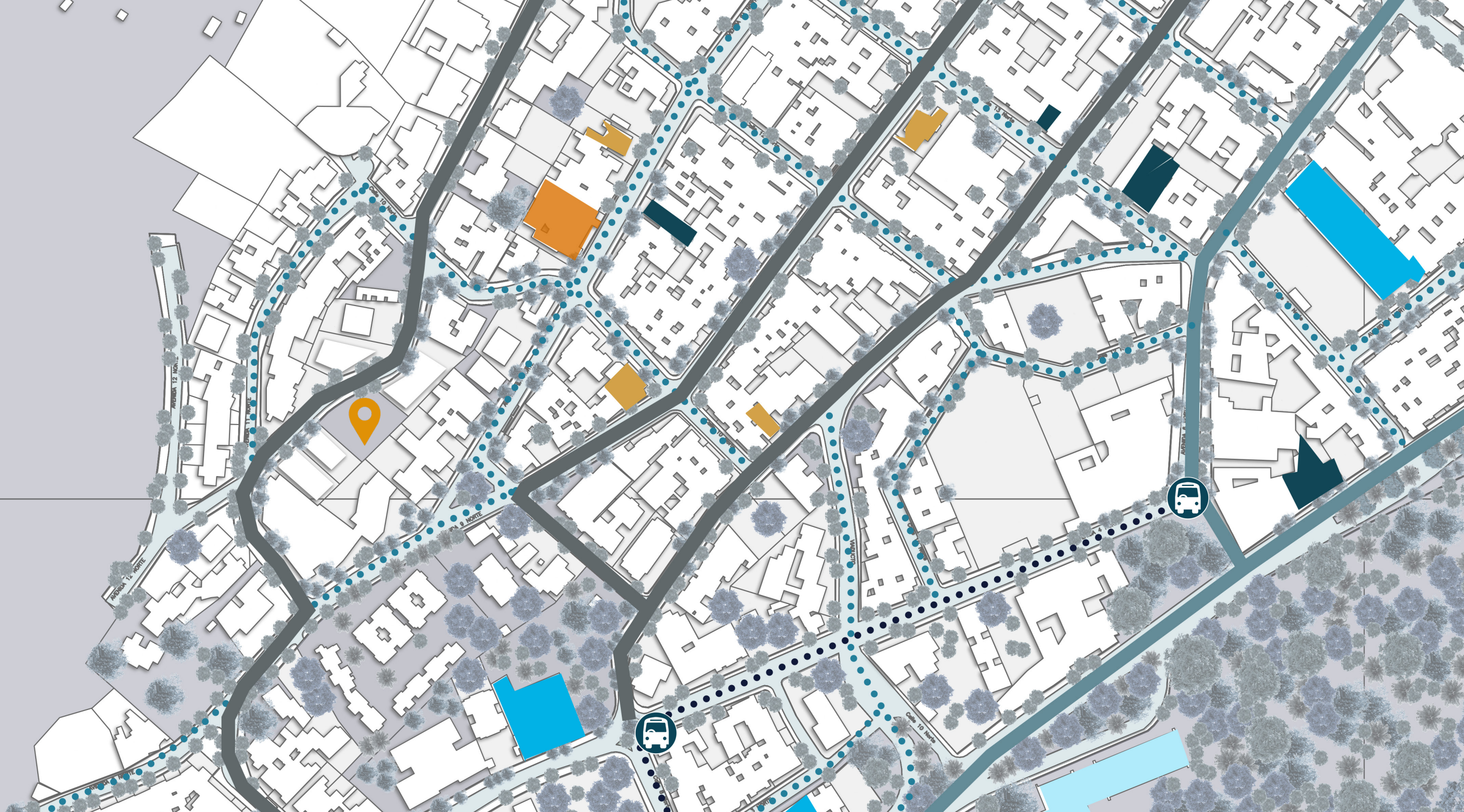
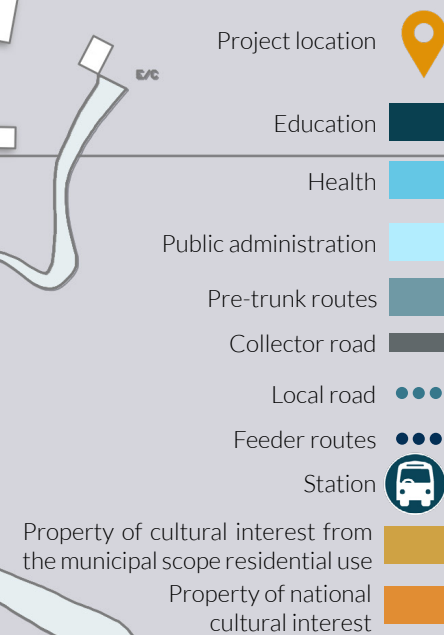
Stratigraphy [Fig. 39]. Susana Cadavid



ZOOM IN

A sector approach is made to be able to analyze more closely what is currently happening out there. With this map we find some of the variants previously analyzed, however, they are not all due to the complexity of understanding. In summary, we have that the sector is mainly residential, and some parts are mixed (those closest to the river), and that this entire sector is stratum 5 and 6 according to what has been seen before.

We also find that there is no type of approach for the cycle route nearby, the closest park is either the river or the mountain of the Cerro de las Tres Cruces that is ecologically protected, however, no public space is relatively close to the area of work to develop, however, we find some facilities and some neighboring cultural places.



3. ANALYSIS OF THE RELATIONSHIP BETWEEN THE PROJECT AREA AND THE OTHER SIGNIFICANT PARTS OF THE CITY

According to what has been seen above, in terms of detailed analysis of each of the maps that are considered essential when carrying out this project, it is important to recognize not only why they are, but also why. It turns out that the place where the project is related is an important place in the city for residential housing since as analyzed before, it is located in a quiet area, with good orientation, ventilation, and visuals, but above all a sector that is connected with the important and significant points of the city, for example, anyone who is going to visit Cali, Colombia will be invited to know each of the places that are in the images on the right, and the advantage is that the work area is very close to all of them.

The place is not only connected by the roads that distribute these important points, but there is also a visual connection, this is an advantage over how the projects are related when we start to delve a little more into the analysis of how a single positive building affects or negatively to a sector, which we will see later, but the fact that the work area is visually connected to the Cerro de las Tres Cruces, the Colina de San Antonio, and Cristo Rey is already a lot to say.

The inhabitants of Cali, who probably choose Juanambú to live, will want to enjoy the outdoors to play sports and in just a few minutes they will find the entire green corridor that accompanies the Gato del Río, the air corridor that the river generates among the natural forest that Surrounding it is the perfect complement to exercise. However, they will want to visit the restaurants in San Antonio, El Peñón, and Granada. The most emblematic sectors of the best restaurants in the city are minutes away, not counting the thousands of tourist sites and museums that are nearby.

Being located, here is a unique opportunity to reconnect with the sense of belonging to the city and continue in one way or another to make, create and build the city from the human perspective.



CONCLUSIONS

Now, when we enter commune 2 where our project is located, it is important, as mentioned above, to be able to know and determine which are the variables that will be carried out to develop the project, for us the following is important:

- The general regulations of the sector: to know what distances should be left between the lots according to the location of each of them and the heights designed for the development of the project.
- Occupancy, construction, and additional rates: to know how much is the amount of square meters that can be built in the entire project.
- The extensive analysis of urban maps, presents a class of specific regulations and that allows in one way or another to find answers regarding the approach of urban proposals and specific proposals.

However, according to the above, we could conclude with a SWOT thanks to the following maps:

| Strengths: | Weaknesses: | Opportunities: |
|--|---------------------------------------|---|
| Locality | Lack of cycle route | Improvement of connection with public service |
| Visuals | Lack of public transport | Proposal of public space |
| Connections with tourist sites | Platforms in a state of disrepair | Private project |
| Connection with cultural areas | Lack of green in the immediate sector | |
| Nearby natural corridor | | |
| Educational facilities | | |
| Health facilities | | |
| Purely residential area (noise and environmental contamination is minimal) | | |
| Medium / high social class | | |

CHAPTER IV

BUILDING IN A SECTOR



¿HOW DOES ONE BUILDING POSITIVELY AND NEGATIVELY AFFECTS A SECTOR?

I will begin by answering this question from my point of view according to everything I have learned during my university career at the Pontificia Universidad Javeriana in Cali, Colombia, and in my master's degree at the Politécnico DI Torino in Turin, Italy. I firmly believe that buildings can affect either positively or negatively a sector depending on many variables, it really is a mix of everything, the diverse and primary activities that influence the density of people, and the different hours of the sector. For example: When a project is very large, such as a university, a facility, a metropolitan park, it is practically an edge or a border that is inhabited at a specific time of day and at other times, particularly at night, it is completely alone. According to the above, the security of these places at night without the presence of restaurants, bars, or different activities that are used at night, will be affected, so being so large it is very difficult to keep your eyes on everything the time to provide complete security, as it would be easier during the day since the passers-by themselves would fulfill the function of protecting the sector with the mere presence.

This is a clear example of a building/equipment, however, to this example, several variables that affect negatively could be added, such as:

VISUAL BLOCKING BETWEEN NEIGHBOURS

This variable is most of the existing or future neighbors of the building. A clear example is that the building on our side did not open the balconies only towards the main façade for better visualization, but also opened them towards the empty lot (our work area) without considering that in the future it could build a neighboring building. This results in visual blocking and depending on how we develop our project, affects the privacy between neighbors as well.

MOBILITY

Being a building generates greater density and therefore greater road traffic. As I mentioned earlier, we Colombians do not have a very well-equipped public transport system and therefore must have their private vehicle, which generates congestion in the sector thanks to the entry and exit of vehicles, mostly at peak hours (departure time to work and back)

PRIVACY

The privacy of buildings is affected according to how one resolves their own building and considering the constructions that could be

carried out in the future. With this in mind, it is important to recognize where the best visuals are, what work areas I have around me, and to know that according to the Land Use Plan (POT) what I can do on my lot, the neighbor will surely be able to develop the same. Taking this into account, it is preferable to know which neighbors I could count on in the future, with which not, and find the right way to provide greater privacy to my users, and in the same way to existing neighbors. For example, looking for solutions such as closing myself off to existing neighbors, generating in one way or another a facade that is pleasing to the eye, and not simply a cylinder head, since the idea is not only to think of one but also on the composition of the city.

AMOUNT OF SUNLIGHT

Negatively speaking, this can affect when we talk about the security of the sector, since a building generates a lot of shadows, that is why the amount of light that enters directly to neighboring roads will be affected and accordingly to the time of day the light input will be less than what already exists after the building is built. That is why this variable must be considered: how much shade the building gives and at what hours to be able to create a lighting plan in the sector that can contrast the unintended shadow effect.

NOISE POLLUTION

In this regard, noise pollution can be due to the density that the building is going to have since the noise that can generate 30 homes is very different from the amount of noise that a single home could generate. In addition, it could be considered noise pollution depending on the same density, but vehicular that attracts the building to the sector, to the extent that the traffic becomes increasingly heavy, and generates more noise for the vehicular amount, especially in the hour's peak.

ENVIRONMENTAL

It is possible to see this variable as something negative from which something positive can be generated, since, in a green area, an empty lot, can be thought of as some space that makes a city and contributes a green to the sector. However, when the lot is a private lot that is not used, building it would generate a specific space that would not be favorable to the environment. Since it would be more visual, concrete and not a green that adds.

HEALTH

Some would think that this issue has nothing to do with architecture, but when creating a building in height, comfort is being generated

in terms of staying active, since having an elevator person basically keep making use of from him, and you forget to have a habit of walking, climbing stairs, staying active. These comforts then generate an increase in the sedentary lifestyle of human beings that increases the risk of suffering from obesity.

COMPETITION BETWEEN BUILDINGS

It could be that among the empty lots that are, depending on the location, the project approach could then generate a competition between the projects themselves to be able to see which is the project that has the best height, with which it is best visual has, the best internal and external building development, and the best economically viable project that can be generated.

SOCIAL BARRIERS

In Latin America, it is normal for cities to be sectorized according to known social strata, the richest are always on one side and the poor on the other. However, this form of construction generates these invisible social barriers.

GENERATE SHADOW

This variable can be considered positive or negative, as mentioned in the previous variant. However, according to the location of the lot, the city where it is located, the climate that normally makes in Cali could be considered positive since it increases the amount of shade in the sector, with respect to the hours of the day, thus generating a climate comfort more suitable for pedestrian traffic there.

IMPROVE THE APPEARANCE

It composes the facade, composes the city, composes the region, since it allows a language to be generated that improves depending on the quality of the facade development, and that allows that according to what exists, it can be read similar or allows make it better and the other buildings would like to improve their facades to have a more unified language in the sector.

DENSITY

A building can allow housing to be generated for a greater number of people in a smaller space, unlike a single-family home, which allows only 1 family to live, the development of a residence building, allows for multi-family housing, and where there was only one family, in a building there can be more than 30.

IMPROVEMENTS IN PUBLIC ROADS

Thanks to the development that takes place in construction, during it the continuous transit of dump trucks for the distribution of materials, and constant passage, generates cracks in the road, and that is why each of the works are normatively committed to ensuring that the public roads remain the same or better than they were before the construction of the building. Due to this, it is taken into account that it is a positive consequence since the conformation of the city is better developed urbanely from the public roads, where the development of platforms, pedestrian crossings, and bicycle lanes approach even thinking about the future or thinking If it is more urban development, something more general and urban can be considered.

APPRECIATION OF THE SECTOR

As time goes by, the sectors are valued, depending on one reason or another, one of them may be the location, the buildings around, the services that complement the sector in one way or another, and the public spaces that exist. If an attractive building is therefore made, a building that breaks schemes, and that can contribute to society, can become a building that sooner or later is valued.

GENERATES MORE WORK

The realization of a residential building generates employment, not only in construction but long before. It generates employment from the architects who design it, the civil engineers, the calculators, the sanitary and electrical engineers, etc. After the design stage, the construction stage follows, where all those who make the building, the workforce, the material transporters, even the same suppliers from where the materials are purchased get work through construction, and finally, when the construction has gone through the white work and all the finishes, the inhabitants come to live the space, but it continually continues to generate employment for the security of the building, cleaning it, the administration, among others.

GREATER INCOME TO THE CITY

Speaking on a larger scale, we can find that the development of a residential building would generate greater income for public sectors such as the aqueduct, energy, gas, etc. since more people arrive to fill the same space, but on a vertical scale. It, therefore, allows more income to be generated in the municipality for which the inhabitants should pay for their homes.

SOCIABILITY OF DWELLINGS

There are areas where a proportion of low dwellings are common, 2 - 3 floors or buildings up to 5 floors. When a building of more than 7 floors is built-in height, a greater functionality is generated for families, and therefore a social relationship between neighbors more common than between single-family homes, since the relationship is more direct.

LASTING OVER TIME

When building, it is important to take into account that architecture affects time, and the idea is that the building can be durable so that it creates society, generates a positive environmental, economic and social impact. Currently, it is widely used that buildings can be flexible or multifunctional so that when the building can no longer remain what it was intended, it can change its use and continue to be functional.

ECONOMIC AFFORDABILITY

Depending on the area where it is developed, it can become economically affordable regardless of the social stratum where the project is carried out, if a cheaper and more affordable price per square meter is generated for the sector, it could become favorable for the building and the sector as it impacts and sells faster in terms of commercial development.

CIRCULAR ECONOMY

There are 10 features that define how the economy should work, for example:

1. The waste becomes a resource: it is the main characteristic. All biodegradable material goes back to nature and what is not biodegradable is reused.
2. The second use: to reintroduce into the economic circuit those products that no longer correspond to the initial needs of consumers.
3. Reuse: reuse certain residues or parts of these, which can still work for the development of new products.
4. Repair: find a second life for spoiled products.
5. Recycling: use the materials found in the waste.
6. Recovery: use energy from waste that cannot be recycled.
7. Economy of functionality: the circular economy proposes to eliminate the sale of products in many cases to implement a system of rental of goods. When the product completes its main function, it returns to the company, which will disassemble it to reuse its valid parts.
8. Energy from renewable sources: elimination of fossil fuels to produce the product, reuse, and recycle.

9. Eco-conception: considers the environmental impacts throughout the life cycle of a product and integrates them from its conception.

10. Industrial and territorial ecology: the establishment of a mode of industrial organization in the same territory characterized by optimized management of stocks and material flows.

This circular economy can be applied in many aspects of life regardless of whether it is architecture or not since it builds a city thanks to an economy that helps the same place where it is generated. The idea is that everything is obtained locally and, in this way, helps the economy of the sector.

CONSTRUCTION AT HEIGHT

Depending on the terrain, the slope may or may not be taken advantage of in terms of project development, since there are projects that prefer not to do anything because of the challenges, according to the slope, however, there are others who see that as an opportunity and not a threat, and projects that impact the sector can be developed according to their proposals at different levels.

CONCLUSIONS

There are some more recognized variables than others to generate those ideologies of a building that positively or negatively affect the sector, such as:

- Landscape: As we saw previously, if a building can create a landscape, respecting the existing environment and contributing to making it a better place for those who live in it.
- Health: A building that is not only capable of generating comfort in its inhabitants, but also conforms to the city, generating spaces to stay active.
- Architecture: A building that can shape the city, considering the existing and the future. That conform sectorized facades and match what is around. Not a building that becomes different and makes invasive contrasts in the environment.
- Density: A building that meets the needs of giving a more comfortable and safe place to a greater number of people in an area where only a single-family home could perfectly inhabit.

• Location: A building that is strategically located, this generates that the inhabitants can in one way or another transport themselves safely, not waste so much time in the public or private vehicle, a location that allows generating awareness and a greater sense of belonging to what there is around.

• Social: A building that allows constant social communication between its inhabitants and the sector where it is located. • Social: A building that allows constant social communication between its inhabitants and the sector where it is located.

• Environmental: A building that is capable of attaching itself to the land in the most appropriate way, being aware of the green that is being removed to build more concrete, the green area that is being left free for use, and the green area that is being proposed for impersonating that green that has been removed. And finally, how the building is conditioned, taking into account the sunlight, and the winds so that it can generate shady places in the sector, places of solar incidence, depending on where the project is located and if it needs more sun or more shade. And how the building is proposed to allow air currents thanks to the winds of the place, creating spaces of permanence in the sector.

STRENGTHS

- 1. Location
- 2. Visual
- 3. Winds
- 4. Urban sector neighbouring cultural areas
- 5. Sunshine
- 6. Neighbour to important areas of the city (parks)

WEAKNESSES

- 1. Densification around massive construction projects in height
- 2. Complexity of economically sustainable project in finding the equilibrium point of sales in saleable area - social area.
- 3. Direct connection to public transport.

OPPORTUNITIES

- 1. Slope incline
- 2. Height growth
- 3. Provide a larger space to store the vehicle
- 4. Generate bicycle parking for the sector
- 5. Walks and pedestrian sidewalks
- 6. Bike paths

THREATS

- 1. New projects in development

CONCLUSIONS

The SWOT approach is carried out in order to understand and understand what aspects must be taken into account when developing the building. It is important to recognize that weaknesses become opportunities to be able to find solutions and turn them into something good for the building, such as direct connection to public transport, which is not precarious but could be better, in that order of ideas, it is possible to propose more direct connections or in better conditions, such as the correct approach to platforms and pedestrian zebras, as well as generating parking spaces for bicycles in the sector, since as we observed previously in chapter III, the area will be intervened by cycle routes that come very close to the building, that will then generate more constant traffic between the inhabitants, thus creating greater security as well.

A bike path could then be proposed that continues to the project, which comes from the one currently planned for the future, having, in the same way, the parking lots that serve the area.

The only threat so far would be the new projects that are being built nearby, that is why later on we will see a chapter of the competition to be able to analyze how our project should be in order to satisfy the needs of the public and exceed to the competition.



CHAPTER V

CASES OF STUDY

Cases of Study Location [Fig. 40], Susana Cadavid

- 1. Energy Living
- 2. Bioclimatic Prototype of a Host and Nectar Garden Building
- 3. El Matorral

In this chapter, we will analyze in more depth 3 case studies that we have selected as references, which we will review in detail in terms of location, relationship with the environment, program, facade, distribution, and each of the points mentioned in chapter IV on as a building can positively or negatively affect a sector, this in order to select some of the things that we believe could work in our project development in order to obtain a favorable result.

The references are in:

- Energy Living: Medellín, Antioquia.
- Bioclimatic prototype of a host and nectar garden building: Cali, Valle del Cauca.
- El Matorral: Medellín, Antioquia.

Between them, they handle very different things that if we select variations between each one we could get something very good. The idea is that after presenting each one, I will present a series of conclusions so that the reader can understand that each one is admirable.

So, not being more, join me to analyze the following references.

1. ENERGY LIVING – M+GROUP

The following text description provided by the architects:

“This building located on southeast side of Medellin, materializes through the addition of rectangular prisms which are grouped in different heights to find the best direction to different places in the city. The program provides housing solutions for single people or couples, with 71 apartments between 53 and 130 sqm of area, with modular and flexible designs spaces that allow different inhabit typologies.

The project opens its perimeter through terraces, balconies and windows overlooking intentionally targeted sites. The arrangement of these prisms generates various scenarios: Views to the south and north of the valley, the river, the nearby mountains, to the far western hills, to the metropolis of concrete and brick. At altitude, the building is composed of a game of full and empty and various typologies of apartments that emphasize individuality over repetition.

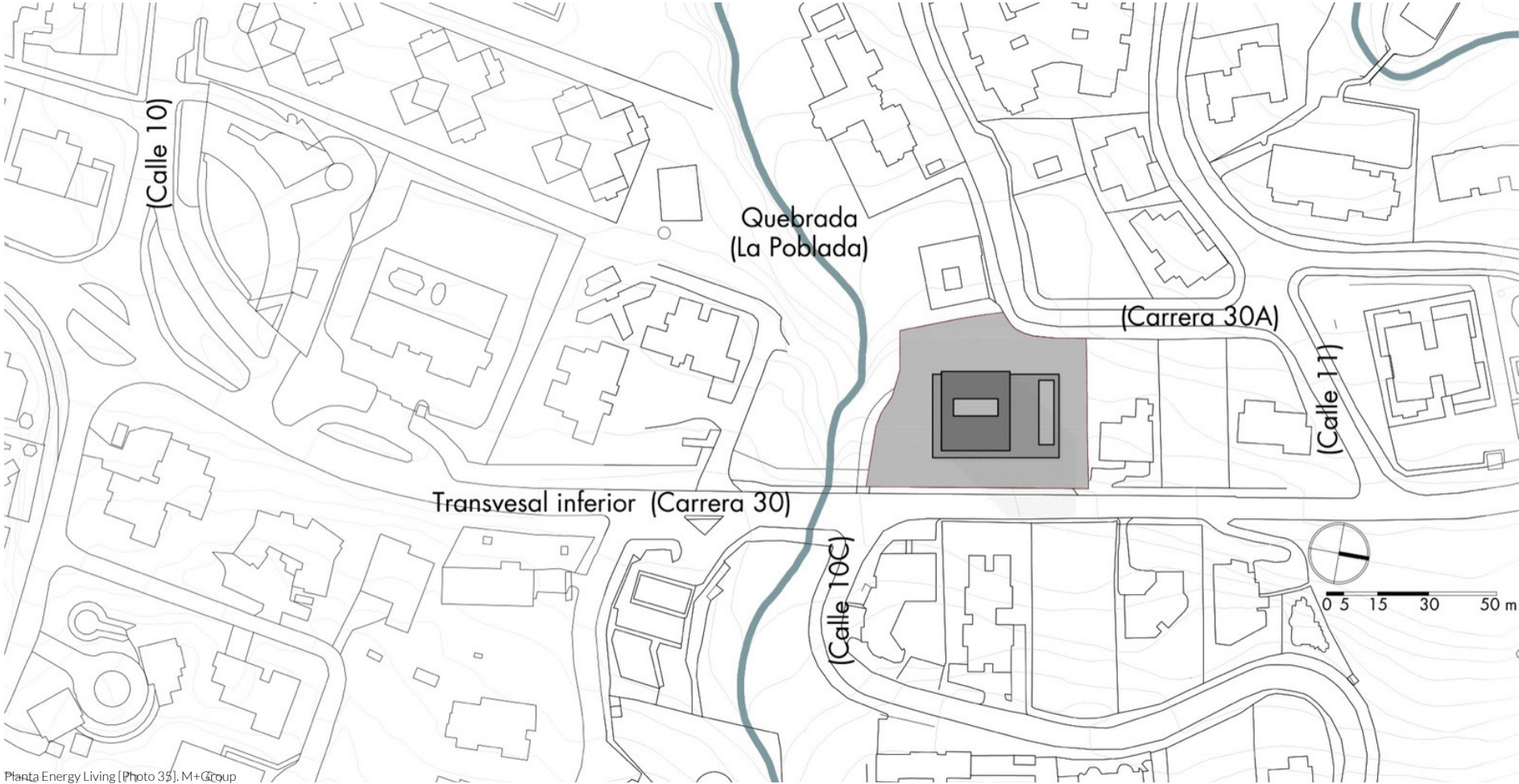
The architectural plan is a square of 21 x 21 m, the vertical circulations and technical areas are in the centre of the building to occupy the perimeter with the apartment units. The base is a volume that emerges from the prisms and defines the facade facing toward the entrance lane, creating a transition between urban and private.

At the lobby, there is a restaurant, administrative areas, and lounges. Social areas of the building are located on the last floor where the gym and wet areas are located overlooking the city.

1. Rectangular volume, which is divided by the number of floors permitted by regulation.
2. Group of levels to generate a rhythm in the facade, two or more levels are integrated, leaving simple levels in between.
3. The simple levels are pulled back with the intention of forming separate volumes.
4. To guide the views to different parts of the city and the mountains surrounding the valley two facades are open to the outside.
5. The openings are oriented to the north – south direction and east -west direction.
6. To emphasize the geometry, some boxes are moved inwards and outwards”. (M+Group, 2016)

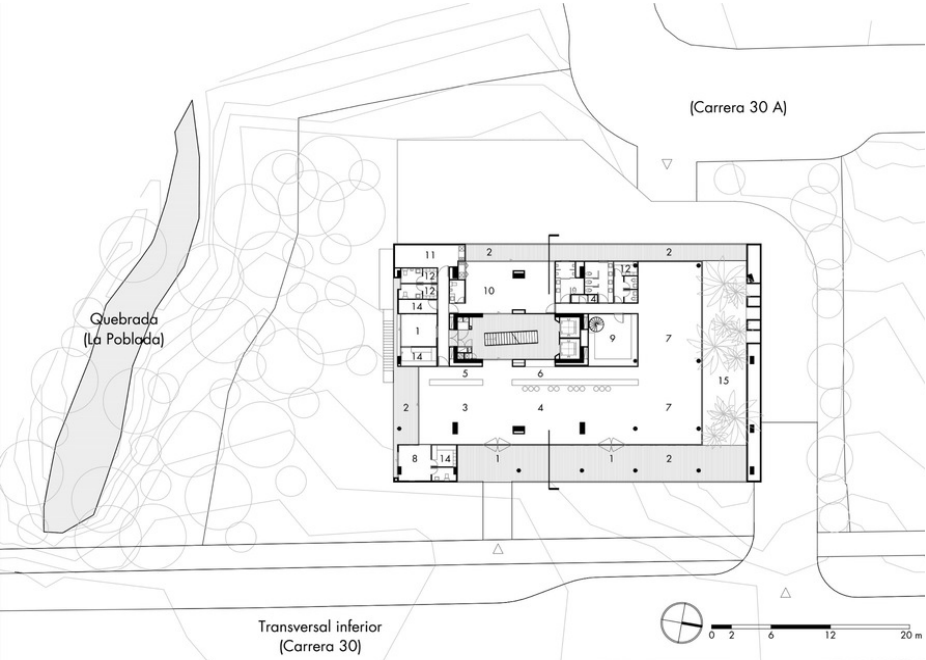


LOCATION PLAN



Planta Energy Living [Photo 35]. M+Group

ACCESS PLAN



Planta Energy Living [Photo 36]. M+Group

Planta de acceso

- | | |
|-------------------|----------------|
| 1. Acceso | 10. Salón |
| 2. Balcón | 11. Empleados |
| 3. Lobby | 12. Vestier |
| 4. Lounge | 13. Lavandería |
| 5. Portería | 14. Bodega |
| 6. Bar | 15. Jardín |
| 7. Restaurante | |
| 8. Administración | |
| 9. Cocina | |

CONCEPT

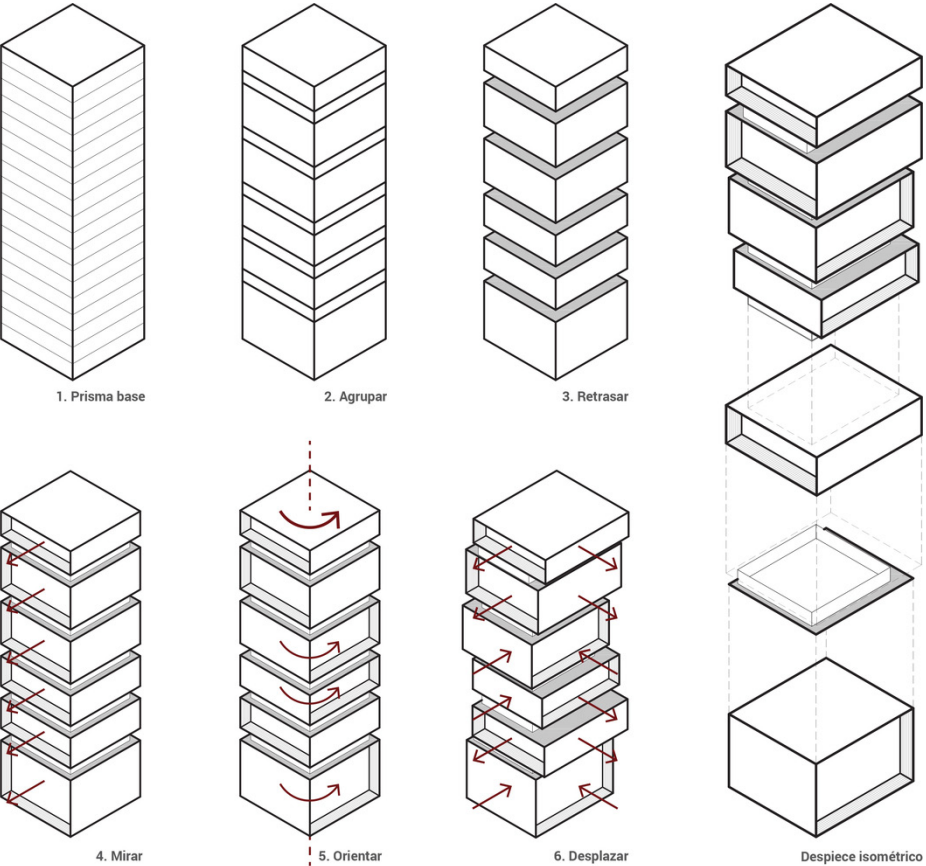
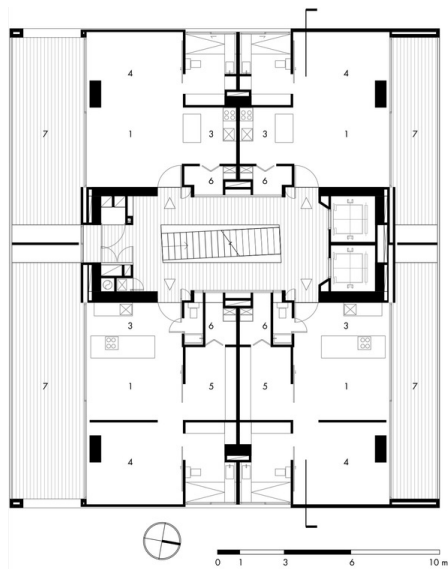


Diagrama Energy Living [Photo 37]. M+Group

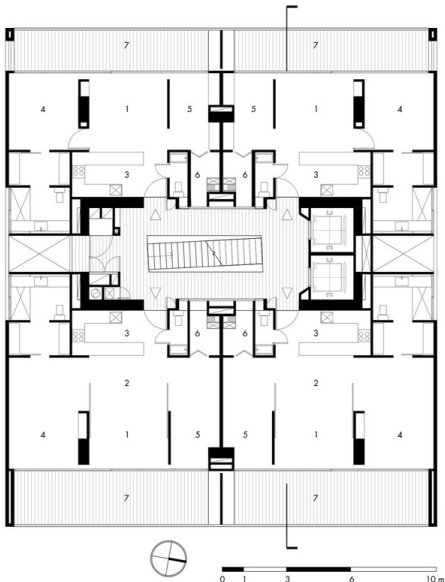
ARCHITECTURAL DESIGN



Planta Energy Living [Photo 38]. M+Group

Planta típica (orientación Norte- Sur)

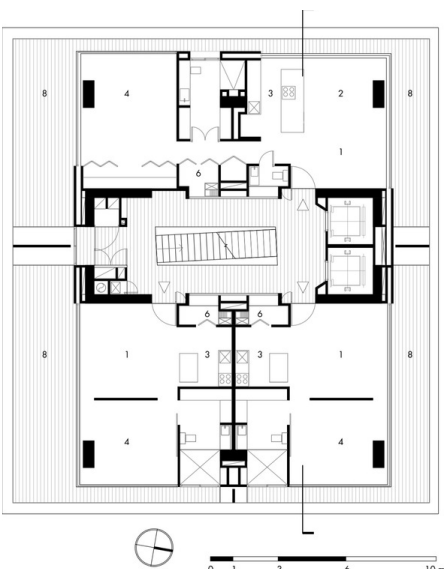
- 1. Salón
- 2. Comedor
- 3. Cocina
- 4. Alcoba
- 5. Multiple
- 6. Ropas
- 7. Terraza
- 8. Balcón



Planta Energy Living [Photo 39]. M+Group

Planta típica (orientación Oriente - Occidente)

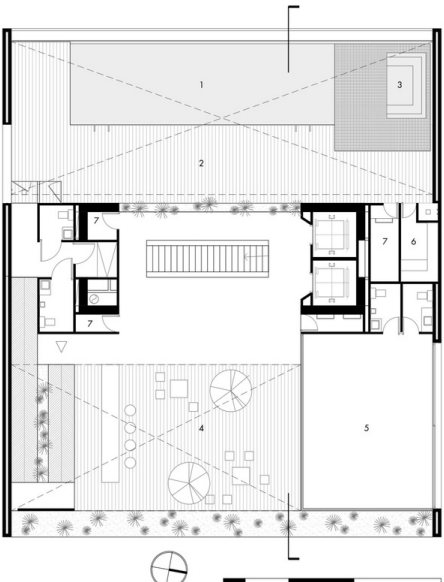
- 1. Salón
- 2. Comedor
- 3. Cocina
- 4. Alcoba
- 5. Multiple
- 6. Ropas
- 7. Terraza
- 8. Balcón



Planta Energy Living [Photo 40]. M+Group

Planta típica (vista 360°)

- 1. Salón
- 2. Comedor
- 3. Cocina
- 4. Alcoba
- 5. Multiple
- 6. Ropas
- 7. Terraza
- 8. Balcón



Planta Energy Living [Photo 41]. M+Group

Planta 22 (zonas comunes)

- 1. Piscina
- 2. Solarium
- 3. Jacuzzi
- 4. Lounge
- 5. Gimnasio
- 6. Turco
- 7. Técnico



Energy Living [Photo 42], M+Group

CONCLUSIONS

The Energy Living building has been one of the selected references because it solves many aspects that make it a building that positively affects the sector, starting with the list that we have developed in previous chapters, it could be said that the building as such improves its appearance, Since the composition that was carried out when composing the facade uses an iconic language, in terms of improving public roads, it is a building that, being close to the El Poblado Creek, generates spaces for leisure, recreation, and communication with the natural part, respecting the distances established by the regulations regarding water sources.

The building is located in El Poblado, one of the most emblematic and recognized sectors of Medellín, for its location, its relationship with the context, what is around it, the restaurants, the leisure activities that are carried out, among many, for this reason, it is a building that in addition to making a city, generates an increase in the appreciation of the sector.

The building, being a tall building, is responsible for generating a higher density of dwellings in a smaller space, and therefore composes more than the relationship between the same neighbors of the building. In Medellín, unlike Cali, there are taller buildings such as this one that has 23 floors, due to the stratification of soils, and the seismic zone where we are located.

When comparing it with the building that will be developed, it could be taken into account that the Energy Living building is developed on a sloping land like ours, and how they respond to that inclination, generating an entrance to the basement as we have planned. We can also add that the building has incredible visuals, as we can, even observe from 360 degrees, in order to enjoy the visuals that exist in the sector. However, since we have buildings on both sides of the lot, we find ourselves a little in the situation of solving these visual dynamics in another way, such as taking the two most emblematic visuals, as they are towards Cali, and towards the cliffs, which are benefited by the existing windows. However, we have taken into account how they generate those 3-story facade blocks, to play a little with the dynamism of this, we have wanted to have the same gesture, but playing with double heights in a part of the building to break a bit with that facade.

Finally, the Energy Living building proposes a platform on the first floor whose function is to generate that space for leisure and recreation for its users, having a set of levels in our project we take this aspect into account to carry out something similar, taking into account that it could even be an open space for the society of the sector without losing ourselves to the idea that it is only for the users of the building, but rather a space that allows relaxation, meeting, and coexistence.

2. BIOCLIMATIC PROTOTYPE OF A HOST AND NECTAR GARDEN BUILDING – HUSOS

The following text description provided by the architects:

“This project has been underway for a decade and has involved the design and construction of a bioclimatic building in the centre of the city of Cali, as well as the subsequent management of various actuations to promote environmental care activities among people living in it and visiting it. The building is a Host and Nectar Garden Building (EJHNMC, in its Spanish acronym) that includes households and work areas.

It was originally conceived as a building for Taller Croquis, a small workshop specialising in clothing and decoration items in Cali which was branching out through a myriad of small distribution points around the world. The green façade provides a comfortable microclimate within the building, reduces energy consumption and can be used as a prototype for a welcoming domestic garden for all the insects and birds in the area, which rely on a network of biological corridors to move around.

This is achieved by means of two different actions:

The first one involves using bushes and climbing plants from the local ecosystem (mainly nectar and host plants for butterflies) which are also part of the habitat for birds and other local insect species. The building uses the presence of butterflies as a biometer to gauge the quality of the environment and lend visibility to the unique value of the biodiverse ecosystem where it is built. Butterflies are generally one of the most effective indicators of an ecosystem’s quality and biodiversity, and they are especially important in this area, that is home to the greatest diversity of butterflies in the world.

The second action ran in parallel to the design of the building-garden and was developed with the assistance of biologists and of the Cali zoo: it involved encouraging and supporting the dissemination of information about the importance of the nat-

ural singularity of Cali within the world and, in short, to create new bonds between the Caleños visiting the shop and their natural environment. The dissemination activities included handing seeds and brochures to the visitors of the building and organising workshops for neighbourhood children.

The purpose of these actions was to preserve the biological corridors within the city, encouraging those receiving the seeds to plant them on their balconies, front gardens, and patios.

The design and management of the building-garden has allowed the garden to work as a set of affective multimedia devices that strengthen the symbiotic relationships between the house-workshop and its environment and are acknowledged as entities operating on scales ranging from local to global.

The social and natural processes occurring therein over time have turned it into a test bench for the architectural approach to some of the dynamics and temporalities of the city’s ‘biological component’” (HUSOS, 2015)



Bioclimatic Prototype of a Host and Nectar Garden Building [Photo 43], Husos

LOCATION PLAN

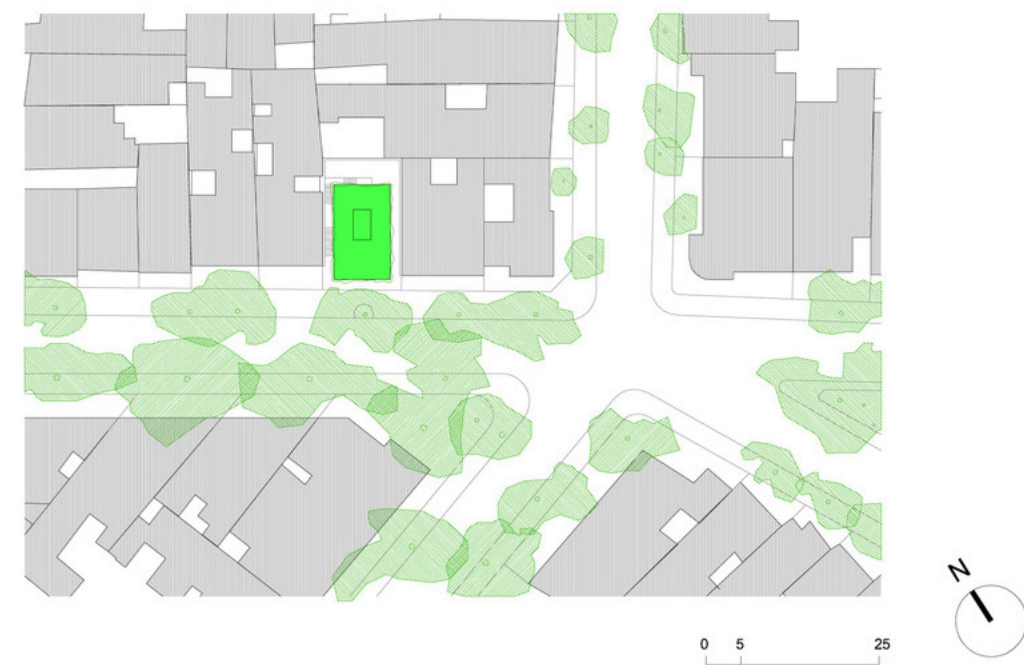
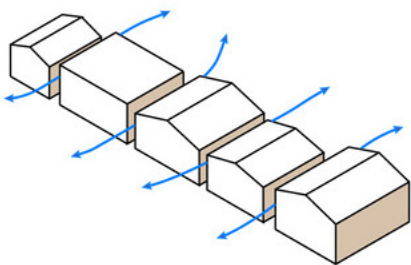


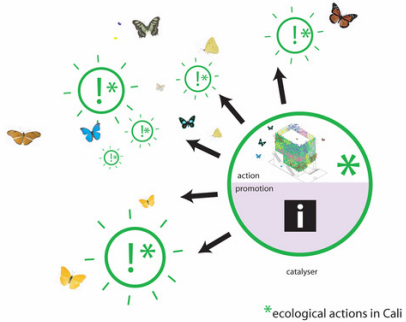
Diagram D Bioclimatic Prototype of a Host and Nectar Garden Building [Photo 44]. Husos



traditional disposition of houses in the Colombian cities at the Caribbean region, leaving a separation between them to let air flows move and help cooling the houses.

CONCEPT

Catalyzing effect



Apart from the direct beneficial impact on its immediate surroundings, through different advertisement campaigns and community initiatives that are currently under development, the GBHNPCB, as an information hub, is acting as a catalyst for activities aimed at the preservation of Cali's ecosystem biodiversity.

Diagram 6 Bioclimatic Prototype of a Host and Nectar Garden Building [Photo 45]. Husos



Bioclimatic Prototype of a Host and Nectar Garden Building [Photo 46]. Taller Croquis

ARCHITECTURAL DESIGN



Second Floor Plan Bioclimatic Prototype of a Host and Nectar Garden Building [Photo 47]. Husos



Third Floor Plan Bioclimatic Prototype of a Host and Nectar Garden Building [Photo 48]. Husos



Fourth Floor Plan Bioclimatic Prototype of a Host and Nectar Garden Building [Photo 49]. Husos



Longitudinal Section Floor Plan Bioclimatic Prototype of a Host and Nectar Garden Building [Photo 50]. Husos



Bioclimatic Prototype of a Host and Nectar Garden Building [Photo 51]. Manuel Salinas

CONCLUSIONS

The Bioclimatic Prototype of a Host and Nectar Garden Building has been the second of the selected references because it solves many aspects that make it a building that positively affects the sector and because it is located in the same city where the project is being developed. This building attracted a lot of attention for the actions it takes on the bioclimatic aspect, such as when separating it from its neighbors it generates constant air currents, and since its facade becomes a leading element, such as green in the vegetation, this is one of the reasons why it has been selected, to understand and continue creating an architecture that is not independent of nature but is always taken into account when designing and building.

For this project, it is taken into account that it is a dividing project, therefore, it has buildings on one side like ours. The idea of taking into account the concept that they have about generating vegetation that attracts butterflies is proposed to have a garden full of them, a natural wealth within the building itself, which is why together with the following reference it is proposed to generate those spaces of “Garden” on the façades, thus creating spaces that help to generate shade, climatic and acoustic comfort, and depending on the type of vegetation that is placed, implement a greater number of poultry species.

This building is a small building compared to the other references, but it is taken into account that it is a building open to the public, that the space that is generated thanks to the implantation between the entrance hall and the street are stairs down to a double-height space as the double heights are proposed in our building, but it is more taken into account is the social and urban response of this, since having a use open to the public and being different in its facade draws attention.

3. EL MATORRAL

The following text description provided by the architects:

“In this era of profound environmental and climate crisis, green has become a banner of salvation. In any new building vertical gardens and green roofs are almost requirements.

EL MÁTORRAL with its suggestive name is an architectural and constructive proposal which takes this issue very seriously. The slabs are converted into a large container of more than one hundred tropical species. Drip irrigation provides rationally scheduled water into this small ecosystem.

With this true garden contained in the thickened of the structure, the inhabitant can from the inside enjoy the vegetation that grows on the floor. This gives the feeling of being in a house where a lush garden extends outside.

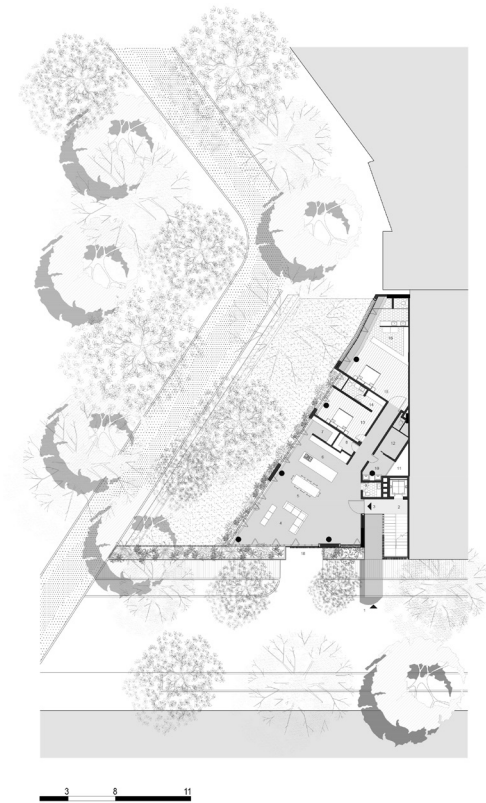
All spaces enjoy this, for example plants such as aloe vera, penca, rosemary, thyme, basil, tomatoes, and lemon trees hug the kitchen from the outside. It is not uncommon to see a stray squirrel on the third floor stepping from the branch of one of the trees and entering through the windows of the building.

From the outside EL MÁTORRAL has literally devoured the façade, it has become a small oasis in the dense heart of the city.” (ALH Taller, 2017)

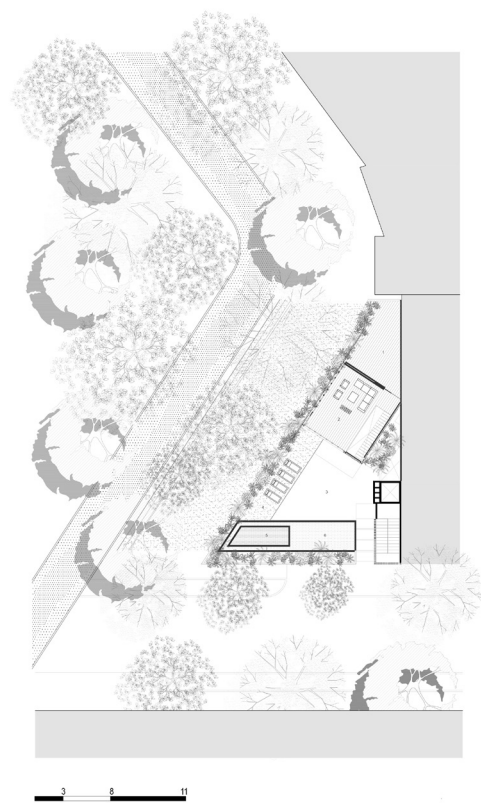


El Matorral [Photo 52]. ALH Taller

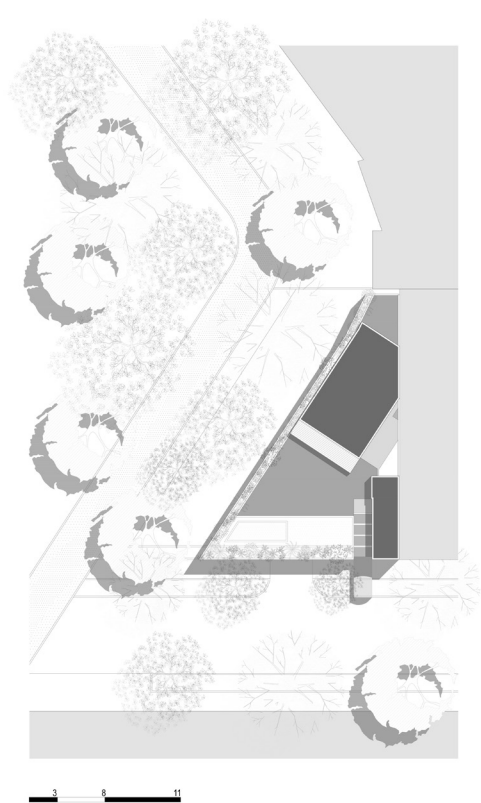
ARCHITECTURAL DESIGN



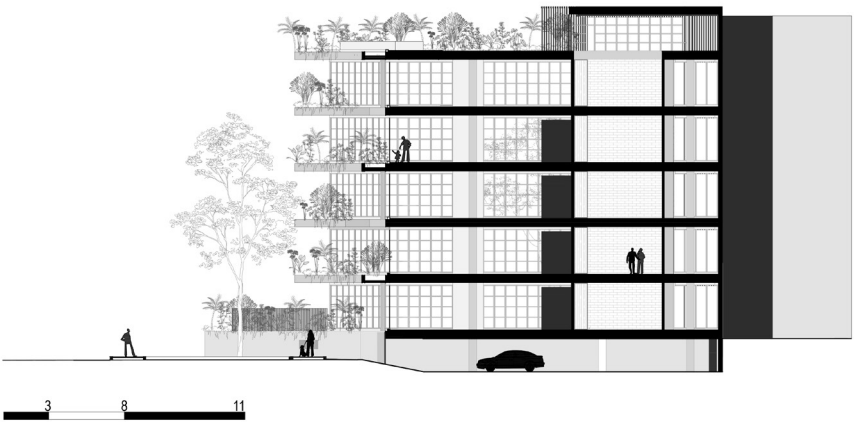
Planta El Matorral [Photo 53]. Santiago y Camilo Arango



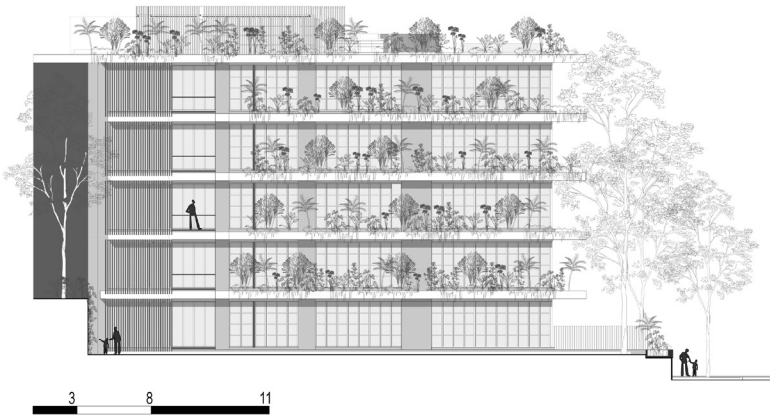
Planta El Matorral [Photo 54]. Santiago y Camilo Arango



Planta El Matorral [Photo 55]. Santiago y Camilo Arango



Sección El Matorral [Photo 56]. Santiago y Camilo Arango



Fachada El Matorral [Photo 57]. Santiago y Camilo Arango



El Matorral [Photo 58]. ALH Taller



El Matorral [Photo 59]. ALH Taller



El Matorral [Photo 60]. ALH Taller



El Matorral [Photo 61]. ALH Taller



El Matorral [Photo 62]. ALH Taller



El Matorral [Photo 63]. ALH Taller

CONCLUSIONS

The El Matorral building is one of those chosen as a benchmark since ALH Taller is a benchmark for many things at TAG Estudio Arquitectónico, for how many of the architectural and design problems are solved as such. This building is located the same as the first landmark in Medellín, it could be said that the building as such goes unnoticed in the environment, due to the use of materialities that blend in, and due to the composition of the facade.

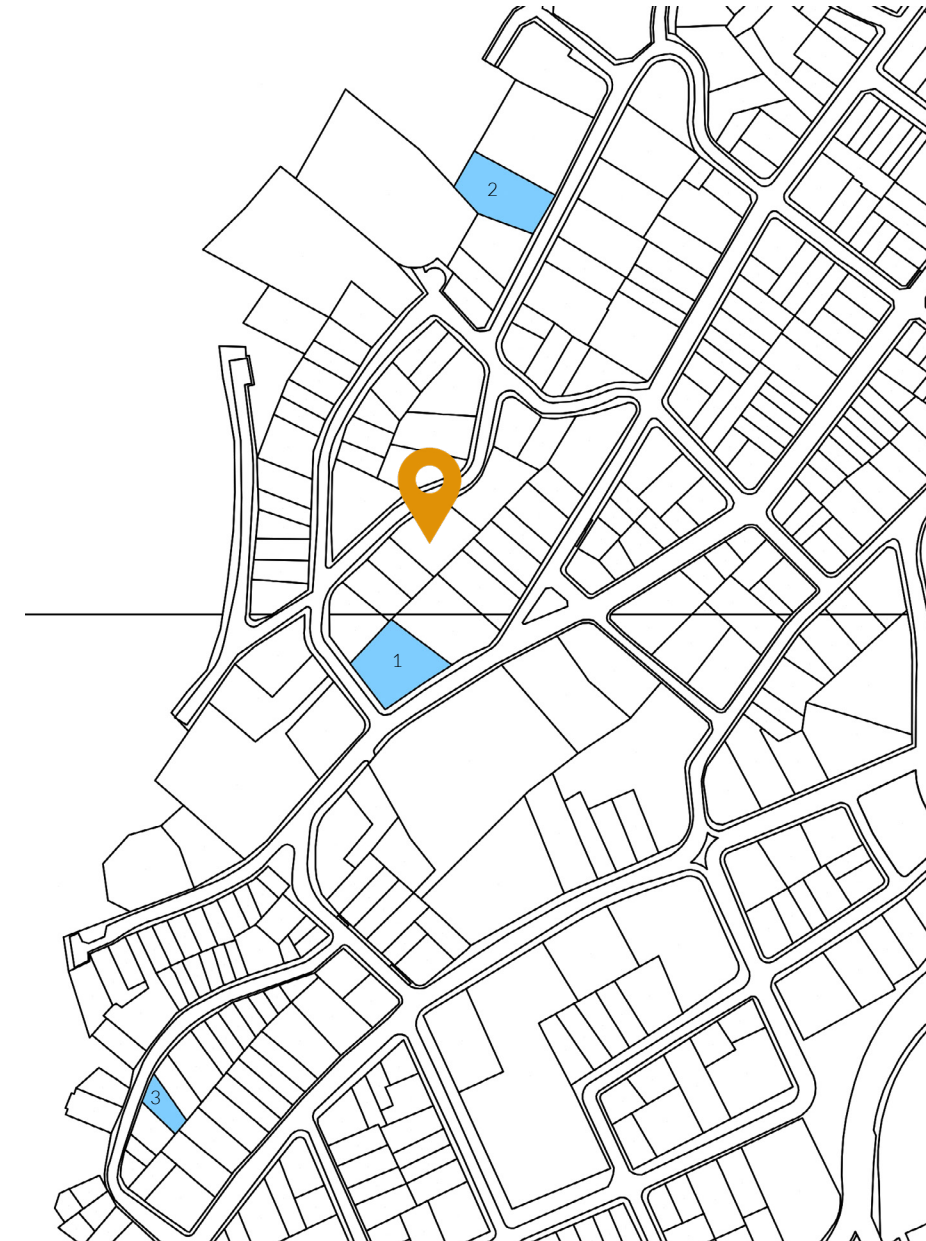
The building is located in El Poblado, one of the most emblematic and recognized sectors of Medellín, for its location, its relationship with the context, what is around it, the restaurants, the leisure activities that are carried out, among many, for this reason, it is a building that in addition to making a city, generates an increase in the appreciation of the sector. In addition to this and with respect to what was said above, the building blends in with the environment is because it is between two green corridors.

As a reference and architectural and design responses we could say that we take as an idea and from the previous reference the gardens that will be generated on the facade, as shown in El Matorral, it seeks to generate a sensation of space, where there is no balcony, outside or inside, but rather a whole joint space that forms a great space, where you can breathe pure and enjoy climatic comfort.

CONCLUSIONS

Taking into account the aforementioned examples, if we make a summary of what has been selected from each of them we would obtain:

| | | |
|--|--|---------------------|
| Energy Living: | Bioclimatic prototype of a host and nectar garden building: | El Matorral: |
| Iconic language on the facade | Separation from neighboring buildings | Perimeter gardens |
| Public space for the sector (terrace) | Green facade | Large, open windows |
| Indirect connection with the gastronomic sector of the city, in a way that helps the local economy | Vegetation to attract animal species (butterflies, hummingbirds) | Inner spatiality |
| Height density in smaller area | Space open to the public | Climatic comfort |
| Relationship between neighbors | Double heights | Green facade |
| Inclined lot, entrance to generate parking spaces | | |
| Game of heights between the building | | |



Competences Location (Fig. 41). Susana Cadavid

CHAPTER VI

COMPETENCIES

- 1. Kairos
- 2. Hayedo
- 3. Insula Living

Unlike what was seen in the previous chapter, where we talked about case studies, in this chapter, we will analyze in more depth 3 competencies that we have located in the project sector, which we will review in detail in terms of location, relationship with the environment, program, facade, distribution, among others. This in order to go into more detail about what is currently in the sector and what we must have as a differentiation point when developing a project there.

The idea is not to always do the same, but to find those reasons that add to the fact that the project that is developed is better than that of the competition.

Some of the variables can be seen in the conclusions, such as number of apartments, square meters of sale, target to which the project is directed, number of rooms, amenities, parking spaces, and especially the experience of the interior space.

The projects in competition are:

- 1. Kairos
- 2. Hayedo de Juanambú
- 3. Insula Living

1. KAIROS

LOCATION



Kairós Tower [Photo 65]. Elite Arquitectura

GENERAL INFORMATION

Apartments: 25

Areas: Between 66m² to 136m²

Rooms: Between 1 and 3

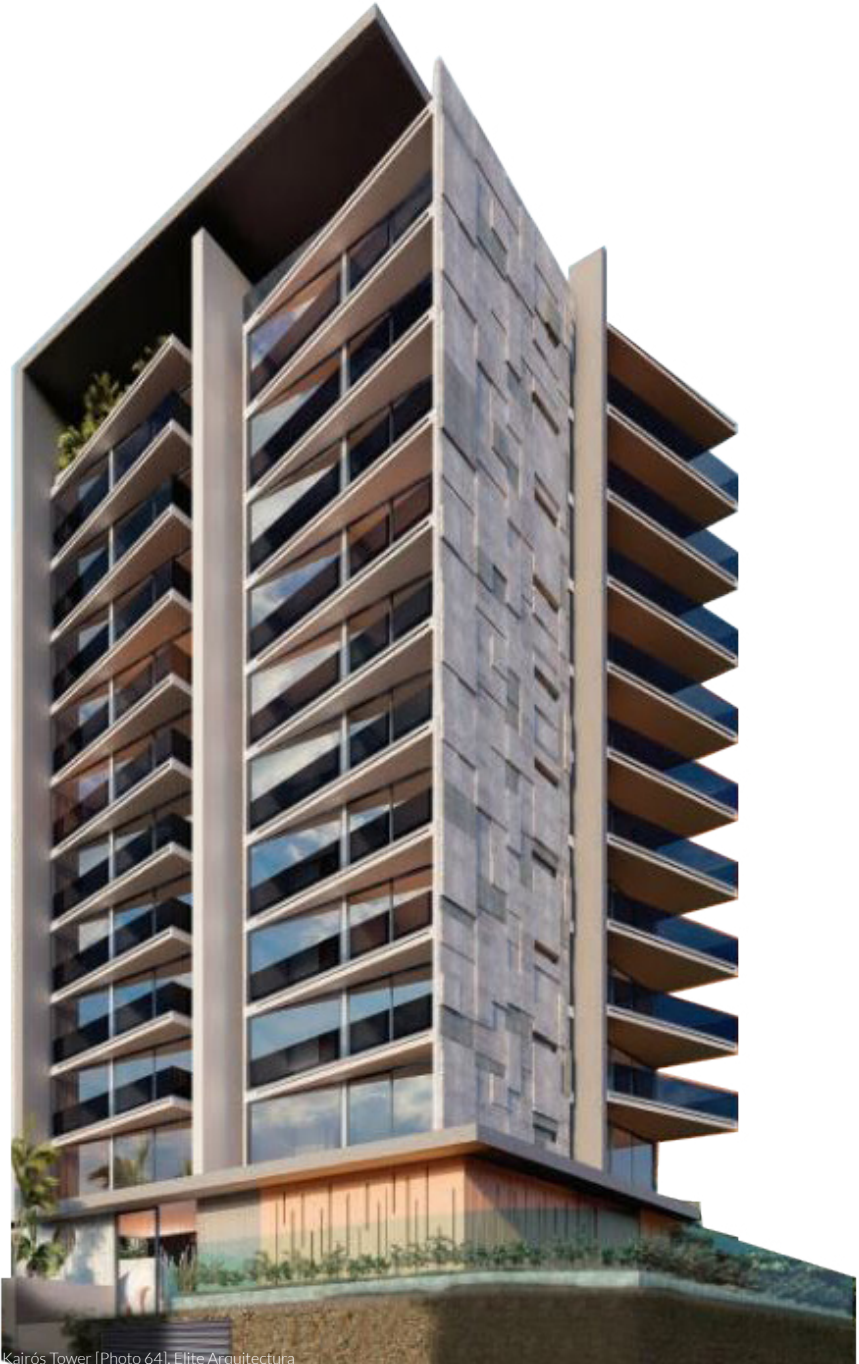
Excellent illumination, beautiful view, ventilation and freshness

Amenities:

The Solarium terrace is the perfect space to break the routine. It is located on the 12th floor, It has a swimming pool, BBQ area, gym or area TRX, wet area (sauna or Turkish) and Wi-Fi. Additionally it has wide work area, co-working space.


Two basements with parking spaces for owners, visitors and bicycles.

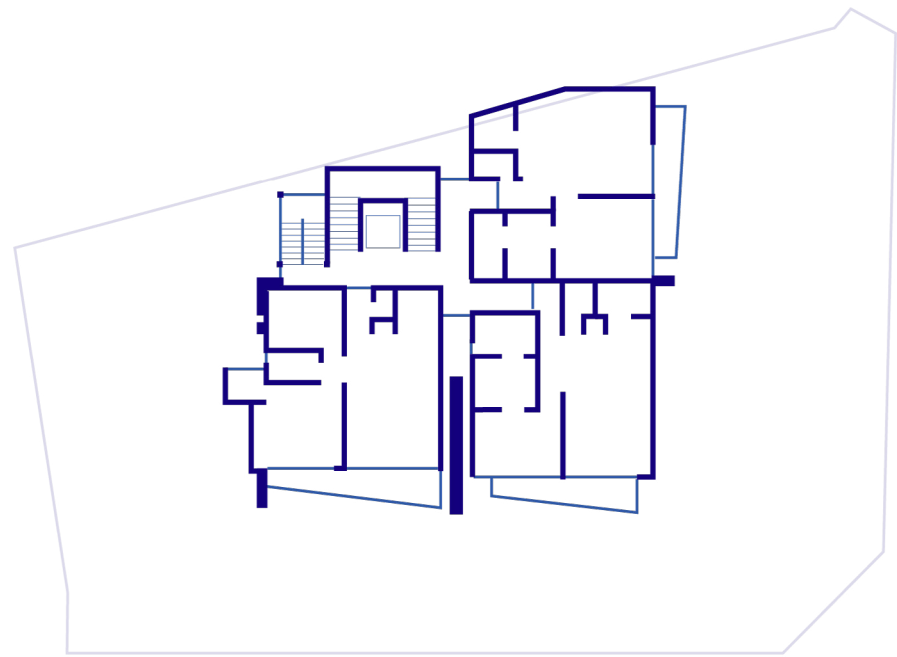
M² Value: \$7'200.000 COP - 2.045 EU



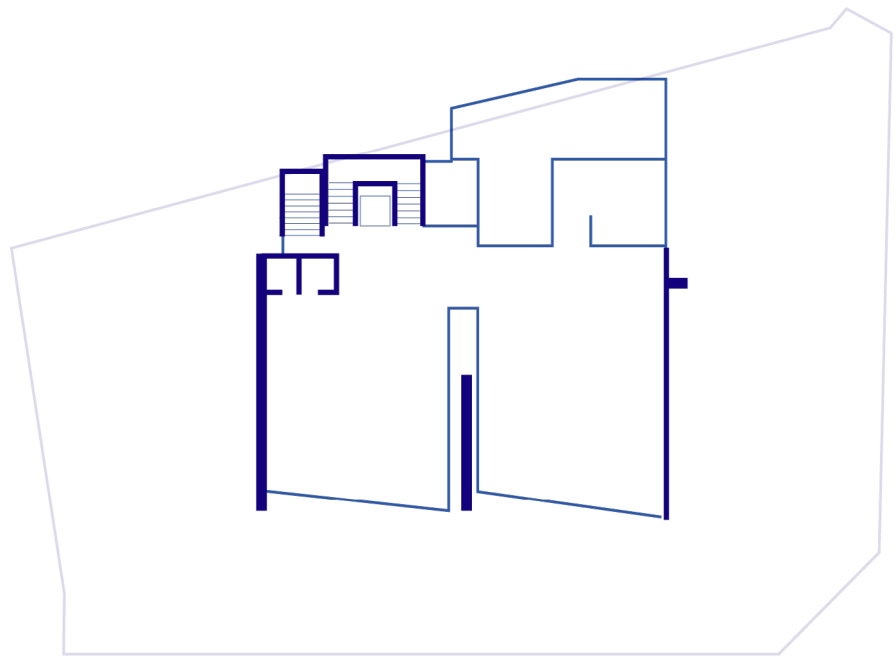
Kairós Tower [Photo 64]. Elite Arquitectura

ARCHITECTURAL DESIGN

 3 apartments



General distribution [Fig. 42]. Susana Cadavid



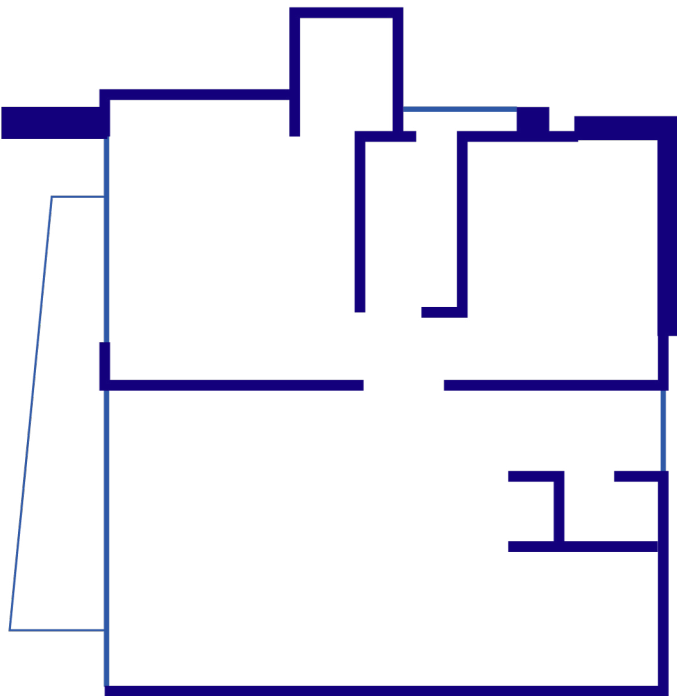
Solarium terrace [Fig. 43]. Susana Cadavid

Typology #1:

Built area: 66.83m²

Private area: 60.31 m²

 2 - 3 - people
 2 bedrooms



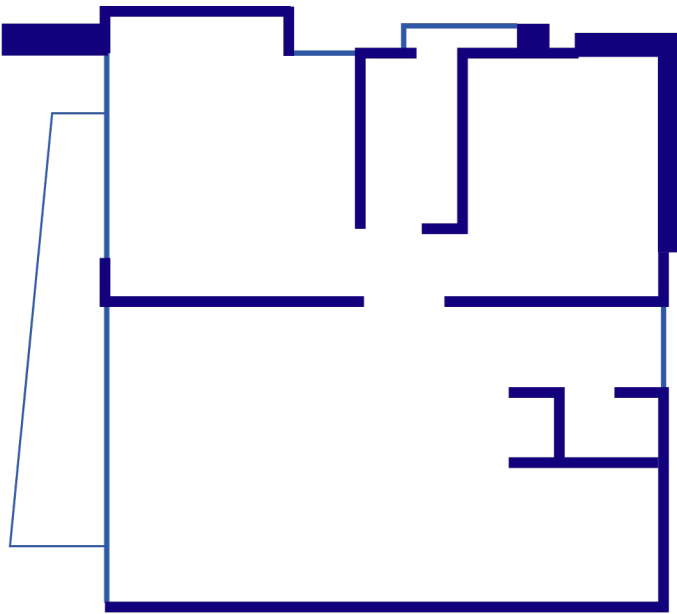
Typology #1 [Fig. 44]. Susana Cadavid

Typology #3:

Built area: 63.33m²

Private area: 54.40 m²

 2 - 3 - people
 2 bedrooms



Typology #3 [Fig. 45]. Susana Cadavid

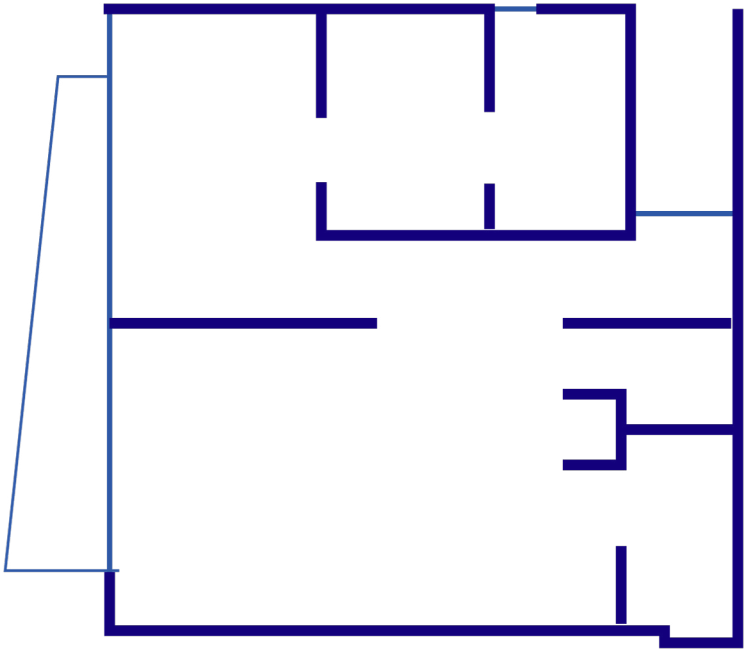
ARCHITECTURAL DESIGN

Typology #4:

Built area: 65.80m²
Private area: 59.55 m²

 2 people

 1 bedroom



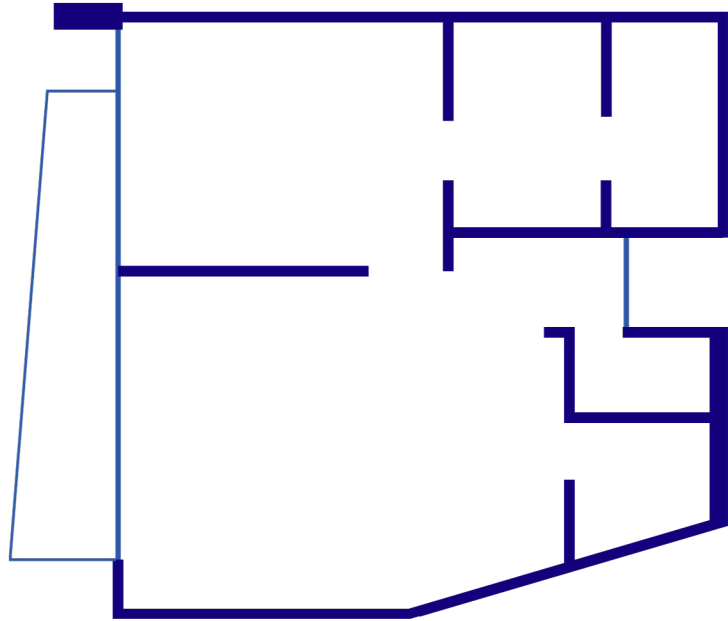
Typology #4 [Fig. 46]. Susana Cadavid

Typology #5:

Built area: 66.38m²
Private area: 55.30 m²

 2 people

 1 bedroom



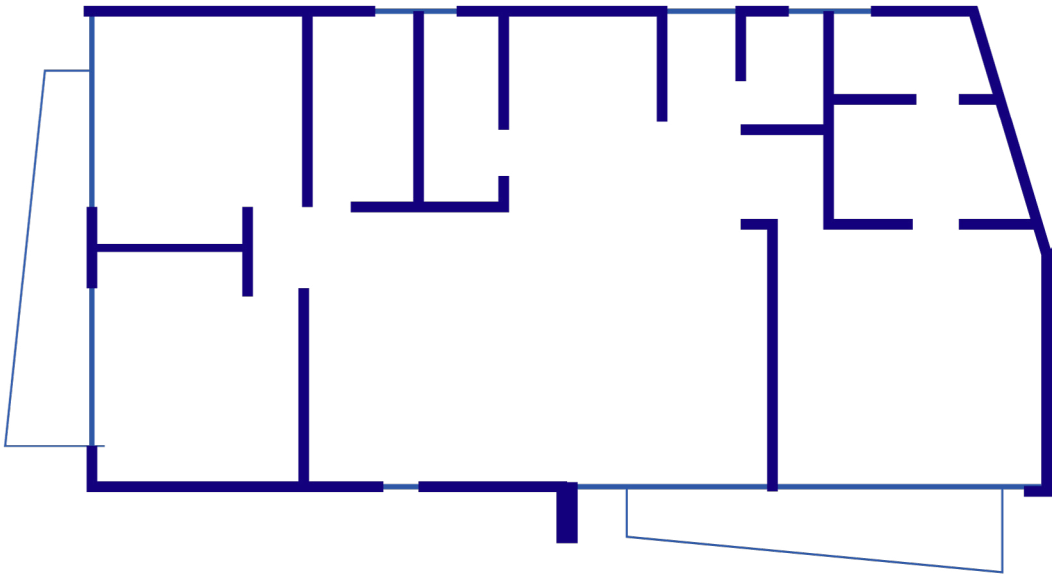
Typology #5 [Fig. 47]. Susana Cadavid

Typology #6:

Built area: 136.53m²
Private area: 125.99 m²

 4 - 5 people

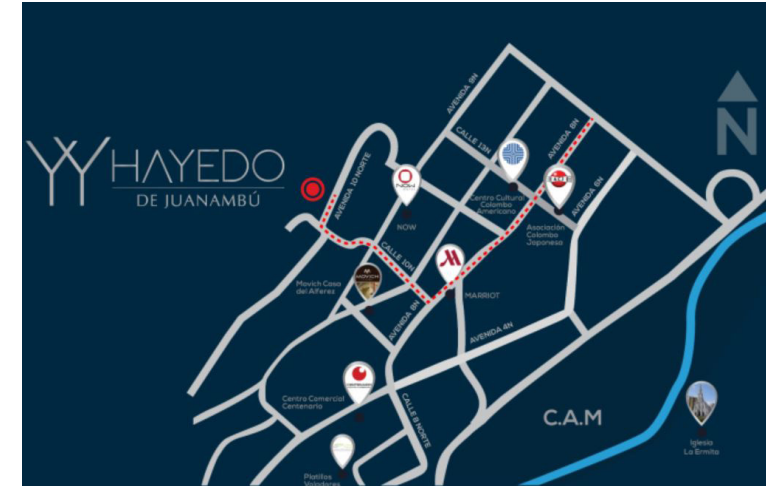
 3 bedrooms



Typology #6 [Fig. 48]. Susana Cadavid



LOCATION



Hayedo de Juanambú [Photo 67]. Juri Constructores

GENERAL INFORMATION

Apartments: 60

Areas: Between 63m² to 82m²

Rooms: Between 1 and 2

Reversal mechanism: apartment rental for nights, weeks or months

Amenities:

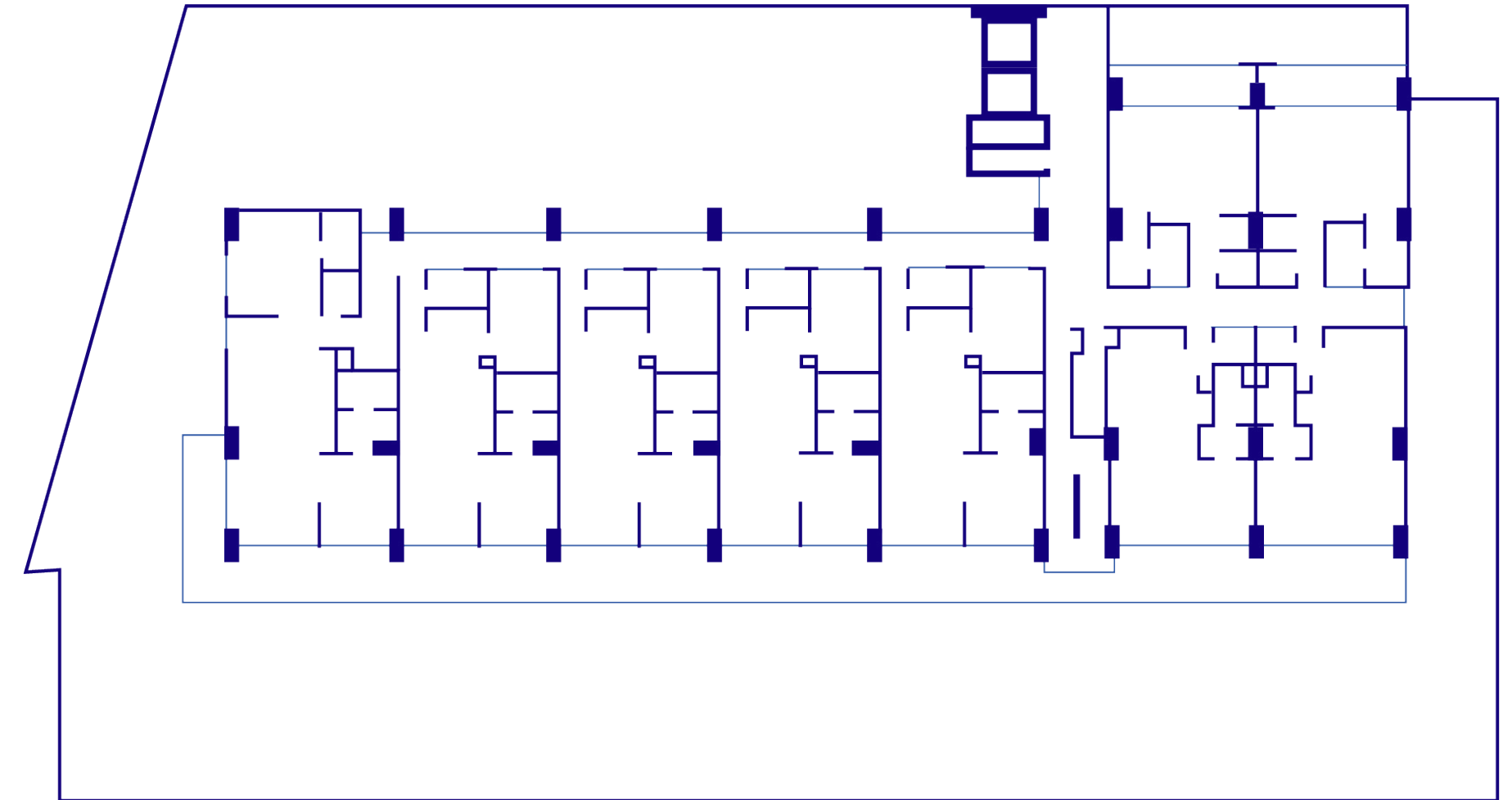
Lobby, swimming pool, gym, wet area (Jacuzzi and Turkish, massage room. Additionally it has a business centre (space for 2 offices and 2 boardroom and laundry.

Two basements with parking spaces for owners.

M² Value: \$7'500.000 COP - 2.130 EU

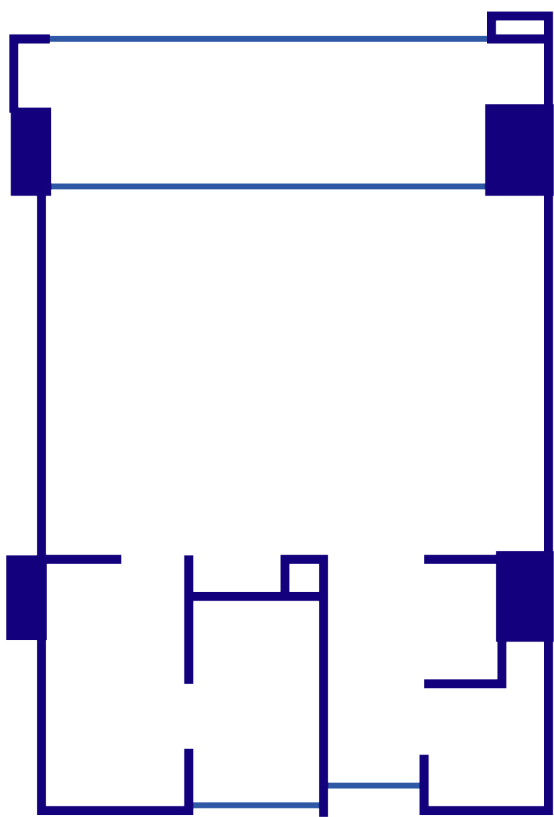


9 apartments



General distribution [Fig. 49]. Susana Cadavid

ARCHITECTURAL DESIGN



Typology #1 [Fig. 50]. Susana Cadavid

Typology #1:

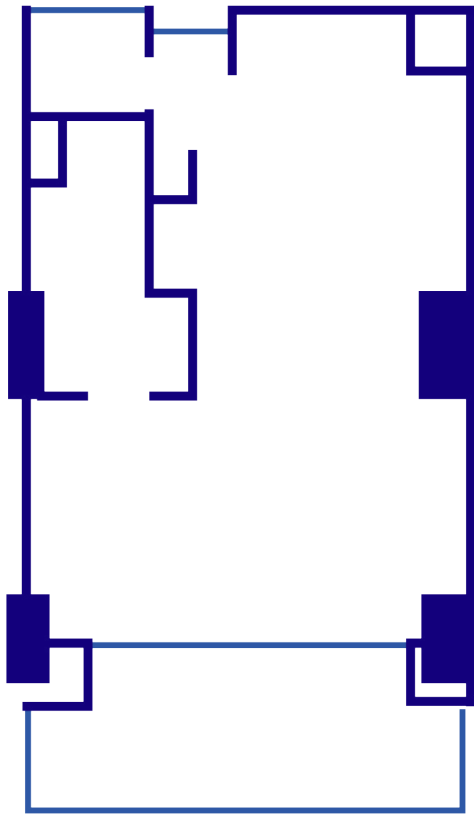
Built area: 63.97m²



1 - 2 people



1 bedrooms



Typology #2 [Fig. 51]. Susana Cadavid

Typology #2:

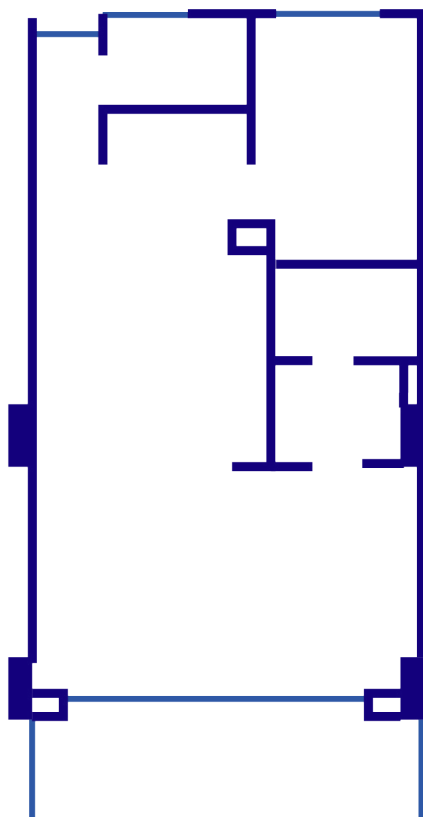
Built area: 65.80m²



1 - 2 people



1 bedrooms



Typology #3 [Fig. 52]. Susana Cadavid

Typology #3:

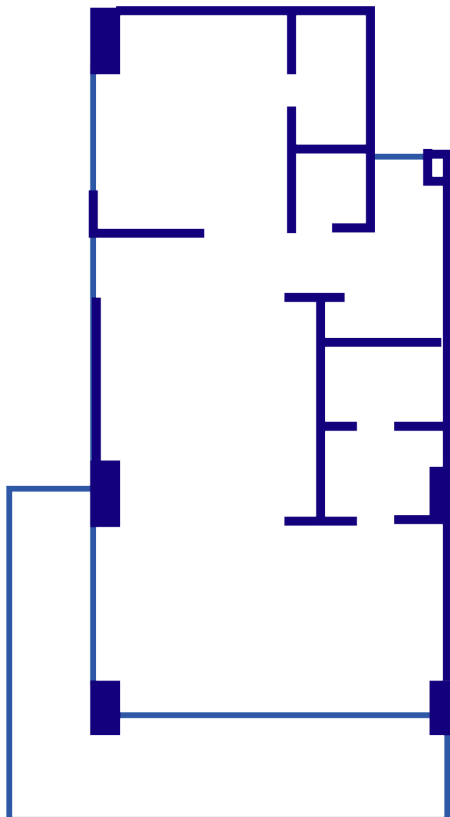
Built area: 79.06m²



1 - 2 - 3 people



2 bedrooms



Typology #4 [Fig. 53]. Susana Cadavid

Typology #4:

Built area: 82.97m²



1 - 2 - 3 people



2 bedrooms



Insula Living (Photo 68). Grupo Insula

LOCATION



Insula Living (Photo 69). Grupo Insula

GENERAL INFORMATION

Apartments: 34

Areas: Between 20m² to 65m²

Rooms: 1

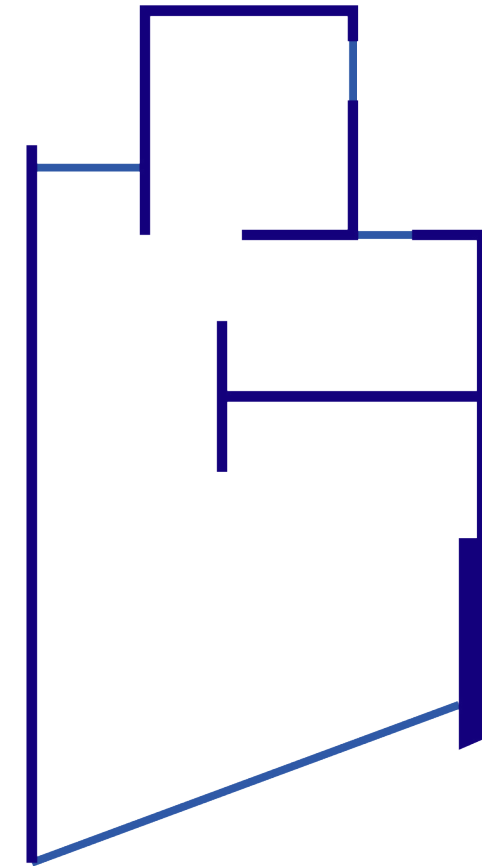
Reversal mechanism: apartment rental for nights, weeks or months

Amenities:

Speed lane - Yoga deck - Jacuzzi - CrossFit - TRX - Gamer room - Communal garden - Putting green - Firepit - BBQ - Cinema - Cook station - Skybar - Coworking - Boardroom - Private Hobbies and Work spot - Water collection system rains - Charging point for electric vehicles - Smart locks

M² Value: \$6'500.000 COP - 1.845 EU

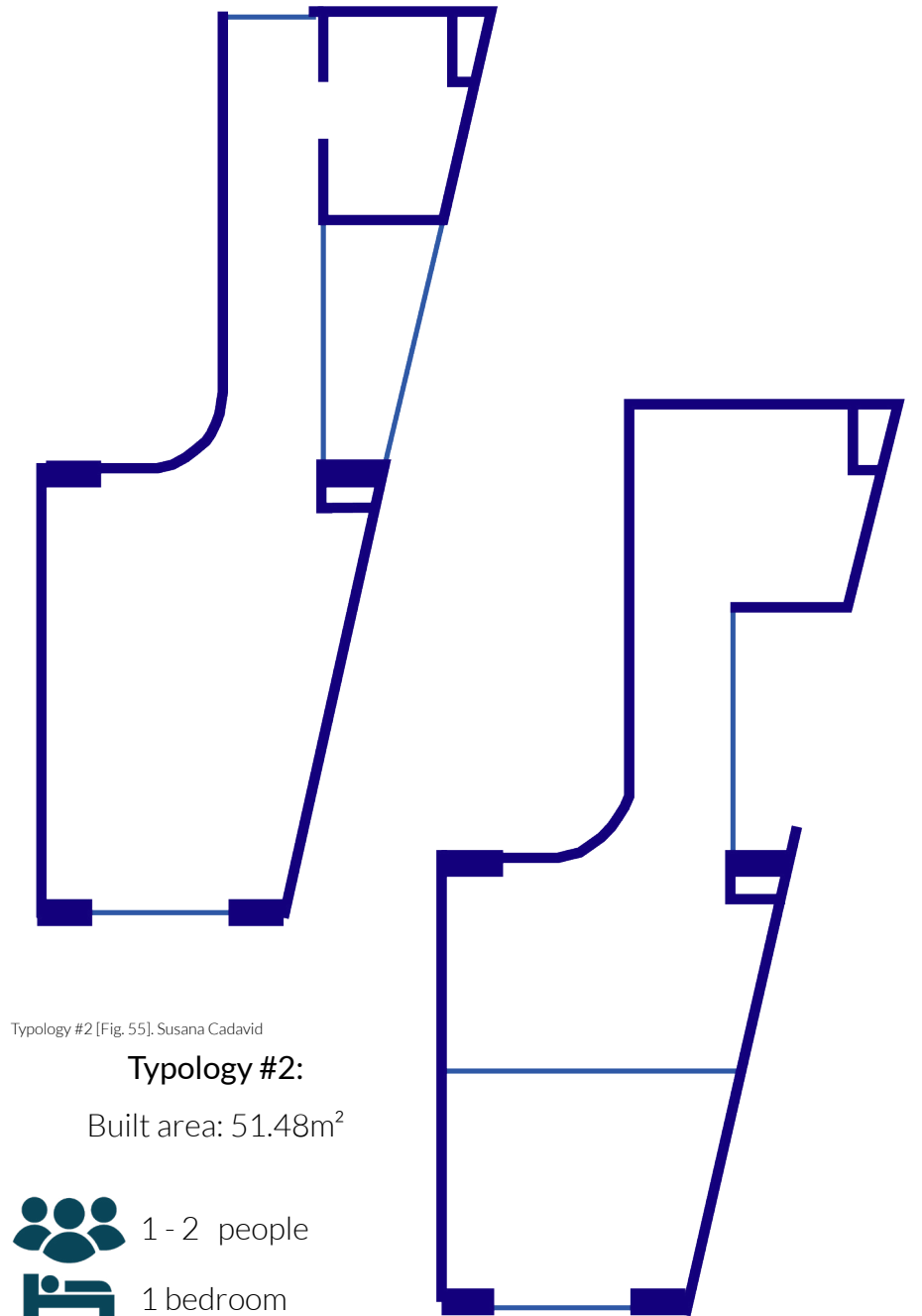
3. INSULA LIVING



Typology #1 [Fig. 54]. Susana Cadavid

Typology #1:

Built area: 25.04m²

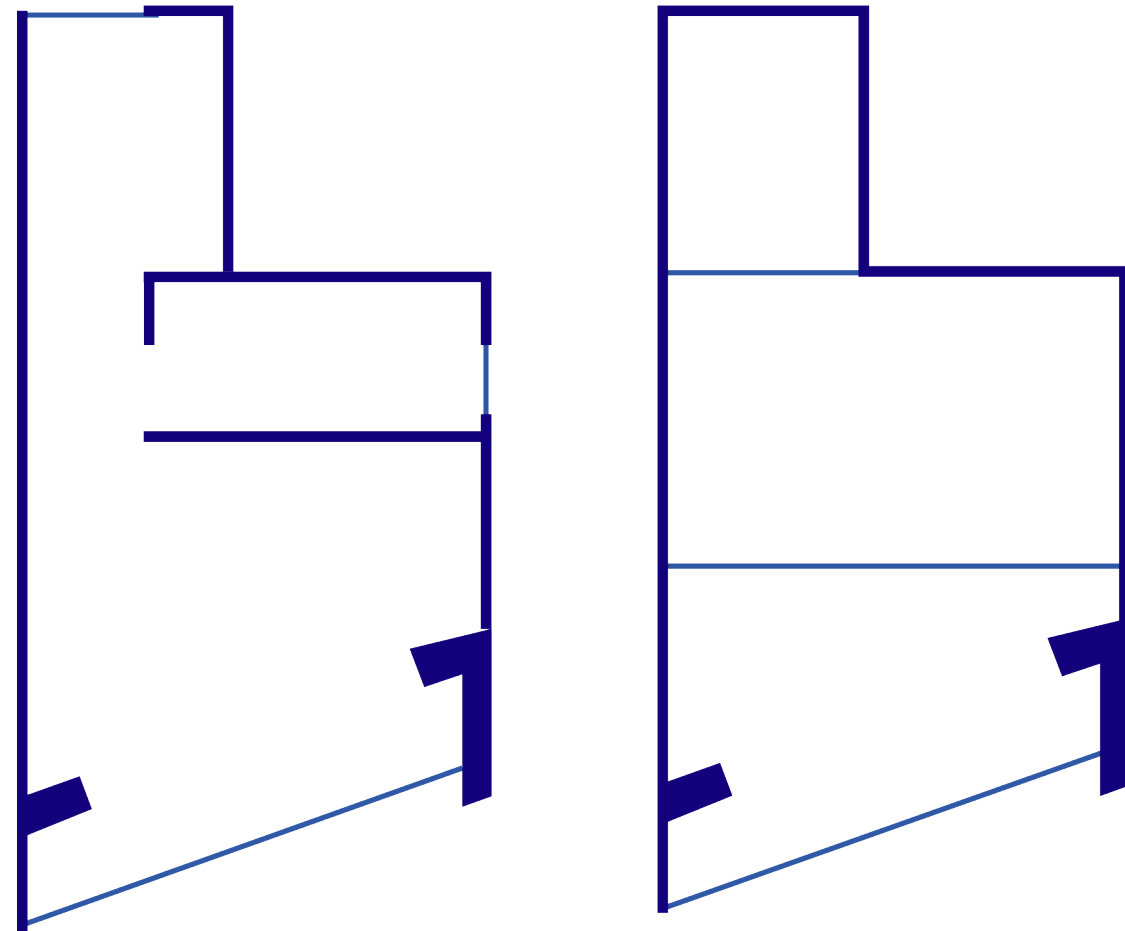


Typology #2 [Fig. 55]. Susana Cadavid

Typology #2:

Built area: 51.48m²

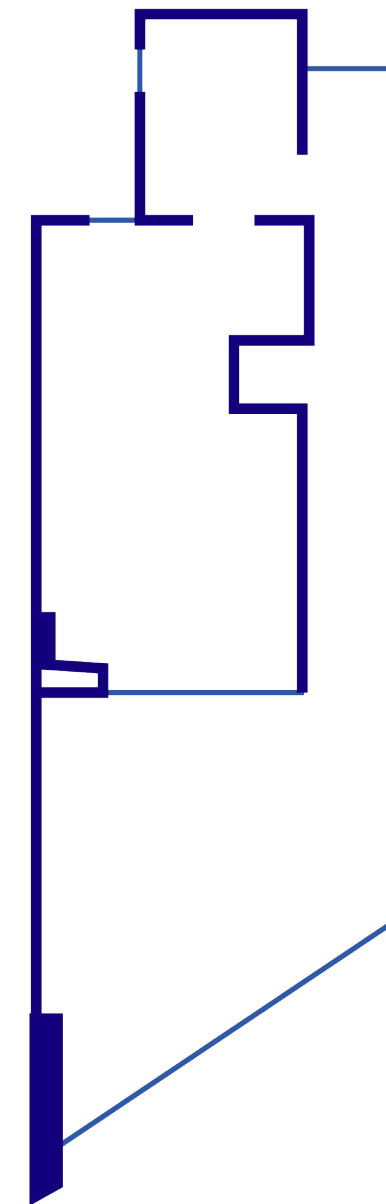




Typology #3 [Fig. 56]. Susana Cadavid

Typology #3:

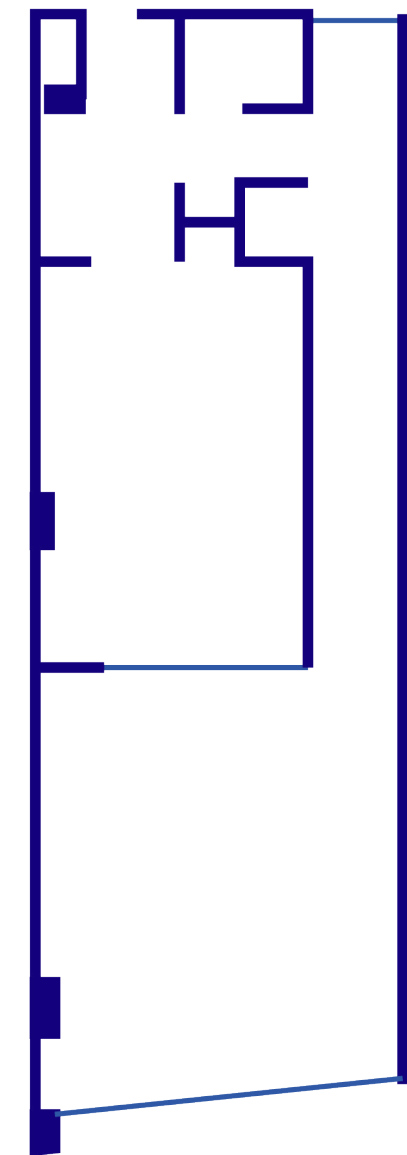
Built area: 34.03m²



Typology #4 [Fig. 57]. Susana Cadavid

Typology #4:

Built area: 42.58m²



Typology #5 [Fig. 58]. Susana Cadavid

Typology #5:

Built area: 48.04m²



CONCLUSIONS

One of the lessons I learned at the university is to analyze the competition in the sector where my project will be carried out or proposed to be developed, I rectified this again while doing my master’s degree. It is always important to do a detailed analysis of what we find around in order to know what there is, what people are looking for, how the development of projects has been carried out according to the location, and what solutions have been proposed. While doing my practice with TAG Estudio Arquitectónico, I confirmed that not only an architectural or urban-type analysis should be done, but also an economic one to find things as important as when the competition has started to sell the value of the m2 of each of its types of apartments, this in order to know if the project is feasible or not.

Today, the project has been able to reach a point of feasibility thanks to all this analysis of the competition, starting with choosing which are the projects closest to mine, what type of project it is, as we see it in the previous cases only one of them is purely residential, the other two are designed to invest and function as Airbnb due to the sizes they handle and the distributions they present.

According to this information, we could say that our architectural proposal could work differently from that of the competition for our building is purely residential and will have space for the benefit of the sector that will be relatively public in accordance with what was analyzed in the previous chapters. In addition, to this they propose:

35 apartments distributed as follows:

Type A: 20 units of 59.5m²

Type B: 7 units of 103.6m²

Type C: 2 units (they are duplex) of 115.2m²

Type D: 4 units of 118.3m²

Type E: 2 units (penthouse) of 191.4m²

And proposing as amenities:

Double height lobby, co-working, gym, yoga space, cinema, terrace number 1 with barbecue, garden, and fire pit, and terrace number 2 with pool and Turkish. 2 basements with double parking spaces for each of the apartments, utility room, visitor parking, and bicycles.

Although all these details will be seen in more depth in the next chapter.

It should be clarified that all these decisions were taken into account thanks to reviewing the competition, the amenities proposed by them were key references to know what to implement in our project. And make the decision that our project would be more for an exclusive public, where the apartments had wide and quality spaces. Also proposing that the Type D apartments could be converted into 2 Type-A apartments, and in the same way in the opposite direction, thus allowing greater flexibility according to the sales in the market.

CHAPTER VII

PROJECT: KURABÚ DE JUANAMBÚ



Barrio Juanambú [Photo 70], Juan Felipe Velasco

GENERAL INFORMATION

Talking about the project is something relatively simple, when you do things with your heart it shows, and when you firmly believe that what you are doing is a project that is capable of benefiting not only the community that will live, enjoy, and remain to inhabit the project but also the sector, in general, is much easier.

The project came to me in the place where I was doing the internship, where I currently work. It gave me the opportunity to challenge myself and show myself what I am capable of taking into account each of the variables that I have learned during my career, my master's degree, and my life experiences. The fact of having traveled and lived in different places throughout my life, I think is essential when it comes to comparing, learning, and implementing what I enjoy doing: designing. Designing not only for myself, a couple, a family, a residential complex, but designing for a city, for a country, and why not for the whole world.

So, without further ado, the project: KURABÚ de Juanambú. It is a building that seeks to break schemes, transform what we are used to living, what we know as space, where we could say the most time in our lives and that place that we want to feel like home, a place that welcomes us later. Of a long day, a stressful day, a sad day, or even a place to go when we cannot be happy. Home. It is no secret to anyone that what we are experiencing as a society (Covid-19) worldwide has affected us, and we have realized that we need spaces that we can use in different ways, we need where to cook, where to exercise, where to work, where to relax, where to sleep, and countless other things that we didn't really contemplate before. Covid-19 made us realize that our lifestyle will often be modified by situations that we cannot control, but that through architecture we can generate some solutions.

That is why KURABÚ de Juanambú proposes apartments of different sizes for different types of users, from individuals, couples, classmates, friends or families, but everyone may be able to have relatively spacious and comfortable spaces compared to those who are in the market as we have seen previously, and especially spaces that connect with nature. This is the most important point of each of the project designs.

The project has 35 apartments, each with two parking spaces (which is a plus to the market), bicycle parking, double-height lobby, co-working, cinema, indoor and outdoor gym, first-floor terrace, the first terrace in height with fireplace, large BBQ, living room and communal garden; and a last terrace on the top floor with swimming pool, Turkish bath, bathroom, relaxation area, and communal area.

But as I mentioned before, the idea is not only to develop a good project in the interior, but also a project that shapes the city, and that is why later on I will explain how the sector is currently and what are the urban strategies to shape the city to starting from the KURABÚ de Juanambú project. In this order of ideas, according to what was analysed in the chapter on how a building positively affects the sector, we could take into account the following:

KURABÚ de Juanambú will be a tall building, so it will generate shade, either in the morning or in the afternoon, which is more essential. The aspect of the sector with the neighbors, since its facade, will be a game of different heights with the double heights of the lobby, and the two duplexes, but above all, it will be like a living vertical forest with the border, pots that make up the main facade and the same, although more monotonous, on the rear façade, where it is played with

some edge beams where they rest in addition to the flower pots, but these break with the vertical lines that divide each of the apartments.

The next point in favor of KURABÚ de Juanambú will be that being a tall building, it is capable of housing more families than if it were just one house, in this case, there are 35 apartments and not just 1.

Now to enter the training part of the sector, as we are planning a future cycle-route that complements the one planned for the future as well, and the public parking of the city in the same building as ours, the road, progress that will be executed will be the beneficiary for the sector, as far as it will have a platform (in Colombia there is a serious problem in the development and respect for public platforms) cycle route and the two-way road. What you have to do is talk with the neighboring buildings to be able to make the road, the walkway, and the cycle route as long as possible and to benefit several buildings in the sector.

As mentioned before, Juanambú in itself is already a sector that is highly appreciated by the Caleña community, since its location has many advantages, so on that side, the only thing that the building could bring as an appreciation to the sector would be a recognition for the development of a private building that has public uses. In addition to generating employment at all levels, from us as architects, designers, builders, transporters, manufacturers of materials, sellers, etc. in order to construct the building.

By presenting so many amenities, the Project seeks to generate that constant sociability between the inhabitants of it and the inhabitants

of the sector who wish to carry out some of the activities of the public spaces, this generates a constant relationship between a society that favors communication and the lifestyle of human beings.

The building is designed to have fairly long durability, however as we are aware that probably at some point in life the building will cease to have a purely residential use (although for that the regulations of the Plan would have to be modified Territorial Planning) offices could be created, or even a clinic; Since the proposed structure is designed to be able to use large spans, which allows the quick and easy distribution of the interior spaces of the building.

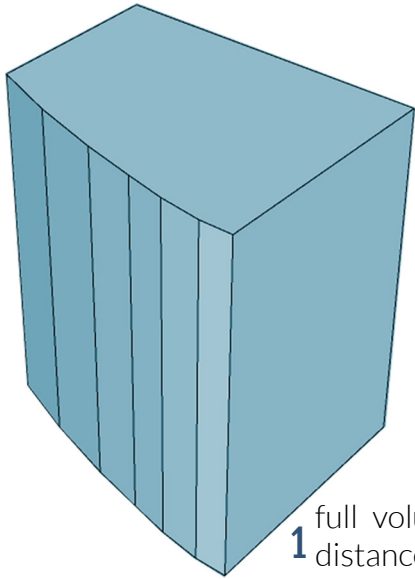
Finally, to close with the general information about the project, it could be said that the building is an economically viable project, where 75% of the area is saleable and the remaining 25% is for amenities, and private/public use. The square meter will be sold at a price that is relatively lower or equal to the market, however, the benefits are much higher than those delivered by the other projects that we have analyzed as competition.

TARGET

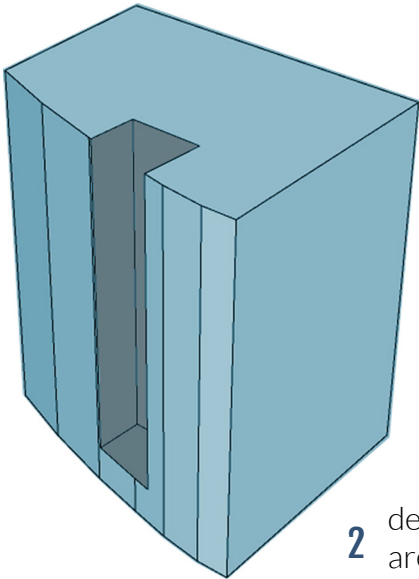
The user for whom this project is intended is for people of economic, social stratum 6, couples and/or families with two children

NAME Kurabú means the Club in Japanese, we have decided to choose this name because we want the people who live in this building to feel all the comforts as if they were in a club. However, the Japanese origin was decided by the way they see life, that culture, that reflects what is truly important, enjoying the little things that life gives us, and those direct connections with nature so that the body, mind, and spirit are in balance.

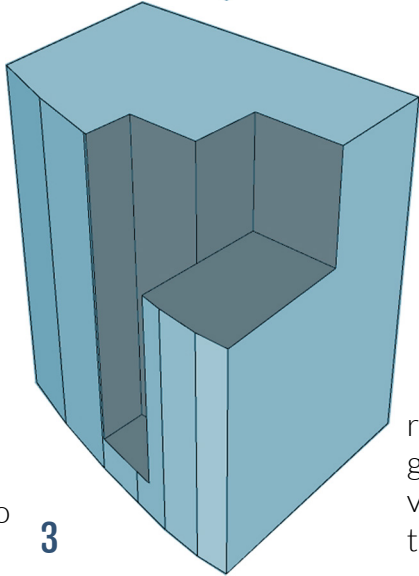
FORM



1 full volume according to distance at normative



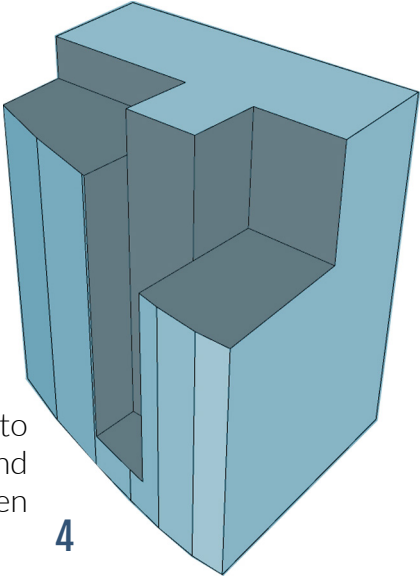
2 delete rectangle to remove built area and open circulation



remove rectangle to generate a terrace

3

remove second volume to generate another terrace and visual connection between them

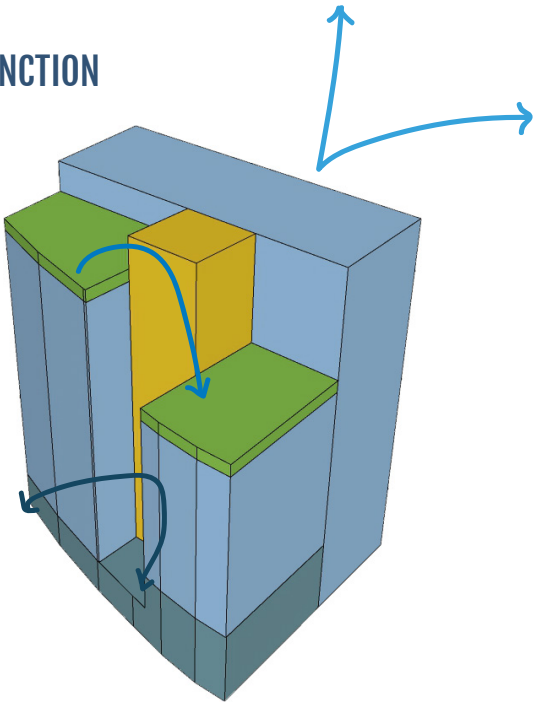


4

Concept [Fig 59]. Susana Cadavid

CONCEPT

FUNCTION

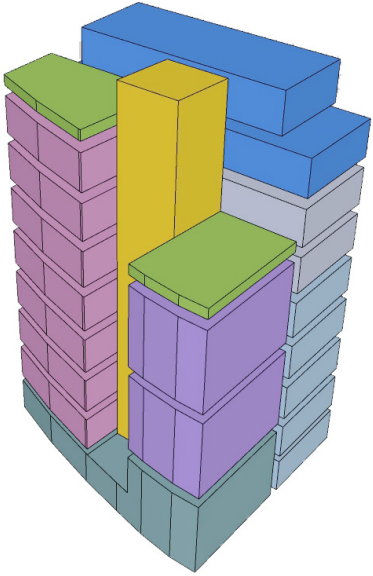


- take advantage of the largest amount of salable area / apartments towards the visual
- social area and terraces towards the part with less visual
- open circulation towards the part with less visual

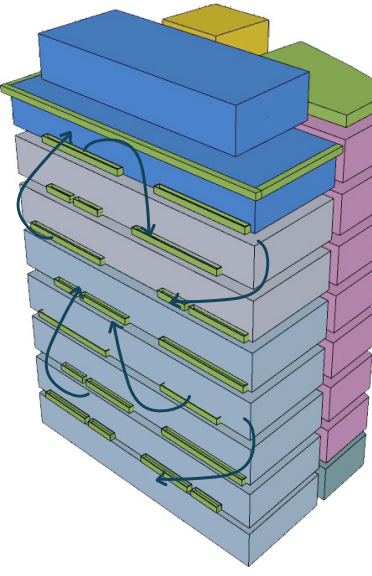
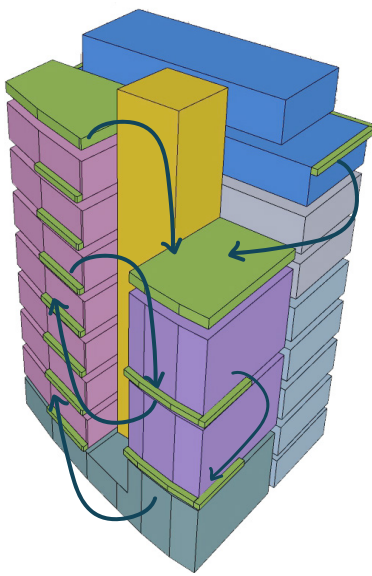
- Private area / Apartments
- Circulation
- Terraces
- Social area

DISTRIBUTION

- 59.5m² apartments (20)
- 104.2m² apartments (7)
- 115.7m² apartments (2)
- 119m² apartments (4)
- 192m² penth house apartments (2)
- Circulation
- Terraces
- Social area



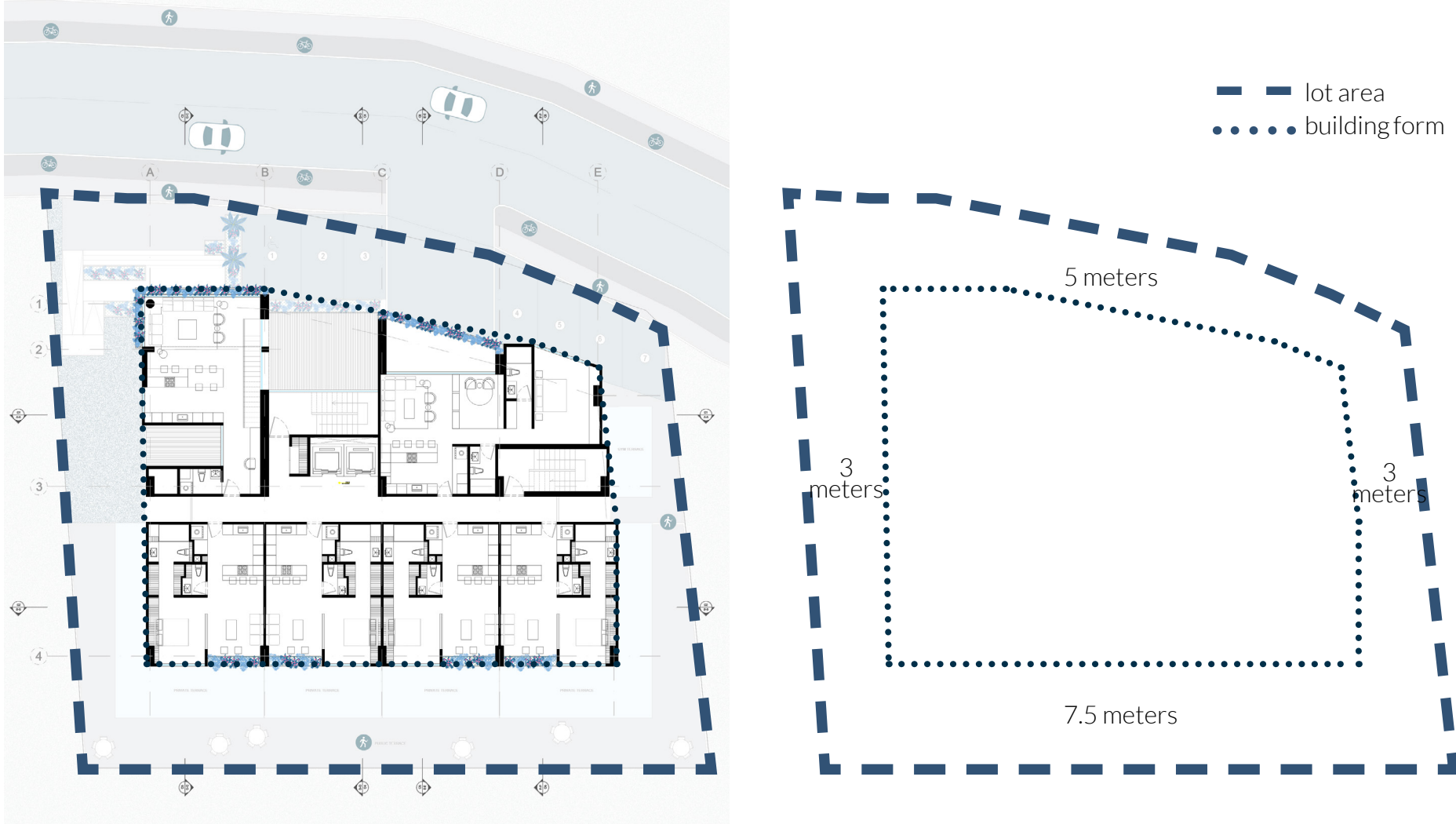
- the building comes to life with a game on the main and rear façade with respect to the greens



CONCEPT

ALIGNMENT MAP

To take advantage of the greater amount of square meters built, the development of a building that adapts to the shape of the lot is used, taking into account the regulations regarding distances from the front (5 meters), from the back (7.5 meters) and sides (3 meters) that added to the distance that both buildings on each side left would give a minimum of 6 meters, thus complying with the regulations.



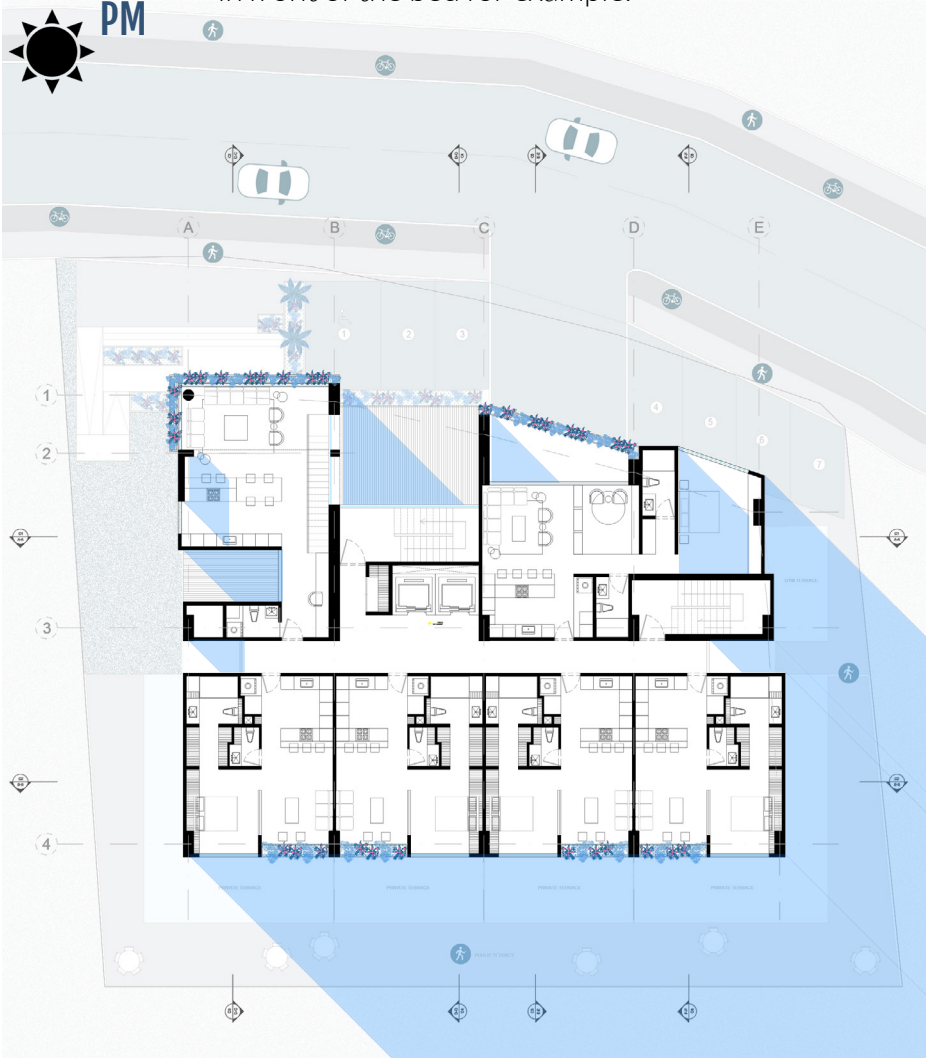
Concept [Fig 59]. Susana Cadavid

ORIENTATION

Morning sunlight the morning sunlight allow us to take advantage of it in many rooms as possible.



Afternoon sunlight the afternoon light instead is used in the social spaces, and in fewer rooms, in order to avoid the heating in front of the bed for example.



If we focus on everything we have seen to make a list of urban strategies that are taken into account in this project so that in one way or another we can conclude that, despite being a private project, with a high social stratum, and for a specific target, according to the sector in which it is, we could say that there are four important pillars to talk about as the connection with public transport, the bike path network, the bike parking spots and the public-private terrace that we would explain next:

1

CONNECTION WITH PUBLIC TRANSPORT

- **More direct connection with public transport:** Having analyzed the public transport network that exists in Cali, Colombia and found that in this sector, there is an absence of direct communication with public transport, because social class predominates in the sector high (stratum 5 - 6) and more private transport is handled, it is proposed to generate a closer connection, aimed exclusively at service people who work in the sector, those who help with household cleaning and babysitters for example.

2

BIKE PATH NETWORK

- **Continuation of the proposal for a cycle path network:** Currently the world is overpopulated, the effects that we see at the level of climate change is not a secret for anyone, and that is why regardless of the social stratum in which you live (which, for example, in Colombia it is handled with that stratigraphy) we should all get to generate that awareness that no matter how much money I have if I can carry out small actions for the environment in which I live, they should be supported by the rest of society.

That is why it is proposed to continue with the proposed cycle route network, which crosses the sector. Not only for those who go to work out there and their way of getting around is bicycles, but for those who have different forms of transportation, but choose to collaborate and create new habits for the benefit of the entire community in the future.

It should not be ignored that, in our city, according to El País “Cali, the second city in the country where the most cyclists die in road accidents” it is important to be able to recognize that this proposal helps with the safety of each of those who ride a bicycle in their day a day.

3

BICYCLE PARKING

- **Bicycle Parking:** To complement the previous point, the idea is to give bicycle park to the city, where people can leave their bicycle parked while they need it, or another idea will be that it will work as in Turin, which can be rented only, with the condition of returning it later, although the idea would be for it to work completely free.

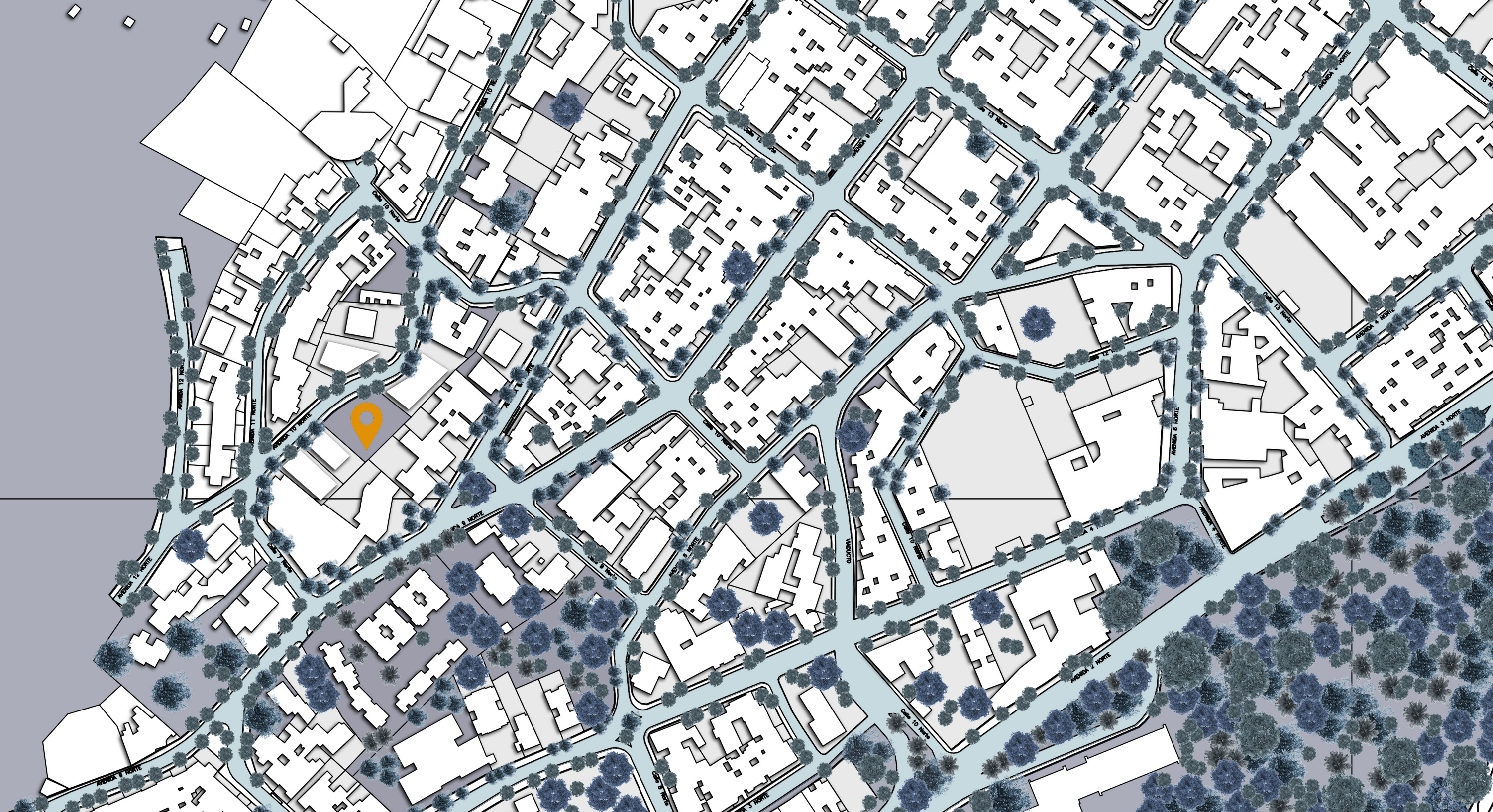
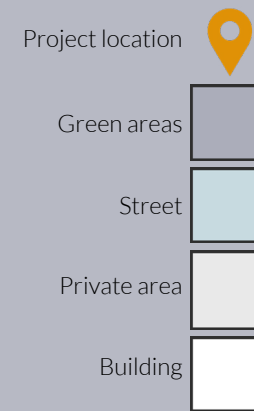
4

PUBLIC – PRIVATE TERRACE

- **Public-private terrace:** Thanks to the visual of the building due to the slope of the land, we also wanted to create a terrace on the first floor that has a very good visual as a public terrace, the idea would be that the building is relatively open to the inhabitants of the sector, who could make use of it whenever they require it, however, the hours of use would be controlled for the safety of the inhabitants of the building.

URBAN PLAN

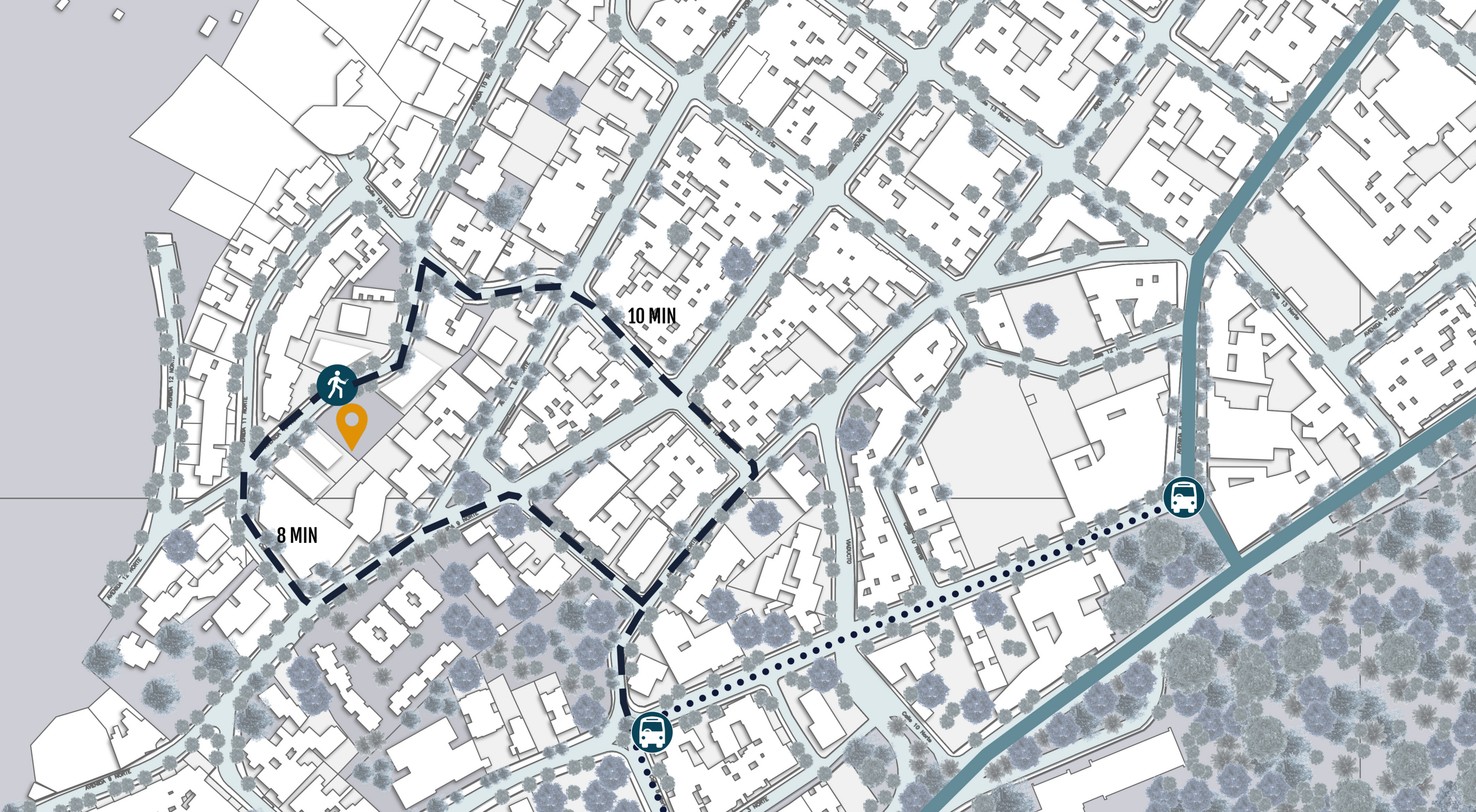
In this urban plan, we can see a general idea of what the Juanambú sector is currently, where the Kurabú de Juanambú project will be carried out. When analyzing in chapter III we see that there is no direct relationship or less than 500 mt around with any other activity that is not residential. The sector has vegetation in all its streets that make them a passable place for pedestrians since it allows the entry of light through the trees but generating shadows.



ACTUAL SITUATION OF PUBLIC TRANSPORT

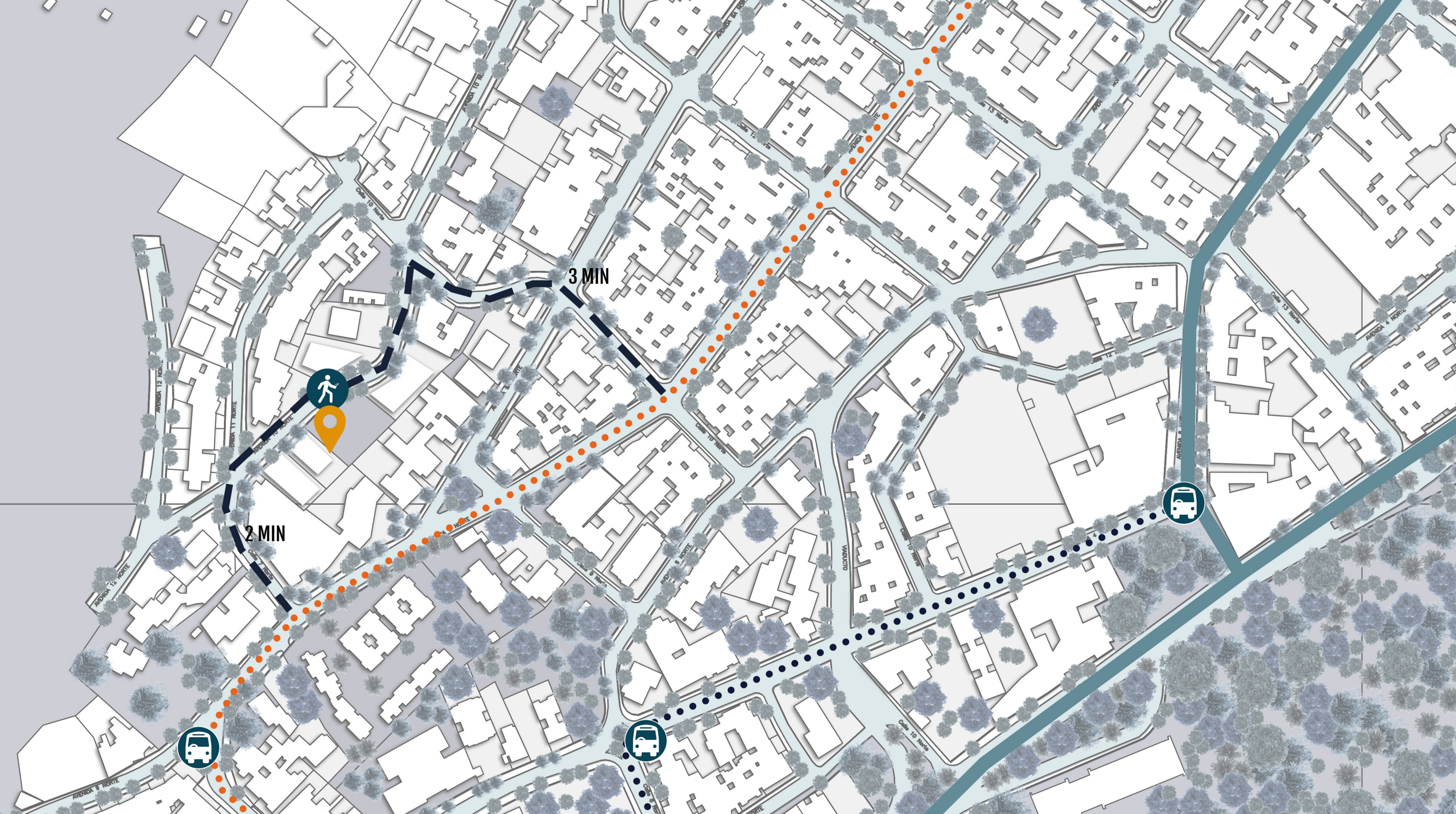
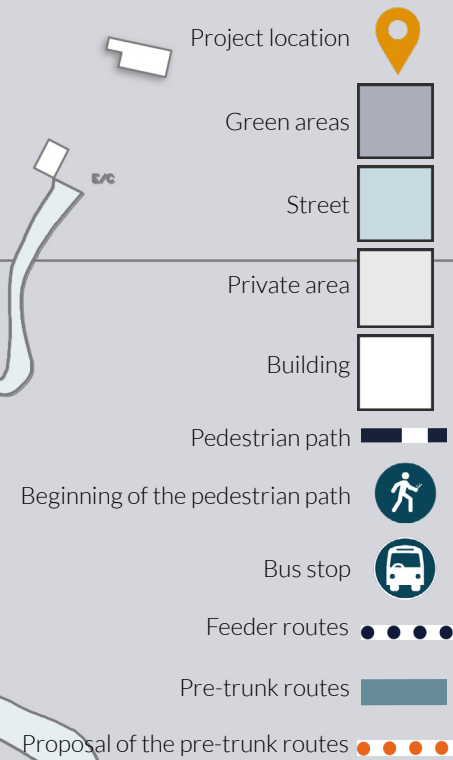
In this map we find the current situation of public transport on a larger scale, this is the feeder bus of the MIO ((Massive Integrated Western) that passes 8 minutes walking from the project, and which connects with the pre-trunk route that covers major roads at the city level.

- Project location
- Green areas
- Street
- Private area
- Building
- Pedestrian path
- Beginning of the pedestrian path
- Bus stop
- Feeder routes
- Pre-trunk routes










PROPOSAL OF PUBLIC TRANSPORT

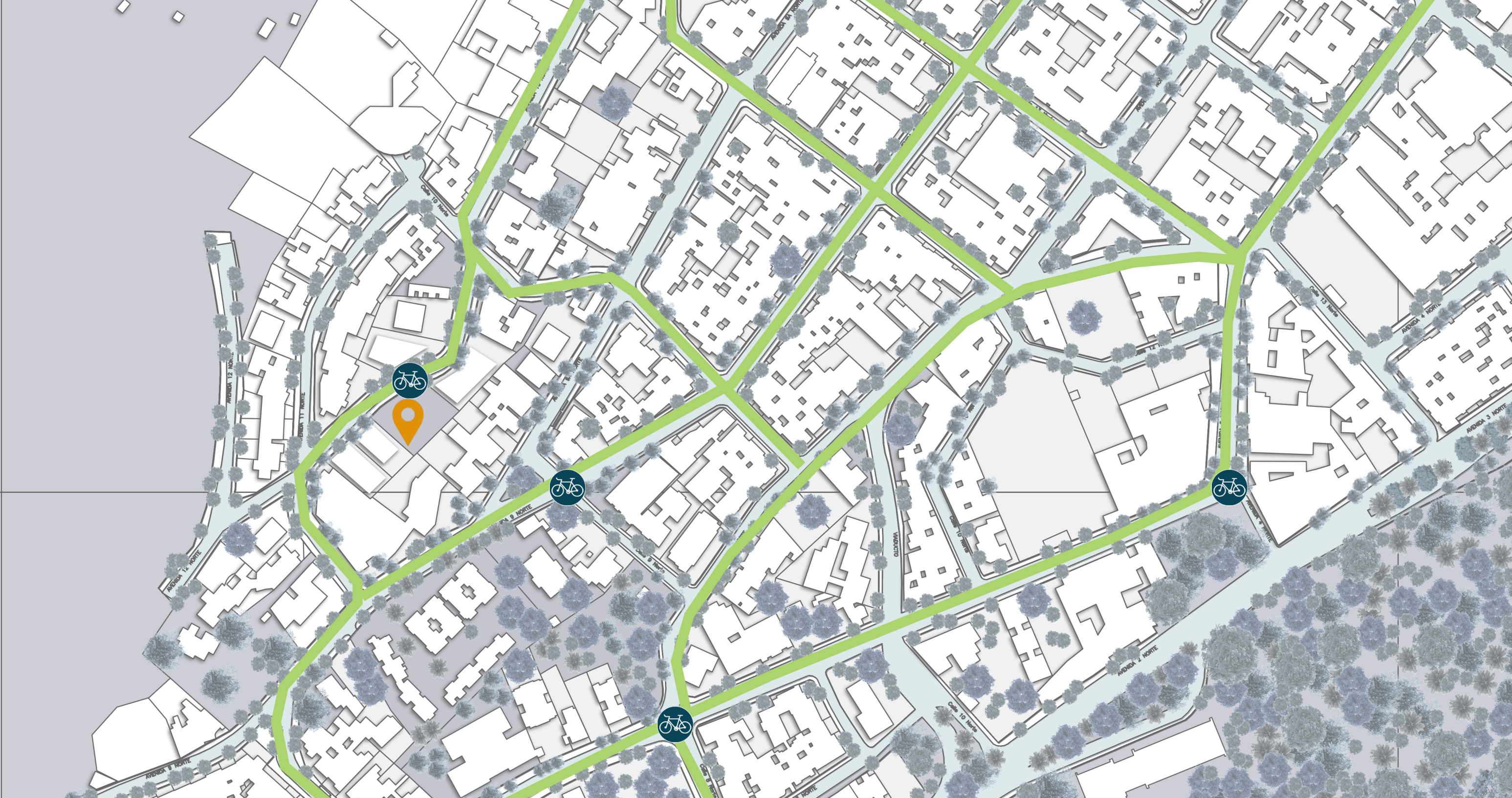
It is proposed to propose another alternate feeder route so that it covers one of the relatively busiest roads in the sector, which would be the one that is parallel to that of our project, this in order to reduce the walk from 8 minutes to only 2. Agree With what has been seen so far, this change would be more than any beneficiary for those who help with cleaning at home and for nannies, among other professions that are not a recognized part of the social stratum 6.

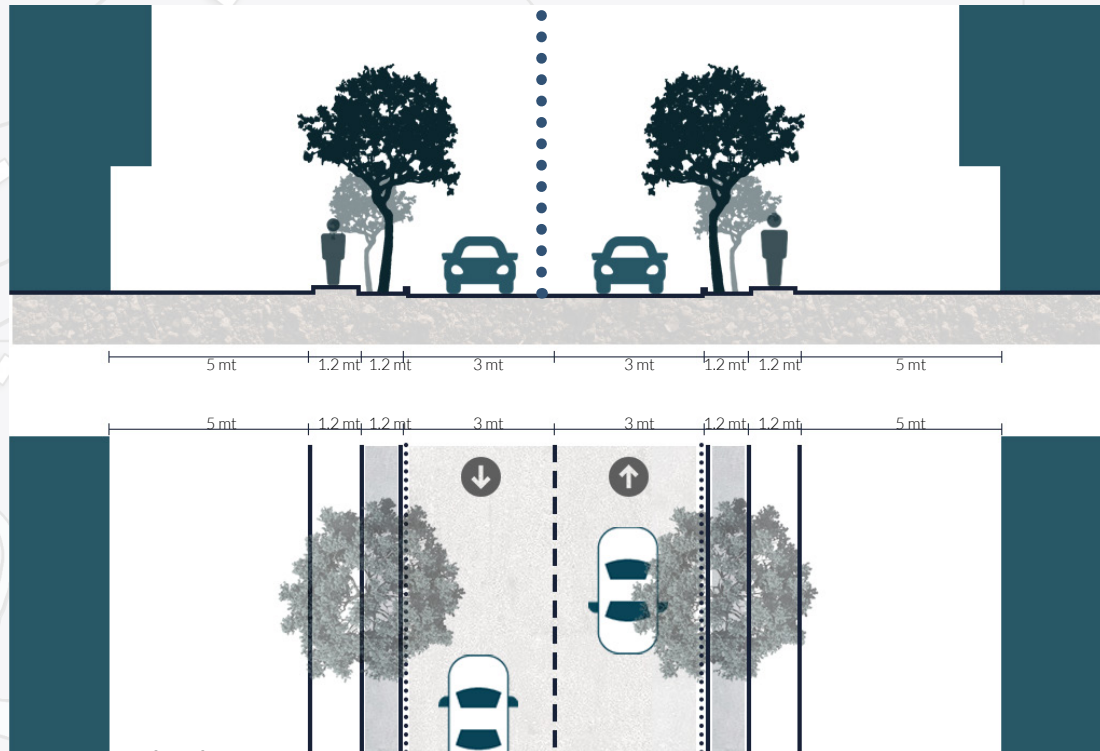


PROPOSAL OF THE BIKE PATH AND PARKING SPOTS

In this plan, the idea is to show what a favorable connection would be for the sector in terms of bicycle mobility, the idea would also be to propose a public bicycle parking lot in the same building in order to benefit the community, and in this way gradually generate awareness that the use of bicycles should not be linked to social class and/or sports as a hobby, but rather something personal respect for the environment that can become a favorable transport option for those of the community.

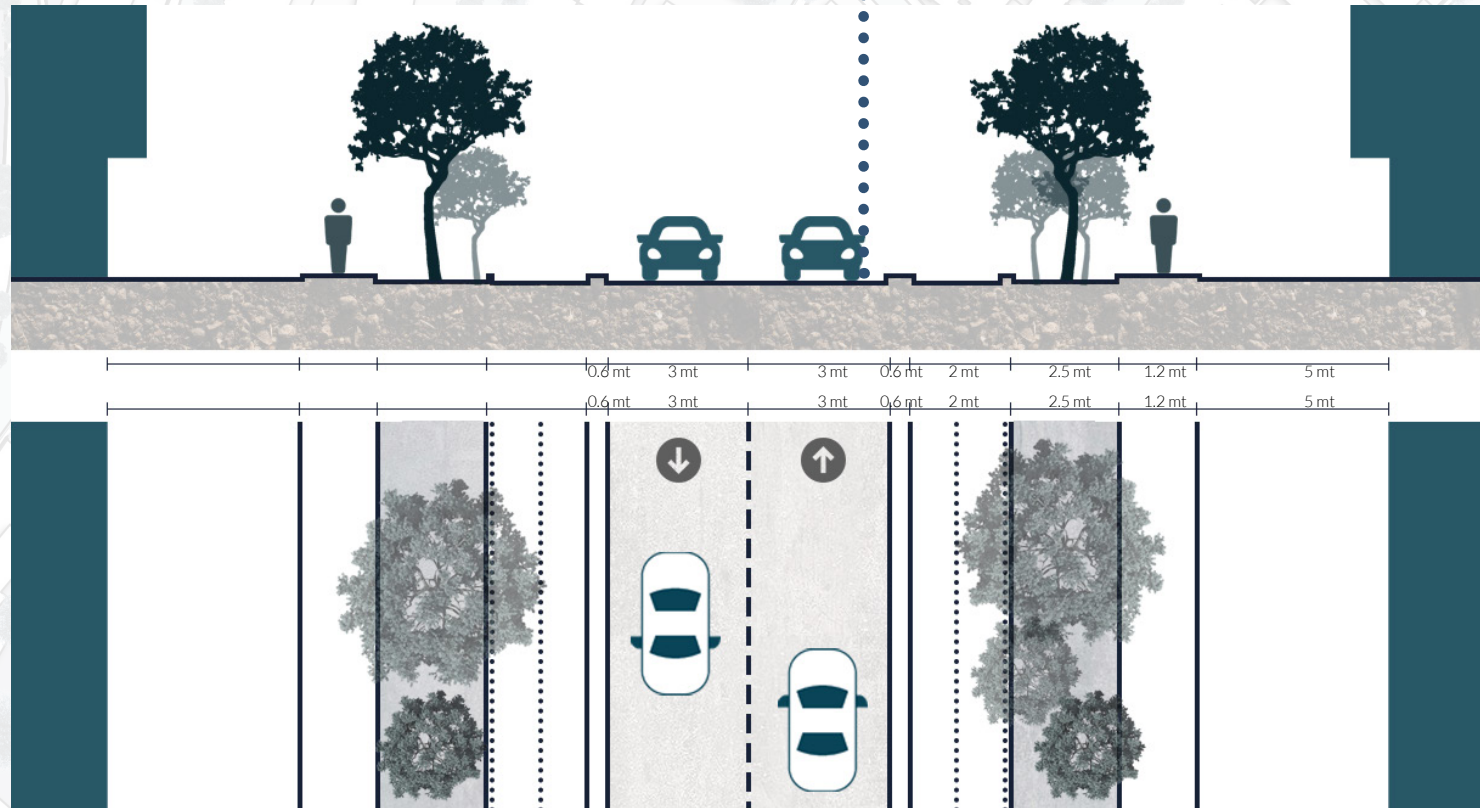
- Project location 
- Green areas 
- Street 
- Private area 
- Building 
- Parking spot 
- Proposal of the bike path 





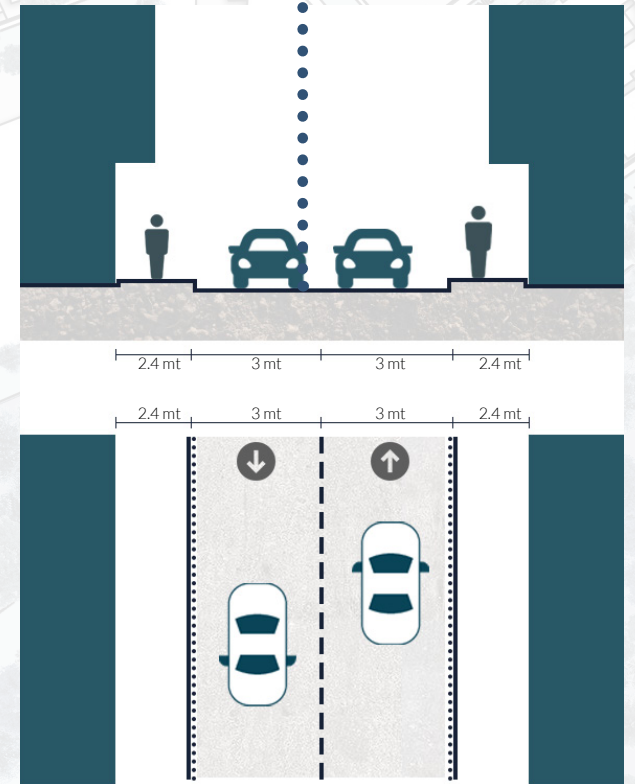
Plan and Section A-A [Fig 82]. Susana Cadavid

Section A-A



Plan and Section B-B [Fig 83]. Susana Cadavid

Section B-B



Plan and Section C-C [Fig 84]. Susana Cadavid

Section C-C

2. URBAN / DESING PROPOSAL

In accordance with what has been seen so far, we could then say that the urban proposal that we will see below is the result of extensive analysis, not only of the sector in terms of various aspects as we saw in chapter III, but also of urban strategies that have been recognized so that a building can be considered as one that positively or negatively affects the sector.

Now, the previous ones were general urban strategies of the project, according to how it is located in the place, however, if we give answers to the question How does a building positively or negatively affect the sector? We would have to propose design strategies such as the following:

- **Generate shadows:** When living in a city as hot as Cali, the idea is to help those passers-by who have to walk the streets of the sector every day, that is why, when considering a building in height, it generates shade in the morning and afternoon, resulting in a consistently warm ride in terms of the comfort zone.

- **Improvement in the appearance of the sector:** The idea of facade composition speaks a lot about each of the buildings, as we have as a concept “a living building/organism” what we seek is to show that life itself on the facade itself, and that is why with vegetation we are helping to further strengthen the direct relationship with vegetation and its importance to our day to day life.

- **Density:** Thinking about the building in height is one of the best possible solutions for this case since we can house more people in the less habitable areas.

- **Improvement in public roads:** This item is answered with one of the previously mentioned proposed urban strategies since the roads in the sector are in good condition, the only thing is that due to so many changes in level on them some of the platforms are not in good condition, perfect condition, and for some empty lots like ours the platform

has suffered lack of attention and maintenance, that is why in this case the main road would not be improved, but rather its accessories such as the platform and the proposed cycle route.

- **Appreciation in the sector:** Being stratum 6 Juanambú is in the sights of many wealthy inhabitants of the city since it is a place with a spectacular view, close to all the tourist, cultural, and natural sites that can be found near One place. Its value is currently very high and it will continue to grow each time there is less possibility of building a new project.

- **Generation of employment and profits to the city:** In this case, the generation of employment is from me, who I am in charge of developing the project architecturally together with all my work team, the structural, sanitary, electrical, etc. All those who make it possible for the building to be economically, socially and environmentally feasible, to those to whom they subcontract to carry out the development of the project and shape it in real life, all the part that is needed for construction, materials, finishes, and even those who are going to work so that when the building is ready it can function, security, cleaning, and administration. And finally in profits thanks to all the payments that must be made to the public part, public services, aqueduct, energy, gas, etc.

- **Sociability:** Over the years, it has been possible to notice how each human being is increasingly closed to the outside for the safety of

each specific place, if I talk to my dad about how his life was before, his answer would be “We played on the street all day, we were not aware of cell phones, and we knew practically the entire neighborhood” and that is what we wanted to achieve with the building, to propose different amenities in which they allow constant interaction between the inhabitants and generate that synergy between each of them, thus forming a community.

- **Staying in time:** The idea of constructing a building to last in time is answered in the materiality and in its use for which it is intended. By proposing a modular building, where two apartments can become just one, where there are lights so large that it could be done if life needs it, restructuring in certain future uses could be done with the proposed structure, the only determining factor would be really the determined use of the area since it is currently purely residential.

- **Economic feasibility:** In this case, an economically feasible project is proposed since 80% of the project areas are saleable and 20% of the areas are social spaces, reviewing costs of m² and comparing it with the competition of the sector, we can see that the project it meets expectations and there are high possibilities of relatively fast sales for what the target is currently looking for.

- **Circular economy:** Actually, this point is one of the weakest points of the Kurabú de Juanambú project because in reality, the only thing proposed for bioclimatic improvements is: the gardens of the façades to create greater climatic comfort, the collection of rainwater for the irrigation of these gardens, and the possibility of raising solar panels to correct some percentages of energy consumption. However, the calculations for these proposals have not been carried out yet, and it is expected to have a response from the project owners shortly, to see if they could be implemented or they prefer not.

In addition to this, the materials to be used are not yet fully defined, since, in the project development process that we are currently in, it is barely in the process of cooking, so to speak.

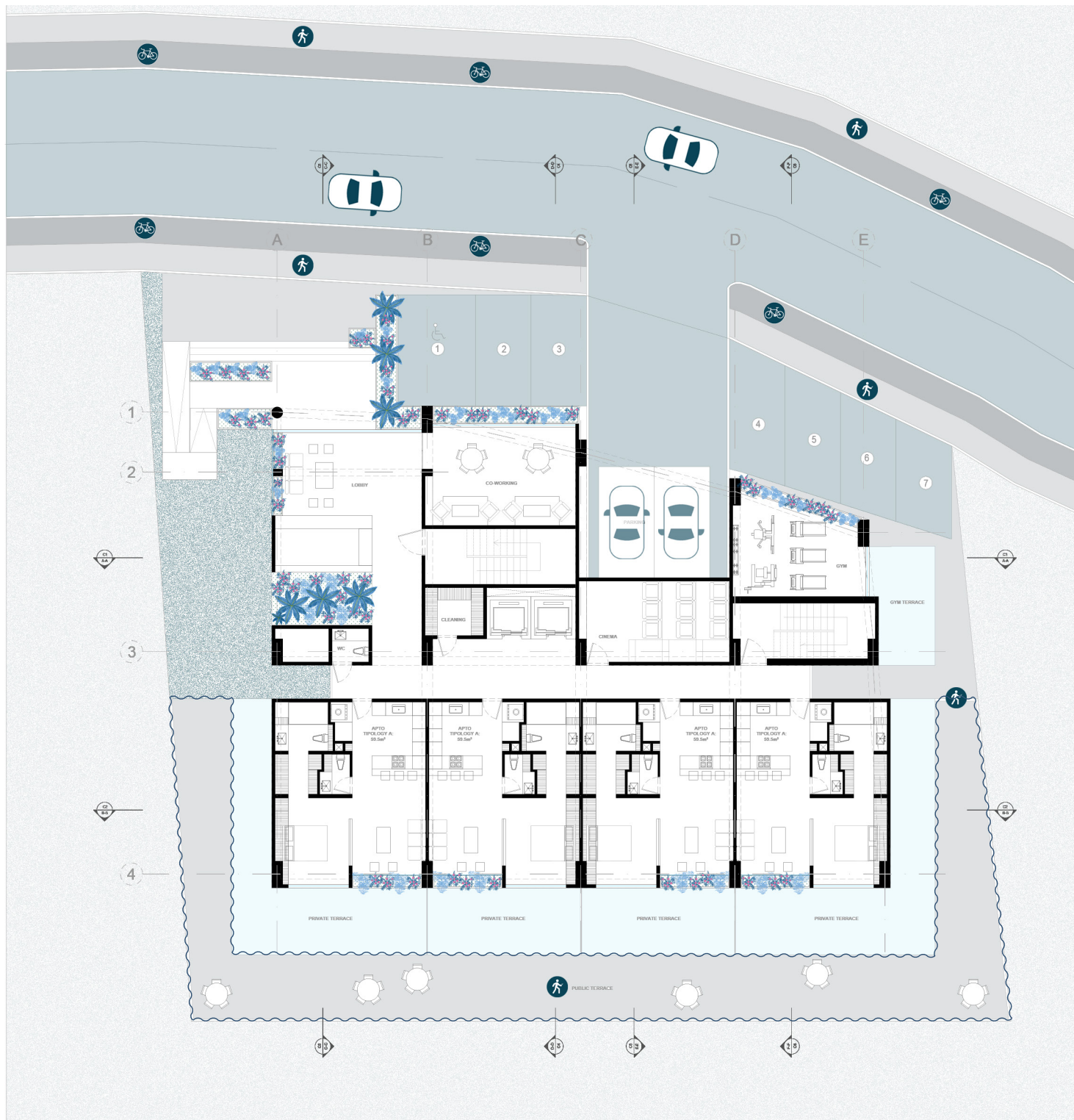
It is important to know that one of the proposals is to be able to implement and help with the environment as much as we can but under the customer's order conditions.

This is how we respond not only urbanely to the sector with our project but also in the design part of the client, the user, and a community that believes in us. Proving in one way or another that, if it is possible to develop buildings that are capable of positively affecting the sector, and likely to have a positive impact not only in the neighborhood, the city, and the entire country. Because with example great ideas are built, and realities are transformed.

-  Bike path
-  Pedestrian path
-  Street
-  Bike path
-  Pedestrian path
-  Private terrace
-  Green areas
-  Public - Private terraces


First floor Kurabú de Juanambú
Scale: 1/250

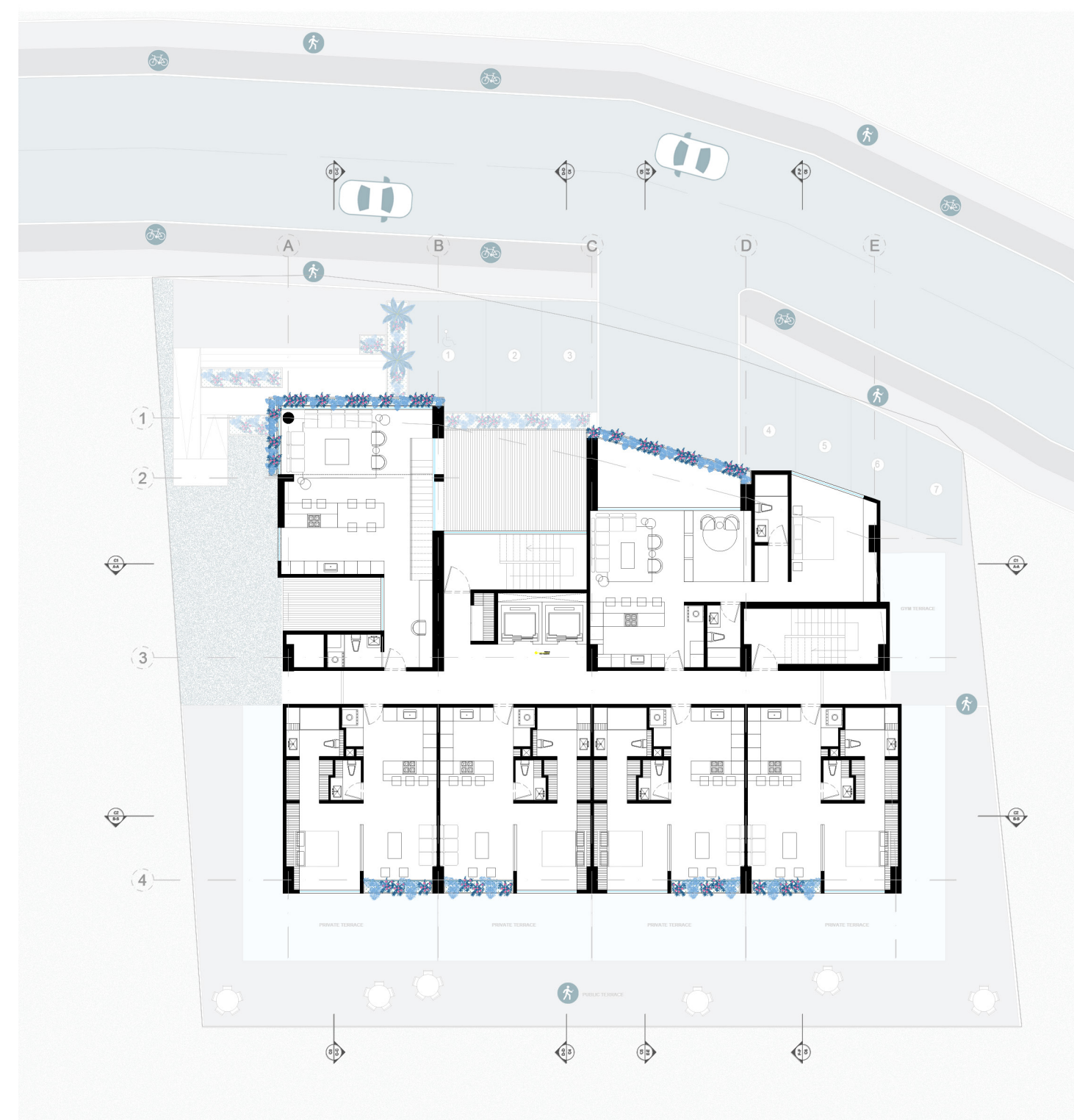
 First floor Kurabú de Juanambú [Fig 64]. Susana Cadavid



3. ARCHITECTURAL DESIGN

Third floor Kurabú de Juanambú
Scale: 1/250

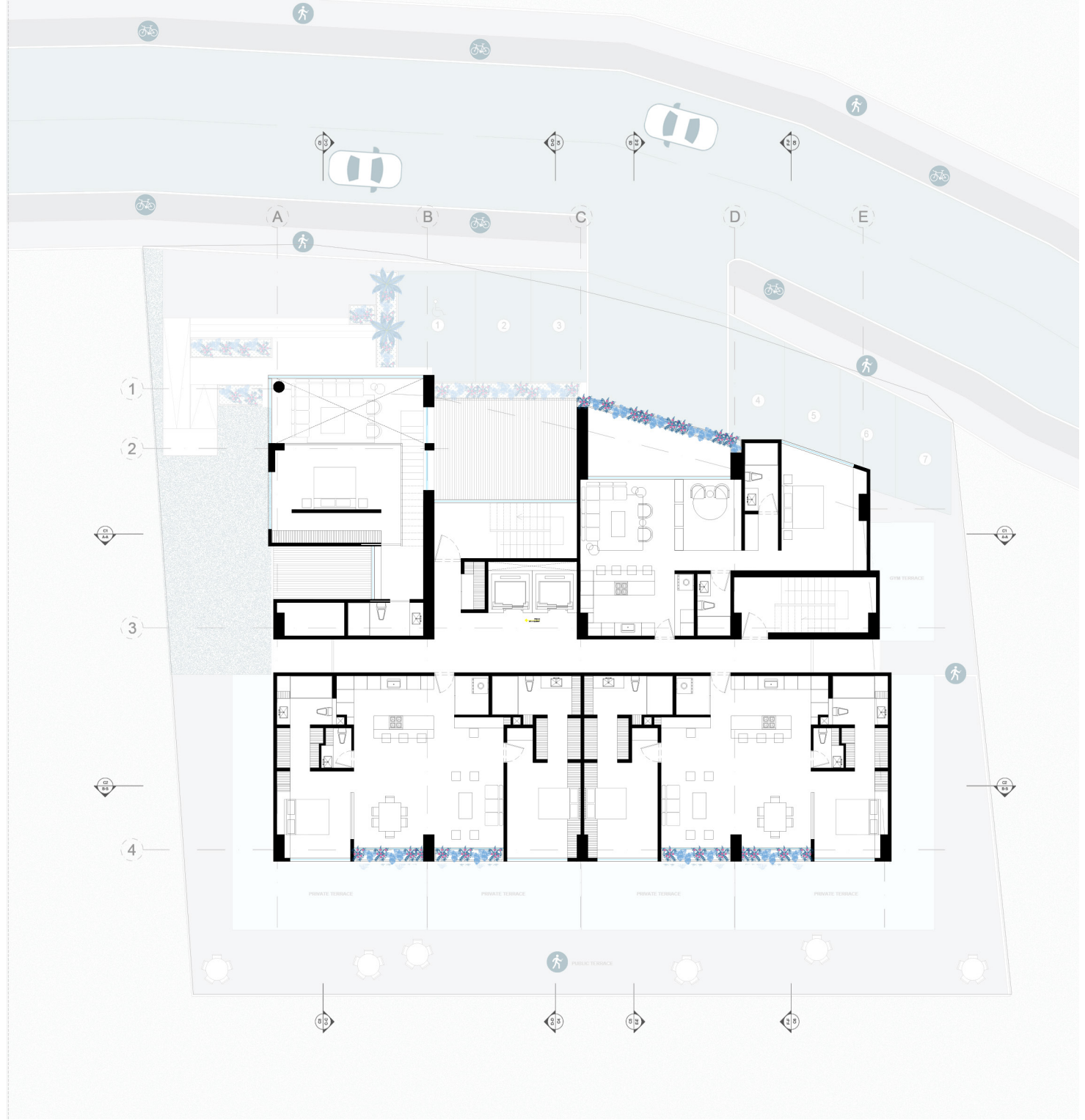
 Third floor Kurabú de Juanambú [Fig 65]. Susana Cadavid



Sixth floor Kurabú de Juanambú
Scale: 1/250



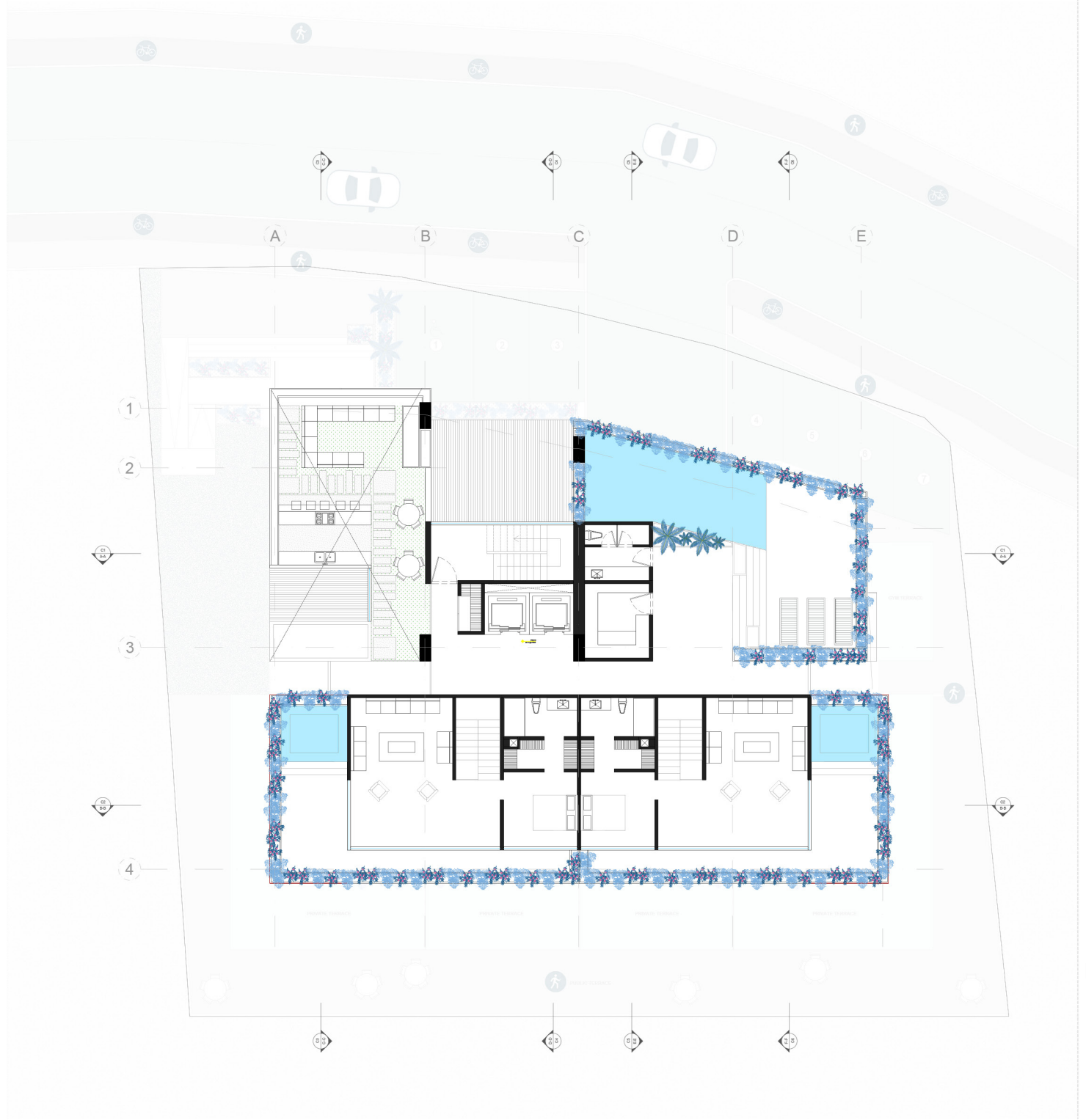
Sixth floor Kurabú de Juanambú [Fig 66].. Susana Cadavid



Nineth floor Kurabú de Juanambú
Scale: 1/250

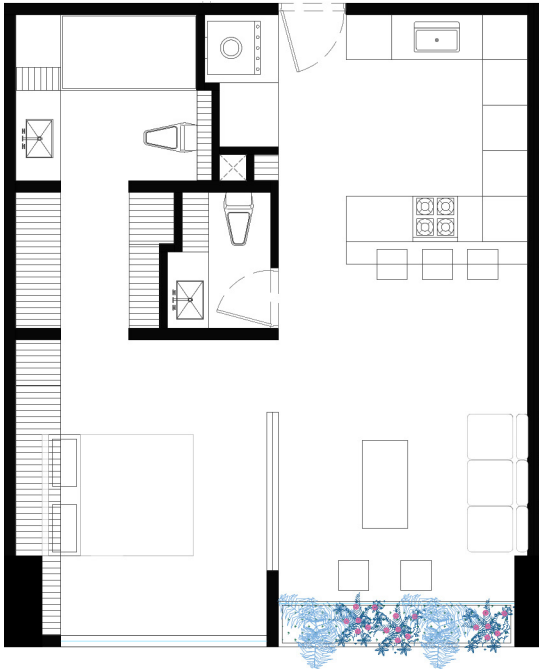


Nineth floor Kurabú de Juanambú [Fig 67].. Susana Cadavid



Typology #1:
Built area: 59.50m²

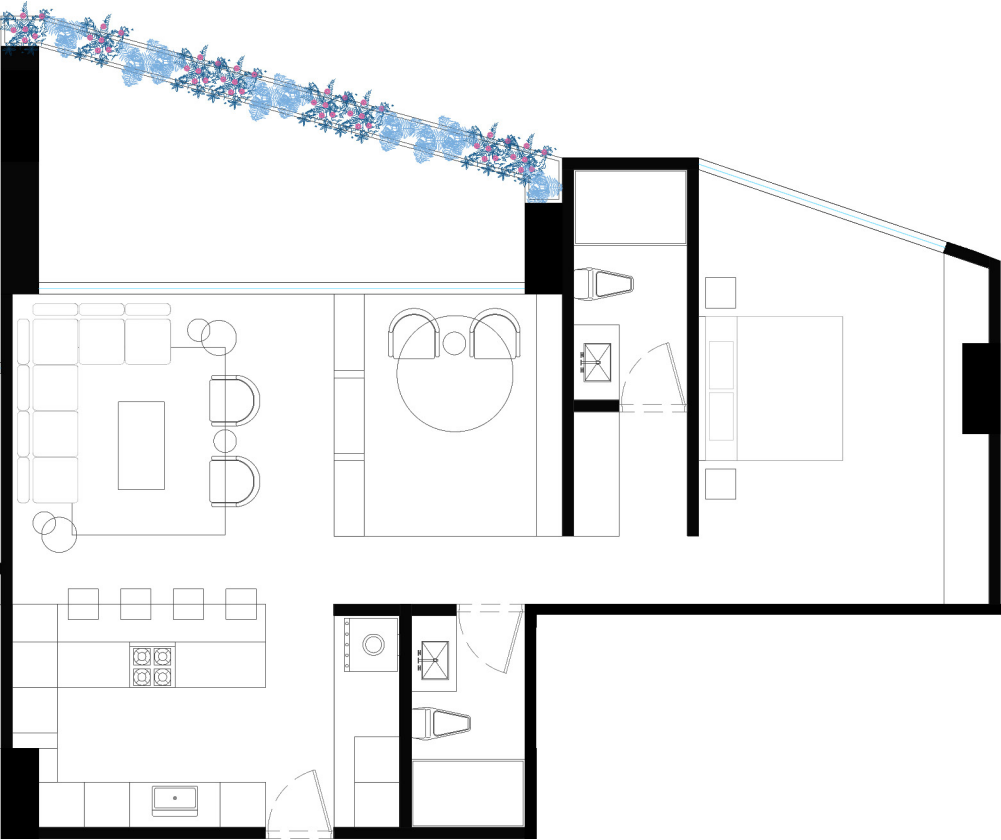
- 1 - 2 people
- 1 bedroom



Typology #1 Kurabú de Juanambú [Fig 68].. Susana Cadavid

Typology #2:
Built area: 103.60m²

- 1 - 3 people
- 2 bedrooms

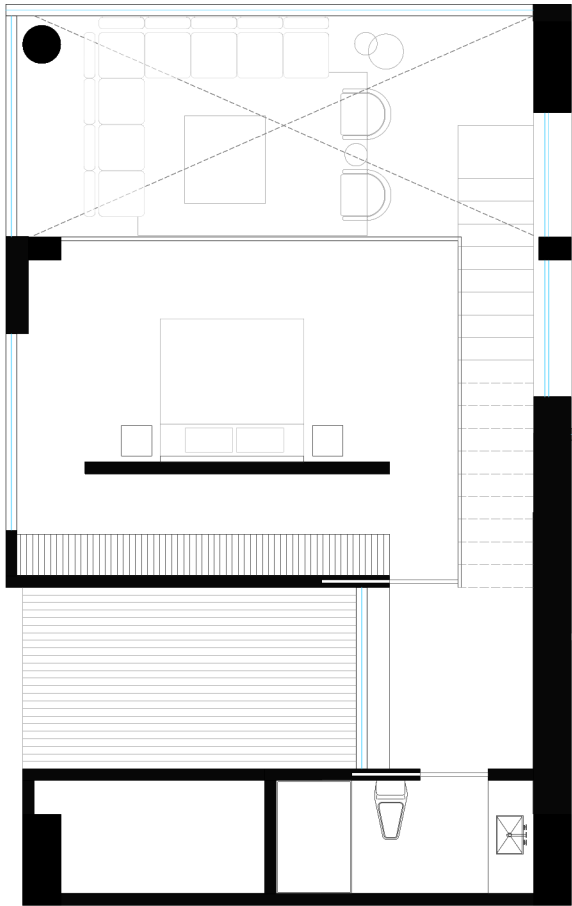
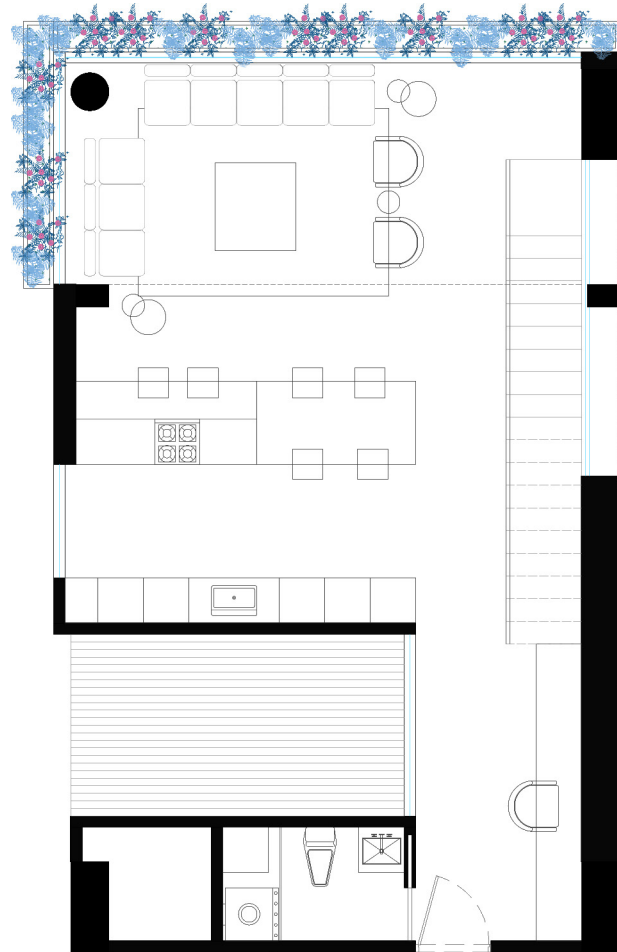


Typology #2 Kurabú de Juanambú [Fig 69].. Susana Cadavid

Typology #3 (Duplex):



Built area: 115.20m²

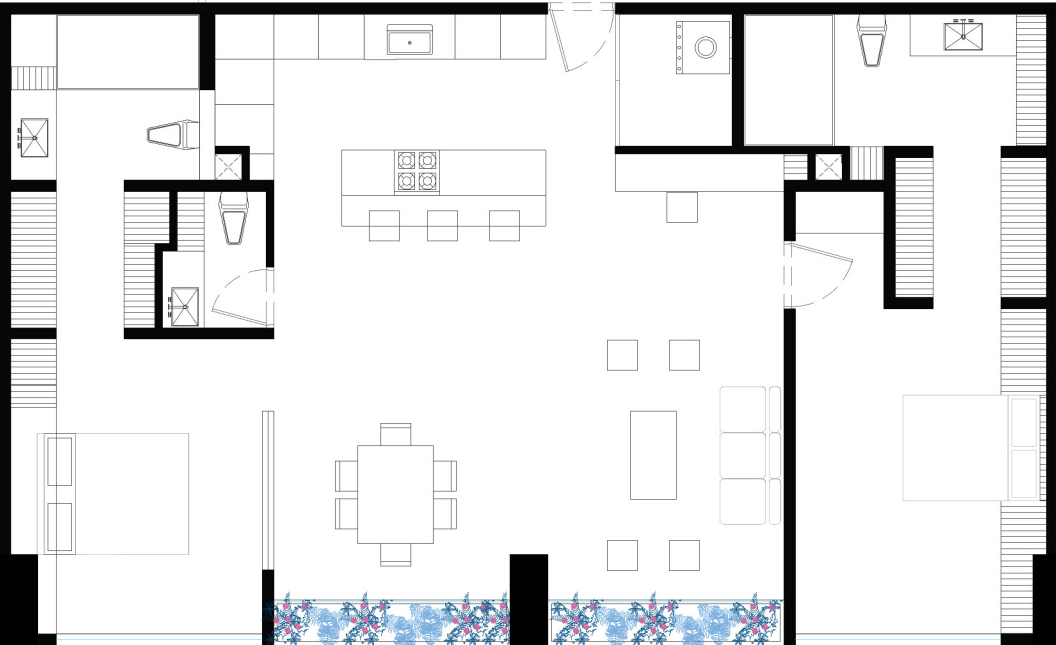
-  1 - 2 people
-  1 bedroom



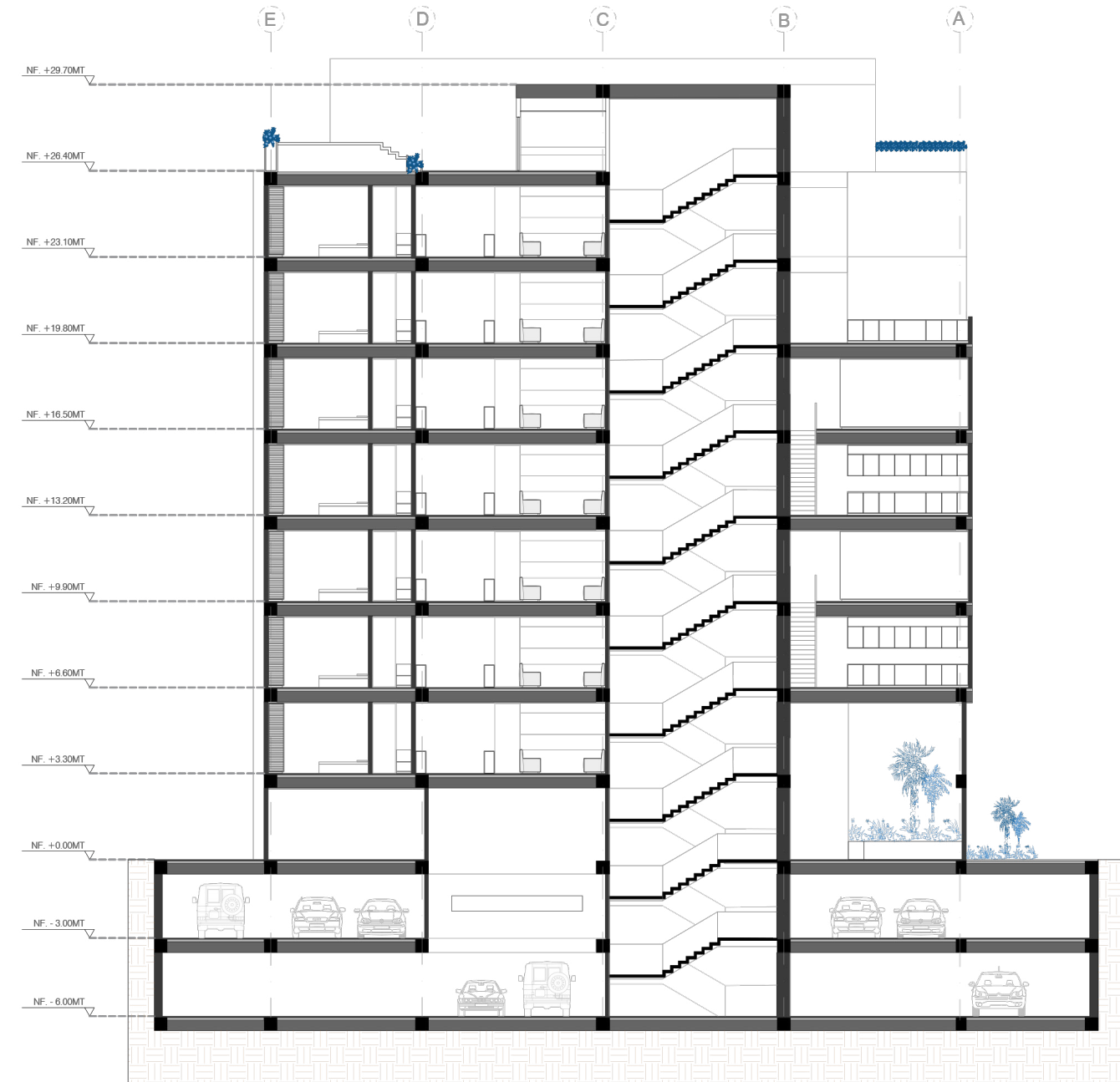
Typology #4:

Built area: 118.30m²

-  1 - 4 people
-  2 bedrooms

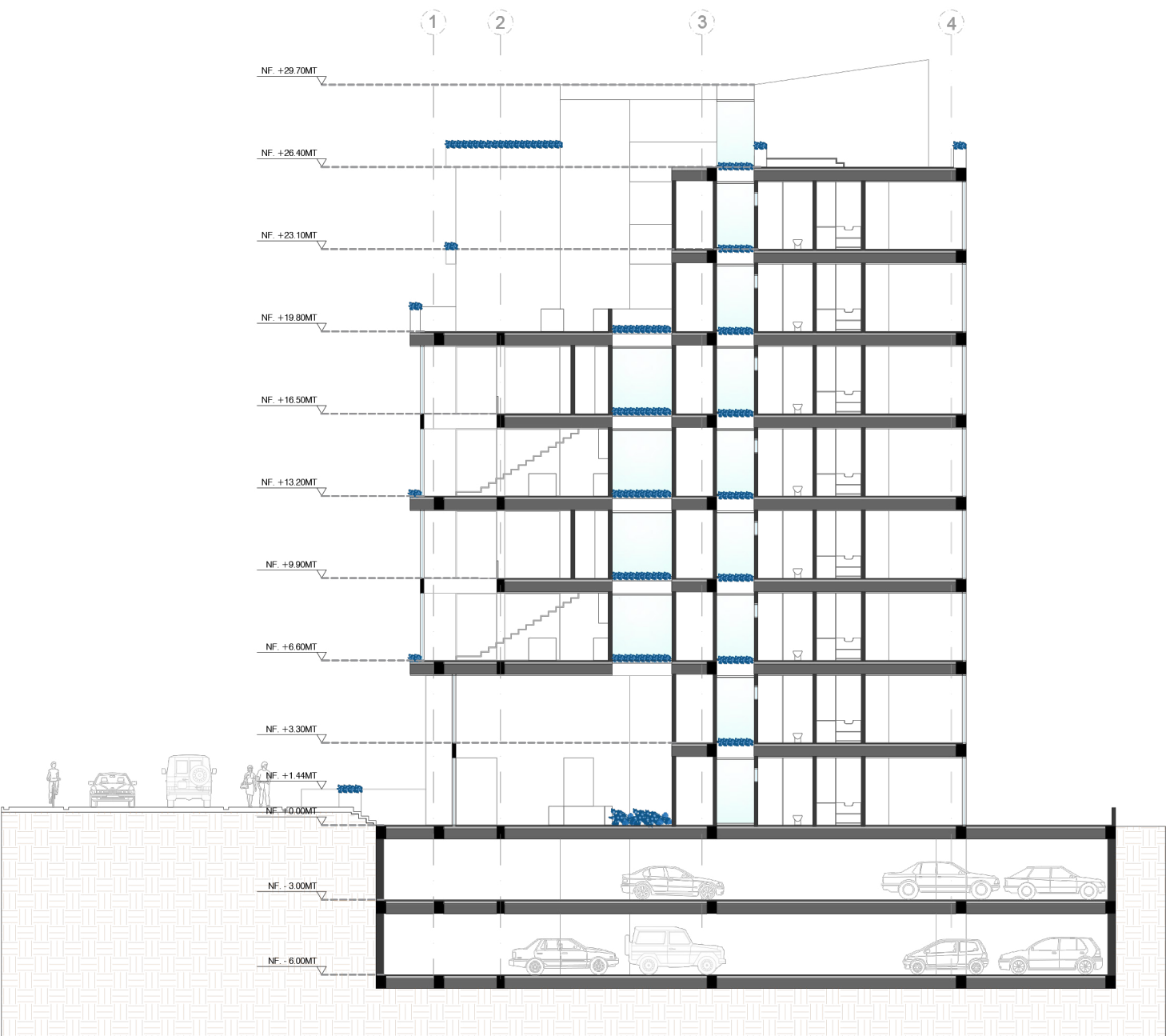


Longitudinal Section A-A Kurabú de Juanambú
Scale: 1/250



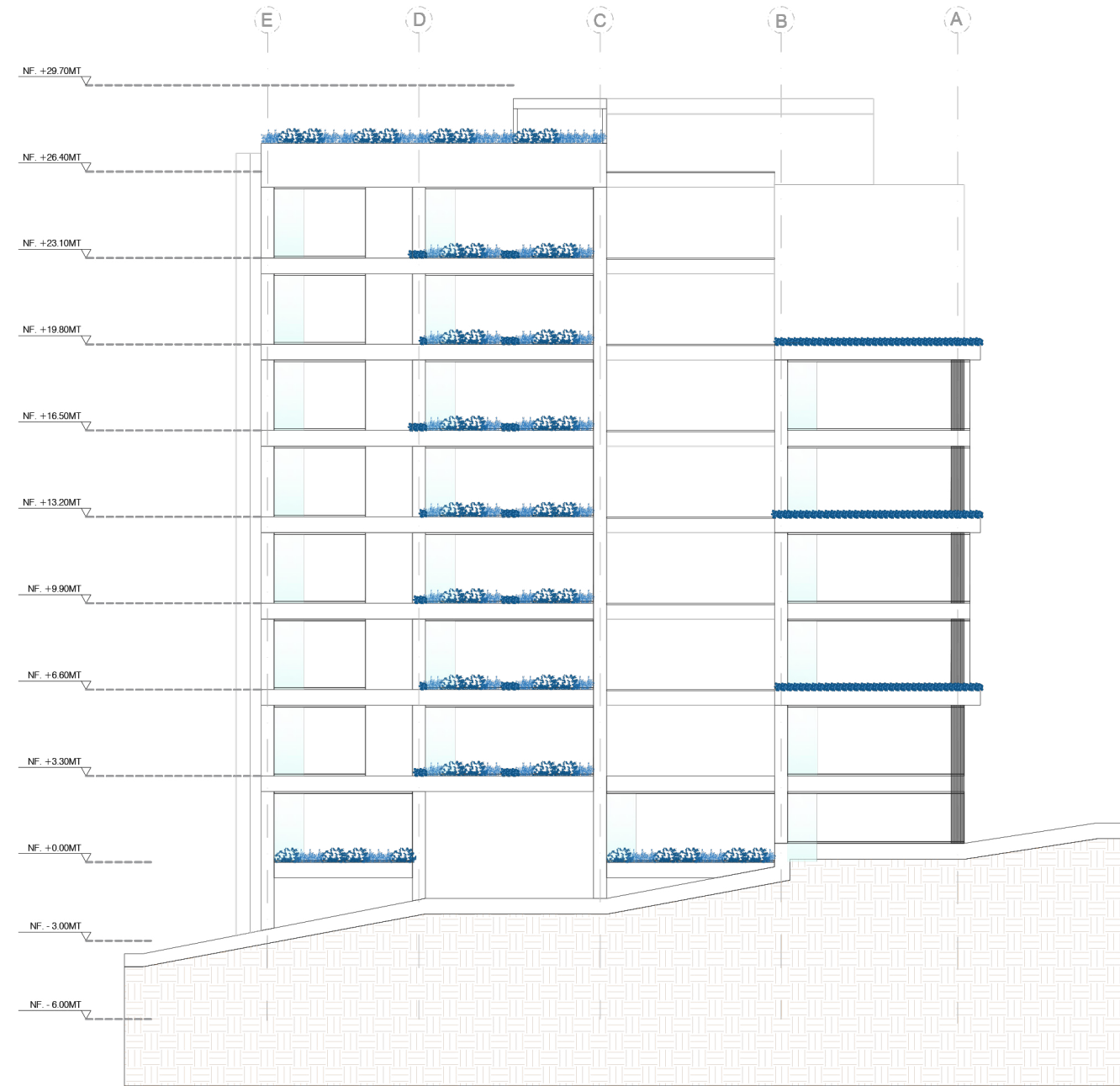
Longitudinal Section A-A Kurabú de Juanambú [Fig 72]. Susana Cadavid

Transversal Section C-C Kurabú de Juanambú
Scale: 1/250



Cross section Kurabú de Juanambú [Fig 73]. Susana Cadavid

North-west Facade Kurabú de Juanambú
Scale: 1/250



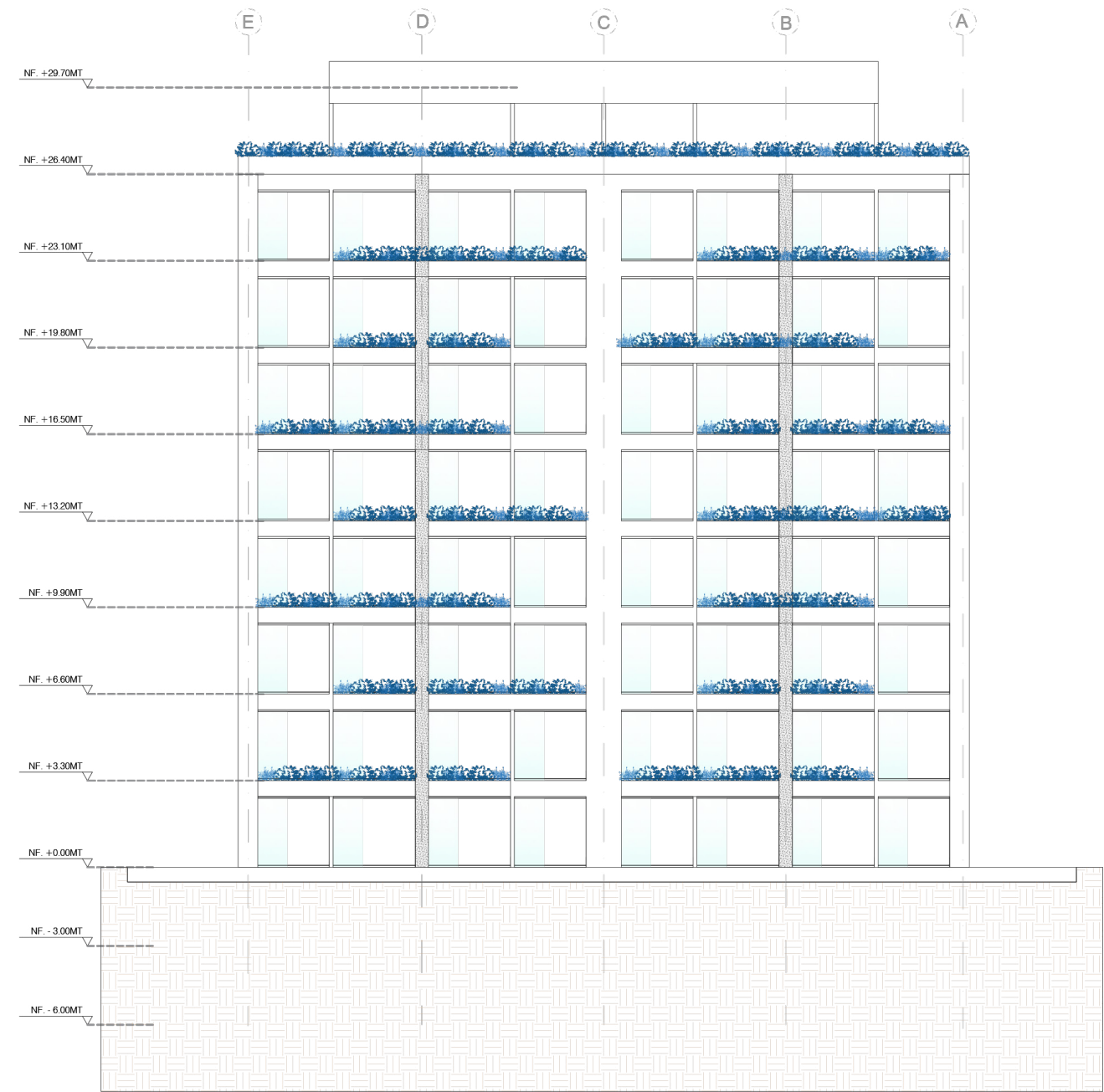
Facade north-west Kurabú de Juanambú [Fig 74]. Susana Cadavid

South-west Facade Kurabú de Juanambú
Scale: 1/250



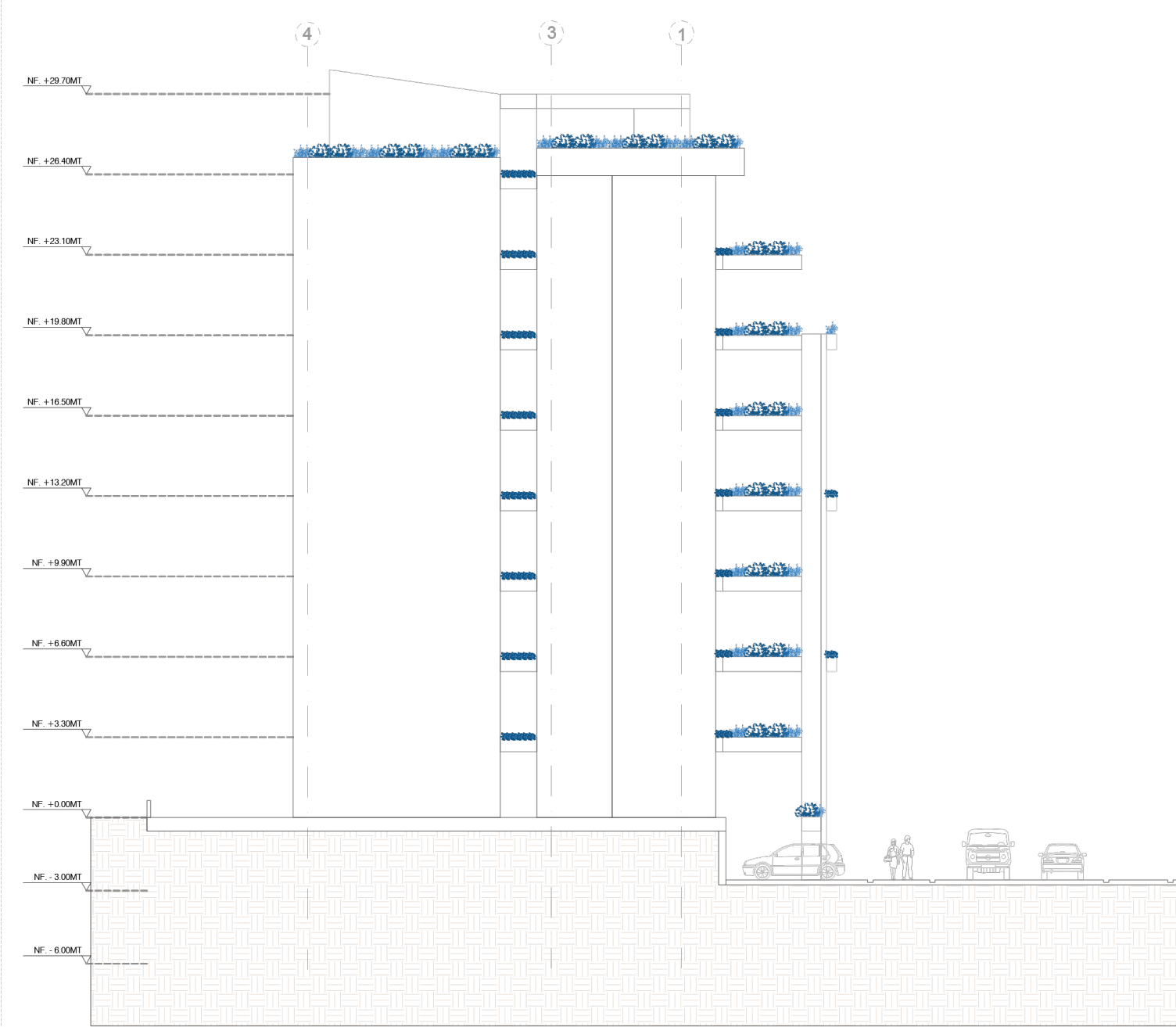
Facade south-east Kurabú de Juanambú [Fig 75]. Susana Cadavid

South-east Facade Kurabú de Juanambú
Scale: 1/250



Facade south-east Kurabú de Juanambú [Fig 85]., Susana Cadavid

North-east Facade Kurabú de Juanambú
Scale: 1/250



Facade north-east Kurabú de Juanambú [Fig 86]., Susana Cadavid

CHAPTER VIII

CONCLUSIONS

I never thought that developing this thesis would bring me so much knowledge, but above all awareness of factors that may seem obvious at first glance, my thesis development plans were very different, but due to destiny and life I started my practice in this company that now it's my job, and I decided to do my thesis with one of the buildings that I currently have in charge of. With all the situation we are living through worldwide, we realize the number of people who have suffered, have become ill, and have had very hard times where they live and dream every day, and that is why as a company TAG Estudio Arquitectónico we set ourselves the task of designing, but designing from the heart, being aware that each line that we draw has a reason and a goal for the user who will inhabit the space.

However, like Susana Cadavid Hoyos, I decided to analyze further the things that we as architects should always take into account when we are going to carry out a project. I decided then to start on a large scale, such as the country, and end with the distribution of the different types of apartments that are proposed for sale.

I concluded then that it is important to start from the big plane, for all those who do not know where the project is carried out, without going too deep, I said, showed, and taught the reader about how wonderful Colombia is, and followed by that, a little of what is Valle del Cauca, and Santiago de Cali, although better known for being Cali.

From here, investigate the design processes that each of us should have in order to carry out a project, starting with the regulations of where the development area is located, each lot or area has different specifications and it is important to respect them, either the lot size, the occupancy area (the built square meters that can be on the first floor), the base construction index (the square meters that the whole building can have), the additional construction index (the square meters for which the owner can pay to obtain more construction meters) and also be aware of what area of activity the area has, since depending on the place it can be purely residential or mixed (residential + commerce), here in Colombia it is very difficult to find in the same area an infinity of activities, but rather things are sectorized, like the social strata, we are divided by strata from 1 to 6 being 1 the population with few resources and 6 the most beneficiary, is why a project begins to take shape taking into account all these variables.

One of the conclusion of all this investigation was that in a sector that has an social strata 6 (people with more money) the connection with public transport, with green spaces, cycle paths and services are not well connected, this explains why people with social strata 6 does not use bicycle if it is not just for hobbies or some exercise, they all have private transport as cars, and its weird to see people using the public transport, and the services are “far away” because all of them as the way to get there without any complications.

Also, I decided to give more strength to what were those factors that could characterize a project that positively or negatively affects a sector in Cali, Colombia (although they could become factors that are worth worldwide) which at some point I came to think that they were too obvious to the naked eye, but that not all projects really take them into account because they are so obvious.

Without going too deep, we could mention some of the factors that could be involved in negatively affecting a sector such as:

Block the view of neighbors, affect mobility, privacy, the amount of sunlight, pollution, vegetation, health, competition between buildings, social barriers, among others.

On the other hand, we have those factors that could help to be positive for the sector such as:

Generation of shadows, improvements in the façades of the sector, density, improvement of public roads, valuation of the sector, greater amount of employment, greater income to the city, sociability, durability over time, economically feasible project, circular economy, construction in height , among others.

According to the objectives set, the idea was to come to recognize these factors in order to be able to develop a project that would meet most of these variables, taking into account that it is not only important to generate responses to the sector, but also to the interior, That is why the competencies that were around were investigated, in order to know how they were developing their projects and what we could do to be able to deliver a better project to our users.

Another conclusion is that it is really important to get to know the competences of the sector, because it is not just the design process that matters, but also the economical part, as a project affordable and feasible in order to know which ones are the prices of the market around to be able to make good impression with the possible owners.

Finally, we can conclude that Kurabú de Juanambú is a project that opened my eyes, about being aware of designing for those who inhabit the project, but also for the sector in general, since, if we all begin to contribute our grain of sand thinking in the others, we will be able to form a city for the other, and not only for ourselves.

CHAPTER IX

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FIGURES

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ambú [Fig 73]. In TAG Estudio Arquitectónico.

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TAG Estudio Arquitectónico, & Cadavid, S. (2020d). Facade north-west Kurabú de Juanambú [Fig 74]. In TAG Estudio Arquitectónico.

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