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Building Urban Texture

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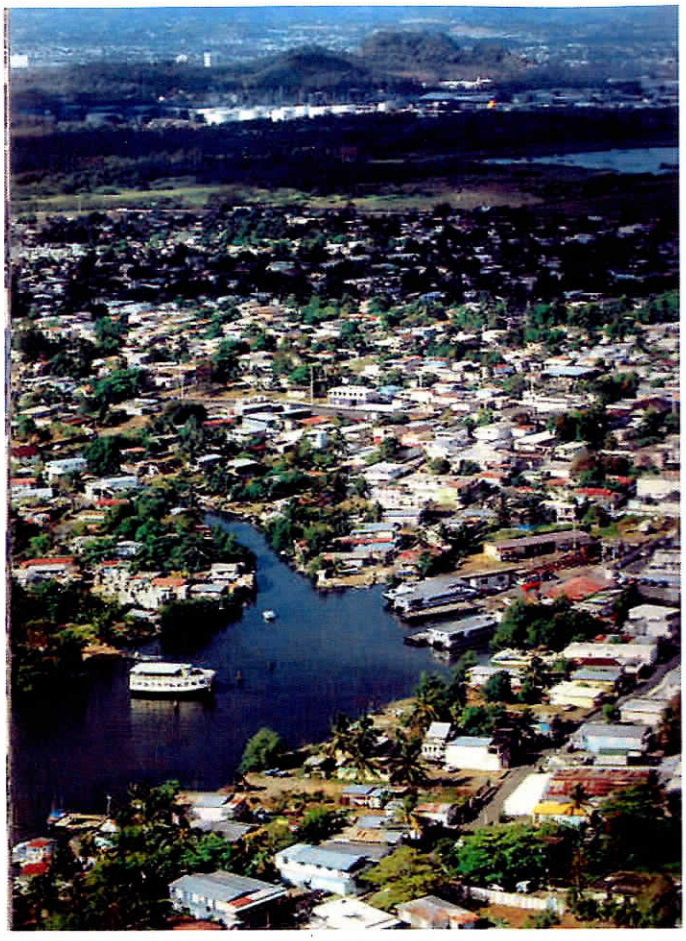
3Forming a place in the bay of San Juan,
2integrating the parts,
1understanding the city

or **Building urban texture**

Fernando Pabón-Rico undergraduate

Advisors: Bruce Abbey, Richard Rosa

Bay of San Juan circa 2000



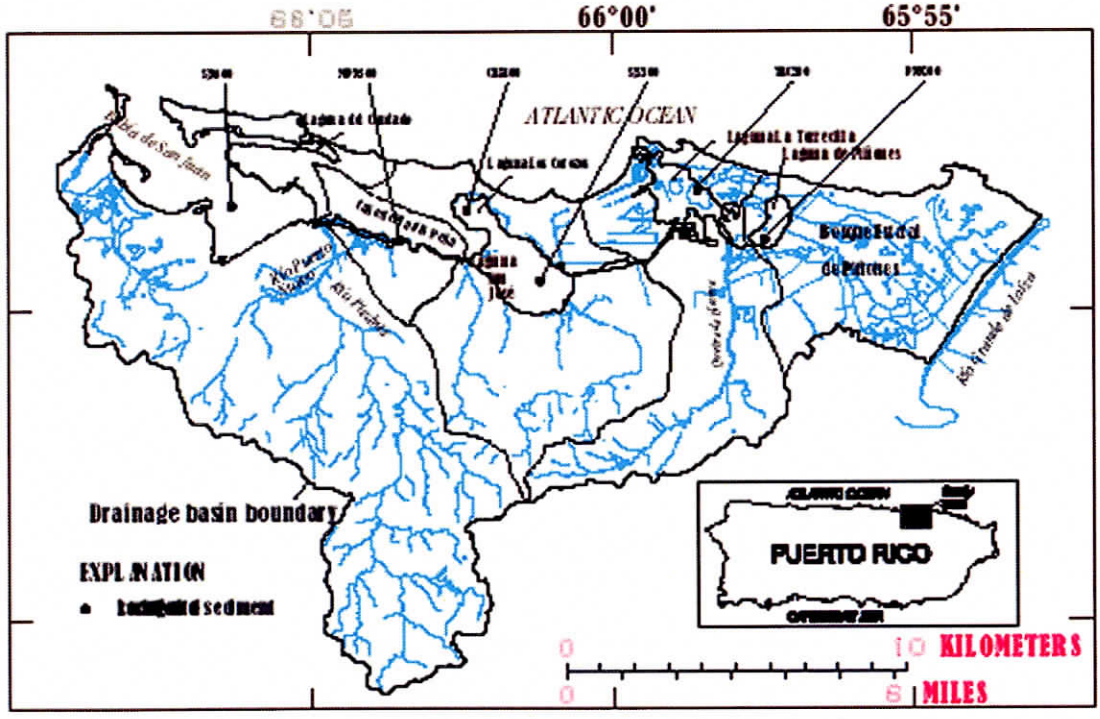


Figure 1 -- The San Juan Bay estuary system showing site localities, drainage basins, rivers and streams, and the locations of the six sediment coring sites.

voices in use

-Enhancing
-creating
-renewing
-replacing
-nourishing
-intervening
-awakening
-reconfiguring
-ordering
-carving
-integrating
-forming
-translating
-incising
-inserting
-developing
-fomenting
-learning
-discovering
-materializing
-producing
-informing
-grafting
-marking
-applying
-bridging
-inventing
-fusing
-reviewing
-mediating
-reciprocating
-repeating
-building
-dreaming

1 Thesis Statement (s?)

This investigation is based on the contention that a city is made up of an urban construct where certain elements are continuous in their presence. This continuity provides legibility to an urban environment. The fact that elements or parts are an integral part of the legibility of the city fosters the reading of the city as a function of their integration. The role or *place* of architecture therefore lies on the formation of the city through its parts.

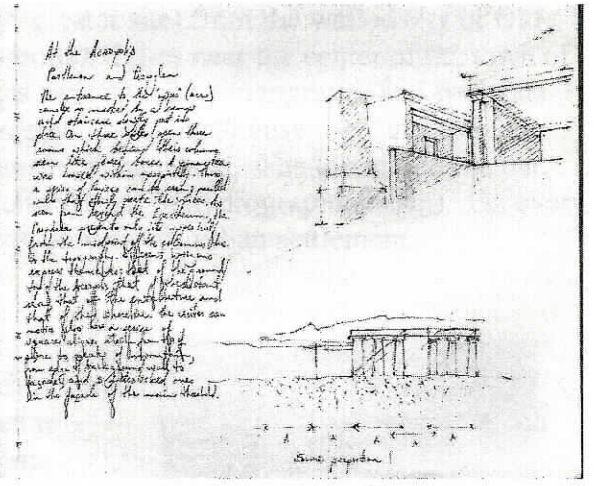
A parallel, potentially alternate, but nonetheless informative thesis places method at the root of the investigation. The methodical approach to the thesis is based on building an understanding of the parts of the city. This creates an awareness of the level of continuity/discontinuity between the parts. Architecture therefore engages the mind in producing ways to understand and challenge the city.

a. Project Topic, Site, Program, Method

Urban development (can be thought of as texture); site is in the bay of San Juan particularly the town of Cataño; program is interested in a mixture of work and housing; method is concerned with understanding the city, is created by drawn exploration of ideas

b. Expectation of Final Result

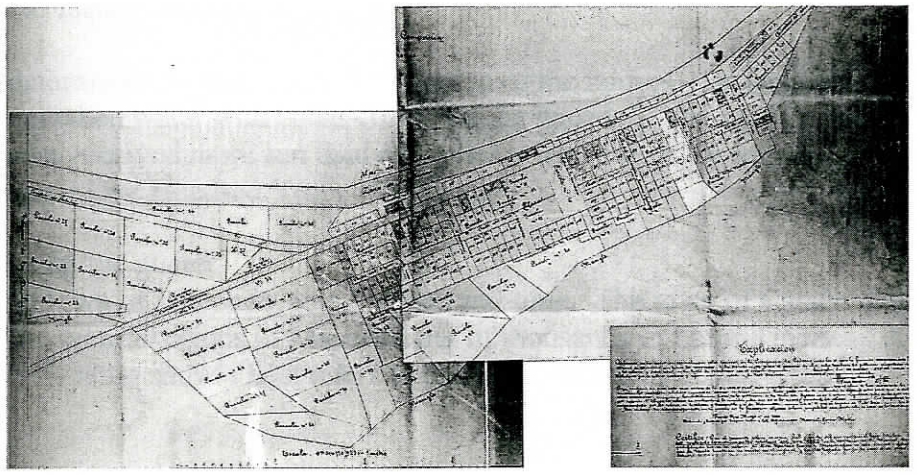
Travel sketchbook drawings and comments at the Acropolis of Athens: Propylaea. These images bring the programmatic and site specific relevance that can be developed by architecture. This architecture brings a way to understand the site in a proportional level through calculated views in a promenade. It also articulates the ritual with spaces that celebrate its connection to the site in a sectional capacity (threshold between the world and a sacred complex) rewarding the effort of the ascent and that engage the states of mind which seek noble activities as with the pinacoteca.



What is needed to create place and its space? What tools can be used to create an architecture that will visually project itself, i.e. that will create an architectural effect of consequence in form and intention? There exists the actual premise that buildings antipode to one another can relate in a discursive way ("associative perspective"). How can design provide formal control and insure a continuity of purpose (especially when so much quality built work responds to a preexisting purpose/tradition) while acknowledging freedom or space? The problem is of urban meaning/content and the role or place of architecture in its

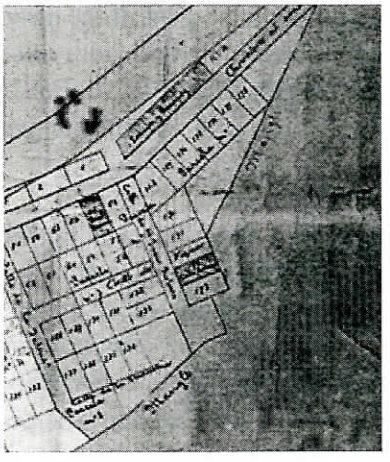
resolution. To solve it, the city must be challenged within the concepts of figure and field, object and void, parts to the whole. A city is made up of an urban construct where certain elements are continuous in their presence. This continuity provides legibility to an urban environment. The fact that elements or parts are an integral part of the legibility of the city fosters the reading of the city as a function of their integration. **The role or *place* of architecture therefore lies on the formation of the city through its parts.** Re-placing, re-envisioning the character of the city can form a meaningful shared place/space for the near and/or far urban settings.

Plan of the town of Cataño (1861) subdivided into parcels including some assigned to stockholders of the steam ferry company. Image below shows a detail of the ferry terminal at the end of the street carrying its name.



The current site proposal is found across the bay (greater site) from the walled city of Old San Juan which sits on high ground (like an acropolis). It lies near the center of the town of Cataño (linked by ferry to Old San Juan) which is surrounded by mangroves and wetlands. The morphology is of free standing but clustered small buildings/houses. Near the area, history has buried any remains of the first settlement of the island. The topography is flat, slightly above sea level and part of an estuary/delta system (a hydrographic basin). On every direction lies the sprawling, mostly one story high polycentric urban settlement.

Potential program for the site includes housing, productive-commercial, and recreational spaces. Formal program for the site aims to build the urban construct by developing urban fabric and urban space. A need to address is the current typology employed in the site which does not exploit its urban context. This necessarily engages in programmatic investigation.



Through drawing, a method of research is developed to explore meaning, significance, relevance, the depths of the architectural intention and its narrative. This process uncovers thresholds, milieus, scales, layers, and conversations among buildings. It informs how to order, mark, form, translate, and integrate the ideas and site in

order to design.

Precedents: Uffizi (G. Vasari), Neue Staatsgalerie (J. Stirling), Piazza San Marco/Procuratie (J. Sansovino/V. Scamozzi),
Concerning typology: palladian villas, corbusian villas (particularly Savoie, Shodhan), centrally planned religious buildings, urban palazzo
Some public spaces: Roman grid/forum intersection, garden promenades, courtyards

2 Thesis/Architectural Issues/ Research

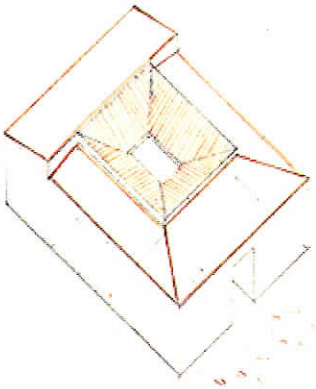
"(José Arcadio) had determined in such a way the position of the houses, that from all could be gone to the river and taken water with equal effort, and he traced the streets with such good sense that no house received more sun than any other at the time of the heat."
Gabriel García Márquez – One Hundred Years of Solitude

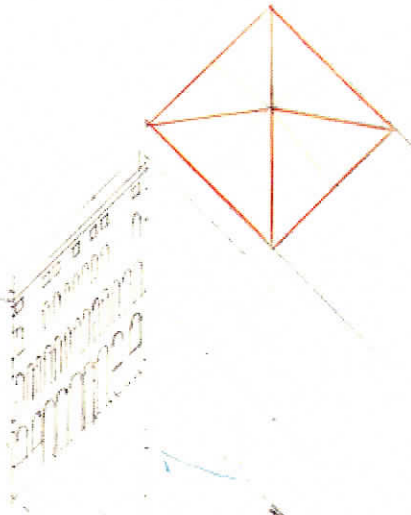
Some initial comments on the quote:
It refers to the fictional town of Macondo, lost in space and time. The town of Cataño could be thought as one of the manifestations of Macondo out of thousands in Latin America. A popular political analysis radio show's host refers to the whole island of Puerto Rico as Macondo.

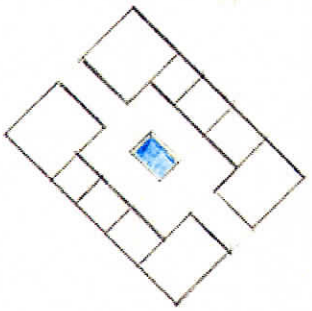
Continuity:
The idea of continuity can be thought of as a success that is being copied, that continues to be applied. This is much like a formula. In a way this can lead to an attitude about how to address the city and its problems of horizontal sprawl. Horizontal sprawl is considered problematic because it breaks down the legiblility, the capacity to understand and challenge the city. Nonetheless this has become part of the built environment. Colin Rowe refers to this as the urban continuum and clearly differentiates between the conception of a city where the figure-ground is "almost all white, the other almost all black". In these cities "the fundamental ground promotes an entirely different category of figure-in the one *object*, in the other *space*. Both models are arguably qualified according to the text particularly when the premise that the object might be qualified not just as figure but also as ground arises. Examples of the Uffizi in Florence and Piazza Navona are given to illustrate that through "a process of response and challenge, both (building & void) make their point". That is, the modern city has been living all along in the spaces and constructions of the traditional city. It can thus be said that objects can articulate an urban continuous texture.

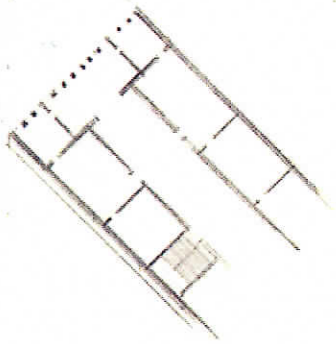
On a hunch:
A suspicion has been explored on the order of typology. During the 1930's and 40's large pieces of undeveloped land where urbanized as suburbs of single story, single family housing. So prevalent is this that it can be argued to have become today the texture or at least one of the main currents of texture of the city. This is particularly true when the typology is seen in light of its varied use, manifestation and deployment. It seems as if the citizens of San Juan and even the whole island have on subsequent generations spontaneously stretched the programmatic possibilities of this standardized structure. All of

these expressions of the same type of structure can be read as integral to the notion of texture in the city. In its general layout it consists of parallel wall or post and lintel systems supporting a flat concrete roof plate. It is remarkable in its formal resiliency and simultaneous flexibility. This can be argued because people have grown up, studied, worked on similar structures. They are universally familiar and held as the standard of living.

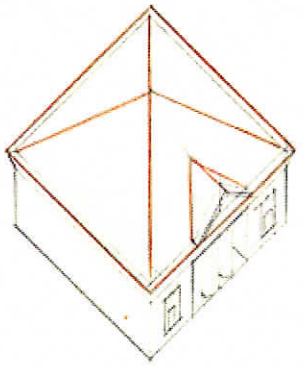


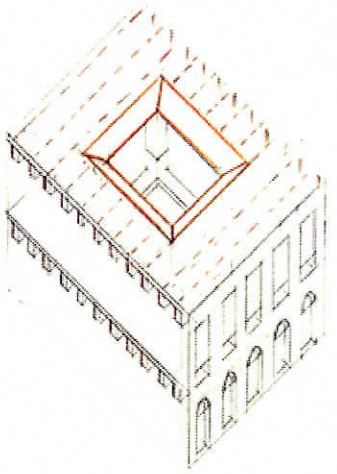


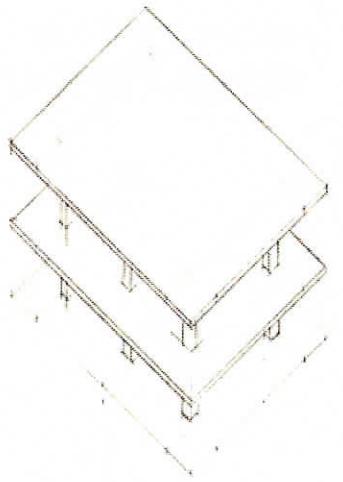


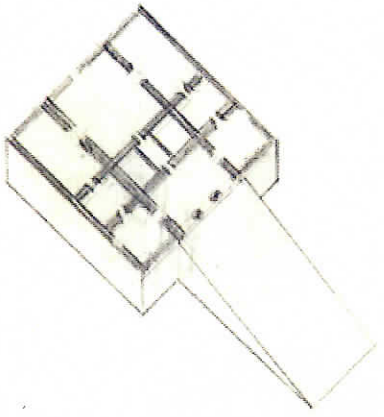


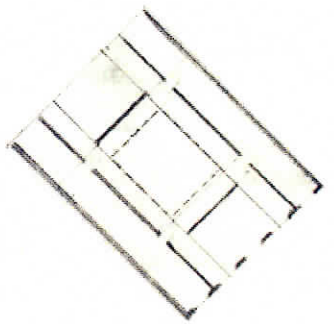
Evolution of Type

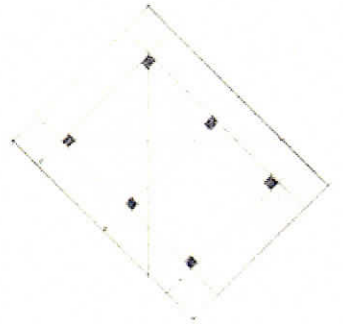


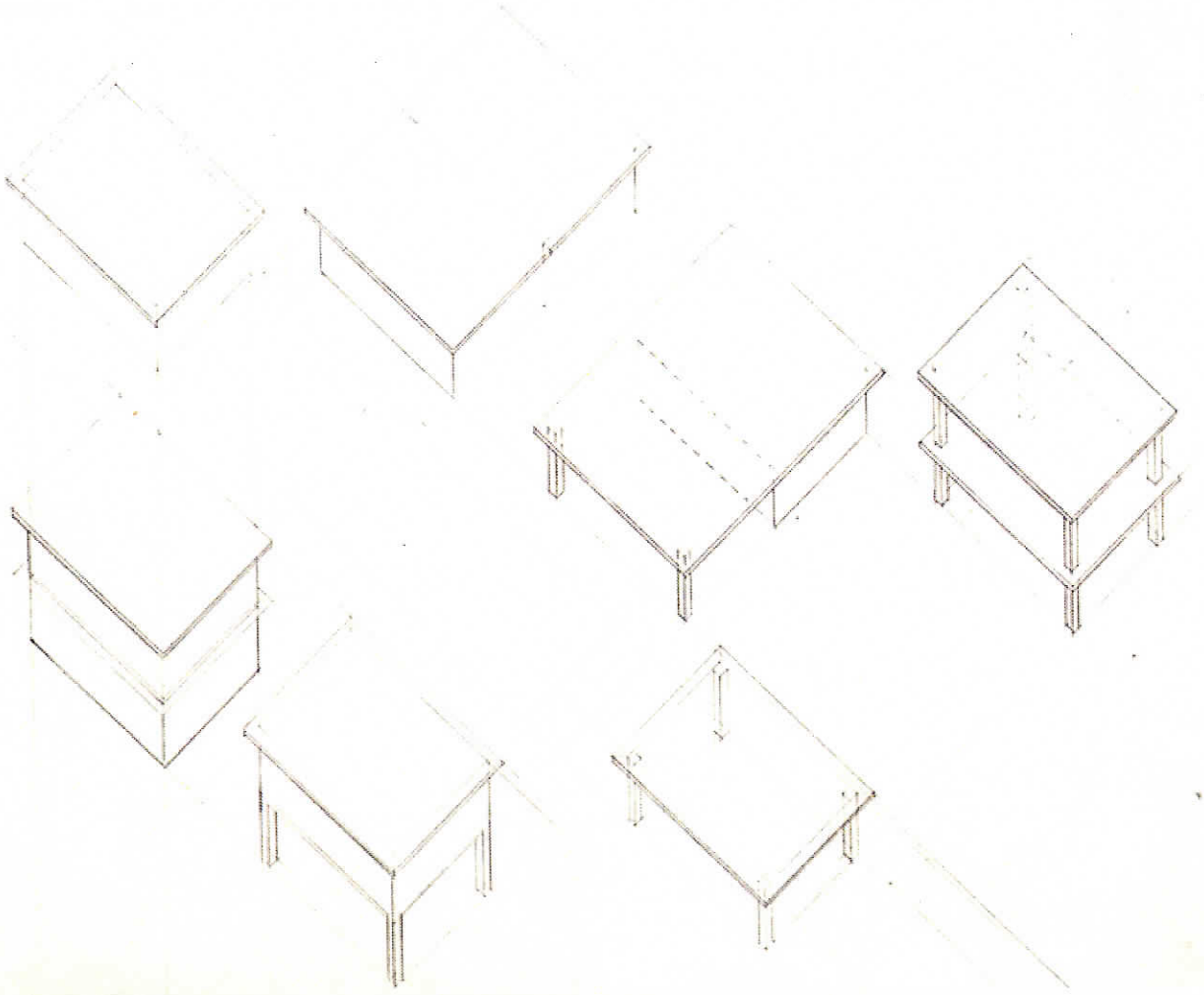




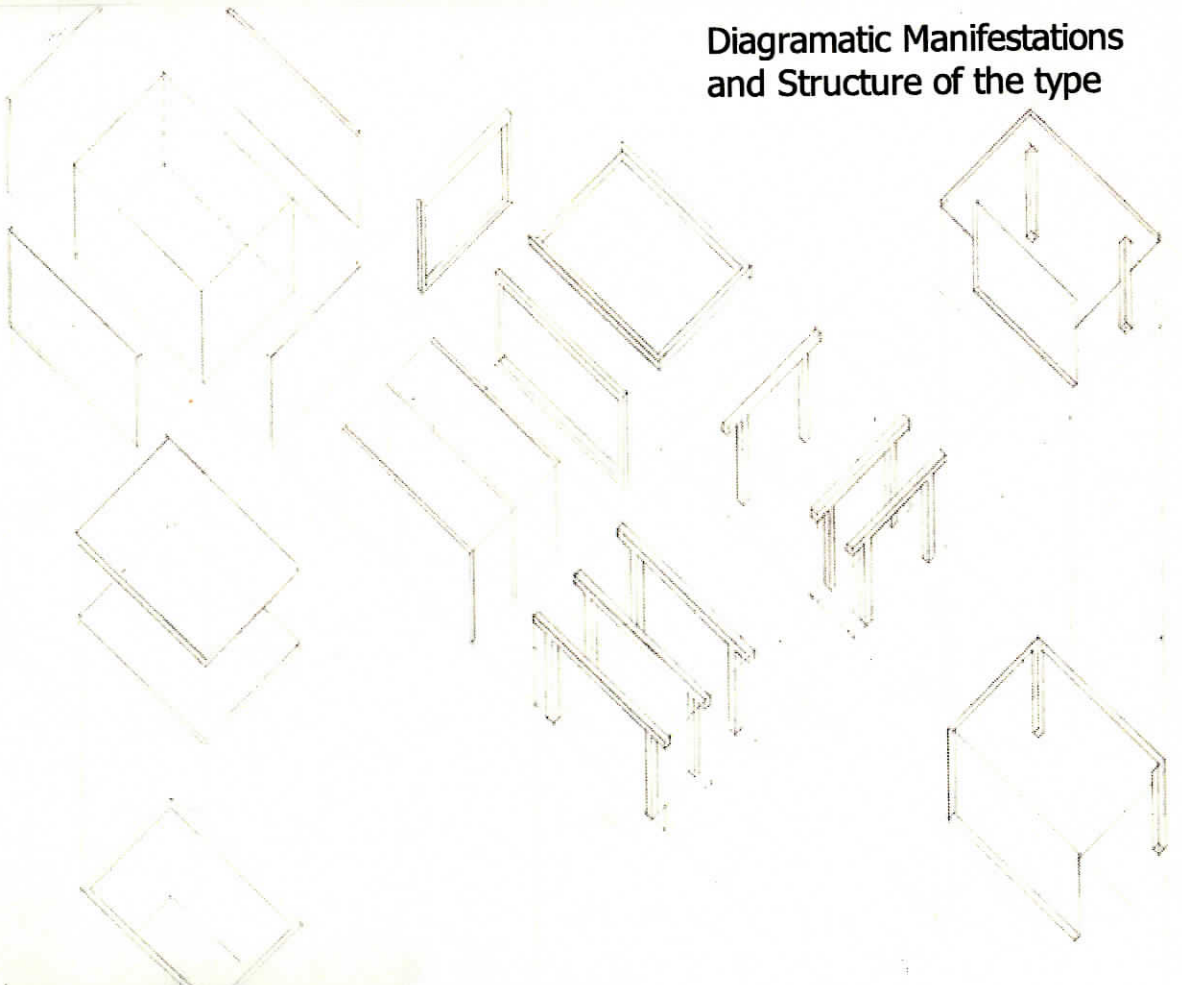


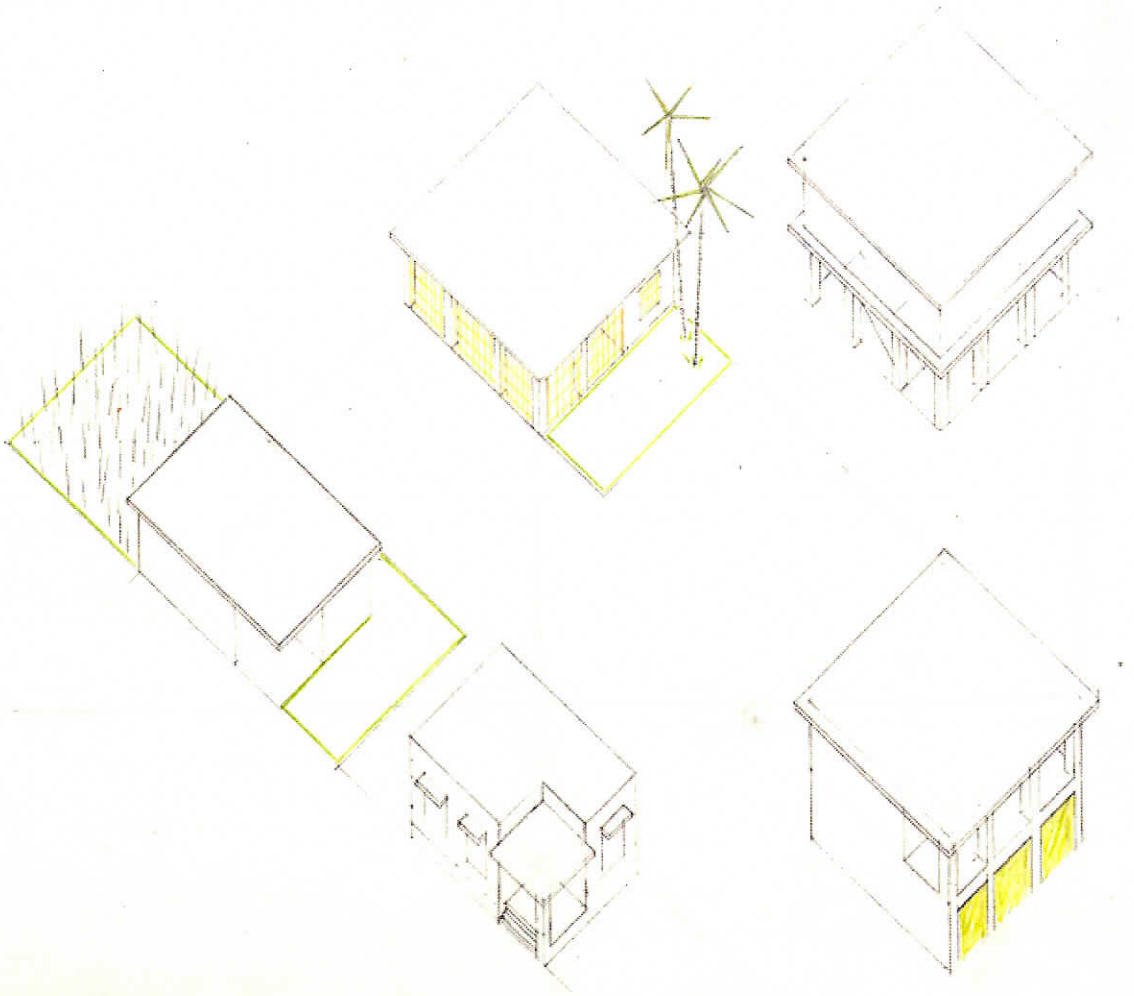




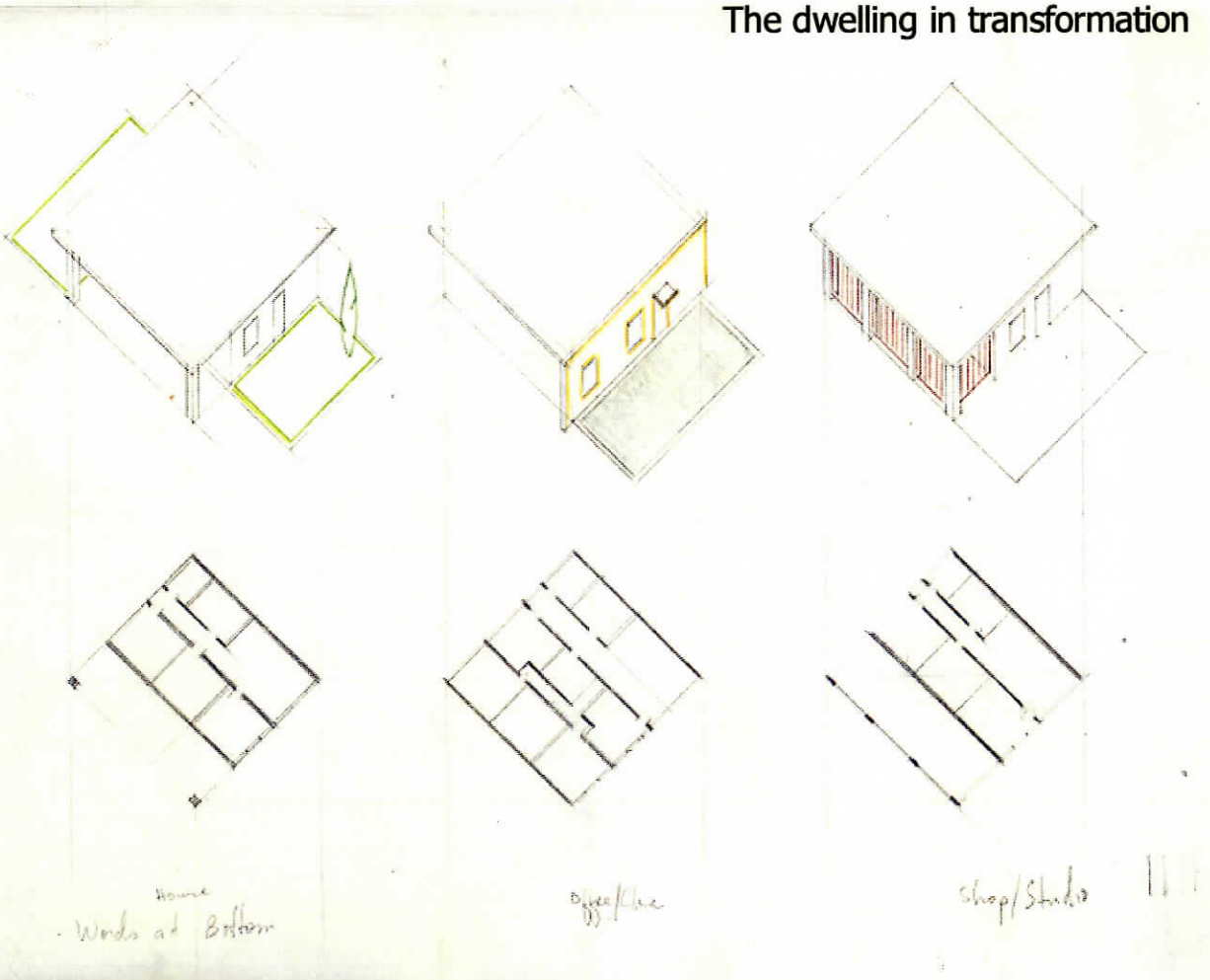


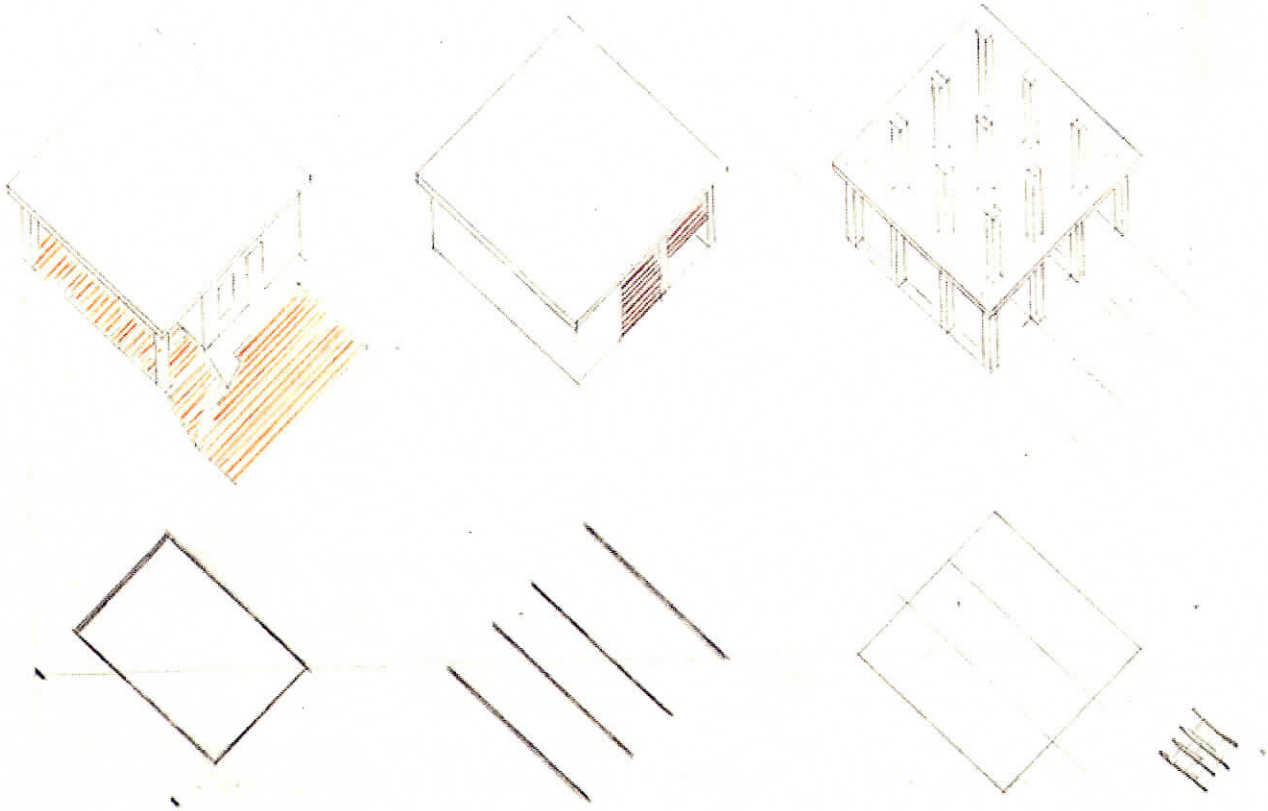
Diagramatic Manifestations and Structure of the type





The dwelling in transformation

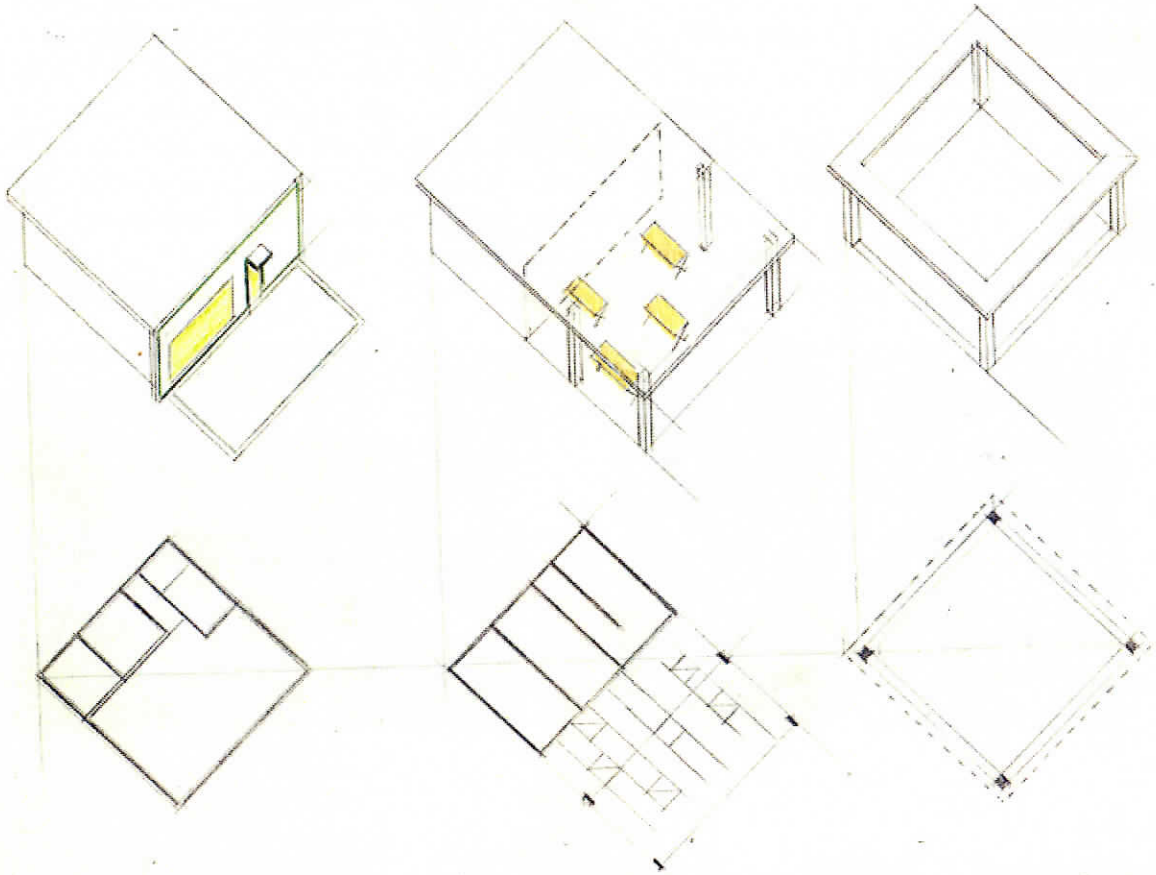




Play

Storage

Transition/Threshold/Exchange
Toll station, terminal (ferry, etc)



Store

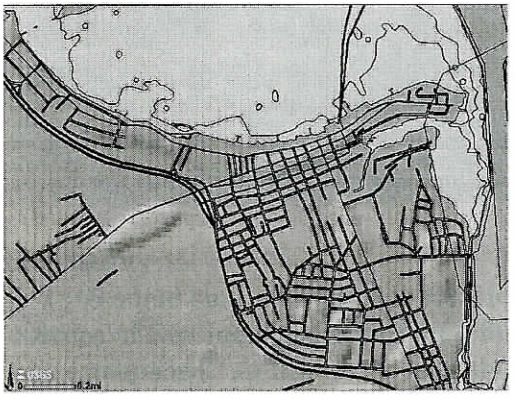
Rest

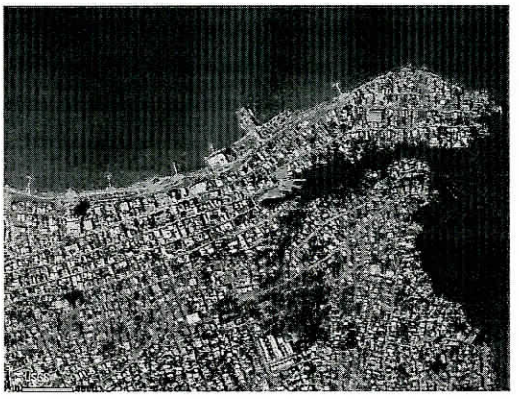
Social Community Center/gathering
Salón Multiuso

The concept of typology:
In this investigation of typology or type, have surfaced notions that "type can be viewed as essence of architecture, a rule for the model, establishing continuity with history". In this sense a connection to the issue of continuity of purpose has been noticed based on an argument of contextualism. Also according to Alan Colquhoun, typology is seen as an instrument of cultural memory, a condition of architectural meaning and thus a way to understand architecture. This cultural memory is familiar or understandable up to a certain extent, to every participant of a given culture. Another enlightening thought comes on A. Vidler's "The Third Typology" where the first is considered to be the primitive hut in nature, the second the scale of tool to machine in the industrialization period, and the third finding its site on the city where form is freed from use and the typology is subject to open interpretation.

Place as image:
The recognition of an urban tissue, area, is currently being used as the vehicle to name a place as such. It is a collected even if ethereal vision of the urban presence. It strives for the ideal to form an image of the city in the mind. The city like the house for Bachelard can be thought of constituting "a community of memory and image"as well as "an embodiment of dreams". In part this is influenced by the conception of cities as depicted by Wayne Cooper's figure/ground drawings.

Back to the quote:
Part of the new literature being developed in the twentieth century by Mr. García Marquez makes the very real face the twists of the mind. The urban designer of Macondo was concerned with the site (framed by a river) and the parts (houses). He addressed the design of access to the river pragmatically yet his mind drifted away in the poetics of an equatorial sun that supposedly might shower with more light some houses over others at noon. In some ways this magical realism can be considered a hindrance to the development of rational places in Latin America. However this can also be considered part of a tradition of experimentation in the creation and development of places to live. Bachelard illuminates this notion saying that in dreams "memory and imagination remain associated, each one working for their mutual deepening". This tradition is at the heart of the enterprises of citizenship.





3 Site Selection and Analysis

The project can be envisioned at the scale of a portion of the town of Cataño or at the level of the whole town depending on its development. As the only other town sharing the bay of San Juan directly it has the potential to participate in the urban and natural dramas of the place and region. The site participates of a tradition of urban space in the form of the Spanish grid of streets and blocks around a main town square. It is also a participant of the typological palette described above within an organizational system (grid). The site has thus a series of "nested scales" open for exploration. The participation of the site on a traditional texture lends itself for development also. The natural surroundings provide a layer for engagement of place as well as its proof.

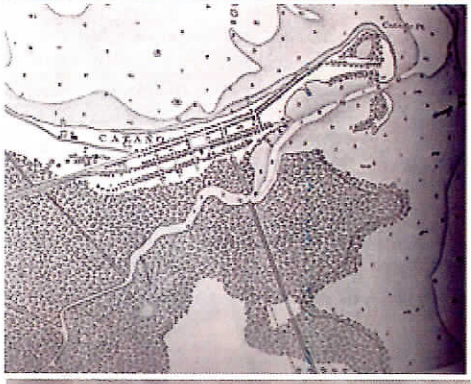
The current morphological condition of the site presents itself as an urban grided center surrounded and interwoven with the palimpsest of a quasi slum texture. This second texture is a major player in the challenge to the image of the town. This is a series of wooden houses that have slowly been improved where streets have been carved out. Along the waterfront can be noticed the differences in morphology from wood and concrete block slum structures to concrete town structures to single story suburban structures. This end of the town is called Bayview and is one of the first developments on the island by developer Long Darlington.

Site history:
In 1569 some land was given to Dr. Hernando de Cataño in payment for his services to the citizens of San Juan in the form of a farmstead (hato). Besides this apparently no settlement was established. At the entrance of the bay however, on the mouth of a river a small community was formed called Palo Seco. Today the area is largely occupied by the industrial complexes of a power plant and Bacardi.

1867

1880

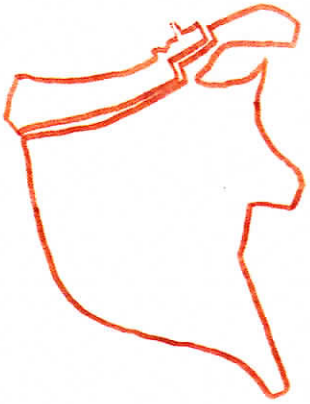
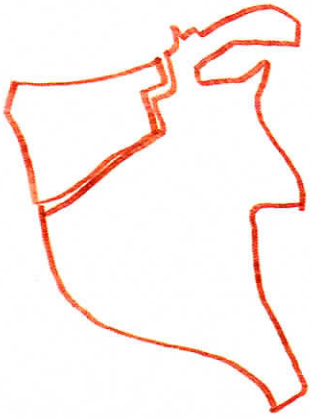
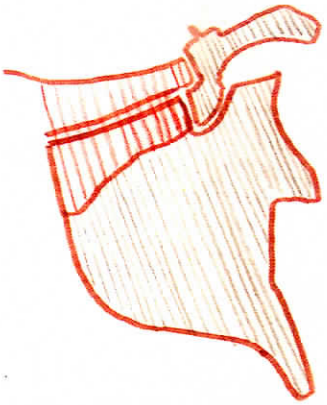
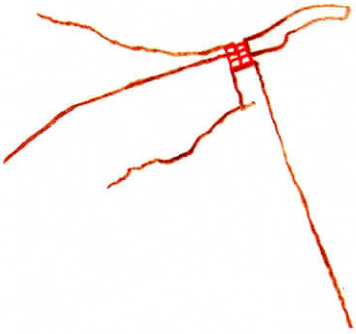
1898

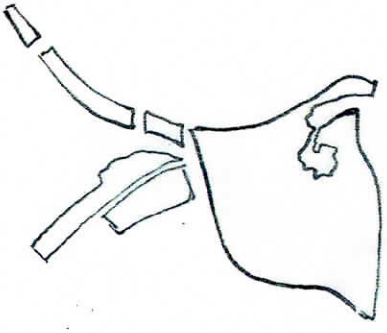
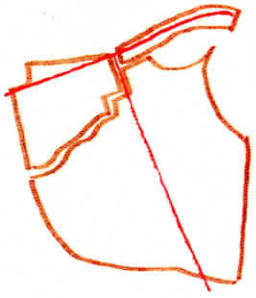
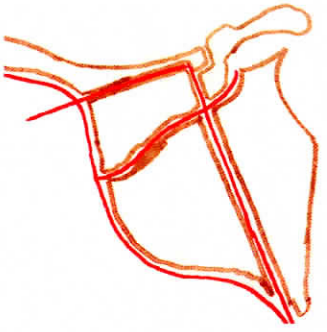


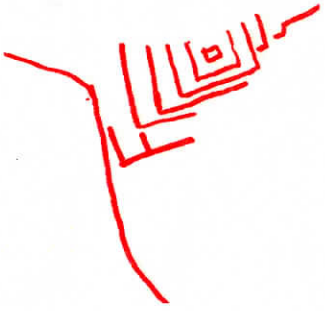
1937

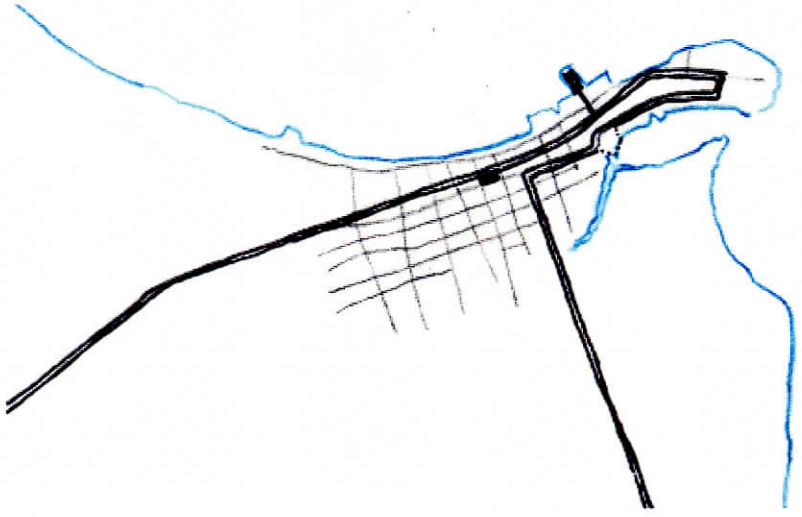
1950

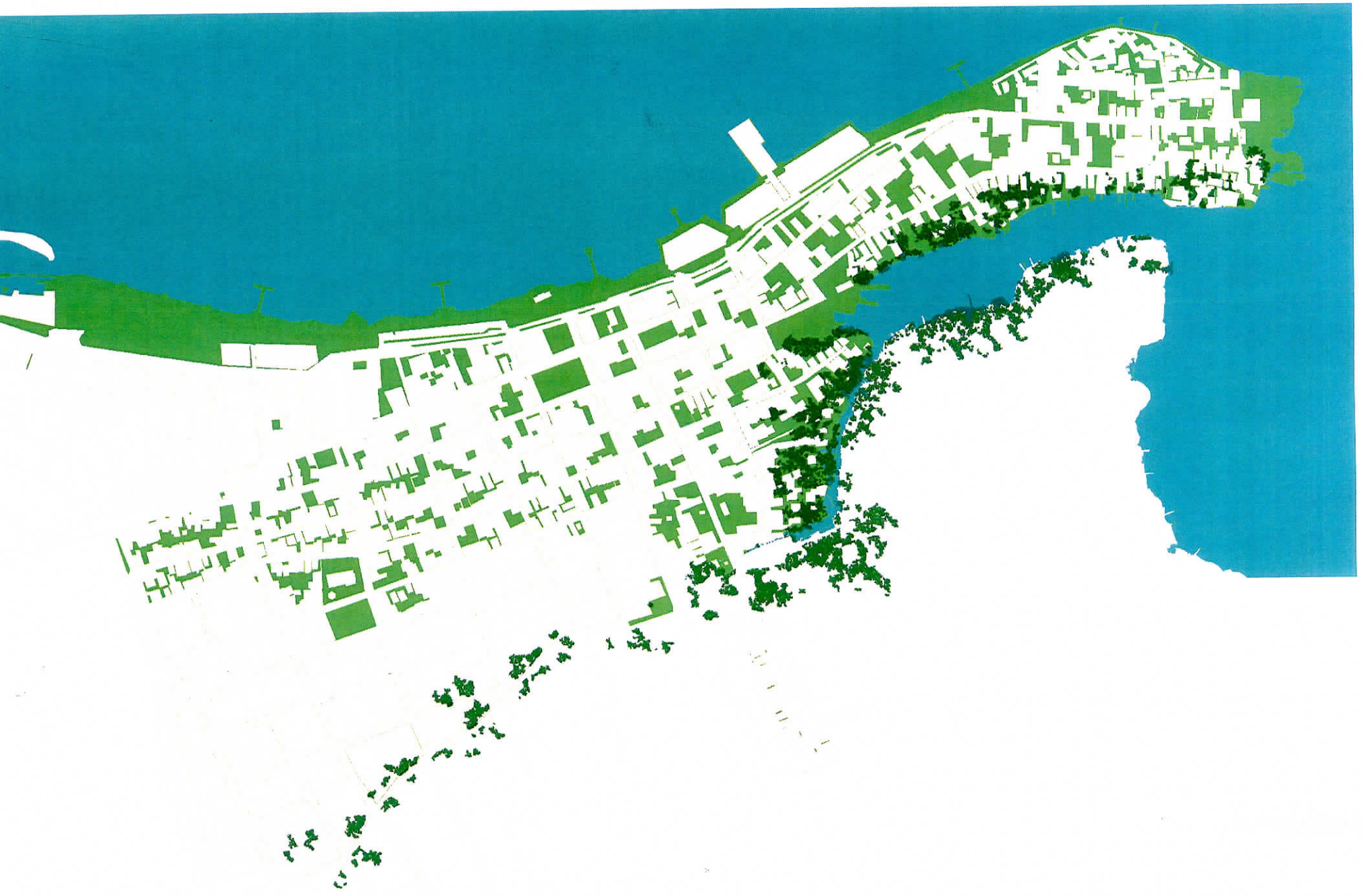
1980

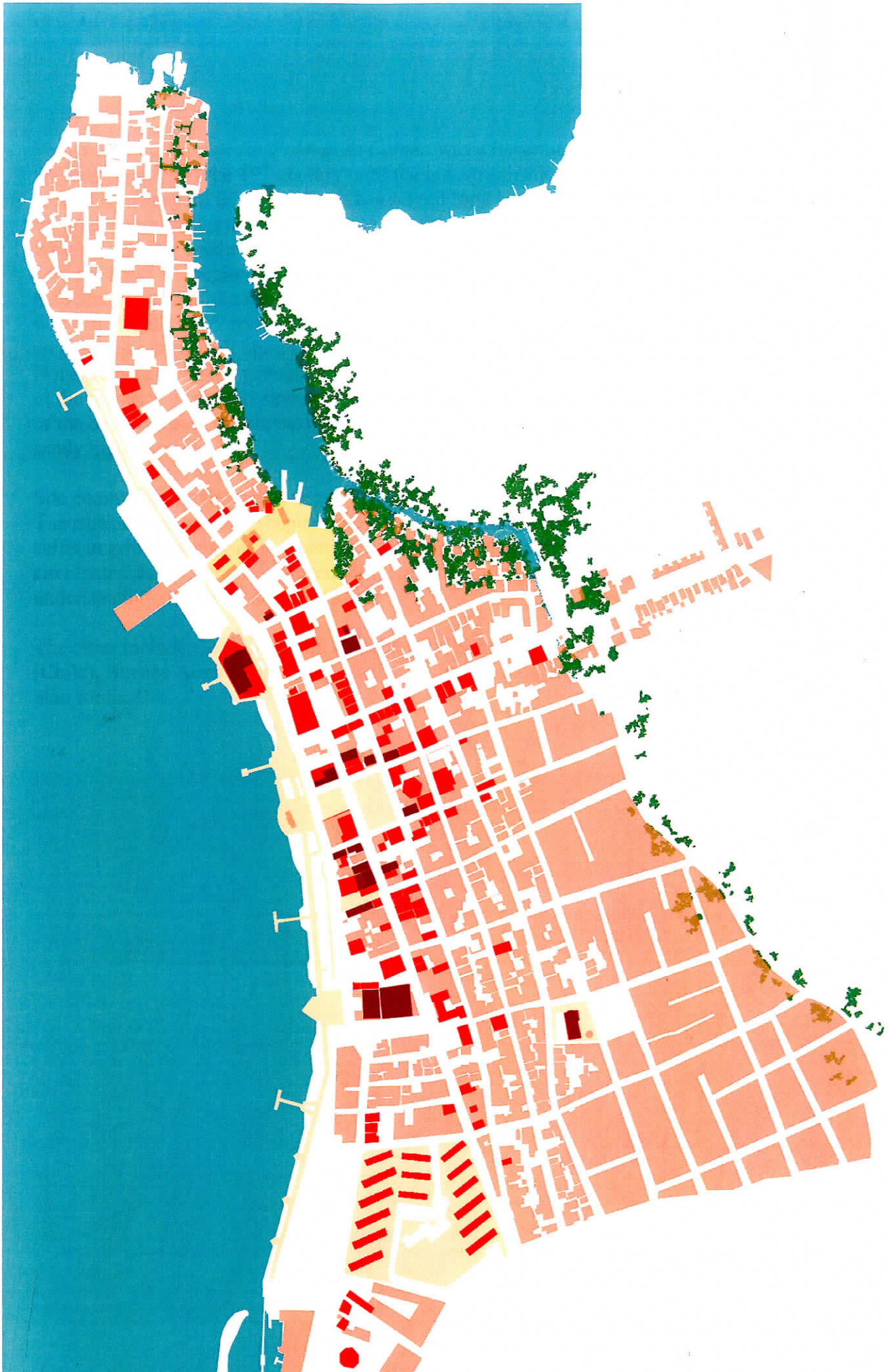









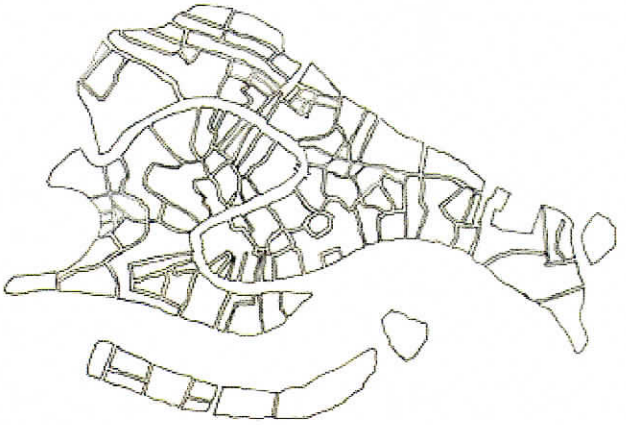


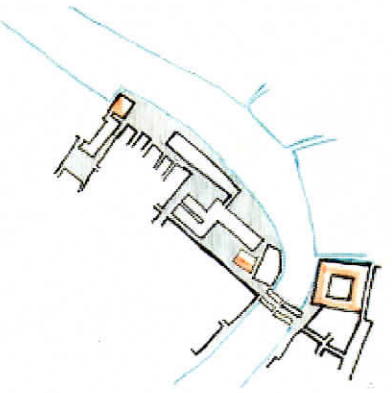


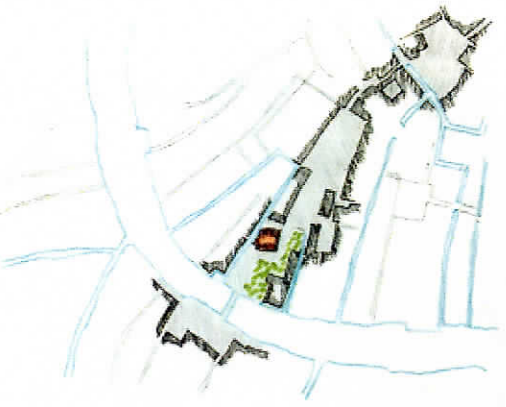
For a time, the *Hato de las Palmas de Cataño* was a fishermen's village finally established in the later decades of the 19th century until the industrialization of the bay. Today it is still used to launch small leisure craft. It has served for a long time as one of the areas to access the walled city across the bay by means of a ferry. Here was the terminus of a train line which ran on the southern edge of the town square and ended at some small still remaining docks/piers in the beginning of the peninsula that served the ferry. An anachronism exists in the nomenclature of the street. It is still called Calle del Tren although in the plan of 1861 it was called Calle del Vapor in reference to the ferry. Currently most of the mangrove/wetland around it has been built upon or been detached from the town by means of a highway. Nonetheless around the peninsula this natural condition is still seen particularly as the result of the presence of a small stream. The whole area is part of the greater estuary/delta system of the bay. Because of this the early planning of the town was sited on a palm tree grove on sandy higher ground.

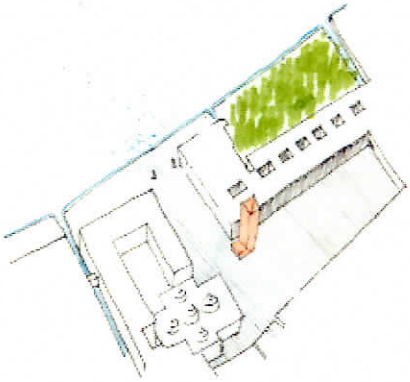
Site comparisons: (show drawings)
The particular peninsular shape of the site, the lot configurations, the block structures, the shifts in grid patterns call to attention a number of other cities that share one or more of these circumstances. Other cities present different conditions that in turn provide greater understanding of current site conditions.

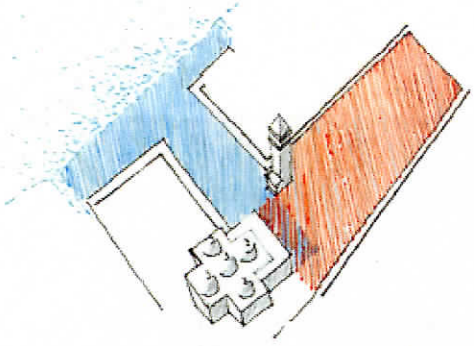
The cities include Cadiz in Spain, Panama City, Santa Fé de Bogotá (Colombia), Valparaiso (Chile), Buenos Aires (Argentina), Venice (Italy), Chandigarh (India), and Le Corbusier's plan for St. Die.

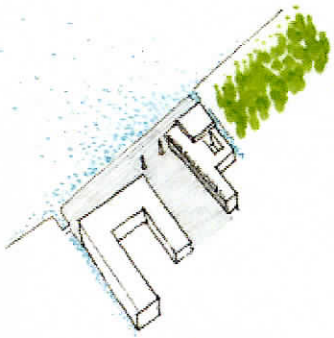


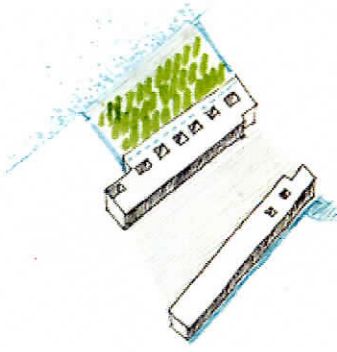


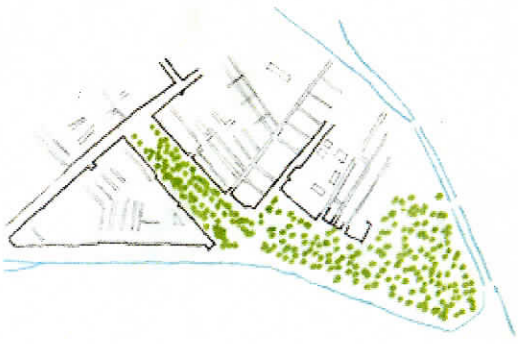


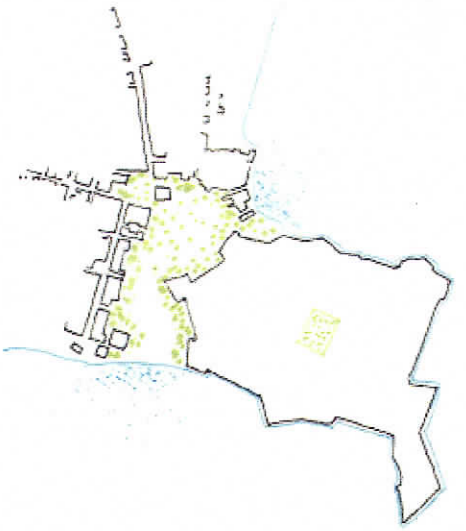


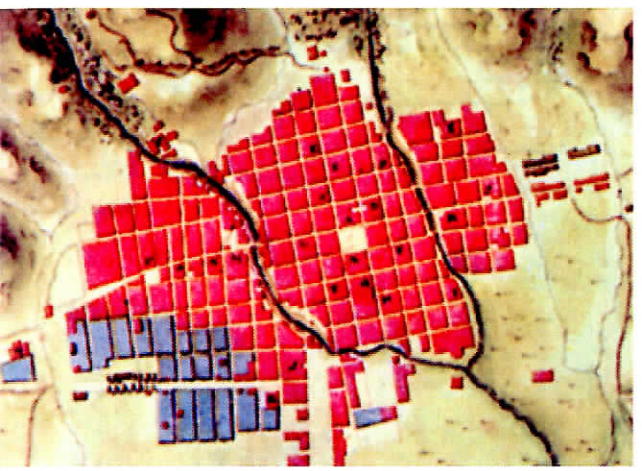




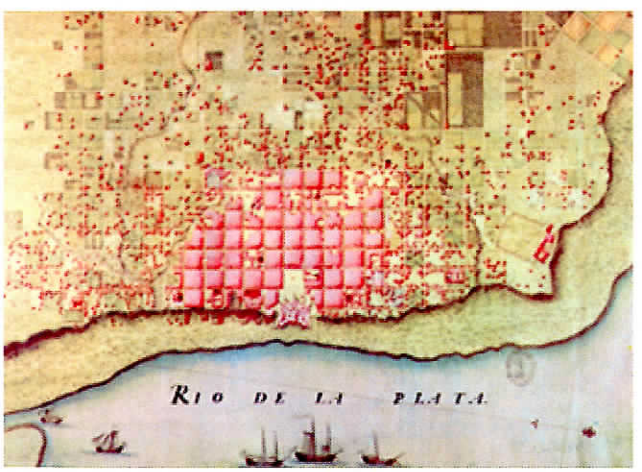




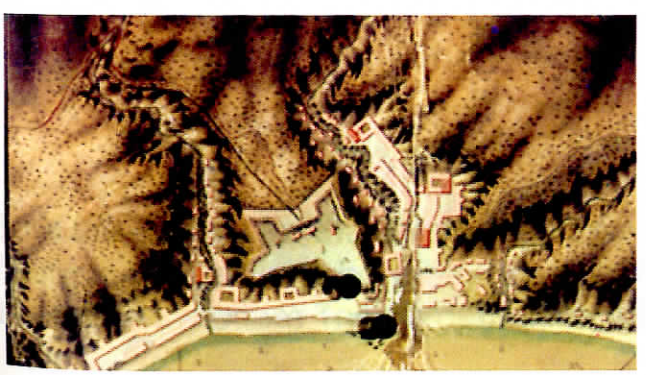




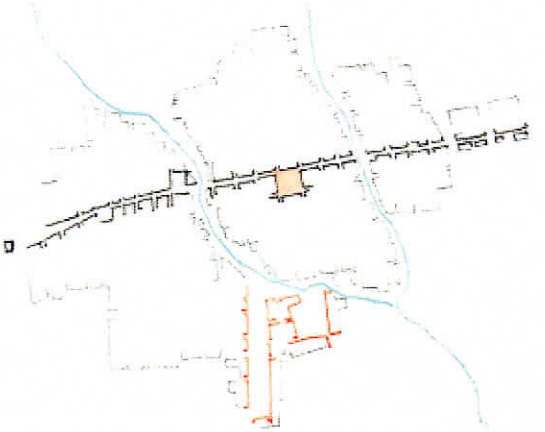
Santa Fé de Bogotá 1797

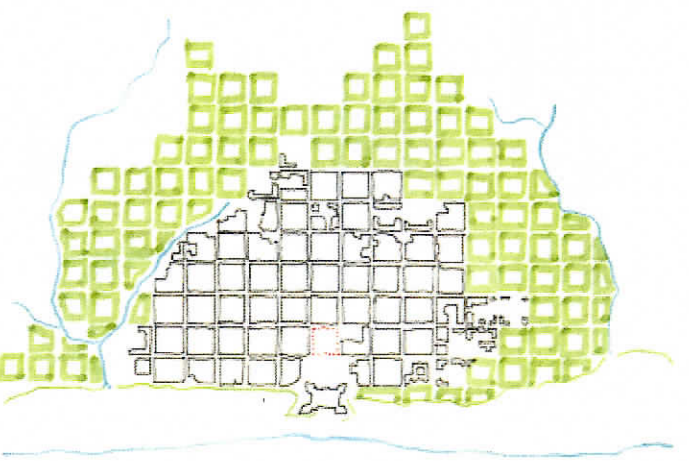


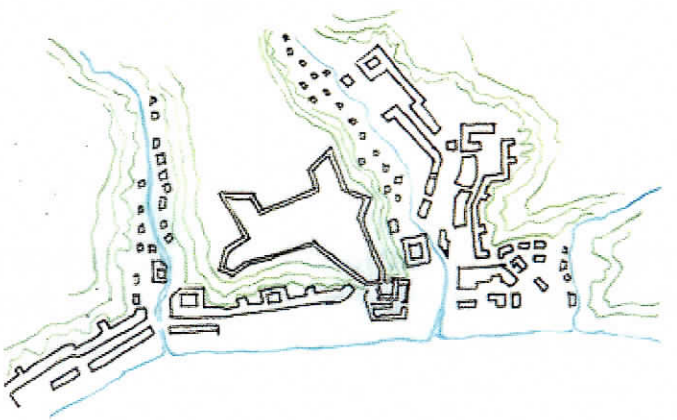
Buenos Aires (nd)

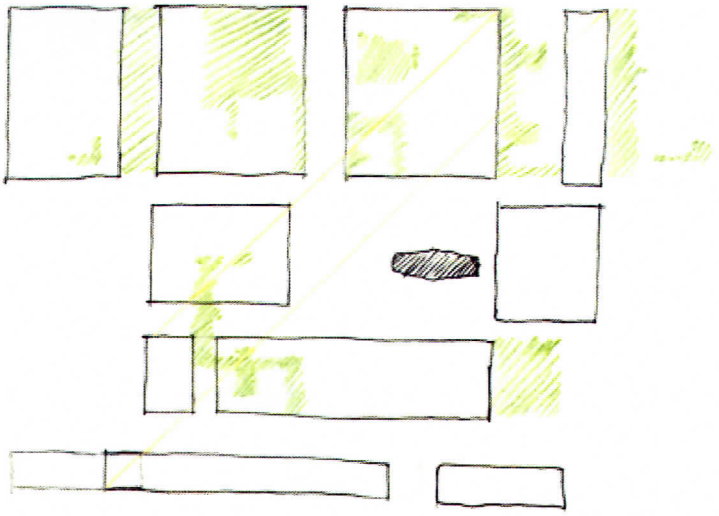


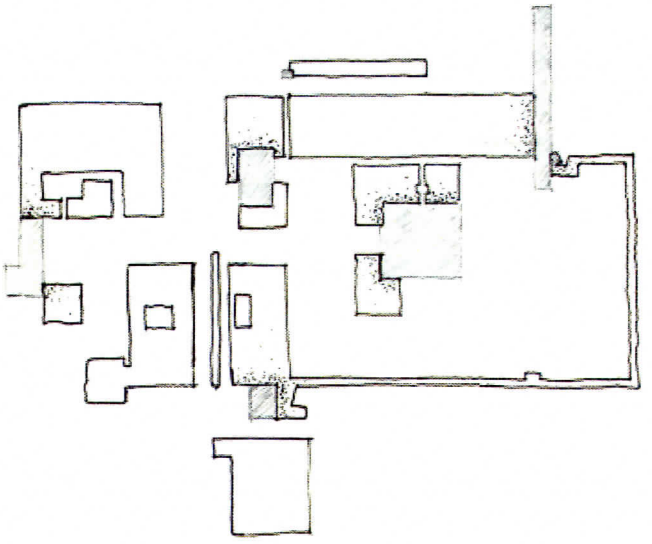
Valparaiso 1764

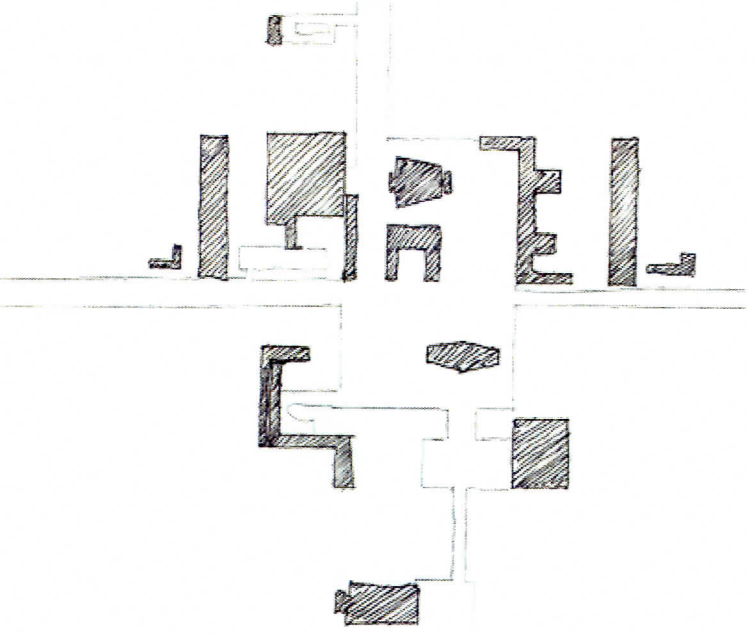


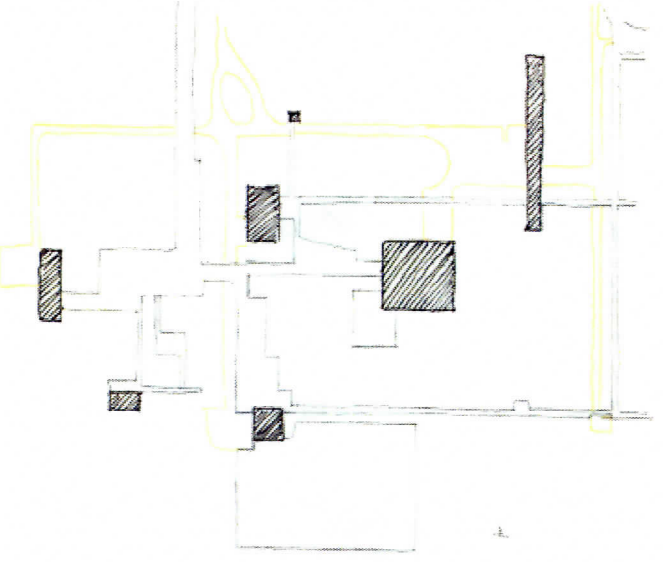




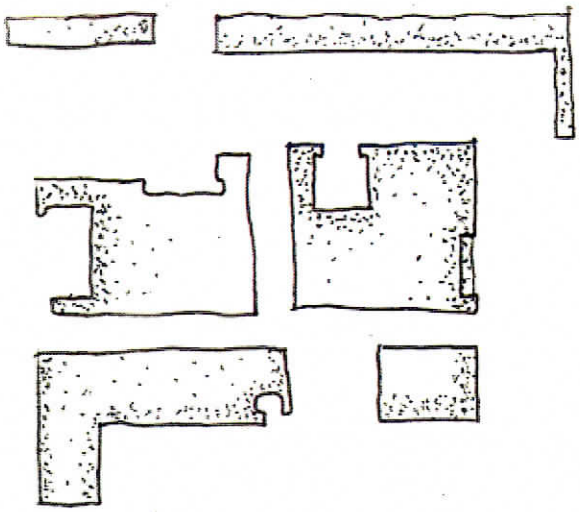




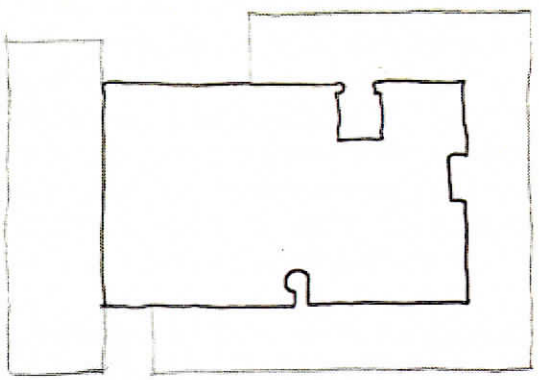


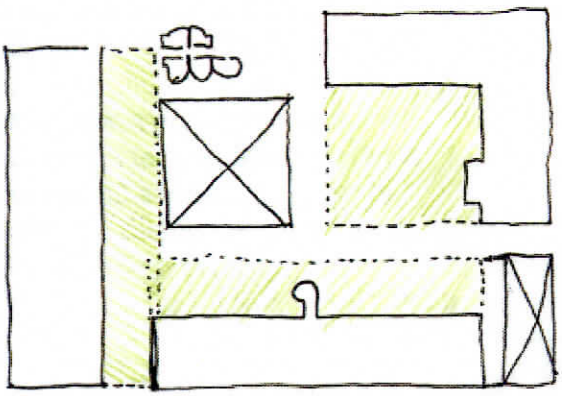


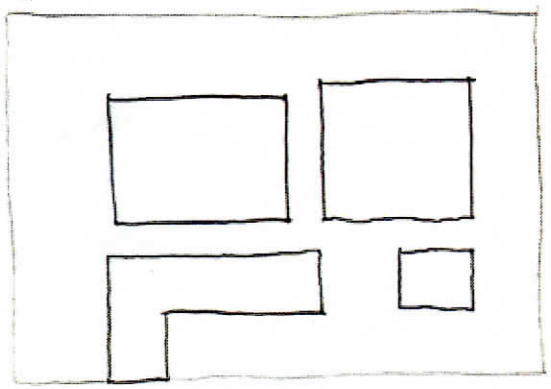
Both the designs for the ceremonial centers of Chandigarh and St. Die provide readings of the figure in the field and how they are interdependent. In this way tensions and resolutions are expressed in texture Their organization brings scale and proportion to the respective sites.

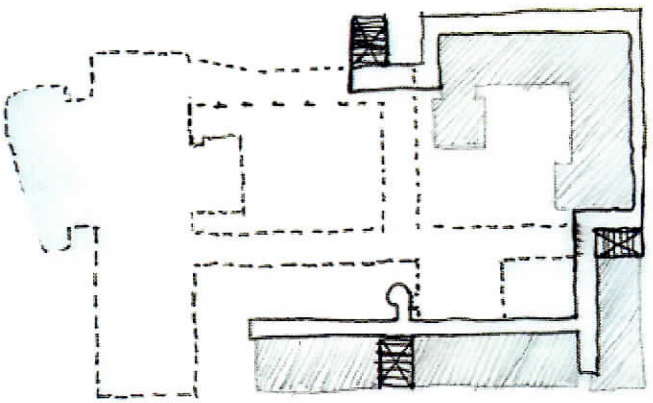


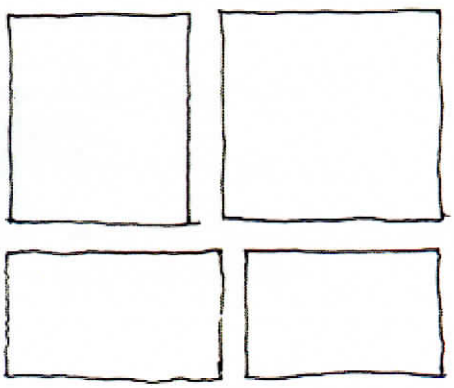
The Monastery of La Tourette engages in a similar organizational stragegy as the cities of Chandigarh and St. Die. The voids' imaginary volumes organize the building which remains in the tradition of urban texture at the scale of architecture

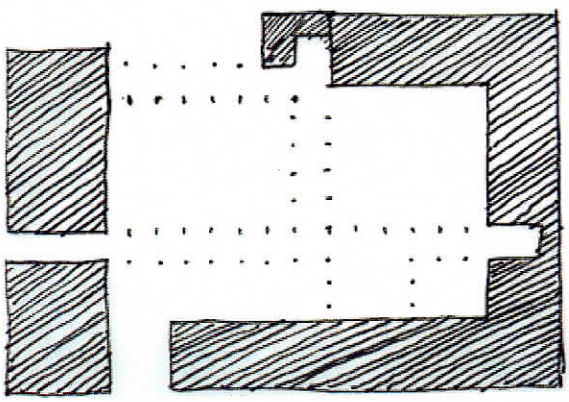












4 Program Selection and Analysis

A. Premise:
Program is understood in two levels: activity and form. On the level of activity it seeks to provide a rethought urban solution for the community that might contribute to its revitalization. On the level of form it works to inform itself through the texture of the city.

B. Agenda:
The agenda of the program is aimed at a development of community values through programmatic demands that should serve to enhance the texture of the city and raise awareness of its ecological footprint. Some of the programmatic demands will be offering a housing environment sufficiently private but civically participant or engaged in the cultural environment. This suggests a space of leisure and rest for its occupants. It is also informed by the concept of the Roman Domus where the inhabitants are acting a miniature version of the state. Another demand is to provide a linked spatial condition directly related to the housing proposition, an area for business to be conducted. This should engage an economic activity and guide it spatially. In this sense the palazzo would be a precedent.
Other programmatic demands should center on the provision of a tectonically developed language specific yet promoting variety that can be interpreted on a variety of ways to accommodate a variety of activities in a variety of locations. To directly engage the site on a natural level, public and private gardens, tamed and wild should be included.

C. Summarizing, the goals of the program should:
-serve as revitalizing catalyst
-bring a civic discourse
-densify the area
-intensify activity
-address ecological benefits
-support the idea of continuity
-engage as a part of the creation of the image of a place

D. Area quantification:

3 propositions for about 73,000 sf (ground plane)

Hostel/Health Club + Housing + Urban Space:

Hostel: 8,600 sf
Housing: 41,400 sf
Urban Space: 23,000 sf

Commerce + Housing + Urban Space:

Commercial Establishments: 25,000 sf
Housing Units: 25,000 sf

Urban Space: 23,000 sf

Commerce + Work + Housing + Urban Space:

@ Grade:

Vertical: 50,000 sf :
Commercial Establishments: 25,000 sf;
20 units of 1250 sf each
Artisans' Workshops: 25,000 sf
20 units of 1250 sf each
(Both to have a presence at ground level or both ground and 2nd levels)

Urban Space (Gardens/mangroves/wetlands/Plaza/Promenade): 25,000 sf

2nd, 3rd, 4th stories:
Housing units: 37,500 = 12,500 (half of 25/25/25 distribution) x 3
Small: 25 units: 500 sf each plus an extra 2,500 sf to make each 600 sf
Medium: 10 units: 1,250 sf each
Large: 5 units: 2,100 sf each
Roof gardens will be employed over the units
Total without speculation of 3rd, 4th, roofscape sf: 40,000 sf

Working numbers

Commercial establishments:
Gallery, Cafe, Retail, Groceries, Souvenirs, Bookstore, Laundry, Travel Agency, Bar, Pool Hall, Market (Gallery)

Display (consider height of 1.5 stories or 2 stories tall spaces): 20x20=**400**
Storage: 20x10=**200**
Support: 10x10=**100**
Totals: a.**700** (consider 200 more outdoors under a roof=900)
x2=1400, x3=2100, x4=2800 (individual establishments)
b. size of establishment @1.5 should be 1050, @2 should be 1400, @ 1.5+1.5 (=3) should be 2100

Café: average occupancy: Cafeteria/Restaurant 12, 18 per person
Coffee Shop 12, 16
Specialty/Formal 17, 22
Bar (stool to wall behind bar) 8.5, 12
Café should have an indoor and outdoor areas

Housing:
Typical Units:
Living room – (15x15)= **225**
Kitchen – (7x7) or (10x10) = **49, 100**

Dinning – (15x15) = **225**
Bedrooms – (10x10) or (12x12=144, x2=288, x3=432, x4=576) or 12x16=192 (full bed and furniture) **100, 144, 192**
Terrace/Balcony – (15x15) = **225**
Support (Bathroom, closets, utilities) – (12x6) =72, (x2) = **144**
(Bathroom: 6.5x 2.5=16.25 or 4.5x4=18 includes toilet + sink, 7x5=35 includes toilet + sink + shower, 8x7=56 includes wheelchair access)
Totals: 991, 1063, 1207, 1351, 1495 **1063**
Circulation @ aprox. 20% of above (one bedroom) = 200

Shop/Office:
Should have double-height spaces, skylights, clerestory windows

Enclosed office room: 10x10=**100**
Optional: Conference Room: 24x34=**816** : 20' long conference table (can be narrower)
Main studio/office room/shoproom: **400, 500, 800**
Individual Workspace open area: 6x8=**48**
Storage (10% main room): **40, 50, 80**
Support (files, server, bathroom, kitchenette, dinning area): **400**
Reception/display room @ 2/5 main room: **200**
Total: 1250 for a 500sf main room

Hostel/Guest House:
Reception: 15x10=150, x2=300
Storage: 25x10=250
Bedrooms: 15x10=150 each for 4 persons max. x15 or 20=2250 or 3000 for a max. capacity of 60 to 80 people
Circulation: 1200 ?
Bathrooms: 2160 (15 rooms), 2880 (20 rooms) check graphic standards
Terrace/Garden: 750
Internet Cluster of 15 computers: 5x4=20 thus 325
Café: Tables 750, Kitchen 150, Bar 150 = 1050
Game room: 500
Total: **8635 minimum of 15 rooms**

5 Precedents and Analysis

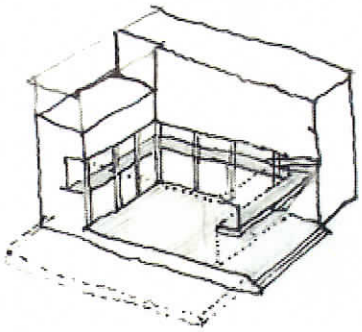
the unit:

-roman house
-italian palazzo
-courtyards

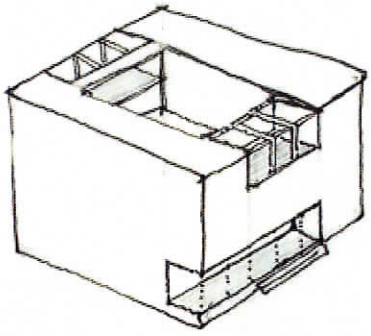
-Kunsthaal
-Casa del Fascio a Como
-Villa Savoye/Millowners building

program:

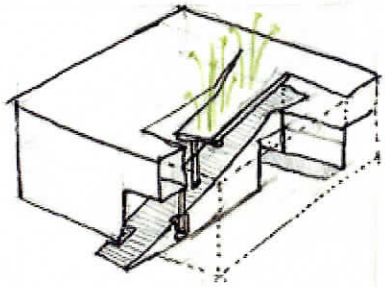
-bauhaus-dessau
-immeuble-villas
-glasgow school of art
-el pueblo ribera
-siedlung halen
-salk institute
-certosa galluzo
-ithaca center apt.
-maison citrohan
-pessac
-studio

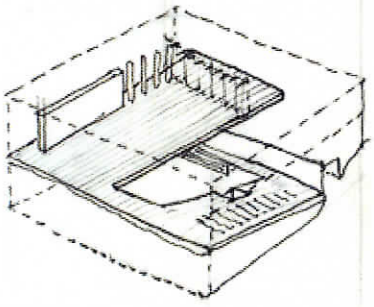


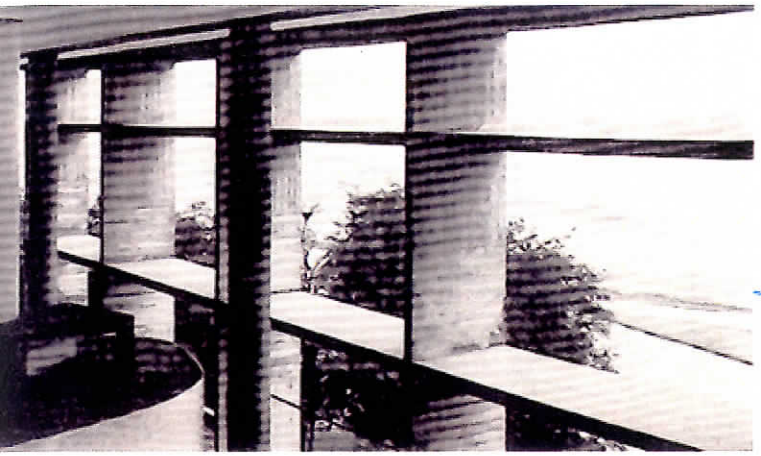
These precedents portray instances [where]

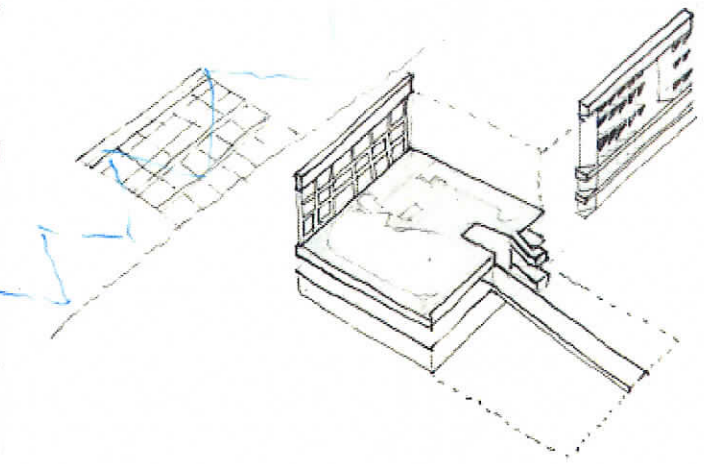


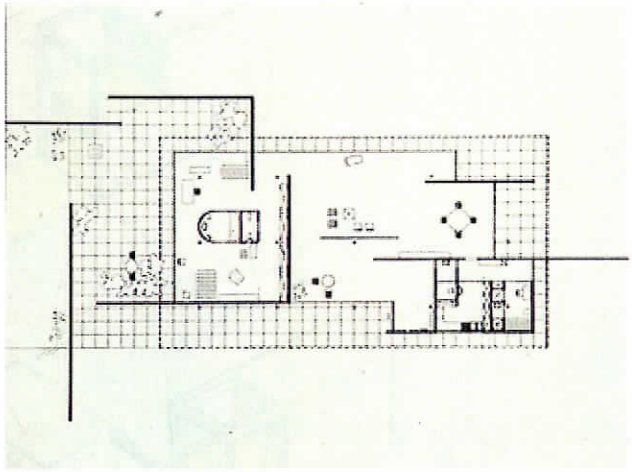
a building projects itself into the city and land allowing the inhabitant to participate of its textrue and thus engage in a civic way the larger realm, actively promoting an image of place.

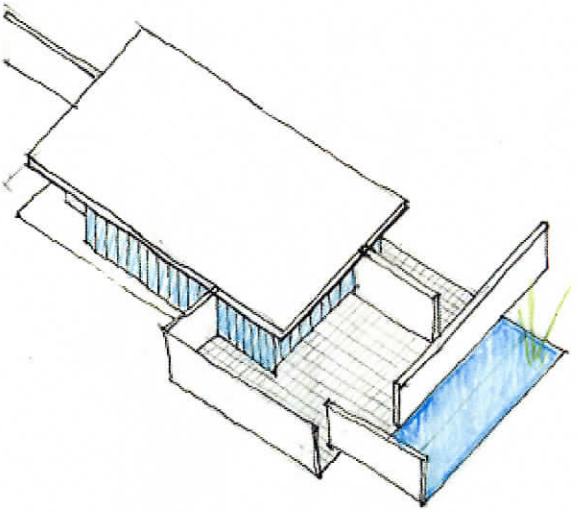


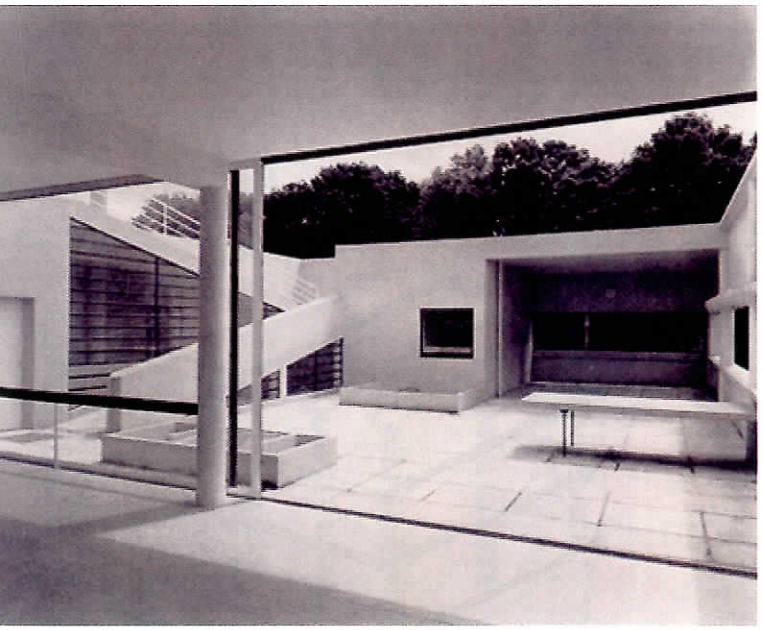


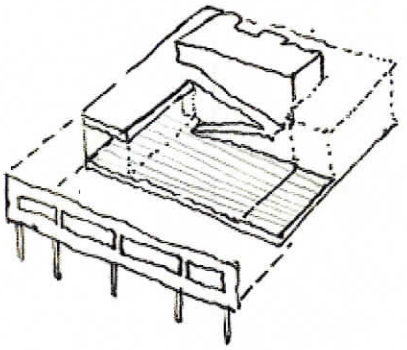


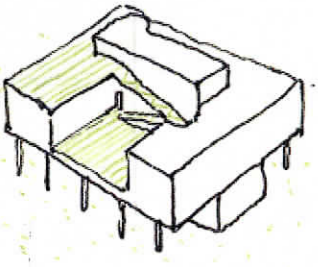


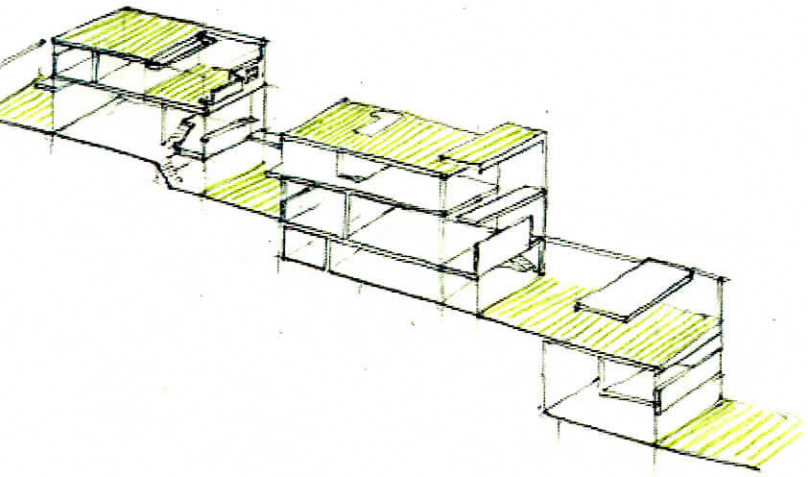


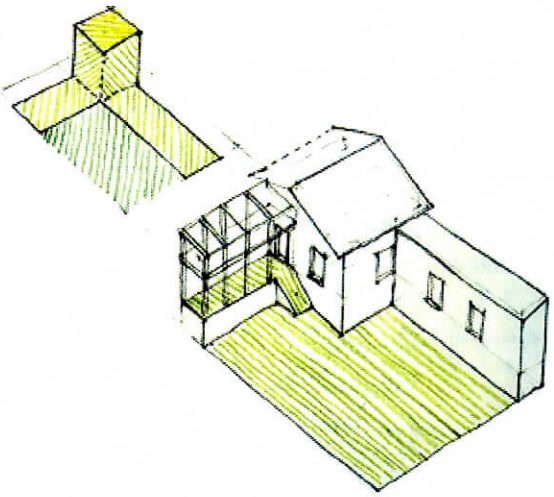


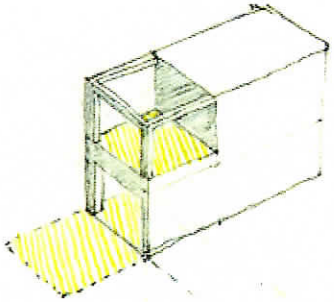


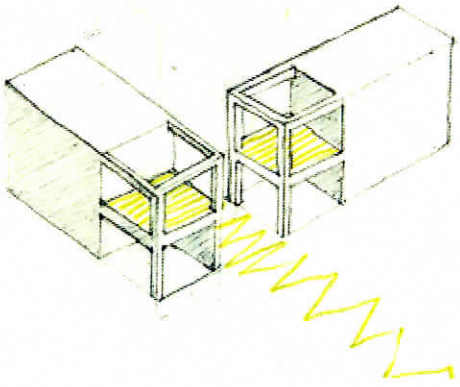


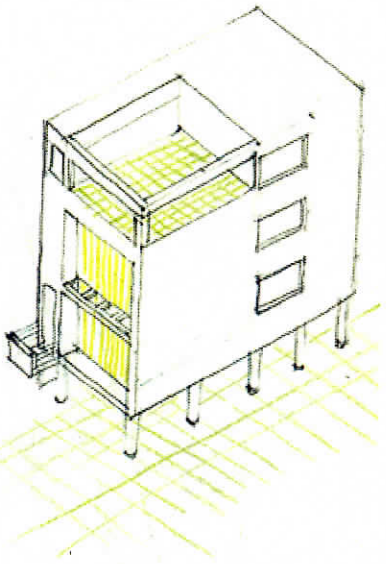


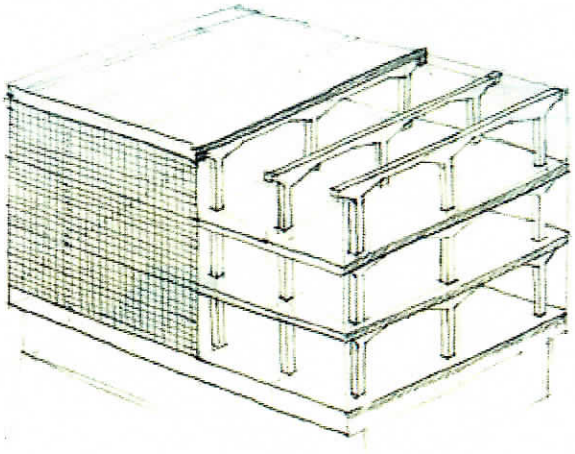


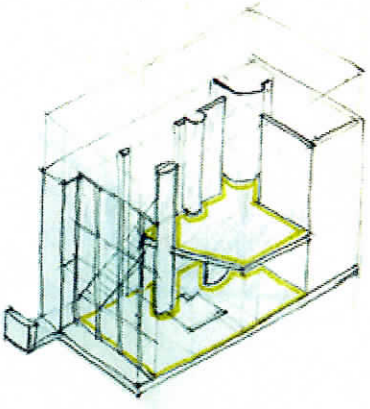


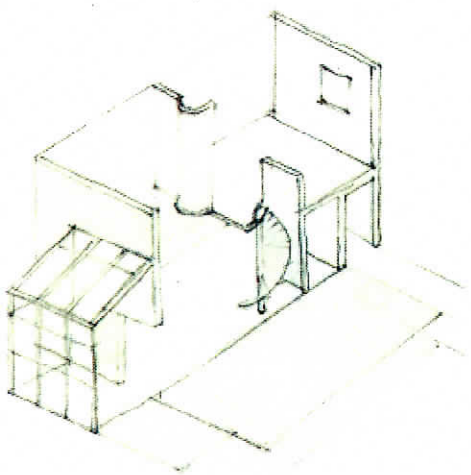


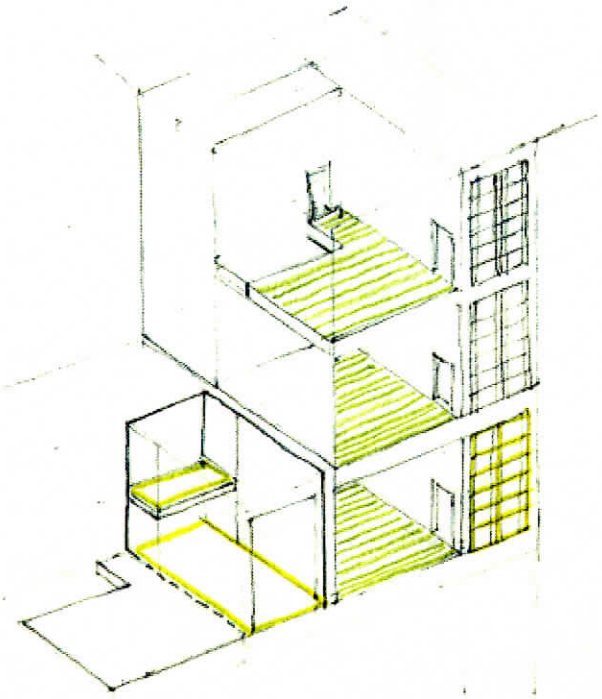


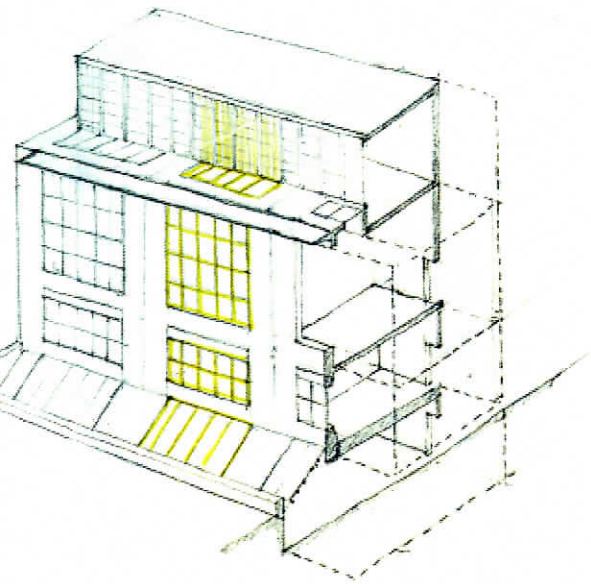


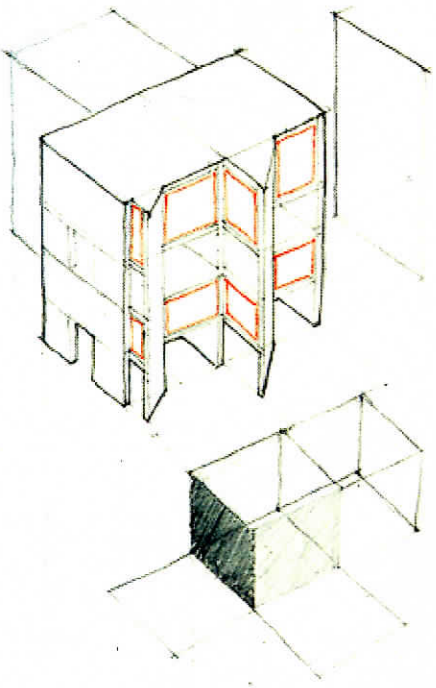


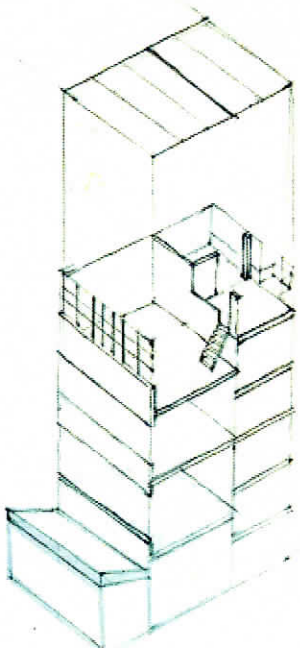


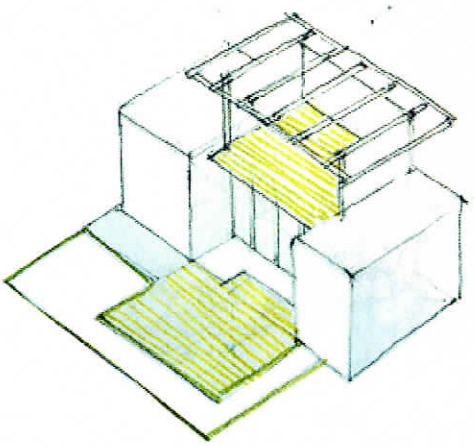


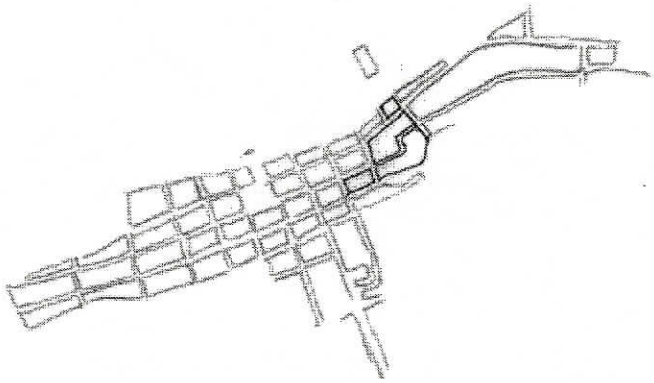


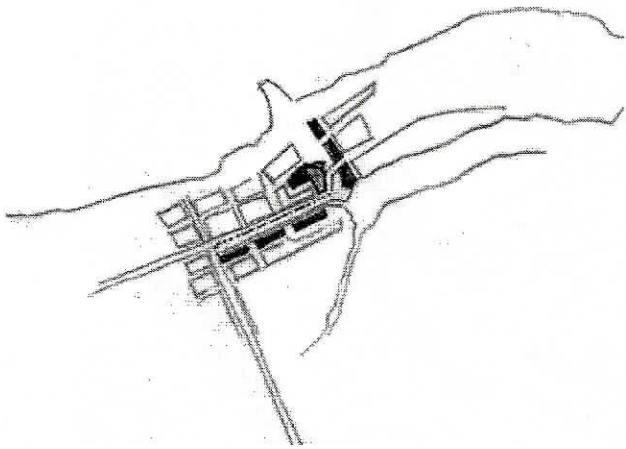


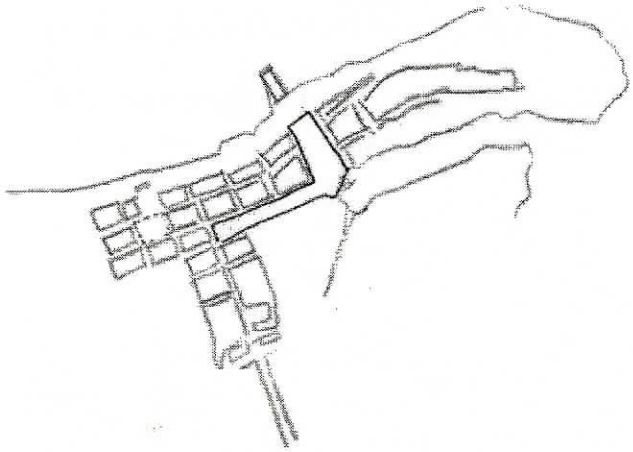


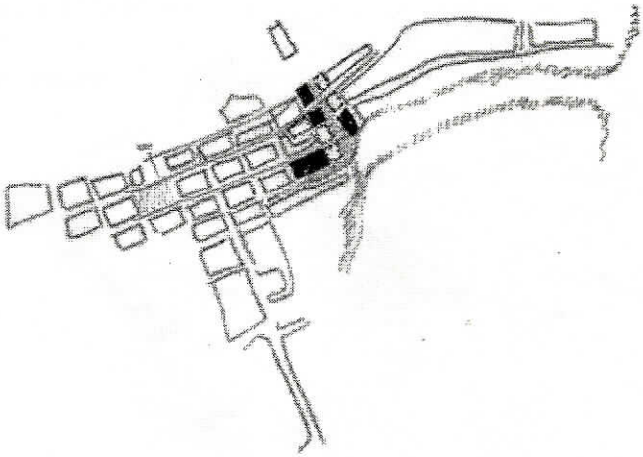


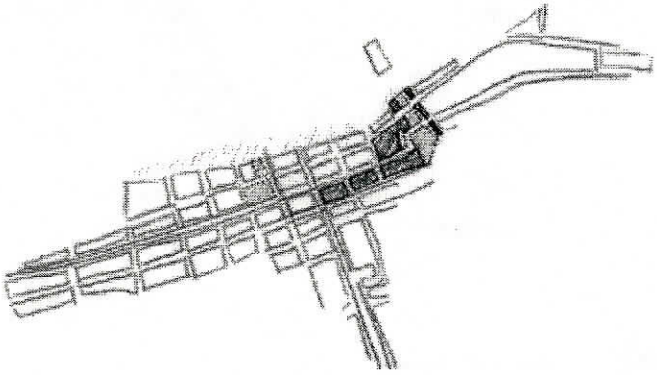


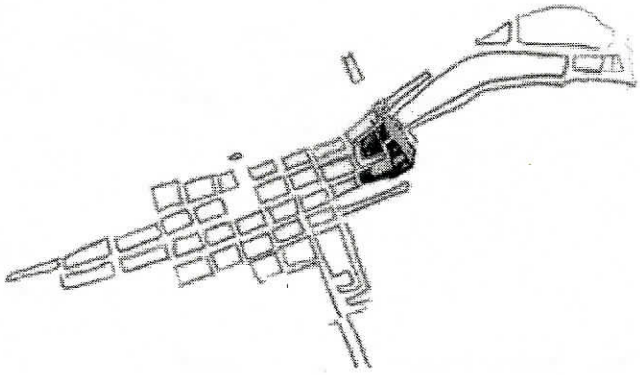


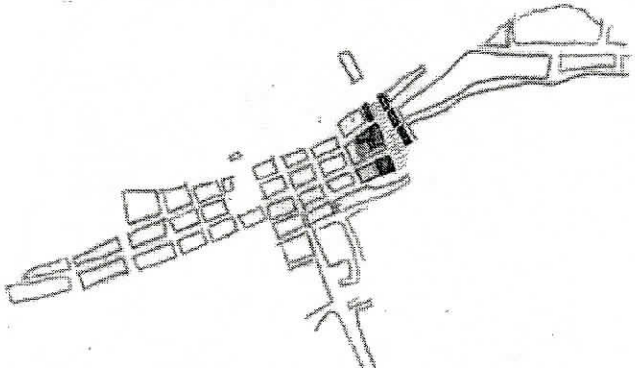


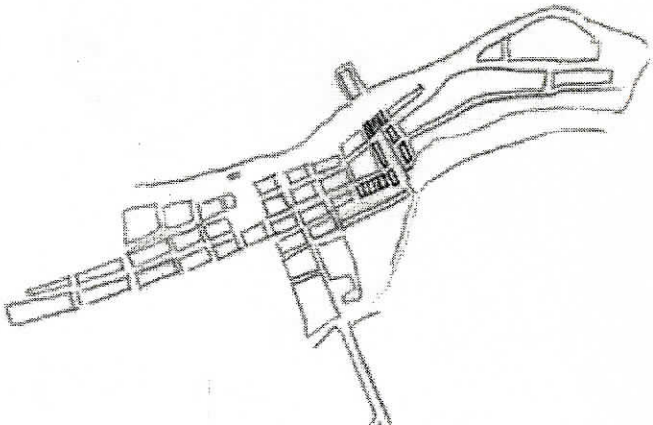












7 Evaluation Criteria

Degree to which these and other questions are answered.

What is needed to create place and its space in the context of the bay of San Juan?

What tools can be used to create an architecture that will visually project itself, i.e. that will create an architectural effect of consequence in form and intention? In other words, what strategies can be used to inform a design process that will participate at different scales on an urban setting and be an integral part or take a crucial role in the creation of an image of place?

How can design provide formal control and insure a continuity of purpose?

What strategy is employed by the design to bring to life the dreams of a community?

8 Resources and References

Annotated Working Bibliography

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[A collection of plans/maps of Spanish settlements in the Americas.]

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[Provides explanations and multiple diagrams about city spatial conditions through time.]

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[Provides a guide/opinion to urban design notions. Presents traditions of thought in urban design as falling today in three categories visual-artistic, social usage, and making places (where new urbanism is placed).]

Caplow, Theodore et al. The Urban Ambience: A study of San Juan, Puerto Rico. Totowa, N.J.: The Bedminster Press, 1964.
[Has an excerpt from the Laws of the Indies emitted by the Spanish Crown in the early 16th century concerning new settlements. On pages 42-44 is a piece of information regarding typological use in the 20th century where a house is converted to a commercial structure.]

Crowe, Norman. Nature and the idea of a man-made world : an investigation into the evolutionary roots of form and order in the built environment. Cambridge, Mass.: MIT Press, 1995.

Hales, Shelley. The Roman House and Social Identity. Cambridge: Cambridge University Press, 2003.

Le Corbusier. Le Corbusier 1910-65 (Oeuvre complete). Zurich: Les Editions d'architecture, 1967.

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[Photographs taken in the acropolis of Athens present how the place relates to the landscape and how the architecture meets the ground.]

Moneo, Rafael. On Typology Oppositions no. 13 New York, NY: Institute for
[Architecture and Urban Studies, 1978 pp. 22-43
Recalls Aldo Rossi's claims about continuity in the city.]

Morton, David. Filling the void: Center Ithaca, Ithaca, New York. Progressive Architecture 1982.

Norberg-Schulz, Christian. Genius Loci: Paysage, Ambience, Architecture Milano: Gruppo Editoriale Electa, 1979.
[Here the author talks about the dimensional existence, space and place according to structure and significance. Genius Loci, i.e. the spirit of the place he recalls the ancients said: "it was that opposite with which man had to come to terms with in order to acquire the ability to inhabit."]

Peterson, Steven K. Space and Anti-Space. Harvard Architecture Review no. 1, 1980.
[A challenge to modern conceptions of space. He calls modern space anti-space as opposed to what could be considered as "traditional" space. Here is an exposure on the crisis of legitimacy (p.93). The reconciliation between the civilized and the wild, the junction between space and anti-space can inform the thesis. Collage served this concept.]

Ramírez, Rafael. El Arrabal y la Politica. San Juan: Editorial Universitaria, 1977.
[A translation to Spanish of Politics and the urban poor, the author's thesis at Brandeis University, 1972. It describes the development of slums around the town of Cataño, how they replaced the mangroves and the communities created in terms of living conditions, what its dwellers did.]

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[The article "Crisis of the Object, Predicament of Texture" deals among other things with the problems of building and realm, figure and field. Duplicity of value/meaning, archetype and accident (buildings) are presented also. An object can be considered not just as a figure but also as ground.]

Segre, Roberto and Aníbal Sepulveda Tendencias Arquitectónicas y Caos Urbano en América Latina. México D.F.: G.Gili, 1986.
[This work contains a section on the state of urbanism in San Juan that remains true now.]

Sepúlveda, Aníbal ed. Puerto Rico urbano: atlas histórico de la ciudad puertorriqueña. San Juan, Puerto Rico: CARIMAR, 2004.
[Contains maps, drawings, pictures, texts regarding every settlement in Puerto Rico since 1493. It is structured according to historical periods. Considers the possibility that Cataño could be the first *company town* in Puerto Rico.]

Sepúlveda, Aníbal. San Juan: Historia ilustrada de su desarrollo urbano, 1508-1898. San Juan, Puerto Rico: CARIMAR, 1989.
[A recompilation of maps of the city of San Juan and surroundings during the Spanish colonial period, it is a revised version of his planning dissertation at Cornell.]

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[Contains a number of precedents for different housing densities and configurations eg. Slab, tower, party-wall.]

Shoemaker, Thomas. "Deep Space Shallow Space" Architectural Review: Jan. 1987, pp 37-42.
[Here is a commentary on the work of Le Corbusier through the images he made of his work. The subject of the Acropolis of Athens is raised: "where he saw the completion of the landscape: '...the Acropolis extends its effect right to the horizon. The Propylaea in the other direction...'".]

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Vivoni Farage, Enrique ed. Ever New San Juan: Architecture and Modernization in the Twentieth Century. (Serie Dédalo 3) San Juan, Puerto Rico: Archivo de Arquitectura y Construccion de la Universidad de Puerto Rico, 2000.
[A series of essays jumping back and forth between the scales of architecture and urbanism/planning with a strong sociological flavor. Provides with the histories of development of San Juan.]

Map: "The Rooms of a City" Polytechnic University of Puerto Rico
[Shows all courtyards and public spaces of Old San Juan.]

Map: USGS Bayamón, USGS San Juan

Aerial photography: of San Juan Metro Area, Cadiz, Ciudad de Panamá, Venice