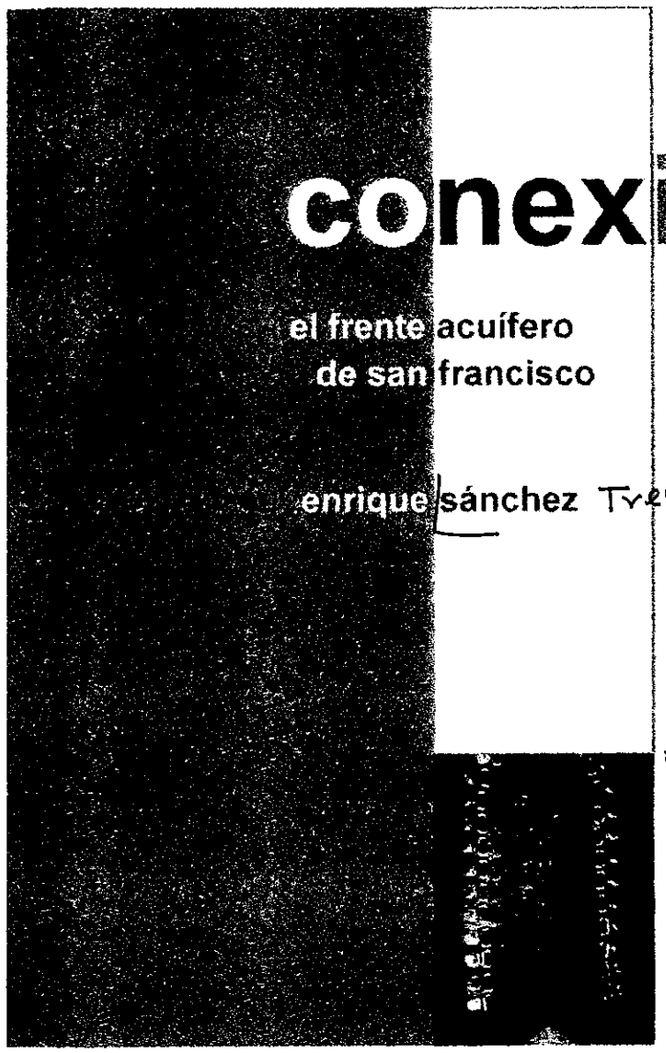
conexión:

el frente acuífero de san francisco

enrique sánchez Treviño

ARQUITECTO



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Universidad Nacional Autónoma de México
Facultad de Arquitectura

Conexión: el frente acuífero de San Francisco

Tesis
que para obtener el título de
Arquitecto
presenta
Juan Enrique Sánchez Treviño

2000

a mis padres, los doctores Martha y Enrique Sánchez, y a mi hermana, Ana Paulina, por el incondicional cariño y apoyo que me brindaron durante esta aventura

a mi familia

a mis asesores y maestros

a la Facultad de Arquitectura de la UNAM

al *College of Environmental Design* en UC-Berkeley

al *College of Architecture* en la Universidad de Nebraska-Lincoln

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:, gaze, flux, tact(tility), suspension, re-beach, $$$, sham, snooze, access/axis, interstitial, strike!, hangout, container

ı, lisbon, vigo

dge@layers.com, mobility, (over)float, mappings, thoughts I, aquatic park, bridge, thoughts II, thoughts III, programmatic
;

estrategia, sistema, industrial, bahía, silencio, playa, mareas, doblez, filtro, filtro y estereotomía, filtro y tectónica,físico,

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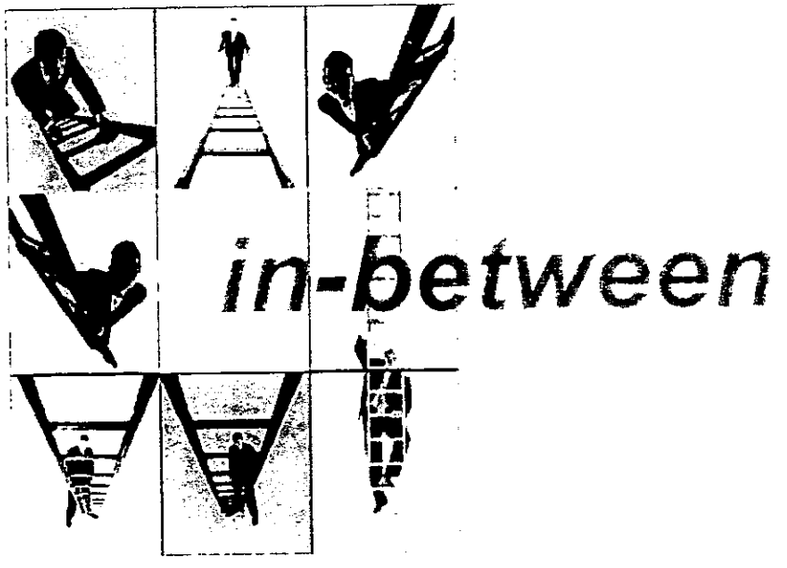


introducción

El desarrollar un programa para la condición denominada *in-between* (entre dos estados o situaciones) requiere considerar la reutilización de las estructuras urbanas residuales y las conexiones deficientes producidas por los sistemas de transporte actual.
Dichos espacios sin resolver crean una situación confusa, pero a la vez liberadora dentro de las ciudades modernas.
La ciudad de San Francisco, en específico las áreas residuales que corresponden a su frente acuífero, ofrecen oportunidades para nuevas tipos de espacios y usos programáticos, que pueden no ser parte de nuestra condición urbana actual. Serían lugares donde una tipología mixta de edificios y programas (la cual estimularía la actividad humana) podría ponerse a prueba. El objetivo es descubrir , por medio de distintas propuestas, qué programa y combinación son exitosas.
Las zonas residuales ofrecen dichas oportunidades debido a que por décadas se han visto olvidadas por las agencias de planeación. Esto sucede principalmente porque esos mismos organismos no pueden basarse en precedentes existentes para desarrollar y codificar estas áreas. En la actualidad, no son mas que espacios desolados, estacionamientos improvisados o campos para vagabundos.
Lo que se busca a través de esta tesis es poner en prueba distintas posibilidades para nuevas combinaciones programáticas y usos apropiados con el fin de revitalizar estas zonas decadentes, produciendo ideas derivadas del sitio, dejando atrás nociones preconcebidas. En si, consiste en crear una hipótesis para una nueva arquitectura que reconcilie sitio, cultura y experiencia personal, a través de la práctica de diversas metodologías que pueden verse resumidas en el siguiente proceso:

Se realiza un análisis crítico del contexto y las condiciones espaciales del sitio, registrándose en forma de notas, diagramas, croquis, fotografías, etc. Dichas observaciones adquieren una particular importancia en permitir una comprensión de la ciudad a través de patrones repetitivos, condiciones tierra/bahía, el flujo de los sistemas de transporte, el comportamiento social y su estructura, etc.

La información se confronta con distintos ejemplos análogos de ciudad. Las posibles relaciones y contrastes se obtienen de dicho empalme.

aislar y analizar

La tercera fase requiere una lectura y representación del análisis, el cual estaría definido por las condiciones del sitio. La representación permite analizar y crear una disección de las observaciones realizadas y estudiar los aspectos de mayor interés, utilizando *collages*, diagramas...enfocándose en los ritmos y patrones de la ciudad.

creación de una construcción abstracta

El cuarto paso tiene como objetivo la creación de un objeto tridimensional que explore las ideas previamente analizadas, así como la relación entre el objeto y el sitio. Se busca así crear una serie de diferentes ideas arquitectónicas producidas por nuevos conceptos.

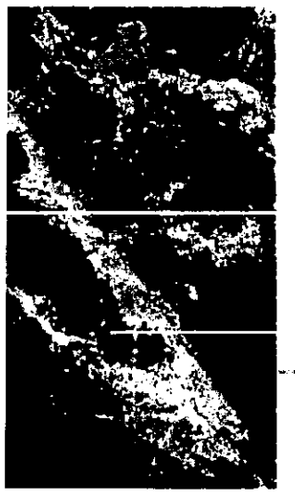
transformación en propuesta

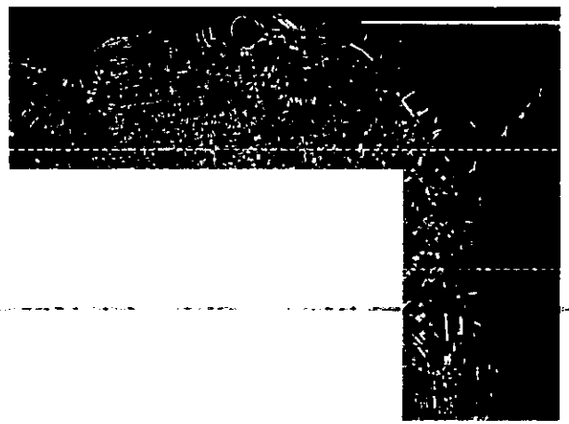
Finalmente las ideas encontradas en la construcción se transforman en una propuesta para un sitio específico a través de maquetas y dibujos.

El propósito principal es el proponer una arquitectura interstcial, sin tipologías preconcebidas, sino asumiendo una metodología que inicie con una investigación básica y avance por medio de la invención de programas que confronten nuestras condiciones culturales.

esta la información de la encuesta en español por Gloria Rojas en clase de campo realizada en primavera durante mi estancia en la Universidad de California en Berkeley agosto 2001 - dic 2001. La información de la encuesta de investigación de campo es completa para poder trabajar con la información arquitectónica individual.
A continuación se presenta el procedimiento para el uso de la información de cada una de las tablas que se encuentran en la parte de atrás de la encuesta. Se explica el significado de cada uno de los números asignados. Para poder llenar la tabla especial se necesitara regresar de nuevo a [illegible]

noo
waterfront





Edge as a concept.

Function: noun
Etymology: Middle English *egge*, from Old English *ecg*; akin to Latin *acer* sharp, Greek *akmE* point
Date: before 12th century

1 a: the line where an object or area begins or ends : BORDER <on the edge of a plain> b : the narrow part adjacent to a border <the edge of the deck> c : a point near the beginning or the end; especially : BRINK, VERGE <on the edge of disaster> d : a favorable margin : ADVANTAGE <has an edge on the competition>

2 : a line or line segment that is the intersection of two plane faces (as of a pyramid) or of two planes
- edge·less adjective

3 : the flat or angled surface, usually fine-ground, that limits the aperture of a lens or prism surface (in Photonics).

Why is the concept of edge so appealing? It implies two different situations (at the least), with a possible change in properties, conditions or characteristics. This notion of edge can be found with various qualities: sharp, smooth, overlapping, defined, malleable, natural, artificial...

In addition, a clarifying aspect to discover the edge is the nature of the elements which the edge defines: their similarities, contrasts, oppositions...

Edge as a site.

San Francisco is in itself an edge in many ways; it is the edge of the peninsula, the edge between the ocean and the bay, the edge between the urbanity and country. The most emblematic is the edge that divides land and water, since in its own nature the rest are implied.

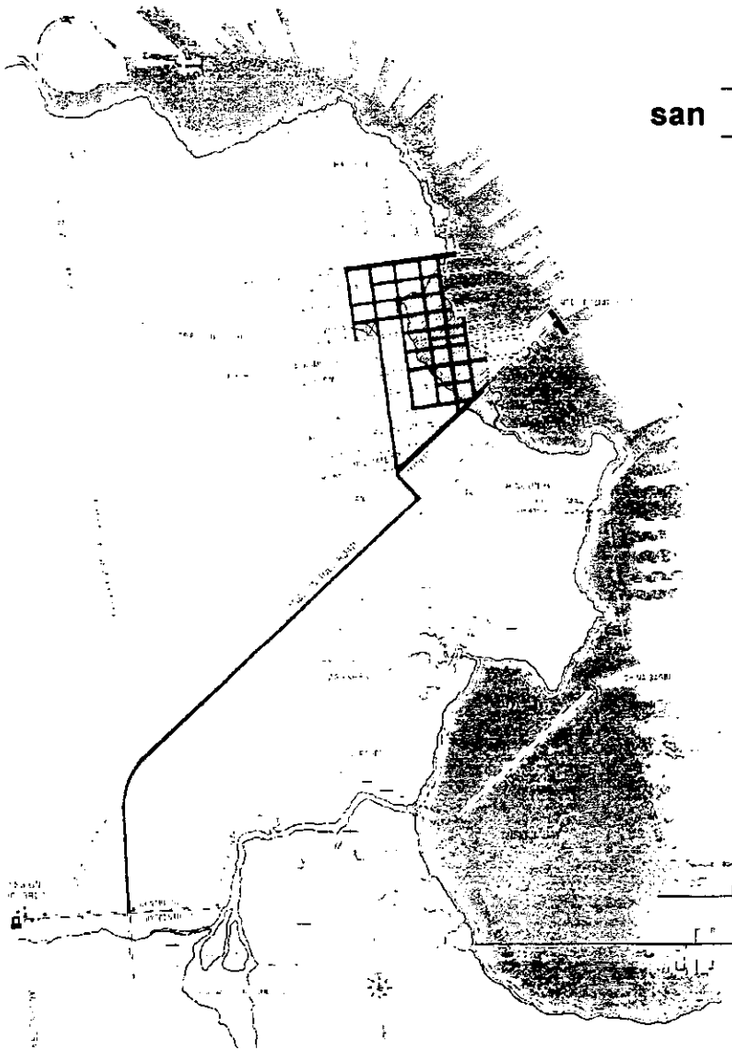
The discovering of the waterfront as a pedestrian made us aware of the triple *tempers* of this boundary.

- Beach (Pacific shore).

- Cliff (from the end of Ocean Beach to Crissy Field).

- Urbanity (from Crissy Field to Islais Creek Channel).

The decision of focusing on the third *section* of the waterfront was taken since it can be considered as an unresolved dialogue between the city and the bay, being the most challenging to intervene. Due to its artificial character, being redefined through time (as the series of infills have reshaped it, starting in 1851) the aim is to explore what will be the attributes for the contemporary waters edge.



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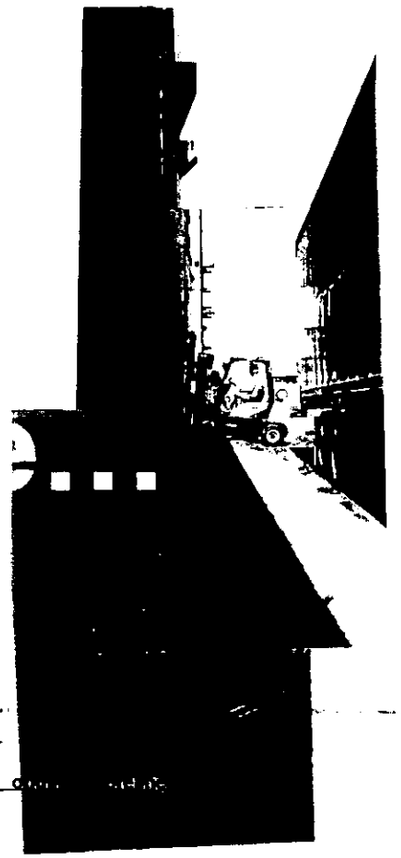


present shoreline

The San Francisco Bay has always been the city lifeblood. For nearly a century the Waterfront was the heart of San Francisco, its economic mainstay. The Embarcadero has been developed in stages since 1868, and today is trying to find a new role in the way that the city meets the water.

After the Golden Rush subsided in the early 1850s, San Francisco became one of the world's greatest ports. Ship anchored at more than 60 piers.

Millions of Bay Area resident rode the ferries that docked at the Ferry Building, but the opening of the Bay Bridge in 1936 and the Golden Gate Bridge in 1937 killed off the passengers ferries.

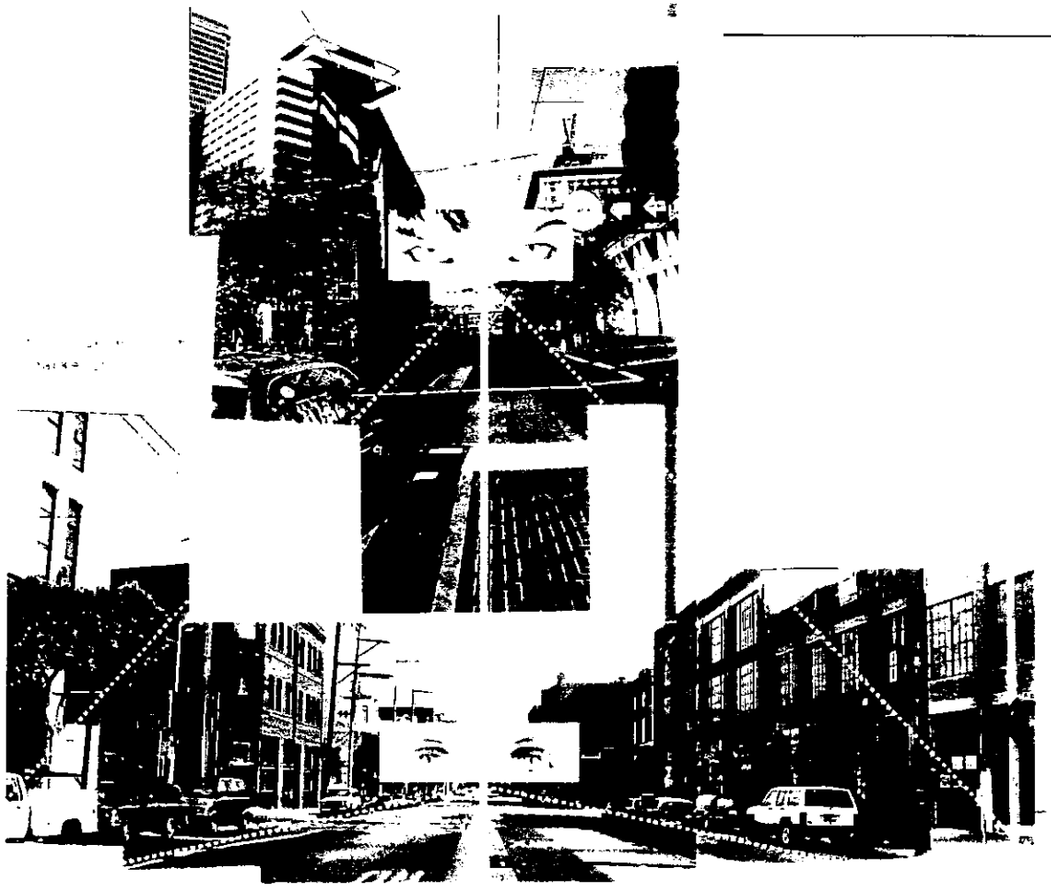
After the Second World War, San Francisco's waterfront went into decline, and the city turned its back into the priceless asset.

The construction of the Embarcadero Freeway along the Central Embarcadero in the late 1950s visually and functionally blocked the downtown business district from the waterfront.

Just when the waterfront's decline seemed irreversible, San Franciscans rediscovered this precious resource and found that shipping was not the only thing a waterfront could be used for.

In the 1960s Ghirardelli Square was converted into retail and restaurant complex, this project made the waterfront more accessible to San Franciscans and especially to visitors. In 1969, the city's Master Plan included recommendations for improvement and development of northern waterfront, but the Plan was adopted only many years later (1977). This plan covered the area from Aquatic Park to China Basin and recommended: enhancement of existing maritime uses, increased access to the Bay, improved transportation, the prohibition of office or residential use on new fill, and reduce commercial density.

Since the 1969 proposal, the recommendations and the goals have not changed, but almost none of the intents of this former plans have been accomplished.



The time for reflection is also the

chance for looking back to the very

condition of reflection, in all senses

of that word, as if with the help

of a new optical device one could

finally see sight, one could not only

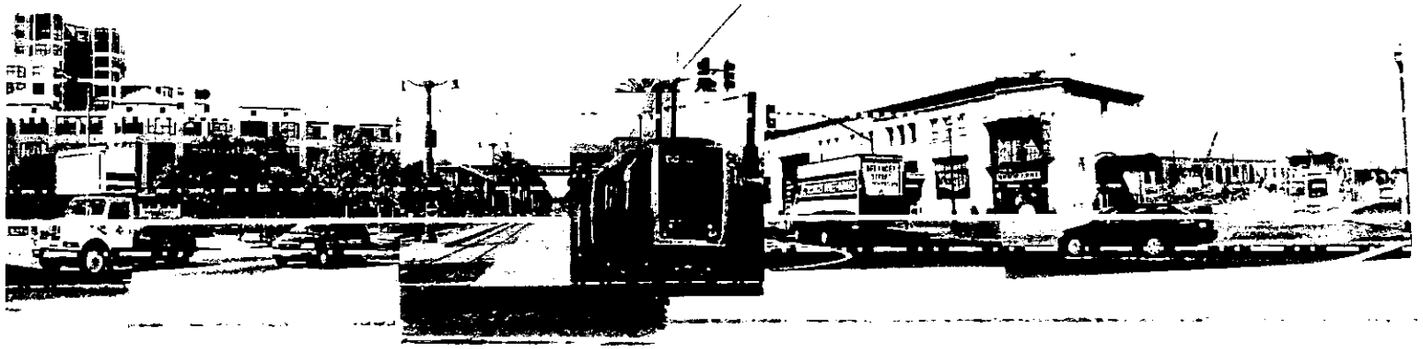
view the natural landscape, the city,

the bridge and the abyss, but could

view viewing.

Rem Koolhaas. S,M,L,XL. 1997.

The waterfront should be a new place to discover the city and to be discovered from the city. Until now there has not been a conscious solution given to the meeting of the city edge with the water. Geometry, boundary, the two city grids, the residual space of the *reticula*, the piers, and the diverse neighborhoods can all be addressed as part of a more accurate portrayal of the entire edge, which reflect the variety of conditions along the shore

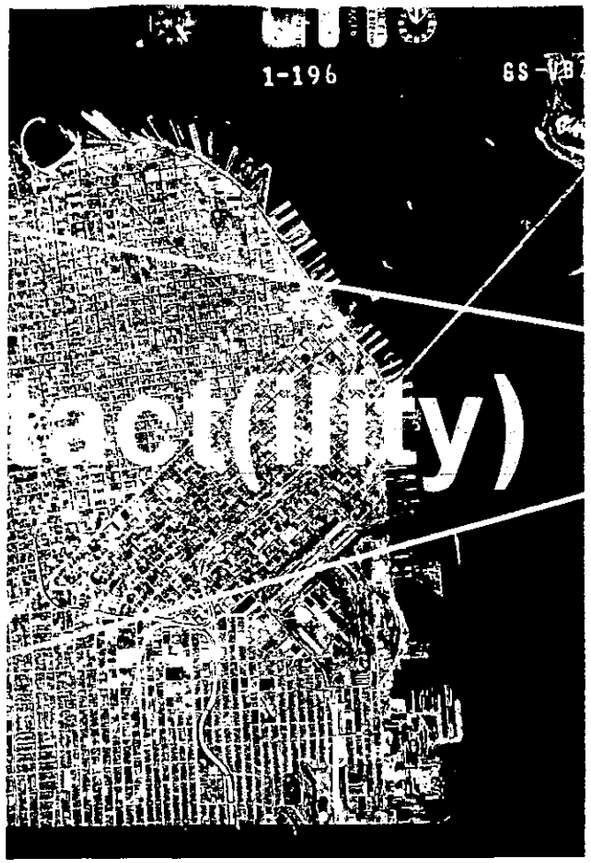


In the last decade, San Francisco's northern Bay waterfront has deeply changed. The district was dominated by the former elevated Embarcadero Freeway, and characterized by decaying buildings, unused piers and deteriorating streets.

With the Loma Prieta earthquake in 1989 this freeway was severely damaged, closed, and torn down, being replaced by a at-grade highway. It is interesting to highlight the importance of this event, which has triggered the most significant reconstruction of Bay Area highways since the last of the big freeways were built in the 1960's. Without the earthquake, local governments would have been hard pressed to pursue aggressive programs for the improvement of public buildings. The new Embarcadero surface roadway, with its median of palm trees and rail transit facilities, handles heavy urban traffic on the border of the city. Although it is not such a marked barrier as the original freeway it is still a physical boundary from the waterfront area.

Historic F-line streetcars now operating up and down most of the length of Market Street will connect the Embarcadero and provide a transit service north to Fisherman's Wharf. Light rail vehicles (N-line) now emerge from the Market Street MUNI Metro subway at Folsom Street, traveling south along the Embarcadero to the new Giants ballpark at King and Third Streets. Metro rail service continues on King Street to terminate at Fifth Street near the Caltrain Station.

The previously described system (F-line) can be defined by its clear "nostalgia" for previous times, represented by the streetcars which resemble the earlier models of the late 1940s. The "traditionally" inspired streetlights are another example of this tendency to borrow elements from the past, trying to give the Embarcadero a fake "historic" atmosphere.



The *manner* in which we address a site is with tact: sensually, mentally and aesthetically speaking.
The reconnaissance of a situation through its opposites

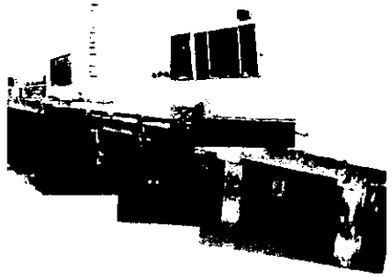
solid versus *liquid*
ocean versus *land*
nature versus *human*
order versus *random*
previous versus *new*
urban scale versus *architectonic scale*
vehicular transportation versus *pedestrian transportation*
city as a planner responsibility versus *city as a collective construction*

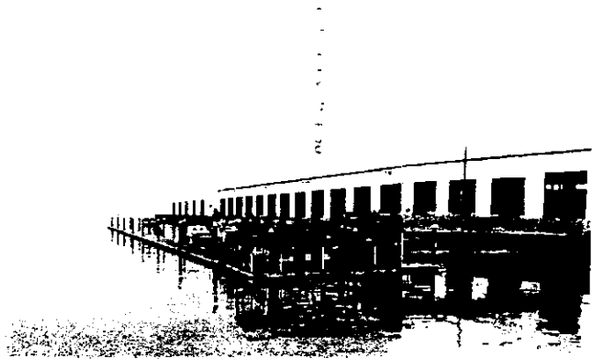
Keeping in mind that order is the interlocking of opposites.
To conceive the site for what it is and for what it could or wants to be; perhaps these might seem as contradictory aspects, but they are never unrelated.

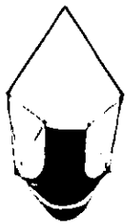
The possibility of working in the San Francisco Bay creates a series of opportunities for *snooping*, recording and understanding the different factors which conform this particular area. We would like to approach to the site and the project in an interrogative way

Focusing on a specific zone, in the southeastern waterfront, where the topography and the urban design collide, it is common to find several residual spaces which have been left as open, public areas, but are used in a seldom fashion by the locals. In addition, the San Franciscans have been totally alienated from the shoreline. This is due to the facts that the projects for its renovation have been mostly triggered to tourist-related activities. The remaining areas are industrial or abandoned, therefore they can be defined as a no man territory.

The *reuse*, as a scrupulous reinterpretation and renovation, of this spaces will permit the transformation of this underutilized sections to different, probably slightly different needs (since they are the hinge between the city and the piers); in other words, the re-usage or revitalization of the waterfront (pier) would be a definite goal, trying to create a link (new connections, new relationships) between how the *new* space interacts with the *existing* form.







suspension
Main Entry: sus·pen·sion
Pronunciation: s&-'spen(t)-sh&n
Function: noun
Etymology: Middle English suspensyon, from Middle French suspension, from Late Latin suspension-, suspensio, from Latin suspendere

(1) : the state of a substance when its particles are mixed with but undissolved in a fluid or solid (2) , a substance in this state (3) : a system consisting of a solid dispersed in a solid, liquid, or gas.

The concepts of suspension can be comprehensively explained by the additional notions of

intersection of different natures, such as the city and the ocean

overlapping of diverse systems; the grids that conform the urban mesh and the irregular rhythm of the piers

connection and link of the original shoreline with the present one, and the tie between this and the man-made waterfront

assemblage of the different pieces which conform the puzzle of the waterfront, in order to keep their individuality, but making them work as a system with the city

The conceived guidelines are a result of the previous observation, filtered by our personal criteria.

The process that lead us to the present proposal originated from the general framework; searching for an articulated intervention.

The area of the urban waterfront itself can be subdivided in three subareas according to the way they are used (in direct relationship with the density that creates) and how they relate to the bay and to the city and how the spaces are appropriated by the people and given a particular use:

1. From Crissy Field to Ferry Building.

2. From the Ferry Building to China Basin.

3. From China Basin to the Islais Creek Channel.

The particular character of these will influence directly the qualities of the system on which the project will be based.

The system itself will consist of different layers of subsystems: transportation (pedestrian/vehicular), exercising/recreational, and visual. The emphasis will be in exploring the interstitial spaces between the street level and the water level (section) and how it varies with the different tides.

crissy !

Once a tidal marsh, Crissy Field was later an army site for the Spanish, a post for the US military, and the site of the Panamerican Pacific International Exposition in 1915.

The architecture at this landmark remains from the airfield's heyday in the 1920s.

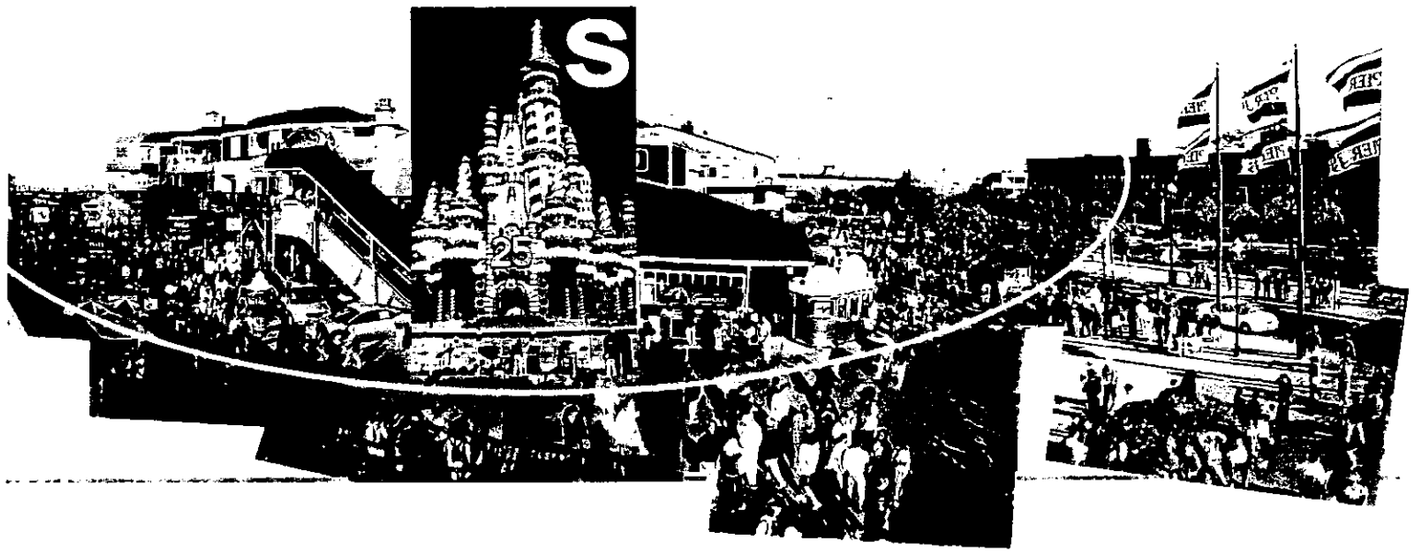
The sand dunes flanking the beach at Crissy Field were once part of a sand field edged by salt marshes and lagoons.

For more than two decades, this shoreline edge has been open to the public. Over the years, Crissy Field has been a park destination - popular for jogging, cycling, dog walking, picnicking and boardsailing.

However, despite of this, the promise of Crissy Field has remained largely unfulfilled. Only one third of the 100-acre site was available for use. Much of the area was a asphalt, open space created by building demolition, hard-packed earth, deteriorated paths and weeds, with almost 30 acres fenced off. Crissy Field remained difficult for the public to enjoy

Dunes, a grassy airfield, an expanded beach, a restored tidal marsh, trails, overlooks, family picnic areas, school group education programs and many opportunities for recreation and enjoyment are the plans of Crissy Field

: to the world of pier disney-nine! welcome to the place on earth!



There has been very little new commercial development on Port property within the last 20 years. Many of the existing commercial uses in the northern waterfront were developed before 1980 as a single use establishment.
One exception is Pier 39, the visitor oriented retail and entertainment complex, which was build in 1978 as a mixed-use maritime complex.
Pier 39 integrates marine and excursion boat activities and public access feature which have transformed the appearance of the area, but at the same time has excluded this particular part of the waterfront to the San Franciscans.

The way to spur the city to re-imagine its edge as a collective experience can be approached in different modes

–through commercial activity that serves as a magnet for shopping crowds (Pier 39 and Fisherman's Wharf); which by its own nature is a fake method of revitalizing an area.

–through public open spaces or promenades paid for by a lesser degree of commercial development.

–through completely public parks, which replace the commercial nature of the city with a public terrain that remains purposefully open, but productive as a place of recreation or cultural enrichment.

There is no more opposition between

the abstraction of money and the

apparent materiality of commodities:

money and what it can buy are

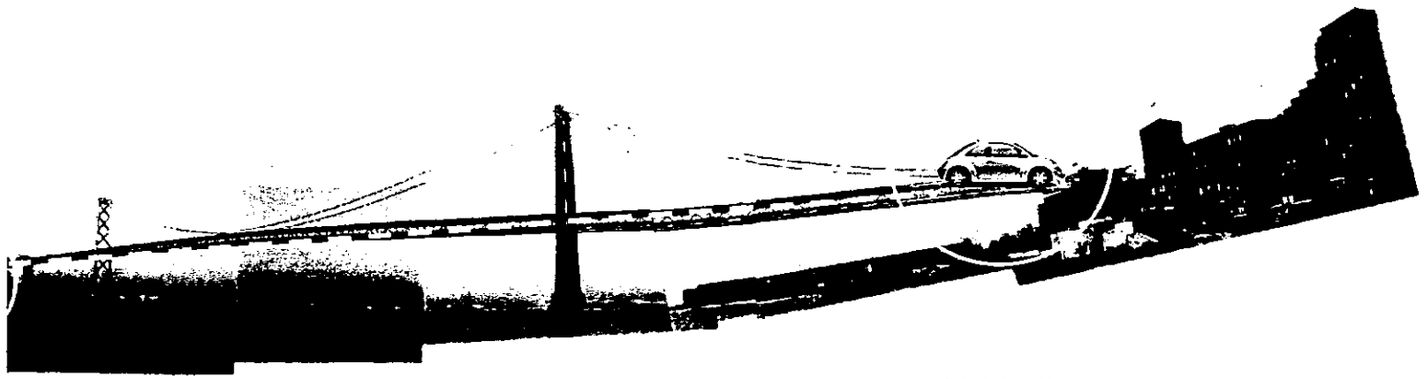
now fundamentally of the same substance.

Rem Koolhaas, S, M, L, XL

The Waterfront Land Use Plan mentions: "The priority for Fisherman's Wharf is to re-invigorate the fishing industry which is the heart of this area. The plan recognizes and reinforces the synergy between historic fishing operations and visitor-serving activities, which has made the Wharf one of the top visitor attractions in the United States, generating substantial revenues to the Port and the City."

As the previous example of Pier 39, Fisherman's Wharf clearly illustrates how the northern waterfront has been basically targeted for tourists. If the water's edge that surrounds San Francisco is analyzed it is possible to highlight how the coast has been alienated from the actual people who live in the city. therefore a public (local) area should be proposed.

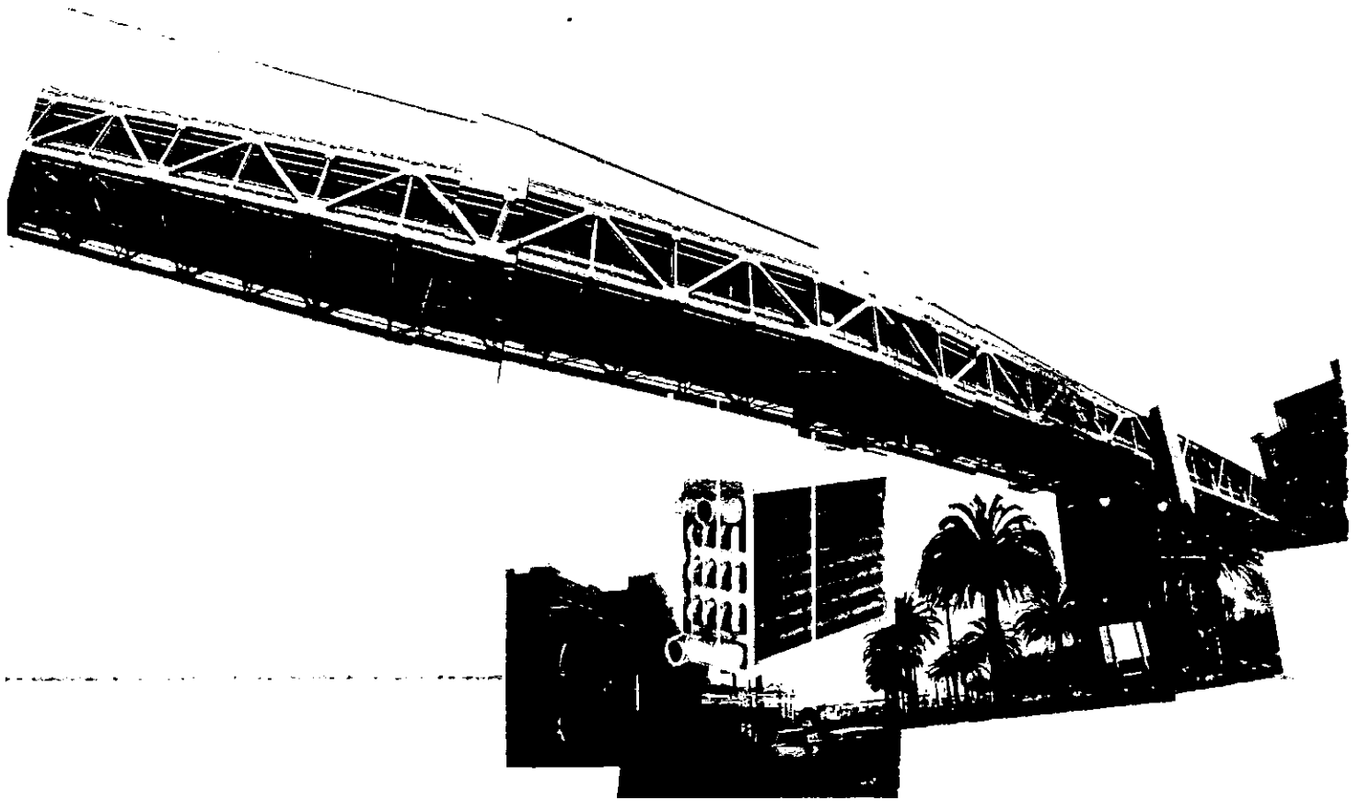
o and Alameda Counties. Length: 23,000 feet (4.5 miles), total project, structural and roadway including approaches, toll plaza, etc., 8.4 miles. Structure: Suspension, tunnel, cantilever and truss West Bay Suspension Bridge Length 9260 feet (6282.9 meters) Vertical clearance 220 feet Span Length 2,310 feet Tower Height 526 feet (from water 178 feet Vertical clearance 191 feet Span length 1,400 feet Deepest Bridge Pier 242' below water level - 396 feet high Tunnel 76' wide,58'high(546m/1700'long) Opened November 12 1936Cost $77 million Traffic Lanes: Upper level: five lanes westbound Lower level five lanes eastbound Avg Daily Traffic 270,000 vehicles



Around 1920 a previously-thought goal started to become a reality: to build a bridge across the bay, to link the peninsula to the mainland once and for all. Because of the rapidly growing number or autos and trucks in cities surrounding San Francisco, people wanted means to take their personal transportation, their automobile, directly to the City. (San Francisco watched its neighbor to the South, Los Angeles, growing both in size and economic importance).

Bridging the Bay and the Golden Gate would create a Greater Bay Area that could sustain San Francisco's dominance over L. A. The Oakland-San Francisco Bay Bridge opened in 1936 and the Golden Gate Bridge opened the next year. The transformation of San Francisco from island to mainland was complete. The old isolation that had shaped San Francisco's birth and growth was gone forever. The automobile was king. Electric streetcars were doomed, ferryboats redundant (in 1928, ferries carried over 46 million passengers between the two shorelines), cable cars unnecessary.

This new access/axis to the city influenced directly the Embarcadero Area (passengers abandoned the ferry services and chose to cross via the bridge). At this same period of time, there was a decline in the shipping industry, which lead to its partial abandonment. The old piers were left as useless warehouses with "picturesque" façades built in part to obscure the "other" reality of work on the waterfront.



interstitial
Function: adjective
Date: 1645
1 : relating to or situated in the interstices.

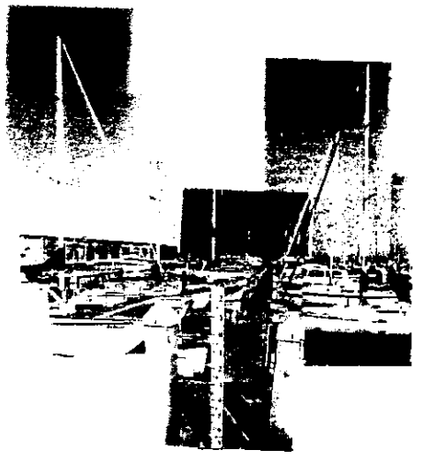
2 a : situated within but not restricted to or characteristic of a particular organ or tissue -- used especially of fibrous tissue b: affecting the interstitial tissues of an organ or part.

3 : being or relating to a crystalline compound in which usually small atoms or ions of a nonmetal occupy holes between the larger metal atoms or ions in the crystal lattice.

The different layers which compose the mesh of the Embarcadero layout makes it possible to explore/exploit the idea of the "spaces in between".
The bridge works as an "abstract sign" where the buildings can extend underneath it, taking possession of this corridor which lacks walls.

This structure creates a fissure in the way the people inhabits the land; the business areas situated to the north, while the housing and industrial activities are found to the south.

Textures, proportions, heights and typologies are organized by the bridge.



Historically, the South Beach/China Basin Waterfront was dominated by maritime and industrial uses and railroad terminals. Most of the pier facilities have deteriorated in the last 20 years, but several of the piers still host industrial maritime activities.

The Waterfront Land Use Plan prescribes that, since most of these maritime operations north of China Basin do not conflict with the emerging residential and commercial uses in south Beach and Rincon Hill, should be retained.

The South Beach/China Basin area currently includes two waterfront recreation areas. One is the South Beach Harbor at Pier 40; a 700-berth marina built in 1986 by San Francisco Redevelopment Agency "to spur the transformation of this then-derelict warehouse district into a safe and attractive residential neighborhood". The construction of the marina, which required the demolition of former Piers 42, 44 and 46A, tried, with a not completely successful result, to stimulate the conversation of the border area to a mixed-use residential neighborhood.

The project included also the development of pier 40 with commercial revenue generating uses, 1,900 residential units, restaurants, cafes, neighborhood shops, the Delancey Street Foundation's transitional housing and training center for former convicts and a public open space. Many of these projects remained only potential.

Tenant: San Francisco Giants (NL)

Opening: April 2000

Surface: Grass

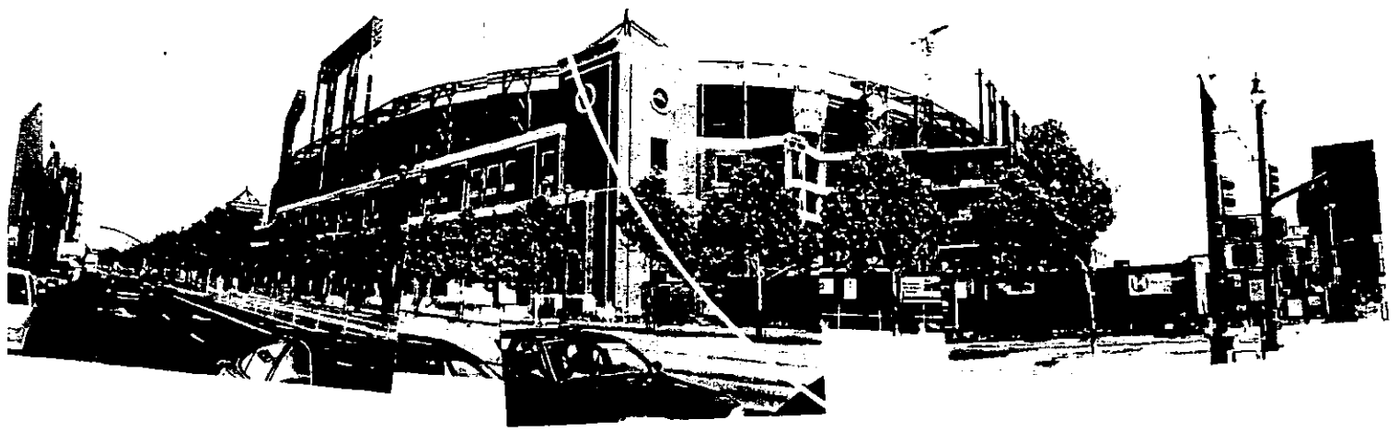
Capacity: 42,000; Two-thirds the capacity of 3Com Park (63,000)

Owner: China Basin Ballpark Corp., a subsidiary of the Giants

Cost: $255 million, private financing

Location: A 13-acre site is bounded by King, 2nd and 3rd Streets and China Basin.

Dimensions: Left field: 335 ft., center field: 404 ft., right center: 420 ft., right field 307 ft. backstop: 57 ft.; foul territory: as little as 48 ft.



The Pacific Bell Ballpark, now under construction at China Basin, was privately developed trough a lease that the Port of San Francisco did to Giants, since non-maritime use are currently prohibited on the waterfront, pending the adoption of the Waterfront Land Use Plan. In addition, an exception was even made regarding the height limitations of the area, which should not exceed 40 feet.

Pacific Bell Park will be served by different public transportation systems: Muni Metro streetcars and trolley buses, BART, CalTrain, buses and ferries. It is also set within walking distance of downtown and many city neighborhoods. Those choosing to drive to the ballpark will have access to the park via the Bay Bridge, Highways 101 and 280 and major San Francisco thoroughfares, including Third Street and the Embarcadero.
In spite of the fact that the public will be encouraged to use public transportation as the primary means of getting to the ballpark, parking remains as an unsolved problem: the capacity of the stadium is 42,000 versus 6,500 spaces which are currently available (within a 5-10 minute walk).

The relationship between the marina and the volume of the stadium cannot be defined as a direct dialogue. The second gives its back to the waterfront where the marina is set. The public space that can be found in between this two areas is one of the few green open spaces along the shoreline. Even if it was designed as part of the Development Program of South Beach, it resulted as a residual space (it does not fulfill its task as a transitional zone between the density of the city and the irregularity of the water's edge). The scheme of the project, by facing towards the bay, permits the possibility of having a privileged point of view; but at the same time the architectonic language is arguable since it tries to imitate the "historical San Francisco style"

The area found south of China Basin is typically industrial. In spite of this fact, several spots where the San Franciscans *hangout* can be found along the edges of the waterfront.
Mission Rock and *The Ramp* are two examples, targeted to different publics, but both with a tradition among the locals.

What did we find attractive in these particular places?

A relaxing and friendly atmosphere.

Good food.

An unusual view..

A mixture of industrial and alternative chic...

Young people. .

Spaces for gatherings and parties...

Terraces for sitting outside..

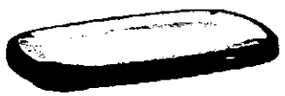
Direct/visual relationship with the water ..

The idea of discovering the city...

Low density versus the high density of the city

The reuse of warehouses as recreational areas (restaurants, bars, indoor climbing gym)..

The challenge is to apply/find this same characteristics along the waterfront; in other words, discover the excitement or this hidden properties of the city's edge, giving it an access from the water.

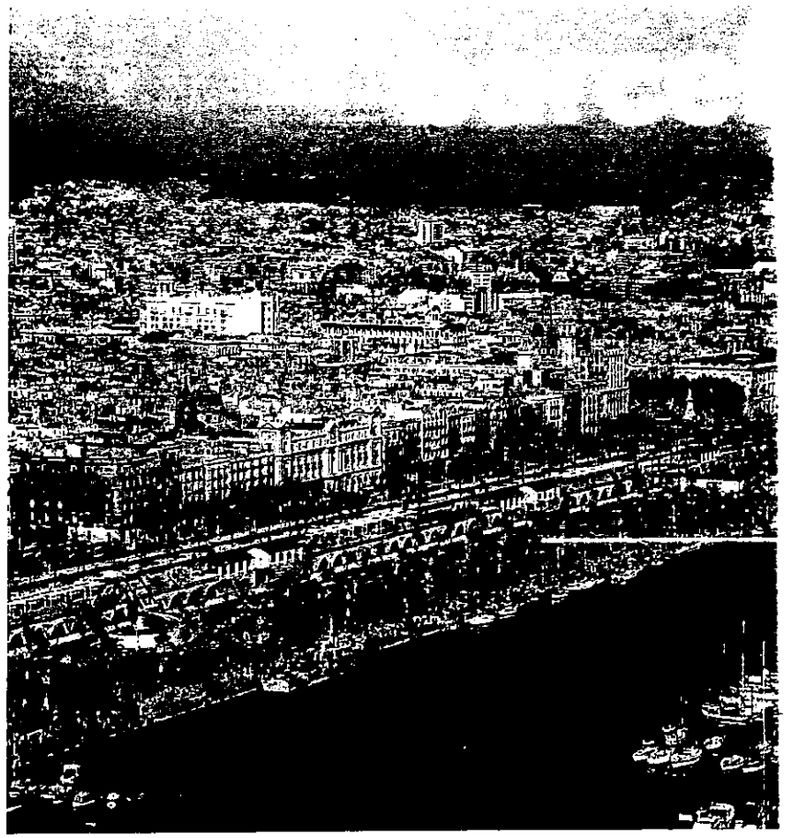


Aqua Vista Park is found at the infill's edge which took over Mission Bay. In spite of its name, the area cannot be defined as any kind of park, but as an abandoned zone of the city.

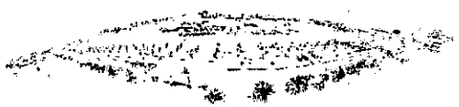
The few activities which take place are scattered fishing by some locals, cargo shipping and boat repair at its southern end (which occur at early ours of the morning). In other words, it is basically empty during daytime (except for some workers who park to have lunch inside their vehicles since there is no sitting area).

At the opposite side of the road, homeless people have taken possession of the empty land, giving to it a desolate but fascinating atmosphere. For this reason, we find that in its nature there is a series of possibilities for exploring different design strategies.

The *ruins* of the original piers are a reminiscence of the previous economical and industrial influence of the Port of San Francisco. The combination of these elements and the still existing piers set the perfect scene for an open public space.



Moll de la Fusta, esplanade



General plan and perspective

The city's renovation started at the beginning of the 80's with the strategy of the *urbanismo strategico*, which consisted in the understanding/analysis of the present elements. The plan was focused on the observation of spaces, mainly public. For this reason, the developers refused to create a *maximal* planing.

The original idea of Oriol Bohigas consisted in intervening on particular spots, rebuilding the city. These spots should organize the city in an economical, functional and social manner. These circumscript interventions would transform the city's fabric. The formless green spaces are converted into public gardens and parks and the vehicular connections into streets, with all the connotations that the word *street* implies.

The interventions are set in:

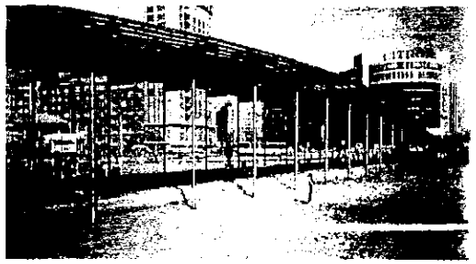
Moll de la Fusta
Plaça de la Estacio de Sants
Parc del Escorxador
Cinturones
Via Julia
Parc del Clot
Diagonal
Parc de la España Industrial
Olympic Ring at the Montjuic
Parc de la Migdia
Vall d'Hebron
Parc de Mar

The project consisted in the construction of *a* series of public spaces. The city of Barcelona facilitated the resources for developing not residential buildings, but mainly open and collective spaces (plazas, malls, courtyards, cemeteries, streets and piers). This *technique* can be defined as *acupuncture*, being risky in its nature since the results could not be directly predictable. Its behavior created a chain reaction, where one cannot control every aspect of it. These *punctual* interventions covered a large area of the city, having a large economical and intellectual budget. The project covered the levels between the pavement design of a plaza and the development of a parking lot, to the creation of large open areas and the intervention on the totality of the waterfront.

Parc de l'Espanya Industrial

Parc de l'Espanya Industrial

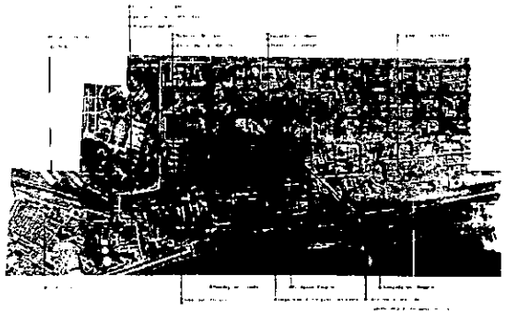
Bernardo de Sola, Josep Maria Julia and Pedro Barragán. Layout of Via Julia.



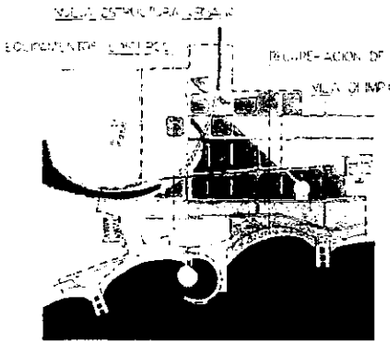
One of the new layouts of the small squares in the old city center.

Heliou Pinon and Alberto Viaplana. Layout of Placa de los Paisos Catalans

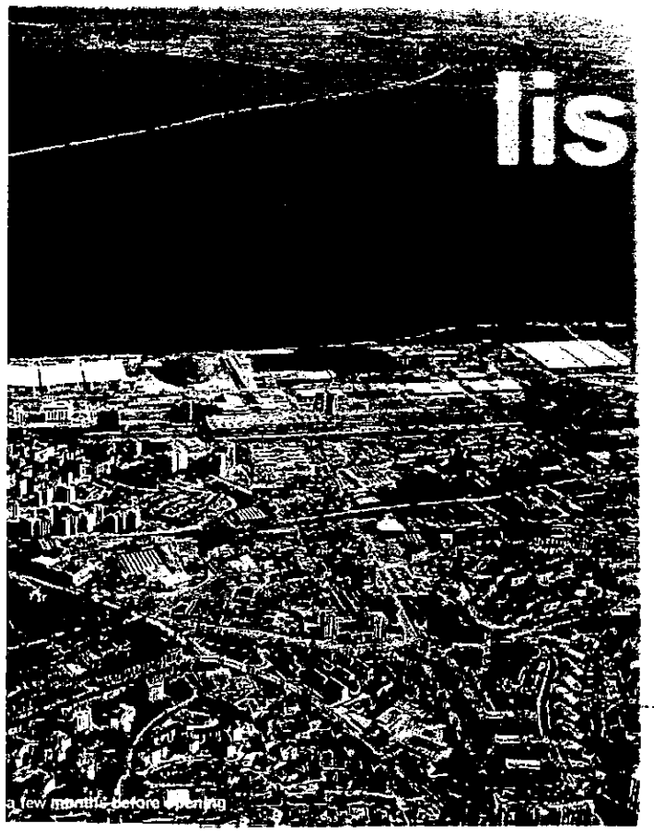
Esteve Bonell and Francis Rius. Barcelona's velodrome.



Photomap of the site of the 1992 Olympic Village with a description of the existing elements.



Martorell, Bohigas, Mackay. General plan for the layout of the Olympic Village in the new Nova Icaria neighborhood..



Miles of new roads under construction, a new bridge that spans the Tagus river, city squares being refurbished, and an 840-acre riverside industrial site being transformed into a world village in a park setting, all pointed to a particular event: Lisbon's World Fair (1998).

Held at the end of a century full of changes and contradictions, the Fair represented an important opportunity to re-examine certain concepts and, at the same time, to foresee others that the future will bring.

An issue that had to be faced was to reconcile the ephemeral with the permanent. The organizers and designers decided to take certain principles from Barcelona as a model- especially those connected to the renewal of the waterfront.

It was intended to promote the urban reconversion of a vast industrial zone in Lisbon, called the "zone of intervention". Architects and urban designers were able to re-evaluate the concepts of renewal, recovery, preservation, context, urban integration, sustainable development and what "makes city". The organizers were interested, first, in working on the urban regeneration of this segment of Lisbon (the recovery of abandoned and contaminated industrial edifices), and seeking a perfect integration with the surrounding zones, the townships that connect it with Loures.

The positioning of the exposition also underlines the intention to re-establish a relationship between the city and the river, contributing to open the debate and to stimulate interest in the city regarding the waterfront areas, with respect to both the river and the sea. The fair itself was set as an "evidence" of a "change" in "how" the Portuguese changed their way of looking at the relationship between the city and the river, and an opportunity to rethink Lisbon as a riverfront city. The objective was intervening in the renewal of its urban fabric in a creative, lasting way.

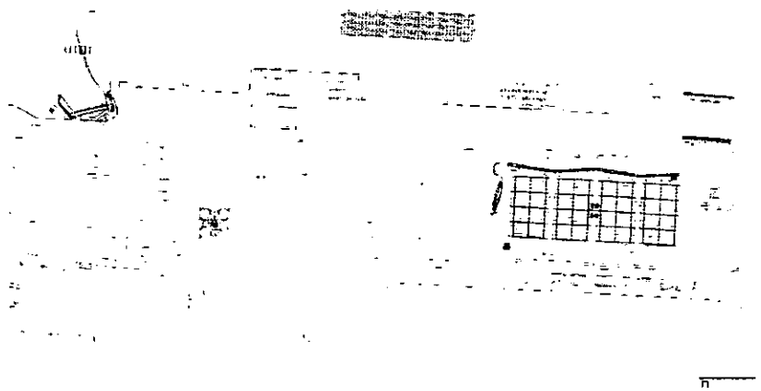
Lisbon looks like a city that wants everything and ties everything, coming up with "revitalization" plans for many sectors of the city without actually coordinating them or ranking the in an overall "idea of the city". It has developed along new axes that expand outward toward the periphery zones, leaving large, unused interspaces.

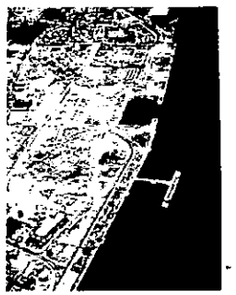
As in Barcelona, it is important to emphasize the amount of attention and resources devoted to the creation of public spaces, a situation that is practically unique in Portugal. The urban planning emerged as an attempt to affect the city by means of small, point-by-point interventions, oriented more toward the consolidation and exploitation of the extant that to construct anything new.

The plan for Expo '98, on the other hand, is linked to development, having to respond to certain problems that emerge as true challenges:

Will it be possible to control the level of intervention by "making city" rather then "making a city"?

Will it be possible to break through the physical boundaries of the fairgrounds and the zone of intervention, through integration with the existing urban fabric?

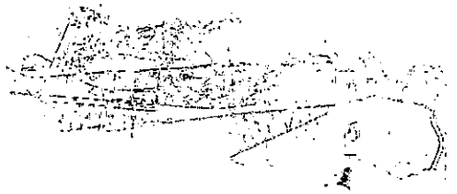




e project

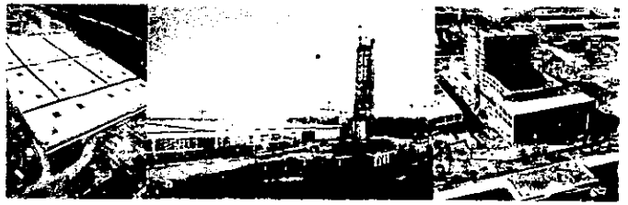
site plan:

1. Pavilion of Portugal 2. Eatern station 3. Pavilion of knowledge of the the sea 4. The utopia pavilion 5. Pavilion of the oceans 6. Northern international area 7. Restaurants and installations 8. Southern international area 9. Southern gateway 10. Olympic building 11. Jules verne theater 12. Doca dos olivas restaurant 13. Administration services 14. Western gateway 15. National organisations area 16. Northern gateway 17. Central service gateway 18. The future pavilion 19. Media center 20. Sony place 21. Companies area 22. Panoramic tower and world trade center 23. Information center 24. Urban park 25. Wharf 26. Telecom pavilion 27. Vip gateway 28. Dockside support facilities 29. Restaurants 30. Garcia de orta gardens 31. Cabeco das rolas park



axonometric and regional plan

2 3



4 5 6

8 9 10

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14 15 16 17

19

1, 2 Pavilion of the oceans (Poole, Castro, Chermayeff, Sollugub

3. Restaurants and installations (Studio Risco)

4, 5 Area of the participating nations (Studio Risco)

6. Jules Verne theater (Studio Risco)

7. Doca dos Olivais restaurant (Studio Risco)

8. National organization area (Studio Risco)

9. Administrative services (Almeida, Ferreira, Emauz Silva)

10. Service entrance (Guedes Cruz)

11, 12. The utopia pavilion (Cruz, SOM)

13. Panoramic tower and world trade center (Profabril, SOM, Jacobs)

14. Information center (Arruda)

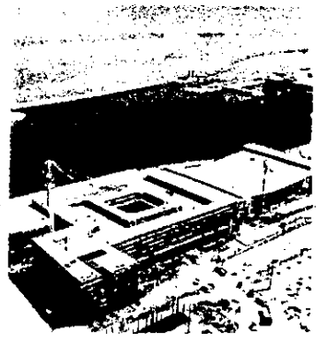
15. Pavilion of the future (Santos, Ramos, Guedes)

16. North gateway (Tainha, Marques)

17. Social communications center (Prata, Portugal, Rosas)

18. Pavilion of participating nations (Barreiros, Dona)

19. Portuguese pavilion (Siza)



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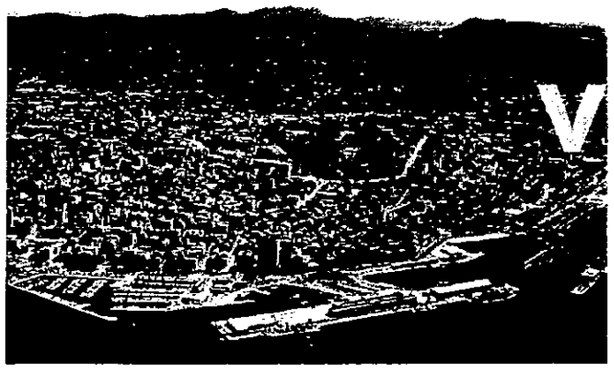
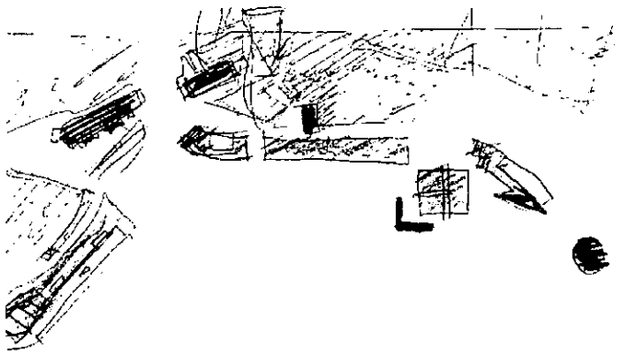




Sketch by Vasquez Consuegra

In 1943, Vigo had an utopian project to create a meeting point between the sea and the new development of the city. Instead, during the last 50 years, the shoreline resulted in a series of residual places as consequence of a port and industrial development. The warehouses and the buildings for custom services, railroad lines and the maritime station created an impenetrable barrier between the city and the sea.

Through the observation of the European and American experiences of reorganization of the waterfront, the city government realized it was necessary to eliminate the gap between this two conditions.
Because of this, the port intervention was extremely necessary to resolve the actual lack of connection of the city, since it grew giving its back to the water. The project was thought to transform this area into the main urban center of social activity, recovering the coast as a space for spare time and cultural events.

Taking into consideration examples such as Buenos Aires, Barcelona, New York and London, the port spaces became the perfect foundation on which to develop new facilities and urban activities that had no precedents in the area. In addition, the shift of tertiary and administrative activities, a new traffic plan that linked the new design with the city through a pedestrian connection, the increasing of parking zones and the achievement of the port needs will be very important tools to achieve the project goals: different uses of the public spaces and new possibilities of development.

The waterfront wants to become the center of the city, since it lacked an emblematic space.

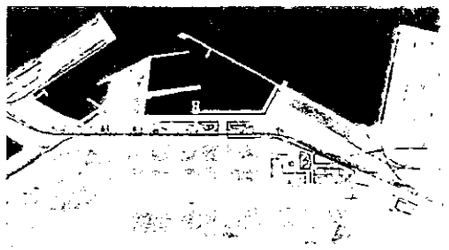
The organization of the area through a new axis situated between the two town entrances. It will point to two different spaces, in the city (Plaza de la Estrella, which is presently a degraded space, and will become an institutional element, since it will be the the autonomous administration of Vigo) and the one that connote the new port spaces (located at the access of Berbes, a typical maritime neighborhood).

The first phase of the project consisted in the conversion of the spaces occupied by Elduayen Gardens, being the first step to organize all of the area. The gardens are situated between a heavy-traffic avenue, which delimits the city, and the walls of the port. The usage of the pre-existing *paseos* and vegetation in addition of subtle architectural interventions were done in order to create a direct connection between the city and the sea. As an example it is possible to mention how the different functions are indicated through a change in the material or its pattern.

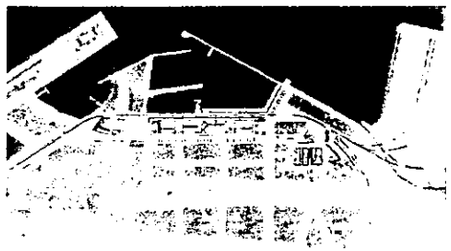
To control the entrance to the docks a plaza was created, that would organize future interventions, such as a swimming pool, shopping center, maritime station, tourism office and a restaurant.

This project will try to go beyond the permanent lack of equilibrium between the city and its waterfront in an elegant solution standing as an example of how a sensible reading of the needs of a city can conduce into a complex design solution.

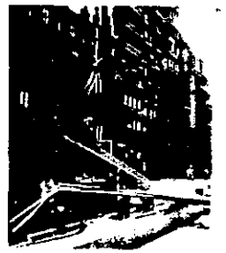
site plan of the waterfront of Vigo the project

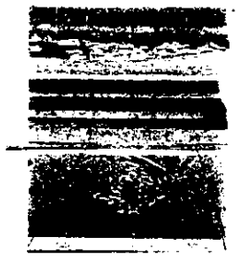


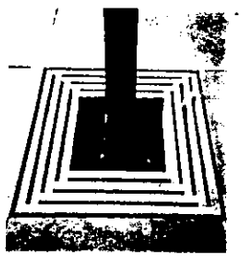
site plan of the waterfront of Vigo the project

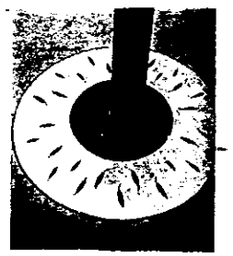


1. Transformation of the maritime station into a museum of the city. 2. Marine mammals aquarium. 3. River station, tounsm office and restaurant. 4. Pavilion of the pier 5. Waterfront promenades and gardens of Elduayen. 6. Plaza de la Estrella. 7. Warehouse and restaurant 8. Tunnel of Beiramar 9. Circular fountain 10. Control station and port entrance 11. Plaza del Berbes and underground parking.









Section.

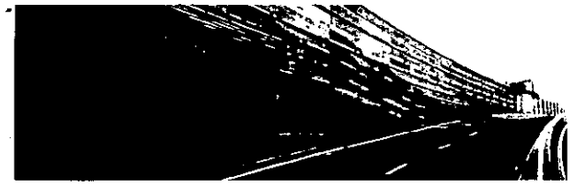
ion structures for underground parking .

plaza.

is and underground parking.

Plan. Street level.

Plan. Tunnel.



Tunnel of Bellramar. Eastbound and westbound views.

General plan.

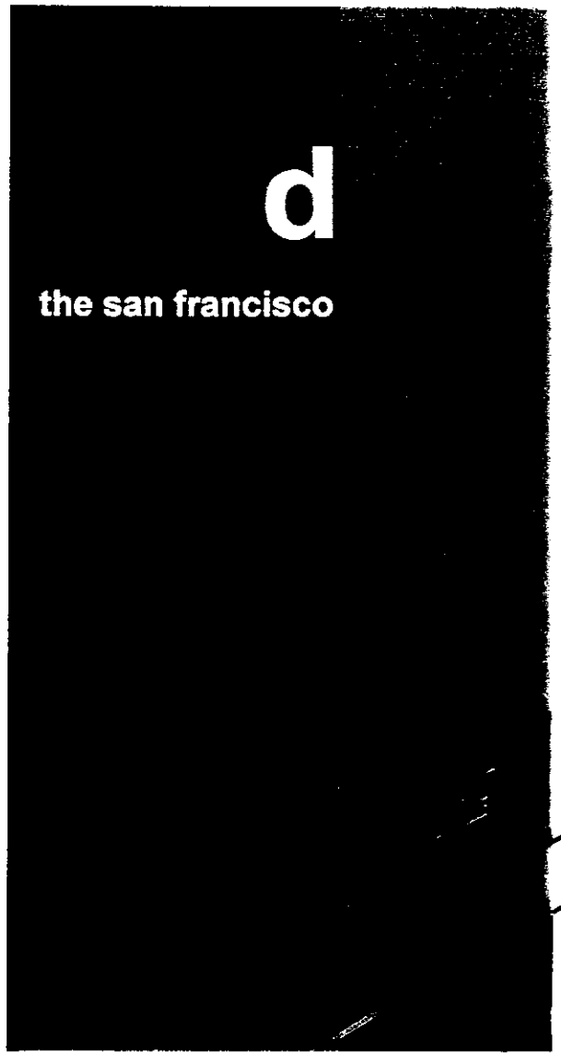
Croquis.

Pier pavilion. Plans and sections.

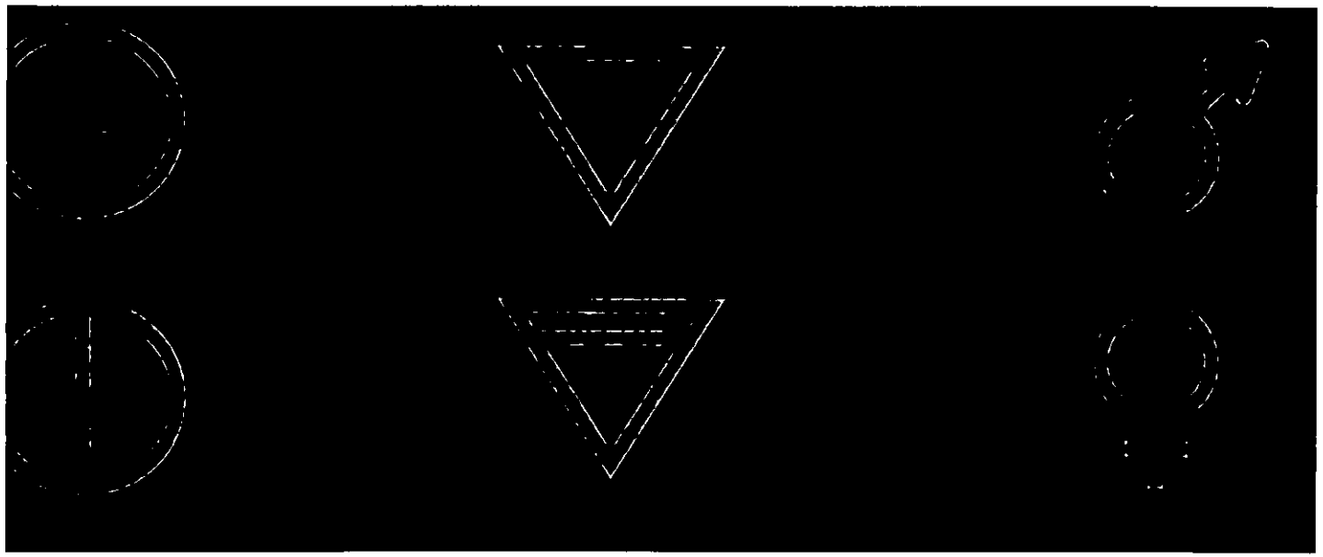
Pier pavilion. View of model.

d gn

the san francisco



duality



In the last years, one of the greatest worries in the architectural field has been the exploration of the semantic limits, including those of a structural, strategical, and above all, geographical nature, directed to evidence the new project situations in which the tradibonal trinomial association of *city-territory-landscape* is framed, destined to house complex impulses of redefinition.

The concept of void has gained importance not only for its condition of absence, but above all, for the indetermination which is found in these *terrain vagues* (Ignasi de Sola-Morales) in which the non-existing uses or activities is bound to the spectation of what is possible, of what is latent.

Emptiness, therefore, as an absence, but also as a promise.

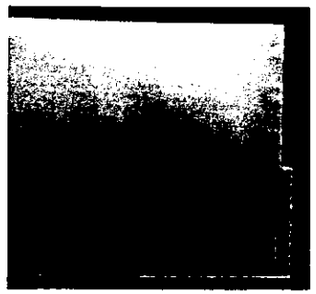
This ambiguity, this contrast, this vagueness that is generally found in the new contemporary landscape, becomes even more paradigmatic in a particular edge situation ~ water/land-, as an unusual limit which is real.

A sensible frontier between a dynamic and universal mean –water (movement, flux, infinite landscape, abstract, without references)- and a stable and local mean – land (roots, solidity, memory, proximity, codified and figurative landscape).

Limit between exterior and interior, between reality and abstraction, between flux and permanency where, through the conceptual reduction that occurs when gazing at opposite natures, it is accenhuated, enhanced if the vague, ambiguous and contrasting condition of the landscape which has been previously described, is present. A stage waiting for major restructuring operations favored by that non-usage condition that has characterized a large area of the *limit* sites , specially the ports. A stage open to new projects that respond to the assumption of this implicit ambiguity even in the relationship with the site.

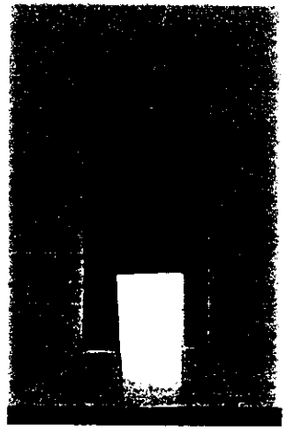
It is precisely this peculiar undefined situation, of contrast, duality and vagueness, which frequently favors a decoding destined to impulse answers tensed by despair forces, therefore, with an experimental character, the project being understood as a an almost empirical essay, ex novo for a landscape with unclear references: to dilute or to roll, to flux or to anchor, to disappear or to make evident...in a landscape open to multiples metaphors: boats as containers...buildings as landscape...stages as ships... In other words a reflection of a fragile, hard-to-grasp context.

lge@layers.com



paque face)

Light box (transparent face)



Light box (lateral face,

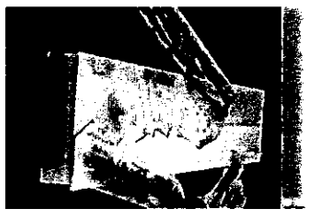
x serves as an *apparatus* which confronts several edge conditions found along the waterfront. Through their overlapping, it is possible to determine their similarities and differences.
as a tool...

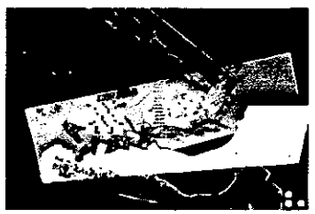
The symbolic meaning of water as the region of transition between non-formal air and formal earth and solid, between life and death: a liminal relationship; a liminal landscape.
"Problematic areas", "interstitial spaces", "empty urban spaces", "obsolete zones", these are the places where the main efforts have been concentrated on part of both municipal authorities and of most agents involved with improving the urban landscape, on criteria of feasibility and effectiveness. This concurs with a line of thought based on the revaluation of the existing city, a strategy based on its transformation rather than its constant expansion.
It is a good starting point what is called post-urbanism, "in which the nucleus, the city and the periphery have become indistinctly fused inside a series of state of mind". The human body moves "astonished through not disturbed by its constant repetition, the continuous movement through by now extinguished thresholds which leave only traces of their original status as a places".
The phenomenon of *pycnolepsy* is, indeed, typical of our rapid movement in which the place observed leave no imprint on our memory, causing the loss of perceivable points of reference and the disappearance of visual signs.
"While the urban centers are beginning to lose their ability to be fixed settlements, constructions on the periphery and their interrelations reflect the specific modernity of conditions of life on the outskirts"
Nevertheless, their movements are more a spasmodic while these *terrae incognitae* are traced out.
On other hand, these *terrains vagues* have to be reutilised in order to boost unstable local economies. On the other, this fosters an effective restructuring of the urban tissue and of the landscape in relation with the water, which particularly in port cities implies an exceptional, formidable challenge in terms of political determination on the part of manufactures, investors, administrators and architects.
Water is above all a transport and communication infrastructure, a medium for commercial transactions, a source of economic prosperity; at the same time, however, it is the direct cause of multiple dangers.

The Mediterranean Sea has generated a special type of port area in which acts of the city's public life were carried out combined with a special urban structure, with a special city architecture. On the other hand, in north-Europe, Holland especially, there is no clear natural division between land and water. In these humid areas the relationship between water and dry land is manipulated by and ingenious system of ditches, canals, dykes and mills. In this culture a major difference has emerged between the areas situated outside and inside the dykes. Inside the dykes means security regulation and directed urban tissue; outside the dykes means just the opposite. The waterfront ceased to be the "face" of the city since not only a functional but also a mental difference arose between the port area and the representative center of the city. The port area became an informal zone, a zone of extreme mixture, with a huge variety of models, dimensions, proportions and cultures. Indeed in literature we can find description of these areas as place of change *par excellence*, which could be found mostly in north-Europe rather than in the south, where ports are presented more as places for meditation (and later to be developed as the epitome of tourist resort).
The restructuring processes of these areas make direct reference to the new need to redefine open public spaces. The open space is today the main configurational agent of the city, "the where the city is observed and utilized". The importance of the open space is not understood necessarily as an exclusively green zone but in terms of different models of use and form. It is necessary to find new methods to study the models which reflect the typical movement of these places to understand their properties and, ultimately, the innate abstraction of these places, the undifferentiated, non-symbolic styles towards which architecture tends, in which images vanish.
The deep quality of the open/public space in our contemporary world: a desert point/panorama, a landscape from which we are able to perceive the "horizon" of urban life. The eager desire to "do something", to "fill these voids" architecturally and the need to do nothing.

ge@layers.com

san francisco waterfront and its layers





the need to "redefine" or rework the edge of the city [...] cg

[...] if SF's edge is malleable and ellastic, and can be operated on, it has the characteristics of a site[...] cg

[...] the fundamental problem is the polarioppositional relationship between the water and the city[...] cg

Through the *reading* the San Francisco waterfront, we were able to discover a series of layers which are described in the following paragraphs:

Mobility: far from putting the brake on the dynamic of the urban concentration, the development of information technologies, communication and transport has taken an active role in contributing to it.

Infrastructure: the main characteristic of the infrastructure system is its potentiality to create a structure for the territory.

Fractality: The growing expansion of the worldwide conurbations is leading to the formation of peripheral sub-centers which grow according to similar laws to those of the city center in a process of polycentric growth which fosters accelerated processes on the edges, thanks to the proximity to the peripheral infrastructure and interstitial green areas.
This "fractality" characterizes the limit of build surfaces as well as the limits of the landscape.

System: made up of multiple units from a lower level (subsystems) constantly interacting by means of different combinatorial mechanisms.

Networks: A series of radio-centric networks independently appear, each juxtaposing their apparent interest in becoming integrated. The result is an absurd, unfunctional confusion which ultimately an expensive one due to an accumulation of short-term savings. The reconversion of these spider's webs is an aim for the future.

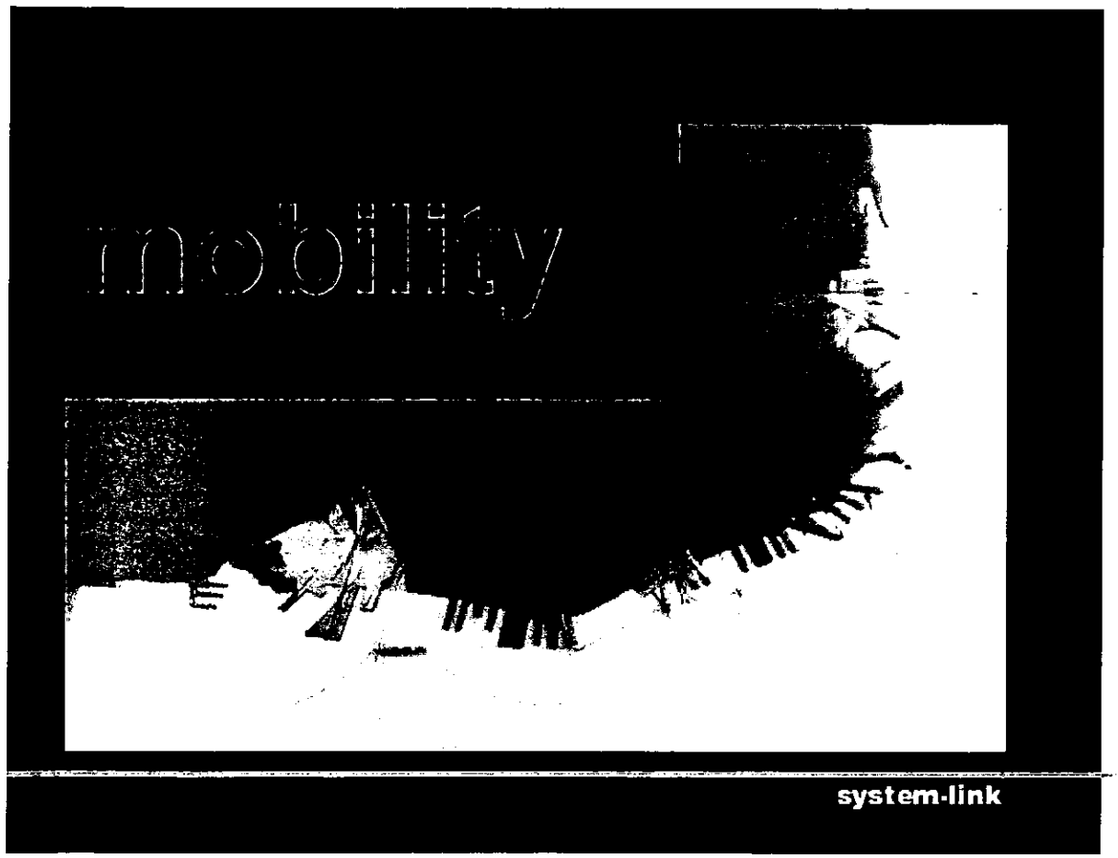
Places: improvement in the speed of transport do not translate as less time taken to move from one place to another, but as facility of access to spaces situated further away. Mobility means the possibility of getting to different places. The new city as to have a network of its own places. To achieve this aim there are different strategies: firstly, valuing rather than leveling landscapes and topographical characteristics; secondly, the organization of the points of confluence of networks with different speeds of movements and uses.
Invent new spaces and new uses. Or, rather then invent them, accept them... respond to the specific demands of place and point up their specific condition, their scale, dimensions, turning them into something unusual and fun which can become an ally for the users...

Superimposition: land which used to be separated according to function is today beginning to support more complex briefs defined according to a complex superimposition of uses in section. Formerly, mono-functional spaces make way for new, mixed "housing-tertiary-facilities-transport-leisure" occupations in keeping with new demands.
In the contemporary city programs only exists for their interconnections; that means that programs have relational rather than typological essence in the contemporary city.

Sequences/Signs: The highway is a horizontal linear force and any architecture should therefore interact with a horizontal flow of force. The rhythms of this horizontal motion can parallel the highway; undulate, snake and wiggle along the highway; even bridges and burrow under the highway...
An architecture of color may joint up with an architecture of rhythm and motion along the highway. Slabs, ties, metal panels, painted or enameled messages provide an infinity of interesting possibilities. Colored strips used rhythmically thus afford an effective dramatization of the dynamics of the motion.

Voids/grounds: void as absence and also as promise, as the space of the possible, of the expectation. The relationship between the absence of use and the sense of freedom, of expectancy, is fundamental to understanding all the evocative potential of these spaces in the city.
The ambiguity between the surface and the space, between the two-dimensional and the three-dimensional, is perhaps one of the constants in these projects, as an alternative to the opposition between the ground and the architectural figure. The surface is no longer the envelope of space, but also its determinant, as both become strongly connected.

New operative landscapes: it is no longer possible to rely on the classical relationship between building and ground, nor on conventional definition of the ground as delimited, stable, horizontal, settle and homogeneous. But landscape is only interesting if it is understood in a more generic sense: as a kind of topographic operating system, rather than as a category of the build environment.



system-link

mobility

To rethink the specific structure of that new space –at once urban and territorial– undergoing increasing dissolution and fractality, and which would no longer be manifested as form –a literal, recognizable, framed figure– but as a progressively abstract system defined by the combinatory and open relationing of fluxes and strata. A network of material and immaterial events: infrastructural networks and interrelated places in their most physical form.
It is necessary to rethink the particular articulatory dimension of certain infrastructure understood as a strategic device, independent of all forward planning; meshes where things intersect and interweave, channel for exchange and surprise
The necessity to revise the notions of scale and change produced in both the urban structure and in the form of the object: a scale displaced, in effect, from the build mass to the infrastructural in a dichotomous, double dimension akin to that produced in metropolitan perception itself, where everyday is forever merging with the extraordinary, the domestic with the global, the general with the particular, the edified with the absent...
To redefine the power of the spatial syncope –the interstitial void– not so much as a residue, but also as an articulatory "joint" of potential tactical sequences capable of lending an alternating rhythm to events, balancing the vigor of volumetries with the value of surface "urban" developments –new and old, "tectonic" and dense– and "horizons" in which to reclaim experiences related to the dimension of the sky, an awareness of the ground, color and vegetation ..
To reconsider the idea of place, not as the evocative fragment of a coherent "whole" but as an autonomous event within a strategic and heterogeneous fanning out –a patchwork– of strata, situations and concatenated potential beauties deriving from that progressive capacity for displacement that makes it possible. Traditional –natural, artificial– places and "new places" related.

In the last analysis, to the actual scenarios of mobility: circuits and attractors (connective strips more than tracing; referents more than landmark); sequences and signs (rhythms and counters-rhythms defined by an atonal range of signals, messages and markers), nodes and interstices (intersections, transferences, overlaps but also folds, margins residual infields to be revitalized); or void and grounds ("field", vacant spaces, "topos" more than "tectos").
To reevaluate the structure and form itself of an object, on the basis of a topological more than typological. A form born of direct processes with their own internal logic.
Form and structure adapted to decisions of strategy more than the sum of "ad hoc details". To the direct manipulation of programs and techniques, posited not as simple "transmitters" but as an active agencies engaged in the design of a new spatiality, at once sensitive to the intensity of the perception and to the awareness of the environment.

The San Francisco waterfront, as a site, can be understood a series of punctual events. Our goal is to create a linear system; in other words a linking element that would connect the different natures of the urban edge.
This first approach consisted on a path, as a way to explore the relationship between the city (body) and the water, as the main component of this interlocking strategy. Through this passage we would like to allow the site to create the narrative of architecture, therefore the architecture would represent the narrative of the site.
This path would work as a framework to rediscover a personal approach to the water. By approach we not only refer to its physical aspect, but also to its rational and instinctual manner.

over) float

atform

lateral view

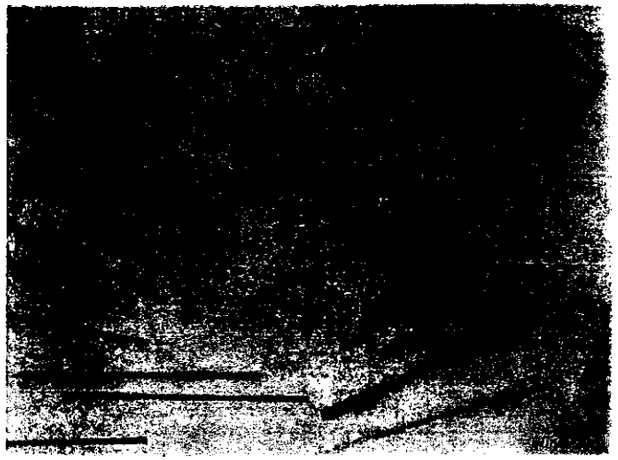
The redefinition, extension, retracing and constant modification of the coastline which makes think "land as far as here and from here toward the sea".
The drift is an exploratory action of the land, which in no case cancels out one's will, and which is undertaken with an epistemological end. The specific nature of a drift is that it is in the land itself which guides the conduct of the person drifting, as through it were calling him
Any territory –sea, earth, marsh, desert- has entreaties to offer us which we have only to listen to above any instrument of self-control.

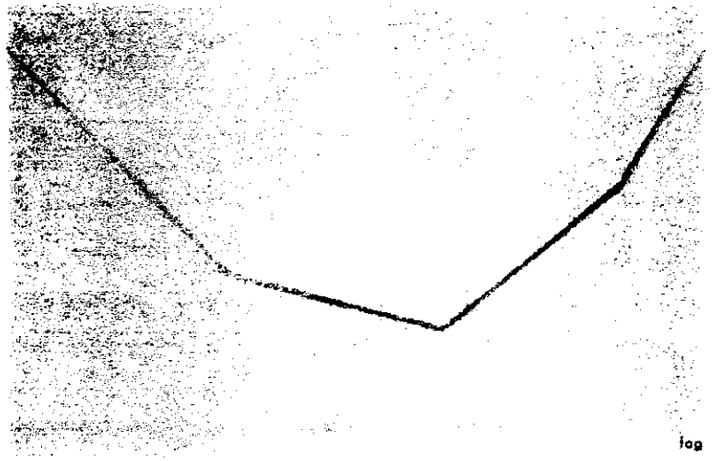
To rethink the specific structure of that new space
The lack of faith and even contempt to programmatic approaches based on use, function and activity have led to the use of other metaphors to generate new ways of formalizing a brief.
The structure of a containing box is characterized basically by its absence of anchorage.
The lower face of the box can rest on any suitable surface (always according its entreaties) as a stop gap contact which could be interrupted at any moment.
The container is, by definition, a structure without foundations, which rests on the land with the help of its own weight alone; it has no rudder, no engine, no sails and no anchor.
The real problem can turned around five themes:
-The possible identification of the rectangular base with the surface of the water –or vice versa, its differentiation as hard, artificial, terra firma leaving the marine environment as an external reference.
-The treatment of the lowest base of the container, as a specifically qualified face in that it acts as a surface of contact with the land.
-The of a real bearing structure, taken as a box without foundations, or simulating a metaphor-container finished off with a conventional structure.
-The imaginative invention on a five remaining faces of the container, with even the possibility of destroying the original capsular shape.
-The recovery of programmatic aspects generated by uses, functions or activities as partial driving forces of the proposal, thus revitalizing the actual conception of the terminal as a possible floating container.

Model

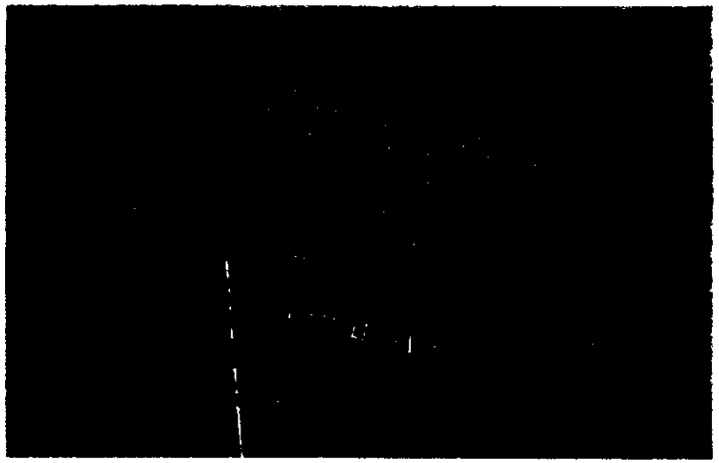
This particular model refers to the vertical movement that is most of the times overlooked in the city: the tides.
The locations in which it can be found run along the urban edge.
Its goal is to establish a direct relationship between the body and the water. A floating platform, a container, which height changes throughout the different seasons and times of the day...the link transforms from a ladder to a ramp allowing an access to the bay

ıappings





fog



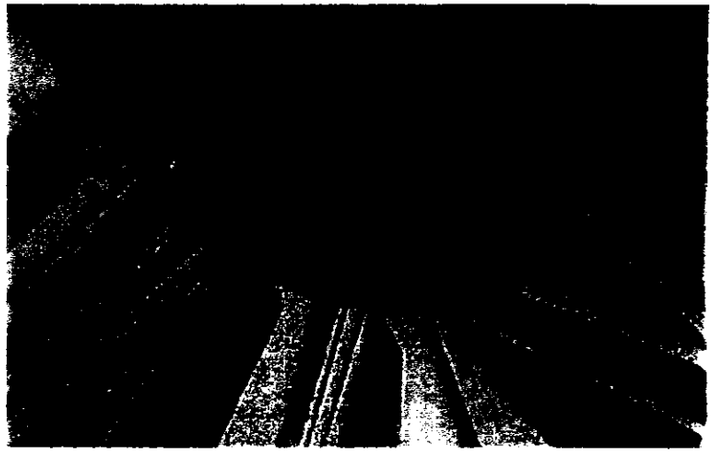
currents and tides

at is the narrative of the site? I would surmise that you will develop means of identifying potential connections between the various areas that make up the edge[...] cg

t the site will heighten the particular awareness of it [...]awareness of the beauty of simple things[...] rc

ıappings

'space



shaking

horizontal movement

the thoughts that one has, to extent to which they are thoughts, is awareness of this equality or homogeneity: the feeling that all combinations of the kind are legitimate, natural, and that the method consists in exciting them, in seeing them with 'ring for their implications. Paul Val

he world was thought to be conformed by four basic elements: earth, wind, fire, and water. The way in which these entities came together determined the particular characteristics of an organism/place. A site, therefore, would present a different the elements, which interacted within it. The relationships, ties, overlapping and even the contradictions created a system where the master builder/architect would integrate/intervene/interpret/modify these elements in his design

urselves in the same situation, how to understand the temperament and tensions found in the site expressed as a design.

oughts

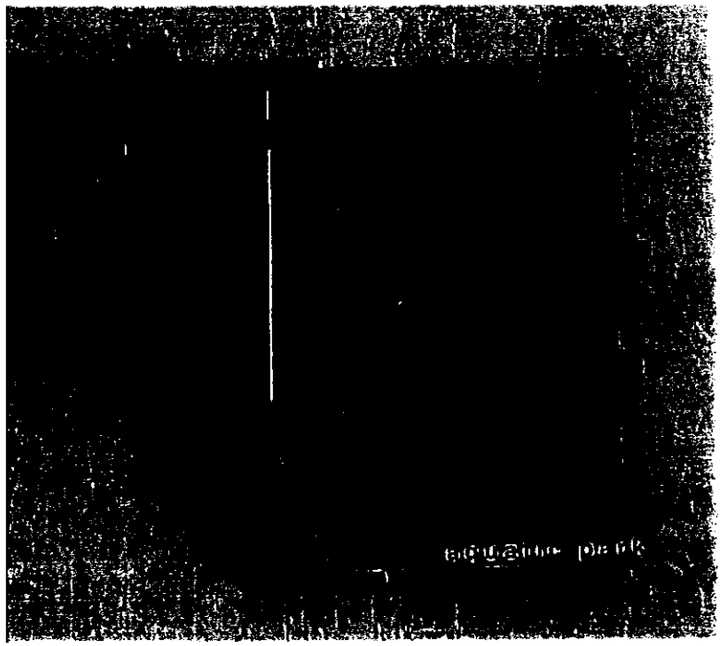
of a project ends up in a frustration when a supposedly exhaustive analysis of a problem is followed by a forlorn encounter with a sheet of blank paper.
ining begins from a confrontation between the first look at the site and an initial sketch, and it concludes being more important than the definition of a functional program.
ucture means capacity to absorb the opposites and to go beyond contradictions; but at the same time requires the perfection of a detail until the detail is dissolved.
oach to the design process, working in team is like working alone but with a capacity for analysis and intervention multiplied by X. The fluency of ideas for each person involved sharpens the capacity and the instrument of judgment, the and the "practice" of Architecture

The analysis of the site consisted in discovering the narrative of the site, transforming each suggestion into a design that would work both, as a unit, and as member of a larger system. The analysis consisted in a series of mappings (fog, tides, currents, shaking, etc.) in order to truly understand the nature of the sites, to discover its textures and conditions, and start creating its own *narrative*.

We are not in search of the manipulation of the site, but in the emphasis/highlighting through the creation of an awareness of some aspect that, at the first glance might seem obvious, but might be hidden or understated. Our approach is to control the framework of the situation. In other words, to develop a *structure* which sets the basis for an event, but without controlling the event itself. Through this proposal we are hoping to create an awareness of the beauty of simple things.
The approach is to create a new "system", in which each intervention forms an area of influence with a larger extension than the project itself: as ripples on the water surface. The link between the projects is given by the overlapping of the ripples of each proposal; in contrast with the punctual structures, which now prevail. The system itself will consist of different layers of subsystems: transportation (pedestrian/vehicular), visual and functional.
The emphasis will be set in exploring the interstitial space between the street level and the water level (section), and how this changing of the section can influence the way one approaches to the water. This is reflected in the proposals in which each represents a different manner to address the water's edge. The designs try to explore alternative modes to the conventional one (from the city to the water)

The layers that conform the system are

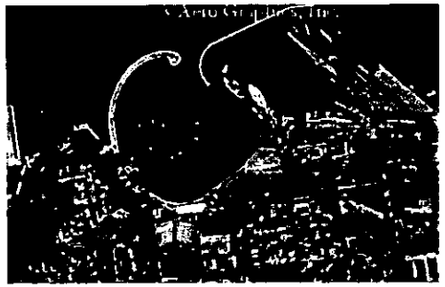
Interventions (the particular areas and the relationships between the sites).
Gotas (scattered, smaller interventions on paradigmatic sites).
Ferry stops (the proposal of a series of *vaporetto* stops).



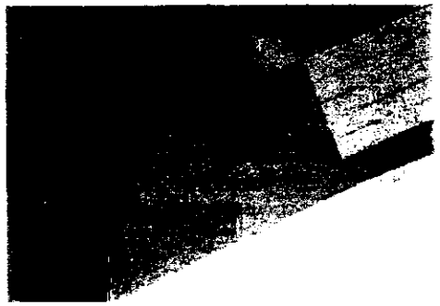
ıntıon. general

the project had as a goal tc solve a series of undefined encounters between water and land. between structure and infrastructu re.

to question the meaning of the plaza in the contempora ry context: residual areas versus public gathering space



site plan



detail of lower plaza and access to beach

aquatic park

Inexplicable places. Disintegrative practices

If common properties exist for *undefined sites*, these are their characteristics. It would be natural to think to former solutions for pubic places, which would tinge these site with monumentality and the cosmetic, would be scarcely appropriate now. Neither natural analogies nor the oft-repeated formalizations "of memory" would work.
The alternative is to reconsider community practices the interplay of social and group encounters, the relationship between formal decisions and their practice.
It is these events in the city, which will gradually be able to construct the new language of project procedure. They are, therefore moments which the characteristic of the encounter with savageness, with chaos, and which are also characteristic of all pre-linguistic environment, and place us on the threshold of creativity
The urban space becomes the space of appropriation and permutation.

The framework and the network

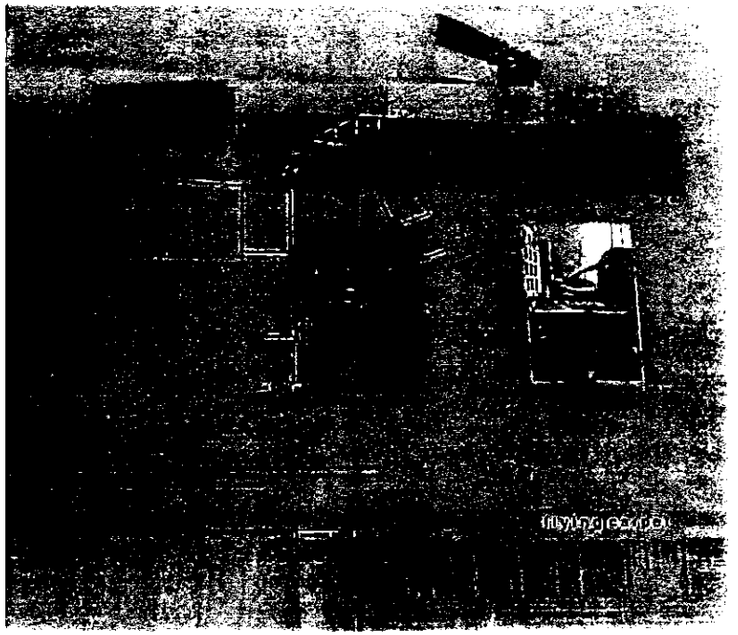
Operating with the supports from economic and social activity could be one of the nodal points in order to conceive the city and its relationship with its surroundings.
Topography, great distance, surfaces and their textures, and, as a consequence, new proportions of scale, may provide the elements for an urban and territorial restoration of the city. The fixing of the boundaries, cartography and the relationship with the distant, may be something more than figures as a plan and be understood as operations for transformations in themselves.

Fabric of sensations

The spaces of attachments are those which generate many of the proposals. They place us in front of an imagined reality, where disorder is given privilege over hierarchy, space over time, and difference over identity.
The individual would take on a different role to the one that is submerged him in belonging to the group.
Nowadays, singularity and, at the same time, the universality of our world pass though the individual simultaneously, making clear that architecture and public space will be effective if we are able to harmonize this paradoxical encounter of dimensions and scale, of feelings and attachments.
The landscape project will have to open the path between the sensitive and the intelligible, in order to rescue relationship with things

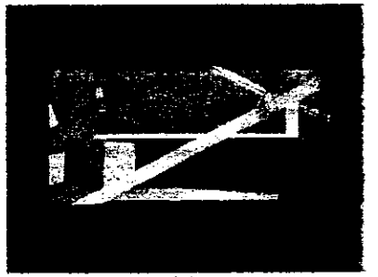
The undefined sites, uncertain, unstable places, contain, within themselves, some of these keys and signals. All we have to do is uncover them, discover them. We need to recognize that an unstable, intermediate situation, between two times also takes shape behind possible concealments and responses.

pier 24 and bay bridge



tions

site plan



general view (model) the proposal consisted of two basic elements a ferry stop (L-shape) which connected city and water and a ramp a link between bay and sky

perspective view

ramp detail on bridge pillar

Uncertain sites

Old factory sites, which now fallen into disuse, the place where the most important infrastructure were located, those of different economies which, today, are enclaves of the super-imposition of countless strata of communication and shifts.
Localizations which are the focus of many of our questions about contemporary cities and landscapes. The location of uncertainty and, therefore, of the project.
There are situations or places where it would be better to direct one with maps, guides for passer-by, because we are no more than accidental pedestrian in them. Such situations produce a feeling of isolation and singularity of presences, of alienation and fear. It is these situations which confer worth and "lack of meaning" on the above.
This lack can be interpreted as an indication of the distance which has always existed between a city which only wants to be architecture and the impossibility of building the city which architecture itself has evinced. It is precisely these incapabilities which show us the countless landscape. In any case this duality show an extreme situation, a borderline place.
A place that always prevent to sleep of reason from yielding and telling us another of its unbearable axioms, another of its "obvious confirmations'. In this case, that the possibility of making the city and architecture coincide formally, the impression is that the contemporary culture in some way predicts these "unstable terrains".
It will not be possible to risk an engaged and creative project without this conjunction between strangeness and reality, without the union of absence and presences.

Intermediate places, sites of difference

Being aware of the cultural, political and social reality is, at the present, more pressing than in other times, due to the fact that we have to bring into line the conflicting presence of a planetary sphere and a reality that is increasingly restricted to micro-policies.
Now, more than ever, it is vital to integrate differences, without referring them to a totality which might take them uniform or eliminate the wealth of their diversity.
The proposal of an ethical horizon from which to invalidate the possible planning and urban equivalencies between different countries and regions, when extrapolating experiences and tested models in those places which, in time, became obsolete.
These huge infrastructures should herald greater control and authority for the city, and not have been subjected to an unreal model of occupancy and management, motivated by similarity to other economies and other societies.

Photocollages, montages, superimpositions and manufactured products are the vehicle which gives dimension to a reality which presents itself by chance, but with which we can operate almost methodologically, repeating gestures and contrivances in order to bring about observation in the gaze and conjecture in its analysis. Object and localizations which do not capture our attention in the city, are offered as the origin of the installations, of the projects, from which we can maybe present a fabricated image for these residual places; zones of offcuts and leftovers.
The tendency to place the public in unexplored places or those which, until now have not been considered by architecture. Once discarded and dissolved architecture is set to discover its places from the beginning, from the origins.

)ject, the bride becomes an observation platform for the understanding of the
hich raps around its pillar, creating a *strata* of perceptions...

oughts

thoughts II

Throughout our search/research, design/redesign we felt necessary to clarify, order and relate the ideas previously mentioned, which are connected to the different level that the project involves.
Therefore, we asked to ourselves these series of questions trying to find a specific answer

What is the bay?
Unifying element along the edge
Numerous qualities
Every quality is present along the waterfront, but one preponderates above the other according with the location
Complex system by itself
Smooth in plan and striated in section
Flexible, liquid

What is the city?
It possesses a different complexity from the water, in the way that it is striated in plan and section (topography, different high of the buildings, the diverse grids, change of density, of scale). In other words, these islands of smoothness create the striatness of the city.
Rigid, solid, this is the reason because the city took over the bay

What is the edge?
The area where an object or area begins or ends
An edge is implied in every object, in the sense that if it does not have an edge it does not exist
The edge of the city (San Francisco) in a map is delineated by the piers, but in reality the edge is the sidewalk along Embarcadero (since most of the piers are not open to the public)
Where the shoreline overlaps with the sidewalk, an access to the real edge of the city and of the bay occurs
The edge exists because of the presence of different qualities, natures, conditions
It is ever-changing
Changes in relation to the qualities, natures and conditions involved
It is modified in relation with time
It is now fragmented

The edge is defined by the uses and defines the uses
From what we are interested in, it is conformed by two or more members

Why is the edge interesting?
By altering it, the general nature of the elements involved does not change (not strictly physically) but acquire new meaning. In relation with San Francisco, by modifying the edge of the city, the city will remain being the city and the bay will continue being the bay, but with different relationship between the two (in other words with another quality of edge).

How to intervene on the edge? Deleting (not possible!)? Reinforcing? Creating a new? Blurring?
Not extending the edge of the city on the water
Creating a new edge since it is the medium to establish a new relationship (it does not relate to the fact of having an edge or not, but which kind will exist), through dilution. As an analogy, a solution is defined by the number of suspended particles within it, therefore the edge will sometimes will have more qualities of the city, while at others, of the bay

In order to have a new meaning of the edge should its shape or form change?
No, but it is necessary to find the "intrinsic qualities" of the new connections that will arise
It is not about only altering its shape, but mainly its "temperaments"

Is it the edge a site?
Now it is a line (mono-dimensional)
We want to consider the edge as a site with its own characteristics and qualities, which are taken directly from the involved elements (city and bay)
It will be a three dimensional element

What are the *physical* expressions of the interventions?
They are not:
Extending the grid of the city (continuing it) to the water or vice versa
Extending the city's density, topography, and scale
They are
Extending the qualities of both
From the city, the horizontal movement, the texture, and the activities (uses of the space)
From the water, its fluidity, vertical movement, and its smoothness

What is the narrative of the site?
It consists in discovering the connections between the sites, not writing a new story, but finding a relation with the existing

How will the narrative of the site enhance/respond to the particularities of the waterfront?
The narrative should be understood as one story (not as a series of stories)
There should be a plot that will keep all of the events together. The social, historical, geological, climatic, functional and textural aspects can be considered as the *characters* of the narrative
The events are not to be taken as individual interventions.

In order to keep the narrative's continuity, at which level should the intervention deal?
There are different levels: starting from the general system, ending with the detail.

egies

space should have coherence, legibility, and meaning; being a vehicle for information and accessibility.

nt state of the horizontal movement, pedestrian and vehicular, is treated in a way where the second prevails. The opposite characteristics between the two make it necessary to differentiate and redesign their paths and
ns.

ular motion is characterized by a defined trajectory, speed, and a definitive nature. It does not interact with other elements (otherwise it creates a collision). It is totally indifferent to the context that crosses and is only related to the
here it is set.

strian motion, on the other hand, follows a more random path, with a slower pace, indefinite and sinuous, in direct relationship with the surrounding environment. It does not work on the basis of distance, but of stimuli

oughts

of these concepts, the proposal will create a different set of conditions for both (a distinct sets of approaches). Our goal is not to redefine the city in relation to the layout of the streets: since it is already structured and is structuring
is set to brake the geometry of the vehicular street to give back to the pedestrian the possibility of seeking and experimenting the city. To create a more heterogeneous course breaking the limit of the building: not necessary
it, but perpendicular, oblique, elevated, ascending or descending.

nole year, Marcovaldo had dreamed of being able to use the streets, that is walking in the middle of them [...]. But he realized that the pleasure did not come so much from doing these unaccustomed things as from seeing a whole vorld: streets like the floors of valleys or dry river beds, houses like the blocks of steep mountains or the walls of a cliff.
no

n, we are interested in considering the infrastructure (series of public resources) as a spatial system of the city, not as an imposed scheme. This concept of infrastructure has its equivalent to Haussmann's Boulevards in Paris and
i's grid in Barcelona, as well as other interventions of this scale in the last century

y of a city can be measured in different degrees. The residual spaces found along the waterfront lack of this characterisbc since they are result of a lack in the urban design process. The spaces of quietness should be designed
ame attenbon as those with activity.

urbaine *works as a strategic catalyst, that once it is inserted in the urban context it modifies or influences the character of the fabric. The goal of this approach is to assume an urban role that is superior to the program, reinforcing the dencies. It represents a possible connection between the urban morphology and the architectonic typology.*
ani

city thoughts

*

The urban space (public space) is the physical container of what happens in the city and its essential formal definition.
Oriol Bohigas

The city consists of relationship between the measurement of its space and the events of its past. [...]. The city, however, does not tell its past, but contains it like the lines of a hand, written in the corner of the street, the gratings of the windows.
Italo Calvino

The charm of "sweet decadency" is in the American city unknown. When prosperity ends, the city either sets forth a new development process or it just dies.

The European city aspires to stability; the American city is instead a temporary crystallization made from the sedimentation of a continue flux. A traffic node represents its nature more than from what is built; for this reason its iconic representation is the "main street" and not a "piazza".
Italo Calvino

Marcovaldo's eyes peered around seeking the emergence at a different city, a city of bark and scales and clots and nerve system under the city of paint and tar and glass and stucco.
Italo Calvino

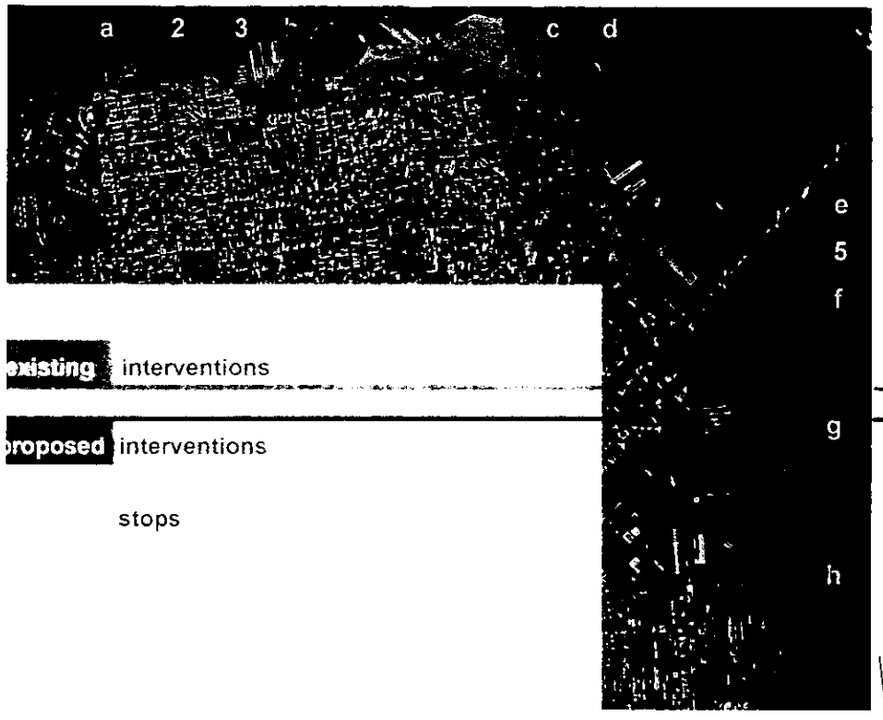
A work of architecture is relevant meaningful and authentic when it follows the properties of the organic state: the particular characteristic of the site, and its connections with its surroundings; when in a synergic system the meaning of each part is only in the relations that it has with all the other; and the meaning of the parts is only in the spatial relationship.
Leon Battista Alberti

The persuasive aspect of a proposal is in its architectonic qualities, but they will appear only if there is a perfect correspondence between the proposal and the practical expectations of its recipients.
Leon Battista Alberti

san francisco thoughts

Things without use never work.
The actual condition of the San Francisco waterfront as a space without use, is the starting point of our project. The belief of revitalizing an area through a series of embellishments is condemned to failure, therefore the attribution of new natures through the discovery of the relationships and connections with its context is the most appropriate approach.
The public space in this particular part of San Francisco is scarce and hardly used for its quality. The city itself is so deeply and strongly conformed, making it difficult to discover and propose a suitable site for intervention. The waterfront presents itself as the most proper location, due to its transitional stage and possibility of broader propositions.
The creation of a complex system, where the interactions of the different layers (uses, edges, textures, typologies, periods), gives to the city a relation of meanings, where the possibility of discover emerges. The connections of these layers are the main purpose of a public space
The waterfront as a public realm, where the boundaries are blurred and new series of connections between the bay and city come forth. The blurring does not imply confusion, but an interweaving of different elements into a more complex design. In other words, an active participation of both, where the process of action-reaction takes place (that, which affects the city, is directly related with its counterpart on the water's edge).
The experimentation, which started with the Modern Movement, of blurring inside and outside is the base ground for our research: the prospect of applying this concept to the urban scale.

site plan



existing interventions

proposed interventions

stops

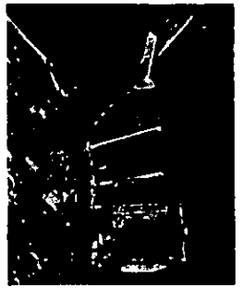
a. marina yacht club
b. aquatic park
c. piers 33 and 35
d. piers 9. 15,17.19 and 23
e. ferry building
f. piers 24, 26, 28, 30 and 32
g. south beach marina
h. aqua vista park

(your intervention should be) a bold move that involves the entire urban waterfront. bold, but quiet as the water '...] ss because the existing condition along the st edge is varied and diverse. the insertion of anything which is asking for notice would need to be carefully selected [...] dg
rmulating an infrastructure of connections is an interesting premise. what gets connected and what does not (that which remains disconnected is almost more interesting[...] cg to control the framework of a situation. but not the situation itself is the power of design rc

submerge

2

overlap



flood

4

filter

programmatic connections

The four conditions of disconnection chosen for the development of the designs are:

1. Coit tower and piers 27 through 29.

2. Foot of Market St., Hyatt Regency Plaza, Ferry Building and its loading plaza.

3. Piers 24-32 and Bay Bridge.

4. Mission Rock (Aquavista Park)

Each of them represents a particular situation in which the city addresses the bay and where a different type of connection can be established:

In relation to an iconic element such as
, which allows and overview of all the city;
the permits an understanding of the nature of the water, while physically being in the bay. An entrance, a circulation system and a core. These are the programmatic conditions of the watermark.

Market Street has a visual connection with the Embarcadero, but it lacks a physical one. The open space found in front of the has no character due to its previous condition under the freeway, being one of the few green areas in the financial district. The building itself could be used as a that would permit a dialogue between the movement of the city and the incoming ferries.

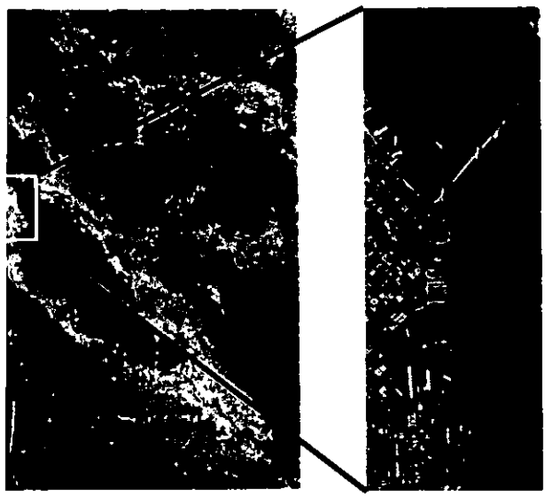
The space underneath the can be considered as an opportunity to explore a building as a section, using exactly the 60' wide by 151' tall slit that it creates. An interstitial intervention is needed: a kinetic hanging from the present structure, would inform about events directly related with the city.
In direct relationship with it, the parking lot found by piers 30 and 32 would be transformed into an that would flood according to the different levels of the tides. Its counterpart on the water, would be conformed by three platforms or , using the space of piers 24 through 32.

, found by Mission Rock, serves as a memory of San Francisco's industrial past. The proposal of a man-made as a counterpart of Ocean Beach in the west, that could be used by the San Franciscans, taking advantage of the almost fog-free location and calm waters. The intervention consist of the weaving of different textures/conditions. The proposition will work as a method to establish a dialogue, a connection, between the earth and the land, city and water.

The waterfront is seen as a

playa urbana

el frente acuífero de san francisco



preludio

El tiempo para la reflexión es a la vez la oportunidad de ver hacia atrás a la misma condición de reflexión, en todos los sentidos de la palabra, como si por medio de una nueva herramienta óptica uno lograra finalmente ver la vista, uno observara no únicamente el paisaje natural, la ciudad, el puente y el abismo, sino que uno lograría ver viendo.

Rem Koolhaas, S.M.L. XL, 1997.

El frente acuífero de San Francisco debe convertirse en un sitio para descubrir la ciudad y verse descubierto por ella. Hasta ahora no ha existido una solución verdadera al encuentro entre el límite de la ciudad con la bahía. Geometría, fronteras, la retícula urbana, el espacio residual y los distintos vecindarios pueden considerarse como un retrato más exacto de la totalidad del límite, los cuales reflejan la variedad de condiciones a lo largo de la costa.

Límite como concepto:
1. Fin, término.
2. Confín, frontera
3. El valor constante al que tiende una magnitud variable, acercándose indefinidamente a él pero sin llegar a alcanzarlo.

¿Por qué es el concepto de límite atractivo?
El límite infiere dos situaciones distintas (como mínimo) con un posible cambio en propiedades, condiciones o características. En sí, puede presentarse en diversas formas: definido, maleable, natural, artificial..

Sobre todo, el límite clarifica la naturaleza de los elementos que lo conforman: sus similitudes, contrastes y oposiciones.

Límite como sitio:
La ciudad de San Francisco es en sí un límite: es el límite de la península; el límite entre el océano y la bahía; el límite entre lo urbano y lo natural. Aunque cabe destacar que su límite más emblemático es aquel que divide la tierra del agua, debido a que partir de éste se infiere el resto.

La decisión de enfocar la tesis en el límite urbano, es decir, el límite interno de la ciudad con su bahía, se basa en considerarlo como un diálogo inconcluso entre estas dos naturalezas. Debido a su artificialidad, siendo redefinido a través del tiempo (desde 1851 se comenzó a ganar terreno a la bahía), el propósito de este estudio es explorar cuáles serán los atributos para el límite acuífero contemporáneo.

estrategia

estrategia

La estrategia necesaria para entablar una relación con el frente acuífero de San Francisco requiere de tacto; desde el punto de vista sensual, material como desde el estético. Esto es posible reconociendo los elementos en tensión, como lo son:

sólido y *líquido*
tierra y *bahía*
naturaleza y *humanidad*
orden y *caos*
lo existente y *lo nuevo*
escala urbana y *escala arquitectónica*
movimiento vehicular y *movimiento peatonal*
ciudad como responsabilidad del diseñador urbano y *ciudad como una construcción colectiva*

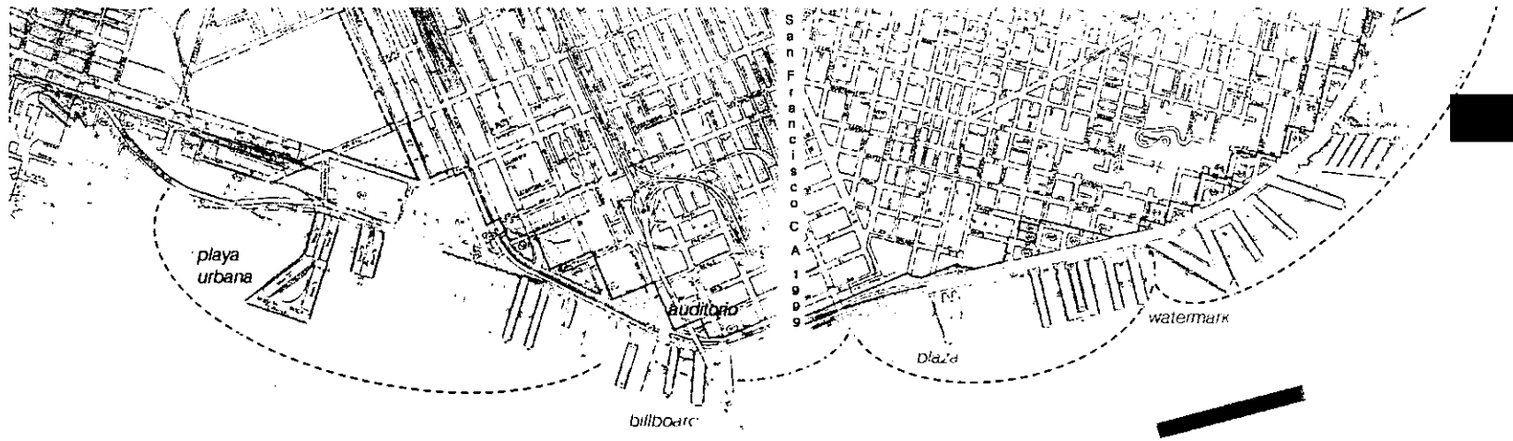
Es indispensable no olvidar el hecho de que el orden, consiste en entrelazar los opuestos, con el fin de concebir al sitio por lo que es y por lo que pudiera o quisiera ser. En pocas palabras, a pesar de aparentar contar con elementos contradictorios, estos siempre se encuentran relacionados.

De igual forma, la reutilización, como una escrupulosa reinterpretación y renovación del sitio permitirá la transformación de estos sectores olvidados en su verdadera función, servir como una especie de *bisagra* entre la ciudad y los muelles. En este sentido se evitará la situación actual, donde los proyectos de renovación (dirigidos principalmente a la industria del turismo) han alejado a la misma población local de la costa. En su lugar se propone crear una conexión en la manera en que el nuevo espacio interactua con la forma existente

Para lograr esta meta, el análisis del sitio consistió en descubrir su narrativa, transformando cada sugerencia en un diseño que trabajarla tanto como unidad, como miembro de un sistema a mayor escala. Es decir, el estudio del frente acuífero tuvo como finalidad el comprender verdaderamente la naturaleza de dicho límite. A través del registro de distintos elementos (neblina, mareas, corrientes marinas, vientos, etc.) se buscó descubrir sus texturas y condiciones, y así comenzar a crear un relato propio.

No se buscó una manipulación desenfrenada del sitio, sino el énfasis o la atención a algunos aspectos que a primera vista pudieran considerarse como obvios, pero que en realidad se encuentran ocultos u olvidados. La *táctica* consistió en controlar el *esqueleto* o *armazón* de la situación. En pocas palabras, desarrollar una estructura que sentara las bases para que se suscitara un evento, pero sin controlar al evento mismo. A través de esta propuesta se espera crear una consciencia de la belleza de los hechos sencillos (como lo es el caso de los cambios en las mareas).

El proyecto busca crear un nuevo sistema, en el cual cada una de las intervenciones forme un área de influencia con una extensión mayor al proyecto mismo, como sucede cuando se riza la superficie del agua. El eslabón entre las intervenciones está dado por el encuentro de dichos rizos, en contraste con la serie de eventos puntuales que existen actualmente en la costa. La propuesta consiste en una intervención articulada, resultado de un observación previa, filtrada a través del criterio personal. Un sistema integrado por distintos estratos de subsistemas, con el fin de crear una intervención lineal.
Se dio cierto enfasis a la exploración del espacio intersticial entre el nivel de calle y el nivel del agua, y cómo esta sección cambiante puede influir en la manera en que uno percibe la bahía.



sistema

clave:

intervenciones

archipiélago

rutas de ferries

rutas del archipiélago

sistema

El concepto de arquitectura urbana debe ser interpretado como el carácter catalítico de las diferentes intervenciones en la trama de la ciudad.

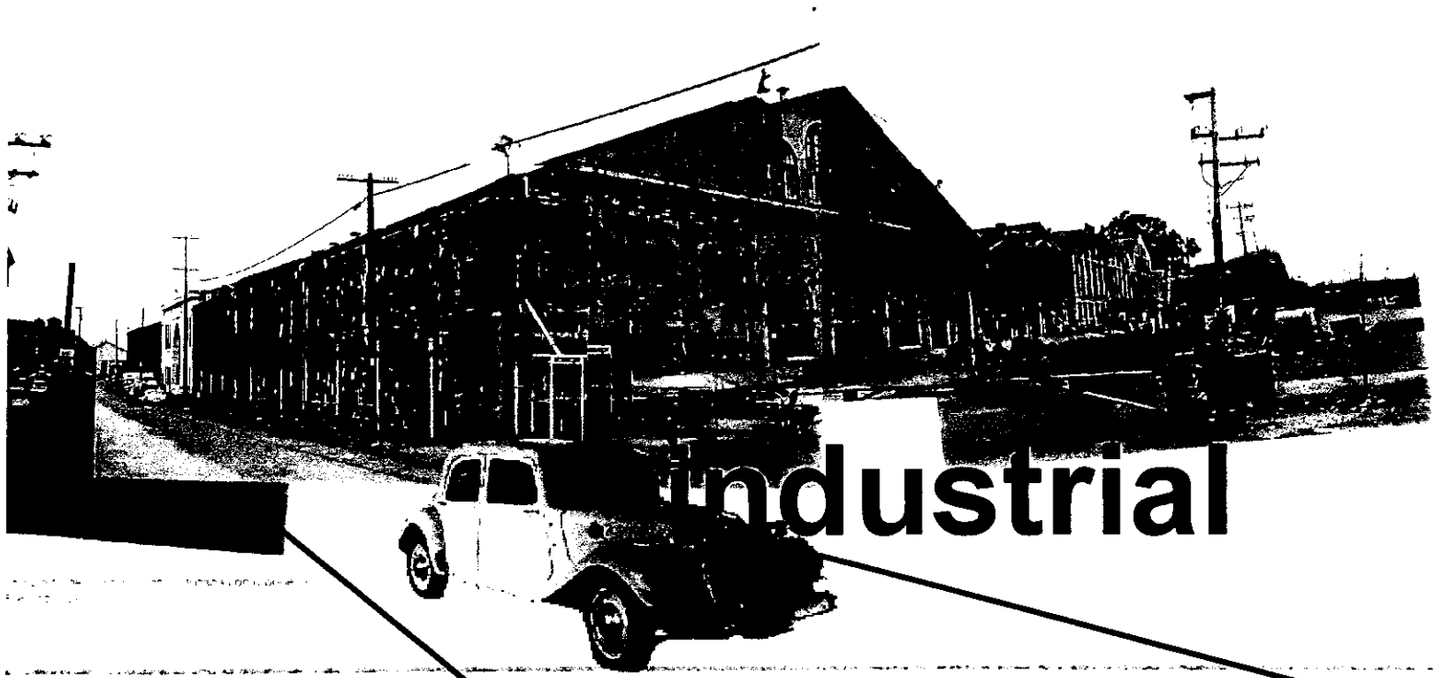
Manuel de Sola Morales.

Los diferentes elementos que conforman el sistema son los siguientes:

1. Estudios de caso o estudios del límite. Las áreas donde se ubican las propuestas particulares o intervenciones.Se consideran estudios de caso debido a que representan estados característicos de desconexión entre la bahía y la ciudad.

2. Plataformas. Conformadas por un sistema modular de unidades de 3.00m por 3.00m, las cuales se pueden ensamblar de varias maneras. La forma que adquiere se le asigna una función en específico. pero debido a que la forma es flexible, la función también lo es (una plataforma de forma cuadrangular se puede utilizar para conciertos, días de campo, etc; mientras que una con proporciones más alargadas se puede utilizar para practicar caminata, patinar, etc.). Estos elementos se encuentran sobre la superficie del agua, trasladándose en relación con las corrientes a lo largo de la costa. Su velocidad varía en relación a la forma de la plataforma (la máxima distancia permitida es 7.5 km en 6 horas).
Por ende, las plataformas no son específicas a un sitio. Su objetivo es el cambio de perspectiva, al colocar al usuario sobre la bahía. Su conformación se podría definir como la de un archipiélago móvil.

3. Botes o *ferries*. Sirven como medios de enlace entre las distintas intervenciones (estudios de caso y archipiélago) utilizando el agua como infraestructura de transporte.



industrial

industrial

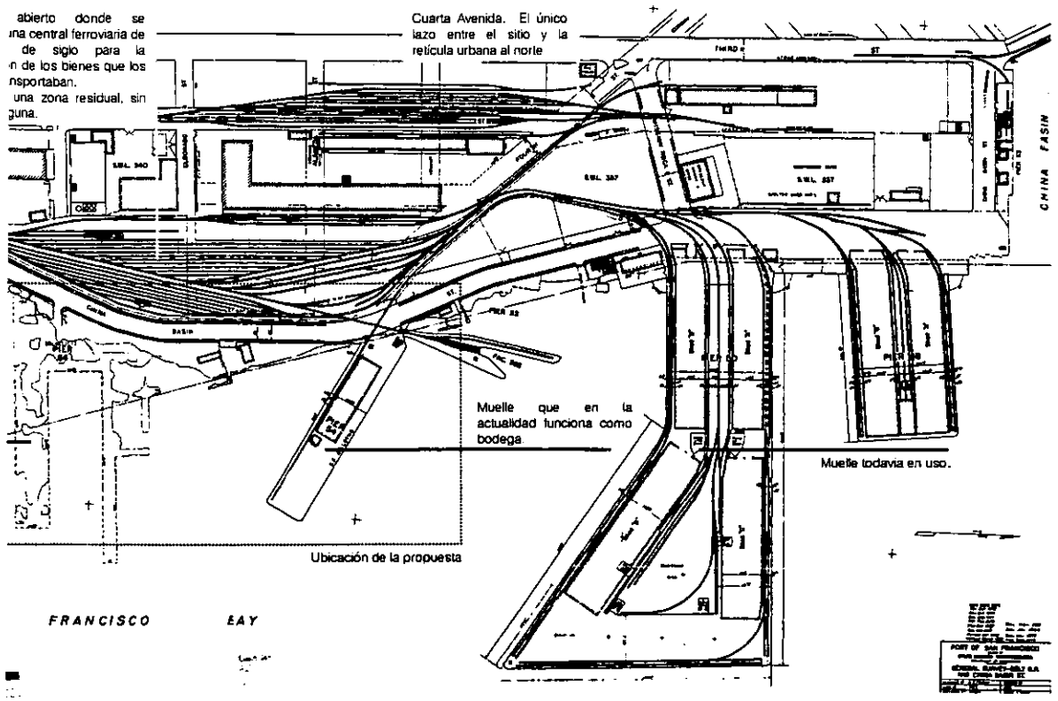
San Francisco se ha caracterizado por su actividad portuaria, la cual hasta hace un par de décadas había sido su principal factor de desarrollo económico. A raíz del *boom* de la industria de telecomunicaciones, en específico, de la red mundial, San Francisco ha seguido el ejemplo del vecino Valle del Silicón, *heredando* su papel como puerto de exportaciones e importaciones a ciudades al este de la bahía, como lo es Oakland. Esto ha dado como resultado el gradual abandono de los muelles y, por ende, su deterioro.

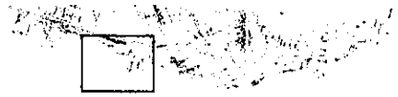
Las antiguas fábricas que se situaban a lo largo de la costa (la zona donde solía encontrarse la infraestructura más importante), ahora en desuso, se han convertido en verdaderos sitios arqueológicos donde se han empalmado una serie de estratos que corresponden a los distintas funciones improvisadas por las que han pasado. Se pueden considerar zonas inciertas, donde es posible preguntarse la relación entre las ciudades contemporáneas, sus frentes acuíferos y el paisaje.

Este fenómeno poco a poco se ha extendido al sur de la ciudad, alcanzando los últimos vestigios de su actividad industrial; espacios a los que hoy se llega como un visitante accidental.

Dichas situaciones producen un sentimiento de aislamiento, extrañeza y porque no decirlo, de temor. Un paisaje desolado, un paisaje de límite. Límite de la ciudad y el vacío, límite de lo vigente y el recuerdo; teniendo como marco principal el límite entre la tierra y la bahía.

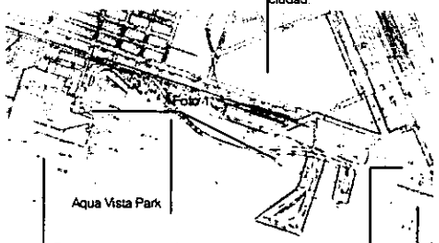
Este es el sitio donde se ubica la playa urbana.





Ubicación dentro del frente acuífero.

Gran extensión libre para futuro desarrollo residencial por parte del gobierno de la ciudad.



Área de influencia.

Condiciones específicas del sitio:

-Presencia de elementos protectores que crean la bahía.

-Presencia de áreas abiertas de gran extensión como contraparte de la costa.

-La temperatura del agua es considerablemente mayor (18º C) en esta zona, que en el área del Golden Gate (10º C).

- Ausencia casi total de neblina.

- Baja velocidad de las corrientes marinas.

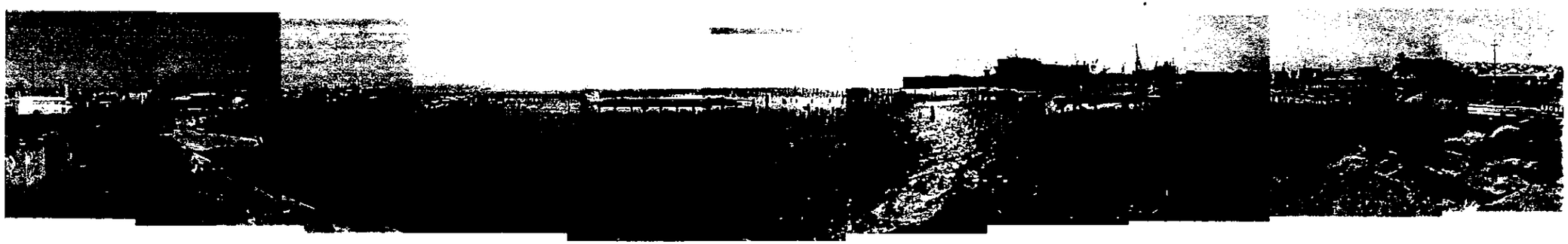
Ubicada al sur de Market Street y de los últimos proyectos que incluyen el estadio de beisbol para el equipo local y la marina, Mission Bay se coloca como el espacio con el mayor potencial de desarrollo de San Francisco. En lo que se puede considerar como el último territorio disponible para proyectos a gran escala,se sufre el peligro de que se vea sujeto al modelo típico de fraccionamiento, repitiendo el esquema existente en el que se niega toda relación con la bahía (buscando la *uniformidad*, mientras se elimina la riqueza de su diversidad de condiciones).

Es precisamente la unión entre lo no familiar y lo real, este lazo entre presencias y ausencias lo que permite el diseño de una propuesta apasionada y creativa.

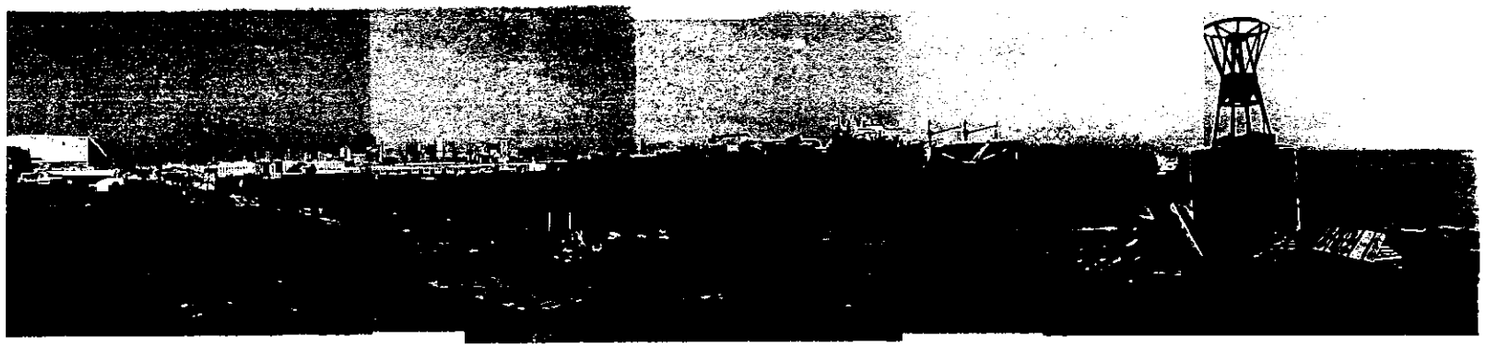
Fotocollages, montajes y súper imposiciones son el vehículo que da dimensión a esta realidad que se presenta por casualidad, pero en la que se puede trabajar casi metódicamente, buscando observar viendo y proponer analizando; colocando al ser humano en estas zonas inexploradas que no habían sido consideradas por la arquitectura, descubriendo el sitio por sus inicios, por sus orígenes.

bahía

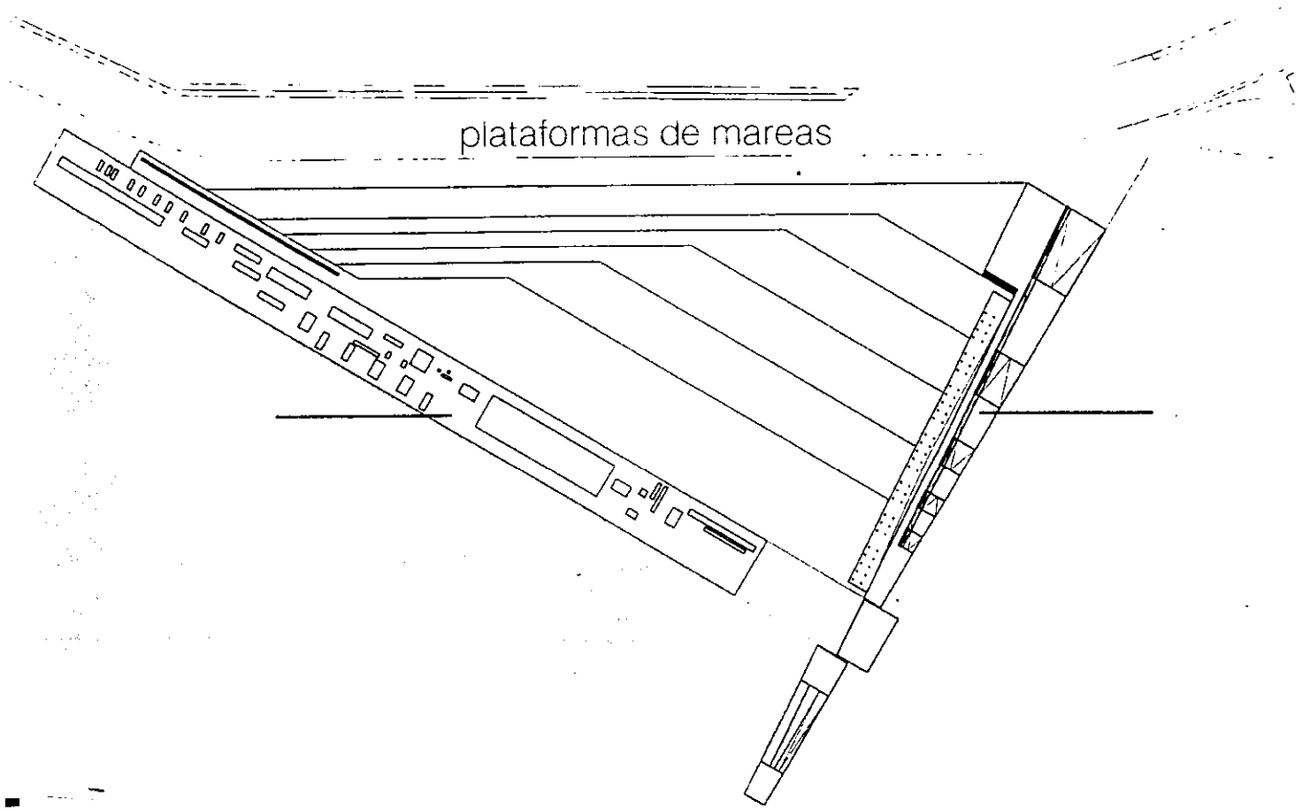
ilencio



ilencio



ilencio



playa

agua
medio dinámico y universal; paisaje infinito, abstracto, sin referencias.

Vista general del conjunto.

El presente estudio de caso (o de límite) es el resultado de un proceso de observación de las relaciones de la ciudad y su bahía. La propuesta surge como respuesta a las pocas zonas de acceso donde se desciende del nivel artificial de la plataforma de concreto que conforma la urbe, a la superficie siempre cambiante del agua. De ahí el reto de proponer un sitio donde el líquido, y no el sólido, se convierta en el espacio público, es decir la denominada playa urbana.

La propuesta se ve como un eslabón entre el ambiente citadino y la bahía, entrelazando los elementos del agua y la tierra. En pocas palabras, una participación activa de ambos , favoreciendo el proceso de acción-reacción (es decir, aquello que afecte la ciudad se encuentra directamente relacionado con su contraparte en el límite acuífero)

Al alterar el límite, la naturaleza general de los elementos involucrados no cambia directamente, sino adquiere un nuevo significado, y por ende, una nueva relación.

El límite se convierte en una piel permeable, un filtro, donde las texturas de la tierra y el agua se encuentran.

A través de las tensiones encontradas *in situ* (en específico, el carácter postindustrial de la zona) el proyecto busca hacer más evidente las formas existentes en que la ciudad actualmente se organiza y proponer una nueva opción en la que ésta pueda *arquitecturalizar* su límite.

Para este fin, los elementos del diseño son los siguientes:

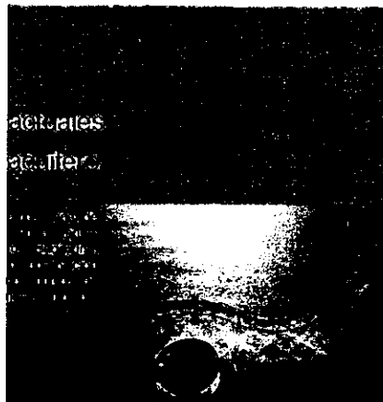
Filtro

Doblez

Plataformas de mareas

playa

análisis



aquatic park

no existe precedente

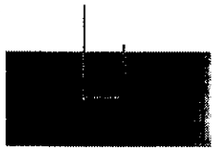
mid-embarcadero

puente de oakland

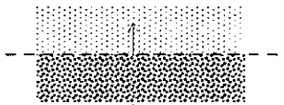
plataforma de pasajeros- muelle 96

vista desde bodega sobre muelle

sis, se crea un
dicha condición,
us propiedades



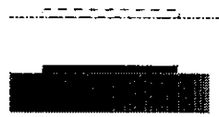
captura del agua



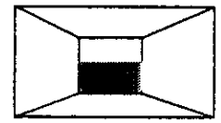
filtracion

escalonamiento

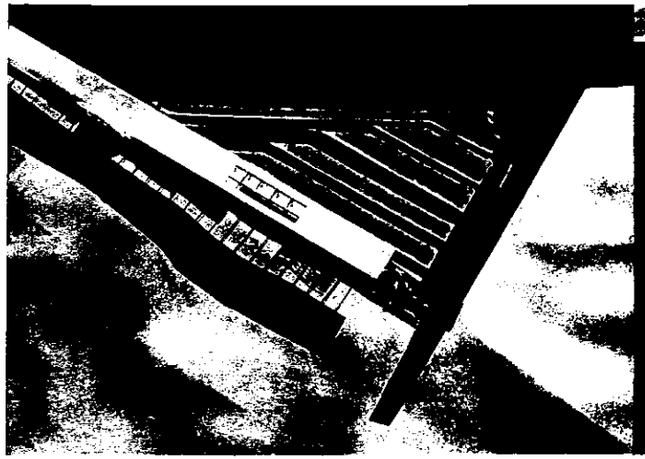
perforacion del muelle

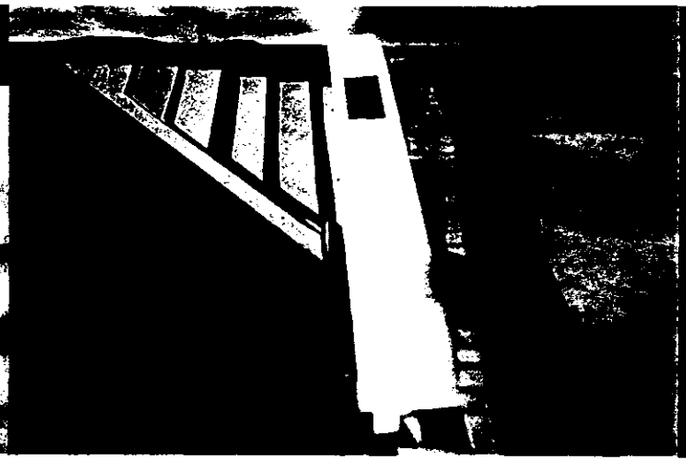


flotacion



enmarcar la vista

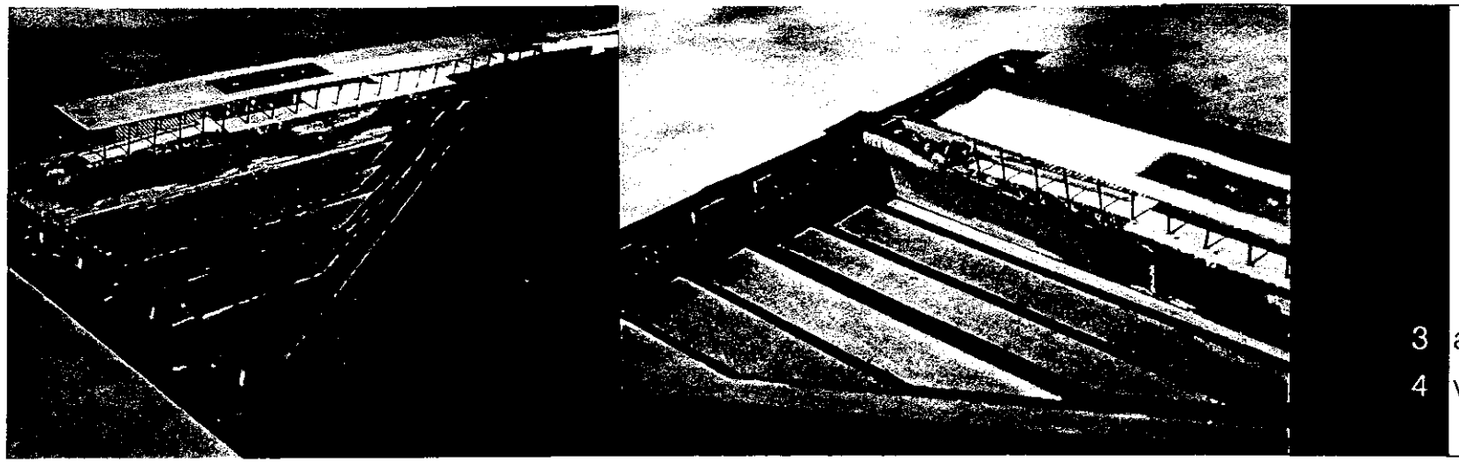




2

1 vista del conjunto. sombras al atardecer.
2 vista del conjunto. acceso al filtro

playa

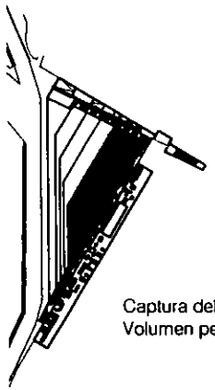


4

3 acesso al muelle.
4 vista de las plataformas.

playa

captura del agua- marea baja
(volumen permanente de agua)

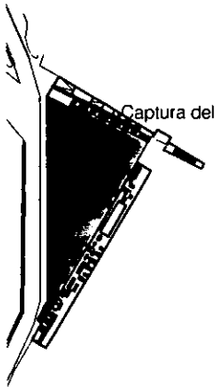


Captura del agua- marea baja
Volumen permanente de agua

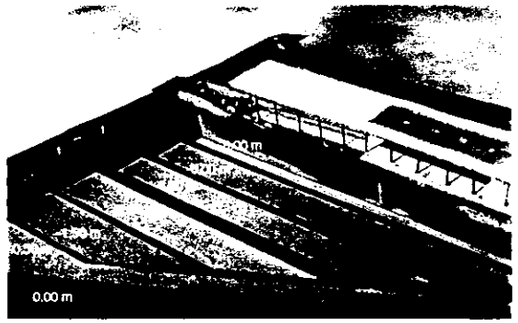
captura del agua- dos horas anteriores a la marea alta

Captura del agua- marea alta
Dos horas anteriores a la marea alta

captura del agua- marea alta



Captura del agua- marea alta



mareas

plataforma de mareas

	Luna nueva		Cuarto creciente		Luna llena		Cuarto menguante	
Enero	0010	4.8	0444	5.9	0440	2.4	0527	5.4
	0442	2.9	1106	1.4	1074	6.7	1151	1.9
	1047	6.4	1721	4.2	1727	-0.9	1733	3.8
	17.31	-0.7	22.42	1.6			2312	1.8
Febrero	0424	2.4	0402	6.0	0433	1.8	0500	5.3
	1032	6.3	1039	0.7	1041	6.2	1156	1.5
	1705	-0.6	1727	4.2	1705	-0.3	1834	3.7
			2232	2.2	2359	5.5	2320	2.6
Marzo	0447	1.2	0429	5.7	0501	0.9	0448	5.0
	11.07	6.0	1128	0.0	1120	5.3	1156	1.0
	1711	-0.1	1852	4.5	1709	0.7	1932	3.9
	2353	5.7	2338	2.7	2345	5.5	2356	3.1
Abril	0530	0.1	0503	5.3	0000	5.6	0454	4.7
	1202	5.5	1158	-0.3	0618	-0.1	1155	0.5
	1738	0.5	1929	4.8	1300	4.6	1944	4.0
					1808	1.7		
Mayo	0601	-1.3	0439	5.0	0558	-0.4	0516	4.5
	1257	5.0	1125	-0.4	1259	4.3	1205	0.2
	1754	1.5	1855	5.1	1738	2.3	1942	4.5
					2347	5.7		
Junio	0548	-1.6	0522	4.4	0610	-0.6	0444	4.5
	1257	4.9	1143	0.4	1328	4.5	1121	0.1
	1733	2.1	1859	5.5	1751	2.9	1848	4.9
	2349	6.9			2353	6.0		
Julio	0535	-1.4	0021	1.6	0619	-0.5	0541	4.2
	1247	5.1	0610	3.9	1330	4.8	1137	0.8
	1720	2.4	1150	1.6	1809	2.8	1842	5.7
	2334	7.0	1846	5.6				
Agosto	0604	-0.9	0544	4.0	0549	-0.2	0539	4.2
	1308	5.5	1107	2.3	1245	5.2	1107	1.5
	1803	2.1	1742	5.4	1749	2.2	1800	6.0
Septiembre	0540	-0.2	0651	4.0	0548	0.3	0549	4.4
	1232	5.6	1138	3.1	1227	5.7	1049	2.3
	1751	1.5	1733	5.1	1809	0.9	1742	5.0
Octubre	0003	5.55	0728	4.3	0512	0.9	0555	4.6
	0547	0.9	1229	3.3	1142	6.2	1043	2.7
	1222	5.6	1744	4.7	1751	-0.2	1654	5.8
	1817	0.6					2349	0.1
Noviembre	0415	1.7	0622	4.8	0340	1.6	0522	5.4
	1039	5.9	1156	2.9	1004	6.7	1049	2.5
	1700	0.0	1709	4.4	1636	-1.0	1621	5.0
	2348	4.8	2340	0.7	2333	5.1	2255	0.6
Diciembre	0425	2.6	0522	5.1	0407	2.3	0529	5.7
	1031	6.0	1110	2.7	1023	7.2	1134	1.9
	1716	-0.4	1630	4.3	1710	-1.6	1716	4.3
			2247	0.8			2311	1.1

El crear un topografía submarina que reponda a los temperamentos de las mareas, permite que la intervención sea experimentada de diversas formas durante momentos distintos del día y del año.

Las plataformas se ocultan y aparecen en un continuo juego con el agua. Sólido y líquido se empalman creando una zona de mediación.

La tabla muestra los cambios en las mareas en relación a las fases lunares. Cabe recordar los siguentes datos generales:

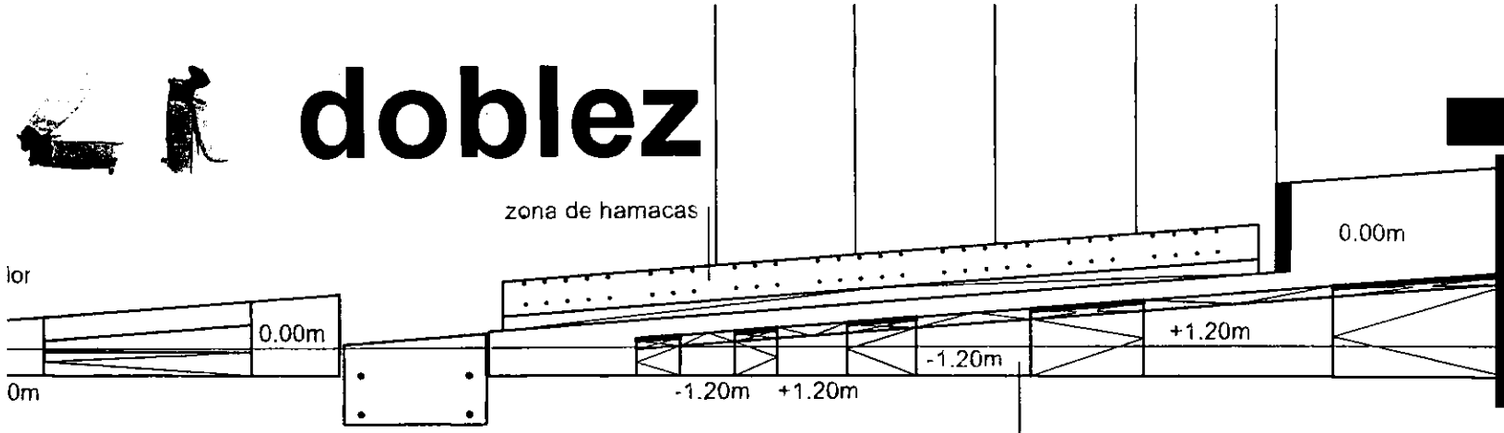
Nivel máximo de marea: -0.27m del nivel de calle

Nivel 0.0 del agua: -2.40m del nivel de calle

Nivel mínimo del agua: -2.94 m del nivel de calle

Dichos niveles se encuentran registrados en las plataformas dentro de la intervención.

doblez

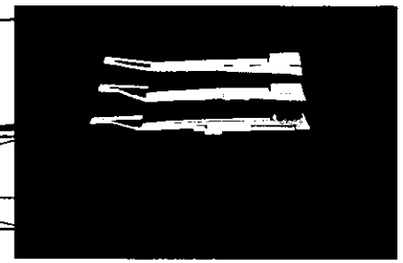


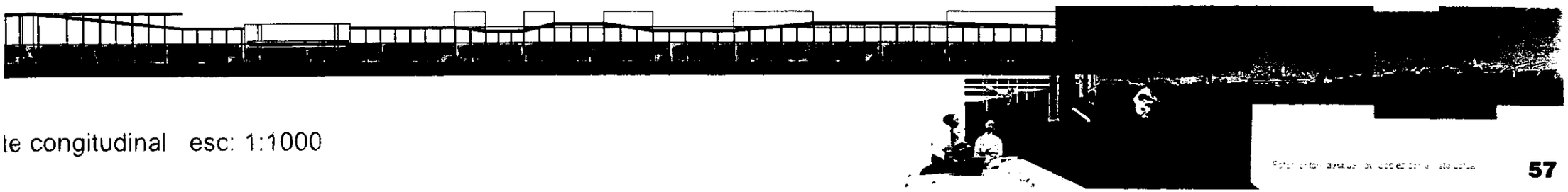
nta del muelle esc: 1:1000

doblez

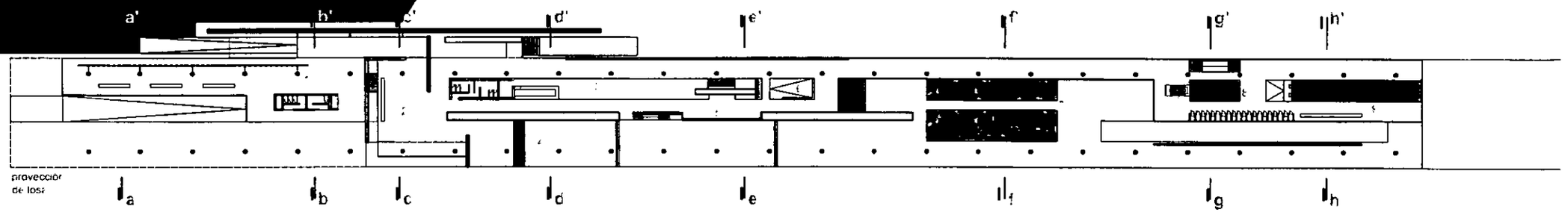
El intervenir un muelle existente, extensión horizontal situada sobre la superficie del agua, tiene como propósito el crear un elemento sobre la bahía que responda a la naturaleza del líquido. Las ondulaciones, producto de una serie de dobleces, podrían considerarse esculpidas o erosionadas por el continuo flujo y cambio de nivel de las mareas y corrientes. Es decir, el paisaje como un proceso que responda a la fenomenología del sitio.

A la vez, el muelle adquiere por medio de esta transformación, una serie de superficies que fungen como espacio público: plataformas para pesca, espacios para el ocio, zonas de descanso...el muelle se convierte en un zona donde la ciudad puede contemplarse.





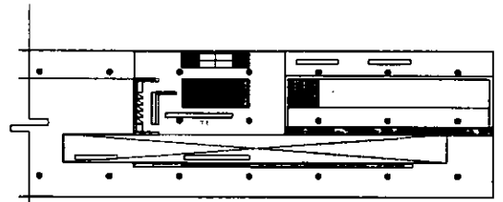
te congitudinal esc: 1:1000



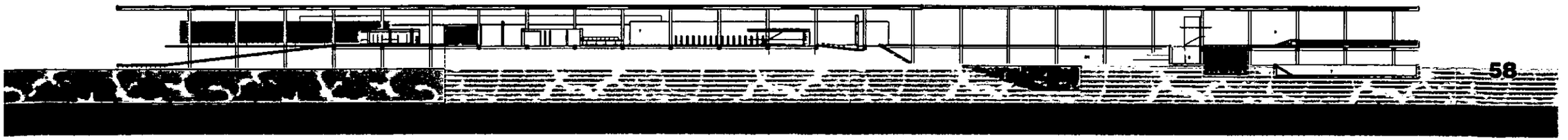
planta general esc. 1:1000

clave:

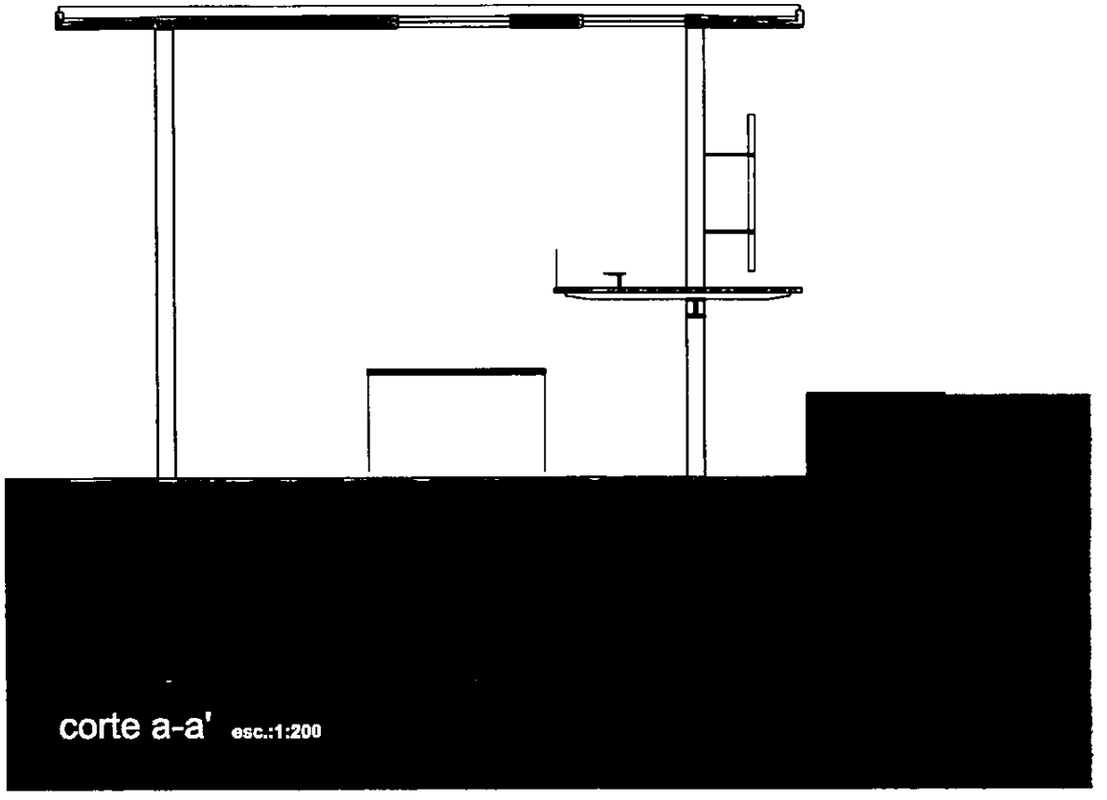
1 paradero de *ferries*
2 lobby
3 restaurante/bar
4 plataformas de bronceado
5 plataforma de observación
6 sala de proyección
7 albercas de agua marina
8 losa de clavados
9 alberca chapoteadero
10 bar
11 club nocturno



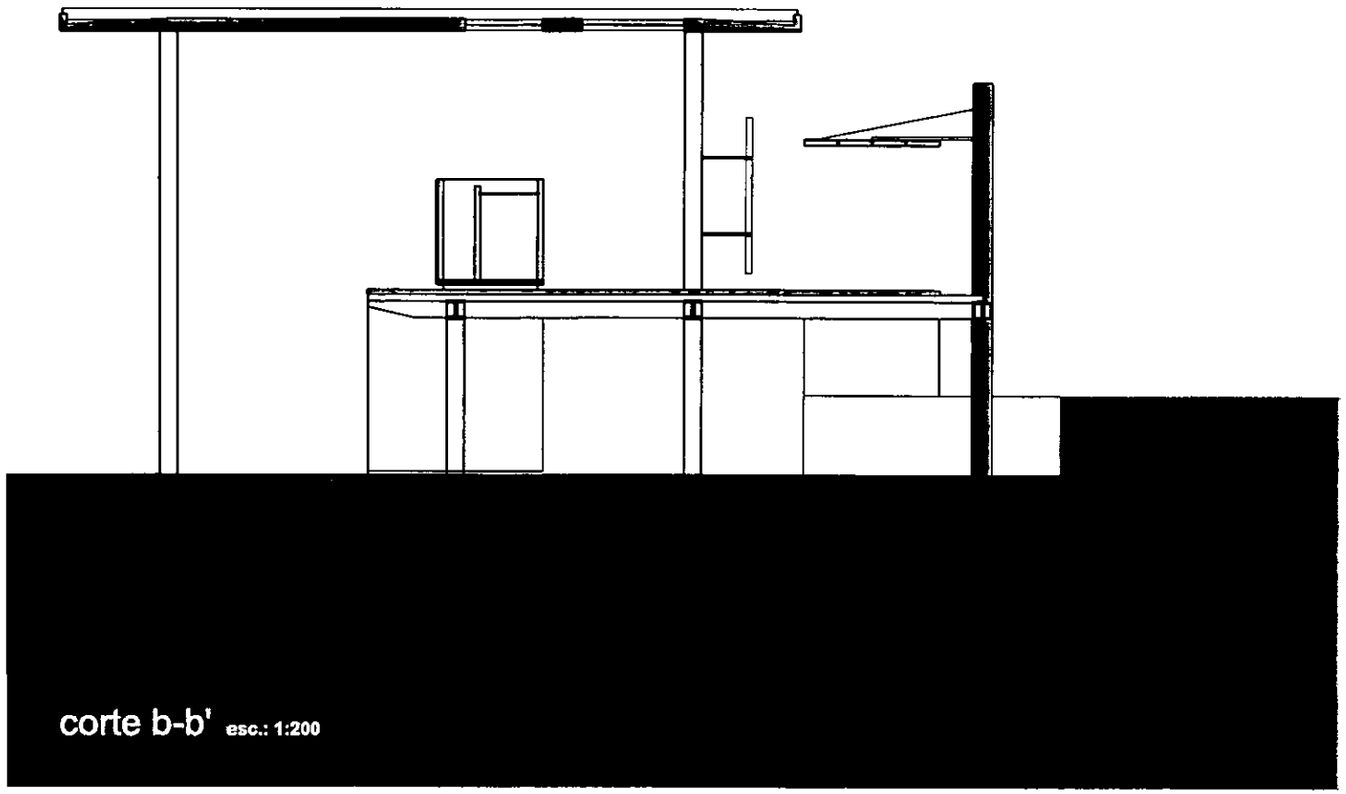
nivel de bar y club nocturno esc. 1:100



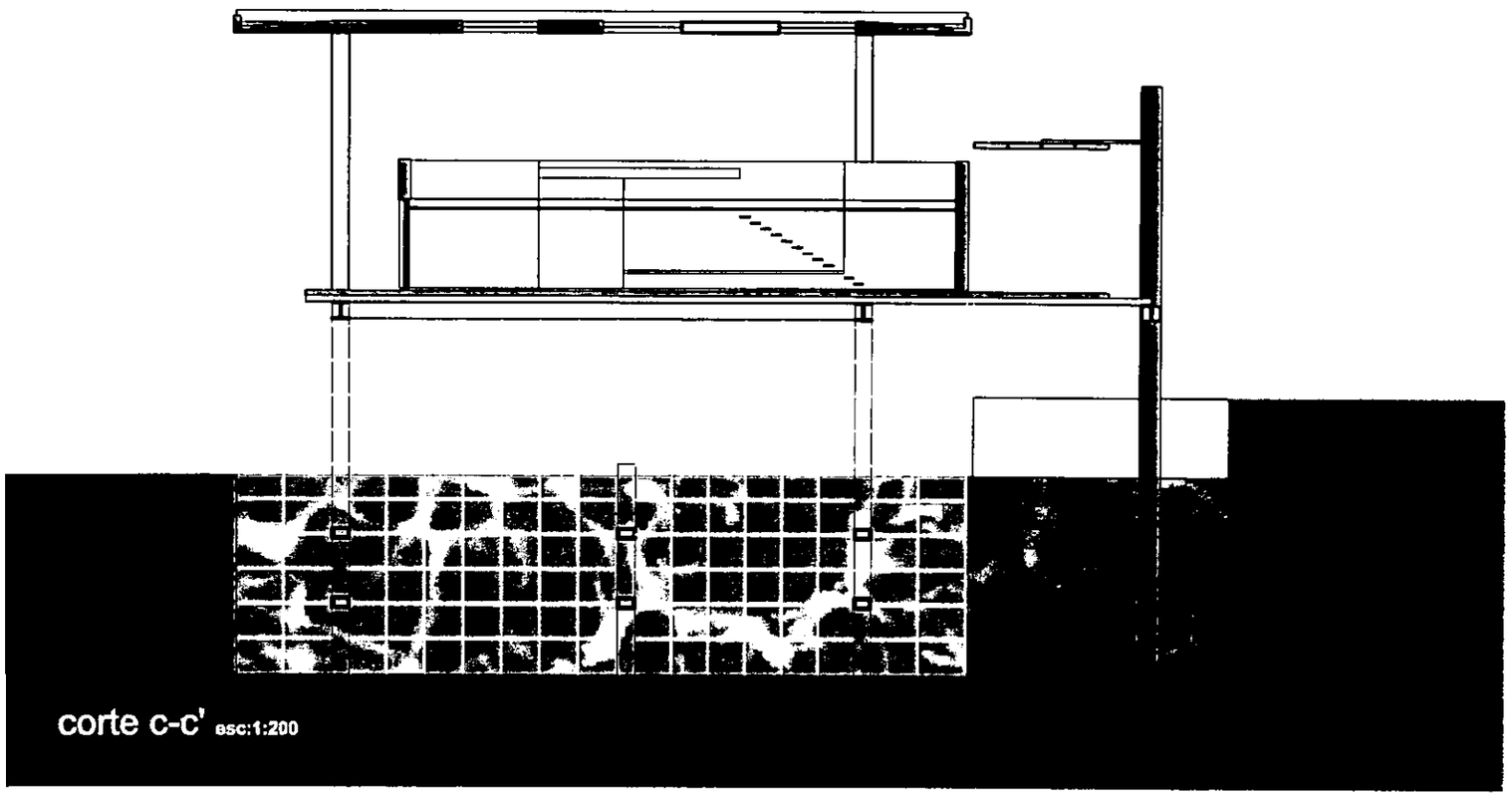
corte longitudinal esc. 1:100



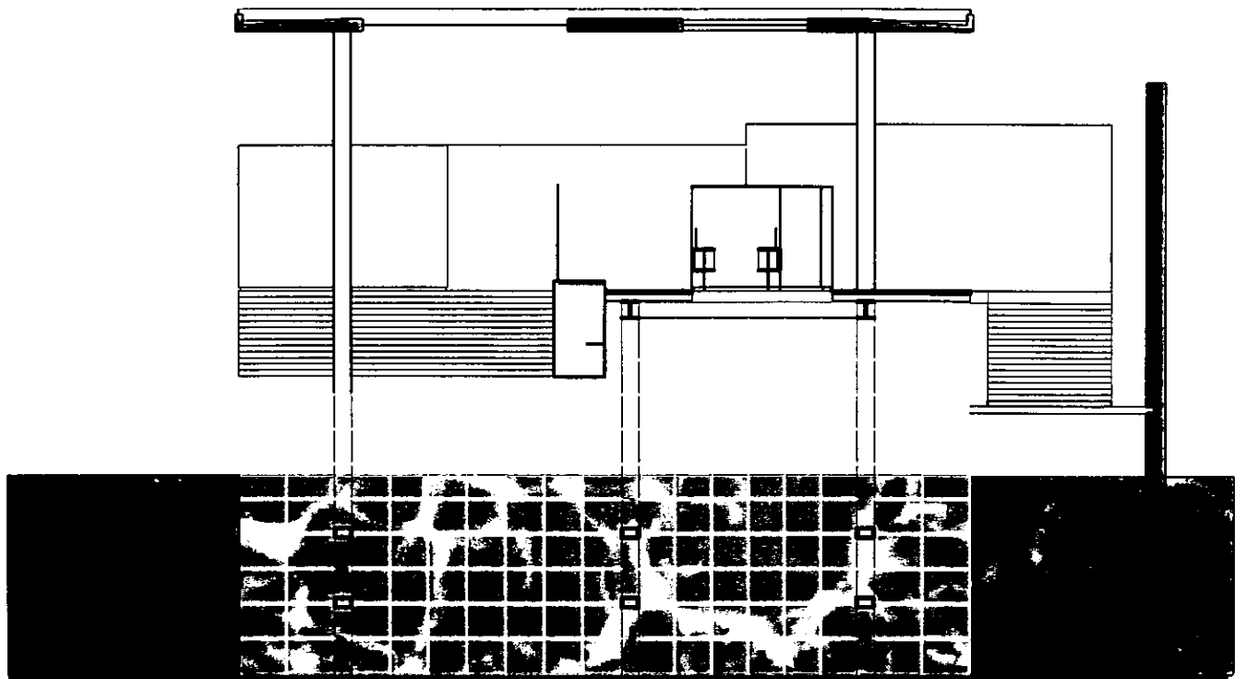
corte a-a' esc.:1:200



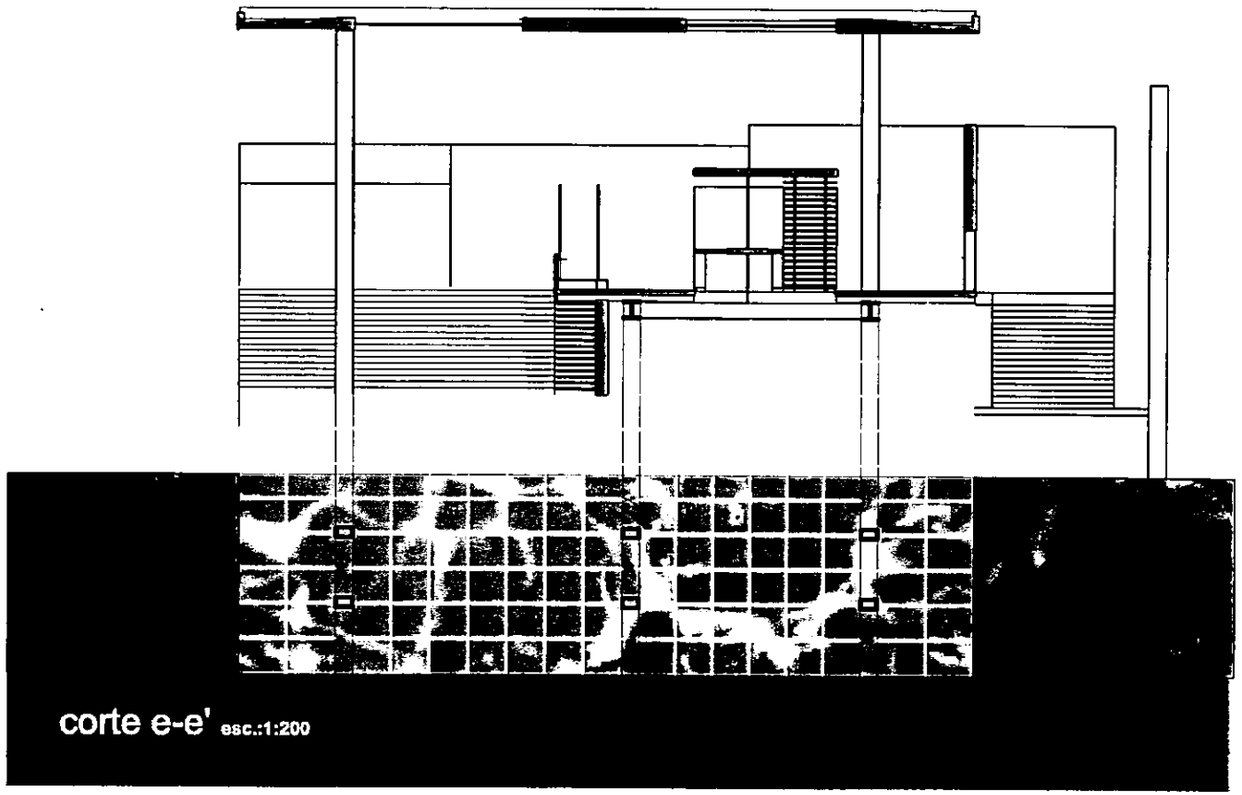
corte b-b' esc.: 1:200



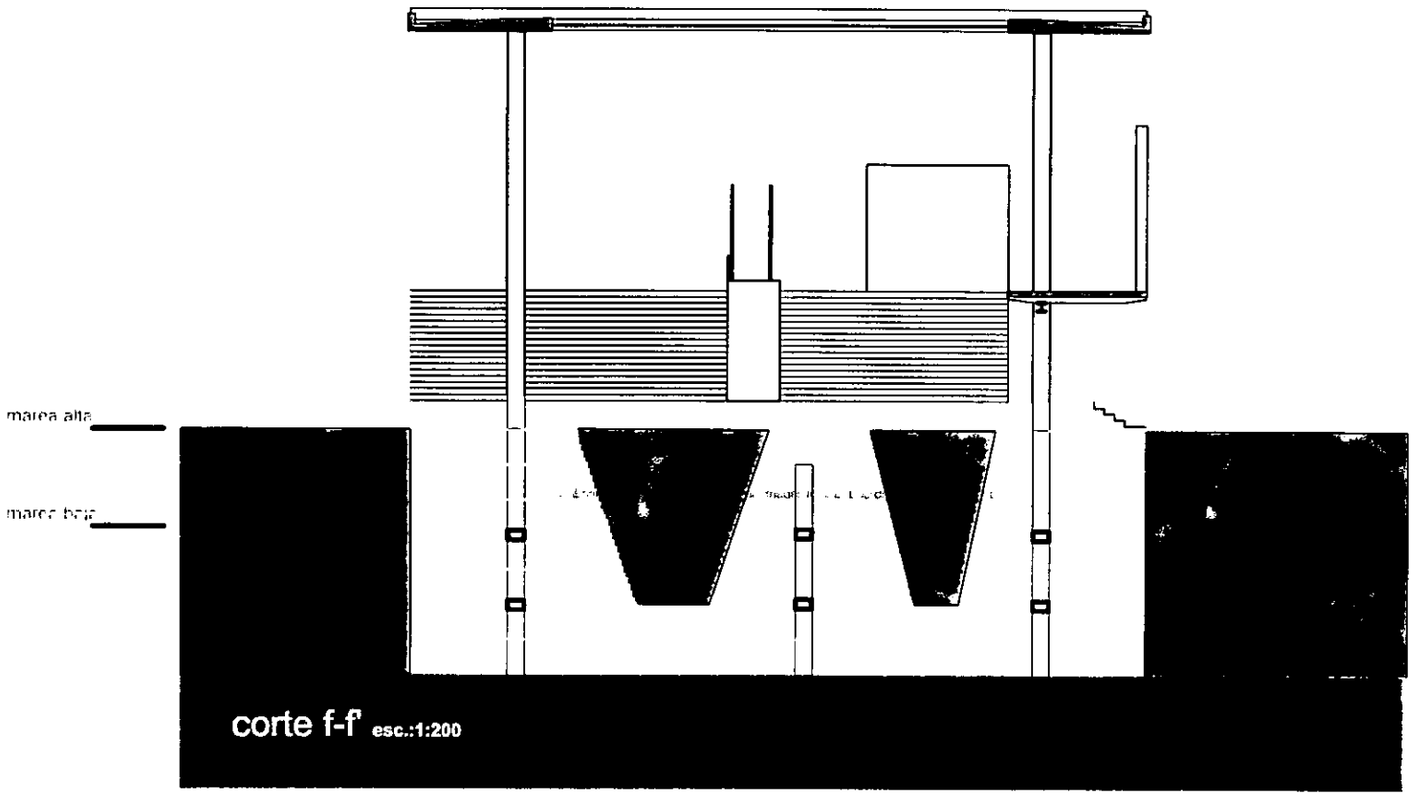
corte c-c' esc:1:200



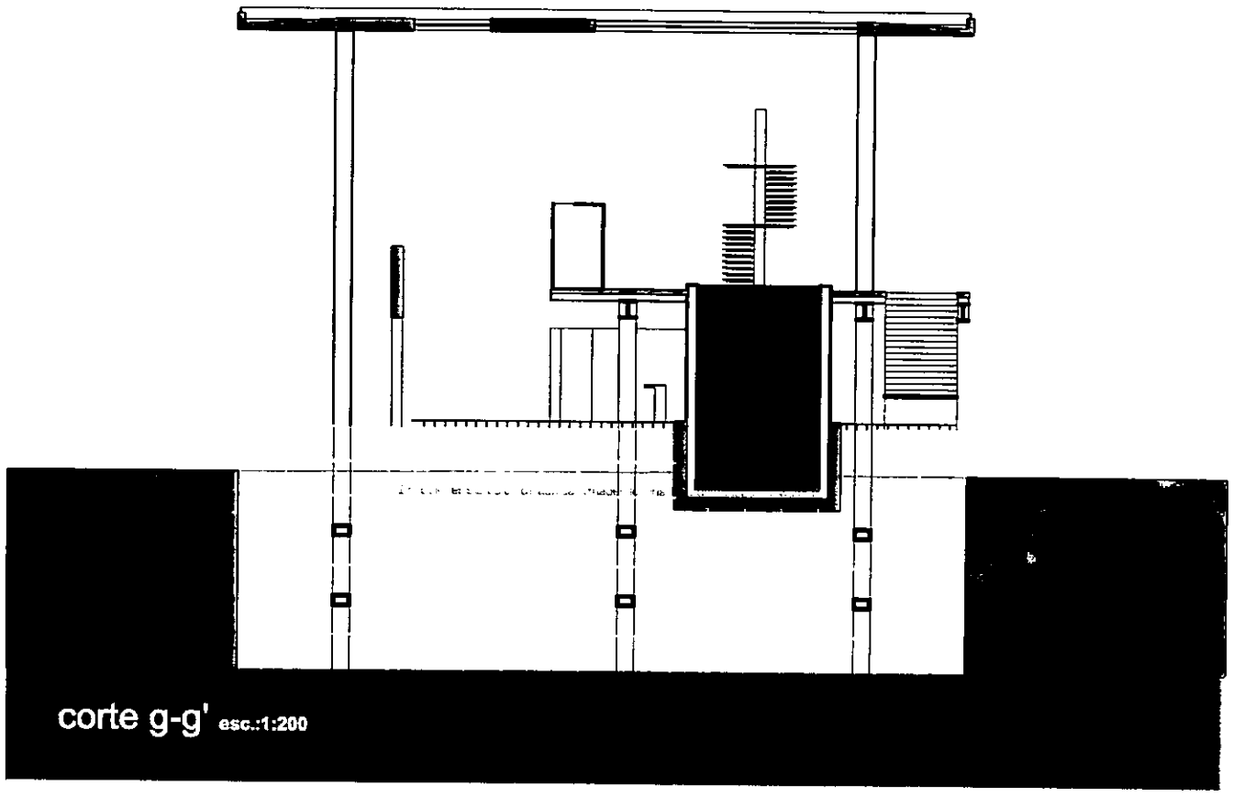
corte d-d' esc.:1:200



corte e-e' esc.:1:200

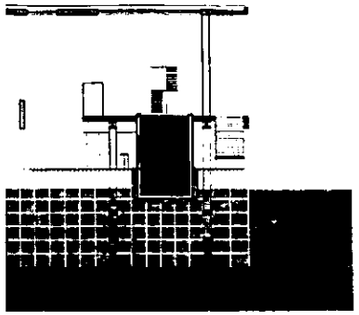


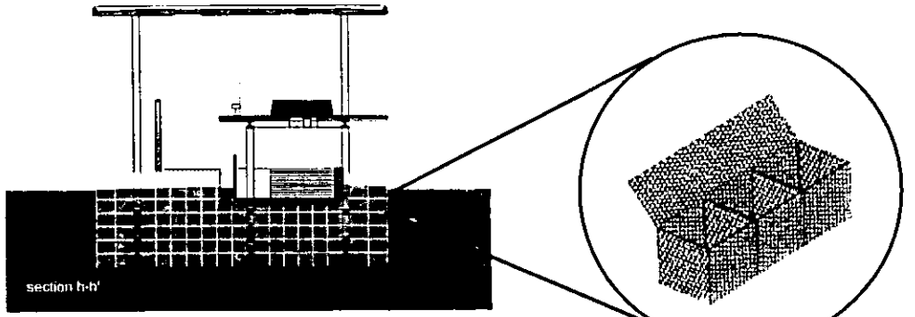
corte f-f esc.:1:200

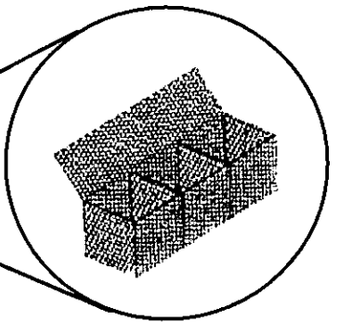


corte g-g' esc.:1:200

corte h-h' esc.:1:200







Horizontal-flow
Roughing Filter
(0.3-1.5 m/h)

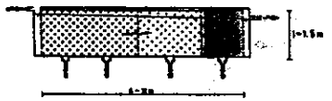


Diagrama de funcionamiento del filtro utilizado en la propuesta

key
- raw water
- flow direction
- filtered water
- drain

size of filter material
- 12-18 mm
- 8-12 mm
- 4-8 mm
- 1-2 mm

filtro y estereotomía

A lo largo del proceso de investigación, un factor que vendría a influir directamente en el diseño fue descubierto. A pesar de las estrictas normas ambientales por parte de las autoridades portuarias, el líquido que conforma la bahía de San Francisco contiene una serie de sólidos en suspensión que alteran la calidad del agua.

No se quiso pasar por alto este hecho, a pesar de que podría considerársele como un agente en contra del proyecto. En su lugar, se buscó revelar el proceso de *curación* y *purificación*. Haciendo evidente esta maniobra el proyecto se vio enriquecido enormemente. Es así como surge el filtro.

Este elemento permite que las partículas suspendidas en al agua de la bahía sean atrapadas por la serie de estratos de roca que conforman su base. De esta forma el agua que cubre las plataformas es apta para ser habitada (natación).

El filtro crea la oportunidad de considerar al límite como un umbral, una membrana porosa similar a la piel, actuando tanto al interior como al exterior de la intervención. Una membrana que respira al ritmo de las mareas.

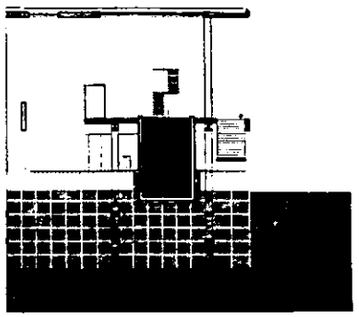
Estereotomía

El procedimiento de filtración utilizado corresponde al método denominado *pre-tratamiento para el sistema de filtración por arena a baja velocidad*. Dicha técnica consiste en el uso de distintas rocas y/o gravas, considerándose un proceso natural para el tratamiento del agua. Se le toma como un paso anterior a los filtros de arena debido a que, por medio de este, se logran eliminar las posibles partículas sólidas que podrían bloquear los finos conductos que conforman este último proceso.
No se continuó con el siguiente paso debido a que no se buscaba potabilizar el agua (lo cual también se consideraría practicamente imposible por el volumen constante de líquido que penetra la intervención), sino mejorar sustancialmente su aspecto físico, químico y bacteriológico.

Para su funcionamiento adecuado se requiere básicamente de tres densidades distintas de material filtrante (entre 25 y 5 cm de tamaño), formando un volumen que deberá tener un ancho mínimo de 6 metros y una altura mínima de 8 metros (cubriendo el nivel máximo de marea al fondo marino).
Un requisito indispensable es la velocidad del flujo horizontal del líquido que deberá cubrir la media de 1.44km/h. La velocidad promedio de las corrientes en la bahía es de 10.8 km/h.
La dimensión final que adquirió el filtro (21 m de ancho) se encuentra en relación proporcional con velocidad de las corrientes.

Las diferentes rocas se colocaron en gaviones con una dimensión de 3.00m de longitud, 1.00m de ancho y 1.00m de altura.

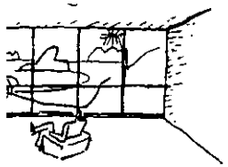
En general, los gaviones alcanzan un nivel de +1.00m sobre el nivel máximo de las mareas, con el fin de que en el estrato superior, las rocas puedan estar libres de estos contenedores y utilizarse como elelemento principal de la playa. El filtro, por ende, es una textura habitable.



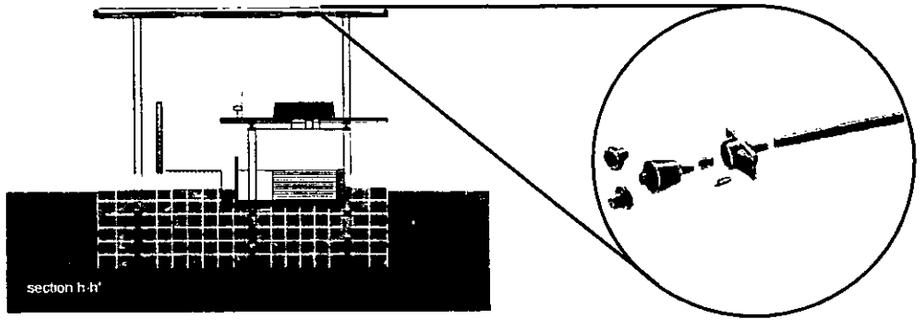
· albercas.

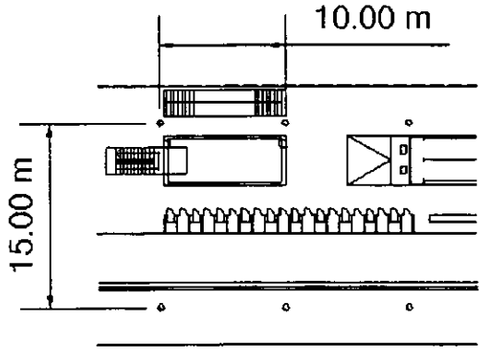
uatro oblicuas de la perspectiva. Su
instala frente al sitio. El paisaje en su
ıtra a su habitación."

El hogar del hombre, p 87



Le Corbusier presentado en Río de Janeiro.
L'hombre, p. 87





Sección de la planta donde se muestran los claros del módulo a ejes de columnas (zona de albercas). A través del cálculo del peralte de losa se obtuvo una sección de 33cm.

iltro

filtro y tectónica

El filtro no sólo interactúa con el líquido, a la vez funciona como una membrana visual. Con el fin de evitar la creación de una nueva barrera que limitara la relación del proyecto con la bahía, el filtro a nivel de la superficie, se convierte en un marco muy ligero, a base de una columnata y una losa postensada muy delgada, que modulan y enmarcan la vista.

Dicho sistema conforma el aspecto tectónico del proyecto.

Tectónica

El presfuezo se define como la creación inicial de fuerzas a un elemento estructural, opuestas a las que producen las cargas de trabajo, con el principal objetivo de contrarrestarlas. De esta manera se aumenta su capacidad de carga y se disminuye la seccion del elemento.

Las fuerzas se aplican mendiante cables de acero de alta resistencia al ser tensados contra sus anclas. La aplicación de las fuerzas mencionadas se realiza después del fraguado del concreto, utilizando cables de acero enductados para evitar su adherencia con el concreto.
Los cables son engrasados o inyectados con mortero después del tensado. Se instalan con curvaturas predeterminadas para crear fuerzas reactivas en el elemento estructural.

Beneficios.

Uso más eficiente del concreto.
- Reducción de secciones hasta en un 30%.
- Reducción de acero de refuerzo a cantidades mínimas.

Disminución de peso en la estructura.
- Aligera la estructura.
- Aligera los cimientos.
- Disminuye los efectos del sismo.

Cálculos usando el método de elemento finito que permiten:
- Dimensionar las fuerzas reactivas del presfuerzo con gran precisión
- Controlar deflexiones de los elementos estructurales dentro de los límites aceptables.

•Fuente: Catálogo del sistema Postensa.

Consideraciones de diseño.

La siguiente tabla (en relación con lo establecido por el ACI- *American Concrete Institute*) muestra las relaciones claro /peralte de losa, obtenidas con el fin de lograr una economía y un comportamiento estructural satisfactorio en el postensado; tomando en cuenta que las cargas vivas se definen de antemano, la elección de las dimensiones del miembro completarán la estructura, y las cargas muertas y las rigideces de los miembros pueden ser, por tanto, determinadas:

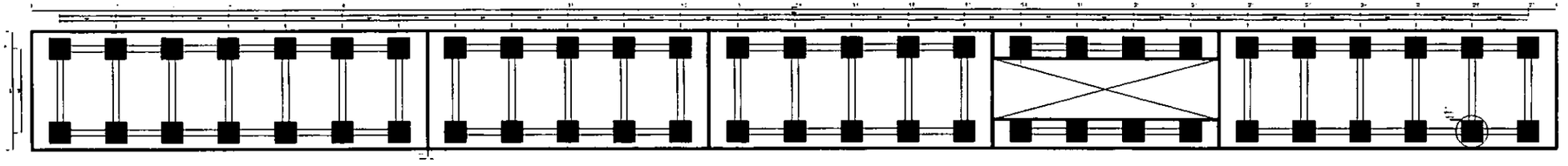
Losa en una dirección.	claro/48
Losa en dos direcciones.	claro/45
Losa en dos direcciones con ábaco	claro/50

El proyecto cuenta con una losa en dos direcciones con ábaco o capitel; por ende se obtiene la siguiente ecuación:

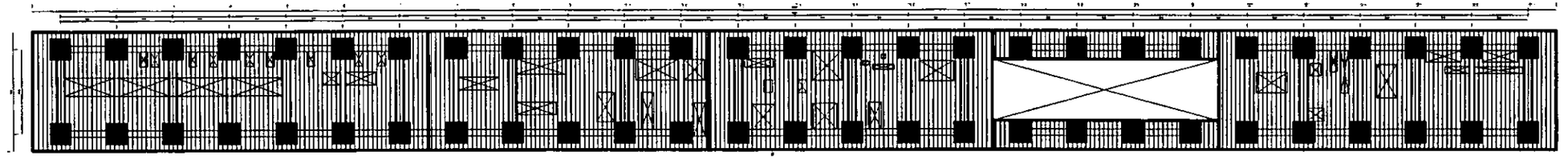
$$\text{sección de losa} = \frac{\text{claro mayor}}{50} = \frac{15\text{m}}{50} = 0.30\text{m de sección}$$

Diseño sísmico.
San Francisco se encuentra en una zona de alta sismicidad, por ende el sistema constructivo elegido deberá responder a esta situación. En el caso de los postensados, el reporte preliminar sobre prueba de transmisión de momento realizadas en la Universidad de Washington y el Consejo de Investigación de Concreto Reforzado prescribe lo siguiente: "(...) el presfuerzo proporciona un medio excelente para confinar una losa continuamente y asegurar su comportamiento dúctil ante cargas sísmicas (...), no manifestándose disminución en la rigidez durante los ciclos"

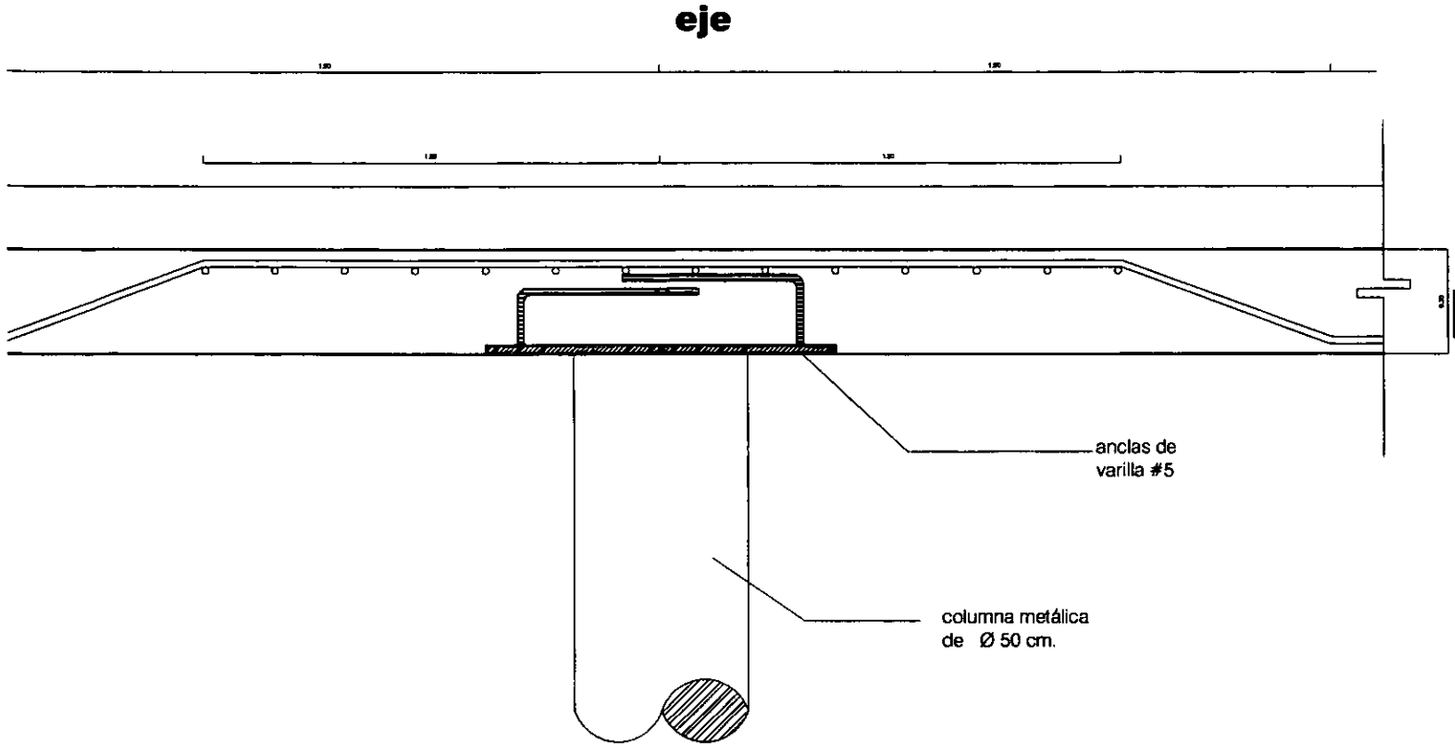
continúa →



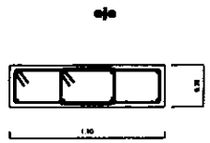
planta de azotea (armado,



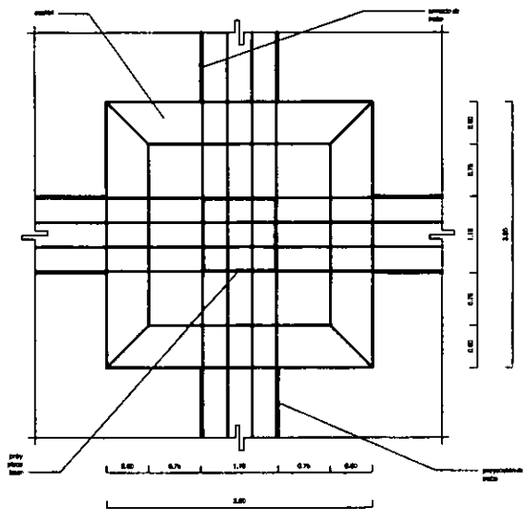
planta de azotea (presfuerzo



detalle unión losa-muro (capitel)
esc.: 1:20



trabe tipo- ejes 1 a 27 y a-b
esc.: 1:50



detalle unión capitel trabe
esc.: 1:100

Un significativo beneficio práctico del postensado es que el daño estructural permanente en el sistema de piso, será mucho menor que el de otros sistemas estructurales. Esto se debe a que es imposible para los esfuerzos de un cable no adherido llegar a alcanzar su límite de fluencia dentro del rango de deformación, previsto moderadamente para el caso de un temblor más o menos severo. La incompatibilidad de deformaciones entre el cable no adherido y el concreto que lo rodea, le proporciona al cable capacidad para soportar sobrecargas excesivas, cargas cíclicas y hasta fallas del miembro.

Resistencia al fuego.

El recubrimiento del acero de presfuerzo en el anclaje debe presentar, por lo menos, 6mm más del necesario en una zona lejana al anclaje; el recubrimiento mínimo de la placa de asiento debe presentar 2cm en las losas.

La siguiente tabla muestra los recubrimientos requeridos de concreto, en losas presforzadas con refuerzo postensado para diferentes rangos de resistencia al fuego.

Agregado.	1hora	1.5 h	2 h	3h	4h
Carbonato	1.9	1.9	1.9	2.5	3.2
Silico	1.9	1.9	1.9	2.5	3.2
Ligero	1.9	1.9	1.9	1.9	2.5

Las dimensiones del recubrimiento están dadas en centímetros.

En el caso específico de la propuesta, se utilizó un recubrimiento de ligero de 2.5 cm.

Protección contra la corrosión.

Para evitar la corrosión en los cables no adheridos se requieren las siguientes propiedades de los materiales de recubrimiento:

1. Estar libre de grietas, y no ser frágil ni fluido durante el rango total de la temperatura prevista (entre 20º y 70º C).
2. Estabilidad química durante la vida de la estructura.
3. No reaccionar con los materiales que lo rodeen, tales como el concreto, cables, camisas o ductos.
4. No corroer a los cables o a los anclajes.
5. Adherente a los cables.

Los materiales de recubrimiento pueden ser: mastiques bituminosos, asfálticos, grasas, ceras, epóxicos o plásticos.

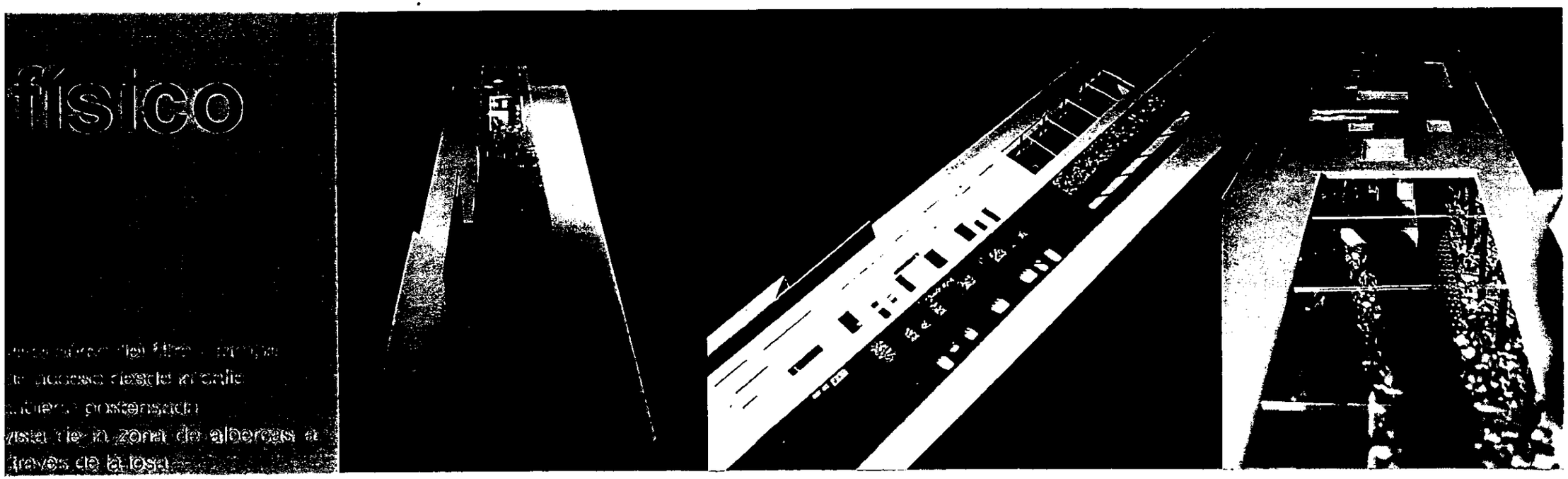
Nota: Dentro del proyecto, existen zonas donde los cables se encuentran expuestos (es decir, donde la losa se interumpe se creando diferentes tragaluces). No son preocupación los problemas de corrosión debido a que los tensores conservan su recubrimiento. Como referencia se puede citar la prueba documentada en el texto Diseño de losas postensadas, pg. 78; donde vigas de concreto presforzado se expusieron al agua de mar.

Dichas vigas de 10 x 20 cm de sección transversal y 100 cm de longitud, se postensaron con varillas de presfuerzo no adheridas de 9.2 mm de diámetro, recubriéndose con mastique bituminoso de 1.00mm de espesor. Se práctico una abertura de 5 x 10 cm en el centro de la viga a fin de exponer directamente las varillas al medio ambiente; y el resultado de la prueba a los cinco años mostró ausencia de herrumbre corrosiva.

Juntas de construcción.

La longitud máxima de una losa entre juntas de construcción debe limitarse a 45m aproximadamente, a fin de reducir el efecto del acortamiento de la losa y evitar pérdidas excesivas de presfuerzo por fricción. Cuando la longitud excede los treinta metros, los cables se deben tensar de ambos extremos.

Fuente: Diseño de losas postensadas; IMCYC; Noriega Editores; México, D.F., 1989.



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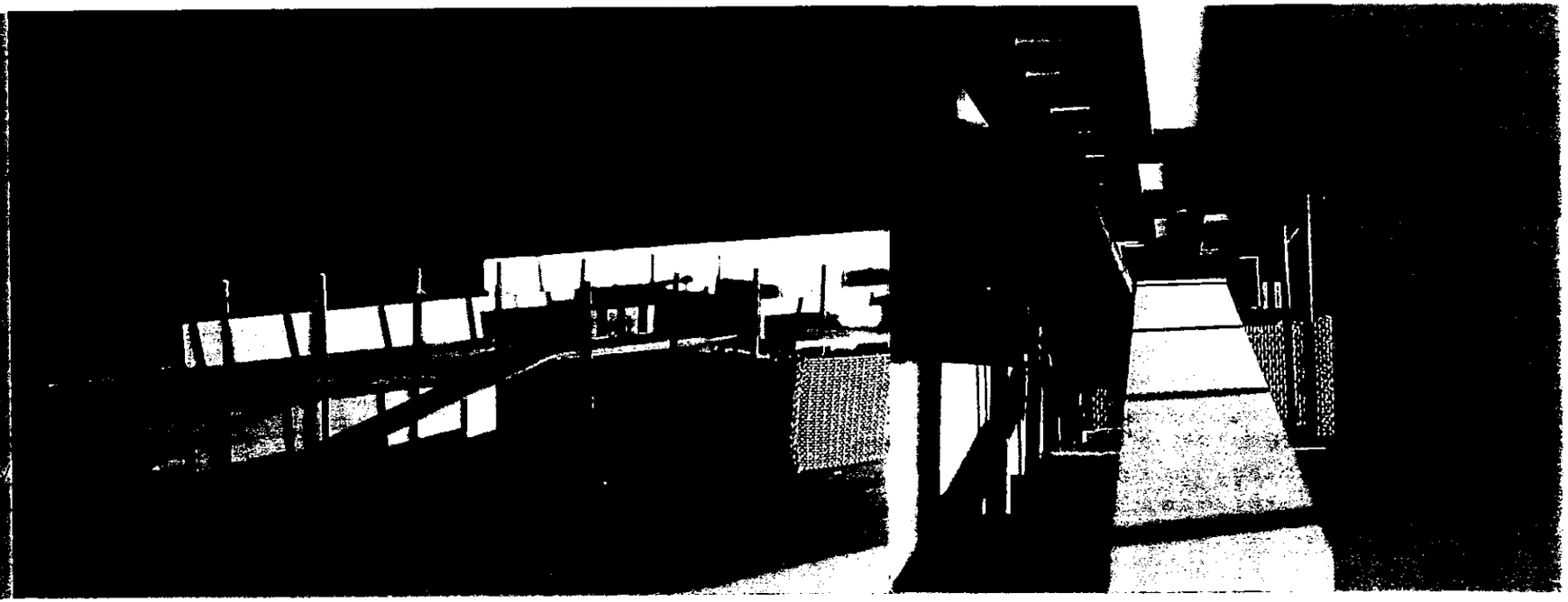

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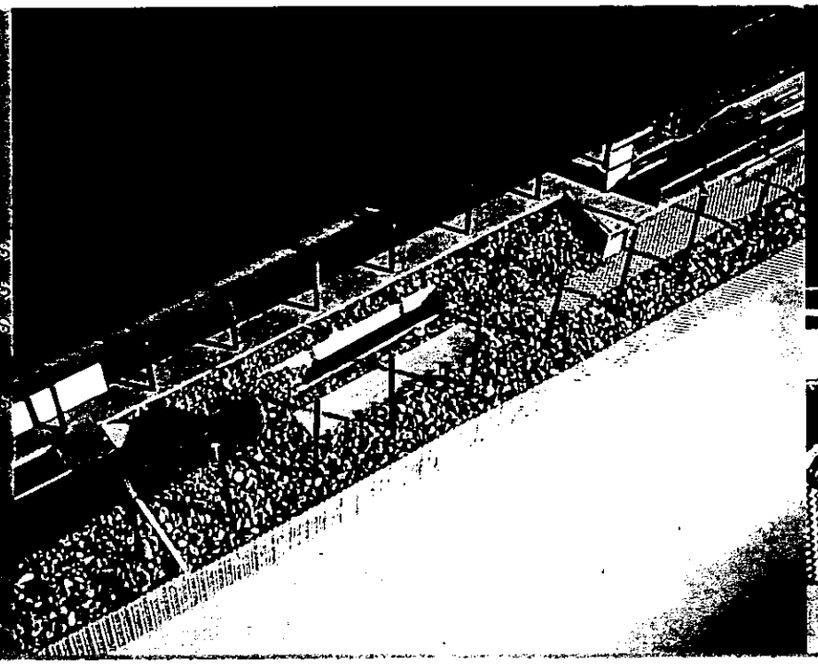
físico

vista aérea de la zona de albercas de agua de mar, dichas piscinas surgen a raíz de un par de cortes realizados en el filtro, por lo que se tuvo cambio conforme a las mareas.

la zona de albercas comunica los espacios de restaurante, [illegible] y el área de las piscinas cloradas y discoteca [illegible].



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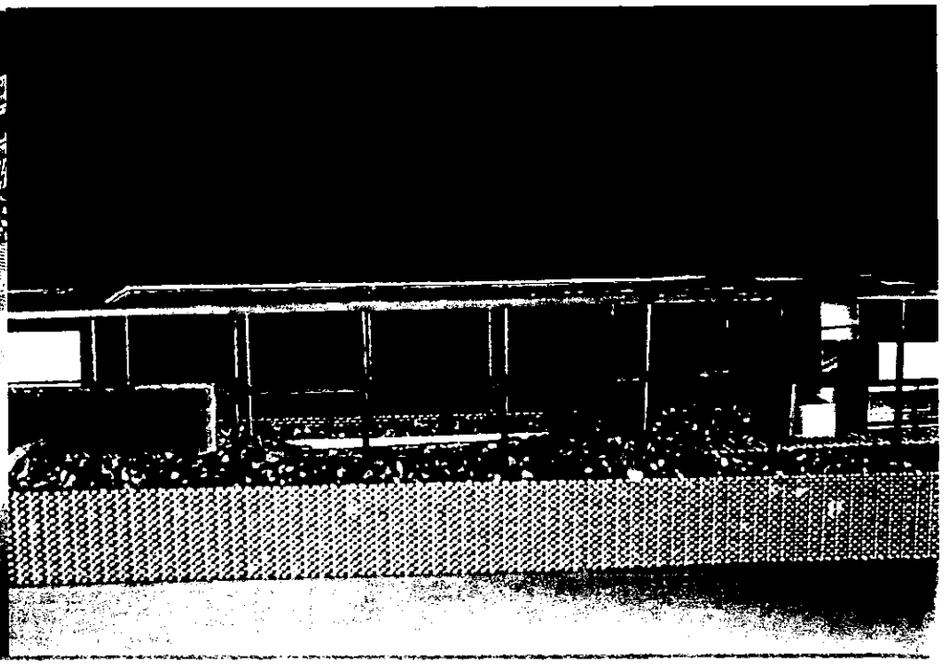

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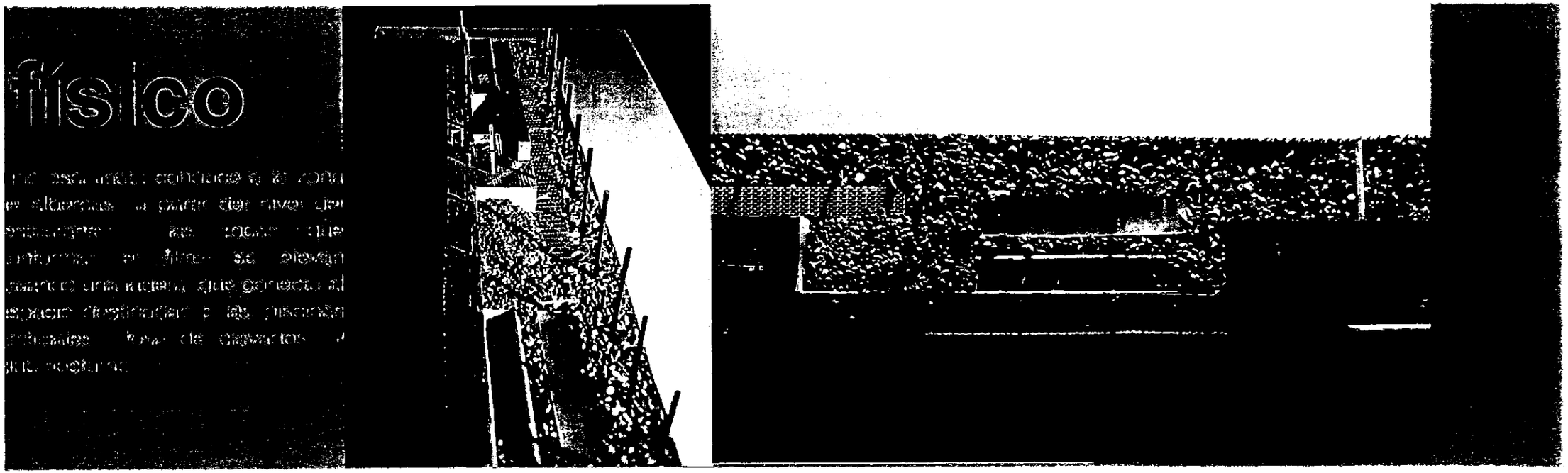

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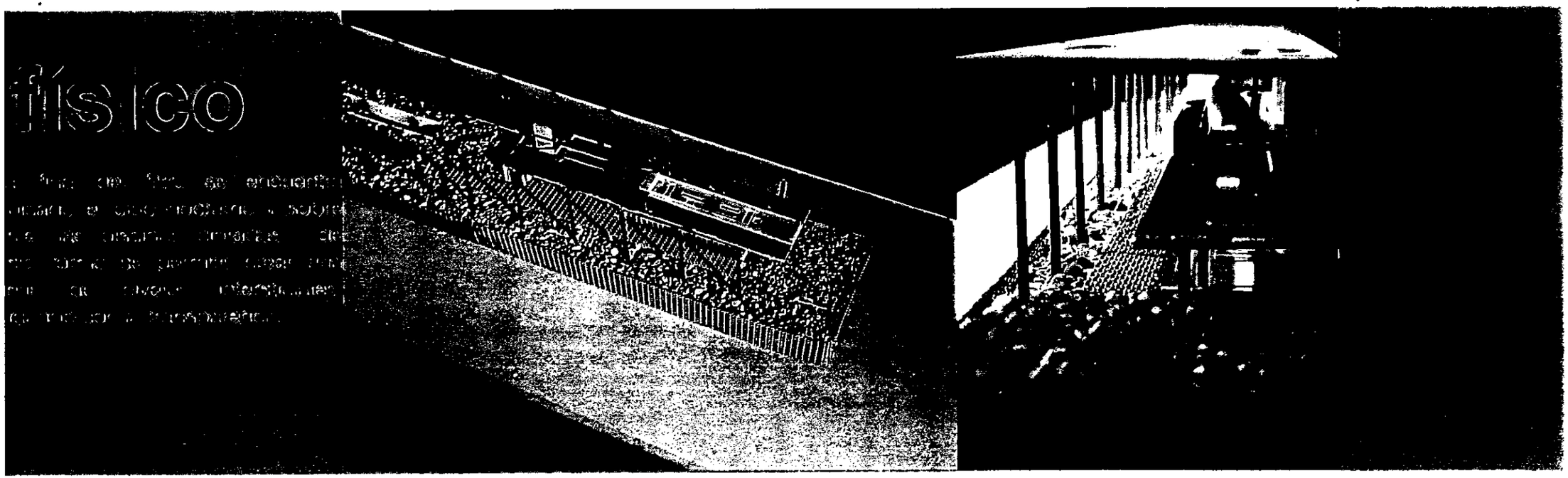

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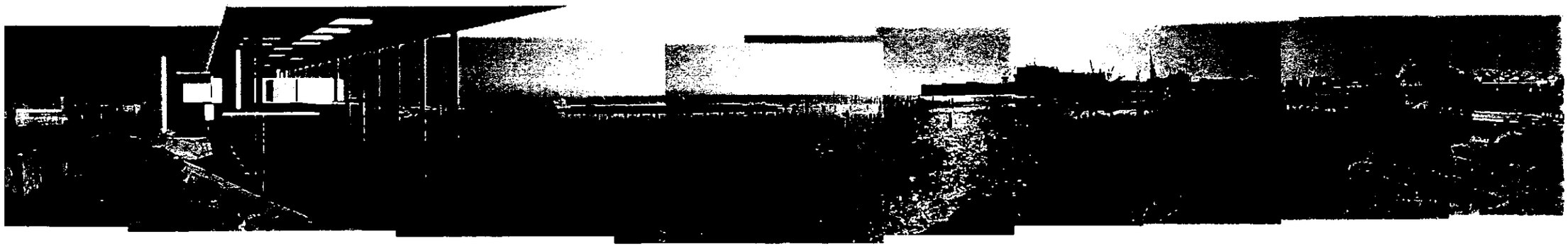
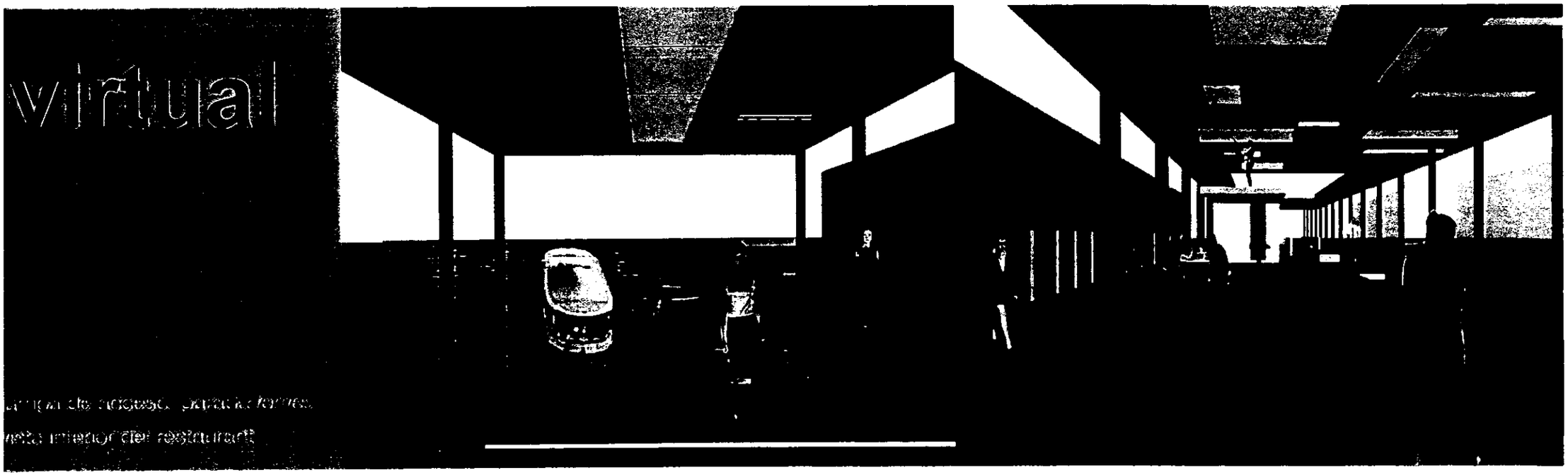


› Fotomontaje de la propuesta dentro del terreno.

virtual



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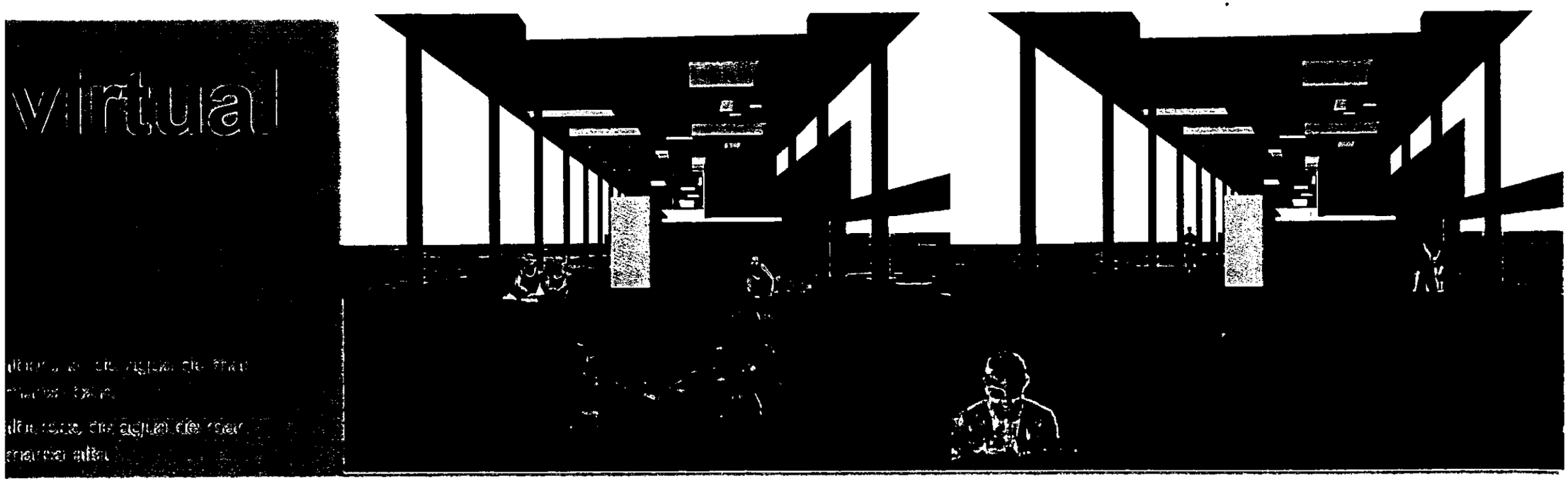


3 4

ESTA TESIS NO DEBE
SALIR DE LA BIBLIOTECA

5

6

tesis:

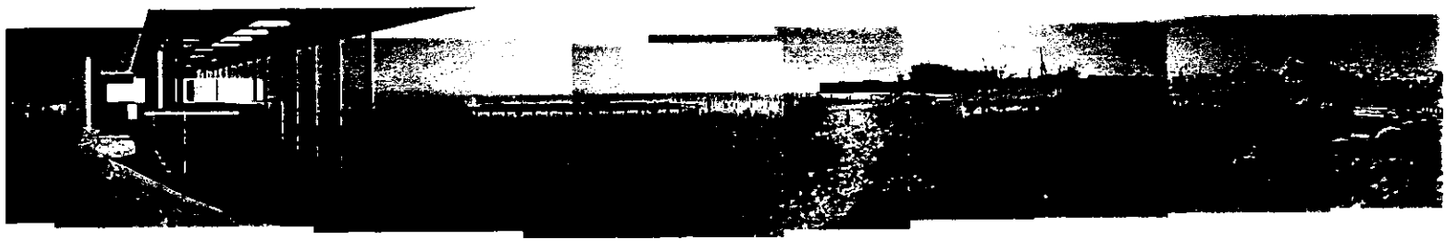
cuífero de san francisco es negado a la población

choque entre la ciudad y la bahía

s de carácter artificial

s :

conexión entre el agua y la tierra en distintas escalas: ciudad, arquitectura y cuerpo



conclusión

La observación es la capacidad de análisis que todo ser humano desarrolla al verse expuesto a los diferentes estímulos del contexto que le rodea. Por ser una vivencia individual, la información se ve filtrada a través de las experiencias previas, conocimientos y emociones, así como las condiciones culturales y sociales de cada persona, creando una imagen particular con la que uno se identifica.

Dicha esencia es la materia prima del proceso creativo. A partir de esta, es posible entablar un diálogo con lo existente para proponer un nuevo vínculo, una nueva conexión.

El presente análisis buscó precisamente dicha meta: crear un lazo entre dos naturalezas distintas, lo sólido y lo líquido; en la escala urbana, arquitectónica y corporal.

Es así como surge la playa urbana, lugar donde las texturas de la tierra y las texturas de la bahía se encuentran.

Por medio de este estudio de caso, fue posible plantear al límite urbano, no como una barrera, sino como una membrana; un elemento poroso, que respirara y sirviera como zona de mediación entre las características propias de la ciudad y el dinamismo del agua.

De igual forma, el lograr replantear el papel que juegan los espacios post-industriales en la trama urbana actual y su posible recuperación (entendida como una reinterpretación de sus características y relaciones), buscó proponer un espacio donde se exploren sus peculiaridades, pero a la vez satisfacer el deseo innato de observar al cielo y comprender el tiempo, la percepción visual y el ritmo de las aguas.

Trascender al lugar, al mismo tiempo al que se refiere a éste. Es así como la ciudad se convierte en un artefacto histórico y arqueológico.

Por ende, el fin de la tesis fue la creación de conexiones, conexiones en el límite; límite de lo estático y lo dinámico, límite de lo natural y lo artificial, límite entre lo oculto y lo evidente.

Vista panorámica del taller de tesis en la Universidad de California Berkeley, Mayo 2000

La vida del hombre se ve directamente influenciada por la toma de decisiones y el aprovechamiento de las oportunidades. A través de la unión de estos dos elementos vamos, poco a poco, conformando nuestro universo, nuestro destino.

Por esto mismo, considero que el haber tenido la oportunidad de haber realizado la propuesta de tesis en la Universidad de California en Berkeley, ha sido una de las experiencias que me ha hecho sentir más satisfecho.

El hecho de encontrarse en un país extranjero, con una cultura y lenguajes distintos, donde todo es nuevo (y en cierta forma asombrante), le permiten a uno crecer tanto académica como personalmente hablando.

En pocas palabras, esta experiencia me otorgó una nueva perspectiva a través de la cual, entender y analizar los conocimientos que uno ha adquirido en el ámbito educacional a través del tiempo. Uno revalora lo que significa su cultura, su familia, su educación y su país,y a la vez confirma el hecho que los profesionistas de la UNAM nos encontramos en el mismo nivel que los mejores del mundo.

Quisiera agradecer sinceramente el gran apoyo brindado por la Facultad de Arquitectura. Oportunidades como estas son de suma importancia en el desarrollo personal y académico de cualquier individuo.

Como última reflexión, esta experiencia en la que tuve la fortuna de participar vino a reafirmar en mi persona el siguiente sentimiento: me siento orgulloso de ser universitario.

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