

ABSTRACT

Title of Document: A RESPONSE TO THE CURRENT
DEVELOPMENT OF VALPARAISO'S
WATERFRONT: AN URBAN MARKETPLACE
THAT STIMULATES THE LOCAL ECONOMY
AND CELEBRATES THE CITY'S GENIUS LOCI

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Valparaiso, Chile, was once referred to as “The Pearl of the Pacific,” and regarded as the chief merchant port of the southern Pacific. In the midst of poets and fishermen, a special identity was forged. This identity is now registered on the UNESCO World Heritage list, but is threatened by economic deterioration, blighted infrastructure, a waterfront that is alienated from the city by train tracks and a raised highway, whose use is limited primarily to warehouse storage of containers for the shipping industry.

The city is coming to recognize that its future development is to be found in the promotion of its cultural heritage, its arts, and its relationship to the sea and hill, yet the impetus for redevelopment and preservation of the harbor may be a threat to Valparaiso's identity as well. A master plan for the 14 hectare stretch of the Puerto Baron waterfront outlines general building regulations and land use of different zones to be used by different developers for which contracts began to be awarded in 2005. While the master plan's intention is to provide an urban and tourist impetus to the district, the plan may actually

weaken the port-city relationship. The plan does not respect or address the city's current social, economic, and infrastructural conditions, as well as its genius loci. The EPV's hypothetical renderings of the vision lack spatial and massing hierarchy, provide over-scaled infrastructure and public spaces, and unappealing architecture insensitive to Valparaíso's character. Also, the EPV plan caters mostly to tourists, the private realm and new businesses, but the economic structure in Valparaíso is currently dominated by its micro and small businesses, employment groups that are already at the highest risk of unemployment. The EPV vision as a whole is foreign and out of sync with the unique identity that makes Valparaíso worthy of preservation and World Heritage

The posed threat for Valparaíso's cultural heritage, local socioeconomic condition, and identity, drives this thesis to critique the EPV urban design by creating an improved framework for future waterfront development. The framework will define the street grid, block size, scale of infrastructure and spaces, and will secure compatibility, congruence, and continuity with the existing context.

This thesis proposes that the EPV applies their building program to the thesis urban design framework, with exception of the entry node of the waterfront, the immediate area of intervention that this thesis will be concerned with. This node is to be reserved for the local economy, through the design of an urban marketplace, which would also include a train station, water entertainment facilities, and exhibition space. The marketplace will serve as a design standard for developers and architects, informing them about appropriate functions, forms, technology, and esthetics of their buildings. Valparaíso's urban waterfront as a whole should provide a harmonious sense of place that respects and celebrates the character and history of Valparaíso, and engages both residents and tourists while generating opportunity and growth for the local and regional economy.

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WATERFRONT: AN URBAN MARKETPLACE THAT STIMULATES THE LOCAL
ECONOMY AND CELEBRATES THE CITY'S GENIUS LOCI

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Thesis submitted to the Faculty of the Graduate School of the
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Master of Architecture

2006

Dedication

To my mother for teaching me the artistic, my father the analytical, and my brother to relax.

Acknowledgements

I would like to thank my committee and the many other people that made this possible, through physical and/or mental help, among those Kim Lee, Jason Shih, Jeannie Ahn, John Bryant, Andrew Wade, Dave Jones, and Andy Murray.

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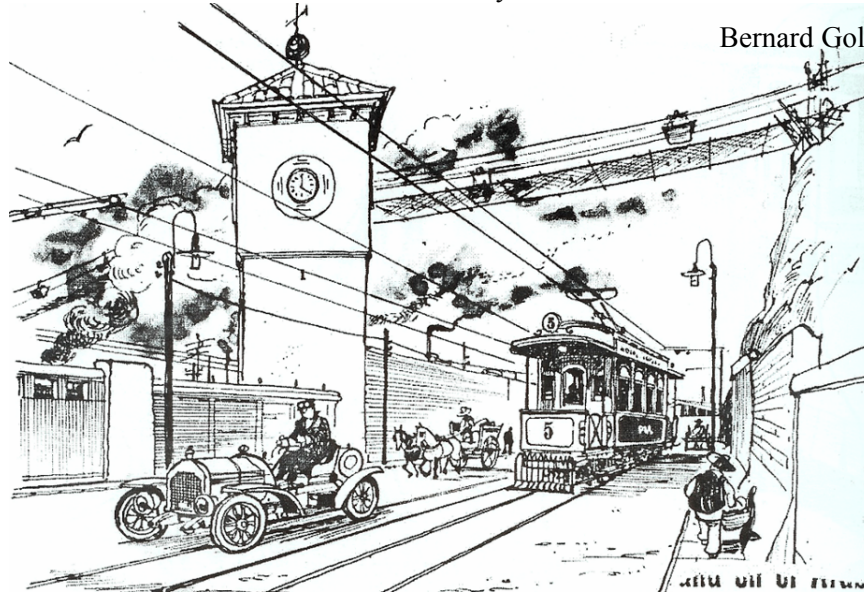
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Chapter 1: Introduction

“To build on the water is to affect our living in three ways: aesthetically, sociologically and economically.”

Bernard Goldberg



(Image courtesy of Lukas)

Figure 1: This is the view of the “coast” from the street immediately parallel to the water in Valparaíso. Although it is of the early 1900s, this condition persists today. The image embodies the technological (trolley, automobile, funicular), social (walking blue collar, carriage riding white collar, automobile riding bourgeoisie, and economic arrangements of Valparaíso’s waterfront, and the aesthetic that corresponds to each.



Port of Valparaiso: Genesis

Every port has its history, which time and humans shape into legend. Valparaiso, Chile, was founded in one of the most southern, remote regions of the world, bounded by deserts, the Andes Mountains, ice fields, and the Pacific Ocean. Valparaiso gained prominence as the only port connecting Chile with the rest of the world. Chile's independence from Spain in the early nineteenth century, and its strategic location between the Atlantic and the Pacific, gave way for Valparaiso to become the chief merchant port of the southern Pacific, although the port city was never officially founded. The city expanded towards the sea and the hills spontaneously, modestly and precariously.



Figure 2: Expansion of city towards sea and hills, 1800's photograph. (Image courtesy of Universidad Catolica de Valparaiso).

In the midst of poets and fishermen, a special identity was forged. Ships and their crews traveling from Britain to China, California to New York, and Spain to the Philippines, stopped in Valparaiso, leaving their goods, their passengers, and their memories behind (Monteira and De Groote, 26). The sailors, traders, pirates, and immigrants also carried back and forth with them a part of Chile, and in this way they gradually fashioned the past and the future social, economic, and aesthetic fabrics of Valparaiso. The product of this condition is the experience of Valparaiso today, reflected in its colorful character, eclectic architecture, and bohemian culture of poets, artists, and manual laborers (Harris Bucher, 46). The most precious traces of this are now part of World Heritage .



Figure 3: 1700s



Figure 4: 1850s

Figure 5: 1900s

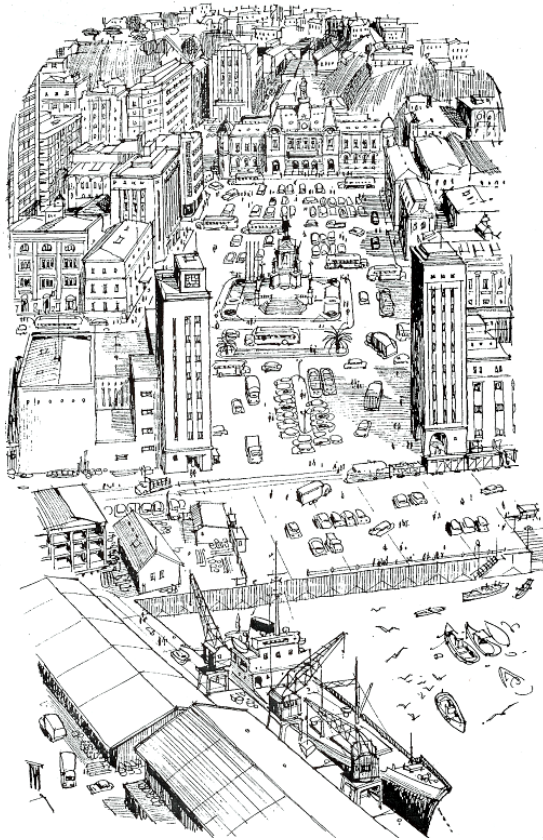
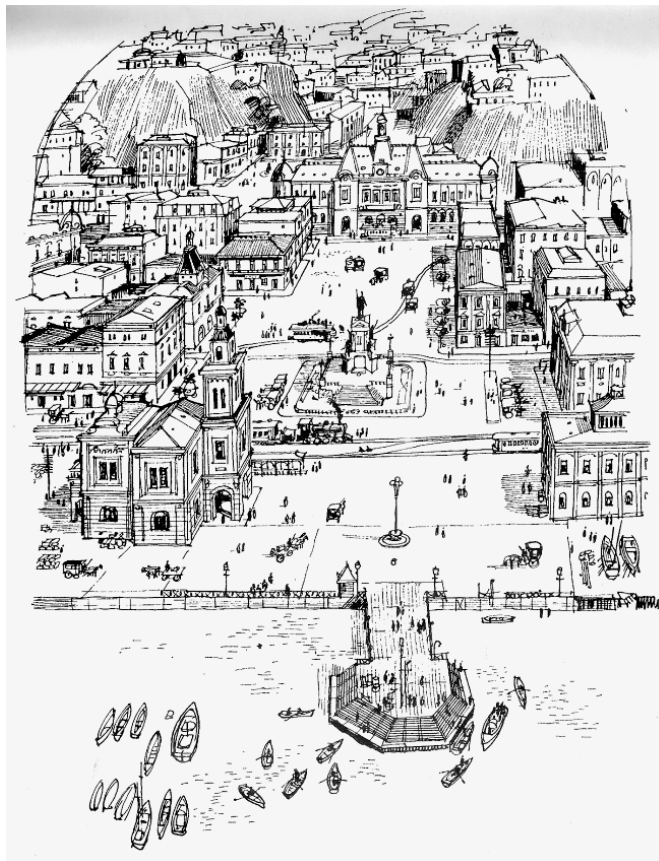


Figure 6: Present
Figures 3-6:
Valparaíso seaport, Pratt Pier,
heart of today's World Heritage
Historic Quarter.
(Images courtesy of Lukas)



Port of Valparaiso: Growth and Decline of Economy

Due to its location and development, Valparaiso acquired international importance and gained access to the industrial era and a wide range of markets. The city acquired its principal characteristics in the second half of the nineteenth century, when the industrialization process was at its height, acquiring a railway line that connected Valparaiso to Santiago, the political capital, a trolley system, and funiculars. Since its birth in the mid 1500s, the port of Valparaiso gained much British influence, from its pirates that looted ships and homes, to the industrialists, merchants, and importers in the 1800s that converted the city into the economic epicenter of the country (Robinson Wright, 14).

Due to these port, commercial, and military activities, the population tripled from 1819 to 1822, from 5,000 to 16,000. At this height, Valparaiso began to lose its economic strength at both the regional and national scale. By 1900, the population had risen to 200,000, but the earthquake of 1906 killed 2,300 people, and destroyed many buildings in the southern part of the town. Subsequently the opening of the Panama Canal in 1914 (reducing traffic through the Strait of Magellan and Cape Horn), the great depression of the 1930s and the end of the saltpeter mines put an end to the port's expansion. Valparaiso lost its preeminent position. Since then, the city and its port have undergone neglect and deterioration, further aggravated by the privatization of the coast during the dictatorship in the 1970s. 100 years later, the population of Valparaiso has only risen to 275,982 (Harris Bucher, 231).

Chapter 2: Identity

Justification for World Heritage Status

The city is coming to recognize that the foundations of its future development are to be found in its cultural heritage, its traditions, its arts and its relationship to the sea. In 2003 the Historic Quarter of the Seaport City of Valparaíso was placed on the UNESCO World Heritage List, creating an impetus for redevelopment and preservation of the coast. The Historic Quarter is in the southern region of Valparaíso, and is where most of today's cargo shipping and naval activities occur.

The approval of Valparaíso's Historic Quarter as a World Heritage Site was based on the city's "unique testimony to a cultural tradition, acknowledging that the site offered exceptional testimony to the early phase of globalization in the late nineteenth century (Monteira and De Groote, 29)."

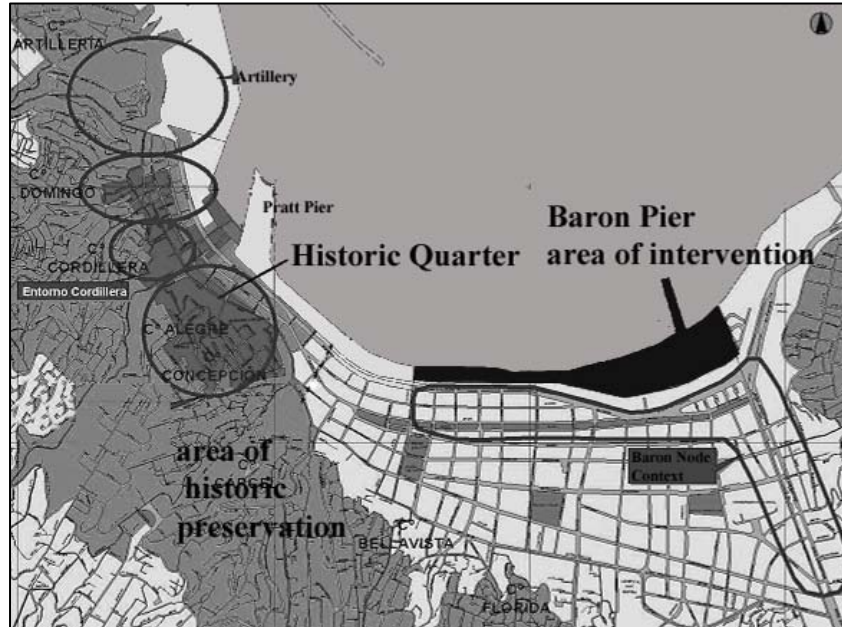


Figure7: Historic Quarter (medium grey) and area of historic preservation (lighter grey) relative to Baron Pier Project site (black). (Image courtesy of EPV).

Social Diversity and its Aesthetics

Ships and their crews, stopping in Valparaíso from Britain, China, Italy, or the Philippines, left their goods, their passengers, and their memories, and gradually fashioned Valparaíso's social, economic, and aesthetic fabrics. Valparaíso was never “planned,” and its transformation has been difficult and gradual, where its immigrant and local “developers” have had to improvise and transform a difficult site, victimized by steep topography, earthquakes, fires, and floods, into an amenity. This has instilled in the social capital of Chile a strong will during adverse situations, a spirit of solidarity and tolerance towards the strange and the different, and the skill of problem solving and improvisation (Alvarez, 23).

It has also instilled in the residents the need to celebrate the good life. As a response to the social and economic decline of the early 1900s, the port became a host for festivities of every artistic nature, from everywhere in the world. Aristocracy, middle and lower classes all indulged in and relied on national and international dance, theater, music, art, and literature. The cultures of liberal arts and intellectual exchange were the pleasures and passions of daily life (Alvarez, 89).



Figures 8 and 9: Valparaíso post cards; reflect market and arts culture. (Images courtesy of <http://64.87.49.119/paginas/archivofoto2.htm>).

Some of the memory of the arts is preserved in the Municipal Museum of Bellas Artes, the Municipal Gallery of Art, La Sebastiana (the last home of Nobel Prize Winning Pablo Neruda), and Museum of the Open Sky, a network of murals throughout the city walls, some painted by well known artists like Nemesio Antunez and Roberto Matta.

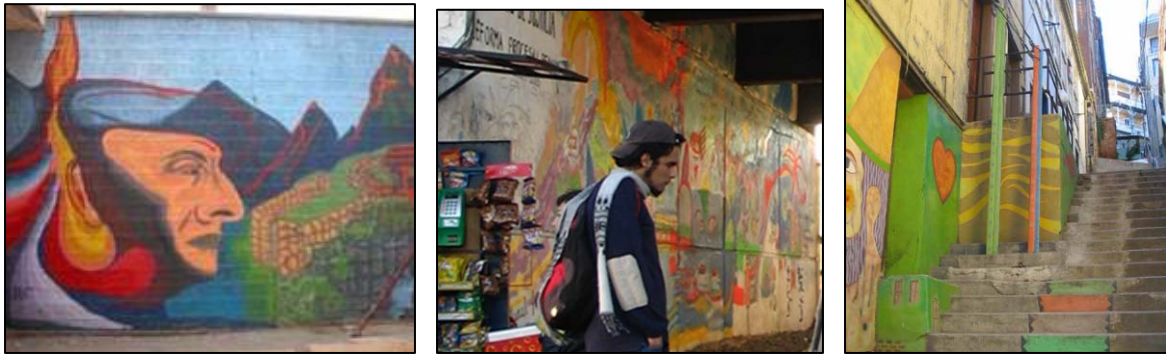
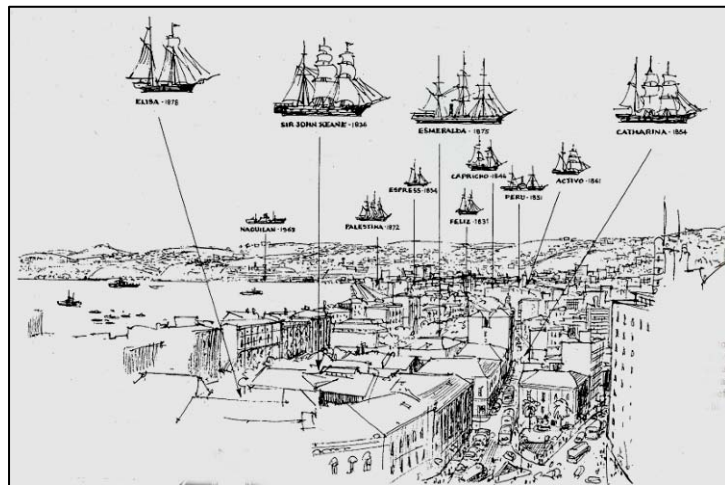


Figure 10: Museum of the Open Sky paintings are found all throughout the lower and upper city.

The memory of maritime history is also preserved in the bay's warehouses, familiar monuments commemorating seafaring heroes, an underwater archeological collection of shipwrecks, and even in the colorful bars and cafes associated with the sailors and fishermen using the port.



Figures 11 and 12: Sketch of bay, shipwrecks highlighted

The bohemian port-city not only boasts great cultural and artistic activity, but also a strong intellectual base. The educational level of Valparaíso is superior to that of the national level, which already has a literacy level over 98%. These conditions, and the fact that Valparaíso houses eight important traditional and private universities, justify the designation of the city as Chile's "cultural capital" (www.municipalidaddevalparaiso.cl).

Architectural Diversity and its Aesthetics

A variety of architectural styles from different periods and styles are found in the urban layout, including informal constructions that attest to the creativity of the type of improvisation practiced by port inhabitants, in which they use their own unconventional used materials, such as the corrugated metal from containers, and apply flavorful color. Some styles are traditional, others modern, making neo-baroque, neoclassical, and neo-eccentric references. Throughout the city, the architecture alternates between defining space, and the wall is continuous, or claiming space and the building is an object.



Figure 13: Liberal use of corrugated metal, as well as the combination of other materials: wood, brick, concrete, and adobe.



Figure 14: Hybrids of British, French, German, and Italian architecture

Physical Form and its Aesthetics

The unusual terrain of Valparaíso, an amphitheater facing the sea, has imposed on the city multiple urban and architectural forms and perspectives. As the houses of the city, and their creators, climbed the hillsides using ingenious and creative solutions in order to claim land and a view of the sea, their volumes stacked, cranked, and interlocked. As a result, the only orthogonally gridded part of the city is at the base where there is no slope and the rest of the streets climb where they can.

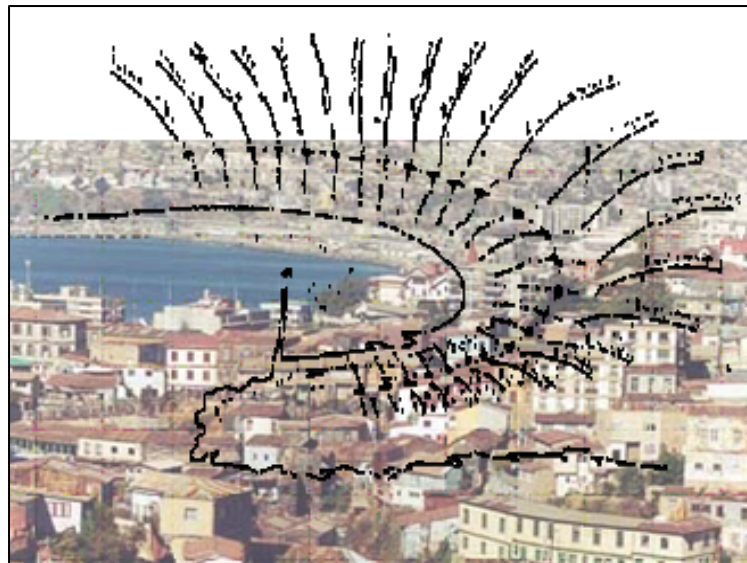
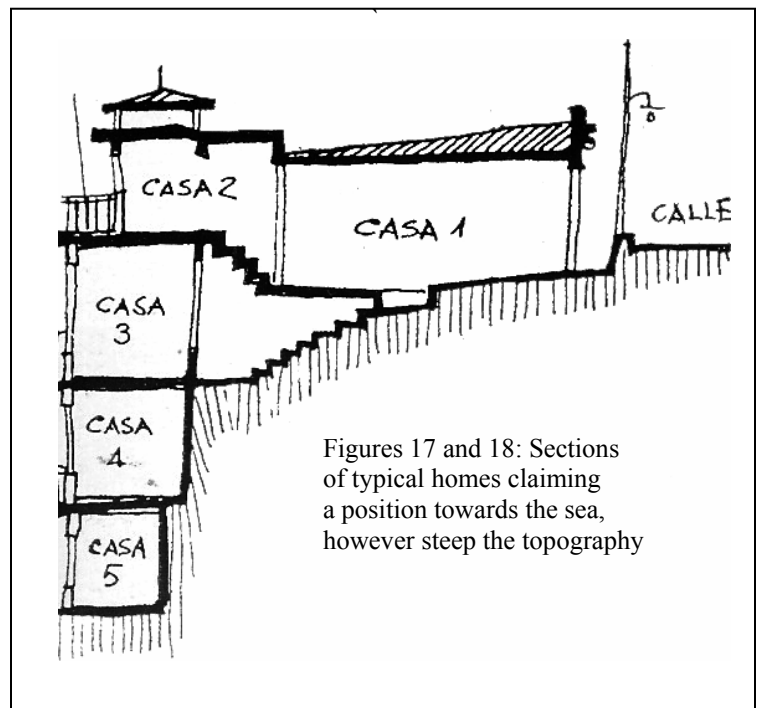
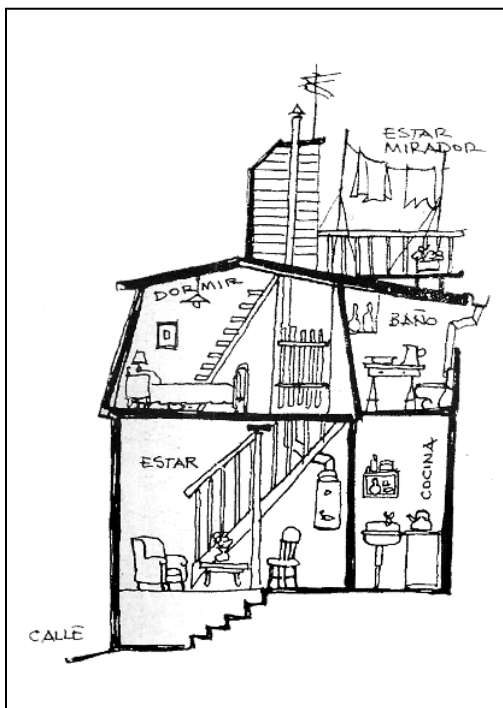


Figure 15: Amphitheater diagram of Valparaíso



Figure 16: View from one of the residential hills; everyone gets a piece of the sea

The view out over the roofs is a typical feature of the city, as is the wide range of colors and textures of building materials.



Figures 17 and 18: Sections of typical homes claiming a position towards the sea, however steep the topography

Economic History and its Aesthetics

Another part of the identity of the city is its funiculars (or elevators) and trolleys, which are also an essential part of daily life. Valparaíso once had 30 working elevators, of which only 15, over 100 years old, are still in use today. The oldest trolleys in the world, manufactured by Pullman Standard in the late 1840s, are still in their original working condition (Monteira and De Groote, 26).



Figures 20 and 21: Elevator/funicular Cerro Baron, left, and Santo Domingo, looking north towards industrial port, right.



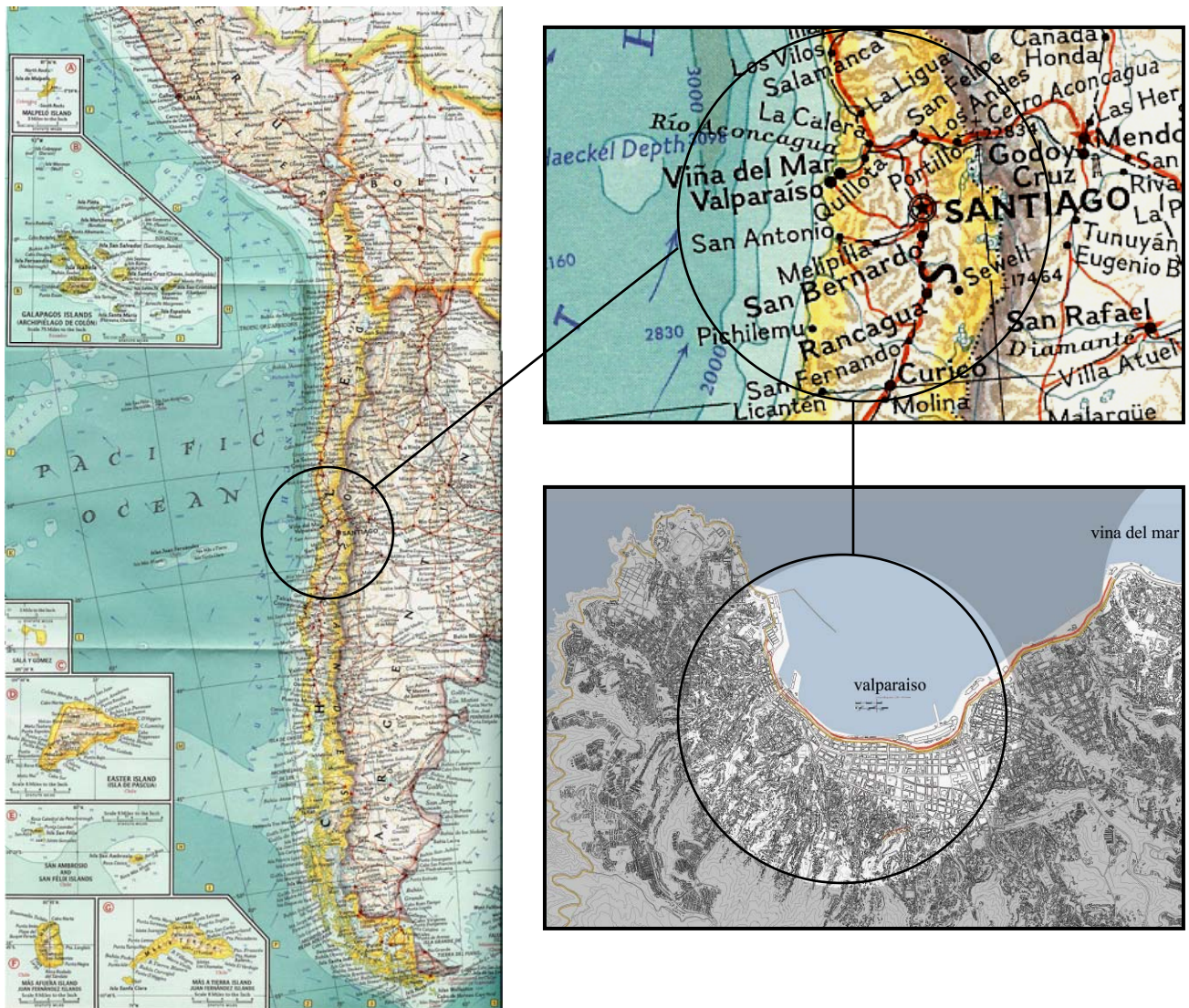
Figures 22 and 23: Elevator/funiculars and their influence on the architecture, or vice versa.



Chapter 3: The Site

Chile and the Seaport of Valparaíso

The region of Valparaíso is located in central Chile, where its capital is the city of Valparaíso, located 120 km northwest of Santiago and 8km south of Viña del Mar. The region of Valparaíso is active and industrial, with a port that serves five regions of Chile, including the Cuyo Region in Argentina. Main cargo transferred through the port comprises import goods like chemical products, mining and industrial products, vehicles, copper, framing and industrial products, foods, and fresh fruits (EPV).



Topography

In the 19th century the city's coast gradually filled with sediment from the hills, both naturally and intentionally (Monteira and De Groote, 28). The city and seaport progressively claimed land on the sea or up the hills, settling in the most unlikely spots, vulnerable to winter storms and the occasional earthquake or fire. Valparaiso is an amphitheater looking out to the ocean, each house claiming a window on the Pacific. The city is currently cradled by 42 hills and 17 gorges.

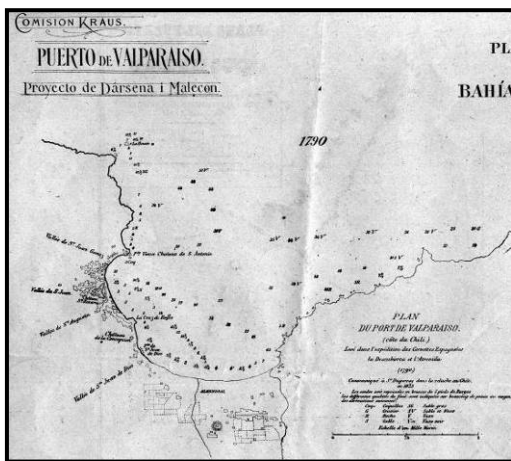


Figure 27: Valparaiso, 1790

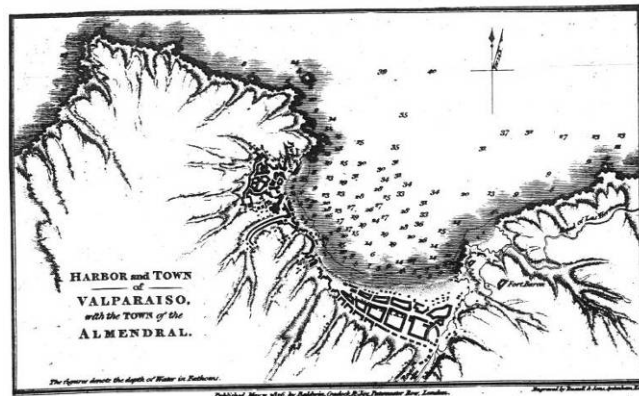


Figure 28: Valparaiso, 1826



Figure 29: Valparaiso, 1854

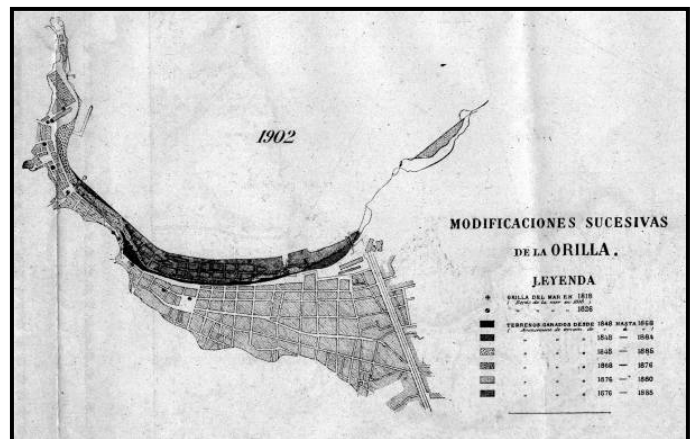


Figure 30: Valparaiso, 1902

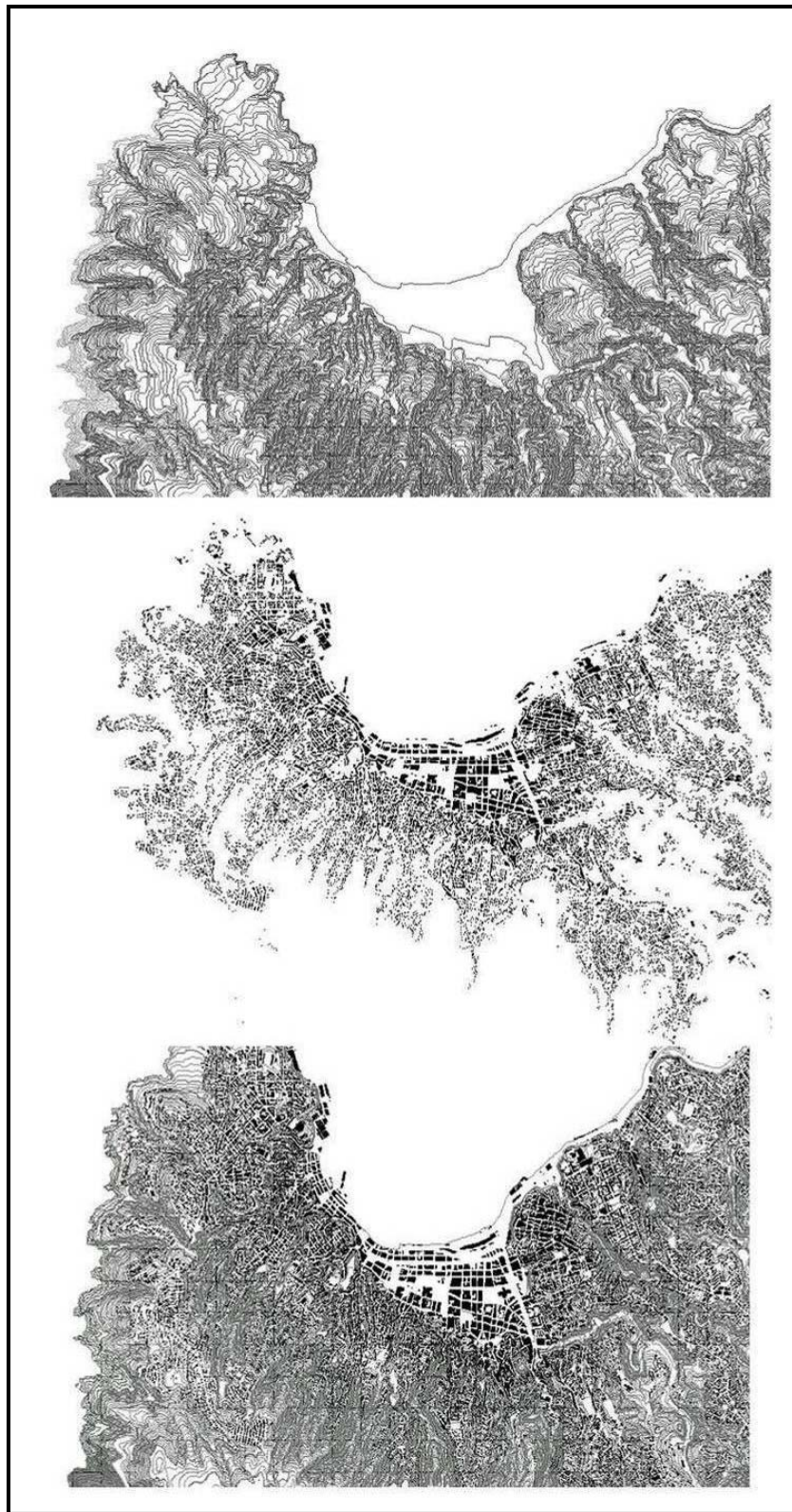


Figure 31: Density growth of city- first the plain, then the hills. (Images courtesy of Universidad Tecnica Federico Santa Maria, Valparaiso).

Economy: Tourist Potential

The region of Valparaiso has an enormous tourist potential, due to all of the amenities before mentioned, and reinforced by the fact that Valparaiso and Viña del Mar were the second most visited places in Chile (2002). The city's particular geographic distribution offers remarkable figural and spatial moments between the hill, city, and sea, and excellent connection to and through the three entities by metro, roads, and a transit system of buses, trolleys, and "collectivos" (shared taxis), and light rail, facilitate their experience.

Figure 32 below highlights the major connections, the historic sector (4 and 5) and the Municipality's proposed areas of development (2 and 3). Please refer to the amenities diagram for more information about Valparaiso's opportunities.

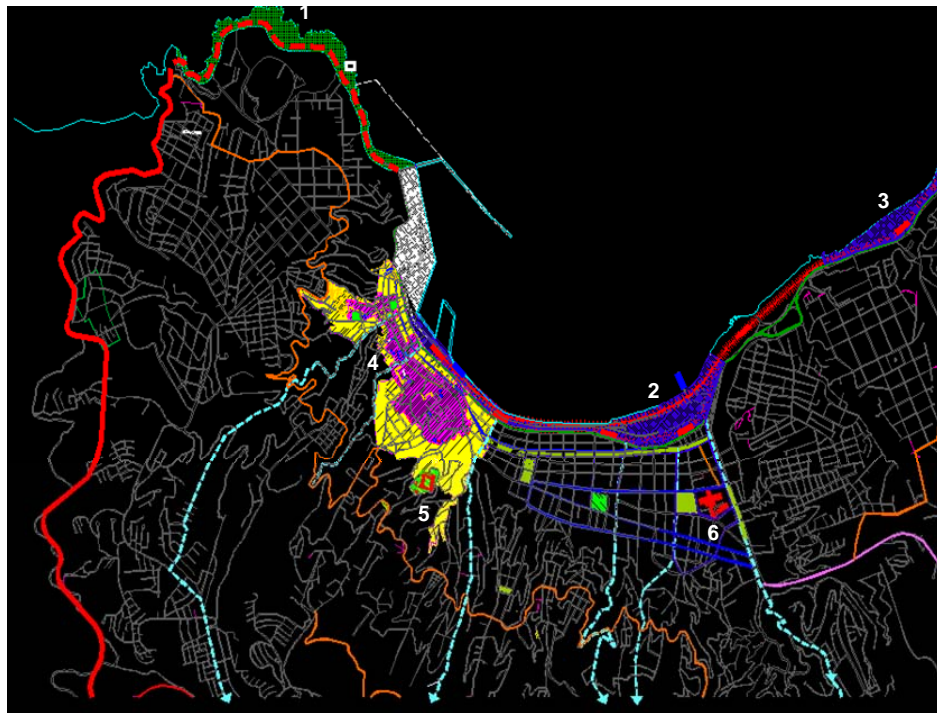
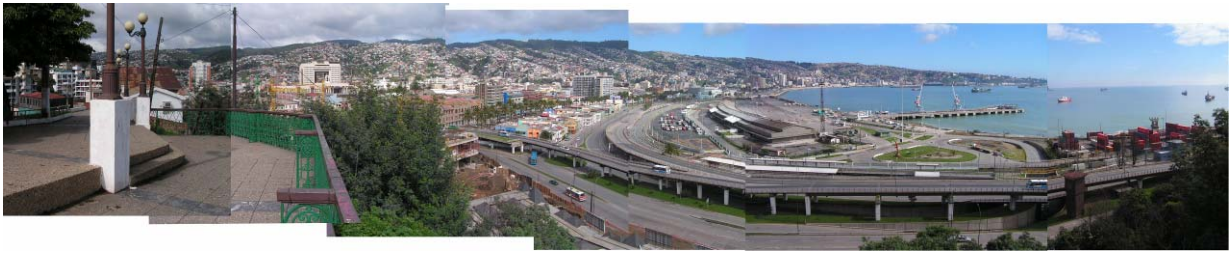


Figure 32: Historic sector (numbers 4 and 5) and the EPV's proposed areas of development (2 and 3).
.. (Images courtesy of Universidad Tecnica Federico Santa Maria, Valparaiso).

Project Site Location

The area of the Puerto Baron project that the EPV is developing corresponds to the entrance node of Valparaíso, where Avenida Errazuriz, the main coastal highway connecting the city with its modern sister Viña del Mar, intersects Avenida Argentina, the street perpendicular to the water and the hills, the link to Santiago. Strategically located within the port and immediately adjacent to Valparaíso's civic center, the area comprises approximately 14 hectares, or 14,000 m², and 459,200 sq.ft.



Figures 33 and 34: Panoramic of the Baron Project site, looking south from the entrance node on Avenida Errazuriz. The elevated highway, the warehouses, containers, and rail tracks create a massive wall between the city and the sea.



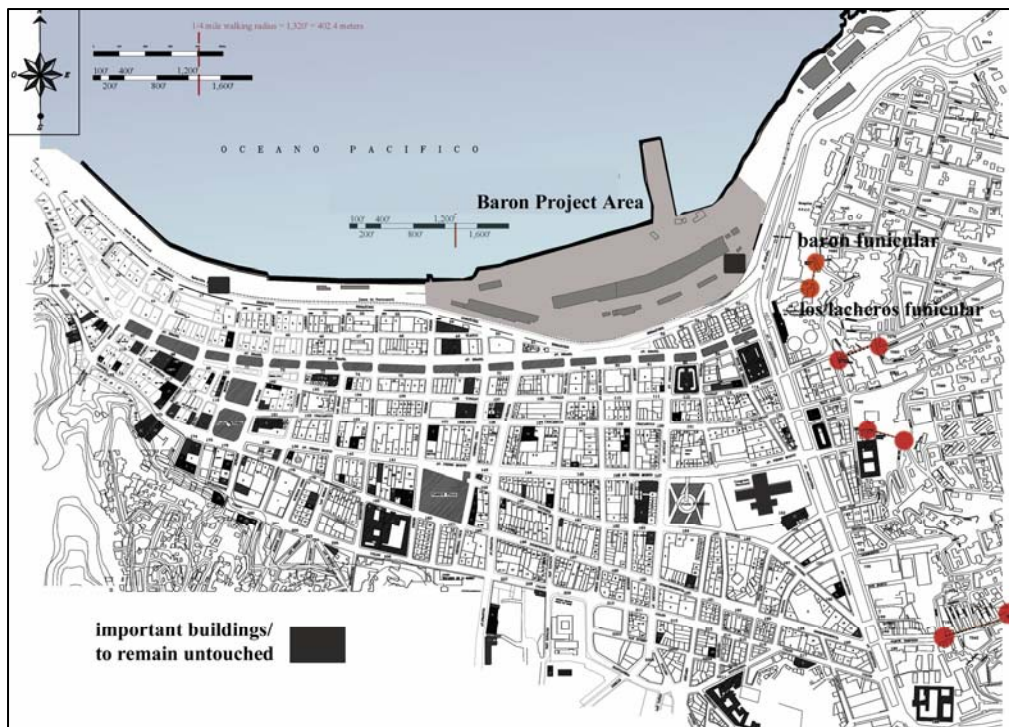


Figure 35: Plan of Valparaíso, with Baron Project area highlighted, important buildings in black and funicular trajectory marked in red.

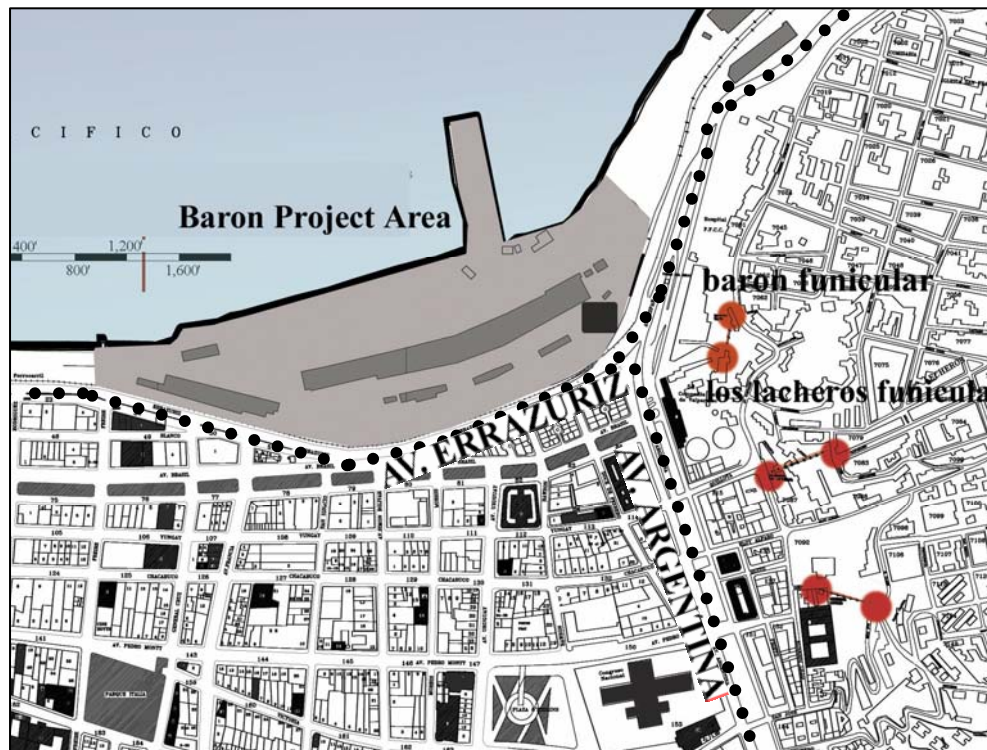


Figure 36: Intersection of Ave. Errazuriz (from Viña del Mar) and Ave. Argentina (to Santiago).

Existing Conditions of the Puerto Baron Site

The buildings on or fronting the waterfront, as well as much of the rest of the city, suffer greatly deteriorated infrastructure. Land use along the coast has been limited primarily to industry and warehouse storage of containers, and is isolated from the city by train tracks, a raised highway, and an unbroken fence. Another issue particular to the Puerto Baron site as the main entrance node into Valparaiso, is the lack of a proper entry experience. A proper gateway into the city would be one that celebrates the moment of arrival, providing a positive first experience, and continues the experience by clear orientation into the city matrix or along the waterfront drive.



Figure 37: Site constraints to waterfront: warehouse, raised highway, rail tracks, and privatization of waterfront to port or naval use.

Existing buildings on the site are the warehouse, its service buildings, and the newly renovated Baron Pier, the only public part of the site. Baron Pier has an overlook offering a view of the entire bay and in particular, the herds of sea lions that lay out in buoys and docks. The pier consists of a promenade that begins at the lower city's ground level, and rises to a second level, above a café. There is no visual or physical connection to this new pier from Avenida Argentina or Errazuriz.

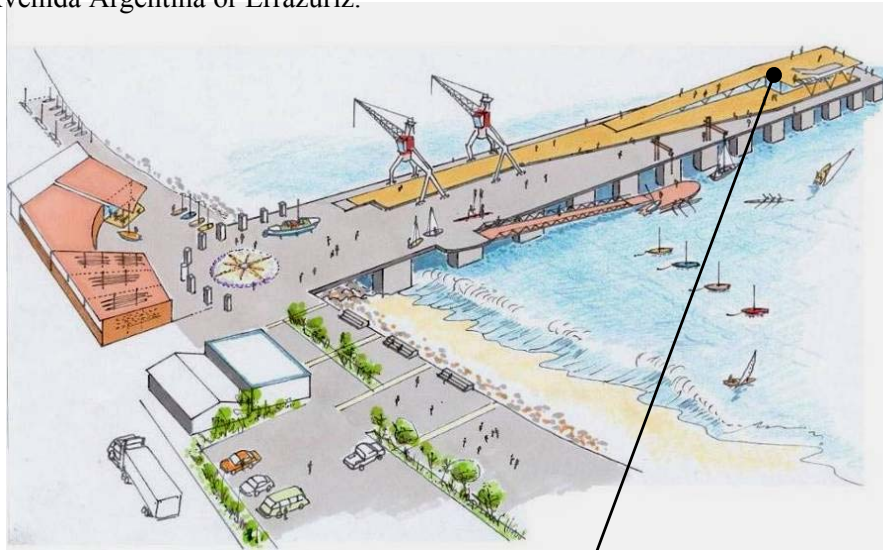


Figure 38: Renovated Baron Pier, 2004.

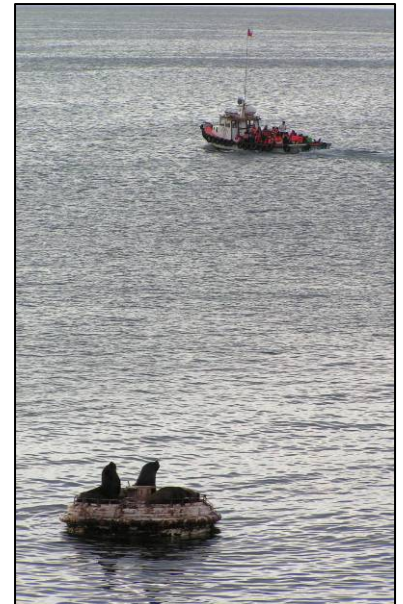


Figure 39: Renovated Baron Pier, view from end of pier towards warehouse and city, and view of the sea lions when facing the other way.

Relationship of Site to Urban Fabric

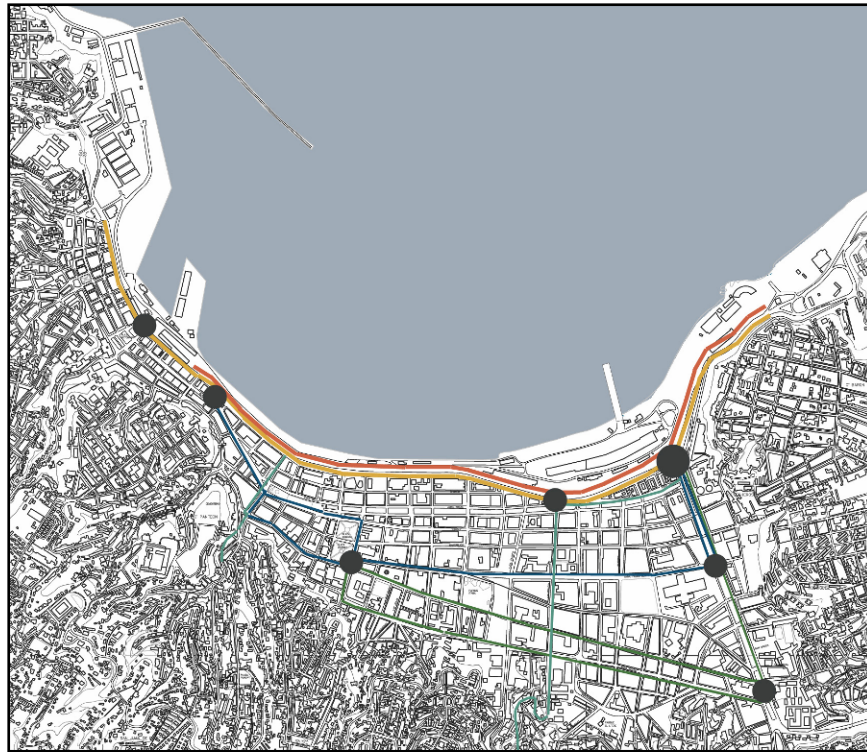
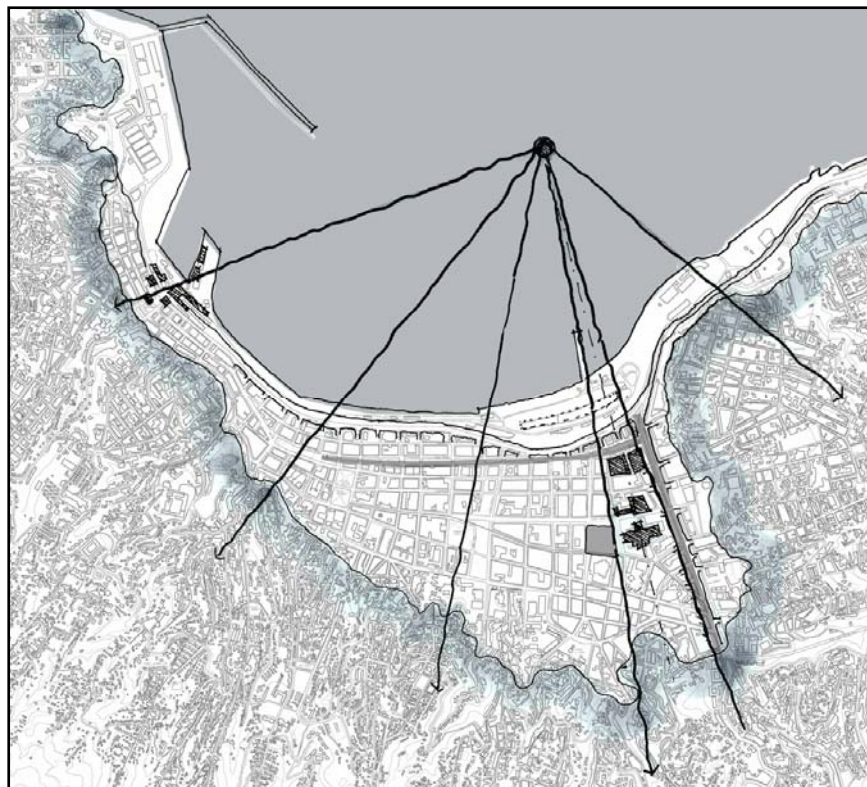


Figure 40: Transit systems and the important intersections. Red- rail line; yellow, greens and blues- city public bus and taxi routes.

Figure 41: Axes created by the amphitheater.



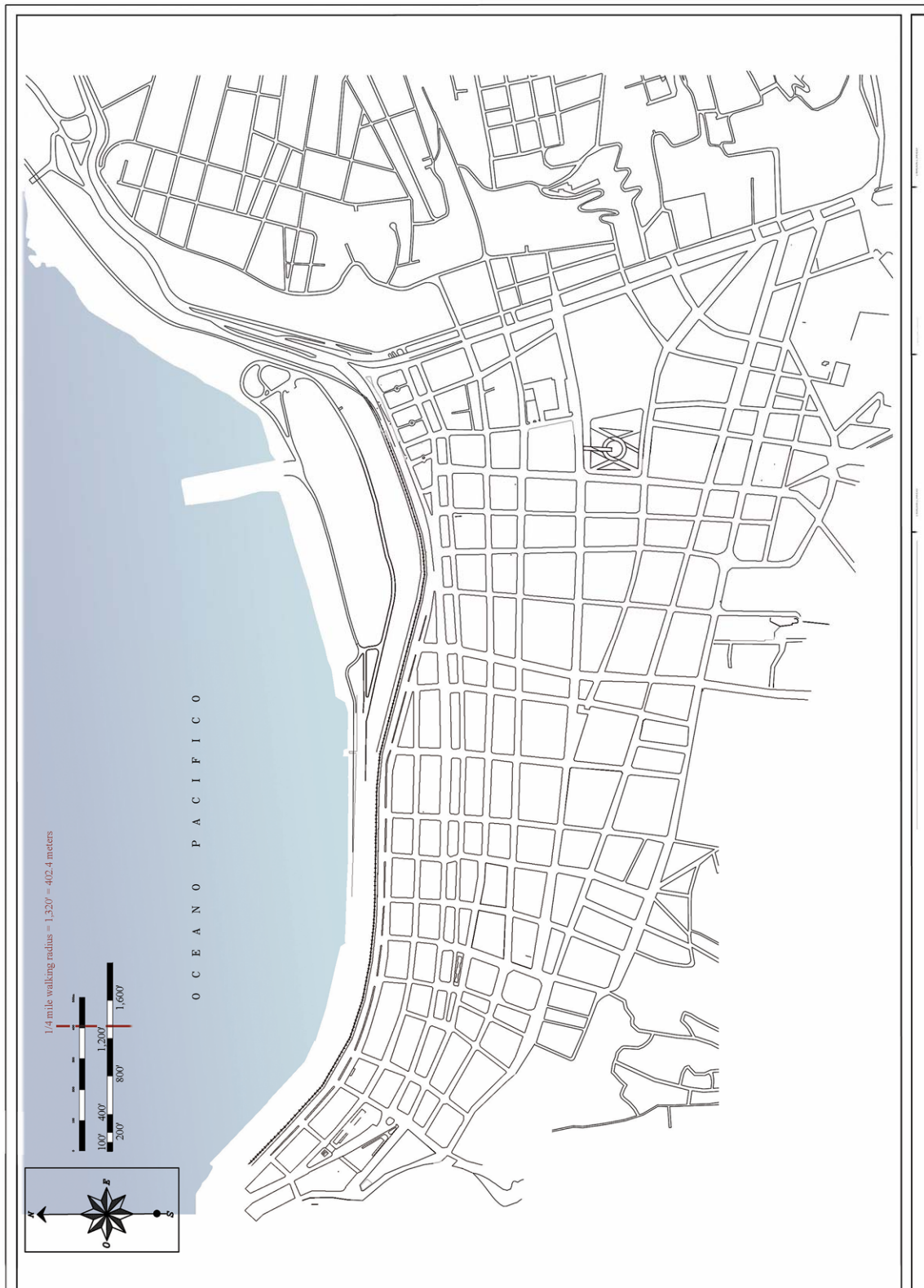


Figure 42: Grid system of city.

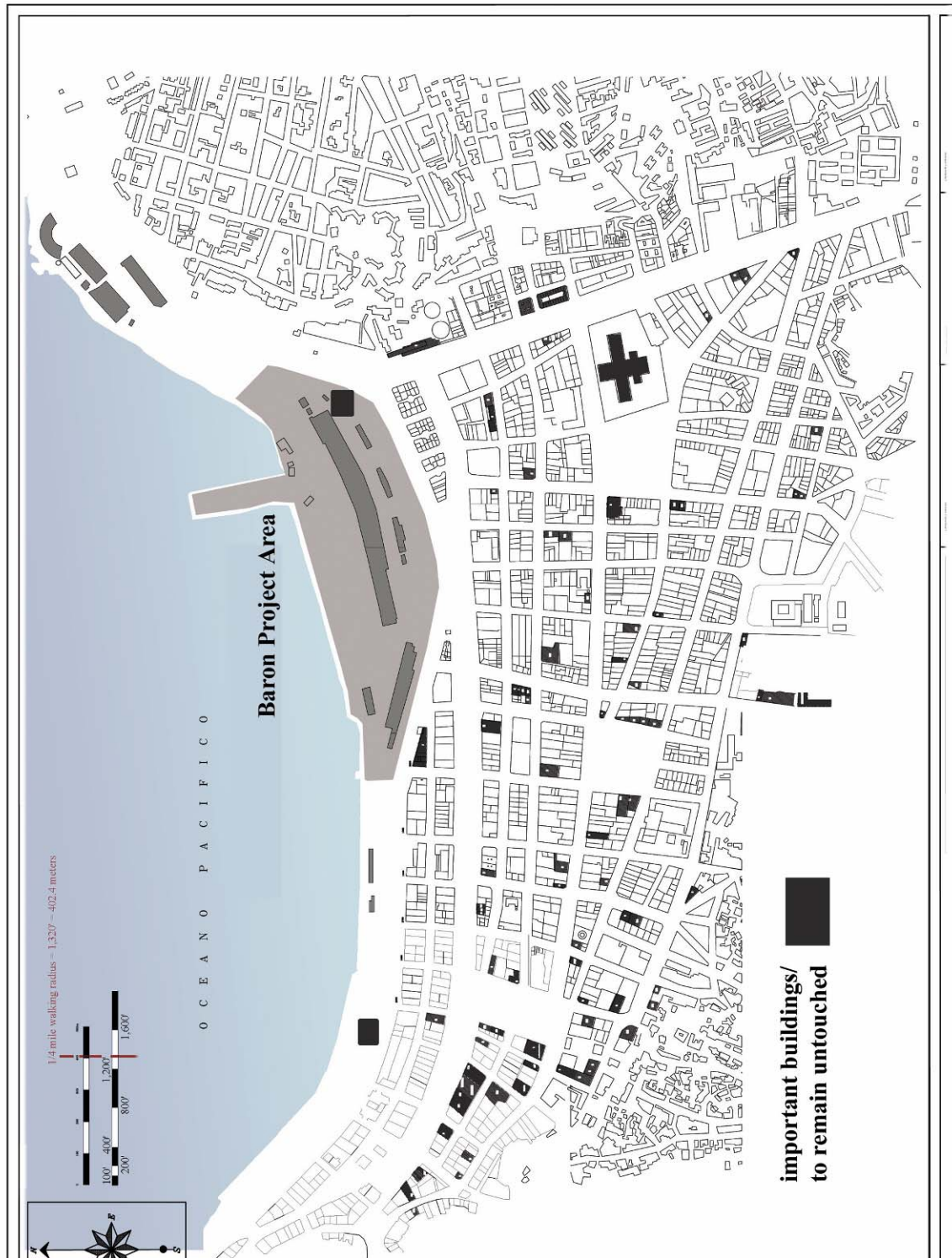


Figure 43: Buildings of functional importance or value to the city.



Figure 44: Land use of Valparaíso and five minute walk radius.

Climate and Microclimate

Valparaiso's small port is built on a rugged coast that is sheltered by the surrounding hills from currents and southerly winds. The climate is temperate, akin to that of the Mediterranean shore (a maximum of 19°C and a minimum of 11°C), with rain falling mainly in the winter. Vegetation consists of mostly scrub with local areas of small trees, and thin grass (www.municipalidaddevalparaiso.cl). Two characteristic and native trees of the area are the palm tree and the eucalyptus tree.

Demographics and other Statistics of Relevance

According to the 2002 census, the region of Valparaiso has a population of 1,539,852, with the city of Valparaiso accounting for 275,982 inhabitants (South Andes Capital). All of the nation's naval institutions and those governing its customs and fisheries are based in Valparaiso (Monteira and De Groote, 30). The city is also the Cultural Capital of Chile, with 32,000 students and a 3,000 teaching staff creating an important university center and a strong contribution to the city's strong cultural profile (Robinson Wright, 45).

The economic structure in Valparaiso is currently dominated by its micro and small businesses:

Type of Business	N° (%)	Capital (%)
Micro	81,6%	11,9%
Small	15,3%	18,7%
Medium	2,3%	21,3%
Large	0,8%	48,1%
Total	100,0%	100,0%

Figure 45: (Source: Mercados Regionales, 2000)

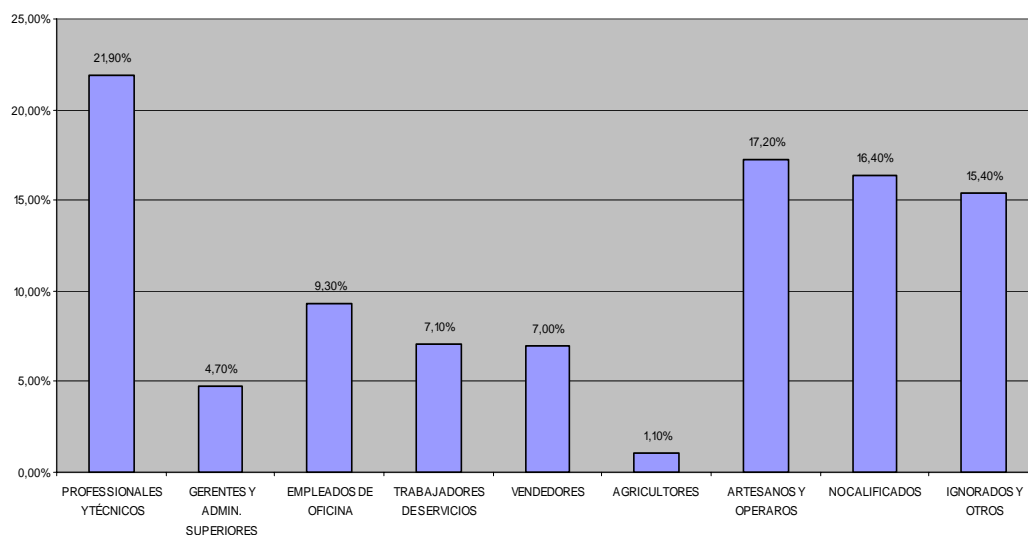


Figure 46: Type of employment for Valparaíso, 2004. Artisans and manual laborers are the second largest group. (Graph courtesy of South Andes Capital).

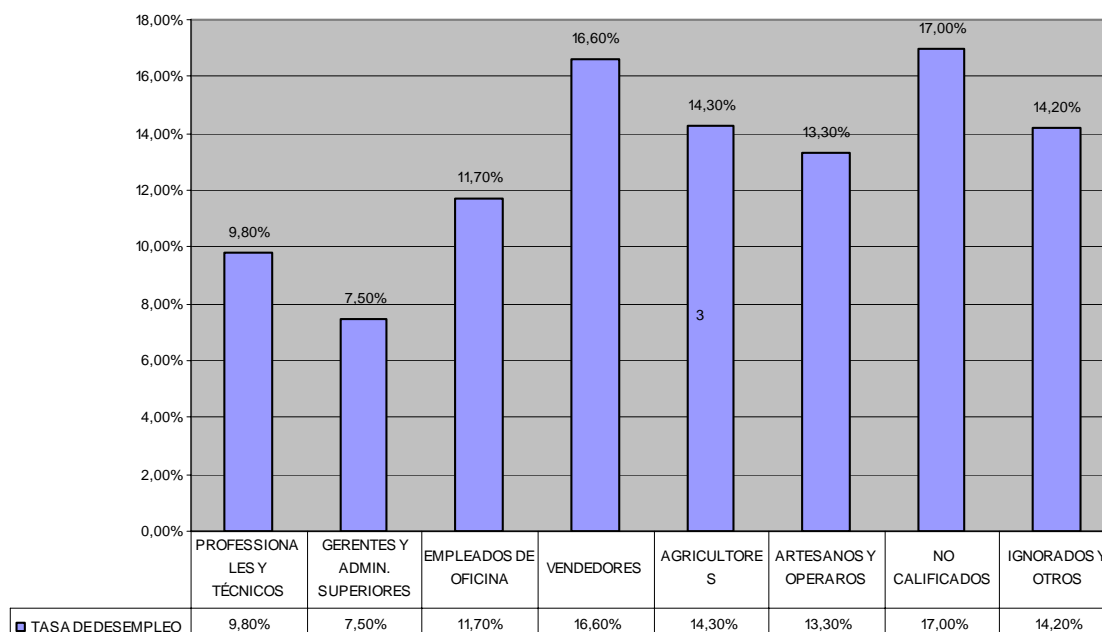


Figure 47: Unemployment rate for Valparaíso, 2004. The highest rates of unemployment besides the “not specified” or “not qualified” are the merchants/retailers, agriculture, and artisans/manual laborers (Graph courtesy of South Andes Capital).

The next graph compares Valparaíso with Viña del Mar, its more modern, sister city to the north. Viña del Mar’s tourist market is fifteen times more successful (8,361 more) and gains almost two times more in gross per capita income (123,797 more),

	Total	Agriculture and Fishing	Industry	Elect, Water and Gas	Construction	Commerce	Tourism	Transit	Financial Services	Social Services
Viña del Mar	271,681	135	86,207	6,823	22,063	29,884	8,962	50,007	14,575	53,024
Valparaíso	147,884	2,630	8,786	6,237	7,725	23,233	601	38,877	11,331	48,465

Figure 48: Gross per capita income, in millions. (Source: Mercados Regionales, 2000).

These statistics reflect in numbers the reality of the social and economic problems facing Valparaíso, and should inform the architectural solutions in terms of proposing the appropriate functions, and identifying the critical users. The second and third largest employment groups of Valparaíso are the artisans and manual laborers, respectively. They are also among the highest at risk of *unemployment*, along with the other small businesses of merchants/retailers and agriculturists.

It is critical that these employment groups, who also provide the base for the city's culture and reason for tourism, be seriously integrated into the Municipality's plan for waterfront revitalization.

Chapter 4: The Threat for Valparaiso: EPV Proposal



Figure 49: Bad solutions threatening Valparaiso's identity; this building is a renovation of a historic 1800's building.

The Threat for Valparaiso

Diversity is the principal characteristic of Valparaiso, translated in its styles and types of buildings, as well as the perspectives afforded by the imbrications of hills, gorges, plains, and sea. Yet the unusual relief of the coast lends unity and harmony to its landscape. This allows the sector inscribed on the World Heritage List to challenge the traditional notion of 'homogeneity' in the evaluation of historic centers. Valparaiso's chief value lies precisely in the multiple facets that render it kaleidoscopic, and the "adventurer" level of effort that is required of its visitors to explore and appreciate the city (Heritage, 23). The issue of Contextualism and "respect for character" becomes difficult in a place that embodies eccentricity, and not only tolerates but appreciates the new and different. How should a new development, especially one as strategically located as Puerto Baron's, at the stage of the amphitheater, come to be in unity and harmony with Valparaiso? Tolerance and appreciation of the different does not imply that the city should welcome everything. Just as the audience in the amphitheater will be attentive of what's on stage, what's on stage needs to be attentive of its audience- its transient *and* permanent audience.

The EPV Proposal

A master plan for the 14 hectare stretch of the Puerto Baron waterfront outlines general building regulations and land use of different zones to be used by different developers for which contracts are being awarded to in 2005. While the master plan's intention is to provide an urban and tourist impetus to the district, the allotment of zones to different developers creates a versatility that may actually harm the plan's intention of strengthening the port-city relationship. The plan caters mostly to tourists, the private realm and new businesses. The executive summary of the Port Company's intentions for the Puerto Baron project reads as follows:

“The main goal of the EPV is to promote a new development with significant real estate investments, for commercial properties, including port, tourism, and entertainment activities. At the same time the Port Company intends to make a relevant urban contribution to the city and a profitable business.”

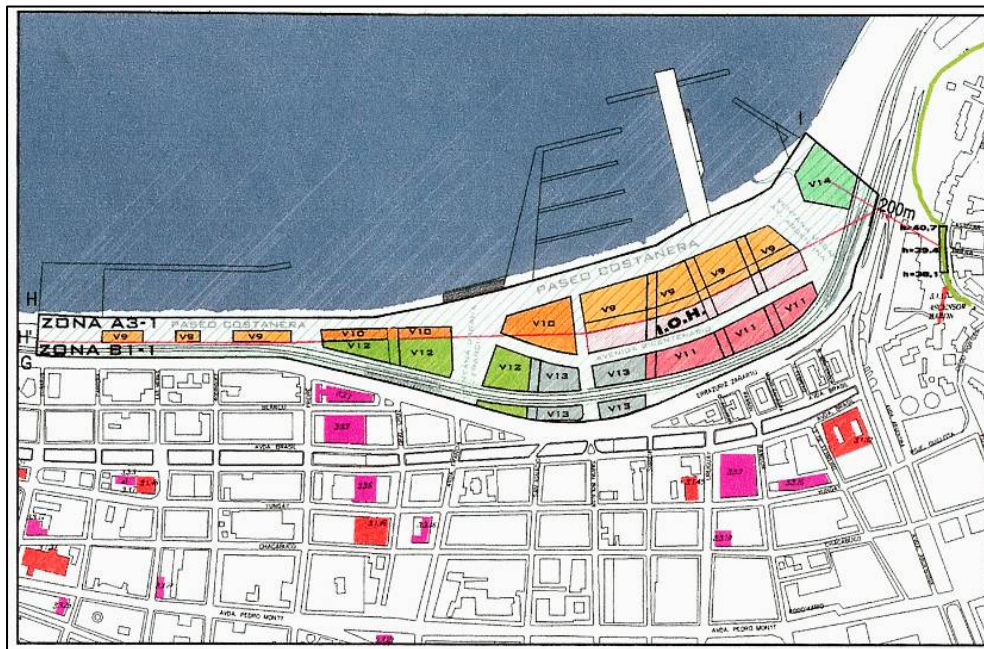


Figure 50: Municipality plan of zones for allotment. Zone V14, the anchor or “elbow” of the waterfront, and the first building to be seen upon arrival to Valparaiso, is zoned as a hotel (private business) (Courtesy of EPV).

The EPV program proposal includes “huge public spaces, hotel accommodation, an aquarium, a yacht marina, a marine museum, a cultural center, an area for festivities and events, a cruise terminal, pubs, restaurants, housing, and offices.” It claims to “integrate the new district with the historic district,” when in fact, it continues to alienate the waterfront area from the rest of Valparaiso, primarily because the plan devotes 40% to private use. It appears to be designed for speculative use, not specific use, unlike the rest of the city. The project’s goals prioritize the private businesses and their profits, instead of prioritizing the value of the place and its people.



Figure 51: EPV master plan massing distribution of Baron Pier intervention site, as of November 2005 (EPV).

Certain aspects of the Master Plan are reasonable. While the average height codified in the proposal is seven floors (EPV), much too high for the 3-4 story contexts, the massings do respect the surrounding block sizes and the existing street view corridors (the original master plan didn’t)- except for the main view corridor, through Argentina Avenue. This view

is clogged with a proposed hotel. The infrastructure often neither defines nor claims its space, resulting in an unclear definition of spatial and building hierarchy.

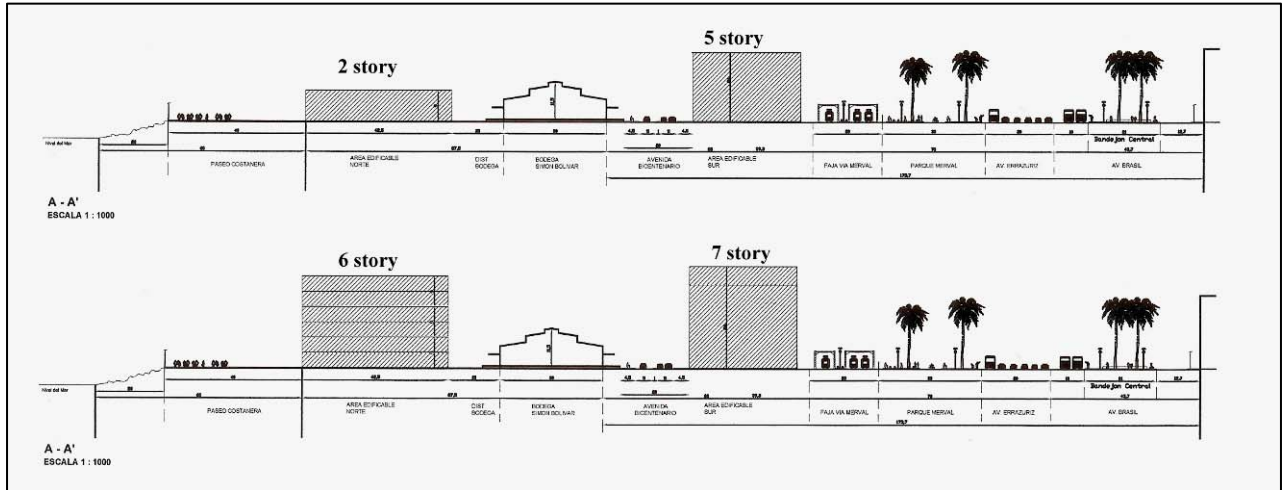


Figure 52: Lower section is of the EPV proposal. Top section is a thesis section proposal.

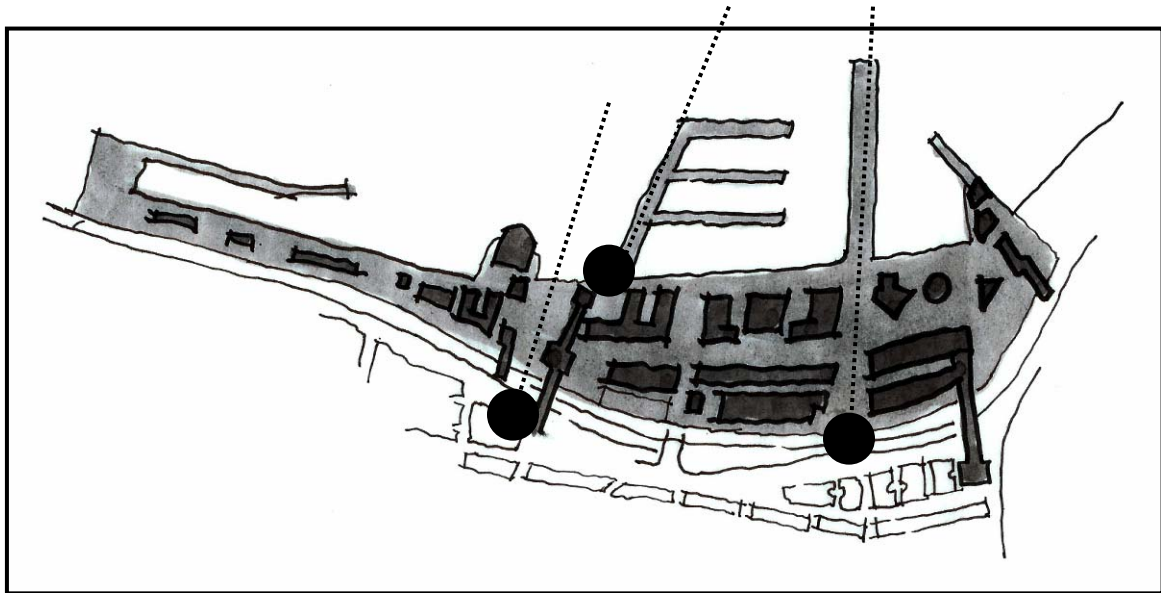


Figure 53: Lack of hierarchy in terms of massing and open space; relationship of buildings awkward; front/back vague

The EPV has prepared a “Conceptual Image Plan” in order to guide investors on the development scheme that is envisioned for each zone of the site. The plan summarizes and graphically represents the urban objectives regarding pedestrian and street outlines, open spaces for public use, the building volumes, uses, and aesthetics. (Any more details of the site must be acquired through purchase of the Terms of Reference, approximately \$1,000). Although EPV suggests that the renderings are only a hypothetical “visual reference,” they still provide information that creates preconceptions and misconceptions as to what the interventions should be like. This condition in psychological terms is called “priming” (Gladwell, 53).

Comparisons of the “Conceptual Images” and the existing context:



Figure 54: (left) EPV hypothetical office complex for waterfront, 6 story glass boxes.

Figure 55: (right) Buildings of Avenida Argentina, 2-4 stories, charismatic and colorful.



Figure 56: (left) EPV hypothetical view corridor between buildings, perspective falsifies actual scale, is irrelevant to the cultural heritage.

Figure 57: (right) Typical view corridor of Valparaíso



Figure 58: (left) EPV hypothetical open space for Baron node, which intersects with Ave. Argentina. It actually does not align to the Ave. Argentina corridor or axis

Figure 59: (right) Typical square of Valparaíso, more intimate and figural. (All EPV images courtesy of EPV).



Figures 60 and 61: Top, EPV; bottom, Valparaíso, (image courtesy of Municipality).



The Irony and Threat of Heritage Tourism

The intention of this thesis is not to dismiss the EPV's master plan, but rather to stress the importance of imposing on each development the responsibility of addressing Valparaíso's identity, cultural heritage, and small businesses. And the fact that many different entities will be involved with the development, increases the risk of creating a waterfront that is incongruous not only with its immediate or extended context, but with itself as well.

Investing in the development of a waterfront that promotes heritage tourism is a promising source of income for "the city." But it does little for "the city" if it neglects to cater to the largest employment group and the greatest at risk of unemployment- the small business. Chris Wilson suggests that "the irony of heritage tourism is that the people that create the heritage are the least benefited economically." He believes that tourism should not only be responsive to community needs, but should also help create a place for local communities and their own social lives and myths. He argues that "the critique of the economic and cultural manipulations of tourism must be a priority of artists, intellectuals, and politicians (240)."

Kenneth Frampton, extending a debate over "tourist consumer regionalism," charged that most of what passes for regionalism today in towns with heritage tourism is "cardboard scenographic populism, and a consumerist iconography masquerading as culture." He explains that it glorifies style and fails to engage architecture at sufficient depth to affect social reality. Local geography and climate, along with political and social traditions and "anticentrist" sentiment, all help to sustain regional cultures. Frampton argues though that only an "ongoing self conscious fertilization of the local with contemporary world culture can keep regional cultures vital and relevant (Wilson, 305)."

Chapter 4: Determining the Appropriate Intervention

Waterfront Typologies

Waterfront types can be grouped based on the scope of development, the building types they support, and the activities they sponsor. Some waterfront types are commercial, cultural and educational, historic, recreational, residential. Another type, the mixed-use, encompasses all of these, and is the type under which the Baron Pier Project falls. Mixed use can vary in use, income, age, and historical content. Through complex interaction between business owners, political officials, and planners, mixed-use types can include housing, retail, recreation, office, education, and cultural space. This type reflects the ability of cities to adapt to altered economic and social circumstances. They are often linked to the center of the city, are highly visible and claim to be tied to a city's industrial or cultural heritage (ULI, 14).

Elements of an Appropriate Intervention

In general, a project responsive to the needs of a waterfront within a historic context should address four elements (Schubert, 132):

- Establishing an appropriate theme
- Implementing the theme in conjunction with an image respectful of the architectural and historic context, therefore in harmony with the authentic.
- Addressing social as well as economic needs by providing appropriate land uses, program, open spaces, and other desired functions.
- Using technology pertinent to (waterfront) ground and climate, as well as any other technology particular to the area.

Responding to Site

Site specific principles that will be pursued in this thesis project are:

- To provide a positive entry experience into Valparaiso.
- To address the current permanent barriers- the raised highway, the railway, the warehouse and the containers, by transforming them into amenities.
- To celebrate the character and history of Valparaiso, by providing buildings in harmony with the character of Valparaiso's unique built environment and culture, and its relationship to the sea.
- To engage a diverse audience of local residents and well as national and international tourists, with the intent of generating opportunity and growth for both the local and regional economy; in particular, catering to small, local businesses: artisans and artists, manual laborers, agricultural.
- To provide porosity along the 14 hectares of construction that will border the waterfront through view corridors that coincide with the existing grid of streets perpendicular to the water.
- To promote the intellectual and academic nucleus of Valparaiso through cultural facilities
- To employ sustainable architectural solutions, and consider appropriate adaptive reuse, or recycling of local materials, both on site and regional.

Market Place as Appropriate Building Type

Patrimony should be considered a cultural value, but not in lieu of a responsible economic dimension. As the city ages and recreates, it must be assured that the city remains loyal to itself. New or renovated structures need to procure coherence and compatibility. Tourism and profitability are important components of a waterfront development project, in

particular one promoting cultural heritage, but it should never be the primary drive (Smith and Gafence). The balance between socio economic and socio cultural factors is essential to success.

The Urban Marketplace is appropriate to the immediate site of intervention, because of its versatility and ability to encompass all of the principles specific to the Baron Project site detailed above. As a stopping point for ships and their crews all around the world, the marks that have been left, and continue to be left, needs to be celebrated. This thesis will create a tool of implementation for the many developers and architects that will become involved in the waterfront development project, through the design of an urban marketplace. The marketplace, which will include a train station, exhibit, and water entertainment facilities, will serve as a design standard for developers and architects, informing them about appropriate functions, forms, technology, and esthetics of their buildings. Valparaiso's urban waterfront as a whole should provide a harmonious sense of place that respects and celebrates the character and history of Valparaiso, and engages both residents and tourists while generating opportunity and growth for the local and regional economy.

Determining the Appropriate Style and Technology

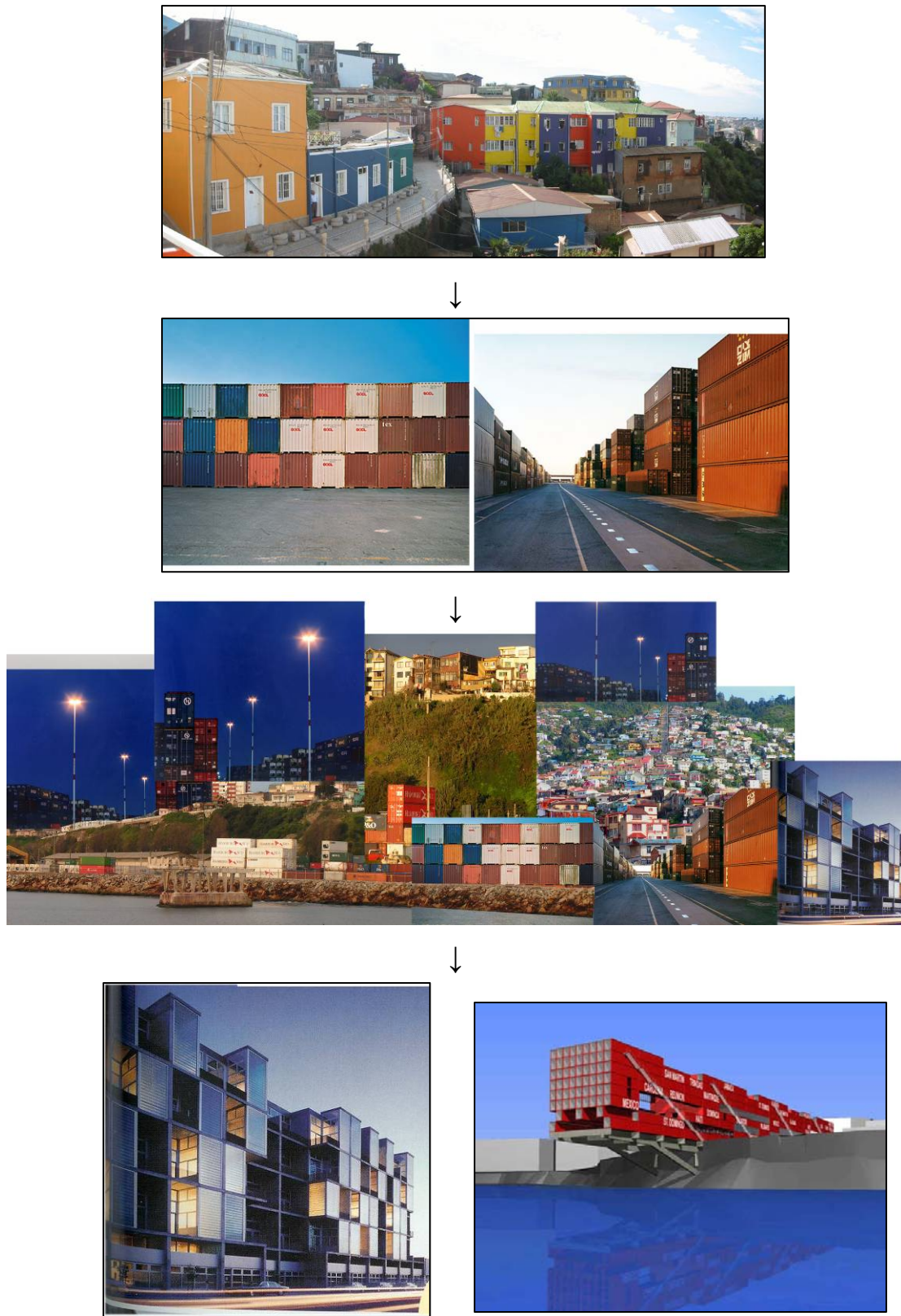


Figure 62: Transformations that are occurring in the city and can continue occurring along the water.

Chapter 5: Precedent Study

The following precedents were selected due to their relevance to the thesis problem, in terms of site constraint solutions, program, technology, economic responsibility to the city, and/or response to historic character or heritage tourism.

Embarcadero and Ferry Building, San Francisco

Relevance to thesis project: site constraint solutions, program, response to context, economic responsibility to city.

Client/Architect: (Simon Martin-Vegue Winkelstein Moris).



Figure 63: Ferry Building and Pier One, fingers extending from city street network.

The Ferry building became a landmark of San Francisco soon after completion in 1898 as a transportation hub, but fell into disuse in the 1940s, due to the opening of the Golden Gate Bridge.

The Embarcadero Freeway, once an elevated freeway that blocked the Ferry Building from the city, was damaged in 1989 by an earthquake, and was replaced in 1991 by a new light-rail line. A proposal to make the now visible Ferry Building into a centerpiece of a festival marketplace that would include piers and internationally themed shops opening onto an outdoor dining arcade was finally realized in 1998. SMWM was hired to restore the 660 foot long building to provide a marketplace, a farmers market, offices, and open space in the form of a plaza and a ferry waiting area (Stahl, 34).



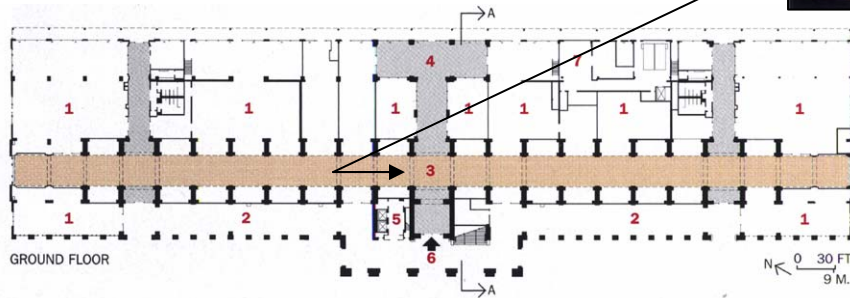
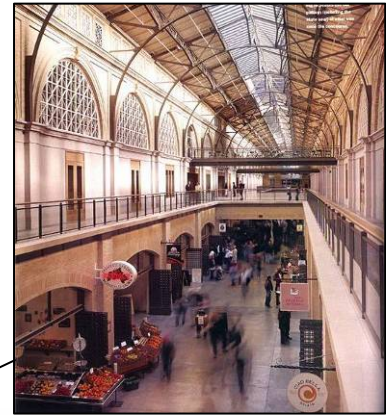
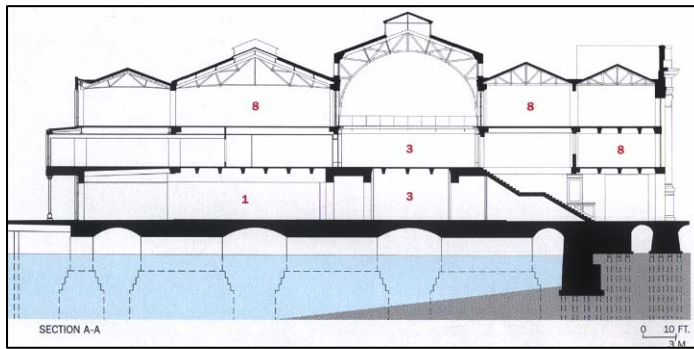
Figure 64: Ferry building before removal of raised highway and parking lots.

Figure 65: Surface boulevard and plaza, actually improved traffic problems. (Images courtesy of ULI).

The building is two sided, facing the city on one and the water on the other.

Materials compatible with the industrial aesthetic of the building were used, such as stained concrete floors, great arches that were rebuilt with replica units over a new slab for a second floor, and steel trusses. The existing wood piles under the building were braced laterally with seismically bulked framing.

Besides paying tribute to the past, and giving visitors access to the water via a 30 foot wide promenade between the landmark and the bay, the creation of a marketplace and farmer's market oriented to local food producers provides an impetus for the local economy and culture. It is now a center of urban life (Stahl 37).



Figures 66-68:
Ferry Building
Figure 69: Scale
study of Ferry site
in Puerto Baron
site. (Images
courtesy of Stahl).



Quincy Market, Boston

Relevance to thesis project: program, response to social and historic context, economic responsibility to city.

Architect: BTA

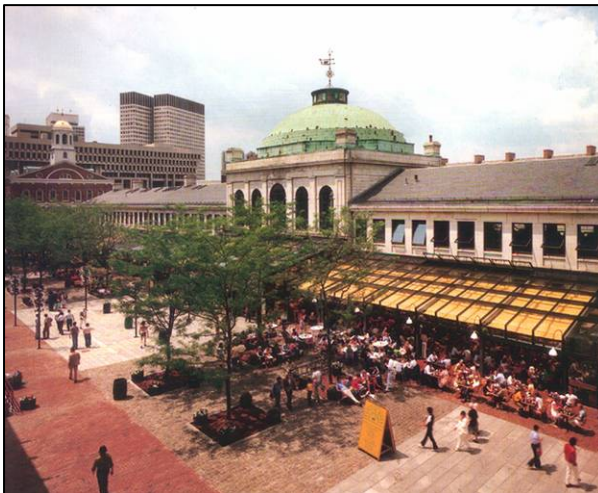
The 42,120 meters squared historic market complex of Quincy Market was restored in 1978 by the Rouse Company. Three buildings were designed in order to achieve commercial viability, while complementing the social and historic aesthetic of Boston. BTA conceived the area as a complete food market, complemented by the North and South Market Buildings that offer three levels of retail activity, through merchandising and leasing plans for 400,000 squared feet of usable space (Smith and Gafence, 47).



Figure 70: 1800s

Figure 71: 2000s

Figure 72: Interior corridor, plan structure much like Ferry Building
(Images courtesy of Smith and Gafence, 47).



BTA ARCHITECTS, INC.

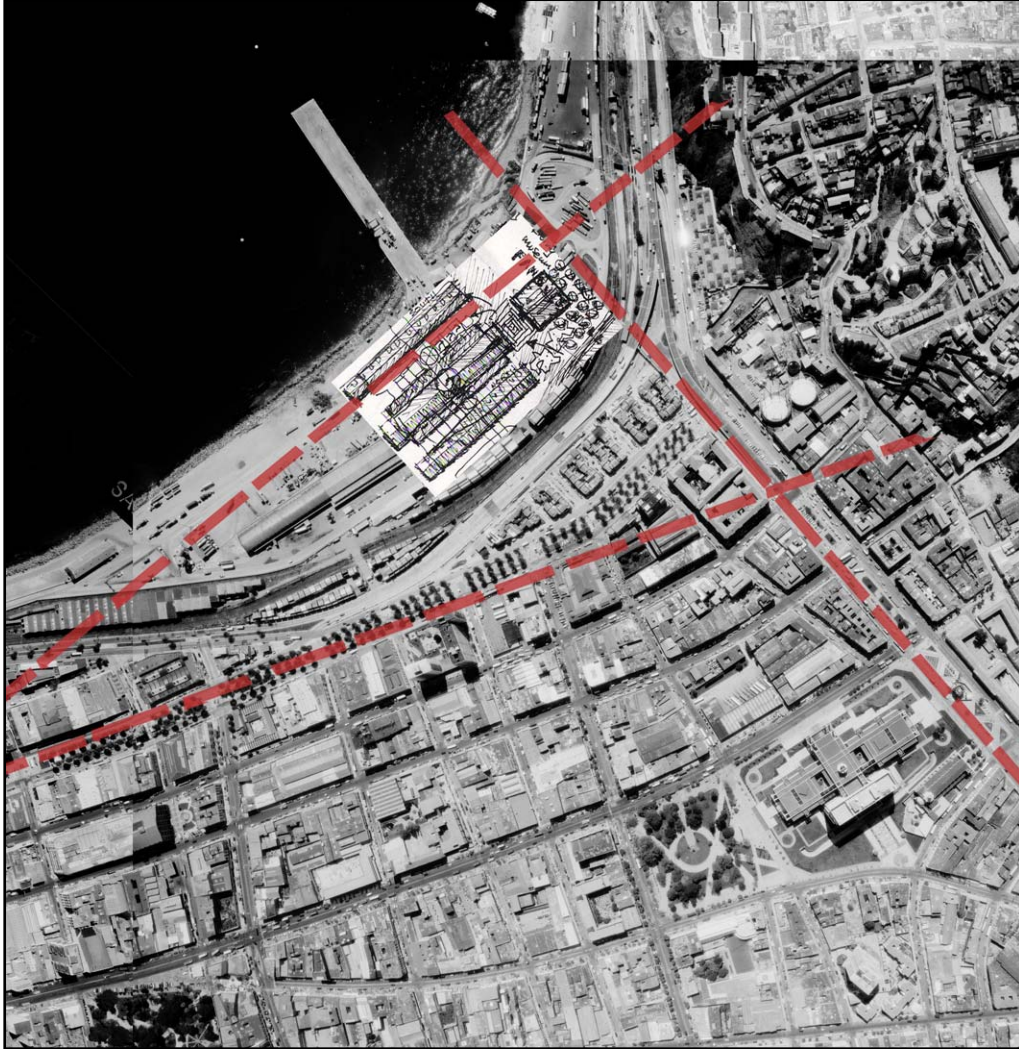


Figure 73: Scale comparison of Quincy Market site on Puerto Baron site.

Porto Antico, Genova, Italy

Relevance to thesis project: reconnecting city to port, program, response to social and historic context, economic responsibility to city

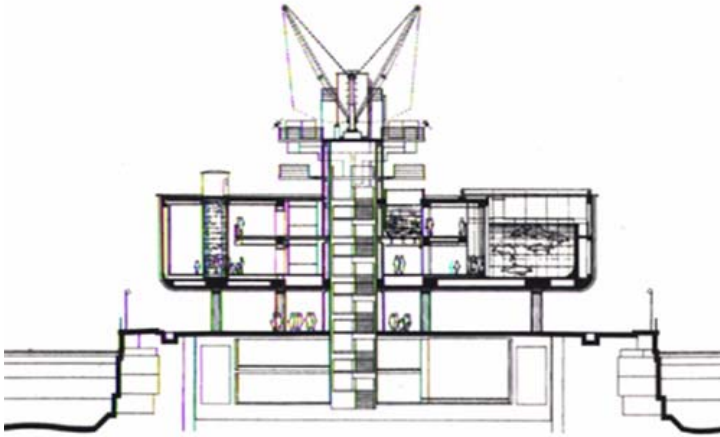
Architect: Renzo Piano

The Columbus International Exhibition in Genoa, Italy, was constructed in 1985 by Renzo Piano. The project was situated on Porto Antico, the city's old port, and had the double duty to regenerate the area as well as create a connection between the historic center and the sea, which had been separated by warehouses, a railroad track, and a freeway.

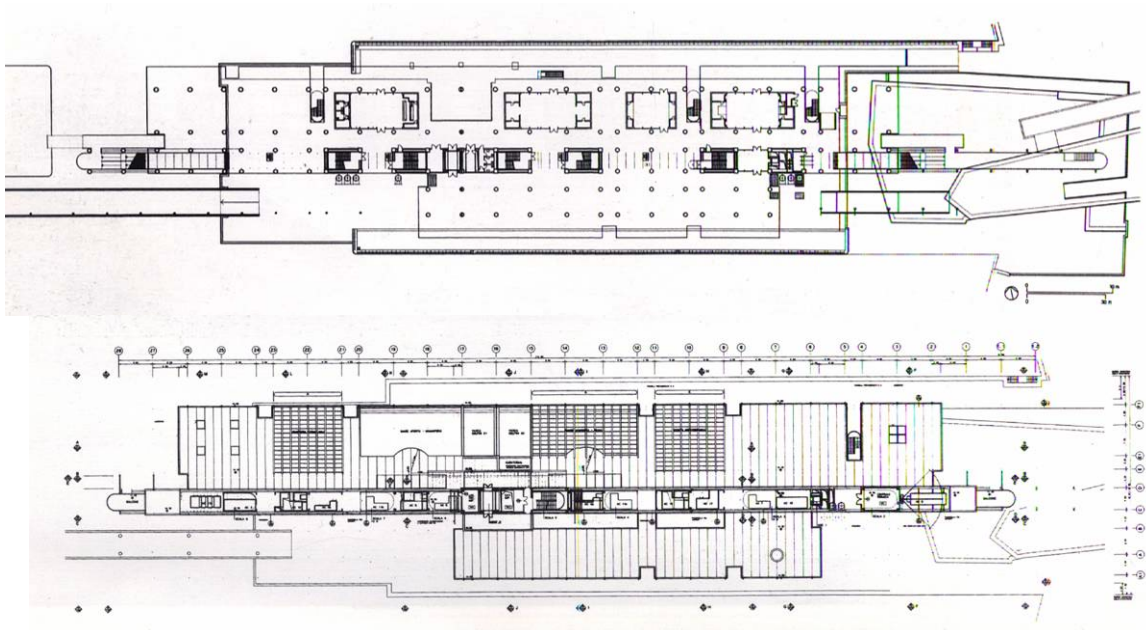
The development converted old buildings for public use, such as a library and an auditorium, and new buildings like an aquarium. Great care was taken to not alter the original spirit of the area. Small alleyways were extended from the historic center to the sea, connecting the city to the heart of the renovated, now vibrant port (Electa, 122).



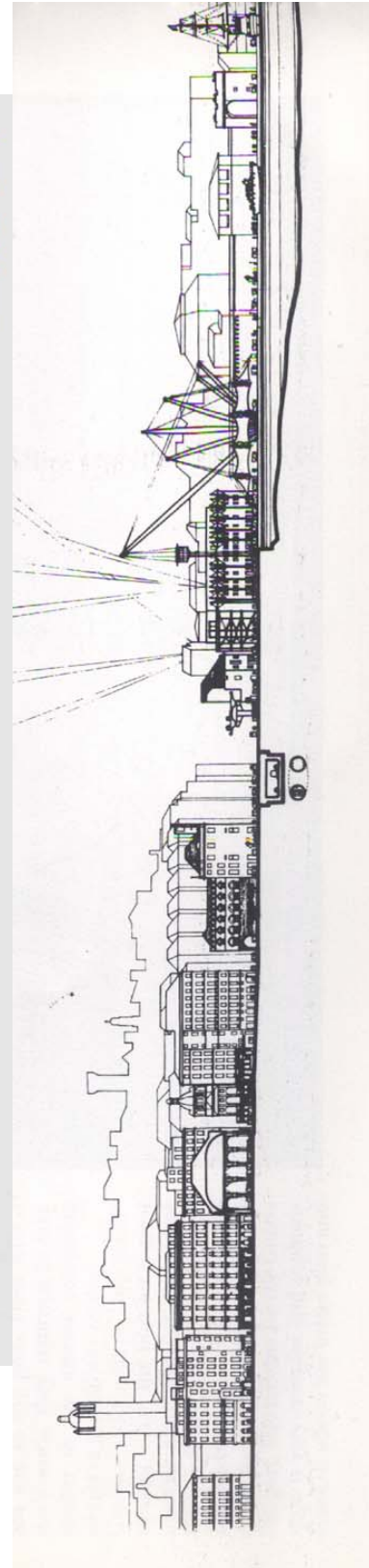
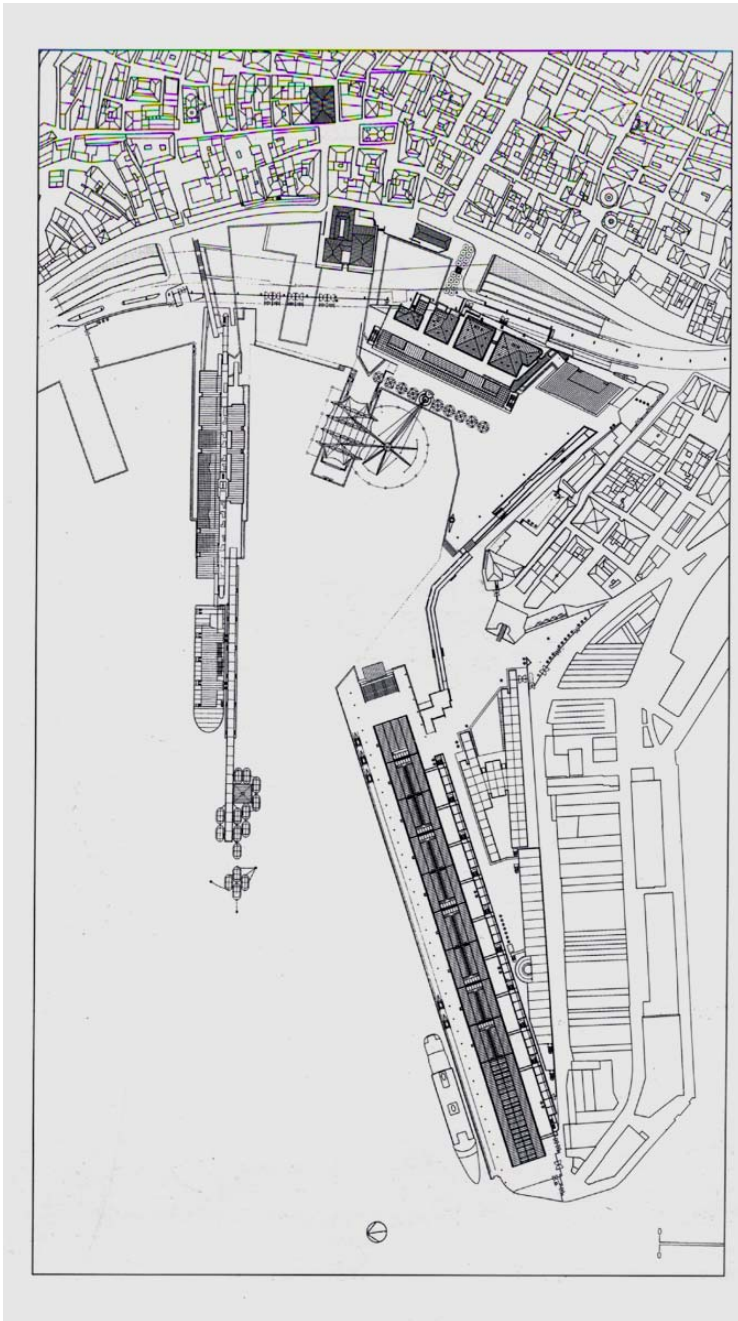
Figure 74: Amphitheater like qualities to site; warehouse, raised highway and rail line separating waterfront with city. (Image courtesy of Electa, 122)



Figures 75 and 76: Aquarium designed by Piano, one of the major facilities of exhibition and contribution to city. (Images courtesy of Electa, 124)



Figures 77 and 78: Floor plans of aquarium. (Images courtesy of Electa, 127)



Figures 79 and 80: Site plan, site section. Images courtesy of Electa, 126).

South Street Market, New York

Relevance to thesis project: program, response to social and historic context, economic responsibility to city, response to similar site constraints: raised highway, reconnecting city to port

Architect/Client: BTA/Rouse Company

South Street Seaport (1982) intended to bring back to Manhattan's riverfront the diversity and prosperity it had in the 18th and 19th centuries, when food and fish markets, warehouses and counting houses, coexisted in the area.

BTA worked with the South Street Seaport Museum, the Rouse Company, and the City of New York to develop a Master Plan for the 11-block historic district: a "museum of streets" that would restore its 18th and 19th century architecture and add appropriate new infill structures. The primary challenge presented by the district was not the preservation of the existing buildings, but the reclamation of the abandoned river's edge for public use, while also establishing viable economic support for the district itself.

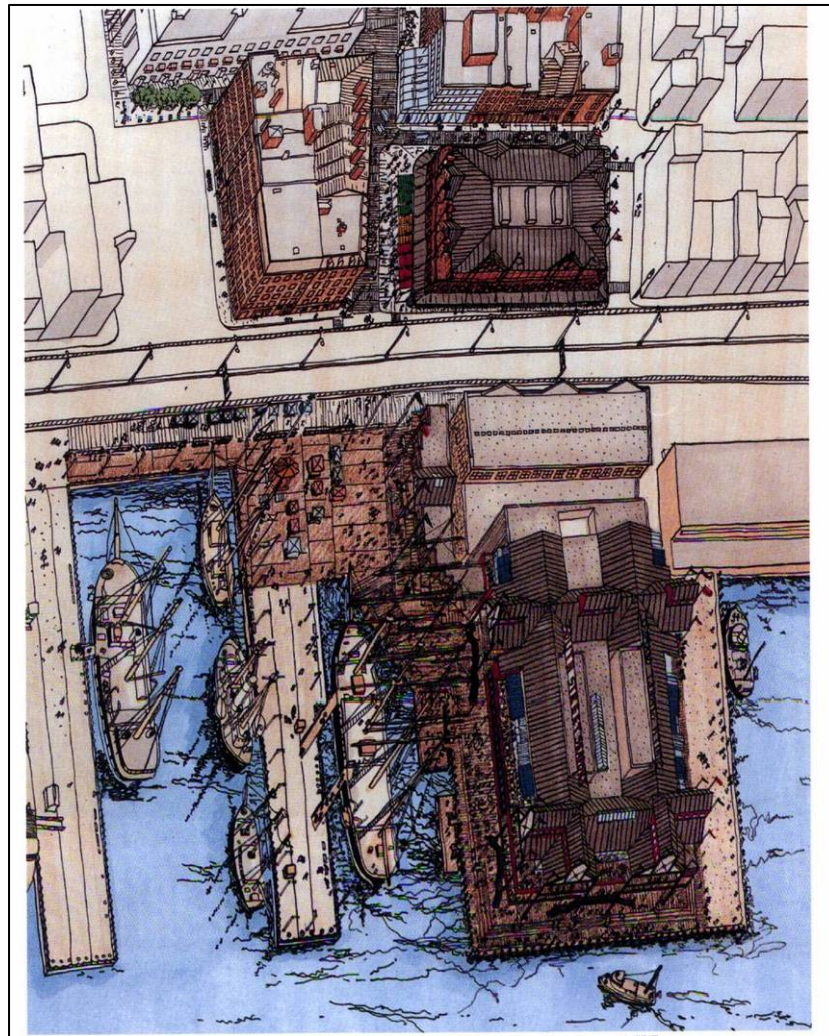
BTA designed the master plan for the South Street Seaport district and was responsible for designing the two principle new structures: the new Fulton Market, and Pier 17 Pavilion. Program also included a Seaport Museum. In the design of these buildings, straightforward vernacular materials and details are used to recreate the scale and texture of the Seaport area (Smith and Gafence, 244).



Figure 81: Parti diagram of intervention on water.



Figures 82 and 83: View and axon of South Street Market- the raise highway was kept. (Images courtesy of (Smith and Gafence, 245).



Container Mall, 5th Ave. and 42nd St, New York

Relevance to thesis project: program, technology, sustainability, economic responsibility to city

Architect: LOT/EK

Nine levels of containers are stacked to make an improvised typology for the mall. The project takes advantage of the inherent program of standardized shipping containers to configure vertical malls that could be erected in left over empty lots throughout the city. Each container module serves as an indoor booth in the fashion of an urban market. The containers are placed in an undulating manner; a system of catwalks, stairs, and elevators is wedged between the container stack and the wall of the adjacent building to make up the circulation and a series of outdoor public spaces. Containers are taken out at different locations, allowing the exchange of air, light, and street views.

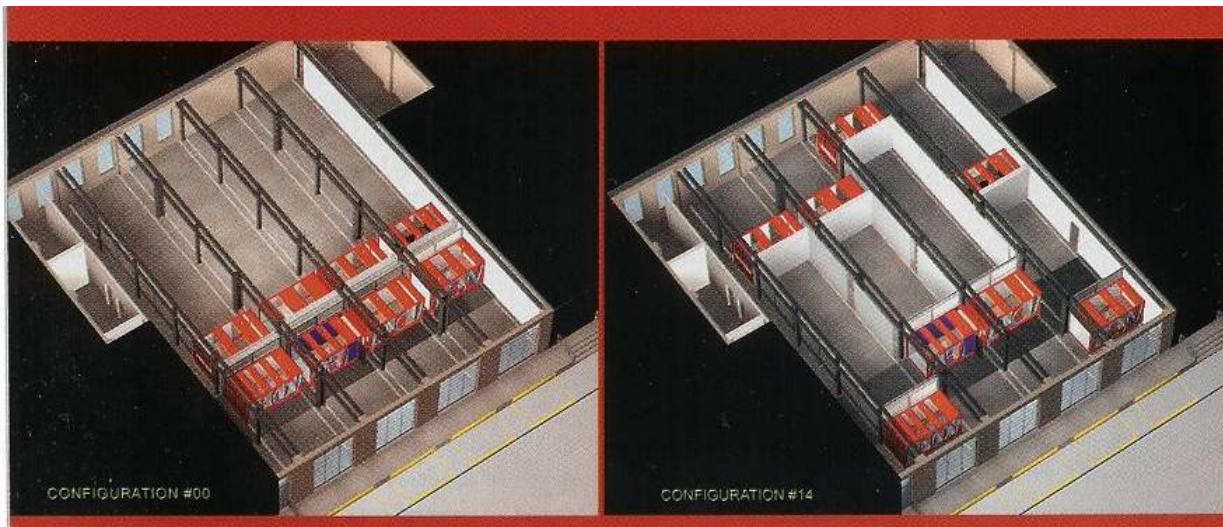


Figure 84: Container Mall, 5th Avenue at 42nd Street, New York (Images courtesy of LOT/EK)



Figure 85 (Top left): Interior hallway in mall.

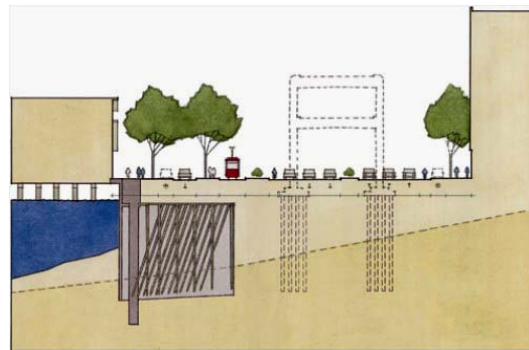
Figures 86 and 87: Another project of LOT/EK that recycles shipping containers is a temporary art gallery of exhibits that can be manipulated (Images courtesy of LOT/EK).



Chapter 6: Program

Project Site Design Issues

One existing physical barrier from the city to the sea is the raised four lane highway that enters Valparaiso from the water, blocking any view and access to the water, providing noise and unsightly traffic instead. The highway is raised in order to accommodate a semi-underground road that crosses it in order to service transportation trucks from the waterfront. The thesis will propose to bring Avenida Errazuriz down to ground level, transforming it into a surface boulevard, like San Francisco's Embarcadero or surface boulevard proposed for Portland, Oregon.



Figures 88 and 89: Study of removal of raised highway, which doubles as a parking structure. (Images courtesy of www.ci.portland.or.us).

Working light rail tracks bordering the edge of the Puerto Baron site along Errazuriz Street currently blocks pedestrian access to the waterfront because no crossing is provided. This thesis will turn the rail into an amenity, by creating a station and a formal passage to the waterfront side. This will increase accessibility to the site and improve traffic conditions in the area.

Warehouses and containers invade the site. EPV plans to relocate the containers to a storage site off the highway to Santiago. This thesis proposes to reuse the containers, in part as construction material, or complete as construction units, for temporary and permanent structures that will comprise the marketplace.

Baron Pier Program Description

The urban marketplace for Baron Pier will cater to the community, tourists, and the micro and macro businesses. The roughly 200,000 s.f. development will be made up of five structures or areas of various activity zones and open spaces, which will offer changing open vistas, especially from Avenida Argentina. The programs includes an urban market with specialty shops, and open air market, restaurants and cafes, a train station, water recreation facilities, and performance and gallery space.

Urban Market:

The main marketplace will provide permanent indoor locations for specialty shops, like international and gourmet foods, or foreign and local arts and artifacts.

Open Air Market:

This second market will be semi indoors and semi outdoors, physically engaging the site by exposing activity, and providing affordable, dependable, and accessible space for Valparaiso's many small businesses, from art to car parts. The units will be entirely composed of container boxes, and will be mobile.

Light Rail Train Station:

The light rail from Valparaiso's northern sister city, Viña del Mar, is being reactivated, and the Puerto Baron site is a convenient initial stop into the port city, in close proximity to the new development, Avenida Argentina, Universidad Catolica de Valparaiso, the bus station, the National Congress, and Plaza O'Higgins. The train station will accommodate ticket booths, and small newspaper and coffee shops.

Performance and Gallery Space:

The project intends to provide ample and multipurpose performance and exhibition spaces for all levels of artists, such as street performers, local artists and musicians, school productions, and community festivals. While some gallery space will be indoors, most of the performance space will be outdoors.

Café/ Restaurants:

Prime waterfront and street frontage should include retail in the form of cafes and restaurants, ensuring activity and maximizing the experience with the sea and city.

Water Recreation Facilities:

Facilities for boat tours, kayaking, rowing, and sailing will

Office and Administration:

The upper floors of the buildings will include permanent office space for the staff that administers and operates each facility. The Urban Market building will also include leaseable office space for temporary organizations that use the facilities, such as tour groups or traveling exhibits.

Service:

The Urban Market, Open Air Market, Cafés and Restaurants will be provided access to a service street for receiving goods and removing trash.

Container as Unit of Construction: A Unit that informs the Whole

Valparaiso's typical house, a corrugated metal box painted with eccentric colors like purple, orange, red, or yellow, mimics the containers that sprinkle the waterfront, in terms of disposition, material, and charm. The proposed urban market place will implement the existing shipping containers and warehouses on site as an architectural element or unit of construction. As a self-supporting modular element, with 40' x 8' x 8'6" proportions, the container can be pierced, stacked and combined to adapt to all the different functions required by the program. It will be manipulated as a 'spatial brick' for parts of the interior spaces as well as to delineate larger spaces for some of the permanent infrastructure, and it will also provide more versatile, temporary structures that can be adapted to specific uses, like rentable space for outdoor farmers markets, kiosks, etc.

Program Allocation

<u>Use</u>	<u>Number of Units</u> <u>40'x 8' module</u>	<u>Net Square Feet</u>
Urban Market:	15 @ 640 sf 10 @ 1,280 sf	32,000 sf 12,800 sf
Open Air Market:	50 @ 320 sf 50 @ 640 sf	16,000 sf 32,000 sf
Light Rail Train Station:	2,240 sf	2,240 sf
Performance Stage and Seating, indoors Performance Stage and Seating, outdoors Gallery Space, indoors Exhibit prep storage	10 @ 320 sf	9,600 sf 6,400 sf 3,200 sf
Café/ Restaurants: Kitchen	4 @ 750 sf 2 @ 3,000 sf	3,000 sf 6,000 sf
Water Recreation Facilities:	14 @ 320 sf	4,480 sf
Office and Administration:	10 @ 640 sf	6,400 sf
Service:		1,280 sf

Total Net Square Feet: 135,400 sf

Circulation: (1/3 of NSF) 45,133 sf

Total Net Gross Feet: (NSF x 1.3) 180,533 sf

Chapter 6: Design Strategies

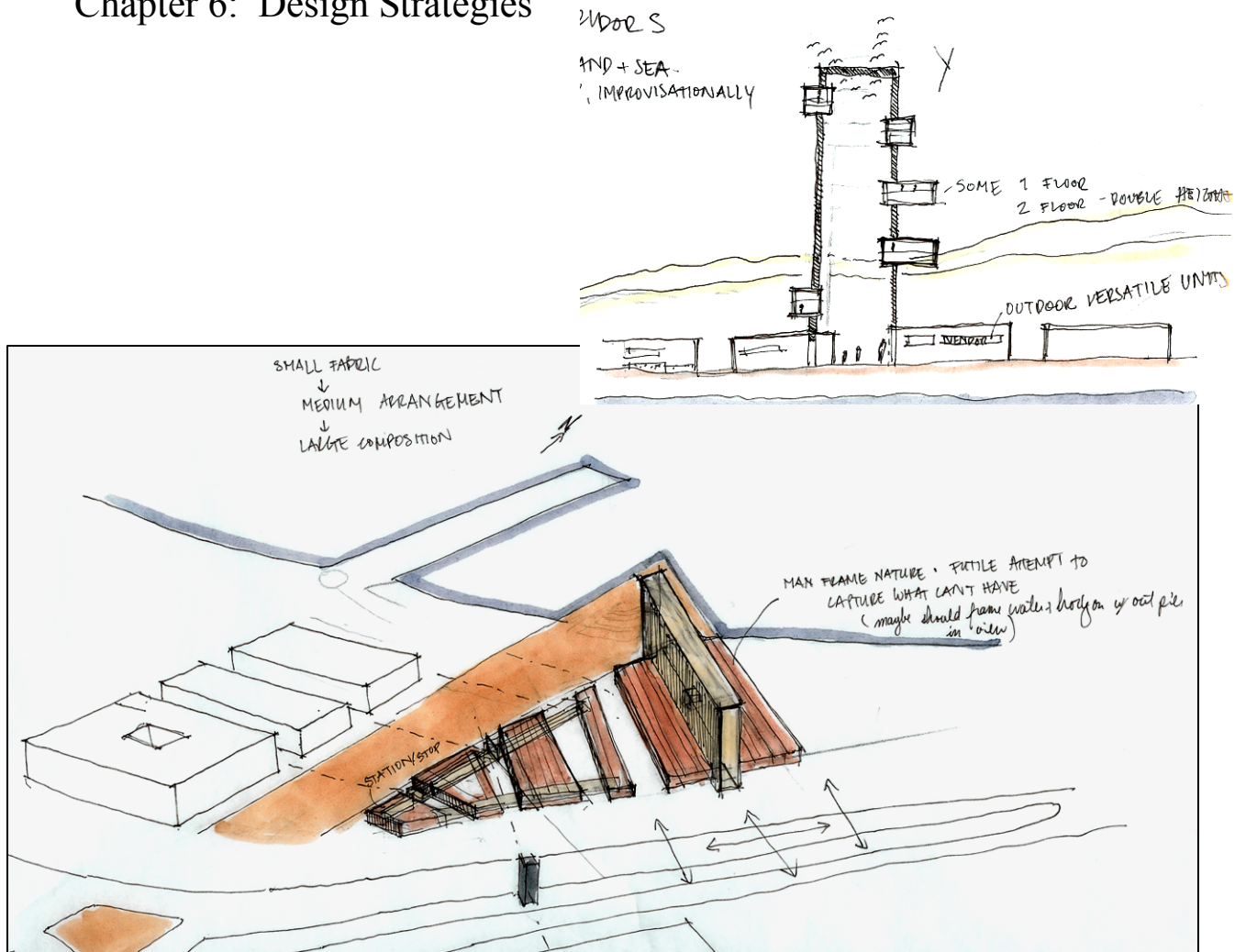


Figure 90: Axon and section sketch, Parti A

Parti A

Parti A is composed of a tall narrow object building, the primary program, perpendicular to a shallow base that holds the secondary programs. In this way the marketplace acts as a bookend to the development, allows high density, but makes little visual obstruction from the street. The massings are oriented such that they create corridors from Avenida Errazuriz to the water and bay, and connects to the existing corridors on the other side of the open space in the EPV Master Plan. It also calls attention to an existing 1800s clock tower by placing one of the view corridors on axis with it. In this parti the open

space that is the extension of Avenida Argentina is extended over the water, visually and physically unobstructed. The parti treats the raised highway by replacing it with a surface boulevard. The train station, low and intimate like the rest of the programs at the base, acts as an anchor to the whole marketplace.

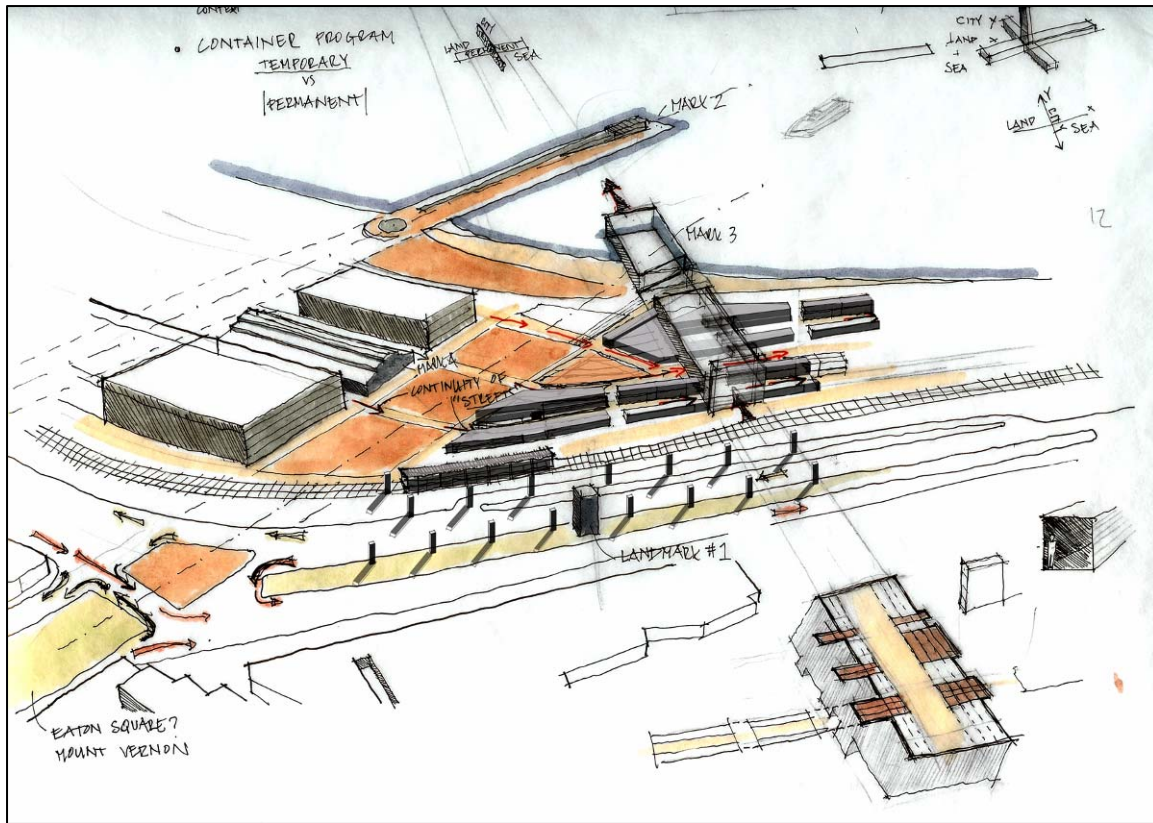


Figure 91: Axon and plan sketch, Parti B

Parti B

In this parti the marketplace is of similar proportions to the rest of the Master Plan's larger massings, but is orientated longitudinally towards the historic port. Smaller fragmented fabric comprised of sets of rentable container units create a grid that runs parallel to Errazuriz and perpendicular to the main market building, actually continuing into and through the market building, suggesting the continuity and versatility of its use.

The raised highway is replaced with a surface boulevard, but leaves the structural concrete columns, to be used as landscaping framing devices, integrated with the fabric of the new facilities. The open space that is the extension of Avenida Argentina intersects with the market building, which extends out into the water.

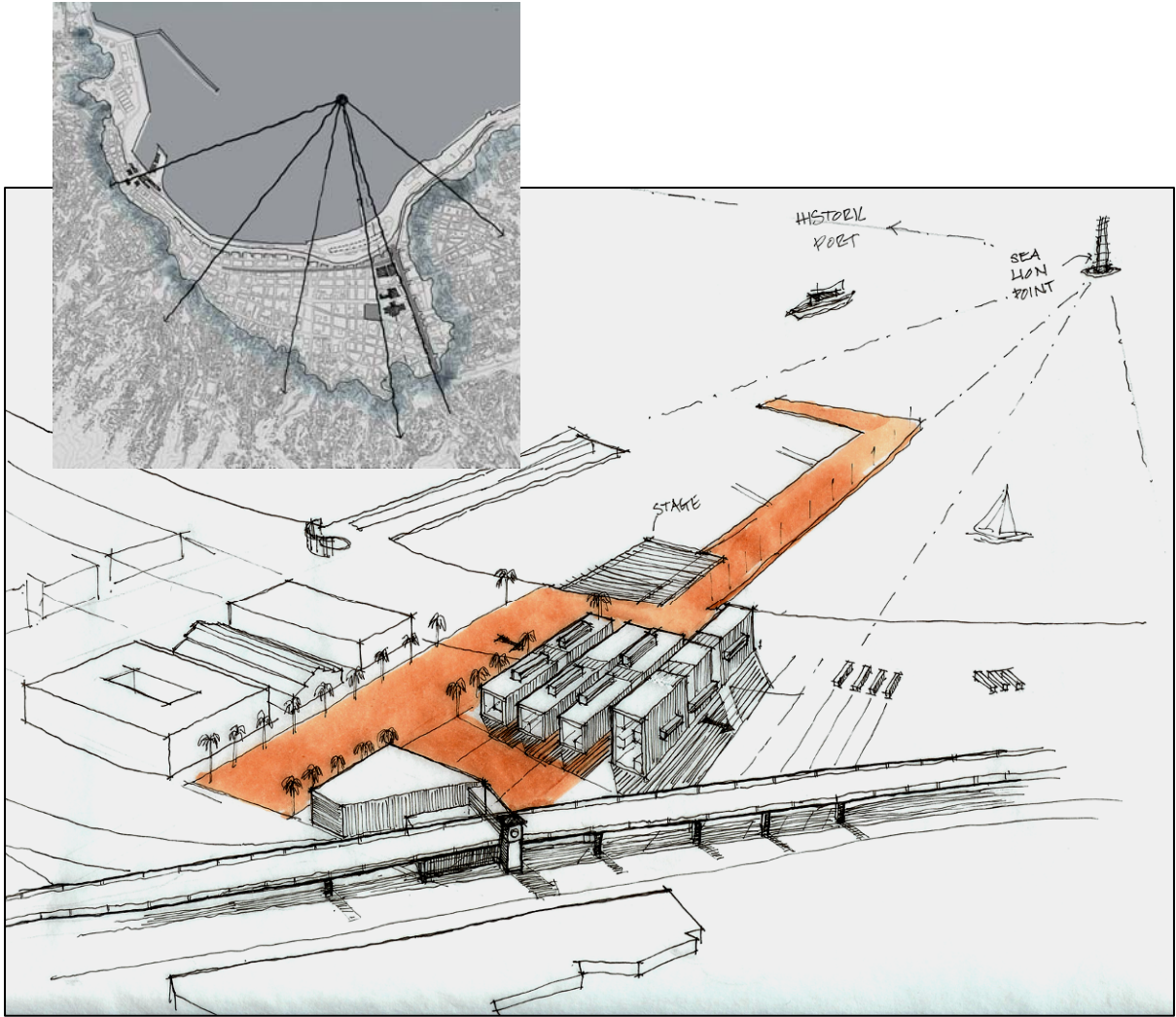


Figure 92: Axon sketch, parti diagram, Parti B

Parti C

This parti keeps the raised highway and transforms it into an amenity, adapting the structure underneath into a sequence of “picture frames” for the view of the bay, ending with the insertion of the light rail station. The extension of Avenida Argentina to the water is unobstructed, and ends at the water’s existing border. The marketplace acts as a small object building to the right of Avenida Argentina’s axis, without obstructing the waterfront pedestrian walkway that begins at the historic port.

Chapter 7: Design Conclusions



Figure 93: Before and After from Baron Hill
Figure 94: Before and After from Sea.



GENIUS LOCI

LOCALS:



ARCHITECTURE:



ART:



HILLS:



ELEVATORS/CABLE CARS:



STAIRS:



VALPARAISO EXISTING



- Region of Valparaíso population : 1,539,852
- City of Valparaíso : 275,982

•All of the nation's naval institutions and those governing its customs and fisheries are based in Valparaíso

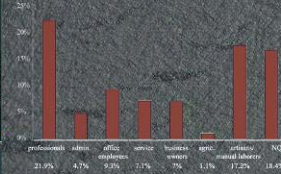
•The city is also the Cultural Capital of Chile, with 32,000 students and a 3,000 teaching staff, creating an important university center and a strong contribution to the city's strong cultural profile (Robinson Wright, 45).

The following statistics reflect in numbers the reality of the social and economic problems facing Valparaíso, and should inform the architectural solutions in terms of proposing the appropriate functions, and identifying the critical users.

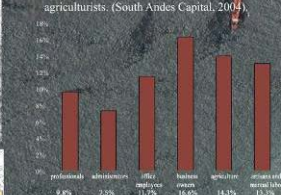
The economic structure in Valparaíso is currently dominated by its micro and small businesses (Source: Mercados Regionales, 2000).

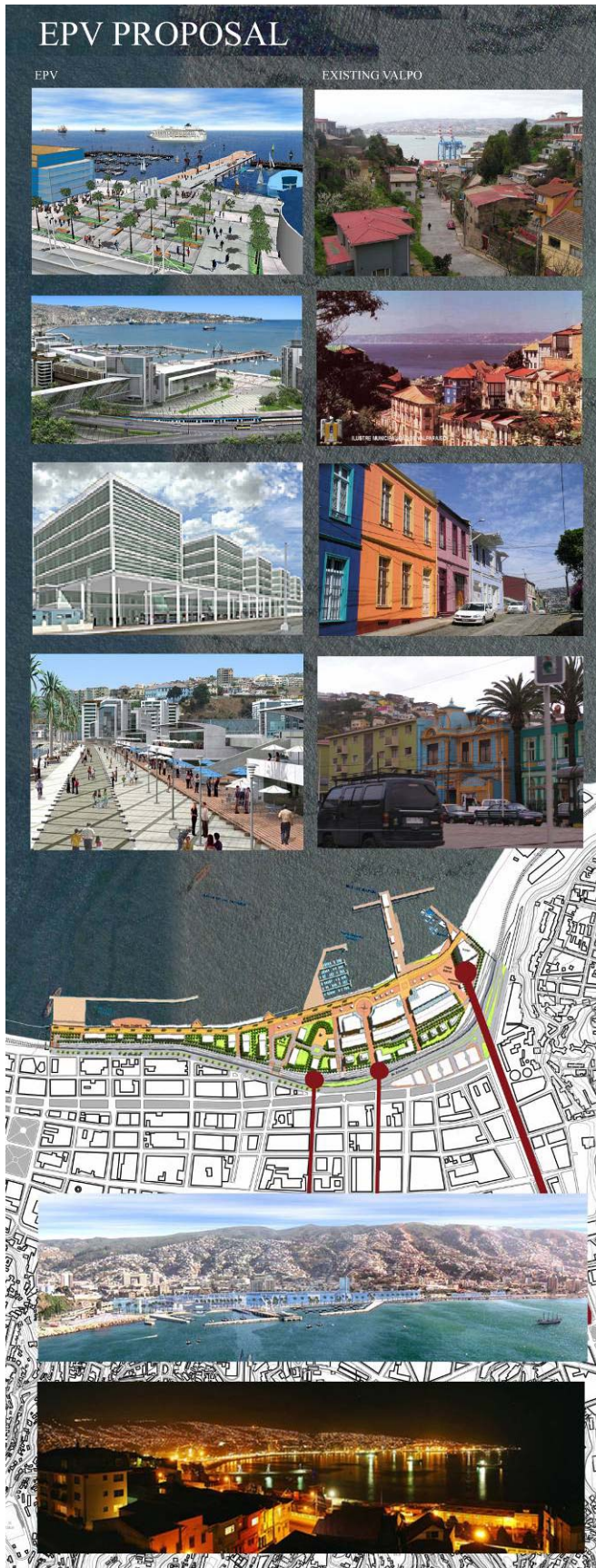
Type of Business	Valparaíso (%)	Santiago (%)
MICRO	81.6%	11%
SMALL	15.3%	18.7%
MEDIUM	2.3%	21.3%
LARGE	0.8%	48.1%
TOTAL	100%	100%

Artisans and manual laborers/operators are the second largest group of employment. (South Andes Capital, 2004).



Artisans and manual laborers are also among the highest at risk of unemployment, along with the other small businesses of merchants, retailers and agriculturists. (South Andes Capital, 2004).





Figures 95, 96, 97: summarized comparisons of Existing Conditions, Valparaiso's Genius Loci, and EPV

The final urban design decisions were based on the considerations delineated under the sections *Elements of an Appropriate Intervention* and *Responding to Site* on pages 39-40. In terms of current physical constraints of the site, the highway, fencing, warehouses and blighted buildings were removed, where the railway and containers were transformed into amenities (explained further). Avenida Argentina was extended out to the sea, and Avenida Errazuriz, which was competing with Avenida Brazil, a major boulevard that houses the Universidad Catolica, was reduced in width and integrated into the waterfront. This way access to the waterfront is facilitated, reducing traffic and crossing length. The rest of the intervention's street grid conforms to the city's existing street grid. This results in a compatible matrix, where the block size, street section, building density and heights, are familiar to the city's pedestrian needs. At the same time the view of the sea is blocked the least possible, a careful consideration reinforced by the unobstructed view corridors of the intervention grid. From left to right, four piers extend to the sea, one for larger boats, one for medium boats, the third mostly pedestrian and small boats, the last, purely pedestrian. The overall plan is book-ended on both sides by an open green, and has five more public spaces. Three public spaces (including the extension of Avenida Argentina, Plaza Avenida Argentina) are accommodated in front of the piers, and two more become part of Node Baron.

Node Baron (see figure 99), the space this thesis proposes to be reserved for the small local businesses of Valparaiso, lies to the east of Avenida Argentina, and becomes the gateway into the city. The node's program includes Baron Station, the first light rail stop in the city, the "Persian" Market and the Food Market, which intend to imitate Valparaiso's mixed use nature and provide housing on top of each shop, and the Artisan's Market, which houses shops on the west side and exhibition and gallery space on the east side. This last building intends to be an iconic building for Valparaiso, a celebration of the city's *raison d'être*, genius loci, cultural, social, political, and industrial heritages.

The Artisan's Market is a steel frame moment connection system that shelves containers taken directly from the site. As the first building one sees when arriving by car, bus, train, and even water, the Artisan's Market celebrates Valparaiso's character by recycling a historically industrial and vernacular material, and creating a festive place that accommodates everyone from residents to tourists. As each shopkeeper, exhibition, or "artist of the month" decorates the exteriors of respective containers reserved for murals, certain parts of the building will expose art and or advertising. The building's facades will be like an open, versatile canvas and will reflect the current spirit of the city, much in the way the city's surfaces are colorful, constantly changing canvases for residents and tourists to explore and enjoy. The thesis node intervention provides two plazas. Plaza Baron is more intimate, rests at the foot of Baron Hill and is enclosed by the market buildings and the station. A funicular and bridge, also part of the intervention, connects Baron Hill, the first of the 35 hills in the city, the 1700s church San Francisco, and the 1800s Baron Clock Tower, to the plaza and waterfront. The second plaza, Plaza Ampiteatro, is flanked by the three Market buildings on two sides and opens to the sea on its other sides. The plaza faces the end of the Artisan Market, which holds a Theater Box that has an open stage raised 19 feet, thus providing space for people to congregate and watch the Theater Box performances.

The containers on site and used in the building come in two sizes, 40'x8'x8'6", and 20'x8'x8'6. Instead of spending \$1000 for the removal and relocation of each container, the money will be used to precondition them prior to being inserted into the steel frame. A water barrier, polyethelene film, will be applied directly to the metal wall, rigid insulation on floor, ceiling and walls, wood strip flooring and siding, and electrical outlets. The containers are made of corten steel and are designed to be structurally resistant to high winds, rain, and rust, and they are most effective near saltwater. They are inherently secure and have low noise transmission, as two containers positioned on top of each other only touch at the nodes. Pad

foundations are needed at the nodes rather than deep piling, and once placed into the frame with cranes, the containers will be welded into place.

Because of the city's Mediterranean climate and the site's favorable position between hill and sea, and the diurnal effect that that creates, the building is able to take advantage of natural ventilation and shading. The sun path during the summer is north south, hitting the building mostly only on its short ends, leaving the longer inhabited sides shaded much of the day.



Figure 98: Thesis Urban Design plan of Puerto Baron



Figure 99: Thesis Urban Design plan of Node Baron

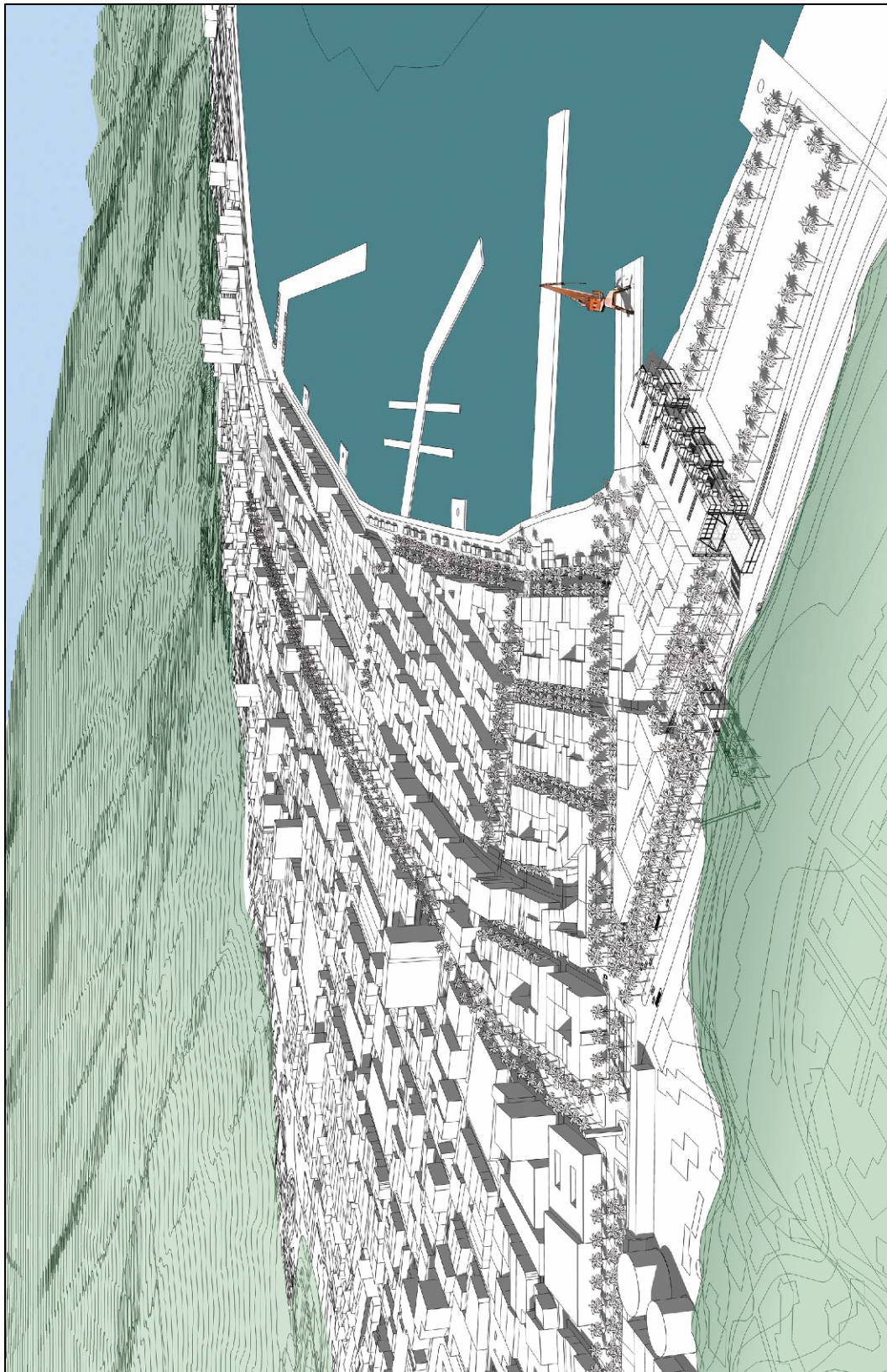


Figure 100: Aerial of thesis Puerto Baron proposal

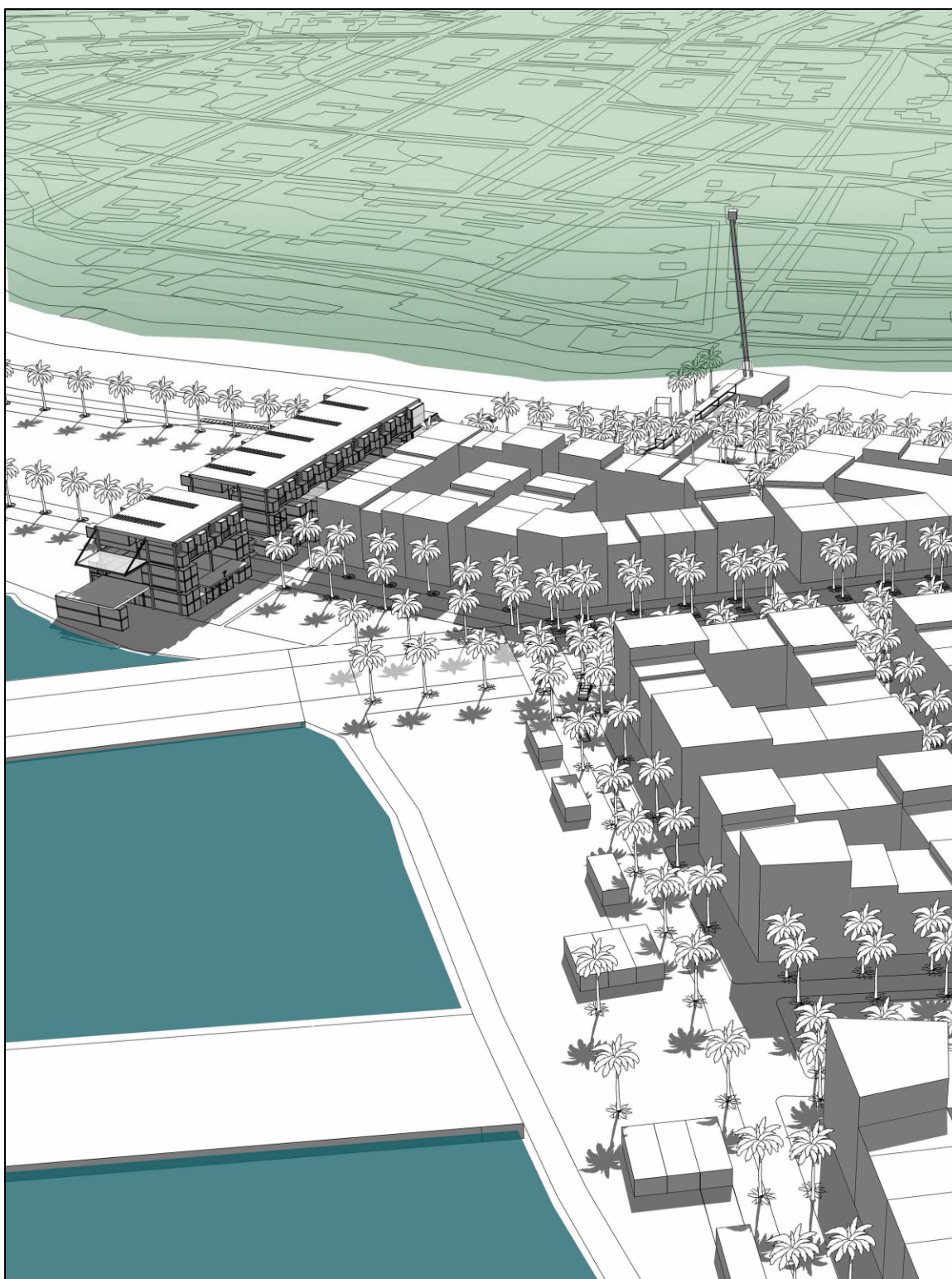


Figure 101: Aerial of thesis Baron Node proposal

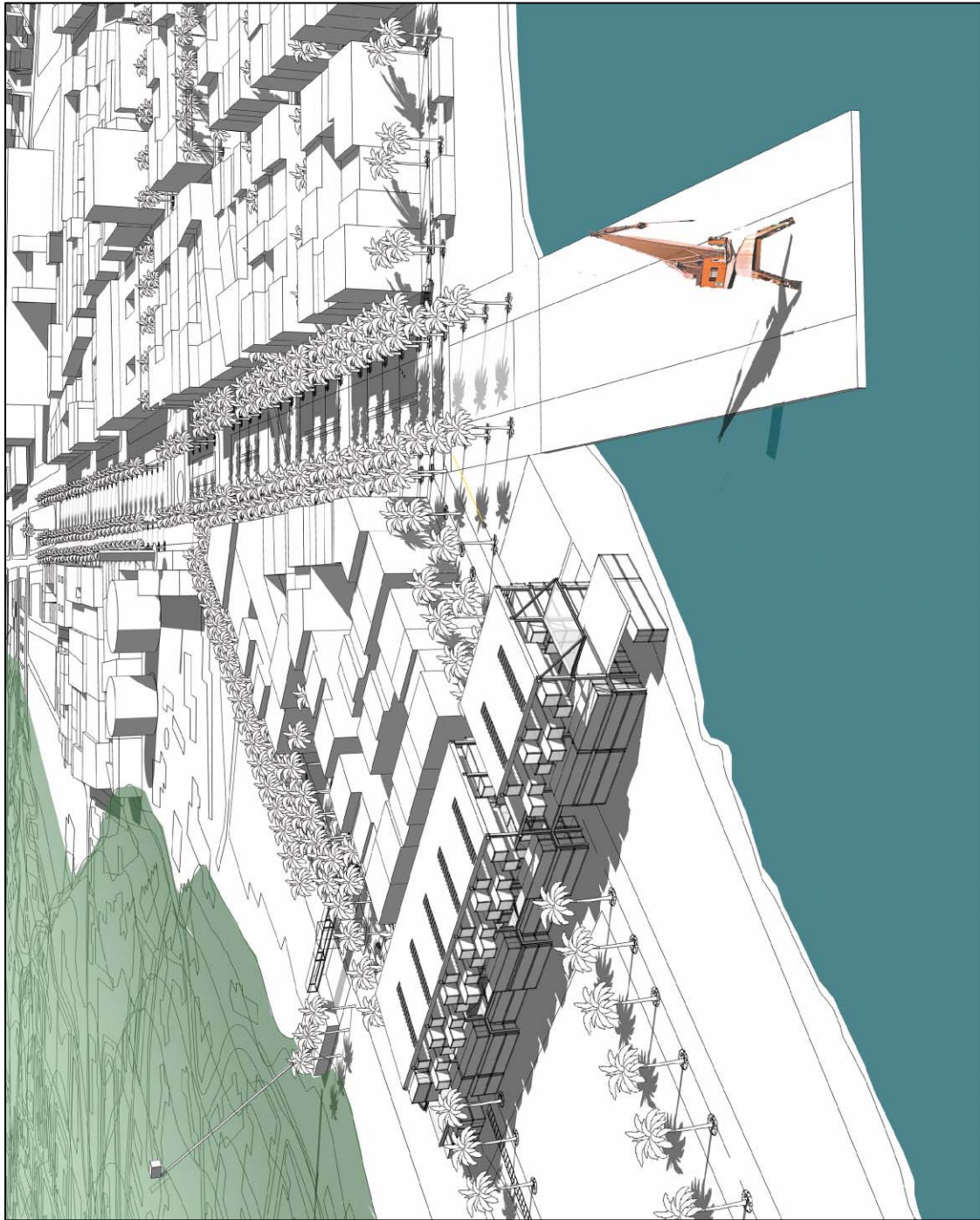


Figure 102: Aerial of thesis Baron Node proposal looking down Avenida Argentina

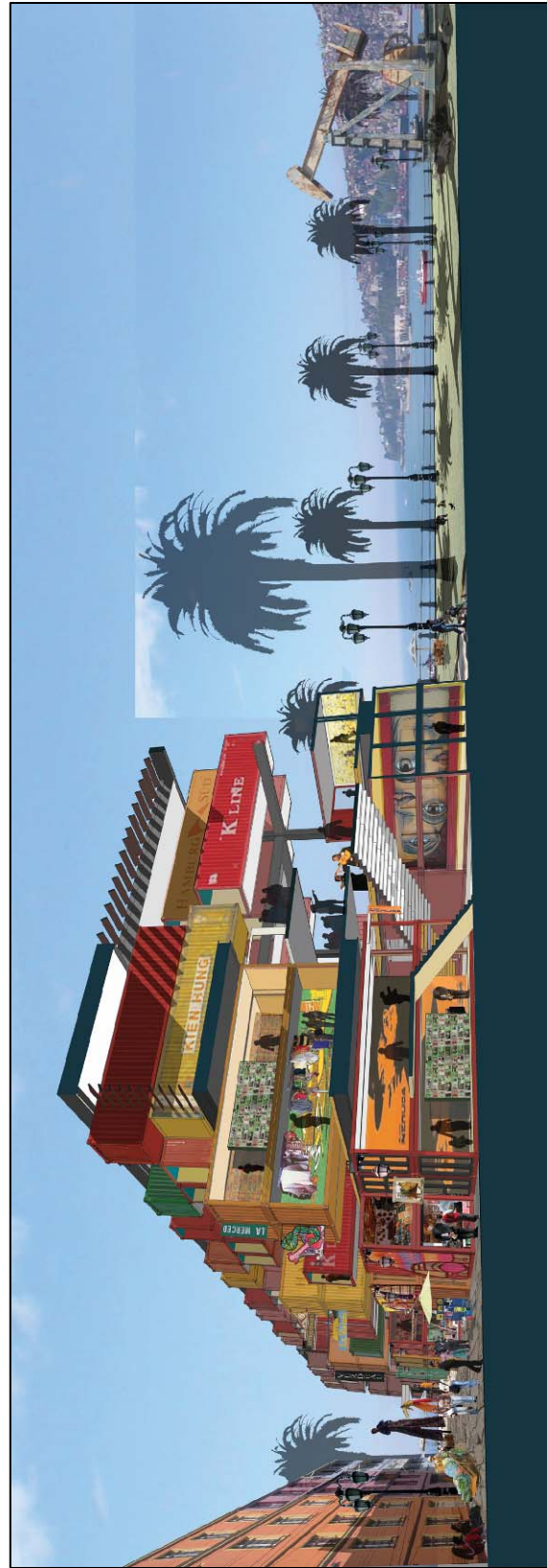
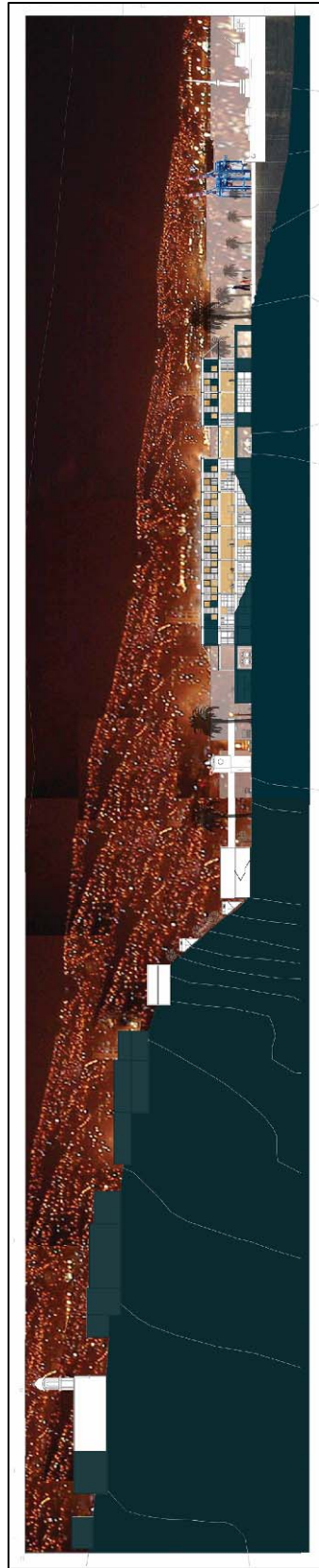


Figure 103: N-S Section of Baron Hill and San Francisco Church, through Artisan's Market, to water.
 Figure 104: Sectional perspective of Camino Artesano and Artisan's Market, looking east towards Vina del Mar.



Figure 105: Arriving to Valparaiso by car/bus

Figure 106: Crossing bridge from Baron Hill towards Plaza Baron.

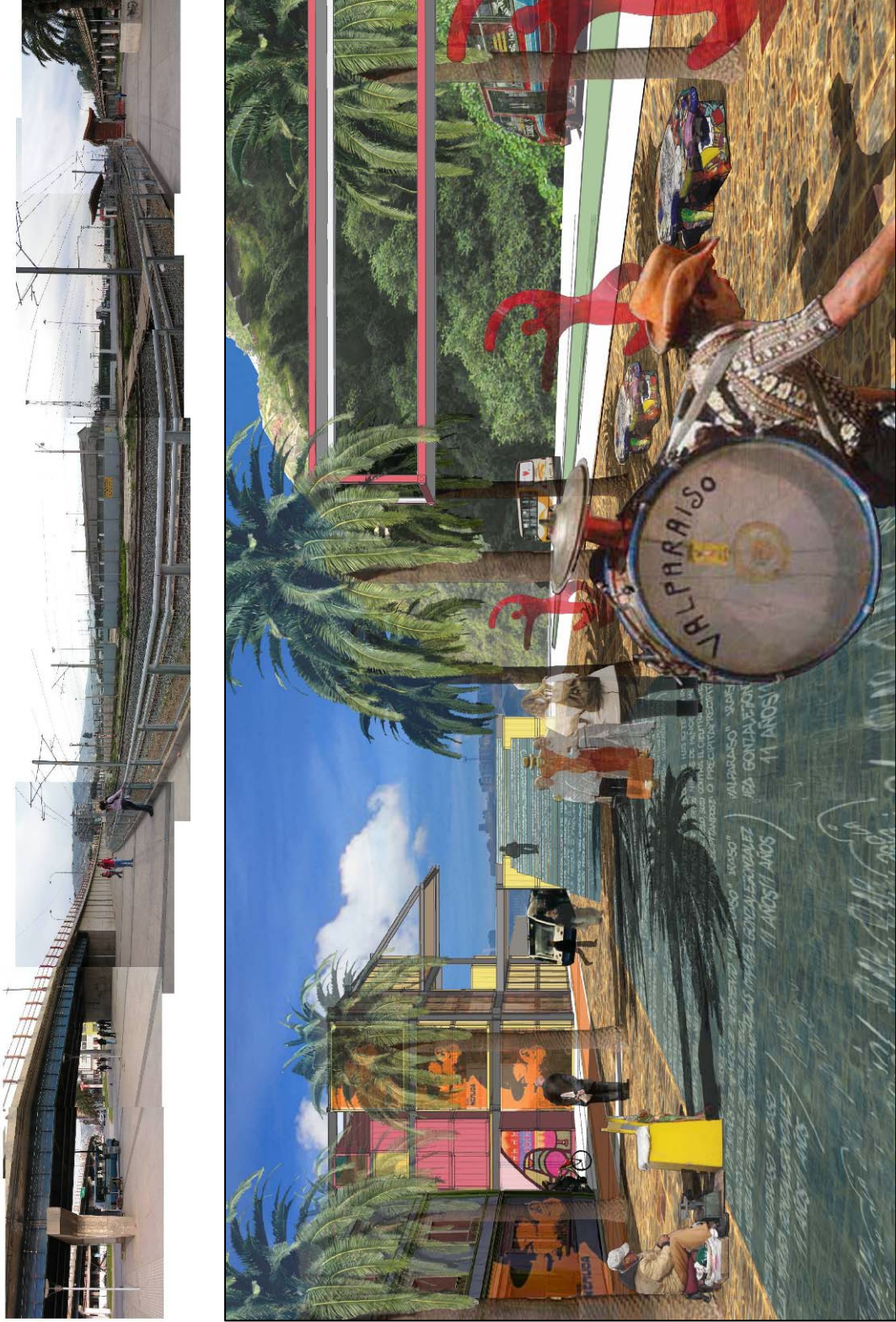


Figure 107: Before and after Plaza Baron site.

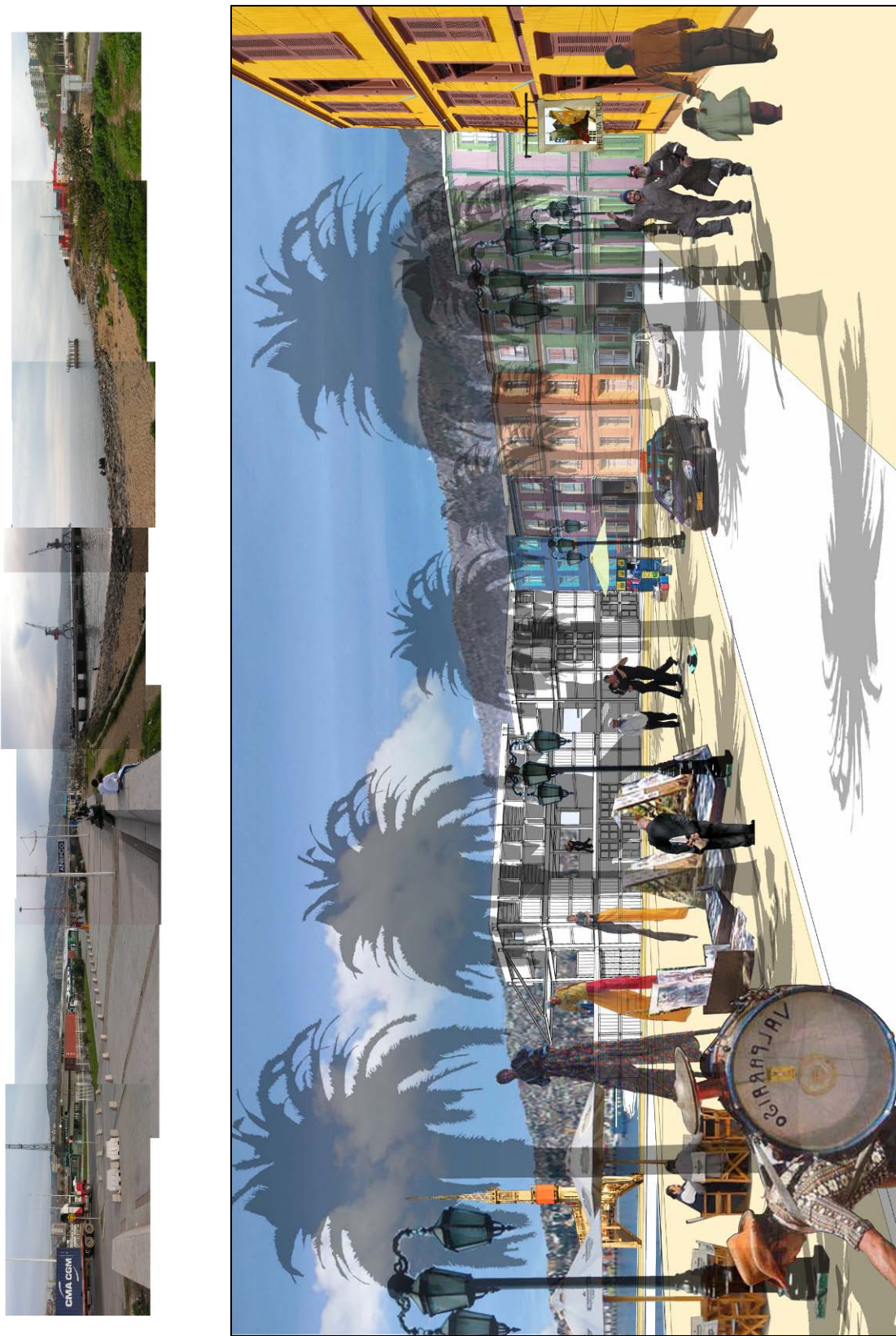


Figure 108: Before and after Plaza Ampiteatro site.



Figure 109: Before and after view from sea.

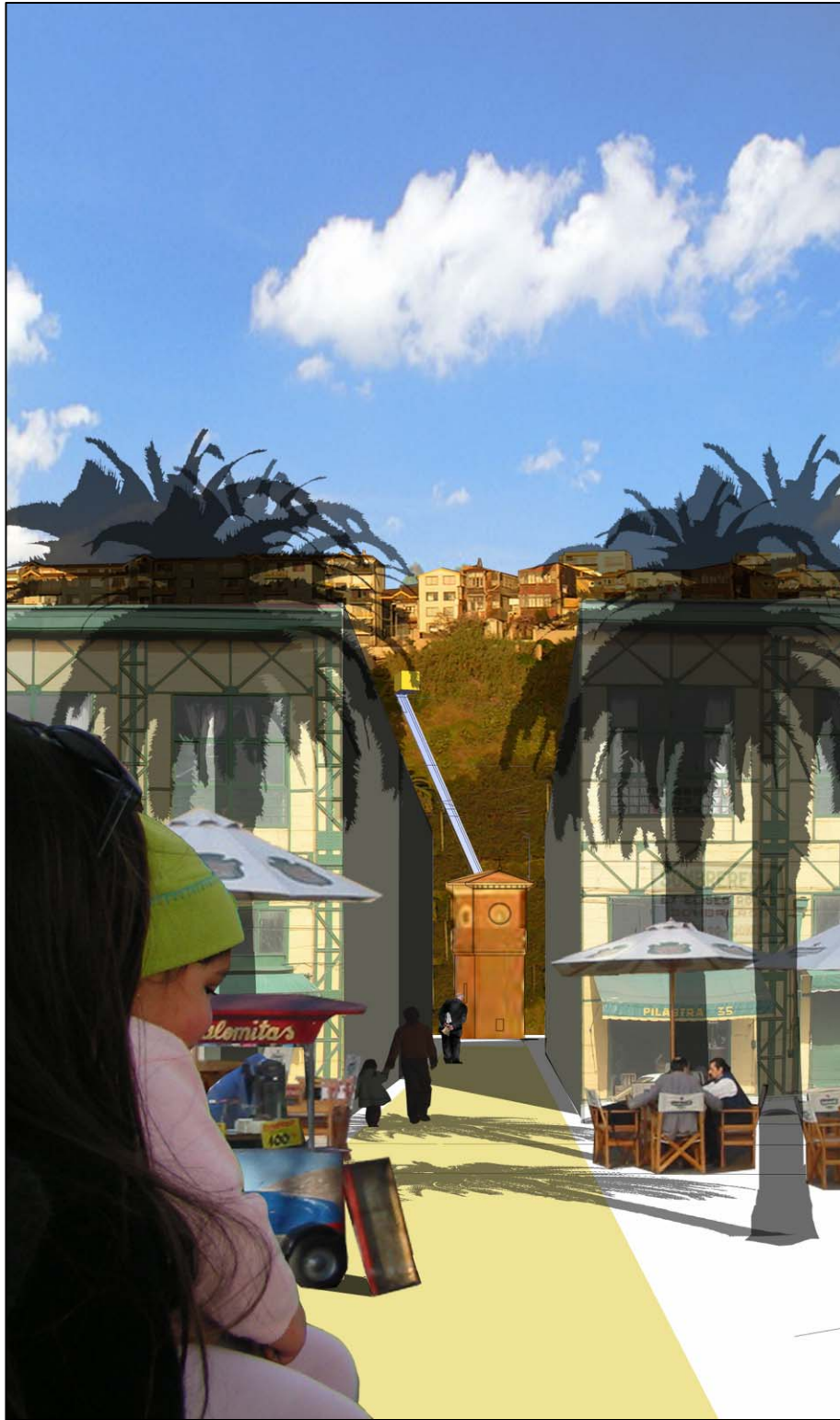


Figure 110: Baron Tower – Hill connection from Plaza Ampiteatro (bet. Food and Persian Market).



Figure 111: Front facade of Artisan's Market.

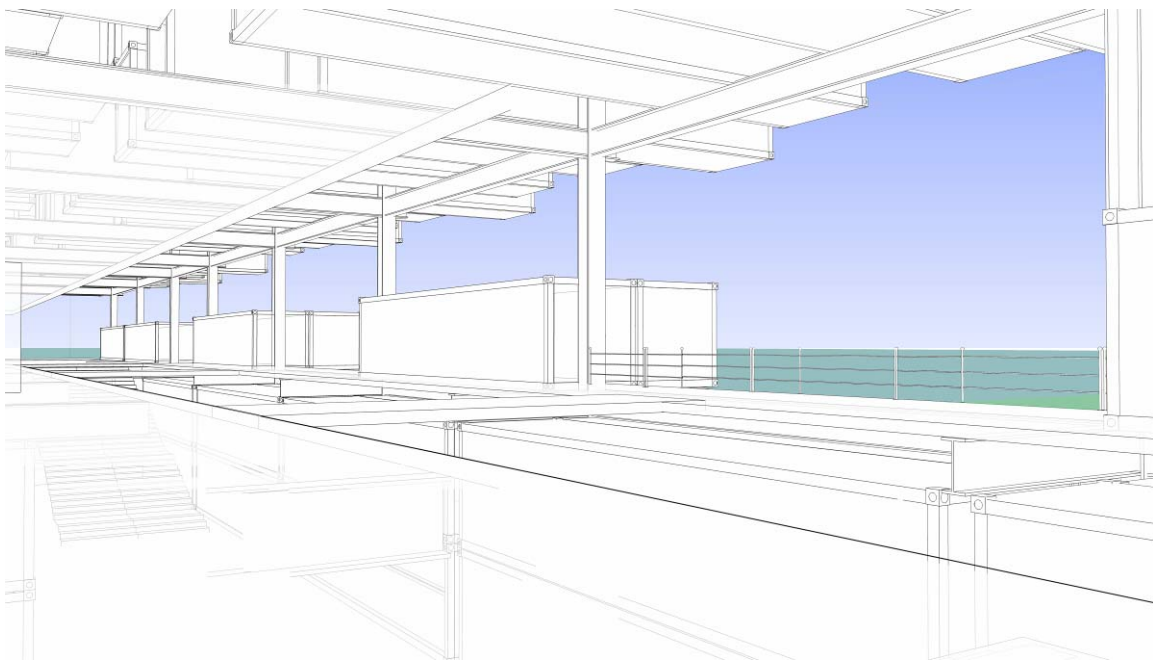
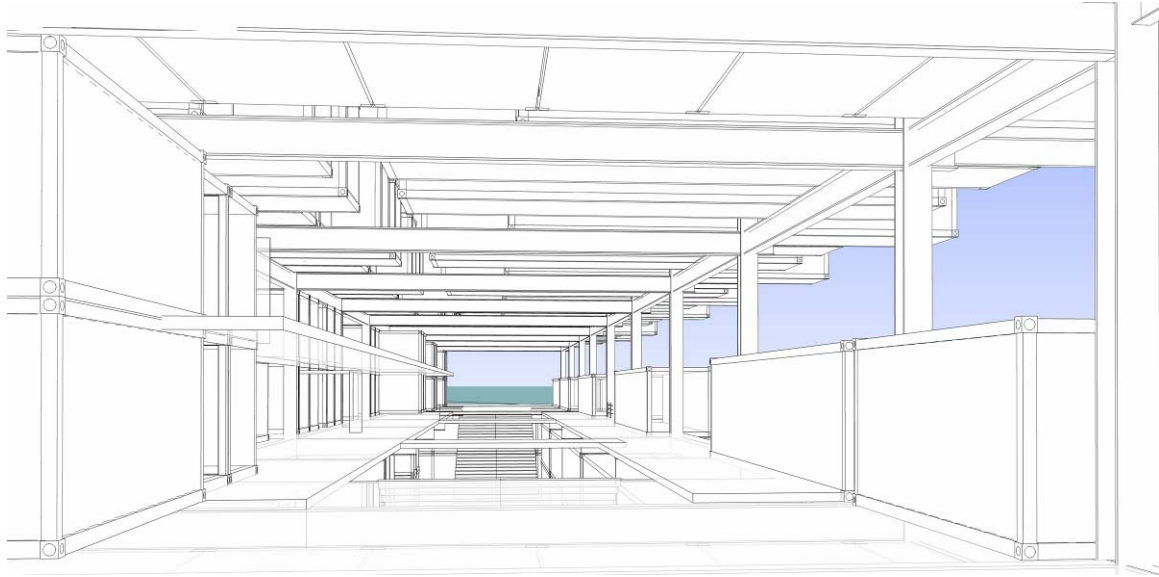


Figure 112: Interior Artisan's Market- entrance.

Figure 113: Interior Artisan's Market- 2nd entry level view to right of sea and Vina.

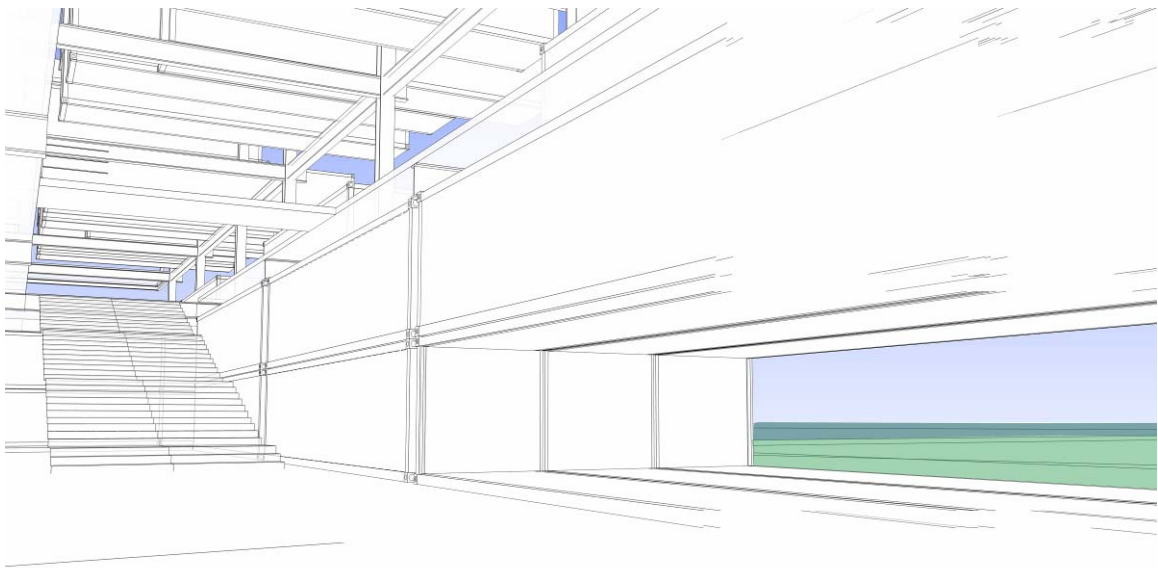
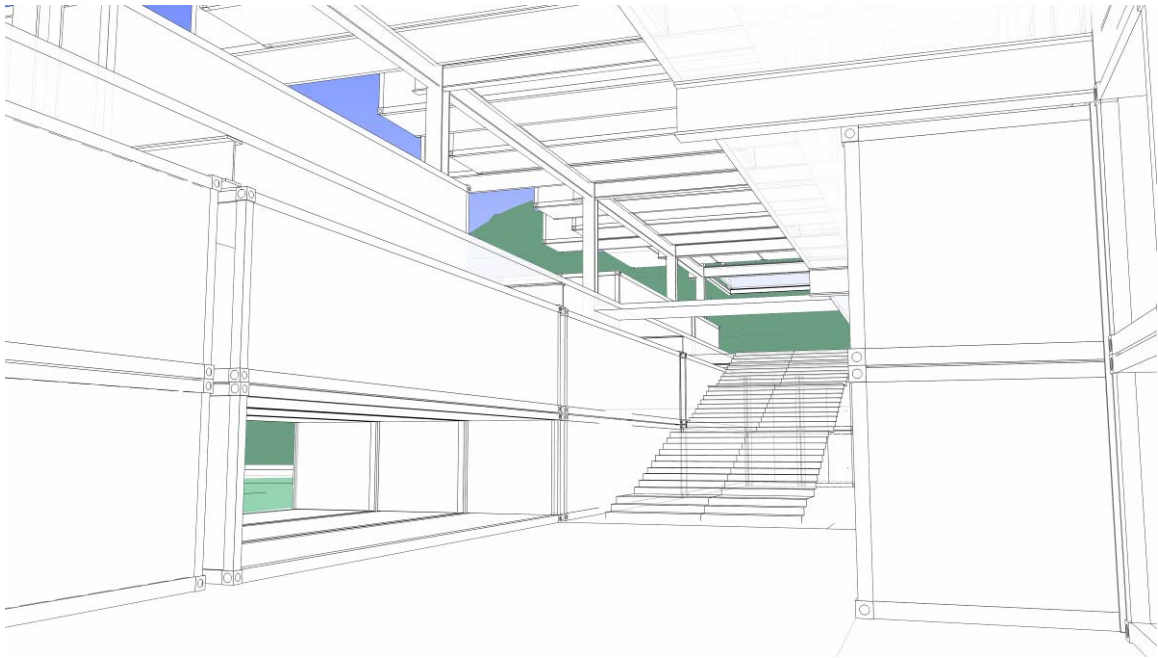


Figure 114: Interior Artisan's Market- ground level towards Baron Hill.

Figure 115: Interior Artisan's Market- ground level towards green/park.

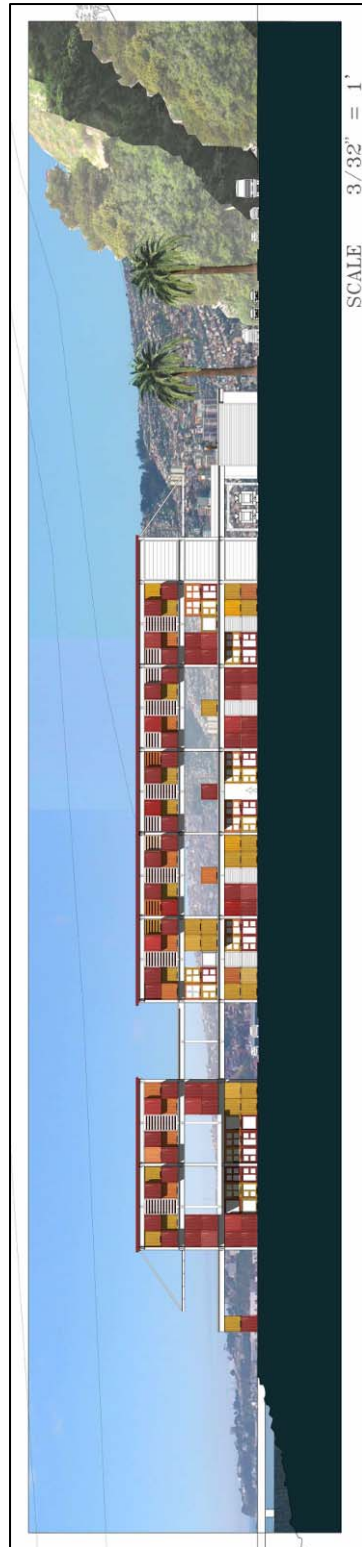


Figure 116: West facade of Artisan's Market.
 Figure 117: East facade of Artisan's Market.

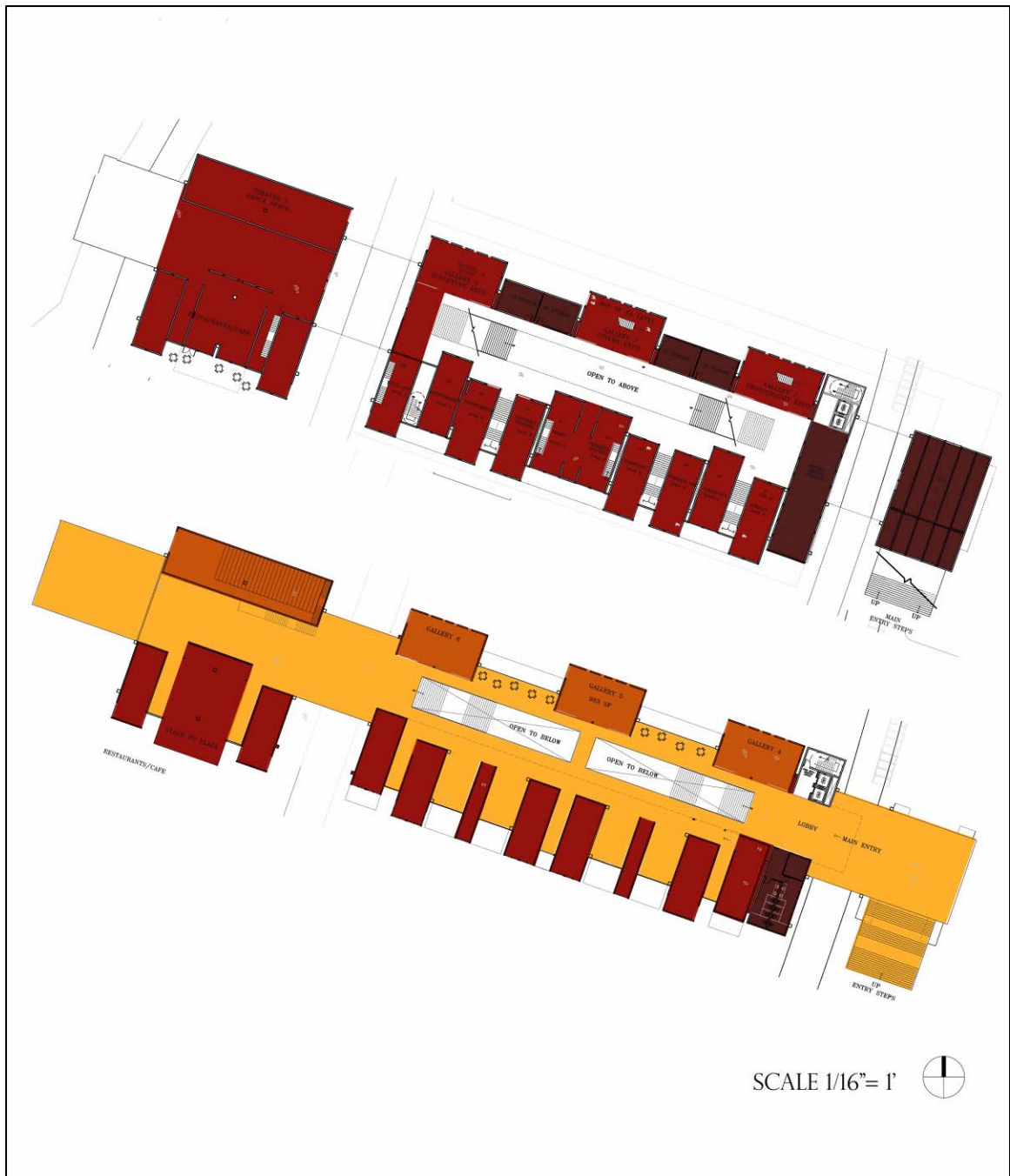


Figure 118: (top) Ground floor; (bottom) Entry Floor, 2nd level of Artisan's Market

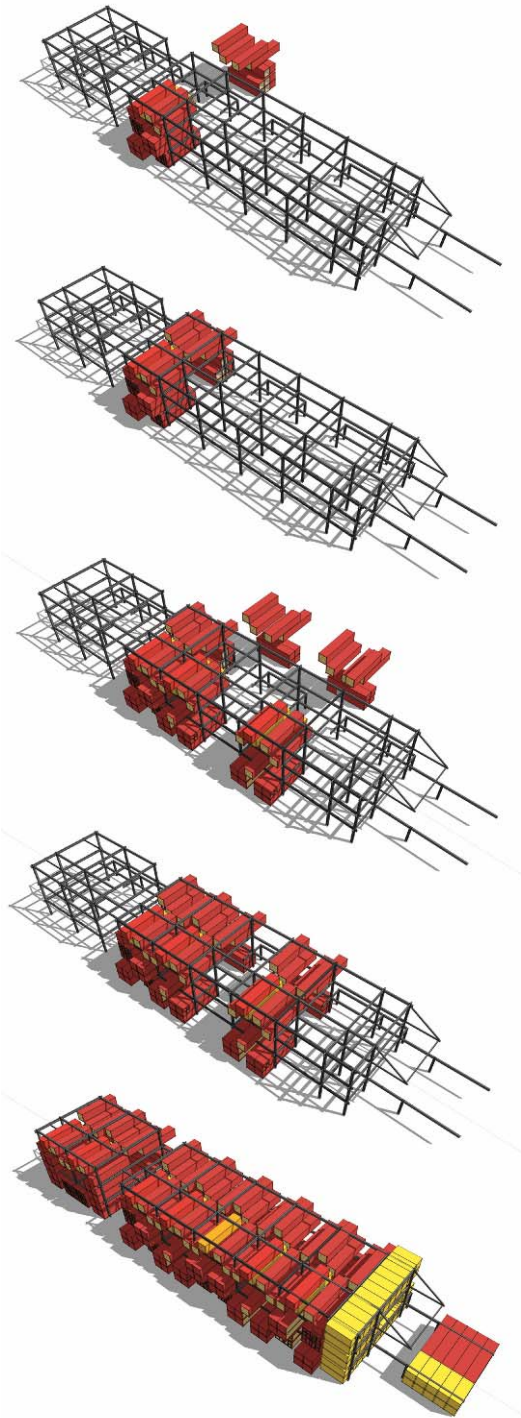


Figure 119: insertion of container module .

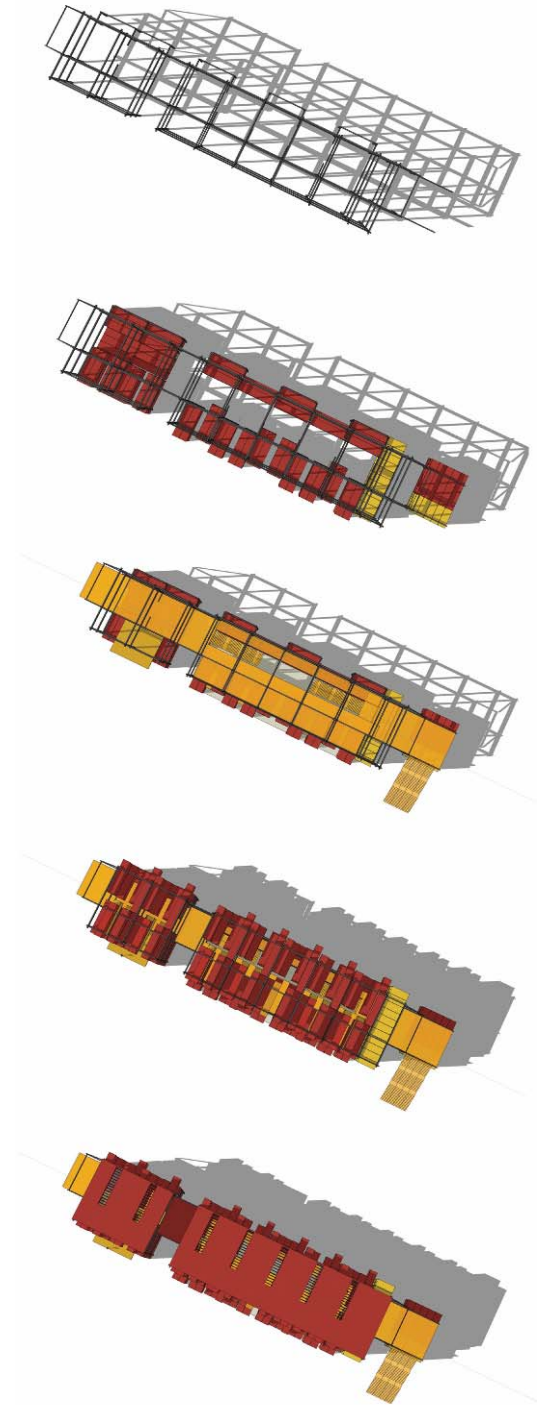


Figure 120: layering of levels of Artisan's Market.

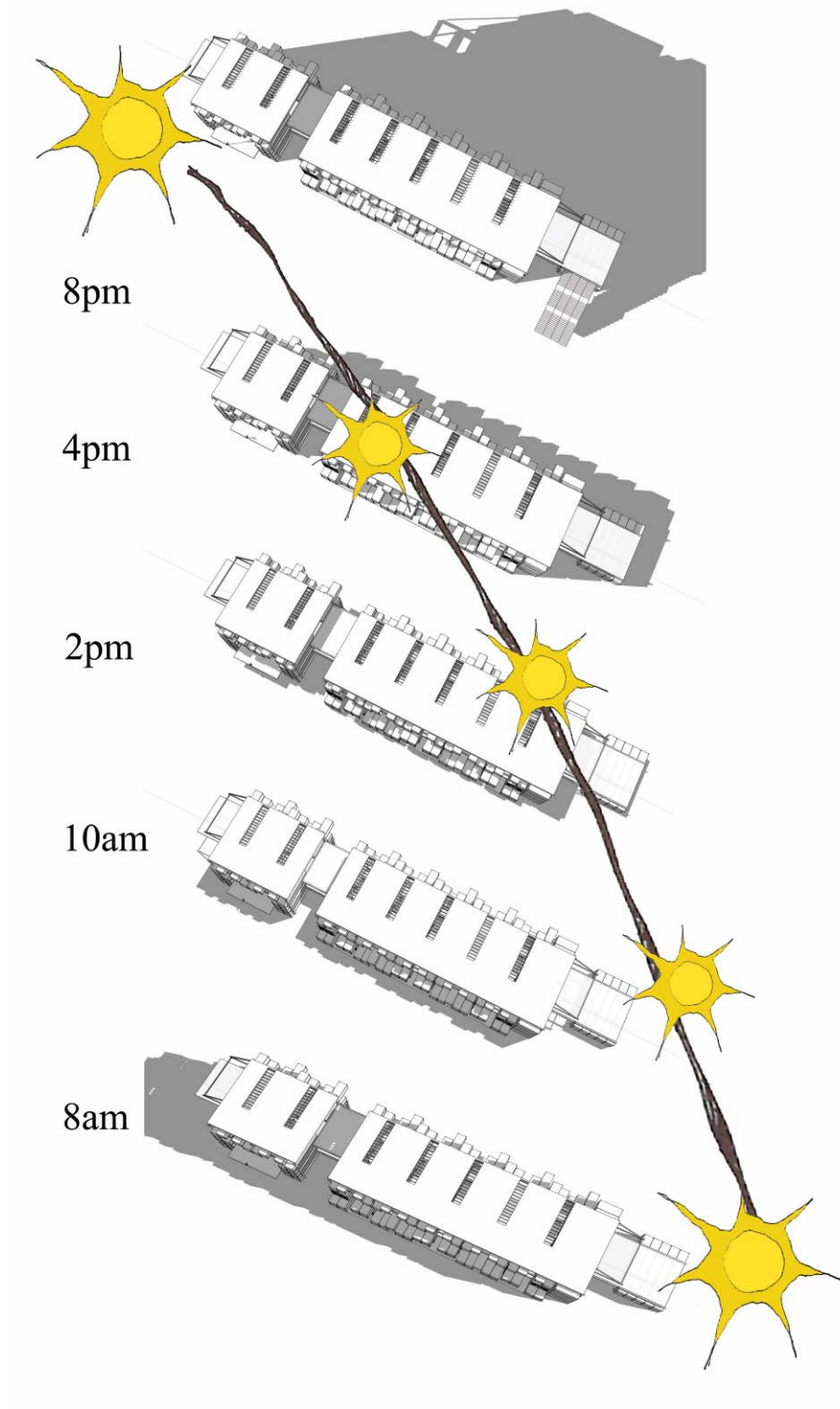


Figure 121: sun path in the summer (February 1st); 8am, 10 am, 2pm, 4pm, 8pm



Bibliography

- Alvarez Aránguiz, Luis. "Origen de los Espacios Públicos en Valparaíso: el discurso higienista y las condiciones ambientales en el siglo XIX". *Revista de Urbanismo*, N° Santiago: Universidad de Chile, Facultad de Urbanismo, July 2001.
- Carrasco, M. Ximena Urbina. "Vendedores ambulantes, comerciantes de "puestos," mendigos y otros tipos populares de Valparaíso en el Siglo XIX." *Revista Archivum*, Año III, N° 4. Santiago: Universidad de Chile, 2001.
- Electa, Milano. *Renzo Piano 1987-1994*. Basel, 1995.
- Harris Bucher, Gilberto. *Emigrantes e inmigrantes en Chile, 1810-1915*. Universidad Católica de Valparaíso, 2001.
- Lorenzo, Santiago; Harris, Gilberto; Vasquez, Nelson. *Vida, costumbres y espíritu empresarial de los porteños: Valparaíso en siglo XIX*. Valparaíso: Ediciones Universitarias de Valparaíso, Universidad Católica de Valparaíso, Serie Monografías Históricas N° 11, 2000.
- LOT/EK. *LOT/EK Urban Scan*. Princeton: Princeton Architectural Press, 2002.
- Monteira, Angèle and De Groote, Susana. Govd UNESCO. World Heritage Review. N° 38, December 2004.
- Pecchenino, Renzo. *Lukas's Notes of Valparaíso*. Valparaíso: Fundación Renzo Pecchenino, Lukas, 1978.
- Robinson Wright, Marie. *The Republic of Chile. The growth, resources and industrial conditions of a great nation*. Philadelphia, 1994.
- Schubert, Dirk. "Festival Marketplaces." *Die Alte Stadt*. Vol. 28, N° 2, 2001. pp. 130-134 Stuttgart, W. Kohlhammer, 1978.
- Smith, Stephen, and Gafence, Michael. *Recreation and tourism as a catalyst for urban waterfront redevelopment: an international survey*. Westport, CT: Praeger, 1995.
- Stahl, Frederick.. Faneuil Hall Markets: urban design and architectural report. 1968 Architectural Heritage, Inc. and the Society for the Preservation of New England Antiquities.
- Torre, L. Azeo. *Waterfront Development*. New York: Van Nostrand Reinhold, 1989.
- ULI- the Urban Land Institute. *Remaking the Urban Waterfront*. Washington, D.C.: ULI- the Urban Land Institute, 2004.
- Wilson, Chris. *The Myth of Santa Fe: Creating a Modern Regional Tradition*. Albuquerque, NM: University of New Mexico Press, 1997.

Municipalidad de Valparaíso, <<http://www.municipalidaddevalparaiso.cl>>

www.portvalparaiso.com

www.aivp.org

www.ci.portland.or.us

South Andes Capital, <<http://www.svs.cl>>