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A Gateway to the Sea in Genoa, Italy

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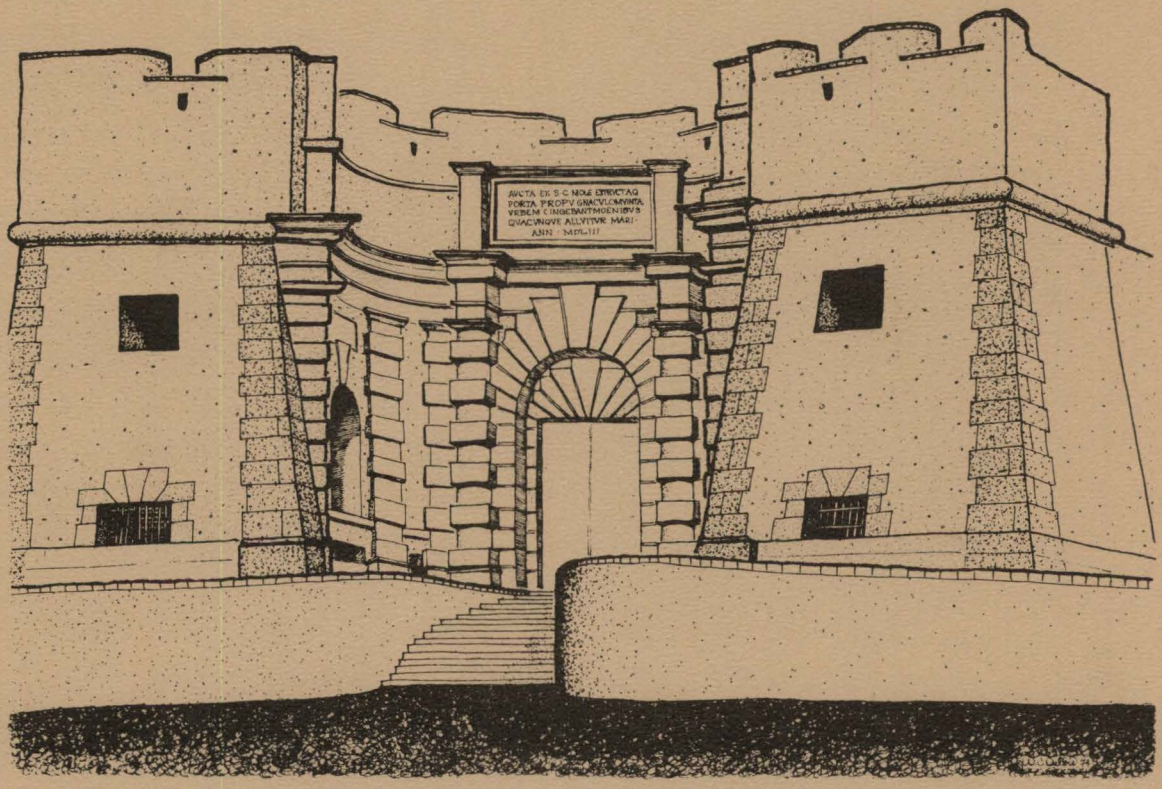
A GATEWAY TO THE SEA IN GENOA, ITALY

A STUDY AND DESIGN PROPOSAL

BY WILLIAM C. DUBOIS



A GATEWAY TO THE SEA
IN GENOA, ITALY

BY

WILLIAM C. DUBOIS

A final project submitted to the faculty of Clemson University

in partial fulfillment for the requirements of the degree

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To Harlan E. McClure, F.A.I.A., Dean of the College of Architecture, for his advice throughout my years of college and for making the European program possible;

To George Means, whose friendship and guidance were invaluable in the preparation of this project;

To my parents, for their faith and support throughout my education; and,

To my wife for her patience, love, and support.

FOREWORD

I have had the fortunate opportunity to come to Genoa, Italy and receive some of the most rewarding experiences of my life. It was to be expected that there would be many unigue problems attached to the task of doing a final project in a foreign country but they could only be handled as they arose. Upon arrival to Genoa I spent several weeks adjusting my physical and mental being to the new environment. For an American who has certain habits and expectations of how to accomplish the most in a certain amount of time it became very frustrating to adjust to the Italian pace of life. The common thing one hears and probably the best explanation of the situation is "piano, piano" (slowly, slowly) or "domani, domani" (tomorrow, tomorrow). After a short time I was gradually making the necessary adjustments and the city of Genoa started to become more beautiful and intriging. My senses began to become more and more aware of the subtle, yet entirely different aspects of European life which were demanding me to change my everyday routines and feelings about life. Inspite of the frustrating speed of accomplishments with the thought of the project in mind, a conscious effort was made in search of a topic for this work.

Much later in the semester after the work had already begun it became evident that a final project done here in Italy could not become the same type of final project that was being prepared at Clemson. Just as the environments are very different, the product of these environments must reflect these differences. The most obvious differences are the lack of usual facilities such as libraries and other sources of information in English from which one may extract an enormous amount

of background information. Also the limited source of faculty guidance here as compared to the College at Clemson made a difference in the extent that the project could not receive the normal amount of directive criticism. With the realization of these and many more differences it was concluded that we must adjust the approach of the final project to correspond to the sources and situations that do exist here. The most valuable things of which we must capitalize upon are our experiences in this new environment, and to develop the observations into a learning process and the basis of a final project. By incorporating the stimulus and input which is offered by the Italian environment and not trying to simulate a project that has been done in the United States it is possible for this study in Italy to result into the most rewarding educational experience.

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INTRODUCTION

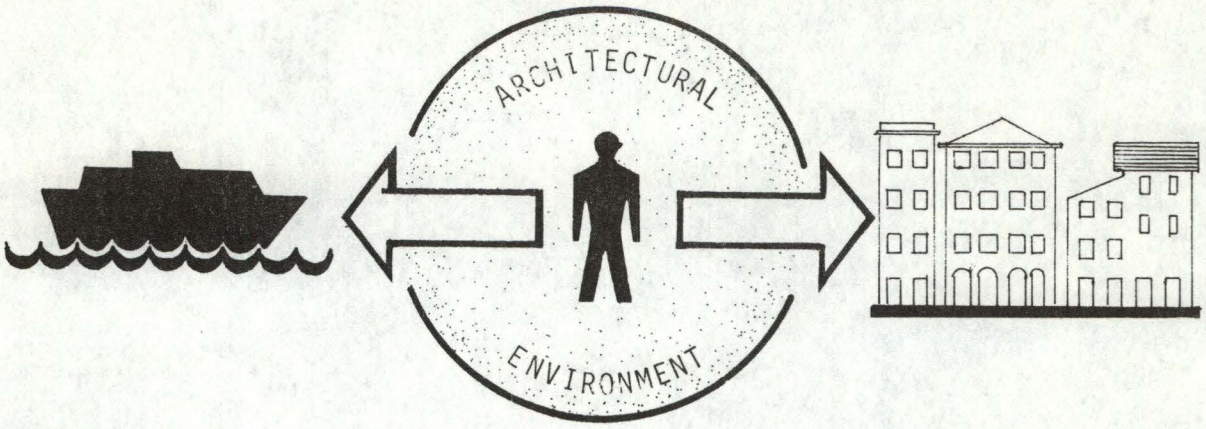
THE OBJECTIVE

Having recognized the peculiarities of doing a final project in this foreign environment the next step was to conceive a method of developing a project which incorporated the assets of the environment without exceeding the limitations. The type of project and its approach has resulted into an unusual and interesting form. After having worked on generalized design projects to familiarize myself with Genoa and its port, I was able to establish some of my interests in order to formulate my objective for this project. I have intended to synthesize my observations of a particular aspect of architecture into a firm understanding and presentation so that someone in the United States may become familiar with this project and the environment from which it was produced.

THE TOPIC

The fact of Genoa being a major port city in the world and having a chance to become acquainted with its life has stimulated me to have an interest in the environment of the port and its implications on the city. The movement of passengers in transition between the ships and their destinations on land is the basic activity that has been studied. This movement involves an occurance of a sequence of events which is being affected by some form of architectural environment. I have selected the term "gateway" to represent this particular environment. The primary purpose and main importance of this project is to understand and clarify the gateway experience of people and its relation to architectural design.

A GATEWAY



THE APPROACH

The approach which has been taken in this project to examine the architectural design of a gateway is to apply the observations of the gateway to three different situations which are complete in themselves yet may be interrelated. The three divisions of the project are the historical gateway, a proposed gateway, and the combination of the old and the new. By making the observations and study of the gateway at these three different point of views instead of only one it is hoped that a more complete understanding of the principles may be achieved.

In order to give a more clear understanding of how this project developed into this form a brief evolution of the work must be understood. Our professor was our guiding force into the study of architectural design here in Genoa. It was his suggestion that we, the students, concern ourselves with a study of the port. This decision was apparently made with hopes that more information in English would be available and more easily accessable than would be information concerning other areas of the city. Also it was the professor's feeling that it would be more suitable for us to design in the fairly open spaces of the

port rather than to make changes in the tight spaces of the old city. Several weeks were spent by all of us developing our own proposals on the same project. This was a good initiation exercise which allowed each of us to begin establishing our own relationships with the port and the city. The intention of the initial project was for us to study the architectural features in the area of the port extending from Molo Vecchio to Darsena Municipale which is shown on the map on page 14. We found that many of the structures in that area of the port are in very poor condition and receive very little use as in comparison to other areas of the port. The circulation of port traffic is also a critical problem in that area due to the lack of dock space and the Darsena area which is a municipal property that disconnects the port properties. It was from this initial study that I became familiar with the area and was able to begin collecting information and experiences for this project.

While making preliminary planning schemes for this area of the port several types of activities were considered to be introduced as design projects. The more significant ones were an elementary school, municipal park, car parking, and a terminal building for ferries. I found the ferry terminal to be the most interesting and reasonable activity to occur in this specific area of the port for several reasons. It became evident with every preliminary plan that the original shoreline should be restored for the purpose of reestablishing the connection of the city with the sea and to return the original atmosphere to the historical Molo Vecchio. However, the restoration of the old shoreline created many new problems with the railway connections within the port properties. A ferry terminal solves the problems by not require-

ing the facilities of the railroads. The location of Molo Vecchio is such that its present use of handling goods is inconvenient due to its isolation from the other areas of the port. On the otherhand, its close proximity to the city center makes it a desirable location for ferries servicing passengers with or without automobiles. Also, Molo Vecchio is one of few spaces in the port which has a fair amount of dock surface space, which is one of the main requirements of the facilities to accommodate ferries. The only other reason for planning a ferry terminal building at this location is that the Port of Genoa does not have adequate facilities to handle the increasing needs of its ferries.

Upon establishing a ferry terminal as the design phase of the project and Molo Vecchio as the site, the ideas of a gateway become realized as the emphasis of the project. In this way the project grew out of the environment and I was able to get the most out of the experiences that I received.

BACKGROUND INFORMATION

THE CITY OF GENOA

Before one can understand the complete significance and ideas of this project it is necessary to become somewhat familiar with the area of Genoa and its port. Genoa, which is located in the middle of the Riviera coast on the Mediterranean, is not only one of the largest port cities of the world but also a prominent tourist attraction of Italy and the whole of the Mediterranean. The climate is mild in the winter and never excessively hot in the summer. The weather combined with many unexpected panoramas of city and sea lead to Genoa's unique and out-

Genoa is always surprising one with a variety of beautiful panoramas of the city and the sea.

The lighthouse is the most prominent landmark for the city. The peninsula of Molo Vecchio can be seen in the center of this photograph.

standing characteristic. One of the most pleasant experiences I have had while living here at the villa has been watching and listening to the activities of the city and the port from my bedroom window. The terrain of Genoa is such that most of its 800,000 inhabitants have a common ability of being able to experience the fantastic vantage points. I find that by being able to experience the various types of ships moving in or out of the port or the activity on the street below I am more aware of my being a part of the city. This experiencing of the city in its own special way is what I find to be one of Genoa's strongest assets. However, she has many more! There is what I would call a flavor of life which seems to be captured by the Genoese. There is an old tradition of commerce with the sea and consequently the city has a brisk pace, but

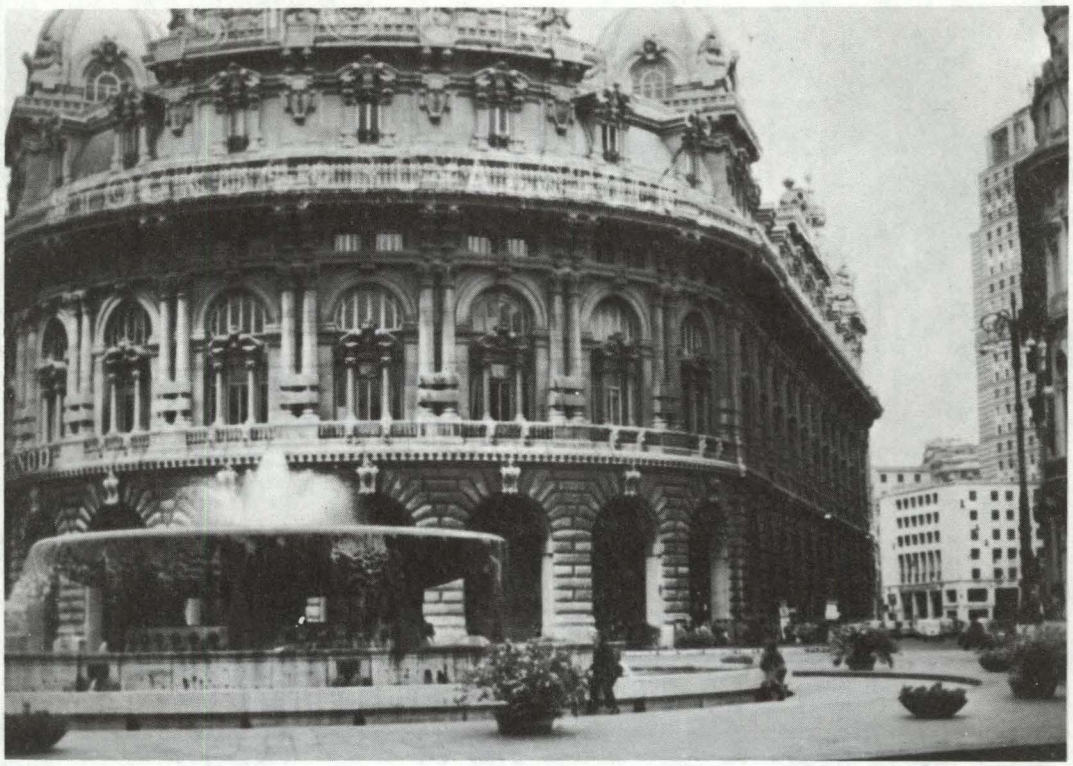
The shopping arcade (above) *along the edge of the port is full of life and activity while in other parts of the city numerous parks* (as shown below) *provide serenity and amusement.*

there are also many areas that remain quiet and seem to have maintained a real sense of antiquity. Life here has a sense of being at ease and unpretensious. One may simply perform the daily routines of life.

The fame of Genoa as a maritime port and industrial and commercial center has become its most outstanding claim; but the richness of art and architecture is also amazing. There are many old churches of various sizes and importance, city walls that were constructed in 1155, and several elaborate palaces of notable families in Italian history. In old Genoa, the historic center, one feels as if he were surrounded by the austere atmosphere of the Middle Ages while still in another part of the city one may feel the splendor and elegance of the Renaissance. These things which have been mentioned are only a few of the

The usually overcrowded street of Via XX Settembre exists as the primary business district for the city.

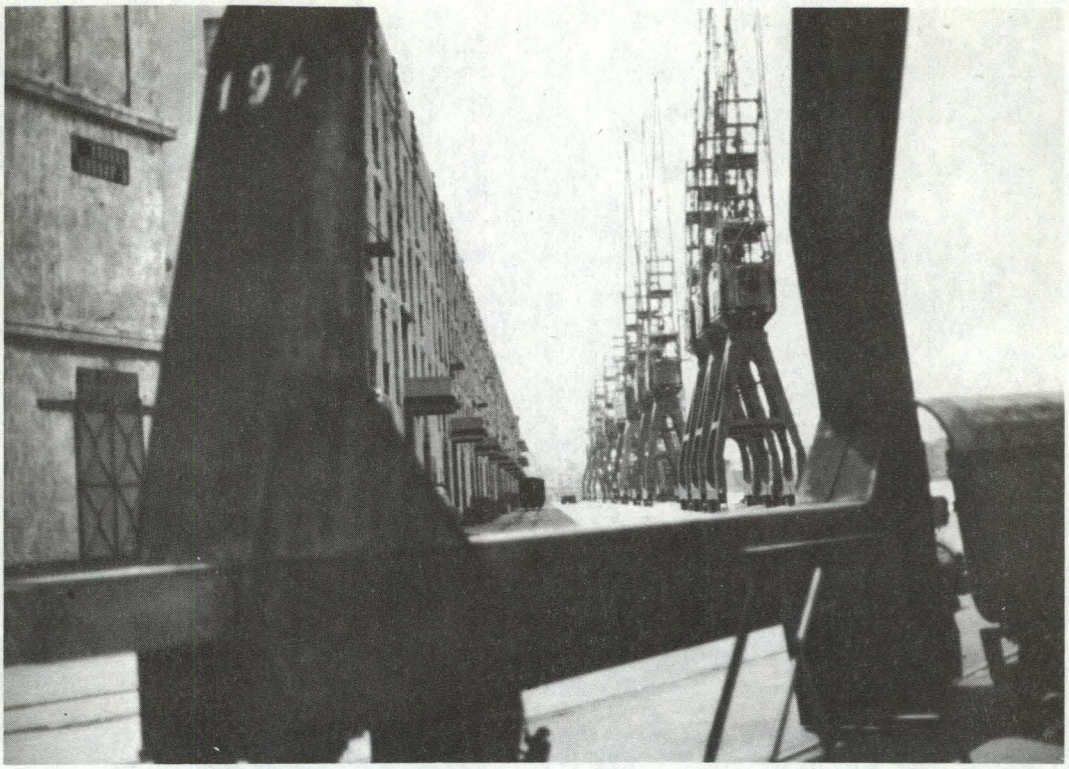
Piazza de Ferarri marks the center of activity in the city with its grand elegance of Renaissance architecture.



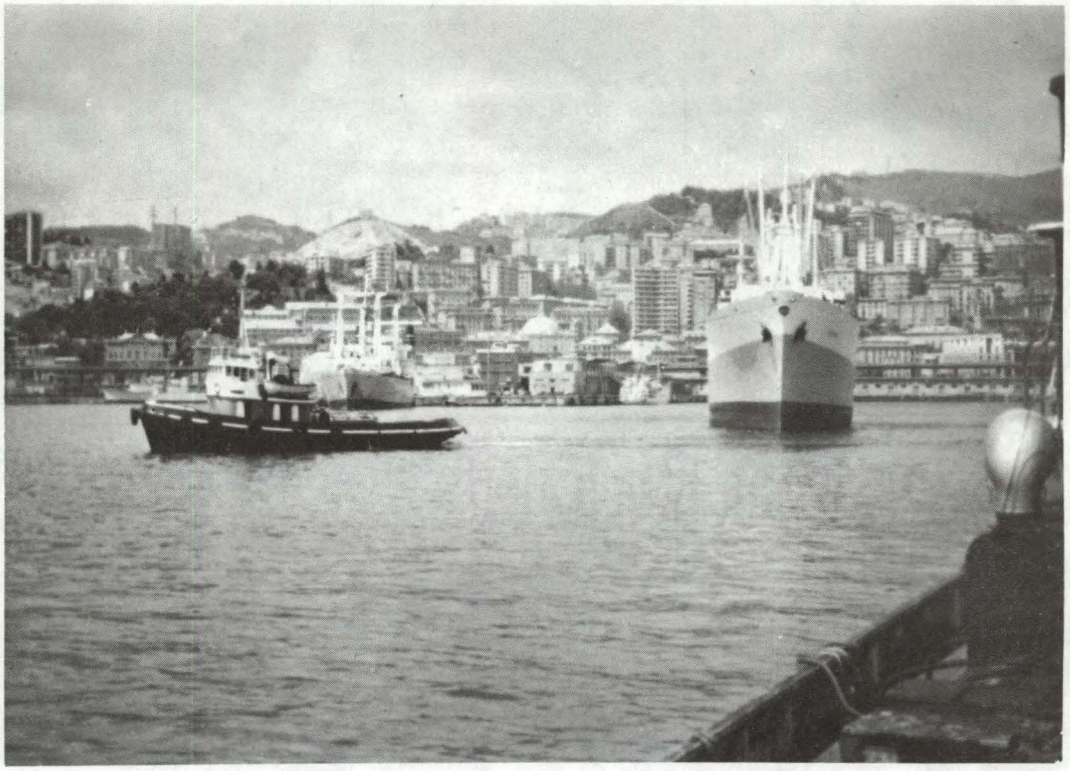
more notable facets of the Genoa experience, not to mention such things as the many museums, beautiful gardens and parks, the cooking, or the Genoese people themselves.

THE PORT OF GENOA

The Port of Genoa is another world of facination within its own boundaries. The dramatic relationship of sea and land within the port combined with the often times huge and massive equipment that is required for efficient functioning set the stage for the movement of goods and passengers. Unlike many port cities, Genoa has a particularly intriging relationship between the city and the port. From the viewpoint of the city one may become a spectator at any number of vantage points within the natural amphitheater formation of the city with the port on stage



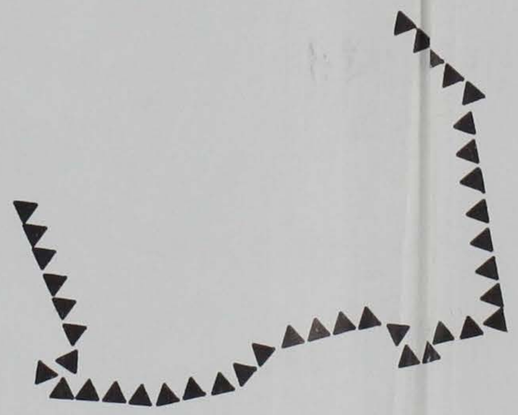
Some large pieces of equipment (above) *which stand majestically in the open spaces of the port add to the dramatic effect the port has upon the city which seems to be watching over its activities* (below).

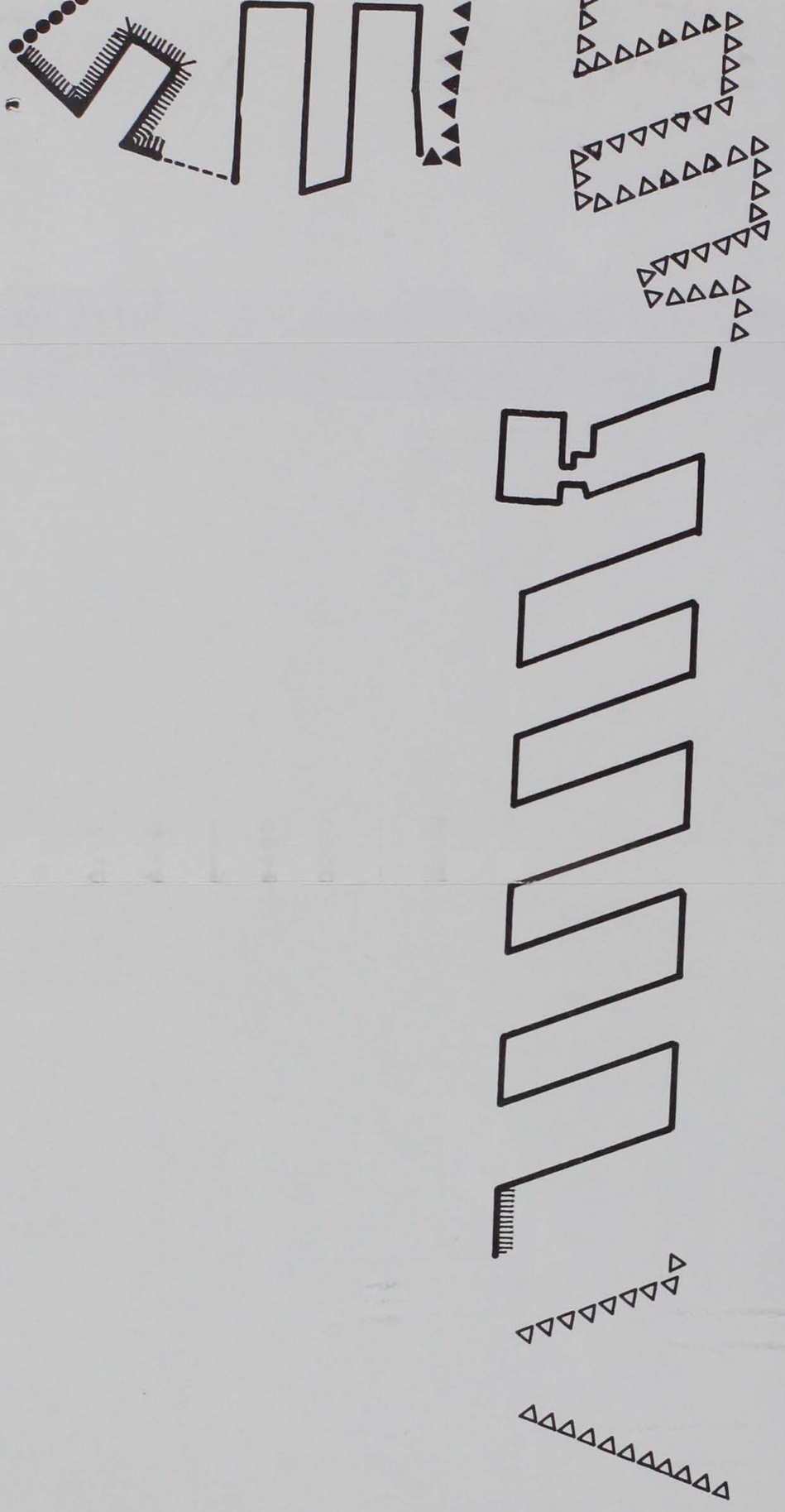


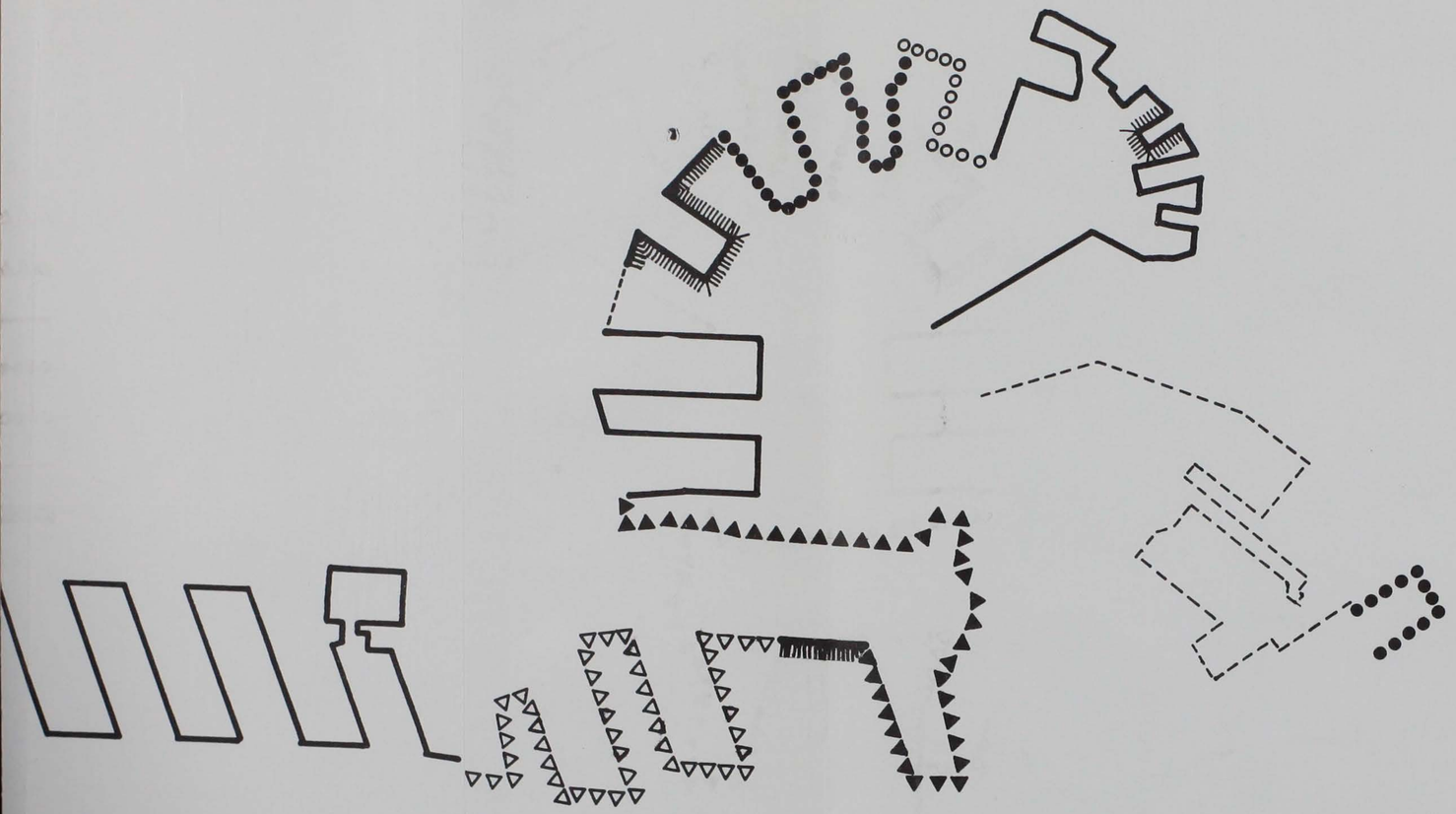
Very seldom can one not find some movement of ships in the harbor. The graceful maneuvers are facinating to watch!

and the Mediterranean sea as the background. Any movement that one may see becomes an event worth taking some time to watch. In the evenings one may sit and listen to the sounds that come from great distances at sea and from within the port which sometimes blend into a weird and eerie tune. Also, the lights twinkling in the night and the ships lit up like gems throughout the port become a living spectacle. Taking the oposite point of view, the view point from the port of the city, one feels a sense of freedom and excitement. Perhaps the fact of being on the edge of the large open spaces and next to the water gives one a contrasting sense of space as compared to being in the confines of the city or on board a ship. As a passenger aboard ship enters the harbor he becomes surrounded on three sides by the city and has further enhanced his sense of arrival. The physical form of the city is such that it is always present and watching over the activities of the port.

The Port of Genoa is administered by an autonomous Port Authority which consists of the State, some hinterland municipalities, and the Genoa Chamber of Commerce. This type of organization allows both employers (shipowners, industrialists, and commercial men) and employees to have a voice in its assemblies. The Genoa Port Authority, constituted in 1903, has the responsibility of carrying out the construction and maintenance of all facilities within the boundaries of the port in addition to the management and coordination of maritime and airport services. The Port Authority schedules the work of the port and establishes the tarriffs. All work and operations of the port are performed by the General Cargo Dockers Company, the Coal Unloading Dockers Company, the Industrialist Branch (shipping repairs) Company, and the Careening Company. Among these companies the total number of workers employed is about 7,500.







EXISTING USES OF THE PORT

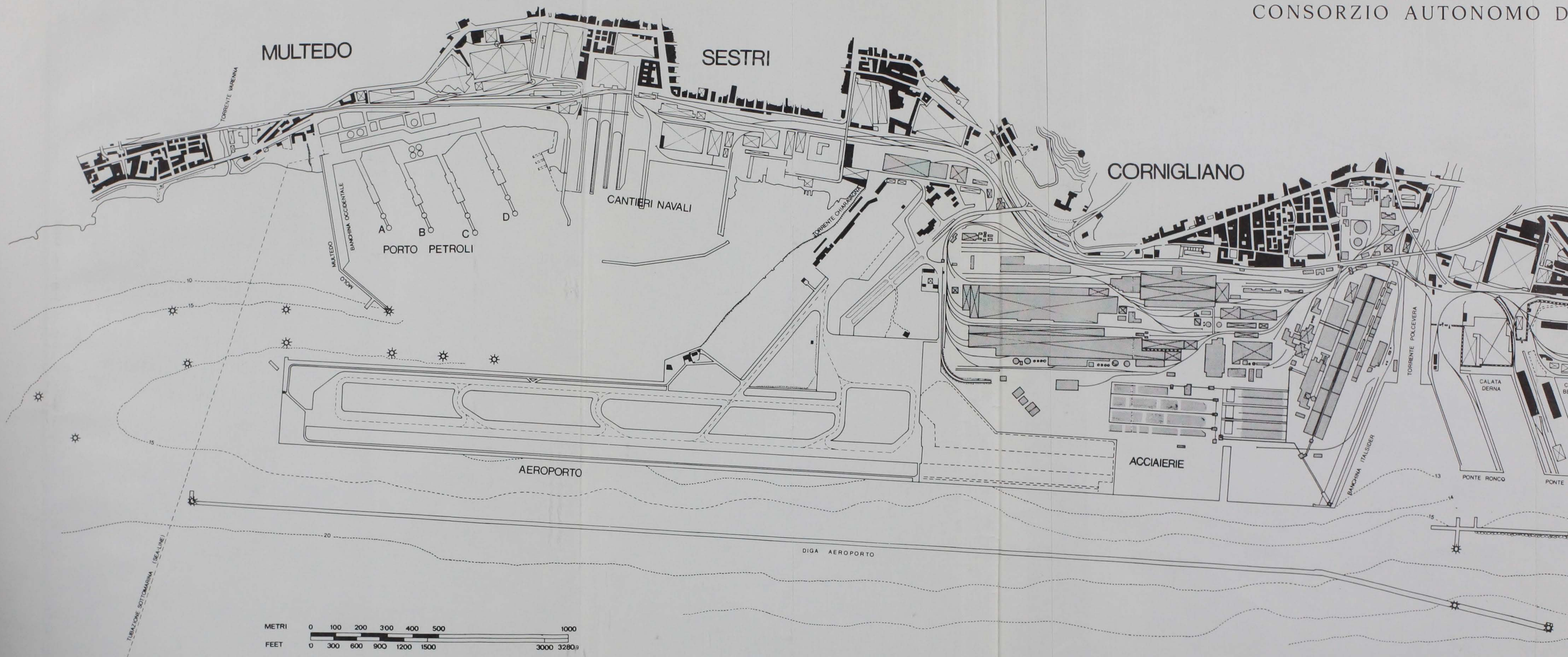
LEGEND

- Zone for minerals and metals in bulk
- Zone for oil
- Zone for miscellaneous goods
- Zone for passengers and pleasure
- Zone for grains and oil seeds in silos
- Zone for ship repairs
- Zone for ferries

Courtesy of:

Ente portuale / The Port Authority / Administration portuaire / Hafen

CONSORZIO AUTONOMO D



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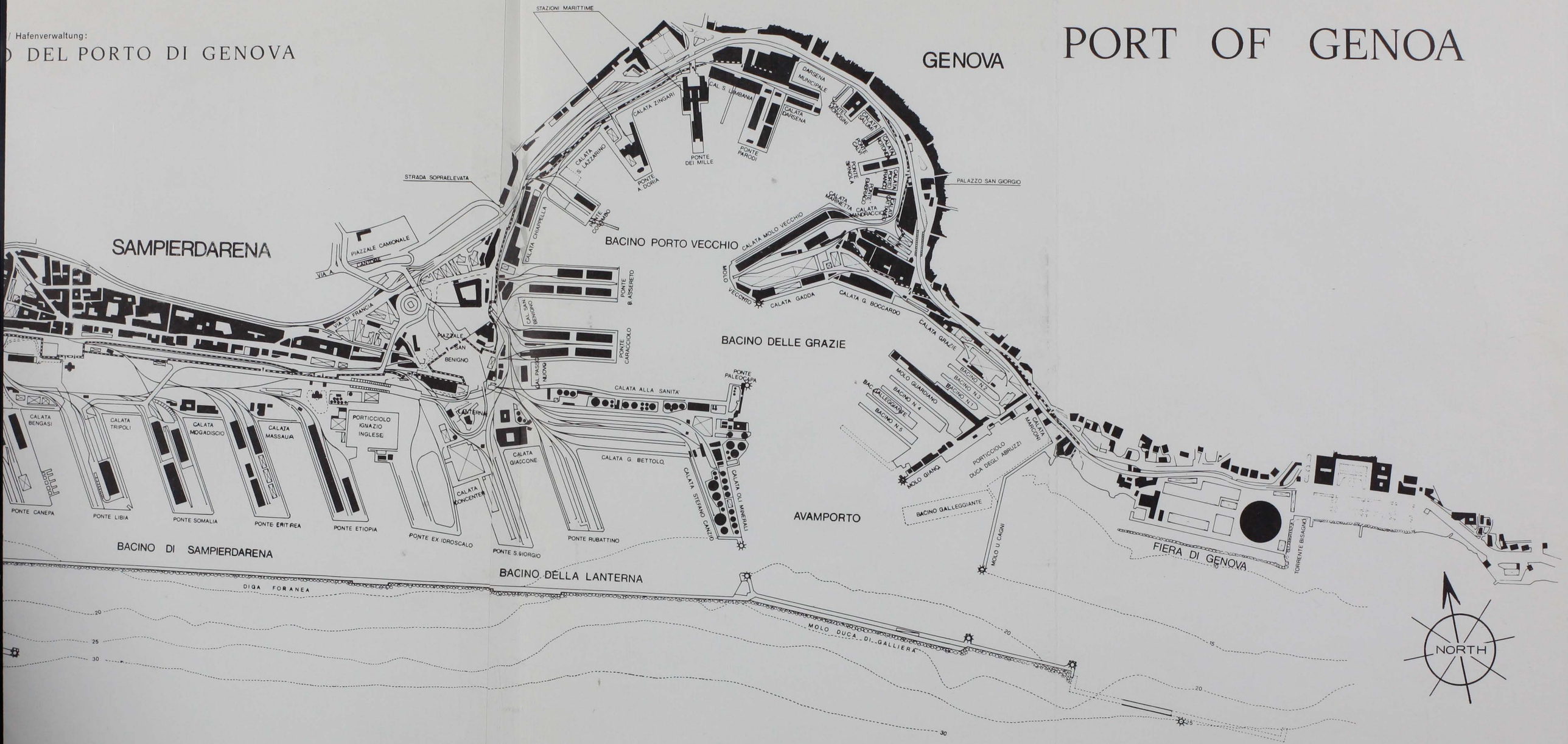
O DEL PORTO DI GENOVA

PORT OF GENOA

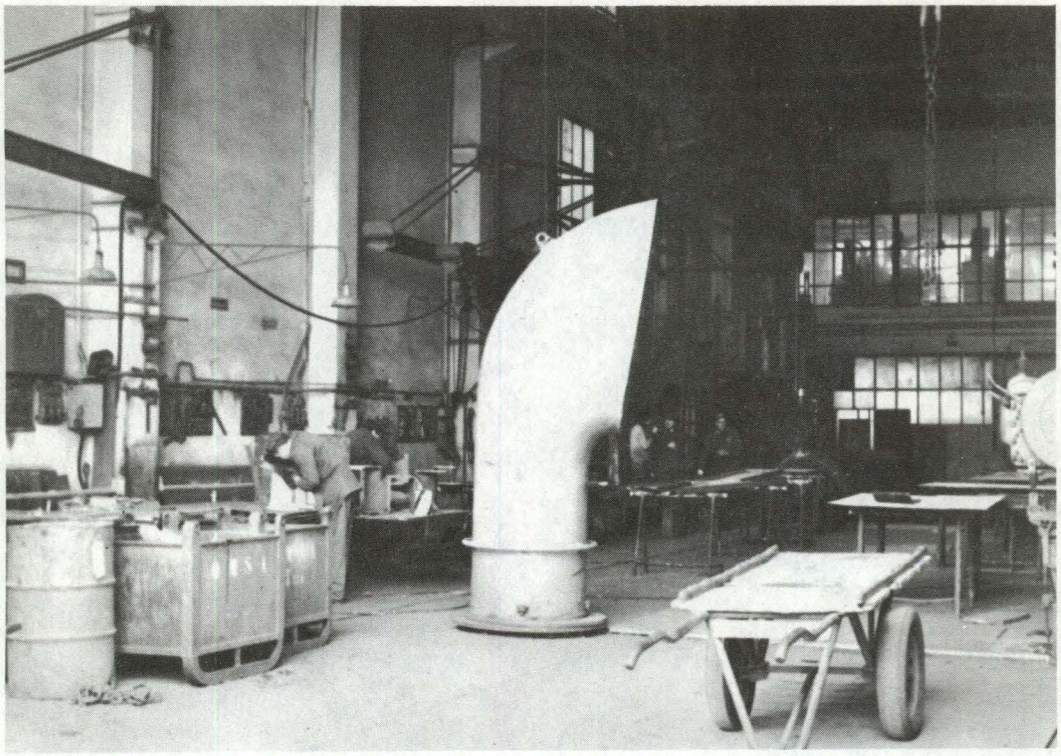


A group of tugs owned by the United Tug Company wait out in the harbor ready to go to work when they are called.

Another important company which manages the unloading, loading, warehousing, reloading, and reshipping on behalf of third parties is the firm "Seaport" -- Port Services S.p.A. This is a joint stock company: 90% held by the Port Authority, 5% by the City Council and 5% by Genoa Provincial Authority. The Port Authority decides the working timetables, supervises the allocation of land and water surfaces, manages the cranes, and either directly or indirectly the warehouses. It assigns the berths and controls the movement of all ships in port with the use of 37 tugs that belong to the United Tug Company.

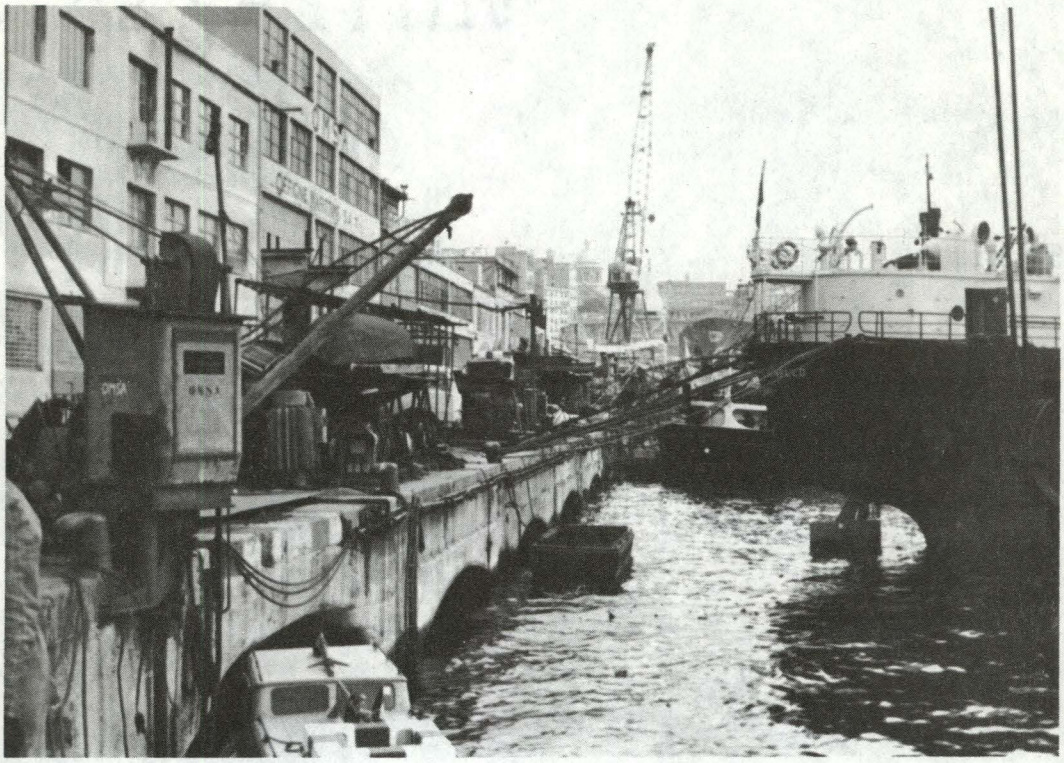
In order to portray an idea of the activities of the port it may be useful to present some of the facilities that exist. There are two maritime stations to service passengers at Ponte dei Mille and Ponte Andrea

Doria. At this location there are six berths, three of which are for large transatlantic liners. Now existing, but soon to be moved farther down the coast is the private yacht basin located at the Porticciolo Duca degli Abruzzi. This area is being taken over for the construction of a super floating dry dock for ships of up to 300,000 tons. When completed this huge floating mass of concrete will be the largest floating dry dock ever to be built. The Genoa port has established a prominent position in the ship-repairing field with more than 160 firms who have a combined working force of 6,000 workers, i.e. nearly 8% of those who are employed in Genoese manufacturing industries. There are 84 workshops (large, small, and specialized) and 7 dry docks for careening. For the purpose of handling petroleum products there exists four jetties



Ship-repairing is of vital importance to the port of Genoa. The photograph above gives an example of a workshop for this purpose.

Here one may see some of the miscellaneous parts that have collected along the south side of Molo Vecchio in the ship-repairing area.



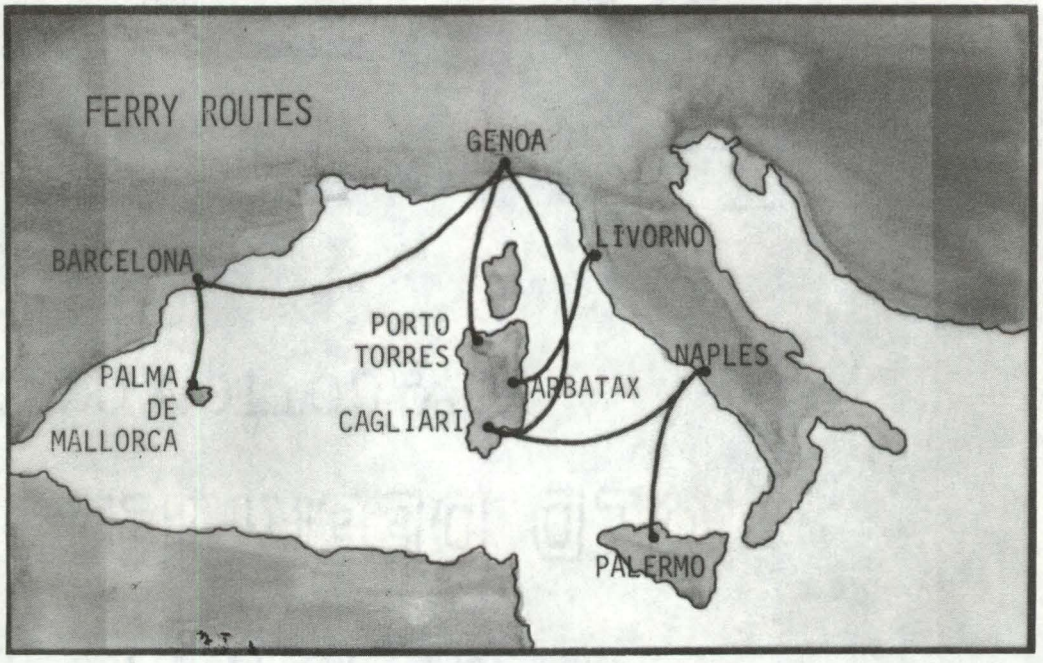
with eight berths to service tankers of up to 110,000 tons. Just last year a platform offshore from Multedo has been built to accomodate "super-tankers" of up to 500,000 tons. A network of oil pipelines originate from the Multedo petroleum port, amounting to 995 miles which extend to feed the refineries of Nothern Italy; Aigle, Switzerland; and Ingolstadt, Germany.

The Port Authority prides itself most on the accomplishment of producing the first container terminal on the Mediterranean at Ponte Libia in 1969. In only a short period of time the Port of Genoa has become the terminus for container traffic on the Mediterranean. In only one year container traffic increased by about 150%. The second container terminal has just recently come into operation at Ponte Ronco and a third

is being planned for at Calata Bettolo. Containers are the new and rapidly growing method of shipping goods. It is a method which takes the largest capital investment but becomes the most functional and economically feasible for goods traveling long distances.

At various locations throughout the port exist 75 warehouses, 29 of which belong to the Port Authority. In these buildings one may find cotton, wool, hides, coffee, and foodstuffs. Silos are used for the purpose of storing cereals, oil seeds, wine, salt, animal and vegetable oils and fats. Large tanks may be found for the storage of mineral oils. The most fascinating pieces of equipment one may find at the port are the 752 quay-side cranes, self moving and fork lift trucks of which 374 belong to the Authority. There are a total of 38 floating cranes of up to 150 tons lifting capacity.

The use of ferries in the Port of Genoa has become of great interest in the course of performing this final project. The type of ferry that is typical of the port is a ship combining the functions of serving



The presence of the ferries in the port provides a valuable service and vitality which becomes a significant aspect in the importance of Genoa and its port.

approximately 700 passengers and 100 private vehicles or 50 trucks and trailers. The routes of the ferries connect with various locations on the Mediterranean Sea and have an average length of 8 to 12 hours traveling time. The use of ferries is becoming a very popular means of transportation for tourists in Europe and especially in the Mediterranean area. Genoa is in the fortunate location of being in the northern most point ready to serve the rest of Europe to its north.

The ferries of the port are presently located at several different points as may be seen on the fold-out map of the Port of Genoa and its existing uses. The use of ferries at Calata Derna and Calata Bettolo is only for the shipping of cargo and therefore is not of great concern to the interest of this project. The facilities that handle both passen-

The ferries are impressive looking ships that serve both the movement of passengers and goods throughout the Mediterranean Sea.

gers and cargo are located at Ponte Colombo and Ponte Calvi. At both locations the facilities for handling passengers are severely insufficient and poorly organized. The best and most used ferry terminal at present is operated by the Linee Canguro Company, located at Calata Chiappella. This facility has only the capacity of docking and servicing one ferry at a time due to the lack of available space in the area. The terminal building is nearing completion of the renovation of an old building and adapting it to suit the new functions. The interiors are very attractive and pleasant but the problem of circulation is a disaster. There exists no evident order to the sequence of events which take place as one either is leaving or entering the port by foot or by vehicle. There is no separation between the passengers and vehicles and the area surrounding the ferry becomes an inefficient and dangerous confusion of circulation. Away from the many functional problems of this ferry terminal it also fails as becoming a psychologically significant gateway for the passengers at the port.

The building that has been occupied by the ferry company exists in the form of just another warehouse situated among the others in the port. This uneventful impression upon the passengers combined with the confusion of circulation involved by the gateway processes leaves the person to only do the necessary things and leave without any enthusiasm or understanding of the experience.

The terminal of Linee Canguro has adapted an old building to handle new functions. These photographs show the main entrance to the building that is used both by the passengers and visitors. The facilities occupy only half of the building shown below.

The space which exists between the entrance of the building and the ferry (above) *handles the circulation of people, vehicles, and baggage on carts. At present the passengers must make their way through the trucks that are waiting to board ship* (below).

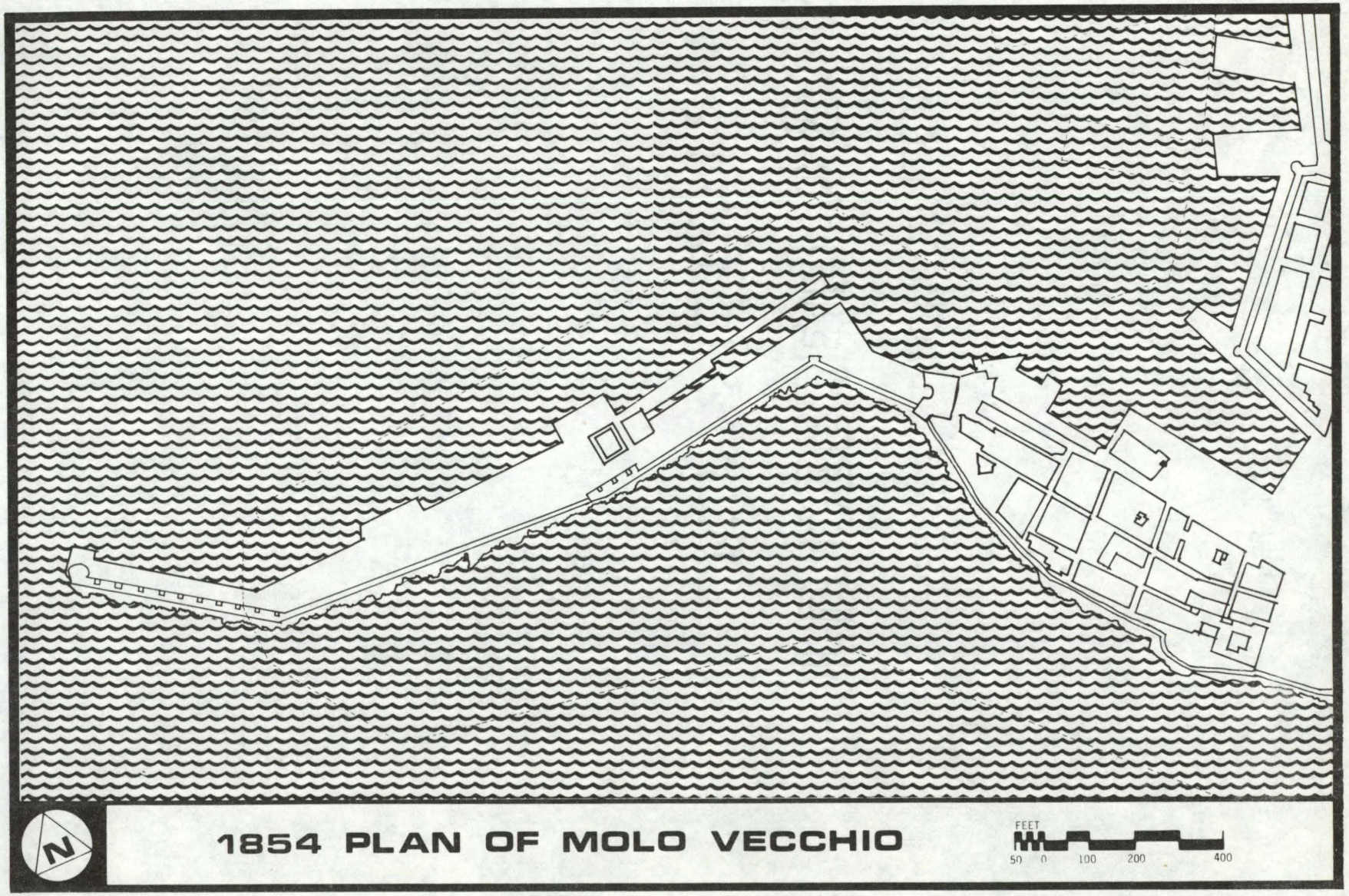
AN HISTORIC GATEWAY

THE PAST

The history of Genoa dates back as far as the twelfth century, although recent archeological discoveries have traced the existance of Genoa back to the Hannibal war in 218 B.C. It is assumed that nothing more than a natural berth for ships could have existed up until the time of around 1128 when the first wooden piers were erected on the extreme point of the jetty which is now called Molo Vecchio (Old Jetty). The jetty was originally a natural formation and is of great importance in terms of providing protection for the inner harbor from rough seas and enemies. Throughout the entire history of the port one of the primary concerns has been the building up and extension of the jetty. It is the original location of the port activities in Genoa and for several centuries has held the most important position of the port. Gradually the port expanded as did the city and the various functions of the port have been distributed along the banks.

Up until as late as the mid-nineteenth century the port area of Molo Vecchio was connected to the city only through the Gate of the Old Jetty which was built in 1554. The configuration of the jetty as it existed in 1854 is shown on the following page. Before this time another gate existed but has now been removed and little information is known about its existance. Very little information is available about the Gate of the Old Jetty which still stands boarded up in the middle of Molo Vecchio.

The part of the city which lies directly behind the gateway has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1854 PLAN OF MOLO VECCHIO
FEET
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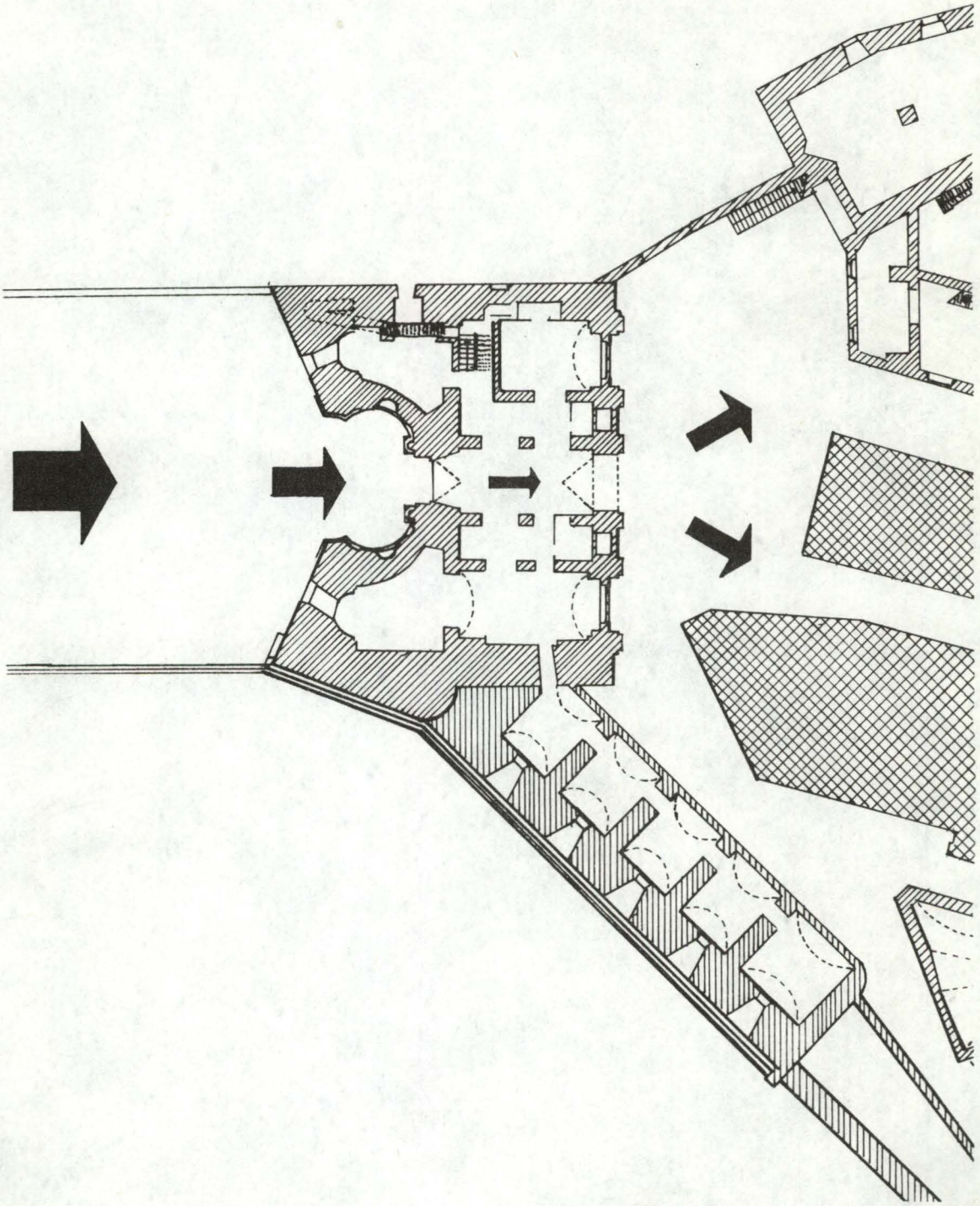
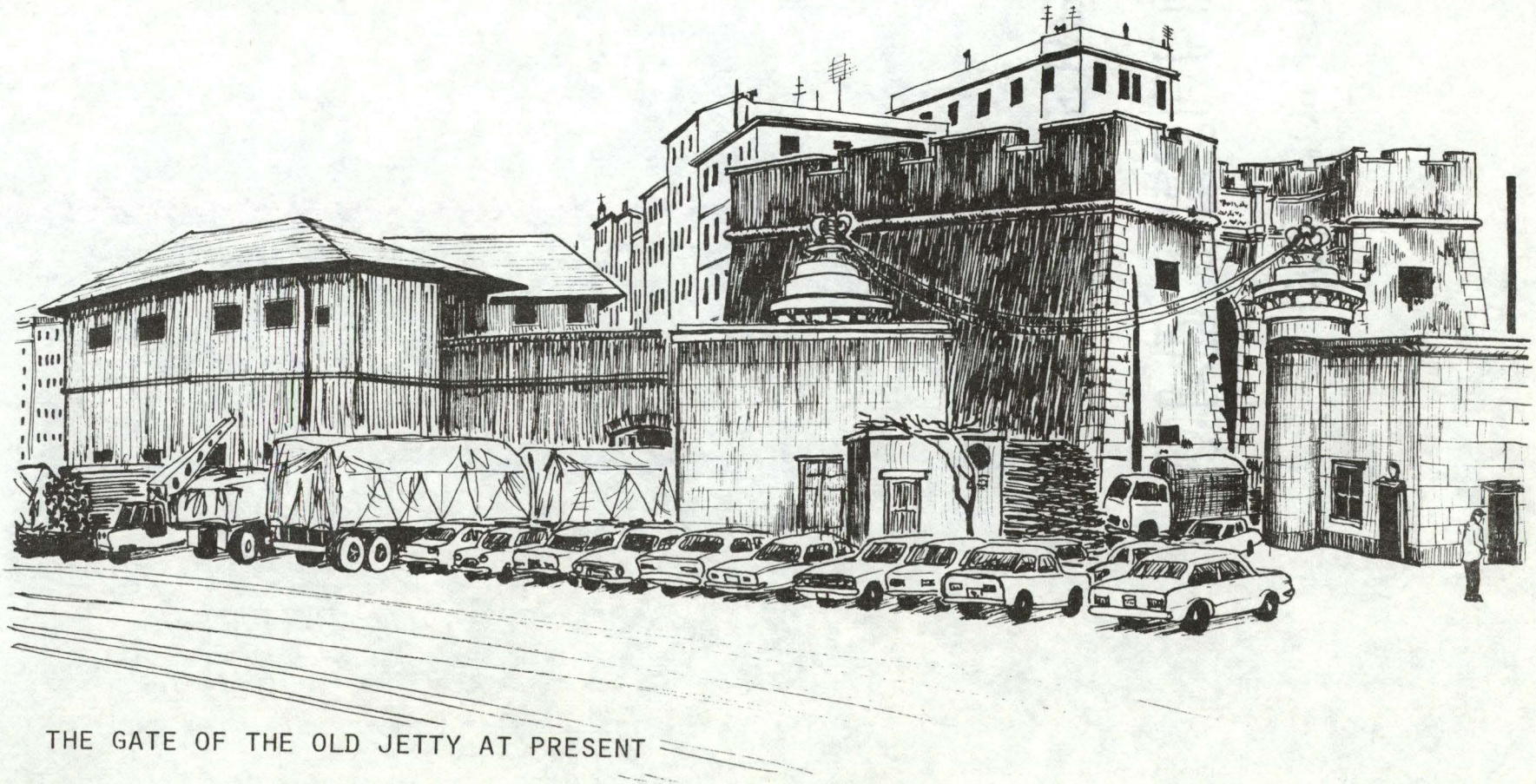
always had a strong relationship with the life of the port more than the rest of the city. The area had a vitality that stemmed directly from the sea. The residences of many expert pilots and sailors were located there along with the shops of craftsmen, mapmakers, coopers, and sail and oar makers. The quality which gave this area its importance was not the collection of important buildings or streets but the continuous process of human engagement that evolved from its location and corresponding activities. The life of the people in the area had a high degree of participation in the environment which returned to them an extraordinary unity of perception concerning their lives. I feel that this experience is a rare oportunity in many of our modern day environments.

The Gate of the Old Jetty has played a significant role in the life of this historical area. Its purpose was to act a a control point for the collection of tariffs and as a fortress in the event of attack on the city. The movement of people and goods is organized into a smooth linear flow whereby the gateway becomes a break in the movement and defines the transition between the narrow streets of the city and the open area of the port. As one from the port approaches and enters the gate to the city he is met by the two prominent walls which focus his attention and funnel him into a semi-circular enclosed space before entering the doorway. Already in the sequence of events his participation has been rewarded by gaining the sense of passing through and arriving at the gate. This sequence is the prelude to prepare for the even more significant event of the narrow dark passage of the gate and arrival in the enclosed courtyard which is at the scale to prepare the senses for the continuation of movement into the city. The changing of

scale is one of the most important effects that a gateway has upon a person, yet it is something that is normally done subconsciously.



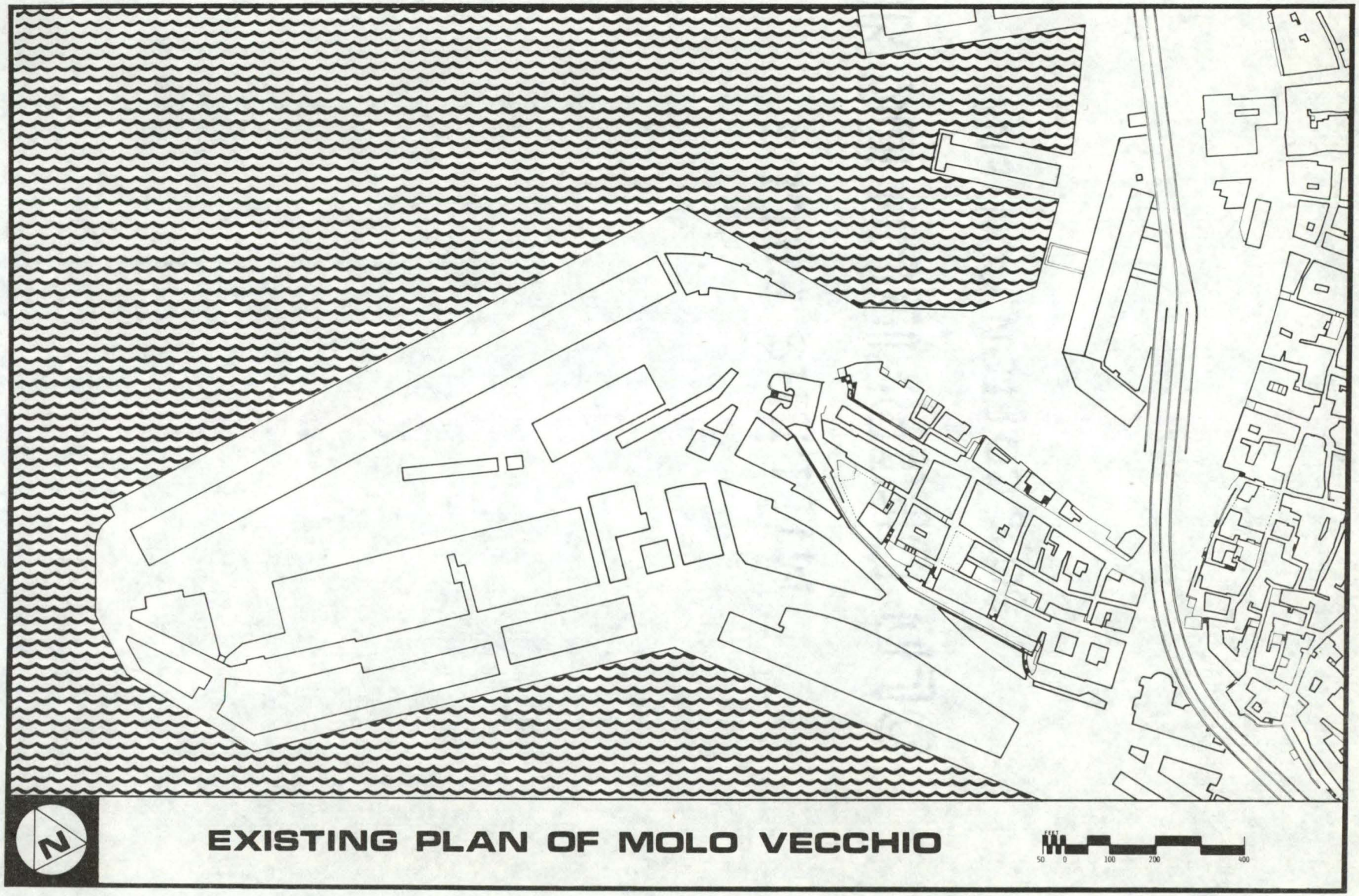


THE GATE OF THE OLD JETTY AT PRESENT

THE PRESENT

The present situation of Molo Vecchio is of an entirely different nature. The Gateway of the Old Jetty has been abandoned and the functions of the port have surrounded the area with a clutter of cars, trucks, and old sheds and warehouses. Ship-repairing is the most important port activity on Molo Vecchio. The repair shops occupy the south side of the jetty allowing the ships which are being repaired to dock close at hand. The buildings along the north side of the jetty handle the movement of raw textiles and similar goods which require both railways and trucks for land transport. However, the railway connection between Molo Vecchio and the other properties of the port is difficult and would be desirable if it could be eliminated or moved so as not to

This photograph shows the northern side of Molo Vecchio to the left of the lighthouse which is across the harbor.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EXISTING PLAN OF MOLO VECCHIO
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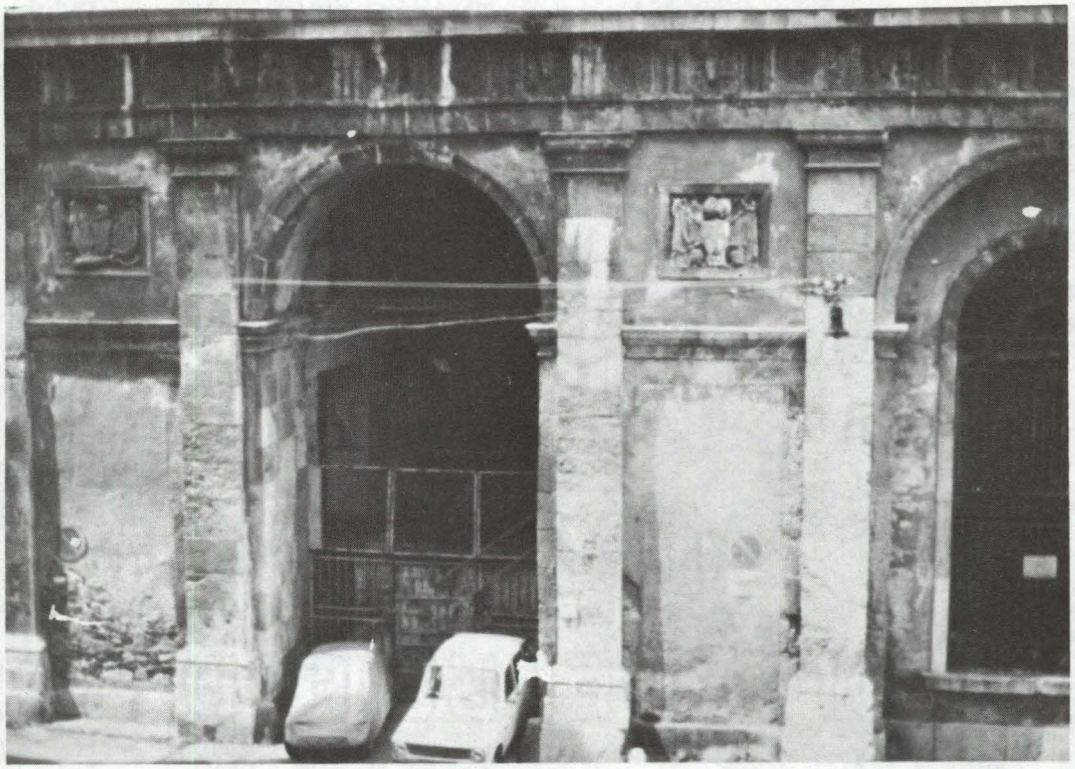
disturb the relationship of the city with the waterfront.

The public area of Molo Vecchio has retained much of its historic architectural character but the vitality which once flourished has now lost its distinction and become an isolated and dead-ended zone which is primarily residential. Several other interestingly historical buildings besides the Old Gate can also be found on the site, i.e. the remains of roman aqueducts, unique grain silos, a jail, a foundry for weapons, and a battery. For such an important area in terms of history and the significance of the location of the area, the present uses are not taking advantage of its potentials for the benefits of the entire city. The historical features and unique atmosphere combined with the need to revitalize the area provide a perfect opportunity to develop an exciting project for the site.

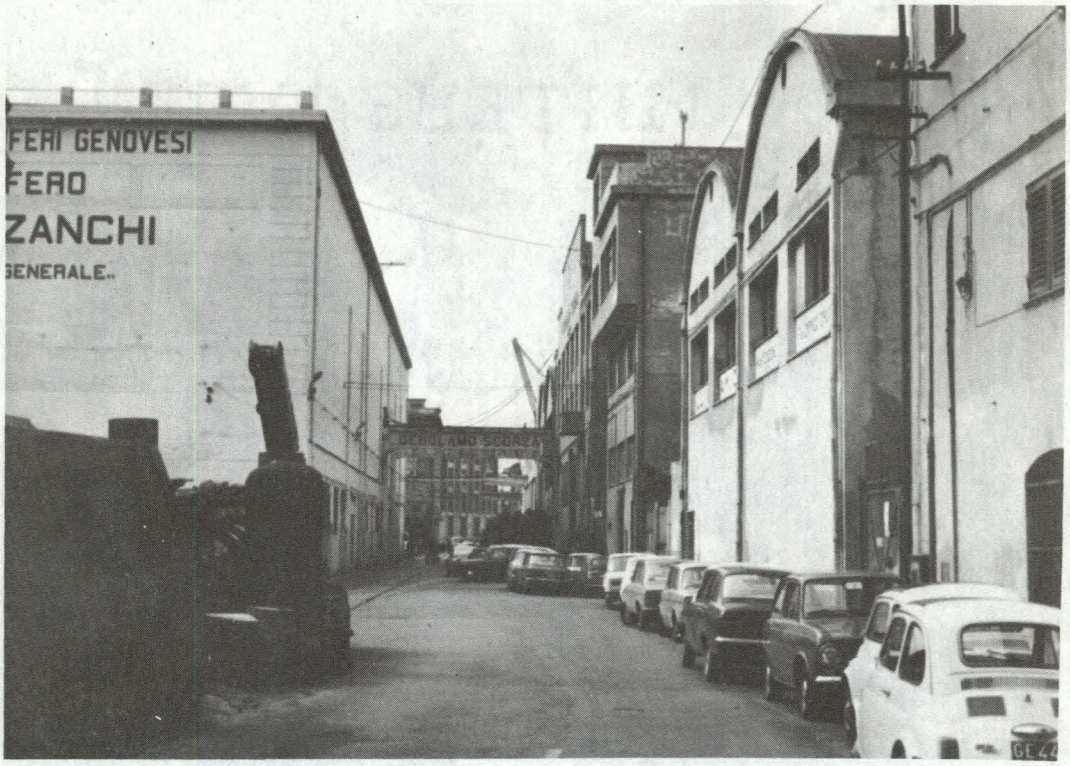
The elevated roadway is a strong psychological and visual barrier which separates the jetty from the city. The buildings behind the roadway are some of the residences on Molo Vecchio.

The residential section of Molo Vecchio has a charming atmosphere of narrow pedestrian streets and heavy masonry buildings.

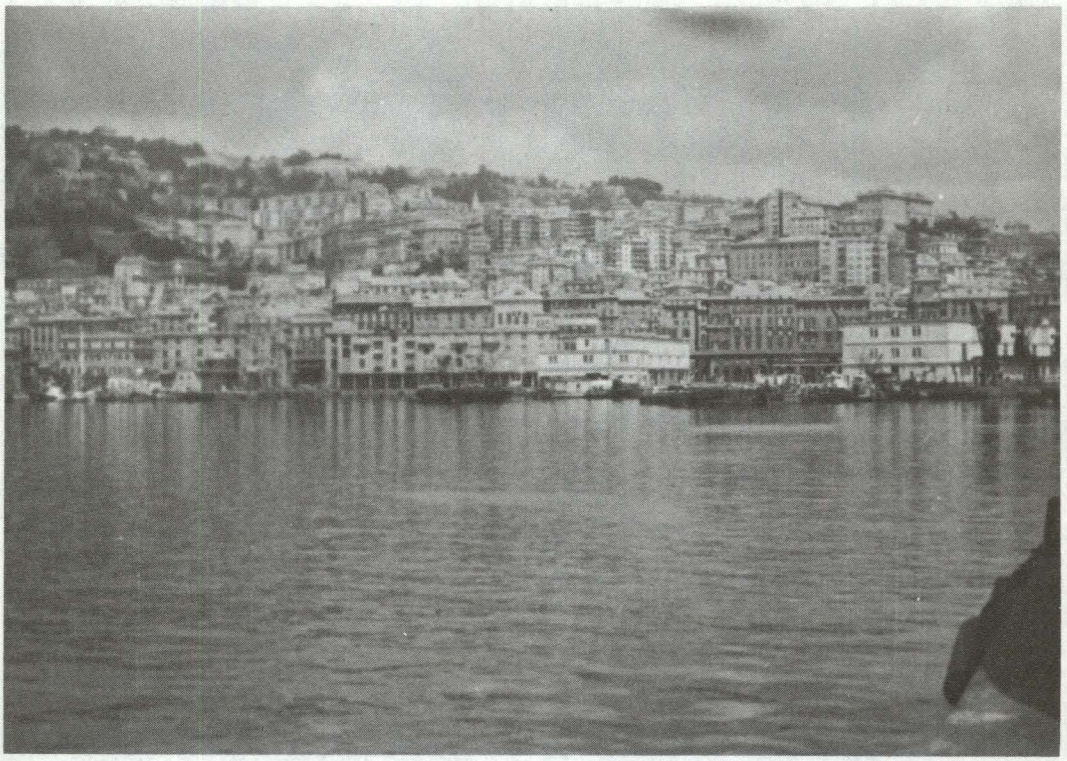
The Gate of the Old Jetty still separates the port from the public spaces. The portal of the Gate on the public side can be seen above and in closer detail below.



The Old Seawall (above) *once protected the public area from the powerful waves of the sea but now only acts as a boundary between the public area and the port space* (below) *which now is filled with scraps produced from ship-repairing.*



Above are some of the buildings on the south of the Jetty which are used as ships for ship-repairing. From the north side of the jetty one has a breath taking view of the city across the harbor (below).

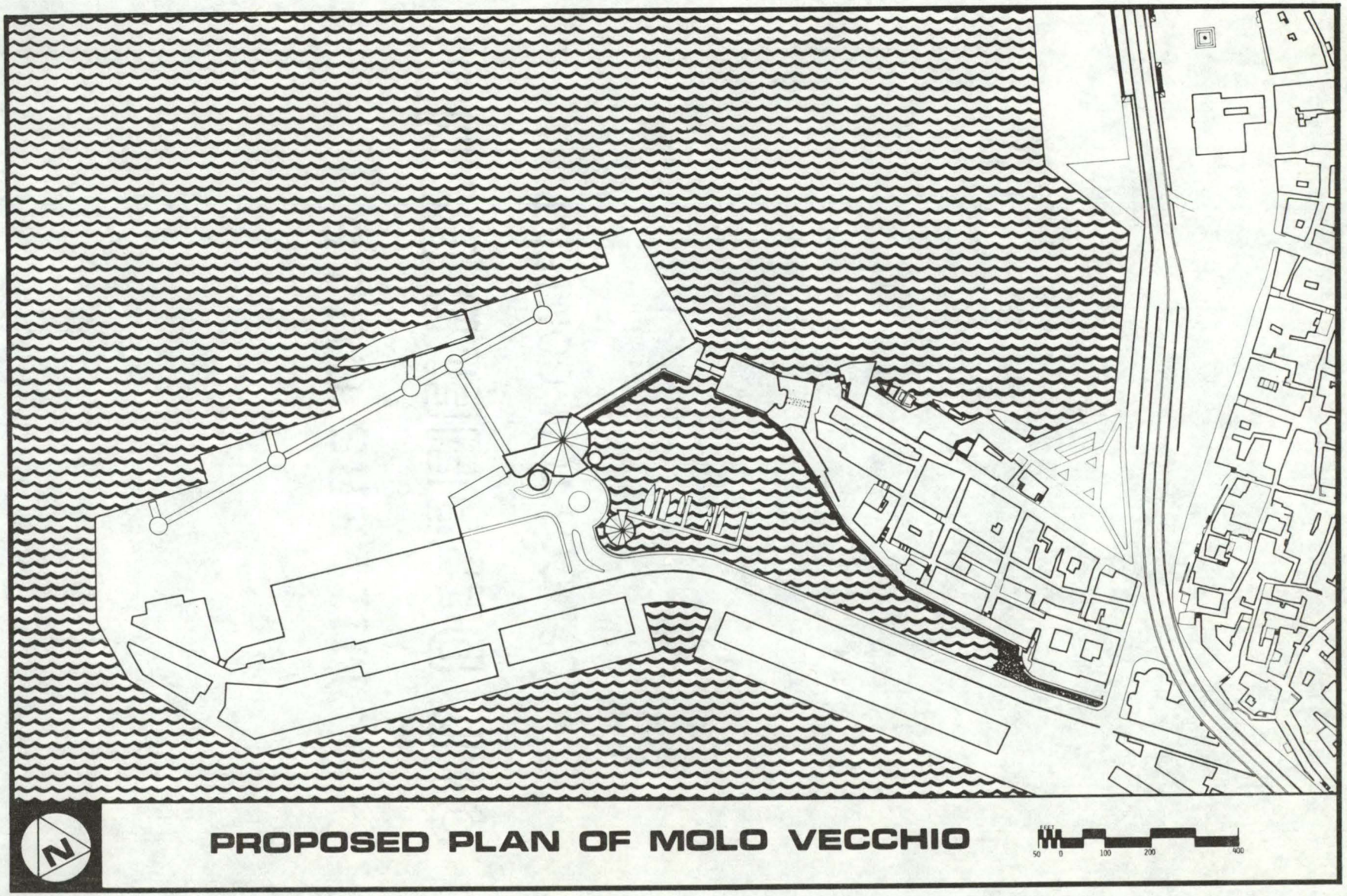


THE PROPOSAL

My proposals for the future of Molo Vecchio are to restore the historical significance of the area and to revitalize the spirit of the environment by introducing some new functions that are applicable to life today. In the process of restoring the significance of the historical gateway to the city one must begin by redeveloping the movement of people into a pattern where the sequence of events become similar to those which were involved originally. This has been done by providing new functions in the area which will cause the movement of people to circulate on the desired routes.

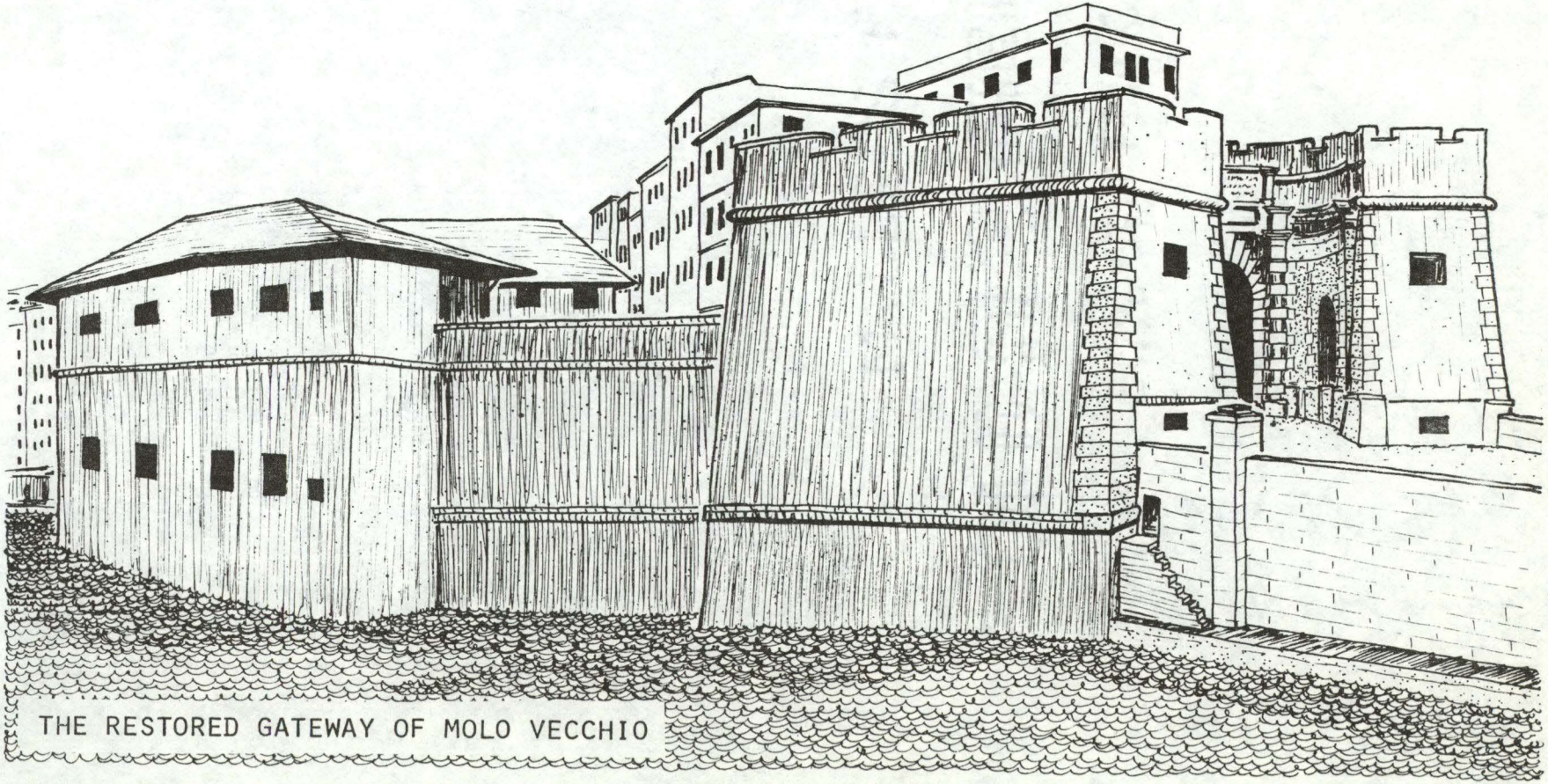
Beginning with the functions of the port, it has been proposed to create a new gateway environment by introducing two new terminals for handling passengers. The smaller terminal will service a variety of small public boats (maximum size of approximately 50 passengers) which will provide such services as tours of the port and excursions to other towns along the coast. The larger terminal will become a facility for some of the ferry services of Genoa. It is the intention of these new facilities to act as new gateways to the sea which will set the pace and lend some of their vitality to the area.

The proposals for the public space of Molo Vecchio are concerned primarily to provide a new source of vitality. Since it is desired to restore the historical significance as a gateway and to maintain the character of the environment I have proposed the new source of vitality to derive from introducing tourism and public leisure into the area. The area may still maintain its residential function but it may do so while going a step further to provide a naval museum, craftsmen shops demonstrating some of the past life of the port, restaurants, bars, and


N
PROPOSED PLAN OF MOLO VECCHIO
FEET
50 0 100 200 400

other functions that would attract the citizens and tourists. A final project by Sara Kavanagh (prepared concurrently with this project) has concerned itself with the only purpose of developing a plan of greater detail to revitalize the public portion of Molo Vecchio.

By directing the movement of people which has been created by new activites in conjunction with the restoration of the sequence of gateway events, the entire site may regain its significance to the city as both an historical and contemporary gateway between Genoa and the sea.



THE RESTORED GATEWAY OF MOLO VECCHIO

A PROPOSED GATEWAY

THE OBJECTIVES

This portion of the final project involves the design of a ferry terminal building to be sited in the area of the port on Molo Vecchio. There are basically two reasons for this design phase to exist as an important part of the final project. Primarily, I feel that as a summary of my work towards the Master of Architecture degree this project must demonstrate some of my ability to design. The other reason is for the purpose of the study. Because of the differences of the Italian environment the approach to the design process was altered from how it may have been done in the United States. The purpose of this project has been to develop my observations and understanding of the gateway as it exists here in Genoa. The design phase is intended to help achieve this goal by the application of the observations to a contemporary building design. The purpose is not to develop a design of every detail necessary for construction but a design which may become a vehicle to carry out the study of the gateway observations and concepts. With the use of this design it is possible to further understand and clarify the gateway experience of people and its relationship to architectural design.

THE PROGRAM

Before any sort of design could begin it was necessary to establish an appropriate program. Much effort was involved in gathering information about how the ferries operated at present and what their needs may be in the future. Without having any real or artificial client many of

the programatic decisions had to be made from my own judgements. All decisions were made to be the most realistic and logical within the realm of my own knowledge about the ferries, their administration, and their requirements. The program was designed to portray what may possibly be the needs and desires for the city of Genoa, the Port Authority of Genoa, and the ferry companies.

In order to develop the program from which to design the building, a list of spaces with their approximate sizes and descriptions was established. This list, along with the bubble diagram showing space relationships, and a list of the people who would be involved in the building served as the guidelines for the design. These lists and diagram are included below as explanation of the design and to familiarize one with what is included in this ferry terminal design.

LIST OF SPACES

PUBLIC SPACES:

ENTRANCE (variable square footage) the primary portal of the building where people will enter and leave the building, catch taxies, or walk to the parking area; a space for the movement of people; to provide partial protection from the wind and rain.

COMMON SPACE (4000-4500 sq. ft.) the space of most activity; the point of arrival; it must orient its occupants to the various function of the building.

FERRY COMPANY OFFICES (500 sq. ft.) there shall be four different ferry companies accomodated in separate spaces; the functions are to sell tickets and distribute information concerning its services; each company will want to establish its own identity by means of graphics and services; the office should accomodate a staff of three employees

and be located directly connected to the common space.

CUSTOMS OFFICE (400 sq. ft.) where all customs information for this terminal is dealt with and stored; most customs personnel will work out of this office and refer back to it; it must have easy access to the customs stations; This office may also occasionally be used to consult with several people at a time for the purpose of paying duties or declaring items. Approximately two employees will work in this office full time.

POLICE OFFICE (450 sq. ft.) this office is primarily concerned with the control of who enters and leaves the port and therefore must have a direct relation with the boundary of port and public spaces; approximately four people will work in this office while others will be outside of the office but in relation to it.

VEHICULAR GATES: at each of these gates the vehicles will be inspected by customs and police officials; all gates will be capable of handling both passenger cars and trucks carrying goods; two employees at each gate; two gates for vehicles entering the port and four gates for vehicles leaving the port.

MONEY EXCHANGE OFFICE (500 sq. ft.) primarily used by passengers coming into port from other countries; this office will be operated by either two or three people; it should be easily accessable to the passengers just arriving into port; there should be a vault for the storage of its money.

TOURIST INFORMATION OFFICE (325 sq. ft.) should relate directly to the common space thus being readily available and attractive to the tourists; it will need some space for displaying pamphlets for sale and free distribution; a maximum of two employees will operate this office

at any time,

AUTOMOBILE CLUB OFFICE (325 sq. ft.) very simular to tourist information; distribution and sales of travel information; also operated by two people,

SOUVENIR SHOP (650 sq. ft.) for sales of various small items. The shop will also provide a means of passing time for those passengers who are waiting at the terminal; therefore, it should have the appropriate relationship with the waiting lounge. The shop should have plenty of display space along with storage and cash register. One employee will manage the shop at a time.

NEWSSTAND (100 sq. ft.) to sell newspapers, magazines, paperback books and other material to aid the passengers to pass time. It should have direct access to the waiting lounge.

TELEPHONES (325 sq. ft.) should be available along with directory books and token vendors for public use; preferrably located near the common space,

RESTROOMS (1200 sq. ft. ea.) should be available at each floor level; easily accesible from the common space and the waiting lounge. The expense of maintenance will be shared by the tenants of the building and therefore no facilities for collecting money will be necessary. The restrooms must have easily maintainable surfaces and fixtures. must be well ventilated,

BAGGAGE LOCKERS (475 sq. ft.) should be generally out of sight but found easily by means of graphics. The lockers shall be of automatic coin operated type so as not to employ someone full time for that purpose. This facility should be located directly off the common space to minimize the distance that baggage is carried throughout the building.

BAGGAGE CHECK (100 sq. ft.) is the point at which a traveler who is about to leave the port may deposit his baggage ahd have it loaded aboard ship. He may only have this done after he has taken his baggage through customs. The baggage check desk should be located just beyond the customs area for the traveler leaving the port. The traveler will recieve a baggage claim stub to assure his claim to the baggage. One employee will operate the baggage check desk. This area must have access to the baggage handling area by means of a shut or conveyor system.

BAGGAGE CLAIM (60 linear ft.) can be handled mechanically and efficiently by the use of conveyors and rollers. This area should be located after the police check of passports and before the customs area for travellers arriving at the terminal. The baggage claim area must have sufficient display space of arriving baggage and be easily visible by the group of people watching for their baggage.

CUSTOMS CHECK AREA (450 sq. ft.) will handle both passengers entering and leaving the port. Surfaces for opening and inspecting baggage by customs personnel with the passengers present are necessary. This is the last activity of the arriving passenger and the first for the departing passenger. The customs check area should have direct access to the common space.

FERRY ACCESS CORRIDOR is necessary to handle the pedestrian traffic between the terminal building and the ferries. This corridor shall remove the pedestrians from the vehicular traffic circulating in the port yard and protect them from harsh weather.

RESTAURANT DINING AREA (2450 sq. ft.) will be provided for passengers and the public to take meals while waiting to continue their travels. The dining area should be of a pleasant atmosphere preferably with a

view. It should have direct access to the waiting lounge and the bar. For the efficency of service the kitchen shall also have direct access.

CAFETERIA AND DINING AREA (2500 sq. ft.) will be provided for those persons who do not prefer an entire meal, who do not have enough time to dine liesurely, or who do not care to pay for the extra expense of the restaurant services. The cafeteria line will serve hot meals as well as snacks and sandwichs. Tables will be cleared by the management so that it will not be necessary for the patrons to return their trays. The cafeteria shall be directly connected with the kitchen while the dining area shall be closly related to the waiting lounge.

BAR AND LOUNGE (1050 sq. ft.) are very popular spaces for the Italians and most Europeans. This area should be directly related to the waiting lounge and the restaurant dining area. The bar will be operated by several bar tenders; table service in the lounge will not be provided; All expenses will be paid to the bar cashier before being served.

WAITING LOUNGE (3000 sq. ft.) will be a large room that may be occupied by all persons waiting at the terminal. The space should not be treated as one overwhelming space. It should profide a variety of more intimate areas for a variety of activites such as reading, conversing, watching the activity of the port, watching others, etc... The atmosphere of the space should be relaxing, as well as exciting. The noises created by the occupants should be absorbed while music may be provided.

NON-PUBLIC SPACES

KITCHEN (1750 sq. ft.) will prepare food for both the restaurant and cafeteria and must have direct access to both. Recieving food and storage must be accomodated without disturbing any public spaces.

STORAGE ROOM (750 sq. ft.) is necessary for storing any miscellaneous items not in use and may be used by any of the various tenants of the building.

RECEIVING ROOM (600 sq. ft.) shall be adjacent to a loading dock and primarily serve the movement of goods involved with the kitchen. It shall also accomodate any other servicing, i.e. mechanical equipment or stroage. The loading dock should be unobtrusive and out of the way of other activities around the building.

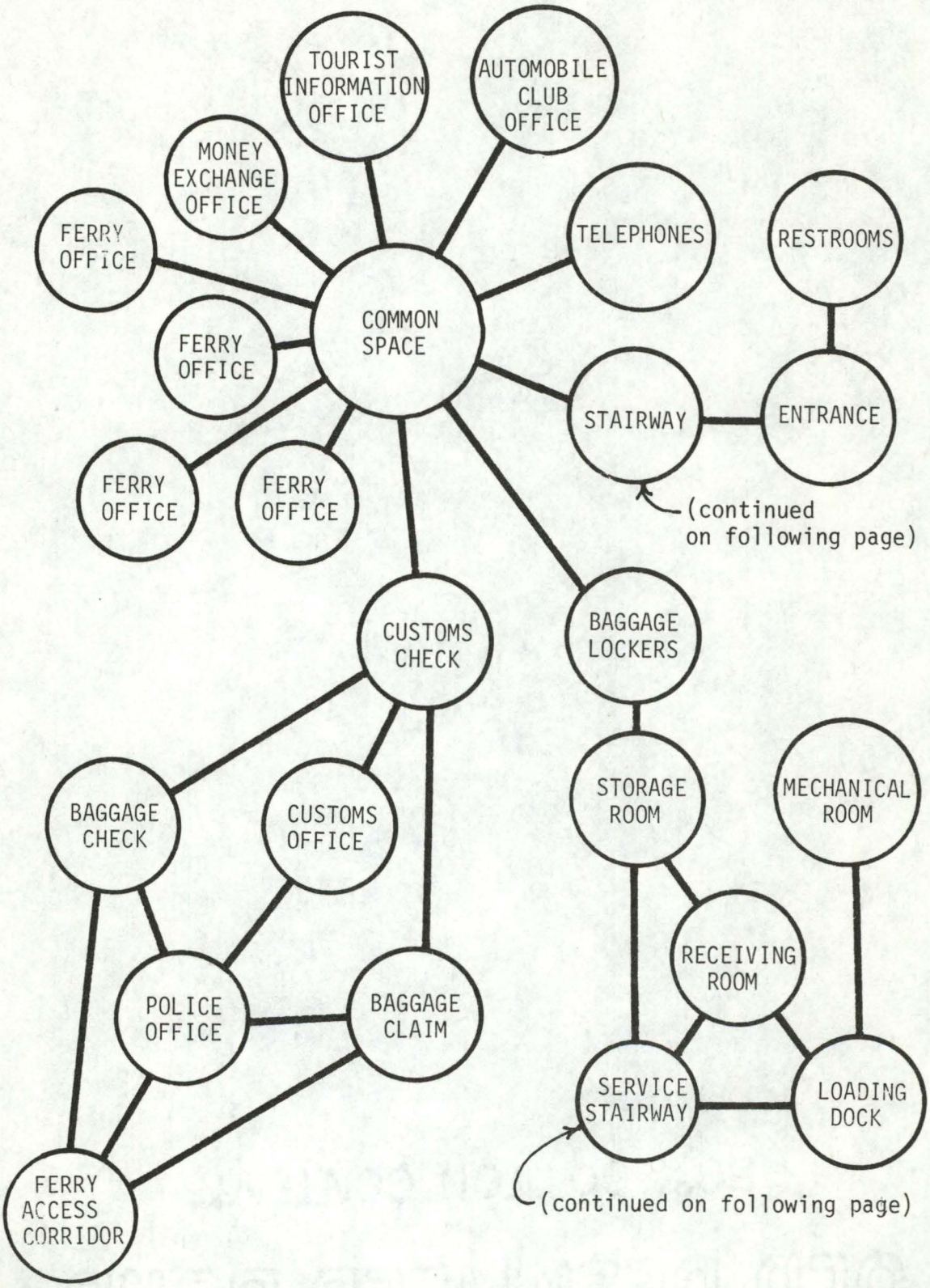
LOCKER ROOMS, RESTROOMS, WASHROOMS (1300 sq. ft. total) are needed for kitchen personnel and other personnel. Kitchen employees must have these facilities readily available to encourage use and for convenience. Other personnel may need these facilities related closely to their work stations.

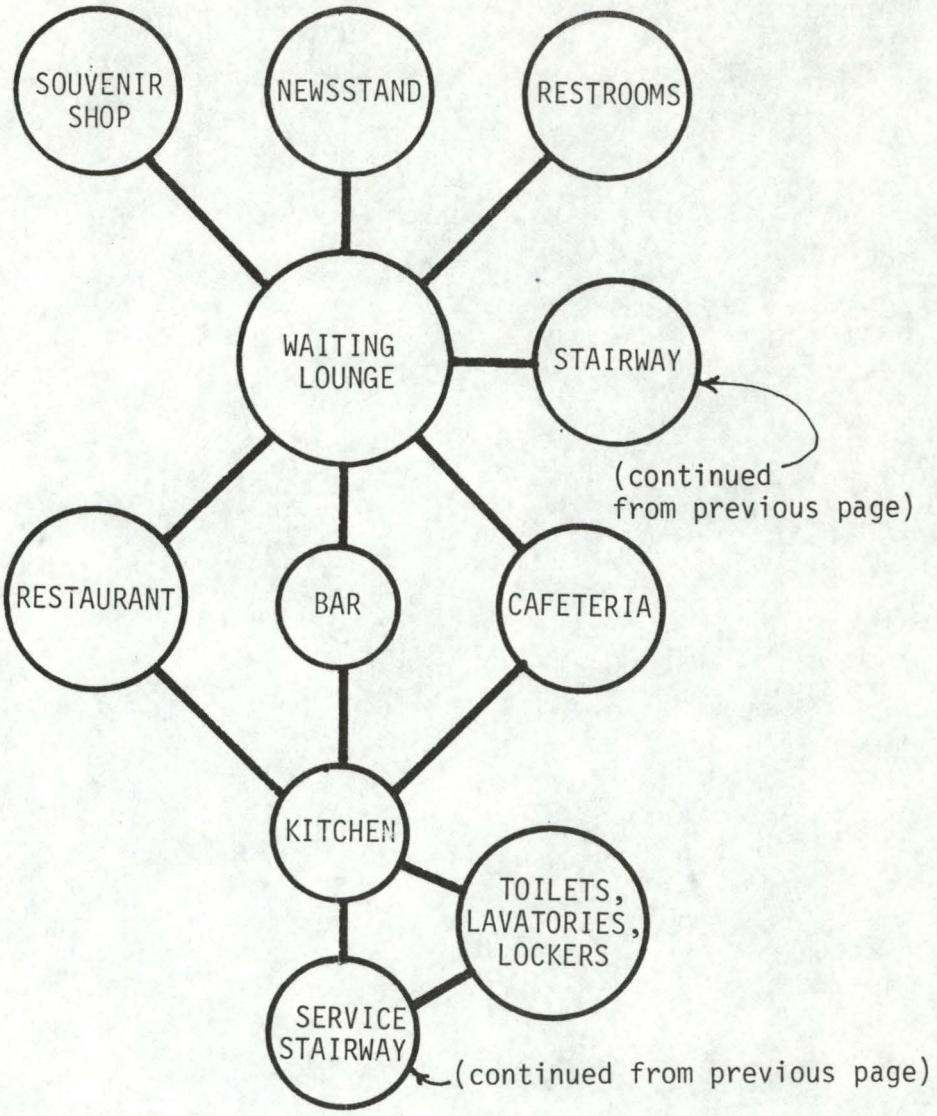
BAGGAGE HANDLING ROOM (2000 sq. ft.) must be connected by means of conveyors to the baggage check, baggage claim, and the ferry dock areas. This room must have enough space to sort and store baggage for short periods of time. A maximum of three employees will work in this room at one time.

MECHANICAL EQUIPMENT ROOM (1750 sq. ft.) shall have adequate space to house and repair the mechanical equipment. It should have access to to the outdoors and easy connections to all zones of the building

TOTAL SQUARE FOOTAGE IS ABOUT 30,000 SQUARE FEET.

BUBBLE DIAGRAM OF SPACE RELATIONSHIPS





LIST OF PEOPLE INVOLVED

11	CUSTOMS PERSONNEL
12	POLICE PERSONNEL
12	FERRY OFFICE PERSONNEL (3/office)
14	KITCHEN PERSONNEL (incl. restaurant, bar, and cafeteria)
2	MAINTENANCE PERSONNEL
7	MISCELLANEOUS SERVICES PERSONNEL (i.e. money exchange, souvenir, tourist, etc.)
60	TOTAL number of employees to work in the building

THE PROPOSAL

The design which grew from the preceeding program is shown in the plans, elevations, and sections on the following pages. The site plan of the building may be seen on page 37. The type of structural system used is of poured-in-place reinforced concrete for the main skeleton along with masonry load bearing walls. The roof is of steel trusses and decking covered with a thin shell of concrete and rough agregate finish. Most of the exterior walls are curtain walls of glass. All exposed concrete walls, columns, and beams are to be left their natural color and textured by the formwork. The non-structural interior partitions, ceilings, and floors shall be highly sound absorbent and finished in neutral colors such as black, white, and grays. Bright colors will be provided by graphics, furnishings, and peoples clothing.

Below is the legend of spaces shown in the plans on the following pages.

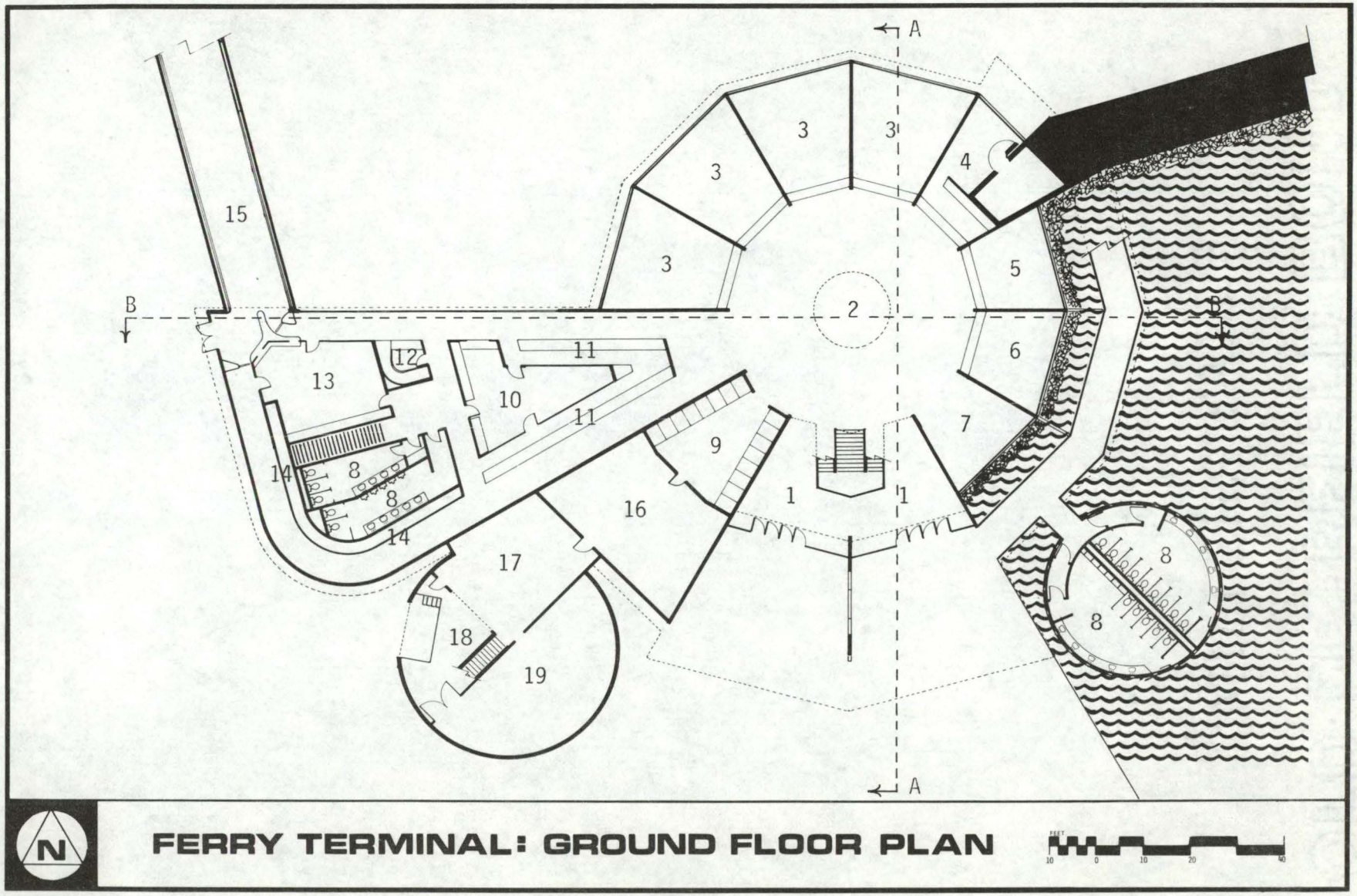
LEGEND OF SPACES

GROUND FLOOR

1 ENTRANCE
2 COMMON SPACE
3 FERRY OFFICE
4 MONEY EXCHANGE OFFICE
5 TOURIST INFORMATION OFFICE
6 AUTOMOBILE CLUB OFFICE
7 TELEPHONES
8 RESTROOMS
9 BAGGAGE LOCKERS
10 CUSTOMS OFFICE
11 CUSTOMS CHECK
12 BAGGAGE CHECK
13 POLICE OFFICE
14 BAGGAGE CLAIM
15 FERRY ACCESS CORRIDOR
16 STORAGE ROOM
17 RECEIVING ROOM
18 LOADING DOCK
19 MECHANICAL EQUIPMENT ROOM

FIRST FLOOR

20 WAITING LOUNGE
21 WALKWAY TO THE OLD GATE
22 SOUVENIR SHOP
23 NEWSSTAND
24 CAFETERIA DINING ROOM
25 CAFETERIA SERVING LINE
26 RESTAURANT DINING ROOM
27 BAR
28 JANITOR CLOSET
29 KITCHEN
30 FOOD STORAGE
31 TOILETS, LAVATORIES, & LOCKERS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FERRY TERMINAL: GROUND FLOOR PLAN
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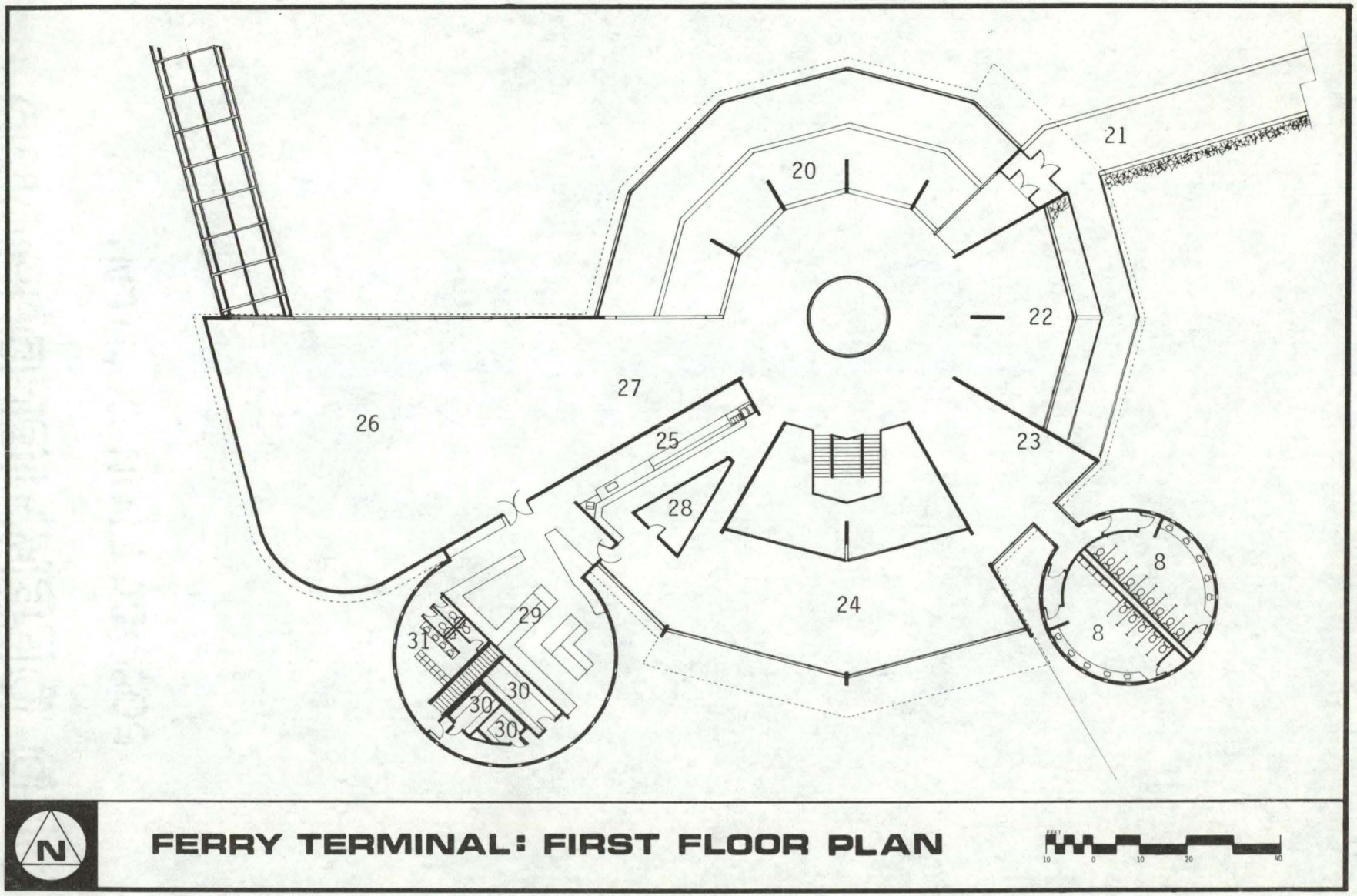
40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FERRY TERMINAL: FIRST FLOOR PLAN
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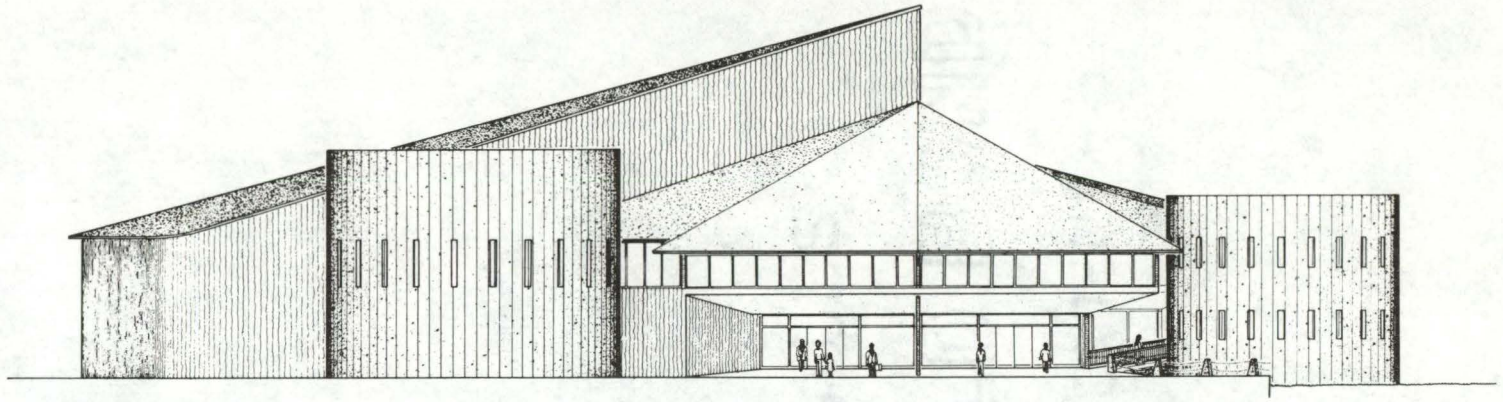
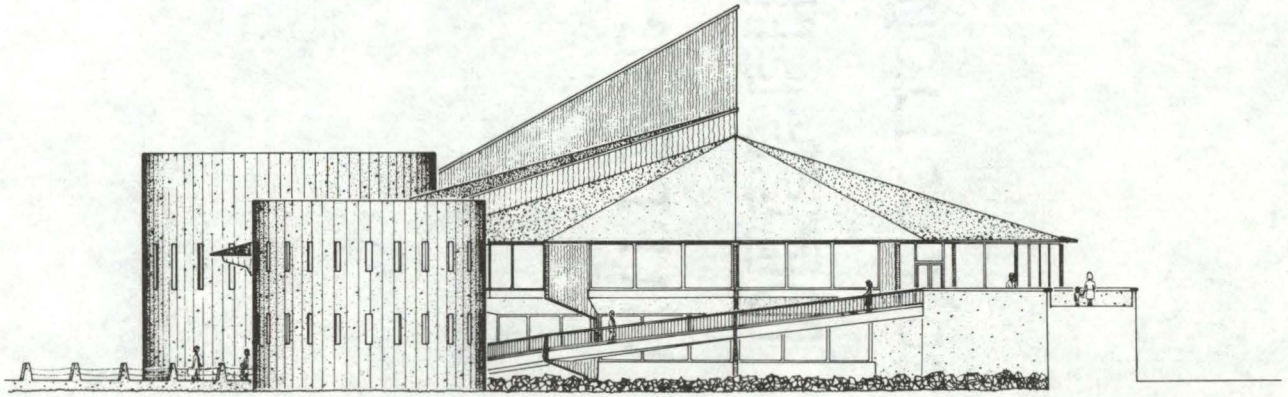
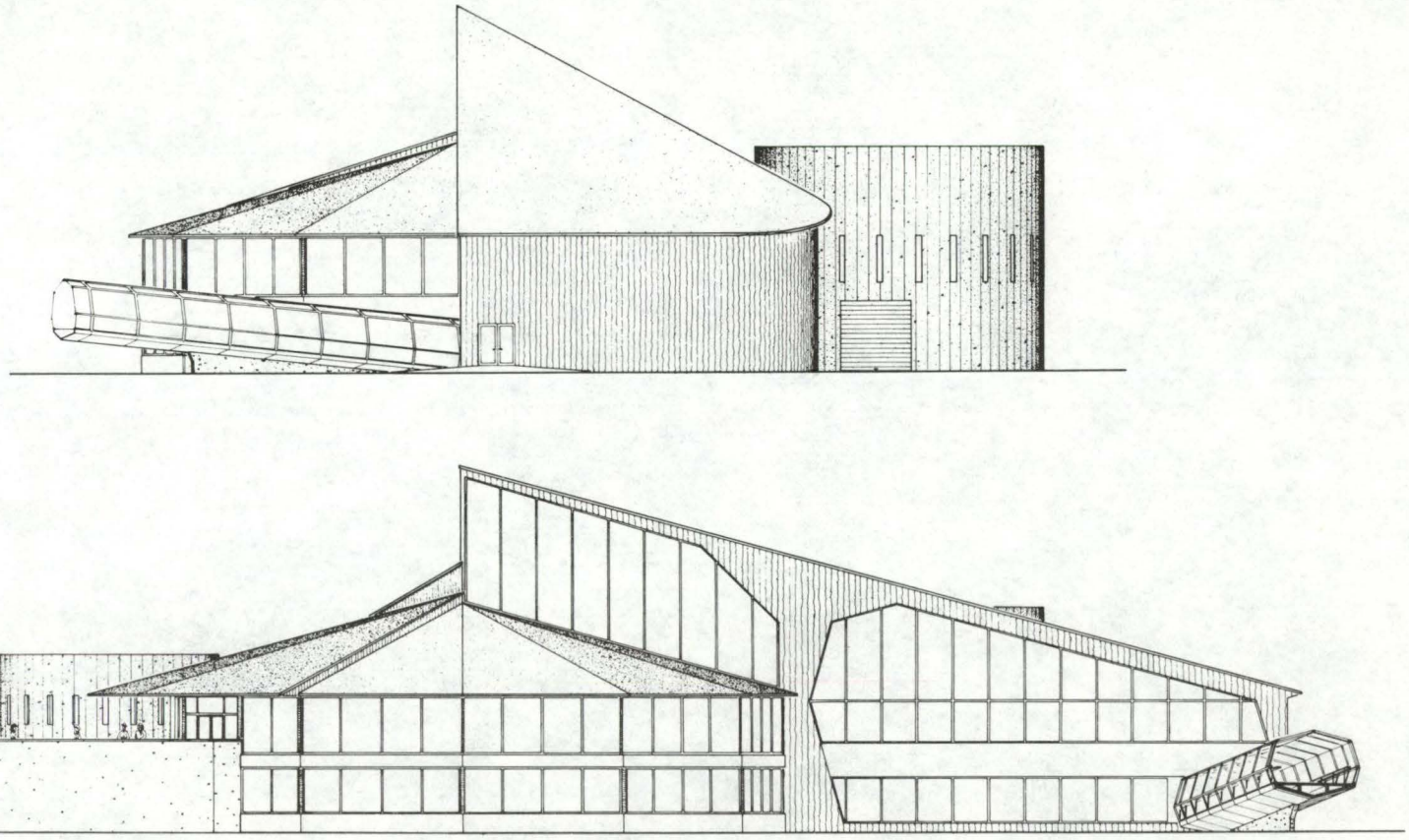
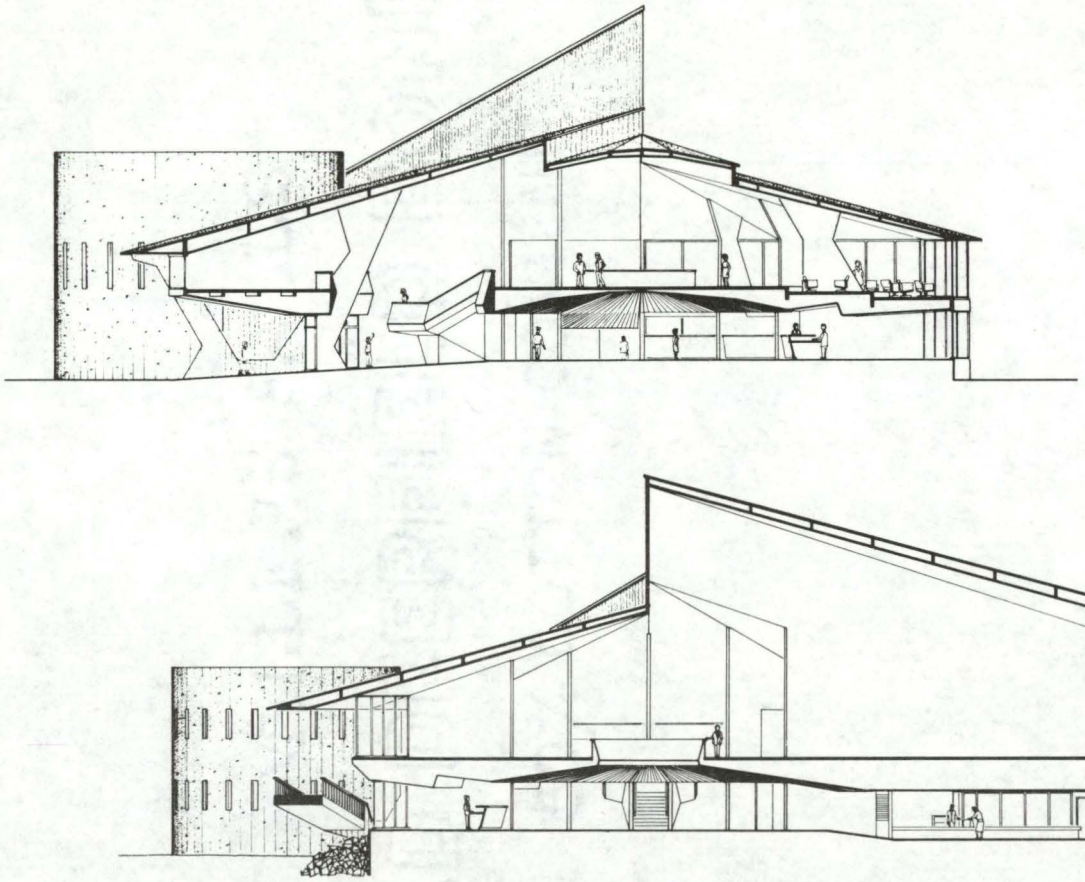




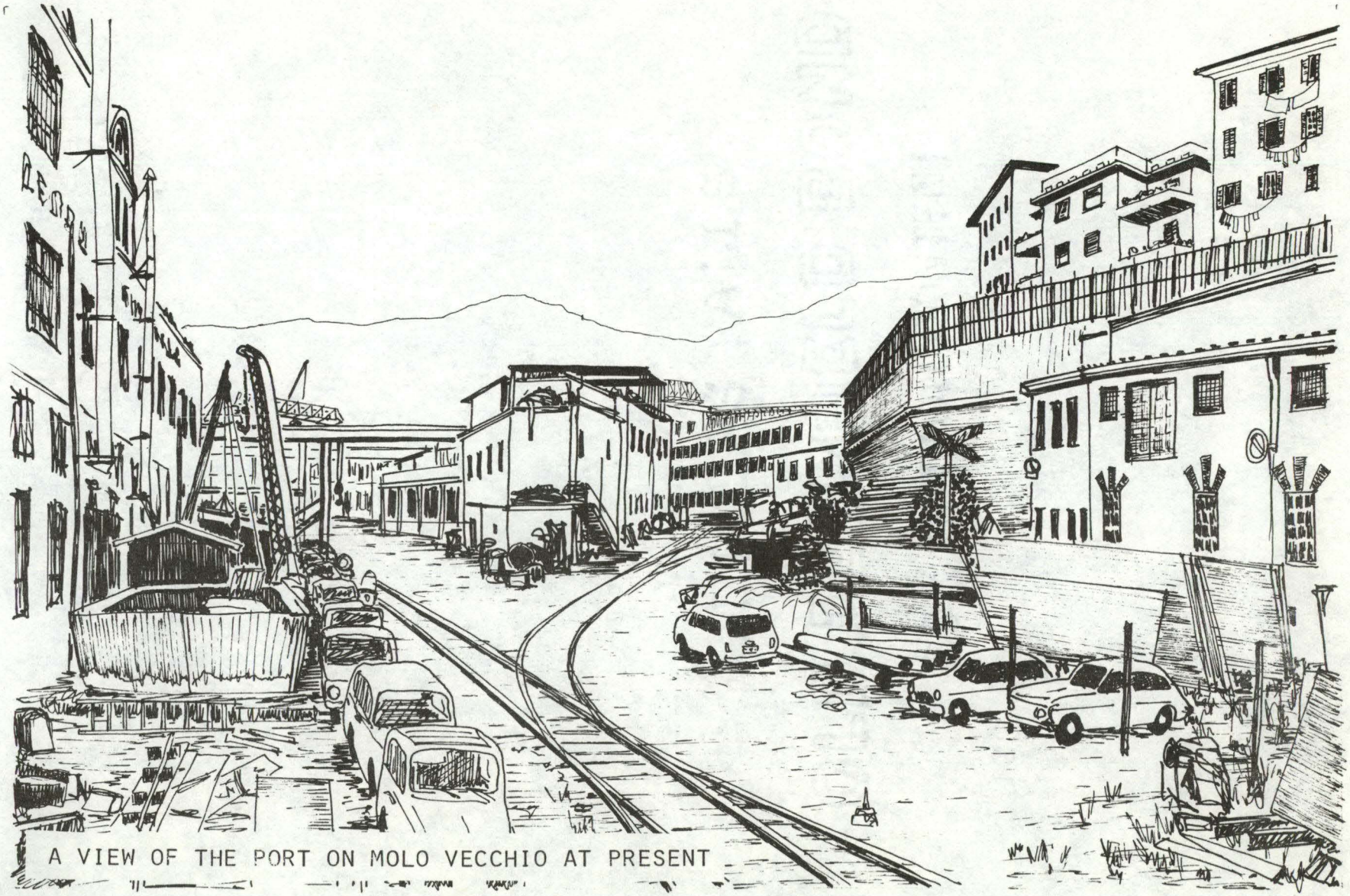
ELEVATIONS: SOUTH & EAST



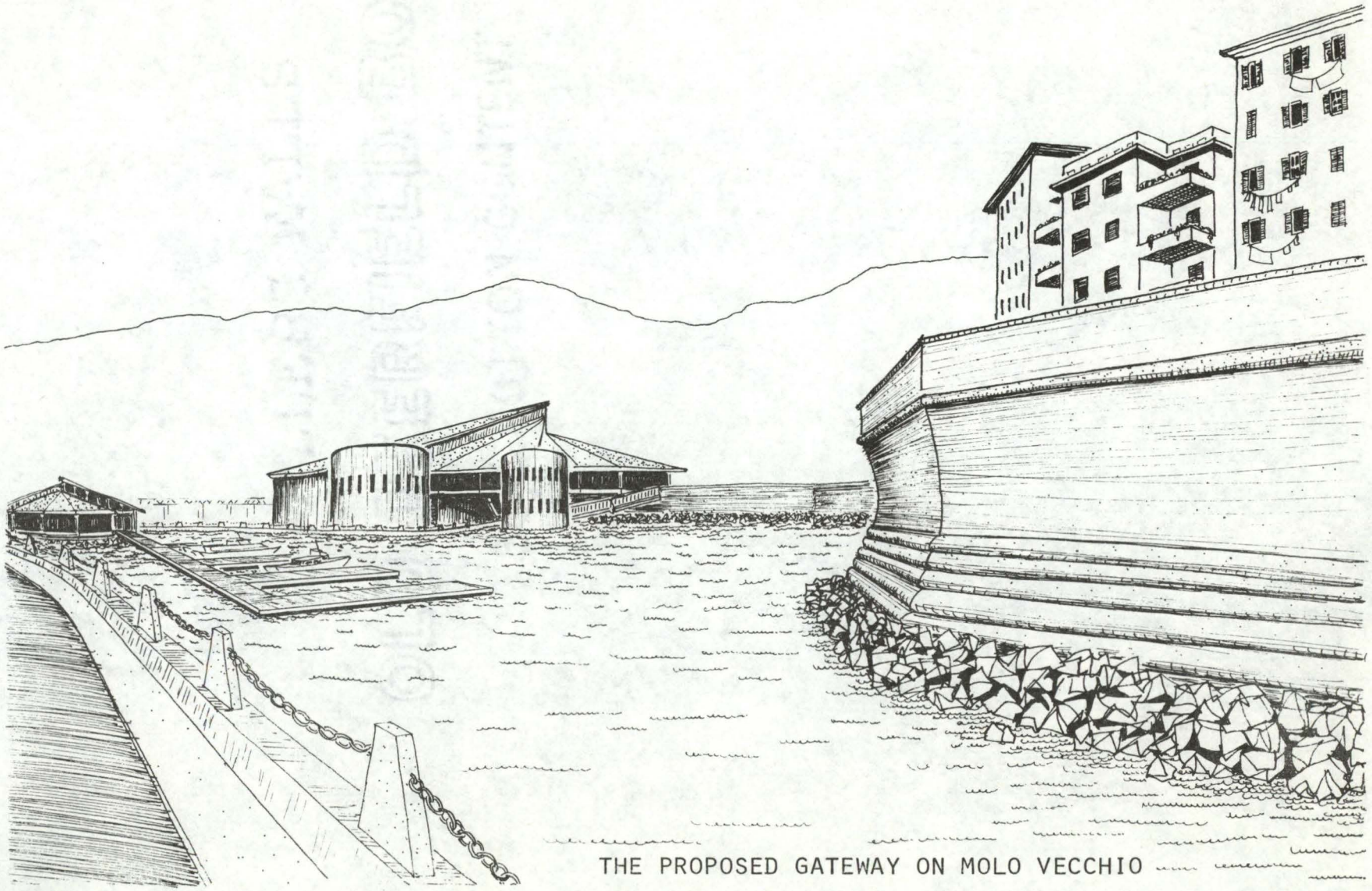
ELEVATIONS: WEST & NORTH



SECTIONS A-A & B-B



A VIEW OF THE PORT ON MOLO VECCHIO AT PRESENT



THE PROPOSED GATEWAY ON MOLO VECCHIO

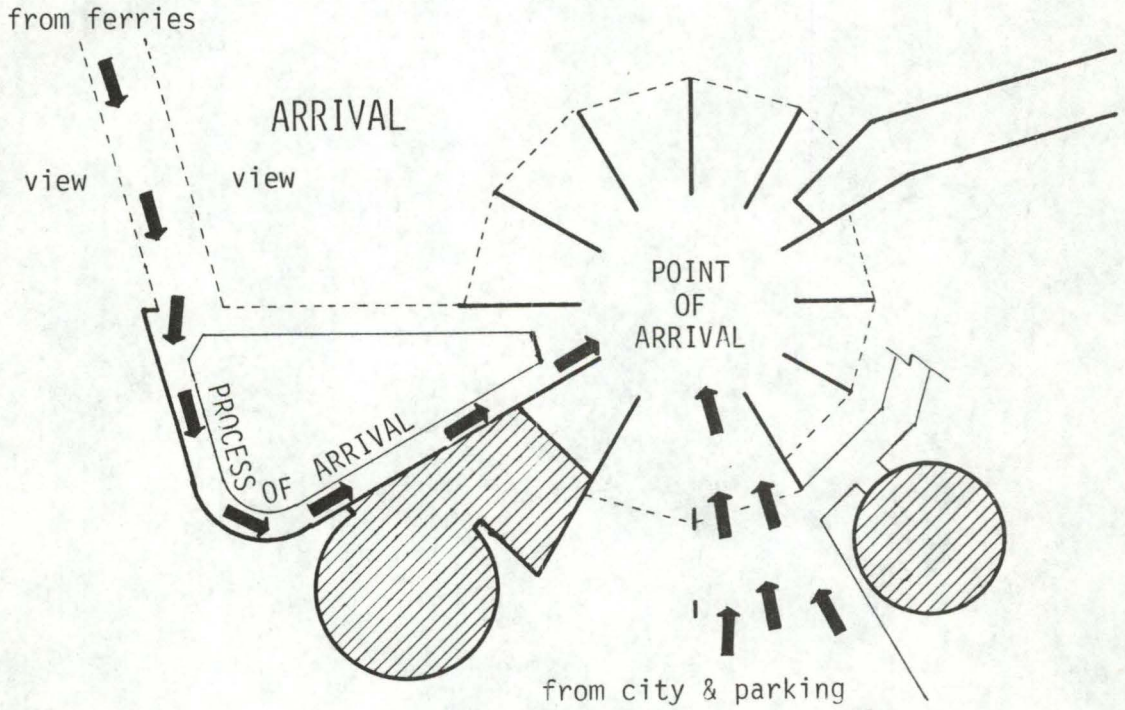
THE ANALYSIS

The analysis of this design is for the purpose of developing the concepts concerning a gateway. The question to be answered is "What is involved in a gateway design and how does this design function as a gateway for Genoa?" As in any building design the primary concern is that the building will not only function properly but also give its function an extra vitality and significance to the people involved. I believe that it is very important, particularly for a gateway, to enrich the functions which it provides.

The function of the gateway is to provide the sequence of events required by passengers in transition between the land and sea. It may also serve some residents of the city in such ways as dining or travel information but these services are not its major concern. The time spent by a passenger in the terminal may only be a small portion of his total traveling time, however it may be the most distinctly remembered and significant part of the journey. The events which occur must have ease and continuity to receive their appropriate perspective and enhance the traveling experience. It is necessary to recognize and understand these events so that the architectural design may fulfill its role to contain them.

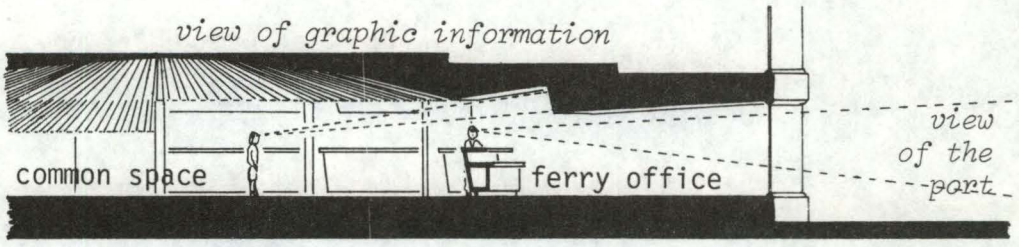
There is a specific sequence of events which occur at a gateway which is basically the arrival, the terminal activities, and the departure. The sequence occurs from either of two directions, entering or leaving the port, but remains basically the same. For the purpose of examining the sequence of events in this terminal building design I have taken the position of a passenger leaving Genoa and about to board a ferry for some destination on the Mediterranean.

The first encounter one has with the gateway building is visually at a distance while approaching it either by foot or some means of vehicular transportation. At this point the architecture has a chance to stimulate ones anticipation of the events which are soon to come. The two massive round towers stand firmly in front of the spiraling form of the roof which may symbolically represent the transition from rest to motion or land to sea. Closer to the building the two towers become the dominant features which draw one towards the entrance between them. As one walks up to the building and passes between the towers he is funneled into the heart of the terminal by the ramping floor, sloping ceiling, and the two narrowing walls. This sequence delivers the traveler to his point of arrival with all the necessary reinforcements to enhance his experience. He has now automatically become a part of the activity which is happening in this central space. The circular form of the space which encompasses him not only awakens his sense of arrival but also unifies him with the other travelers so that he feels a part of the group rather



than a lost individual in a large crowded room.

After one has arrived in the common space of the terminal he is ready to immediately take care of the necessary travel arrangements. This must be done without too much confusion or difficulty. The design of this terminal is such that all of the arrangement type of activities are located along the perimeter of the common space and are easily identified and located by means of graphics. The various offices have views of the surrounding environment on the opposite walls from the customer desks which allows a visual connection between the terminal activities and the total gateway environment.

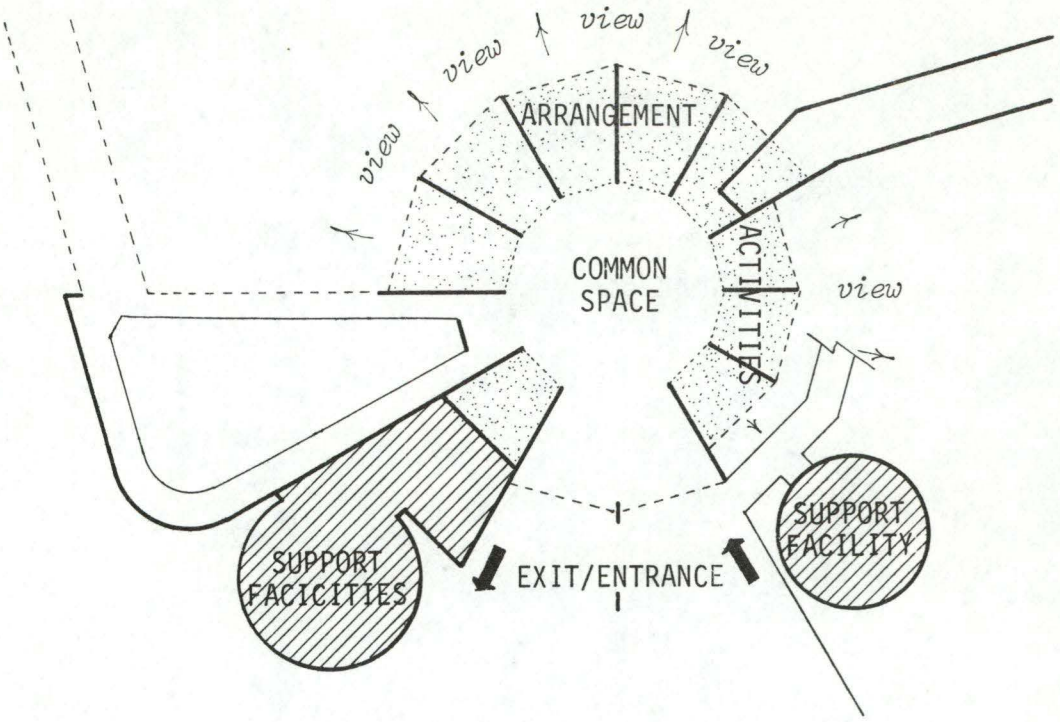


After the necessary arrangements have been made the traveler may have time to relax until it is time to board his ship. Again by means of graphic information he will be led up the stairway to the passtime activities. At the top of the stairway he can see the waiting lounge directly ahead with the panoramic view of the harbor and the city beyond. The visual presence of the city instills some retrospect to the passengers' experience before leaving the port or anticipation to the travelers just arriving to Genoa. As one circulates either to the left or right away from the stairway he will find the passtime facilities that are available. The waiting lounge provides ample space to sit and converse, read, or simply watch the activities of the port just outside the window.

Dining is also an important part of the passtime activities and is capable of becoming the most enjoyable and well remembered part of the gateway experience. Good food, service, and prices undoubtedly are necessary for a good experience but it remains up to the architecture to provide the environment which distinctly records the meal as an event of the gateway. The restaurant dining area is located on the first floor level and has a large window wall to the north which provides a full view of the ferries with the city as a background. This view from the restaurant and the waiting lounge is an impressive image of a gateway and therefore a valuable feature which must be captured by this gateway environment.

The cafeteria dining area may also become a significant part of the gateway. It is located directly over the main portal of the terminal building allowing the movement of people to flow beneath it. The windows on its south side have a large roof overhang for sun protection and to shorten the view making the front drive area of primary interest. On the northern side of the dining space is a railing which allows the people to watch the activity of the entrance below while they are eating.

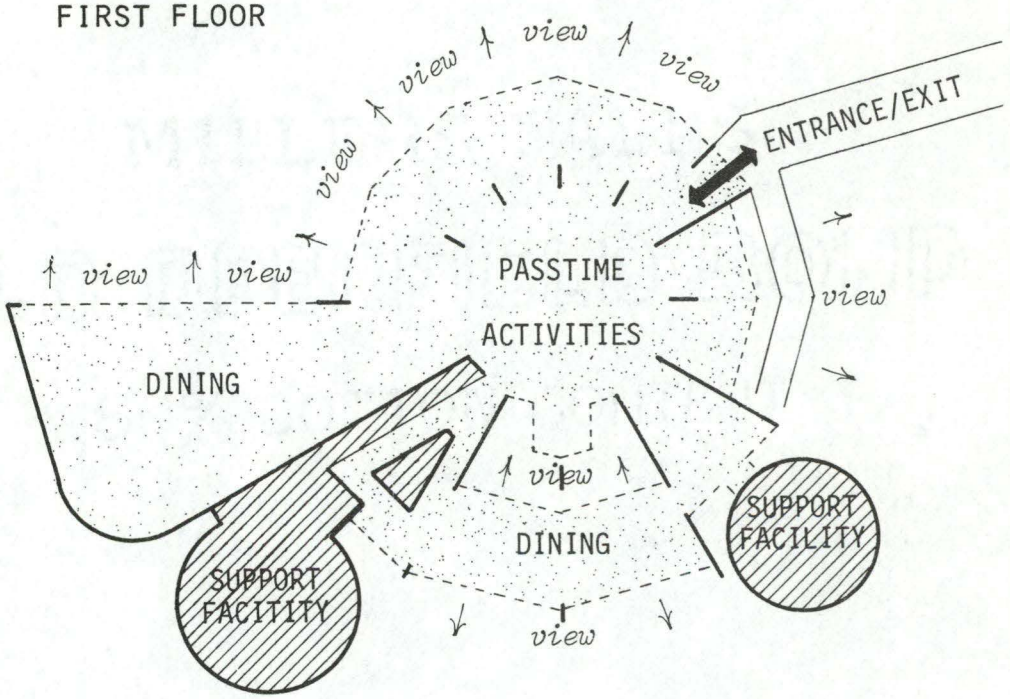
The souvenir shop, also an important passtime activity, is located on the east side of the building with a view of the Gate of the Old Jetty out of its window. The doorway just beside the shop leads directly to the walkway which provides a convenient link of the terminal's passtime activities with the other tourist facilities in the historical area of Molo Vecchio. The various views from the terminal of the surrounding area have the important function of supporting and being an active part of the gateway experience.



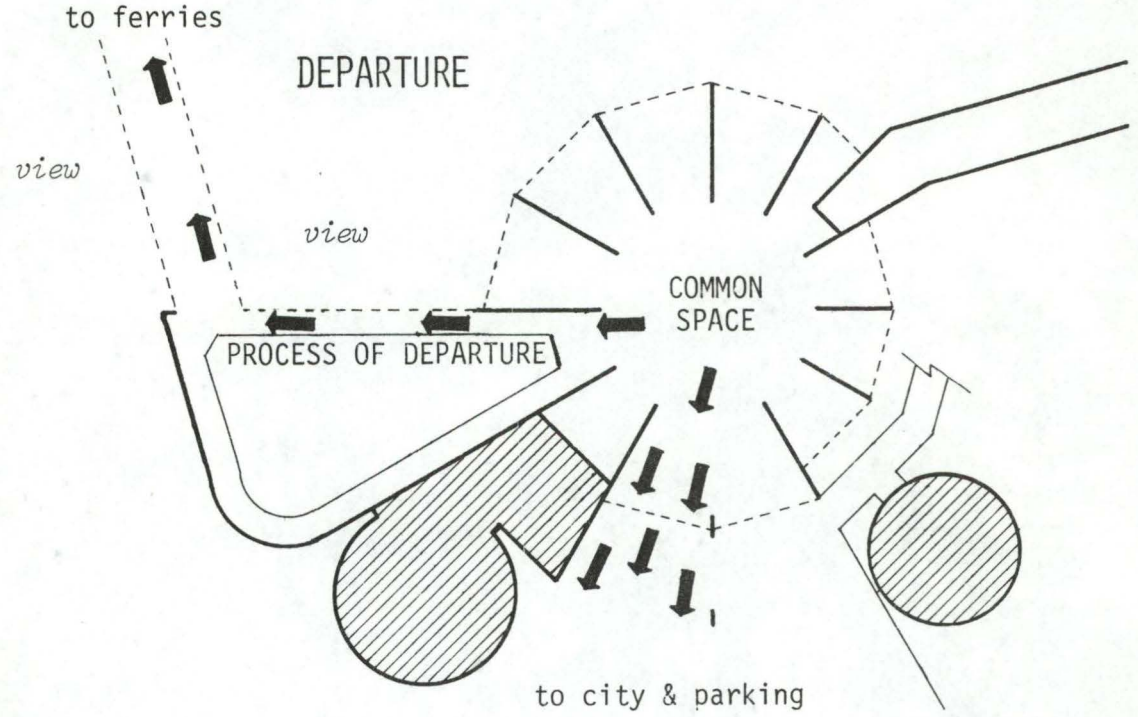
GROUND FLOOR

TERMINAL ACTIVITIES

FIRST FLOOR



The next and last event of the gateway experience is the departure. There are several mandatory tasks the traveler must perform in the process of boarding a ferry. After having purchased a ticket in the common space of the terminal he may begin immediately by having his baggage cleared by customs and declaring any items he may have of value. The baggage check desk just beyond the customs area is ready to relieve the traveler of handling his baggage and to deliver it to the appropriate ferry for him or he may choose to carry it himself. Finally, everyone must have his passport checked before entering or leaving the area of the port. This is the actual point of transition between the port and the public spaces of the terminal building. At this point the passenger may walk safely on the elevated walkway to the ferries and be able to see the activities of the port below. The same sequence of events are required by passengers arriving to Genoa by ferry but in reverse order, the process of arrival rather than departure.



The previous paragraphs have discussed the sequence of events which are involved at the gateway. The design of the terminal building has attempted to psychologically reinforce the events for the benefits of the people. Areas of the building accomodating the arrival and departure activities were designed to be conducive to the movement of people while areas of terminal activities are to make one feel at rest in the terminal and aware of his surroundings. The funneling effect of the front entrance has already been mentioned in terms of people moving through it and some of the psychological effects involved. The area of customs and police checks has a specific set of events to accomplish in its movement of people. The floor level in this area is several feet below the common space as well as having a lower ceiling height. The spaces are more confining and linear corresponding to the concentration of doing the required chores and moving towards a destination. Departing passengers in this portion of the terminal are enticed with anticipation during the process by a wall of windows exposing the activities of the port. Arriving passengers are more confined and urged to move along by a solid wall during their processes of arrival and led to the actual point of arrival in the common space. The changing of scale is accomplished smoothly by keeping the passengers confined between the ships and the common space of the terminal, yet being able to see the open spaces around them on the walkway. The common space is the unique space in the terminal building which acts as a transitional space between the confinement of the ferry boats and open spaces of the land. The two story open spaces in the center of the building and at the entrance help to provide a transitional character to the building.

THE OLD & THE NEW

THE COMBINATION

The two previous sections of this project are concerned about two separate areas of thought involving the site of Molo Vecchio. Both the historic and the contemporary plans have the common theme of becoming an important gateway for the city of Genoa. The concern of this chapter is to examine the total picture that has resulted from both the old and the new gateways working together in a unified plan. In view of both the public and the port spaces together as a gateway, the site of Molo Vecchio is most appropriate. The jetty seems to hold out an arm into the harbor ready to greet its guests to Genoa. Along the northern edge of the jetty greater protection from the open sea is provided to the ships as well as a convenient berth for docking. The view of the city from this side is also excellent for the passengers involved in a gateway experience. The reverse situation is also extremely good. Since Molo Vecchio is one of the most visually prominent features of the port from the city it seems important that the people of the city may have a direct relationship with it as their connecting point with the sea. By providing the facilities to accomodate tourists and the public for recreational purposes the site may regain its original vitality and significance to the people of Genoa.

THE SIMULARITIES AND DIFFERENCES

The historic gateway and the ferry terminal are both distinct creations of their own time and should always maintain their distinct differences. By sharing simular functions as gateways they must also work in cooperation with each other to achieve a unified image for the city as

its gateway to the sea. The atmosphere which is present in the historic spaces of the old gateway is the most valuable asset to be captured and strengthened. One may feel as if he has stepped out of the present into the past and begin to see the life around him with new (although really old) insights. It is important in the true experiencing of the historic gateway to feel removed from our modern society and become a part of an environment of the past. The ferry terminal is definitely not of the past, but very much a part of the present and therefore it should clearly be recognized as such. Without unnecessarily becoming something of the future, the terminal should accomodate its guests efficiently, pleasantly, and rewardingly. The events are to be experienced as part of present life which requires the building and the entire area serving the ferries to be of a design reflecting our contemporary society.

The Gate of the Old Jetty with the city spaces behind and the ferry terminal building both function as gateway environments. The movement of people and adjusting them to a change of environments is the common function that is shared. The old gateway had only a few functions to perform. Primarily, it was a doorway to the city that could control what went in or out and also be able to close the door to keep out enemies. The Gate was a dominant and important element in the large network of walls which entirely enclosed the city. It was a very significant node and landmark at the intersection of the boundary walls and an active pathway. The ferry terminal is also located on a boundary separating the port from public spaces. It acts as the most significant node of activities along the pathway of people entering or leaving Genoa by ferry. The terminal has a number of functions that must be achieved which differ from those that existed at the Gate of the Old Jetty, however they still

involve having control of who and what crosses its boundary. A notable difference exists in that the ferry building does not function as a fortification to protect the city from attack and therefore does not have that expression in its design.

Other factors which have caused differences and simularities between the old and the new are the materials used, building techniques, and the forms that have evolved. Masonry construction has been practically the only type of construction to be found in the past of Genoa and still today except for one or two highrise office buildings in the city. The result is that the buildings often have the appearance of being massive, heavy, and solid. The older buildings are heavier, but progressively less heavy as their age is less. The Old Gate is very solid with few openings as a result of both the stone construction and the need of fortification. The terminal building is also basically of masonry construction but due to modern techniques of steel reinforcement it has a much lighter character. The spaces are much more open to the surrounding environment and have established an entirely different atmosphere which is appropriate to its time and function.

THE RELATIONSHIPS

Generally, as a result of all the various simularities and differences of the old and the new environments there has developed a distint separation of characters that do not mix but are able to coordinate with the common theme of becoming gateways. The design and planning of the two zones has had to recognize the distinctions and provide them with the right relationship for a good marriage to become a strong environment for the city. People in the area may be involved with only one or both of the separate environments and therefore have the ability to connect with

or bypass the other. The functions of one may serve the other and thereby establish a purpose for a direct physical movement between the two. The historic area may provide some passtime activities of interest to those persons at the terminal desiring its tourist services. The terminal may provide dining and restroom facilities to the tourists in the historic area. The walkway which connects the terminal with the Gate of the Old Jetty reestablishes the linear flow of people moving to and from the historic gate which is important to its historical restoration. The body of water which has been placed in the center of the jetty also has helped to restore the approach to the Old Gate. The more important purpose of the water is to further separate the different areas and enhance their visual relationships. Water is a vital ingredient of this gateway environment. The placement of water between the viewer and the node of the gateway (either the terminal or the Old Gate) provides all the elements necessary to instill a memorable and significant image of the gateway environment and its related experiences. As one rides along the drive connecting the terminal with the city, his view is oriented across the open spaces of the water to the new terminal and the original old sea walls of the city. Visitors in the historical area benefit from the water by feeling more isolated and confined in the tight spaces of the old city and by seeing the wall which is exposed that once protected the area from the open sea.

THE RESULT

The total composition of all the various elements mentioned is intended to aid the jetty of Molo Vecchio in becoming a prominent gateway for the city of Genoa. It is hoped that the interaction between the old and the new environments will be united into a strong statement of being

a gateway. The emphasis of the area is on the movement of people and that the transition of spaces can be an exciting part of the experience. The people in the environment may gain a greater depth of feel in understanding their own involvement with the gateway by comparing the experience of the present to what it might have been in the past. By developing a planned "gateway" environment incorporating not only beautiful buildings and historic restorations but also a special attention to the involvement and experiences of the people, it is intended that the proposed environment will serve the city as a symbol of the gateway experiences and regain its significance as an important part of Genoa.

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