SEATTLE CENTRAL WATERFRONT: A COMPREHENSIVE PLAN FOR ITS FUTURE DEVELOPMENT

by

GERALD EDWIN SCHLIE

B.A.E.D. University of Washington, 1973

B. Arch. Kansas State University, 1975

A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF ARCHITECTURE

Department of Architecture and Design

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1975

Approved by:

J. Cranston Weintraub
Major Professor

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Introduction

This Seattle Central Waterfront Report will serve as a framework for the discussion of the direction that the waterfront's design and development should take. Rather than becoming broad and open-ended, encompassing anything and everything in which the local governing bodies might be concerned with, this report will limit its study to those subjects which directly pertain to the physical development of the community. The scope of this report will not include the detailed planning of social, economic, administrative and fiscal matters, many of which are obviously interrelated with physical planning. This report will concentrate on such architectural matters as utilization of existing natural amenities, unity, character, scale, spatial relationships and location of buildings, rather than acting as a particular body of techniques for implementation and studying impacts on social, financial and cultural frameworks.

Recognizing the interdependence of physical, social and economic factors in community development, it is understood that a physical plan must take into account objectives, analyses and forecasts from the non-physical realm. The distinction between these is sometimes hard to pin down, but in general, a plan with a physical development scope will not emphasize economic and social development.

The intent of this report is to become an inventory of the existing forces that have shaped and are shaping the quality of the environment of the central waterfront. It is a preliminary step toward establishing development criteria for the area and as such is a tool used to clarify the complex relationships that are the essence of the waterfront. It is a manual that can be used as a guide in understanding the past development of the waterfront and in making decisions on future changes. The intent of this survey is that it will serve as the means for formulating community goals and urban design principles rooted in Seattle central waterfront's uniqueness. This report will attempt to provide the community with an inventory of its assets and liabilities.

This is a working report. It is intended to isolate and identify the problems, explore existing data, and then to be used for physical redevelopment of the Central Waterfront area.

THE NEED FOR A COMPREHENSIVE PLAN

Traditionally the physical environment was thought of as a major determinant of social behavior and a direct contributor to an individual's welfare. The prescribed therapy for the various social pathologies, therefore, was improvement of the physical setting. If well-designed and well-sited houses, playgrounds and community facilities could be substituted for the crowded and dilapidated housing and neighborhoods of the city's slums, then the incidence of crime, delinquency, narcotic addiction, alcoholism, broken homes, and mental illness would tumble.

As the findings of systematic research into the relationships between social and physical aspects of environments and social behavior have accumulated, however, what were once stable pillars of understanding are melting down to folklore and partial truths embedded within complex networks of causes. The simple clarity is thus being dimmed by the clouds of complexity, diversity, and the resulting uncertainty that seem to be the inevitable consequences of scientific inquity of the deeper understanding that research brings.[17]

With the governmental structure remaining as it is, the local politicians are making decisions for an entirely heterogeneous city, largely unhampered by the objectives or nominal policies of other elements of the polity—focusing on large areas (cities) rather than on communities and neighborhoods. These rigid governmental institutions will continue as local authorities remain poor, while the nation as a whole is wealthy. It is the national wealth that is not only allowing us to continue this inhibited planning, but is now forcing these inhibitions.[1]

Physical problems do correlate with social problems, unfortunately too often urban renewal has sought physical means to improve social conditions. Planners can work in a way that has a positive, constructive influence on the local economy without harming neighboring communities. One method is to encourage citizen participation through obtaining residents' attitudes and reactions in reference to key items. Planners must treat the phase of goal formulation delicately.

So common is the connotation of leisure and recreation with "going somewhere" and spending money that the lack of money clearly excludes the family with a low

income from many outside activities.

OPEN SPACE

Traditionally open space has been justified on health grounds——for fresh air, sunlight, physical exercise and psychological release. From a negative point of view, we know of certain noise thresholds, toxicity levels, pollution quotients, and density patterns which can become intolerable to human beings. But little research has been undertaken to determine the positive benefits——both physical and psychological——of open spaces on human beings in different situations. We do have some indications of the role that open space can play in providing a healthful environment.[10]

Open space functions have rested at the bottom of the list of land use elements, with the funds and the lands relegated from the remainders of other activities. Open space should not necessarily receive on sort of priority or another, but rather should be planned and programmed in conjunction with other functions and purposes. When the functions and uses of the open space are defined more clearly and objectively, however, the open space will therefore become a planned requirement.

The productivity and efficiency of the physical resources——the air, water, and soils——as well as their amenities are critical factors in determining open space programs. By protecting and preserving these resources, waterfronts and beaches will be cleaned, sealife enhanced, and many other economic activities from fishing to seafood retailing will be assisted. The misuse of these resources can present us with dramatic but uneconomical results that now exist——polluted waters, decreased fish production, desicrated beaches and shell-life, and lost natural amenities through uncontrolled development.[11]

With man's expanding demands on the resource base, and with the gradual recognition that resources are not inexhaustible, open space action will be increasingly concerned with the protection of the natural environment, ranging beyond mere sentiment to maintain the purity of a pre-man world. Rather, it extends to contemporary realism as one approaches the concept of what is an acceptable ecological equilibrium of man in the environment.

Why the Waterfront Needs a Comprehensive Plan

Man is most certainly a playful as well as a social animal and infinitely adaptable. Non-purposive elaboration of physical and intellectual pursuits has been part of the human culture since its beginning. The re-creation of human energy and spirit through relaxing and "ennobling" play may quite likely be an end value of life on earth. Today, with our powerful automated productivity galloping ahead—after the grinding grim start of the industrial revolution——we now have time. Time during the day, time during the week, time during the year and time during a lifetime; "free-time" to kill or to build into leisure as the thoughtful pursuit of enriching experience that makes life worth its troubles. This is especially so as earning one's employment turns dull.

It should be obvious that extending space and extensive furniture (both organizational and physical) are needed to cope with the enormous publicly and privately manufactures wishes of the free-time/leisure seeking people. If planners have the high goal values which they claim, they should be aware that the measure of the style and quality of American life in the twentieth century will not be based on the production of consumer goods, but on the creation, display/performance, and consumption of the intellectualized and aesthetically developed arts, as well as a sensitive and loving respect for Mother Earth.

"Doing", most seem to agree, is better than "watching". Participation is more valuable than spectatorship——although some alternative may be immensely rewarding even to the most dedicated participant. The private sector of the economy has profitably exploited spectatorship all the way from "the great wasteland" of TV to the millions of records sold each year. However, to provide the higher reaches of aesthetics and intellectual leisure demands organizational and capital resources far beyond the private person's pocket or the profit-making recreational industry. The creation and framework for leisure, therefore, becomes increasingly a governmental <u>service</u>.[17]

The Seattle Central Waterfront, it should seem, is a logical location for recreation/relaxation-seeking people to gather. People are known to be attracted to bodies of water (regardless of their size) if not for recreation or the pursuit of relaxation, then for its deliberation from the monotony of asphalt, concrete and steel which dominate city centers. (Fountains are typical "human-

izing elements—however ineffective—placed in front of inhumanly massive buildings.)

Today the words "Seattle waterfront" remind its citizens of a blighted condition—it is a place where garbage is dumped in the space between rotting piers. Or as lately, huge installations or high-rise structures are erected on land fill, blocking off the view of the water. Or, the equally bulky (and also noisy) elevated Alaskan Way Viaduct interrupts the prospect, with its thousands of autos and trailor trucks. With the access and view blocked, many Seattle residents are scarcely aware that their city is water-based. They are conditioned to traveling many miles for a glimpse of open water at some other distant location.

Paradoxically, the very existence of decay on the waterfront gives Seattle a second chance to improve its appearance and amenities. Although there is still some competition for land on the water's edge, the existence of decay is evidence that certain older uses are no longer necessary and that we propose the kind of uses which should replace them. Seattle no longer considers its Central Waterfront as part of the economy. The result is that refuse and objectionable land uses find their way to the shoreline.

Seattle's urban waterfront can be treated as a new resource for the economy. But this must result from a plan with safeguards, or the waterfront will be despoiled all over again in the very name of the public. Visions of an expanding world trade coupled with an already obsolete docking technology led shipping and port authorities to plan to "cover the waterfront" with these facilities. The existence of rotting piers and abandoned warehouses has encouraged inappropriate industrial and public utilities projects to fill land and erect businesses with free public access banned. Many of these are only there because public regulations have not been devised to keep them away.

Surface water and riparian lands should be utilized only for functions inseparable from waterfront locations—ports, harbors, marinas, water-related and water-using industries. New installations of public facilities and water-needing industries, and the high-rise apartments and hotels which threaten scenic areas, can be located in other areas of the city that are more appropriate for these uses than is the urban waterfront.[10] Meanwhile, the Alaskan Way Viaduct and railroads have usurped the best waterfront sites...

Use & Implementation of Plan

Users of the plan include all the principal persons involved in the physical development of the community. It will be from the use of the plan, not the mere existence of it, that the benefits flow; the plan is meant to be only a part of the social/physical process suggested herein.

THE LEGISLATURE

The plan draws the legislator's attention to the community's major developmental problems and opportunities. The plan should bring implicit policies into the open to assure that they are determined through democratic processes. Such disclosure places these policies on record and fixes responsibility on the legislative body. It is also desirable for legislators to participate in the early steps of formulating proposals and comparing alternatives. Acting as the client's representative, the legislative bodies should be drawn into the early stages of plan preparation and not kept in the dark until the staff has a finished package ready for them to approve or veto.

Policy determination takes place at several points in time, namely: during preparation, debate, and initial adoption of the plan; during annual review and ammendment of the plan; during major reconsideration of the entire plan after five to ten years; and during consideration of day-to-day developmental matters which call for review of general or long-range policies. They must feel committed to it and be ready to follow its policies in their future actions.[1]

To accomplish this requires a long period of debate and education between the first presentation of the plan in tentative form and the ultimate adoption of the plan in revised form. During this period, the legislators should study the proposed plan carefully, devote work sessions to it, and conduct hearings on it. This period should also be utilized to distribute the proposed plan to citizens, newspapers, and civic groups and to solicit public reactions to the plan.[8]

THE CHIEF EXECUTIVE

The policy determination and policy effectuation functions fall upon the chief executive—for the strong mayor, because he is a policy maker, and for the city manager, because he is the principal advisor to the legislators in formulating policies. The mayor will receive staff advice through the plan and commun-

icate the policies agreed upon by himself and the legislative body. The plan itself does not contain a detailed outline for execution, but its proposals imply that certain, implementing steps, particularly public works, should be undertaken by the administration. Much of the responsibility for effectuating the plan will, of course, fall upon the shoulders of the chief executive.[1]

THE COMPREHENSIVE PLAN

The most important function of the comprehensive plan is to convey advice to the legislative body. The plan is the key instrument by which the most important recommendations are presented. It is of great value to be able to put a clear printed statement of the legislator's policies in the hands of developers, lawyers, other public officials and citizens.

The city's planning commission and staff use the plan as a basis for establishing implementation programs. It is their job to prepare and administer many of the measures specifically designed to carry out the plan——the zoning ordinance, subdivision control, urban renewal, developmental plans, and so on.

Illustration of the plan ought to have a great educational value for the public by promoting public understanding of the community, goals and objectives of the plan, and how the plan is to eventually benefit the community.

Historical Background

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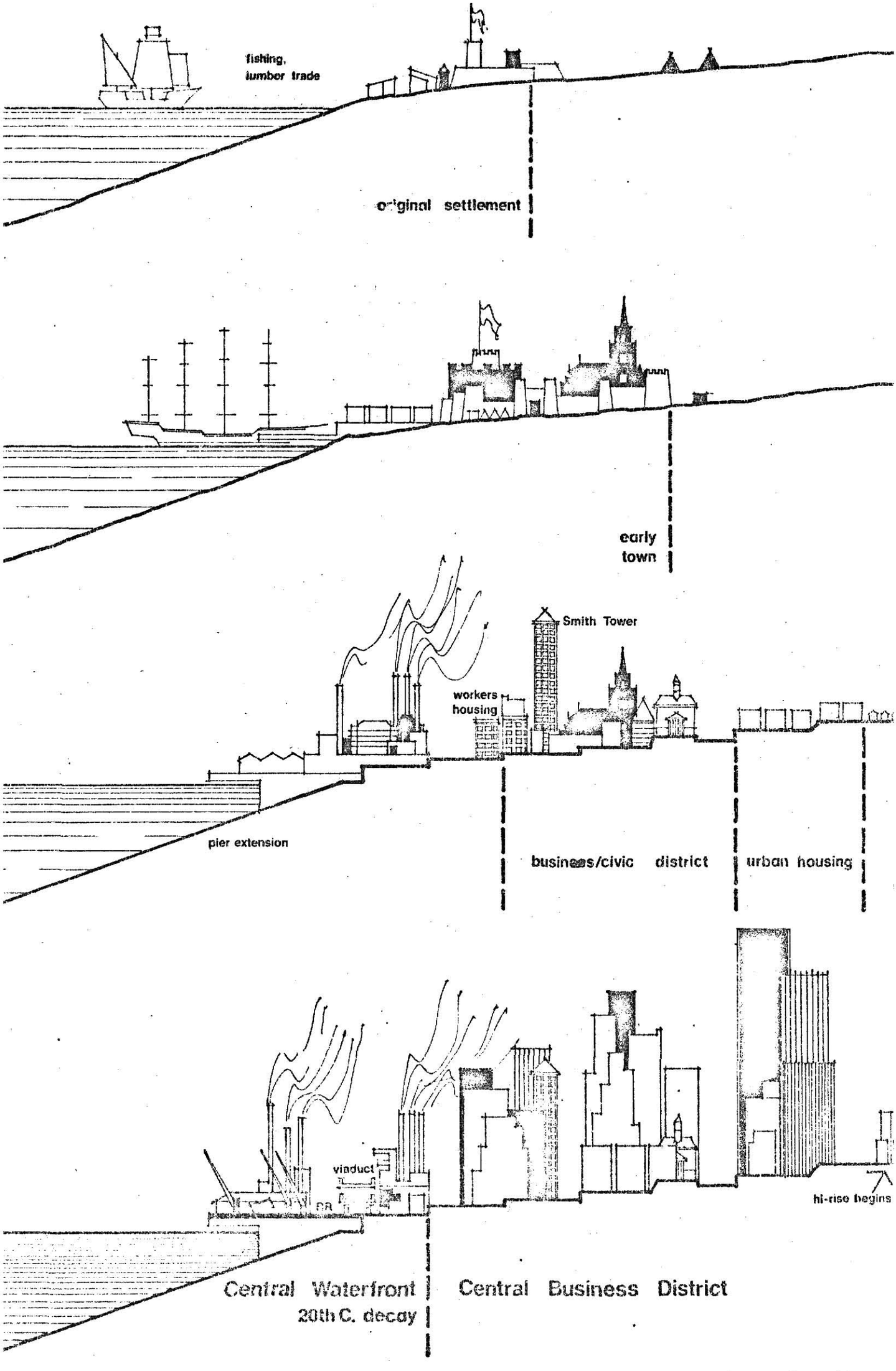

fishing,
lumber trade
original settlement
early
town
Smith Tower
workers
housing
pier extension
business/civic district
urban housing
viaduct
RR
hi-rise begins
Central Waterfront
20th C. decay
Central Business District

Historic Sketch: movements away from waterfront

American cities have almost universally treated their waterfronts as prime commercial and industrial land; they did not consider the recreational possibilities of coastlines and riverbanks when early city plans were designed. Street patterns, especially those modeled after the New York plan of 1811, encouraged the rapid and speculative development of land for private purposes. Deliberately rejecting aesthetic considerations, city planners disdained any form of "embellishment" on the grounds that "a city is to be composed of the inhabitation of men, and that straight-sided and right-angled houses are the most cheap to build and the most convenient to live in. Furthermore, streets and avenues intersecting at right angles with lots of 25' frontage and 100' deep made the sale and speculative transfer of real estate as simple as possible."[1]

Cities and congestion began to be regarded as synonomous——almost by definition meaning an intense level of economic activity in a relatively small area. Although ships had already begun to conquer long distances, technology had not as yet made much headway on the problem of moving goods and men within cities. The scarcity of land within easy access of the docks put a premium on high density and intense development. Newcomers were crowded into any structure that would provide shelter——and land values and the profit motive combined to pack large numbers of people into small areas....growing so rapidly that no amount of conversion of existing structures could house the expanding population. This led the way for make-shift industry and tenements deliberately designed and constructed as slum housing. There was no money to be made in providing decent housing for the poor, but there might be great profit in housing them cheaply.[1]

Thus contemporaries were thrilled by their cities' growth in numbers and overall prosperity, but feared such by-products of rapid urbanization as increased mortality, widespread poverty, and insecurity. To a considerable extent, they convinced themselves that social problems resulted from deprivity of the lower classes——and answered by urging the immigrant poor to adopt the precepts and values of middle class Protestantism in their "humanitarian" concern for the sufferings of the poverty-stricken and a fear of social upheaval.

Other societies concerned with "poverty redevelopment" concluded that moral regeneration along the waterfront would be impossible and that "escape from

the city—for escape is the only recourse against the terrible ills of beggary; and the further you go, the better" would become the predominant solution at hand.

Urban transit facilities such as horse-drawn streetcars, and later, electric trolleys, elevated railways and subways did not cause this exodus, but rather made it easier, at least for those of more than average income. Thus, the very people that were responsible for and continued to perpetuate the poor conditions along the waterfront fled the blight in search of "greener grass".

The nation's urban problems of today are most acute in the declining cores of the cities' CBD's. The outthrust of people and jobs has left the cities with diminishing resources to meet staggering social responsibilities. Suburbanites continue to escape from the city and ignore the needs of its people—and the history which brought about our current crisis does not seem likely to be reversed soon. Even the newest threat of diminishing supplies of fuel, and therefore mass transit, has not yet caused a reversal of attitudes. The fact that decentralization is an unmistakable trend of modern times has not seemed to redirect civic authorities away from their often cautiously conservative awareness of the problems they face. Some have partially comprehended current happenings and then have taken positive measures of improvement, but frequently fail to foresee the future consequences of these measures. Because of these consequences, it is not surprising that there is much confusion as to the right course of action.

Community strengths & weaknesses

Some cities are more memorable than others. It is not only the ports of the city but also the composition of the various phenomena that gives a city character. In analyzing Seattle's imageability, it is apparent that the city is largely dependent on its setting. Connotations of Seattle include such natural features as mountains, water, hills, trees and gardens, which are perhaps the more positive elements within the city. The man-made elements are secondary and they, too, depend to a great extent on their successful relationship to the natural setting either as landmarks or as orientation points. Frequently, a unique mixture of activities or a special adoption of the natural setting for a particular land use creates a memorable impression: the Pike Place Market and the houseboats on Lake Union. Large areas of architectural harmony also remain as a strong impression, i.e. Pioneer Square and Harbor Island. The importance of these impressions is difficult to evaluate; however, it is with these images in mind that an exploration of a city's character and physical form begins.

Contemporary architecture in the Northwest reflects the state of art everywhere. The "Modern Movement" has worked its way through and away from its original vernacular sources. But the sleek world of the "International Style", based as it was on plain buildings has largely run its course. And the old downtown commercial establishments and derelict buildings still line the waterfront as reminders of what once was the origin of our cities.[16]

When the business district moved uptown, in the same callous way it did with most American city districts, Seattle's Skid Road (originally named for the logs, not the people, skidding downhill) soon projected the urban image of hopeless decline and established itself as a stomping ground for vagrants.

One hundred seventy-four years of growth have changed the scene from complete wilderness to a metropolitan area centered around a once-lively maritime enterprise. Its prosperity during the formitive years was based upon the huge stands of virgin timber that reached down to the shores of Puget Sound. Sawmills loaded ships that sailed everywhere over the globe. Fishing in nearby waters and those of Alaska added to this economic base.[16]

Today Seattle faces a future of continual change as old economic foundations

disappear and new ones take their place. "Progress" is changing its character and image. South of the original port docks is the man-made industrial Harbor Island served by Elliott Bay and the Duwamish River. Ship repair and ship building constitute a good share of the existing port industrial activity——as well as presenting an impressive reminder of our maritime heritage. Ships from other parts of the world still visit Seattle, contributing their grace and beauty to the scene and bringing reminders of the romance and adventure of distant places.

Various forms of progress have threatened, and continue to threaten the waterfront. But as long as there is water in Seattle, people will continue to enjoy living on it as indicated by the Shilshole breakwater and boat harbor (further north of the port); reflecting the importance of boating as an amenity factor for the city.

The Lake Washington Ship Canal, dug in 1917 to connect Lake Washington, Lake Union, and Puget Sound, was originally constructed to aid in commercial development of these inland waters. Still fringed with commercial development, the most abundant activity has now become that of pleasure boats passing to and from Puget Sound and its salt water cruising world.[16]

The natural and man-made features of the waterfront are both a pleasure and a source of emotional satisfaction since it provides abundant clues for comprehending the city and for orienting oneself. Among the significant aspects are panoramas, skylines, landmarks, significant architectural masses, and the heritage that emulates from the waterfront.

Smith Tower, built in 1914 to anchor the commercial district, now stands as a symbol and a landmark for the city as the CBD moved north from it. Seattle gained another landmark and symbol as a result of the Seattle World's Fair of 1962 with the erection of the 600' restaurant and observation tower called the Space Needle. The present site, located in the gap between Elliott Bay and Lake Union, is surprisingly pleasant in the city scape as an accent and not a deterrent to the skyline.[16]

Harbor Island to the south of the CBD contains definite architectural qualities because of its direct, straight-forward industrial construction, built to serve working purposes. There exists an impersonal, severe quality, common to similar

areas in other cities, which appears to be caused by the lack of pedestrian spaces, the dominance of automotive considerations, and the unkept, unimproved, raw, empty land.

First Avenue, once the prosperous and active area of Seattle's CBD, is no longer a favorite haunt of the elite. Containing the remnants of a once thriving business, this "bottom of the city" is completely vulnerable to development.

The variety of the city's waterfront is best shown in the particularly unique and colorful Pike Place Market. Located on a bluff off the central waterfront, it attracts people of all sorts—contributing to the ever changing pageant of shoppers and merchants. The market complex represents such variation as a Turkish restaurant, Filipino souvenir shop, Italian grocery, Greek restaurant and beer parlor, and a Japanese florist.[16]

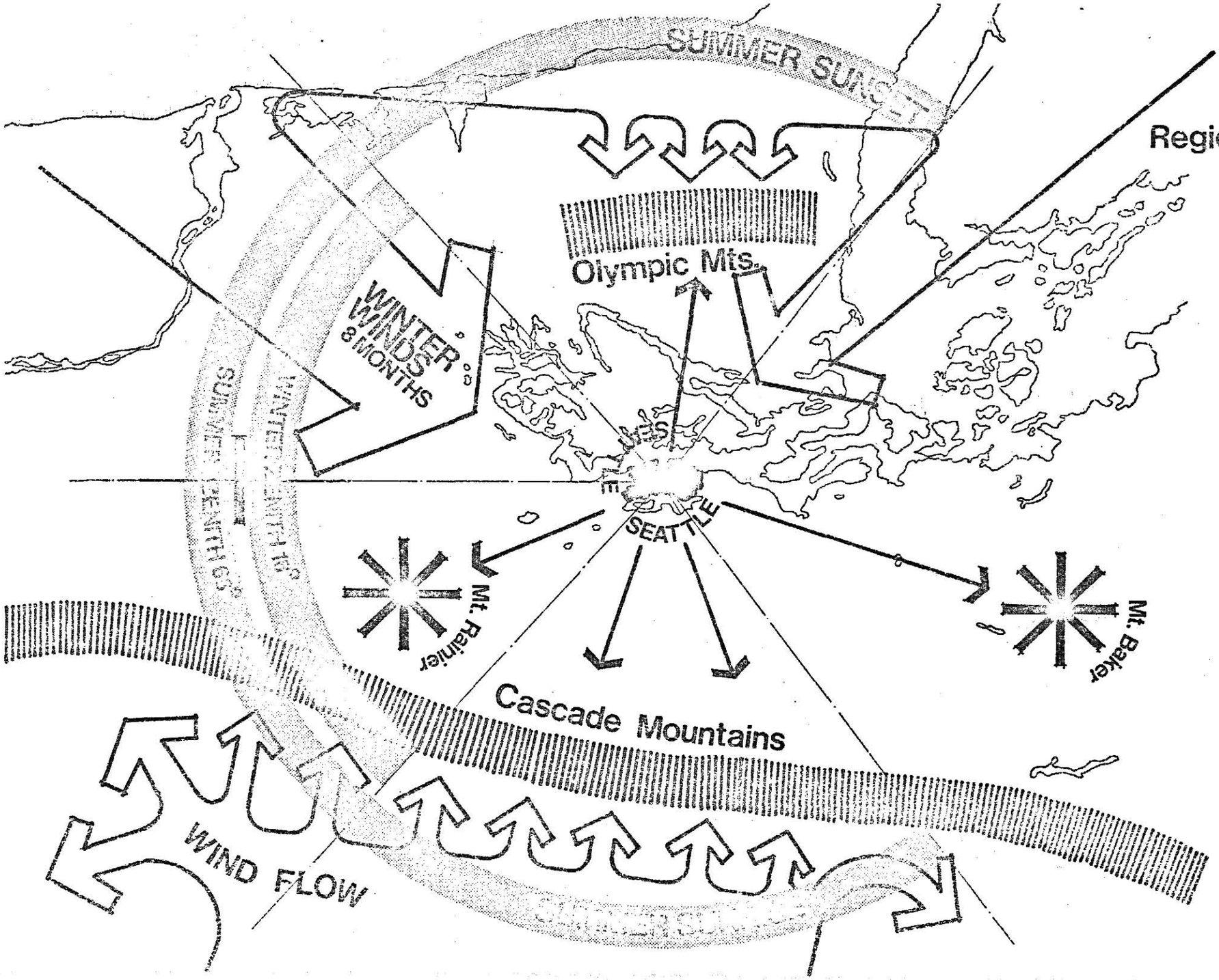
The waterfront, itself, with its docks and past world commerce, holds a potential lure that has not in the past been dramatically exploited. The ferry lines link this district with Canada and other Washington communities and suggest associations with the parts once played by steamers and barges. More color is being brought into the pier buildings, and enterpreneurs are developing—all without planning. With much municipally owned property existing along the waterfront, this area could easily be developed to open the CBD to the sea once again. The mundane appearing Alaskan Way that borders the docks, however, continues the "working waterfront" appearance that exempts the city's trespassing, even though the lure of the sea has always been present. Now its potential as a social and cultural space with recreational overtones is recognized as having another kind of value for the city.

The appeal of the water, the view, the marine activities, and the old shipping piers, has changed Seattle's central waterfront from a working waterfront to a walking waterfront. Unfortunately there is no easy pedestrian connection from the piers to the Pike Place Market, to the main downtown shopping district, or to Skid Road.

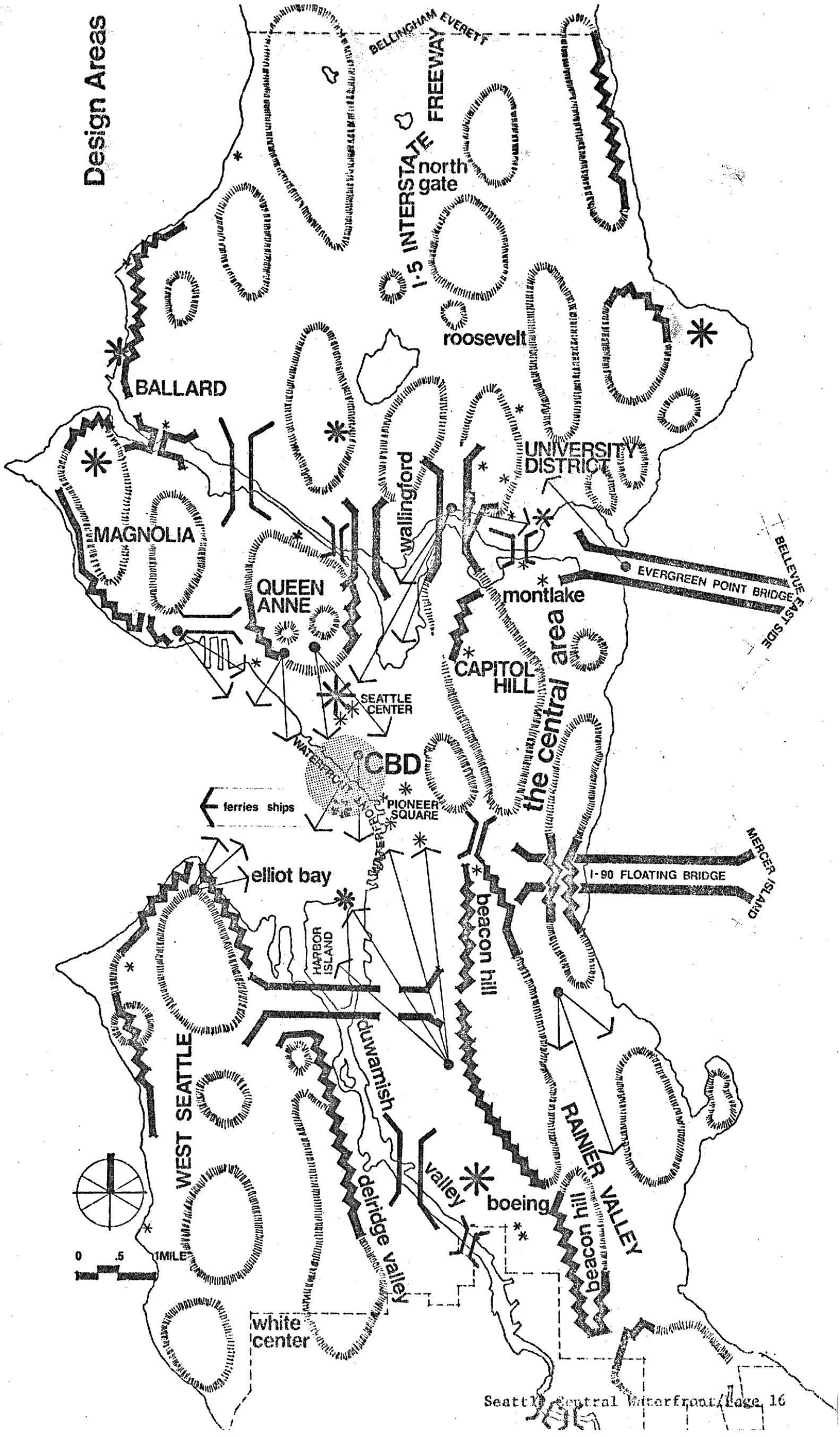
The physical progress of the CBD's development of the downtown points in the direction of becoming solely a daytime city as the downtown becomes more fertile for high-rise development.

In attempting to develop awareness of the aesthetic, dramatic experience of the city, it is proposed that the challenge should be an urban environment worth what it costs the people. The people have made and are making the city, and the city in turn exercises its influence upon their destinies. As time goes by, people must enhance its physical qualities through planning in order to increase their own happiness and cultural enjoyment, thereby causing economic appreciation as well.

The Study Area



Regional Conditions


Design Areas
BELLINGHAM EVERETT
I-5 INTERSTATE FREEWAY
north gate
roosevelt
BALLARD
UNIVERSITY DISTRICT
wallingford
MAGNOLIA
QUEEN ANNE
montlake
EVERGREEN POINT BRIDGE
BELLEVUE EAST SIDE
CAPITOL HILL
the central area
SEATTLE CENTER
WATERFRONT
CBD
PIONEER SQUARE
ferries ships
elliot bay
I-90 FLOATING BRIDGE
MERCER ISLAND
HARBOR ISLAND
beacon hill
duwamish
WEST SEATTLE
delridge valley
valley
boeing
RAINIER VALLEY
beacon hill
white center
0 .5 1MILE

Regional Context

Seattle's physical character is largely determined by its 53 miles of shoreline along Lake Washington and Puget Sound; by the waterways of the Salmon Bay Waterway, Lake Washington Ship Canal, and the Duwamish River Waterway; and by the open space of Green Lake, Lake Union, and Elliott Bay. Intimately related to the hydrography of Seattle is its topography of hills, valleys, and ridges.[13]

Seattle is within that region which includes all the urbanized area from Olympia to Everett. The development parallels the waterline of Puget Sound and is essentially a linear series of cities linked together by a chain of water port activities and by an interstate highway system. Most of the cities within this urbanized area are either seaports or bedroom communities supporting the larger cities.

Seattle has a high accessibility to leisure time recreational opportunities outside the city. Residents consider this closeness to nature one of the most important attributes of the Pacific Northwest. These opportunities include active sports like skiing, fishing, camping and water sports, as well as numerous varied sites for vacation homes on beach sites, forests, or island retreats.

This preference for "nature" has also shown itself in Seattle proper. The city's housing is prevalently older, detached, single-family residences. The attraction of the "country" and of low density living accounts for a minus population growth rate within the city. This trend toward a suburbanization of the metropolitan areas will undoubtedly continue until a drastic change occurs within the urban area.

Major concentrations of high density population immediately surrounding the major activity centers of the CBD and the University District exist; but at the same time Seattle's topography is influencing larger numbers of its residential population to locate on slopes or hills in higher densities to take advantage of views.

While the pattern of residential land use is generally disposed on the hills, slopes, and lake shores; industrial and commercial employment areas are located in the valleys and low lands along the rivers and waters of Puget Sound; the major employment areas being the CBD and the industrial areas of the Duwamish Valley.

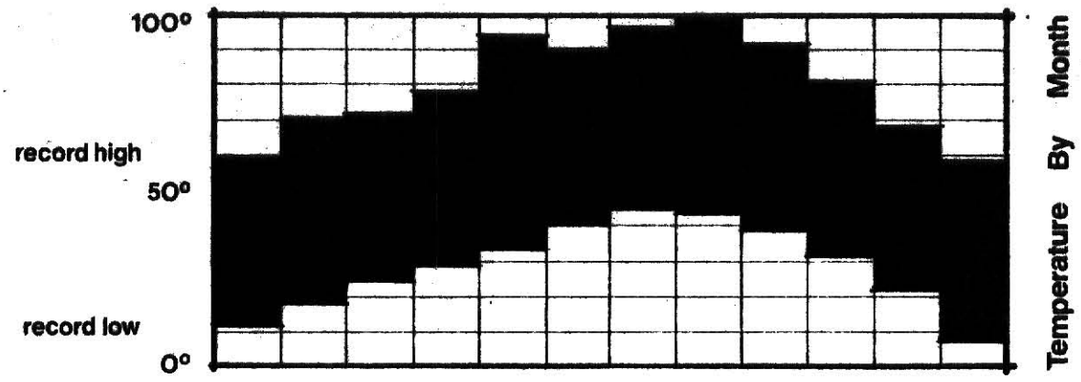
Seattle's transportation system is overwhelmingly auto oriented at this time, but mass transit has recently advanced beyond the regional mass transit planning phase, and is expected to be implemented in the near future. The major traffic facility is the Central Freeway (I-5) which cuts north-south through the center of the city. Trans connections westerly out of Seattle are via the State of Washington Ferry System operating out of the central waterfront across Puget Sound to the Olympic Peninsula.[13]

Seattle Central Waterfront is that portion of harbor area on Elliott Bay most adjacent to the CBD. (See preceding map.) The limits of the area are well defined by the points of street direction change. The south end of the central waterfront ties into the historic district of the old Pioneer Square Area. The Pike place Redevelopment Project lies at the north end with the retail core lying immediately to the east.

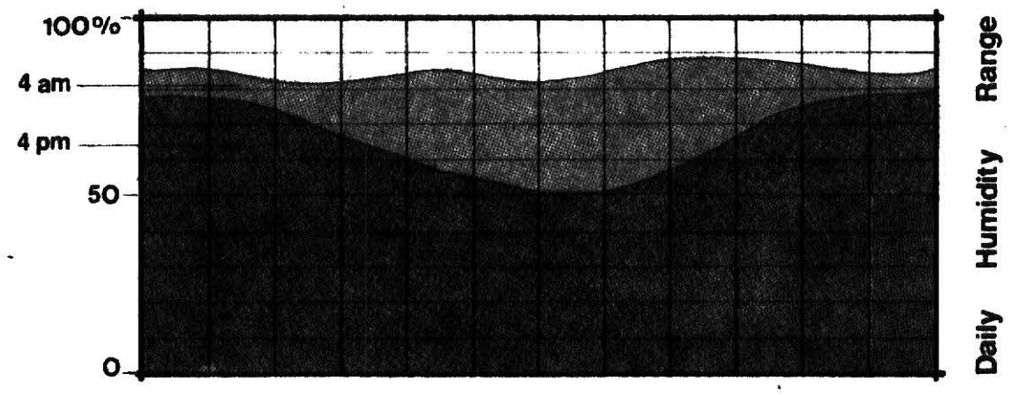
Additionally, the Central Waterfront fits into a chain of attractions referred to by the Department of Community Development as the Entertainment Crescent. This is actually an irregularly shaped crescent of entertainment type development and proposed development which extends from the south end of Lake Union, down by the Seattle Center, across the waterfront and finally terminating in the Pioneer Square International Business District Area.[13]

The shoreline to the south of the central waterfront is developed as heavy cargo handling and international shipping facilities operated by the Port of Seattle. Approximately one mile north of the central waterfront is the Port of Seattle's development built to accommodate deep draft ocean going grain ships.[13]

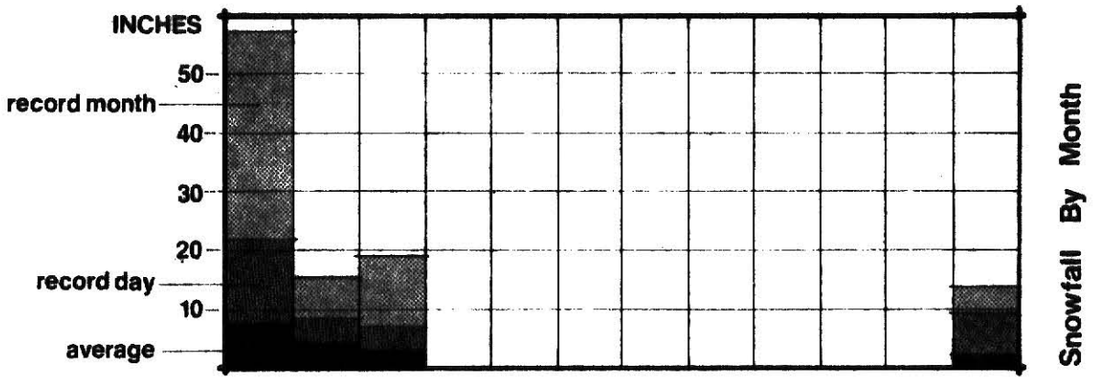
Climate



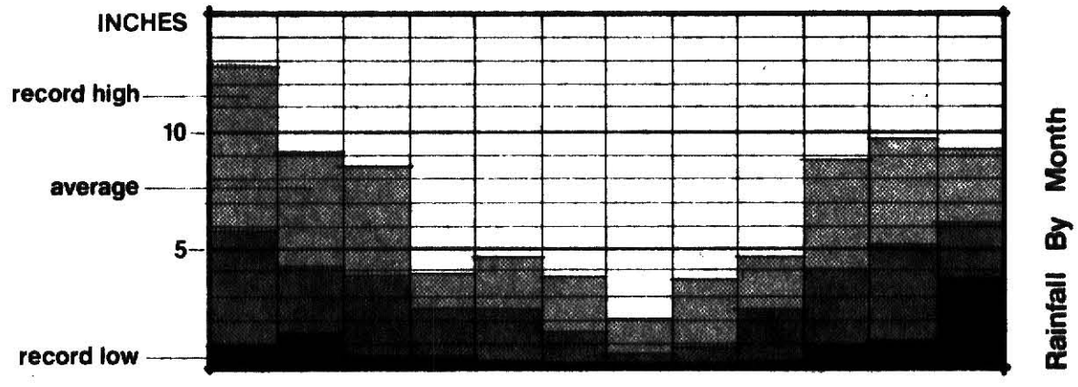
Temperature By Month



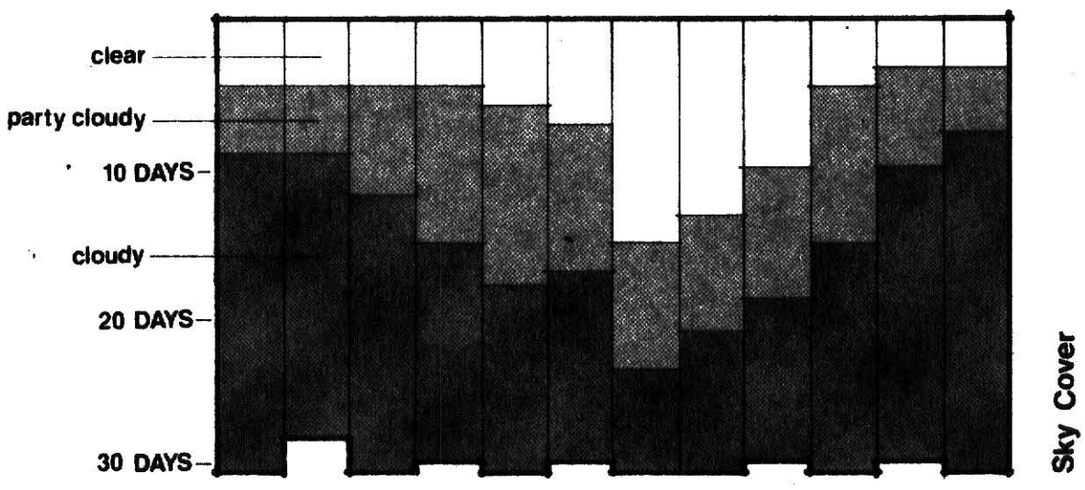
Daily Humidity Range



Snowfall By Month



Rainfall By Month



Sky Cover

Climate

Three major variables for the most part determine the micro-climate within the city. These are: the elevation and placement of the terrain, the distance and direction of this terrain from water areas, specifically the ocean and Puget Sound, and the semi-permanent position and intensity of pressure centers. These vary the temperature, the growing season, the fog centers, the precipitation patterns and other climatic variables.

Seattle has two major beneficial factors which modify its mild climate. The Japanese Current warms the water and the two high land massifs insulate the city and shield the city from adverse weather conditions. The Olympic Mountains prevent the Pacific's heavy rain and high wind storms from moving inland but allow the prevailing southwest winds to warm the Puget Sound Region in the winter. The Cascade Mountains block the cold continental air masses in winter and the hot summer air from reaching the city. (See map, page 15).

The Seattle area has a well-defined dry season (May to September) and a rainy season (October to April). The intensity of rainfall is light to moderate with few downpours. Generally, the amount of rainfall and snow increases with the increase in elevation and distance from Puget Sound. Snow accumulation, which is rare in the city, varies according to the exposure, the elevation and the terrain. (See graph, page 19).

The weather of the area, although mild in degree of temperature change, is often damp and cloudy. Seattle receives an average of 45% of the possible sunshine throughout the year. Approximately 201 days a year are cloudy, 93 are partly cloudy, and the remainder are clear.

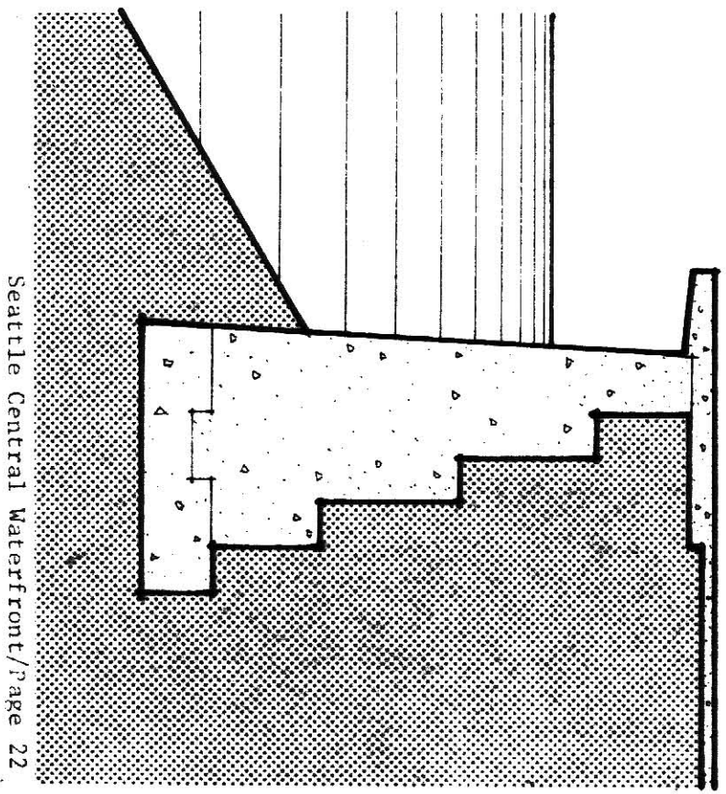
The clouds and persistent rains, while holding the winter temperature above freezing along with the slow temperature increase during the spring, combine to influence the length of the growing season.

In the city, vegetation is important for ecological as well as visual reasons by helping to regulate temperature, humidity and airflow. Vegetation also helps to deaden sound and improves sun and wind protection. The region has long had an abundance of trees and natural growth and the prevalent public attitude has been

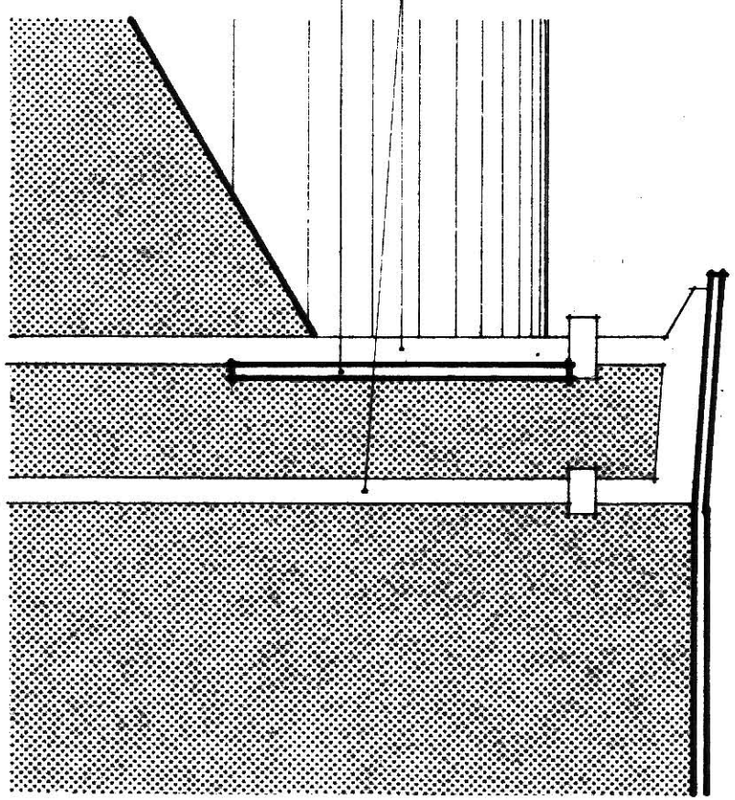
that of the pioneer who had to subdue nature in order to survive. It is only in recent years that public awareness of the need for establishing a much more profound relationship to the city's natural environment has come about. Most of the natural vegetation has, of course, long ago been replaced by man-made elements and second growth as well as the cultivated species. Encouragement should be given to private as well as public efforts to maintain Seattle's ecological balance by a public policy favoring replacement of vegetation lost to new construction whenever feasible.

(Sources: Annual Summary of Local Climatological Data For Seattle-Tacoma Airport; Environmental Airport; Environmental Data Service, U. S. Department of Commerce, 1968)

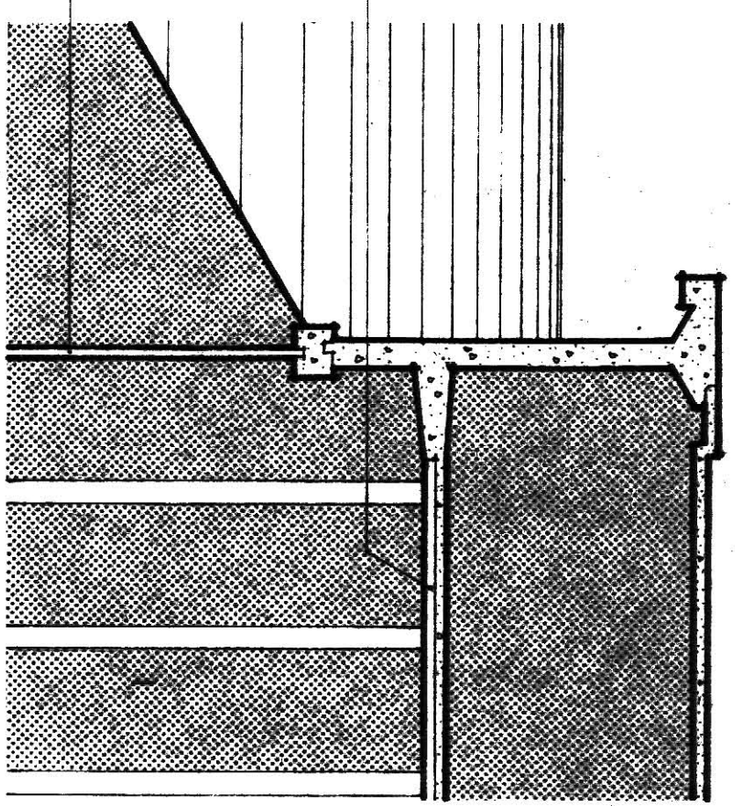
Seawall



Concrete Gravity Wall "C"



Wooden Wall "B"



Typical Seawall "A"

Sub-surface Conditions Seawall

Seawall

The original shoreline within the study area generally followed First Avenue south of Pier 57 and northward along Western Avenue. In the early 1920's a seawall was built in order to reclaim the valuable area adjacent to the piers and to shorten the required length of the piers.

Seawall type "A" (See sections, page 22; map, page 23) was used north of the fire station which is at the foot of Madison Street. Unusual in design, it will require special attention in the use of the immediately adjacent land to make sure that the proposed land use is compatible with the design of this structure, if major changes are to be made.

Cathodic protection and seawall corrosion are problems which require immediate attention. Without it the seawall will last only ten years. With the protection the seawall will last well over the forty year requirement for redevelopment of this area. Cathodic protection is a process of protecting with an electric charge the exposed steel sheet piling which makes up a large part of the seawall.[13]

Tidal Action

The study area is subject to considerable differences between high and low tides. The mean difference is 7.6 feet, the difference between high/high and low/low tide is 11.3 feet, and the difference between the extreme high and low tides registers 19.2 feet. The mean average high tide comes within 8.4 feet of Alaskan way, while the mean average low tide is 16.0 feet below the level of Alaskan Way. The highest tide ever recorded came within 4.2 feet of covering Alaskan Way.[13]

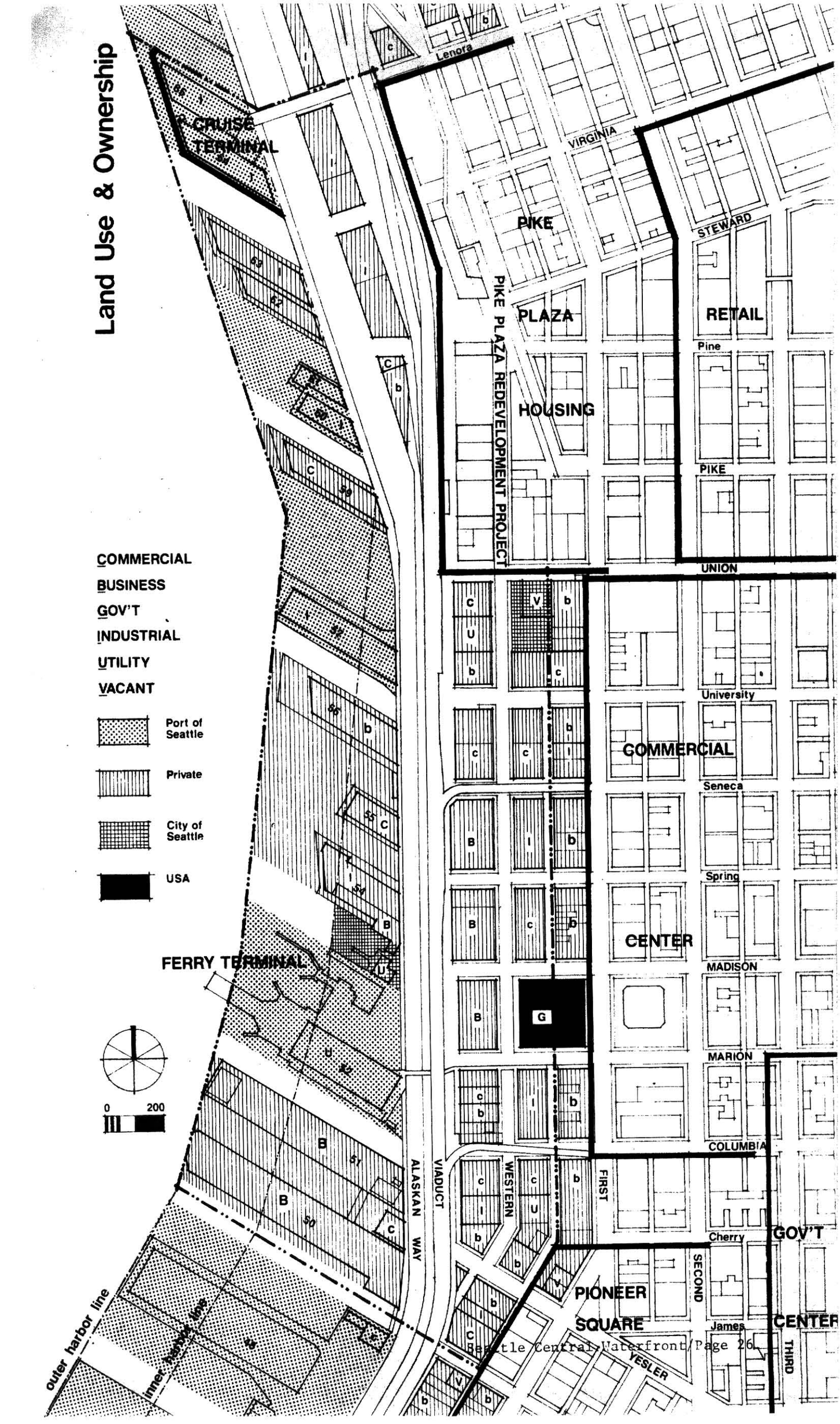
Sub-surface Conditions

For many years in the late 1800's, this area was the only port facility for Seattle. Because of its commercial importance and the necessity to service relatively deep draft ships, the shoreline was moved seaward from its original location at approximately First Avenue to its present location. The area behind the seawall was then filled in during the 1930's.

The filled area behind the seawall will support light structures, but major structures would need to be supported on pilings driven to the original ground

surface. The contour lines on the preceeding map illustrate roughly the elevation to which piles must be driven to support a major structure. Also, a relieving platform extending inland occurs as part of seawall "A" and may not be removed without reconstructing the seawall.

Another major consideration when building in the area is the effect of hydrostatic pressure. The water table is approximately four feet below the existing surface of Alaskan Way. Waterproofing of below-grade spaces and resistance to floatation of depressed structures thus become major problems.[13]


Land Use & Ownership
CRUISE TERMINAL
Lenora
VIRGINIA
PIKE
STEWARD
PIKE PLAZA REDEVELOPMENT PROJECT
PLAZA
RETAIL
HOUSING
Pine
PIKE
UNION
University
COMMERCIAL
Seneca
Spring
CENTER
MADISON
MARION
COLUMBIA
GOV'T
Cherry
PIONEER
SQUARE
James
CENTER
FERRY TERMINAL
ALASKAN WAY
VIADUCT
WESTERN
FIRST
SECOND
THIRD
YESLER
outer harbor line
inner harbor line
COMMERCIAL
BUSINESS
GOV'T
INDUSTRIAL
UTILITY
VACANT
Port of Seattle
Private
City of Seattle
USA
0
200

Ownership

The area between the inner and outer harbor lines is the property of the State of Washington and is typically leased to the inland property owner. These owners include the State of Washington (Pier 52), the City of Seattle (Piers 57&58 and the city street extensions), the Port of Seattle (Piers 60,61,64,65,66), Seattle Piers, Inc. (Piers 50&51), Washington Fish and Oyster Company (Pier 54) Pier 59 Dock Corporation (Piers 55,56, and 59), and Puget Sound Freight (Piers 62&63).

As provided for in the Public Lands Act of the State of Washington, the city streets are extended into the harbor area to assure public access to the water. The area beyond the outer harbor line is the property of the State and cannot be sold, leased or assigned. However, the location of the outer harbor line could be changed by legislation up to 2200 feet from the inner harbor line.

In addition to the many private and public entities owning inland property, the major land user is the City of Seattle with its street right-of-ways that are held in trust for public use. However, major portions of these right-of-ways are assigned to the State (Alaskan Way Viaduct) and to the Burlington Northern Railroad (railroad tracks and spurs).[13]

Water-oriented

- Ferry terminal (Pier 52)
- Fire Boat Station (Madison Street extension)
- Harbor Police Station (Washington Street extension)
- Harbor Excursion Boat Terminal (Pier 56)
- Cruise Ship Terminal (Pier 64)
- Aqua-show (Pier 56)
- Historical Ships Display (Pier 57)
- Marine/Fishing Supplies (Piers 55 and 59)
- Fish Processing (Piers 50,54,60, and 61)
- Water-borne Freight Terminal (Piers 62 and 63)
- Public Fishing Pier (Pier 57)

Tourist-oriented

- Restaurants (Piers 51,52,54,56, and 57)
- Curio Shops (Pier 51 and between 56 and 57)

Retail Import Stores (Piers 56 and 57)

CBD service-oriented

Offices

Wholesale Outlets

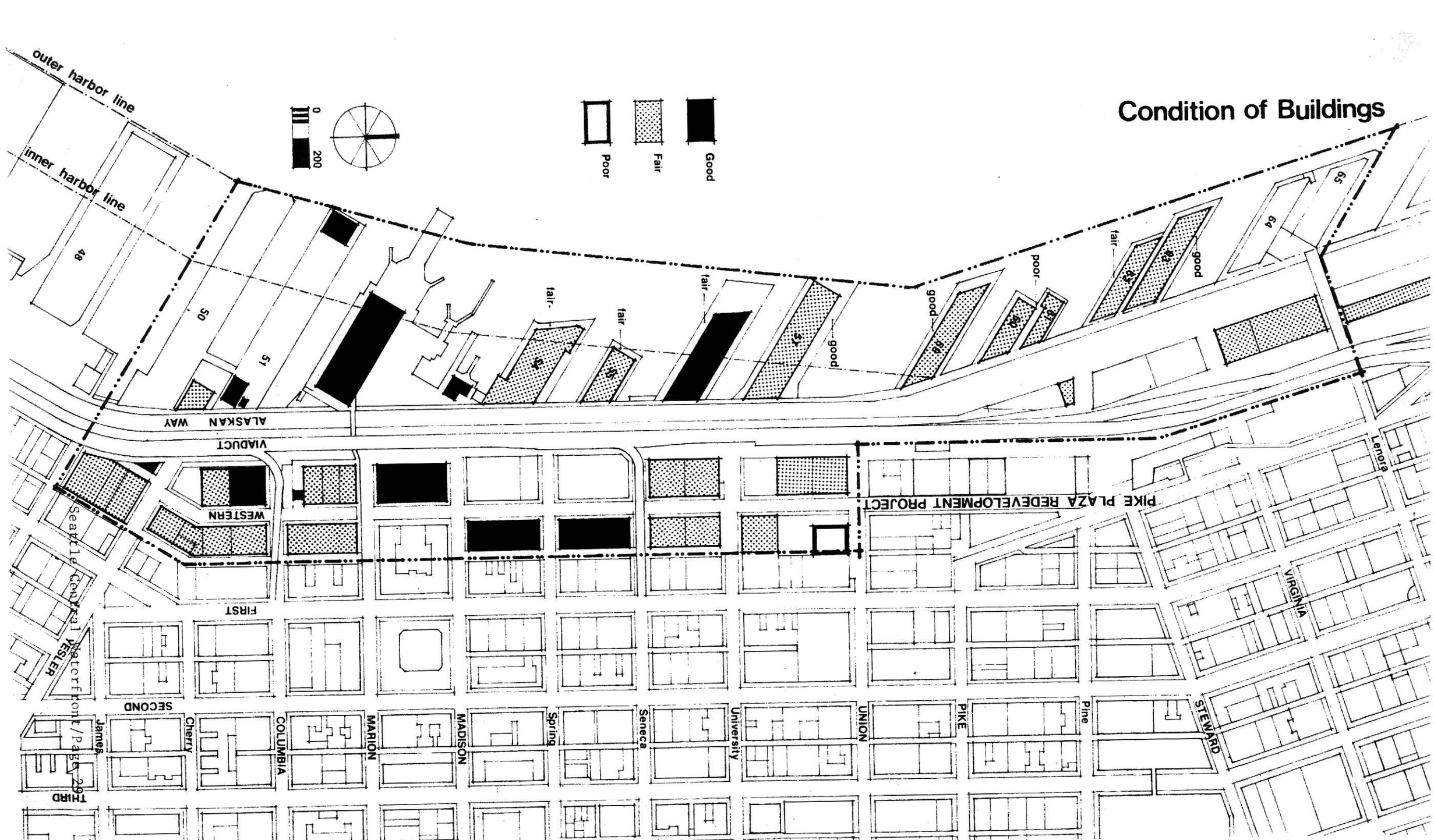
Warehouses

Light Manufacturing

Printing Services

Public Utilities

Parking Facilities


Condition of Buildings
outer harbor line
inner harbor line
0
200
Poor
Fair
Good
fair
good
poor
ALASKAN WAY
VIADUCT
WESTERN
FIRST
SECOND
THIRD
ELLIOTT
PIKE PLAZA REDEVELOPMENT PROJECT
Lenora
VIRGINIA
STEWARD
Pine
PIKE
UNION
University
Seneca
Spring
MADISON
MARION
COLUMBIA
Cherry
James
Seattle Central Waterfront / Page 29

Condition of Buildings

None of the buildings in the study area are more than 6 stories (approximately 84 feet) in height, and the vast majority are only 3 to 4 stories. The age, form and other visual features are the results of the uses, ownership, economics and condition of the buildings, which consequently determine the visual urban form of the study area. Buildings east of the Alaskan Way Viaduct are somewhat homogeneous in character—as are the piers west of the Viaduct.

Most of the existing buildings in the study area are in fair to good physical condition. A rating of good represents a building in sound structural condition and well maintained. If rehabilitation costs are estimated to be less than 50% of the present value of the building, a rating of fair is used. If the estimated rehabilitation costs exceed 50%, a rating of poor is given. No building was determined as not rehabilitable.

The condition of the existing piers ranges from poor to good. Piers are rated according to their ability to sustain their original design capacity. A combination of pilings and decks which average above 75% of the original value is rated good. If the average ranges between 60% and 75%, the rating is fair. If below 60%, the rating is poor. Normal maintenance of an average pier is estimated at $5,000 to $10,000 annually.

In such instances such as Pier 56, and Piers 60 and 61, the buildings are rated higher than the piers they rest upon. Piers 57,59, and 63 are all rated higher than the condition of the buildings which they support. This unbalanced situation between the buildings' and piers' physical conditions is one reason for the assessed valuation being remarkedly low, especially considering the proximity of the study area to the Central Business District (Third and Fourth Avenues).[13]

(Source: Cornell, Howland, Hayes and Merryfield Survey
King County Assessor's Office)

Movement Systems

Kenmore

Renton waterway

cargo & cruise ships

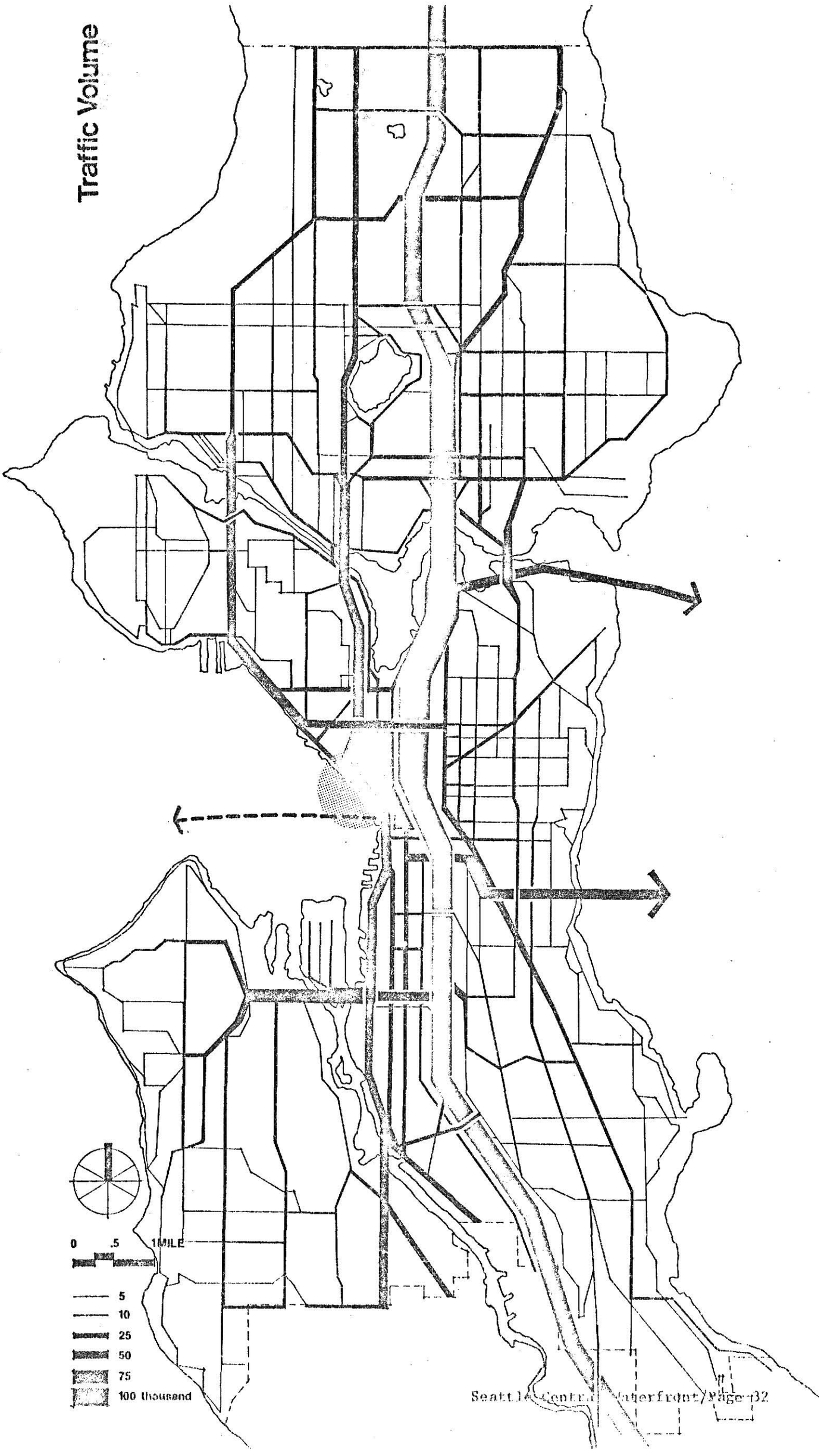
ferries

0 .5 1MILE

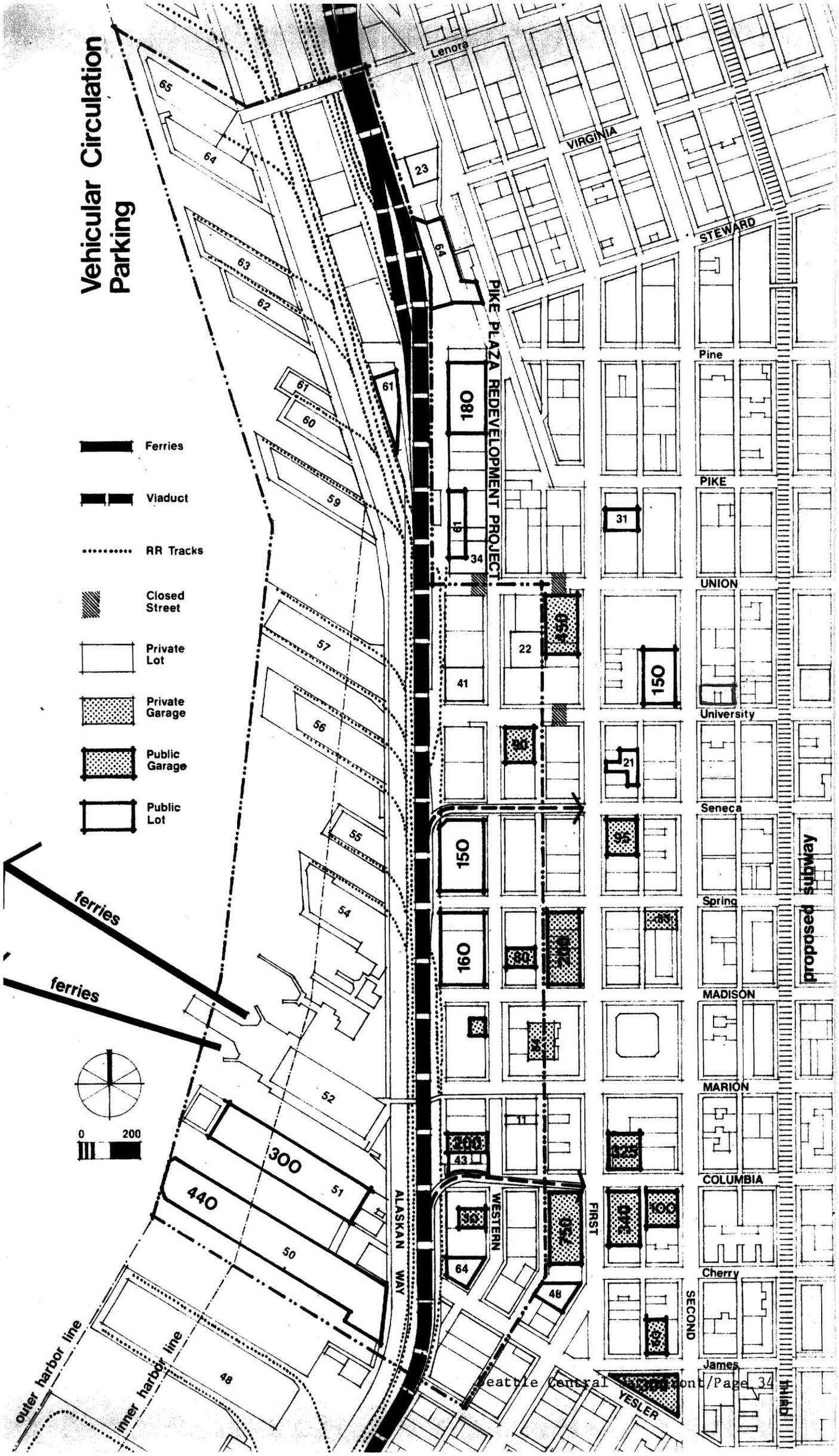
rail lines

vehicular routes

shipping lanes


Traffic Volume
0 .5 1MILE
5
10
25
50
75
100 thousand

Public Transportation


Vehicular Circulation Parking
Ferries
Viaduct
RR Tracks
Closed Street
Private Lot
Private Garage
Public Garage
Public Lot
0
200
ferries
ferries
outer harbor line
inner harbor line
Lenora
VIRGINIA
STEWARD
PIKE PLAZA REDEVELOPMENT PROJECT
Pine
PIKE
UNION
University
Seneca
Spring
MADISON
MARION
COLUMBIA
Cherry
James
proposed subway
ALASKAN WAY
WESTERN
FIRST
SECOND
YESLER
65
64
63
62
61
60
59
57
56
55
54
52
51
50
48
43
41
34
31
23
22
21
180
150
160
300
440
425
100

Vehicular Circulation

Vehicular circulation is dominated by the activity occuring on the elevated Alaskan Way Viaduct and Alaskan Way. The Alaskan Way Viaduct is used by motorists destined for the Central Business District and also by north-south through traffic. (See map, page 31). The average weekday two-way traffic flow on the Viaduct in the Central Waterfront area has been constantly decreasing (88,000 vehicles in 1966, 57,600 vehicles in 1970). (See map, page 34). This decrease in the traffic flow is due mainly to a major shift in the downtown traffic pattern coinciding with the opening of Interstate 5 on the east side of the Central Business District (See map, page 32). According to the Traffic Volume Map, the major volume of remaining traffic is primarily through traffic, with only minor volumes destined for the CBD.[9]

Alaskan Way (the surface street), however, handles traffic destined for the Central Business District and truck traffic by-passing the CBD. In addition, it is used by vehicles using the Ferry System and tourist traffic coming to the waterfront area. Since the opening of Interstate 5, the decrease in traffic volume, however, has only been minor, even though peak hour traffic still coincides with commuter hours. A considerable number (up to 25%) of the vehicles are trucks——indicating an industrial/transportation link between this area and the industrial areas of Harbor Island to the south and Ballard to the north.[13]

Parking

There are over 2200 parking spaces in the study area, of which 2,000 are accessible to the general public. At least 75% of these spaces serve people whose destination is the Central Business District rather than the waterfront. Another 3,300 parking spaces serve the CBD, but are within the vicinity of the study area, almost all of which are public. Within the study area, most of the spaces are in lots but as one draws nearer the Central Business District, the situation changes to one in which all but 250 of the 3300 spaces are in parking garages (See map, page 34).

The 1963 Central Business District Plan indicates that additional parking facilities within the city's center will be built as a part of an integrated transportation system. Specifically, the City will provide parking facilities on the periphery of the CBD and will also provide public transportation into the City's

core. Both of these proposals will lessen the load on the waterfront's parking facilities and free them for port activities rather than serving the Central Business District spillover.

(Sources: City of Seattle, City Planning Commission, Department of Engineering, Bureau of Public Roads)

Pedestrian Circulation

Due to inadequate separation from vehicular and rail circulation, and the resulting hazardous conditions, the study area is notable for the lack of access to the water's edge. This discontinuity between Western Avenue (east of the Viaduct) and the water's edge has confined pedestrian circulation to small areas of tourist attraction lining the waterfront between Piers 50 and 57.[13]

Ferries

The new Ferry Terminal and new superferries together form a major circulation element serving both commuter and commercial traffic between Seattle, Bremerton, and Winslow.[13]

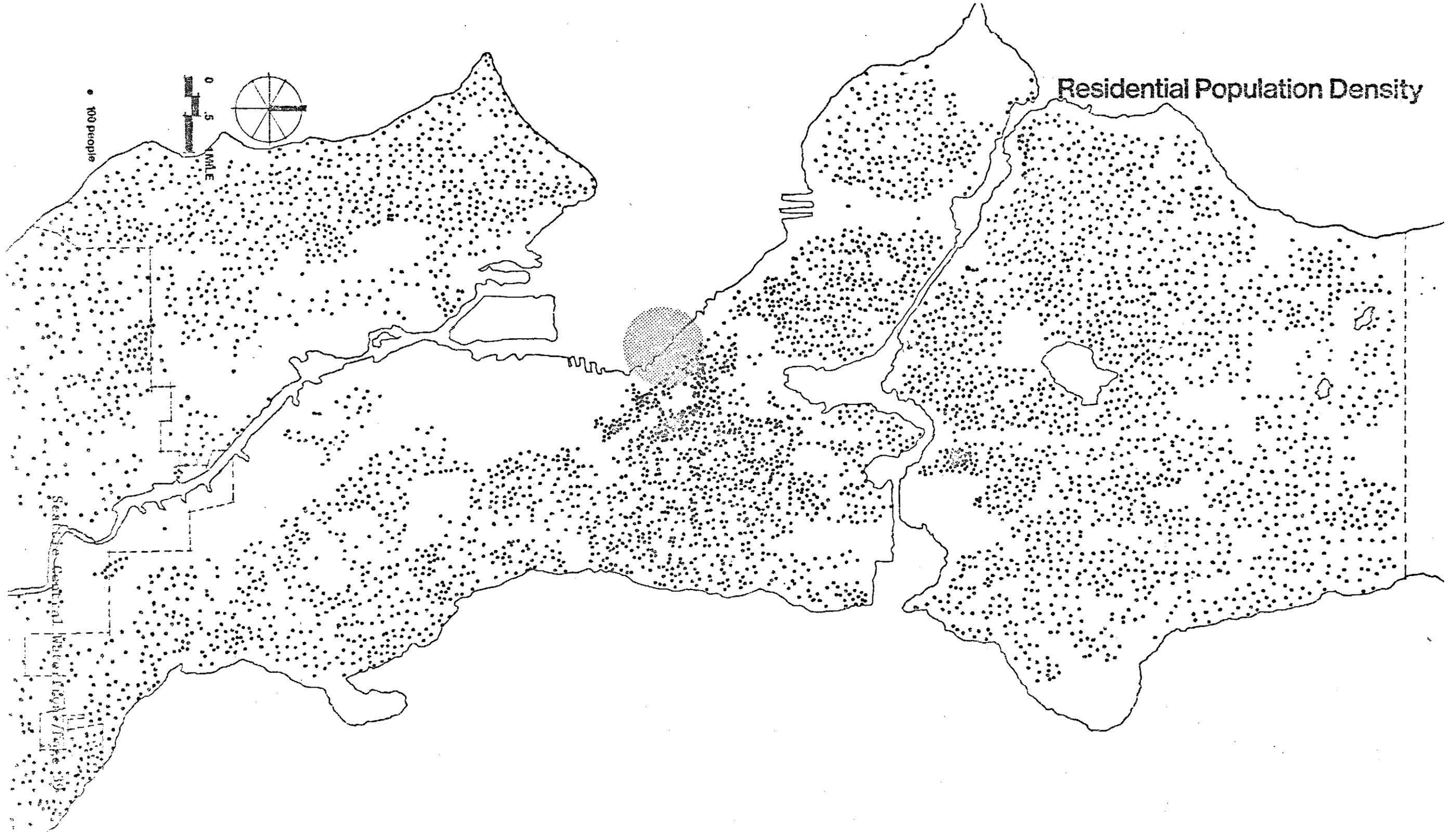
The advent of the new terminal (1966) and the four new superferries (1966-1968) caused a significant increase in the pedestrian use and a major increase in commercial use. Estimated 1970 use amounts to approximately 4,000 pedestrians and 3,500 vehicles per day. Most vehicles are commuters and trucks on commercial trips. The design of the new facility permits an easy access for very large vehicles, increased pedestrian and auto capacity, greater speed and the elimination of any ship turning area.[13]

Public Transportation

Even though the Seattle Public Transportation Systems Map indicates complete coverage of the adjoining Central Business District, the study area has only minimal bus service (See Public Transportation Map, page 33). That which does exist primarily takes people between the ferry terminal and the retail center. Plus the two bus lines in service carry only 4% of the people passing the study area.

Within three blocks is a proposed subway routed under Third Avenue (See map, page 34). With underground egress extending to Second Avenue, subway users would then be within four minutes walking distance of the Central Waterfront.[13]


Land Coverage
0 .5 1MILE
100
75
50
35 per cent


Residential Population Density
100 people
0 .5 1 Mile
Seattle Central Waterfront/Piers 59


open
0
.5
Open Space

Socio-Economic Need
0
.5
1MILE
least
average
greater
greatest

Emerging Problems

Cities are increasingly becoming dominated by automobiles, tall masses of buildings, and high-density living conditions——no longer person orientated. The individual is no longer a prime consideration of the city.... he is increasingly becoming alienated within his own surroundings.

Social interaction and human contact in particular, in the present environment of Seattle's Central Business District and Central Waterfront is limited to a continuous sequence of corridors, elevators, streets, parking garages, and then back to elevators and corridors. As one goes through the motions of living in the present city, these contacts are becoming limited to fewer and shorter interactions with other individuals.

Although changing the physical environment will not necessarily change social conditions in a predictable manner, certain physical and circulation conditions have allowed and even forced the interaction between individuals to become almost nonexistant. Without delving into social problems, and because more elaborate plans are usually made by the individual during his "expected" recreational periods (i.e. weekends, vacations, etc.), the emphasis here will be placed on the "humanizing" problems of commercial spaces and paths that the individual may on occasion use to perform his daily or weekly tasks. An emphasis will be placed on the "unexpected", everyday recreational possibilities.

OPEN SPACE

Even the most beautiful public project remains only as an isolated segment within the city when it stands alone. The advent of plazas (zoning incentives) often destroys the building-to-building relationships and cohesion. When open space offers no place that serves as a bridge between private life and community life, no place for human contacts, the open plaza becomes a dead space imposing a negative nature, especially when the office workers go home leaving it completely deserted. The destruction of human contacts and the present lack of building relationships of the metropolis are mutually urgent problems.

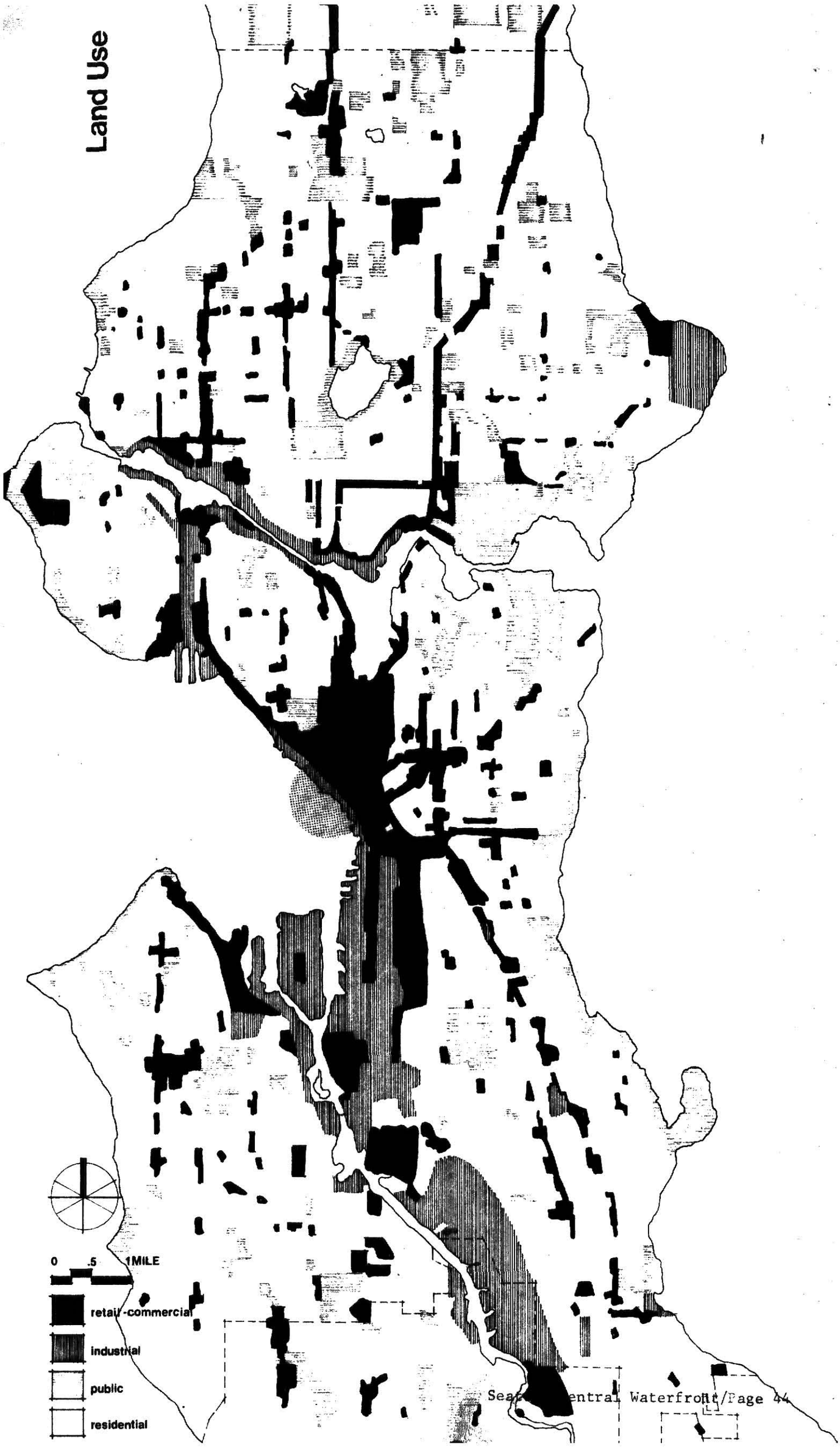
If we look at the city as a place in which private life and community life find a meeting place, then the mark of a 'true city' is where there exists a balance between human interaction and human privacy. It is human interaction

of the desirable sort that is greatly lacking. No machine can replace physical nearness, neither telephone, radio, home movies, or TV can replace the quality of face-to-face communication.[7]

Therefore, when examining the use of the spaces between high-rise buildings, proposals to fill these empty spaces with "life" must also make them useful and pleasing spaces for humans. However, little attention (as far as physical proposals) has been given to the problem of how people can meet each other and share common interests. As one solution, it is proposed here that these spaces function as a focus for living at ground level.[7]

Vital in accomplishing this are designed projects that are close to human identification rather than occupying the space with the kind of advanced architectural forms that serve to separate from each other the very people they should help. As cities continually evolve and rebuild themselves, the removal and destruction of the little things and places, to which people can relate are also systematically removed without thought of replacement.

The presently intended use of open space in the rapidly growing urban areas leaves much to be desired in terms of human usability. Open space requirements by zoning regulations serve to introduce light and air around buildings often become dead spaces. It is not enough to provide "safe and sanitary" buildings when people feel "stored alive" layer on layer. The human element within the Central Business District, which makes people feel they belong somewhere and makes them vitally interested in being alive, is missing. The human sense of identification of the individual with his surroundings is needed now more than ever; especially as the loneliness of people who have lost contact with familiar neighbors, who can no longer spontaneously meet dear friends by opening their front door. High-rise anonymity has replaced individuality at the ground level.


Land Use
0 .5 1MILE
retail-commercial
industrial
public
residential

LAND USE

Because of the large concentration of residential population within the Central Business District (See Residential Population Density Map, page 39) and the total land coverage of the same (See Land Coverage Map, page 38), the CBD and the study are combined into a larger area designated by the City Planning Commission as having the highest socio-economic need (See Socio-Economic Need Map, page 41). This, in part, can be summarized in the General Land Use map as it indicates that commercial/retail and industrial uses almost completely dominate the land coverage within the Central Business District and Central Waterfront Area.[14]

The dynamic elements within our society, primarily that of technology, has brought about an emphasis on the Central Business District as a place for commercial and industrial action. This phenomenon warrants a much more thoughtful understanding of the performance characteristics of the activities within the city. In using the term "land use", a heavy emphasis is placed on the physical constraints of the activities present within the city. This, of course, is necessary but should not minimize proposals confronting the interrelationships among the land uses where most problems and conflicts occur——where it becomes apparent as the means of resolving conflicting demands.[5]

The users needs have not received enough attention in Seattle's land use planning, primarily because human resources have been considered as being expendable and somewhat secondary to operational requirements of the physical systems active within the commercial/industrial complex.

This imbalance generates heavy traffic seeking recreational pursuits out of the narrow waist of the city with consequent traffic congestion and time loss. The gigantic boredom is bearable only because those who could pay for the veneered amenities that exist in the Central Business District can also afford to escape them more often.[14]

TRANSPORTATION

Rigid compartmentalization of the community into industrial, commercial, rich and poor residential communities is not only partly responsible for the boredom within our cities, but also for a good part of the traffic difficulties which

beset the Central Business District. Instead of attacking the latter problem by spending billions of dollars on highways and expressways which cut up the urban fabric, we need to once again examine the purpose of transportation systems. The popular shortsighted notion of the average citizen is that "a city made for speed is a city for success". Our sacred cow, the automobile, dominates us. It mangles humans and its inefficient bulk (moving or parked) devours the most precious commodity---space.

An example of the problems between transportation and land use occurs with the basic imbalance of residential areas in the north and the major employment centers in the central and southern part of the city. This imbalance generates heavy peak hour traffic through the vicinity of the already congested Central Business District.[14]

The universal flooding of Seattle by the automobile has not only suppressed the variety and character of the topography, but it has invaded the pedestrian reserves. No one can deny the place of swiftly moving traffic in a city---it is the scope to which the spread of traffic and its seizure of all roads that calls for protest.[15]

We need highways (or we think we do) because people and goods must constantly move from one zoned city compartment to another, and usually at the same hours. And because each compartment is used only part of the time, many are left lonely and dreary at night---especially the business and commerce compartments of the Central Business District.

Recent emphasis on the automobile for transportation has resulted in a lesser emphasis on public transportation and consequently in a lesser patronage and poorer service. Successful public transportation builds on dense concentrations of population which will provide the necessary patronage within relatively compact transportation corridors. This however, has not been the pattern of residential development patterns in Seattle where most housing concentrations are on hills and ridges and not in the valleys where transportation is the most efficient.[5]

The resolution of the public transportation dilemma in Seattle will necessarily begin with a realistic feasibility study with a firm understanding of the city's

unique physical limitations and the general opinion of public transportation held by the public. The city's development pattern is dependent on the transportation plan for the city. This should include long-range objectives for public transportation so that eventually a balanced transportation system can be brought about which serves the city's varied needs--relieving the locational paradox of residential communities and employment districts.[4]

Similarly, new CBD plans can effectively change and enhance the development pattern of downtown Seattle by more efficient modes of internal circulation, i.e. a better coordinated vertical and horizontal movement of people from strategically located parking garages and other transportation terminals.

Community objectives & attitudes

Civic pride has never been one of the characteristic traits of Seattle residents, even though the setting and its attributes are praised as if these qualities were indeed the result of a long and determined effort on the residents' part. It is, therefore, important to decipher the difference between the two if man-made achievements in the future are to come from a determination to match the splendor of the region rather than to usurp the credit for its pre-existing beauty.

There has been little need thus far to come to terms with the result of shoddy and chaotic buildings since there has been enough natural scenery to distract the citizen from a confrontation with the quality of the city that he has made for himself and his children. However, as the city grows, the inevitable realization of the urgent need for beauty and order will occur. It is perhaps ironic that the natural beauty that is threatened by chaotic growth is also partly the reason for this lack of concern for a planned city.

The core of Seattle is remarkable for its lack of public open spaces or focal structures; it is as if the views of surrounding waters and mountains are supposed to compensate for an almost total absence of man-made assets. The downtown area has as yet been saved from suicide by dullness through two preservation efforts—Seattle's only two—one, the rehabilitation of Pike Place Market, a ragtag market complex dating from 1907; the other, re-use of commercial buildings from the 1890's clustered around the world's original Skid Road, Pioneer Square.[6]

So clear is the lack of conventional landmarks that voters supported a popular initiative to save the Pike Place Market. The voters did not act to save Pike Place from total demolition, but from a more subtle threat: a plan to embalm a 1.7 acre portion as a sanitized centerpiece for a 22 acre urban renewal project. The city proposed to redeem this "blighted" tract of "prime real estate" with a 4000 car garage, a 600 room convention hotel, a row of high-rise apartment towers, plus 300 units of low income housing, which would have sheltered only half of the single men then in old hotels on the site. Opposing the initiative were the downtown business leaders, newspapers and radio stations, and the project's would-be developers and the city government. The initiative carried by 20,000 votes.[6]

Plans are now underway for establishing two vital objectives: maintaining the continuity of its activities, and bringing its structures up to minimum structural, health and housing standards. About 40% of the structures in the district will have to be replaced through a very sensitive phasing of rehabilitation and rebuilding.[6]

The Pike Place Market initiative was supported by the citizens of Seattle for reasons that had little to do with style, craftsmanship or historic associations, but as a setting for a lively mix of functions. With its emphasis on face-to-face, producer-to-consumer transactions, Pike Place offered Seattle's urban dwellers an alternative to standardized living.

The public may not have realized the potential of in-town redevelopment if it were not for the privately sponsored example of Pioneer Square. The Square had previously been known only as the center of Seattle's Skid Road community of vagrants and alcoholics. Yesler Street, which runs along one side of the Square, is the original Skid Road——a street so long established as a center for the down-and-out that it has contributed the phrase Skid Road to the American language.[19]

The Square is now being reconditioned for use as art galleries, furniture showrooms, design offices, and even a law firm; all attracted by high-ceilinged, broad-windowed buildings that reflect the exuberance of a city that was cashing in on the Alaskan Gold Rush. Along with them, come a few sophisticated bars and restaurants, including Seattle's first sidewalk cafe. City recognition of the area did not begin until 1970, when a 38 acre portion was designated a historical district (over the violent objections of organized downtown businessmen). The city's first financial commitment has been for rehabilitation of Pioneer Square itself, the development of a nearby vacant lot as Occidental Park and the planting of street trees. The completion of these open space improvements will only add momentum to an on-going redevelopment movement. (Even the sudden collapse of half a building while rehabilitation was underway promises to be only a temporary setback). So far, the indigents and the new clientele seem to coexist comfortably around Pioneer Square; the new Occidental Park attracts a broad mix of people, few apparently repelled by the sight of drunks.[19]

A change of attitude to a thoughtful approach to urban design issues and the successful preservation of Pioneer Square and Pike's Place Market was essential

for the survival of downtown Seattle. Despite overall drabness, the core of Seattle has remained a concentrated focus of regional commerce. This is due in part to the fact that many workers can arrive by ferry and walk to work from there (an opportunity that has all but disappeared from other U. S. cities). Until some other way is found to increase the quality of human activity within the Central Business District, "the city core needs all the help it can get to stave off dispersal." Pioneer Square and the Pike Place Market——successfully executed——have initiated the way for additional proposals aimed at making downtown Seattle an attractive objective for visitors, shoppers, and workers.[6]

Public Opinion

Early participation of a broad cross-section of interest is desirable in order to dispel the hopelessness that many citizens feel about their role in civic affairs. Civic pride can be generated only through fulfilling the desire to be a part of the decision-making process and clarification of the alternatives facing Seattle in its future growth should be made so that the subsequent choices will truly represent the informed will of the people. In past times, monuments and grand public spaces symbolized the goal and aspirations of the prevailing dominant wills of the social structure, even though there was little or no citizen participation in the decision-making process. Urban design must seek out symbols that relate to the present day life and give them expression so that a civic awareness is nurtured around these symbolized goals and values.

Public opinion on the redevelopment of the central waterfront has been sampled at least three times during the period between 1968-71. A strong majority of responses indicated that:

1. the central waterfront area should be made public.
2. public accommodations be provided.
3. activities such as restaurants, import stores and seafood stores are highly desirable as auxiliary functions.
4. access by better ties to the downtown is desirable.
5. more parking be provided.

Consistant among the majority of the respondents to the three surveys was the desire to have a Central Waterfront with activities that are related to the water. Strong differences of opinion, however, did occur on the question of retaining existing old piers and sheds, as no majority opinions developed as to whether the Central Waterfront should retain or eliminate the existing pier structures in the future day of the Central Waterfront. Also, support was less enthusiastic for:

1. adjacent apartment development.
2. development of a small boat basin.
3. special considerations of the Alaskan Way Viaduct.

Barriers to the Central Waterfront, such as the railroads and truck activity are a major concern to the people.

While not considering public opinion, the opinions of the small businessman pres-

ently located on the Central Waterfront should receive careful consideration in the planning process. An organization of businessmen (the Central Waterfront Park Association), heavily identified with the Central Waterfront area, put forward the main opinion that the area should remain in private ownership and should be allowed to develop private capital. They preferred a boardwalk built around the periphery of the existing pier structures with the business remaining.

Official opinion, based on the responses of the Seattle Design Commission, the Park Board, and the planning Commission, has been concerned with the total image and comprehensive development of the entire area, particularly the solution to such problems as the railroads, the Alaskan Way Viaduct, ownership and design control of the area, and the relationship of the entire area to the Central Business District. The Design Commission has been supportive of total public ownership of the area, the vacation of Alaskan Way and removal of the railroads.

The Park Board, however, desires to avoid jeopardizing the businesses which presently give the area its character and flavor. The Board has also been very concerned about future park development, insisting that the park recognize the historic commercialism of the area, rather than being typical green grass and trees type park as can be found in other areas of the city.

Based on their studies, Mayor Braman's Waterfront Advisory Committee urged the city to build a park which would "provide an activity center—not a pastoral resting place." They believe this would encourage the pedestrian to stroll along the waterfront, enjoy the view, and take part in the life of an exciting commercial center featuring restaurants, shops, historic ship displays, and other visitor attractions. The Commitee took a stand against plans which would remove the commercial activity from the pier area, substantiating this decision on the fact that their surveys indicated the potential users of the Central Waterfront desired an exciting and active area. Also, the area should be designed not only for tourists, but for the in-city dwellers as well.

(Sources: Waterfront Advisory Committee; Central Waterfront Park bond issue results)

Future Needs

Seattle is experiencing several trends, and all indications prove they will continue, unless drastic changes in city design are implemented. High-rent residential districts are tending to grow toward the northern (Bellingham and Everett) and eastern (Bellevue and Mercer Island) sections of the city which have free, open country beyond, and away from the "dead end" residential and commercial districts of Magnolia, Queen Anne, Ballard, Capital Hill, West Seattle, and the Central Business District and Central Waterfront. This residential growth tends to progress toward highground and to spread along lakes, bays and rivers where such waterfronts are not used for industry. This movement of higher-priced residential neighborhoods are also pulling the office buildings, banks, and stores in the same direction. Not only are these movements reducing an already sagging economy in the Central Districts of Seattle, but they are increasingly transforming these older sections of the city into industrial conglomerates. It is most important, however, to remember that these movements are not random——they are a result of an explosion away from the boredom of the CBD along the fastest existing transportation lines.[14]

Planning should not have as one of its criterion the compulsory use of modern traffic facilities for everyone in everyday use. But this is the existing situation in Seattle as the majority of residents move their homes further from the central core of the city and commute every day to the same area they just fled. Those who prefer to separate work and home often return too exhausted and too late in the afternoon to enjoy the amenities that home life offers. Home then becomes nothing more than an over night parking place before he travels to work again the next morning. This system tends to destroy the home atmosphere——one in which the commuter seeks recovery, but receives much less. Therefore, this predicted system is a cultural danger to the city dweller/commuter's well being.

It is understood that these changes in city form are bound-up in the social and economic history of the community, and that the attitudes and tastes of the population are composed of human values which are extremely elusive when the designer attempts to sort them out and assess their role in the determination of city design.

But it should be obvious that the social influences causing these trends are tied into the context of urban ecology with its present lack of concern for the physical, spatial, and material aspects of urban life; and partly with the social structure in the city with its lack of concern for human values, behavior and interaction.[5]

The health, safety and general welfare as a determinant of city design can be described by the term "public interest". Public interest involves another dimension, it involves the notion of control for public ends as they may be distinguished from private economic or social ends. The public interest endeavors not only to develop a scheme fitting the needs and sensitive to the wants of the urbanite, both economic and social, but also to harmonize these considerations with the public interest in a plan that maximizes <u>livability</u> in the city and insures sound development for the community as a whole.[17]

Livability refers to those qualities in the physical environment of the urban areas which tend to induce in citizens a feeling of mental, physical and social well-being according to the extent to which their fundamental day-to-day living needs and wants are satisfied. Thus defined, livability is both an individual matter and a community-wide concern. For example, density in the Central Business District is a major determinant that is increasing its adverse effects on several of the requirements for future livability in this area——health, safety, convenience, economy, and other amenities. Control in this instance would be concerned with the hazards of congestion, mental well-being and physical fatigue from congestion and the adverse effects of noise and fumes from the traffic.[17]

This points out another problem connected with this outward exodus; that the bulk of those migrating to the outskirts will still retain their jobs within the CBD——therefore, increasing, rather than decreasing, the traffic congestion in the Central Business District. It is not necessarily the number of people and transportation systems which cause further problems, but the amount of automobile traffic on streets and arteries.

However, the conclusion should not be drawn that less bulky and faster mass transit needs to be provided. Interstate 5 became obsolete immediately after completion as more individuals found it easier to commute to work each day. Better transportation systems will only perpetuate, rather than control, the outward

growth/commuting population.

A positive solution would be the provision of living conditions and amenities for these individuals, no matter how large the number of people. This entails the transfer of activities from decayed areas to those locations which are functionally suitable for these activities, rehabilitation of those areas vacated for purposes best suited there. But most important, all values, old and new, must be protected so as to ensure the preservation of the delicate social-economic structure of the existing community. To merely rebuild the grey areas lot by lot as in the past without consideration of the three criteria above would result in a compactness that will be pinned down for generations, and ultimately returning into new slums.

Working and living is based mainly on natural selection as the individual seeks a fuller and happier life. This premise must be considered as one of the primary criterion when creating functional order and amenities in urban life.

It is well to be aware of the emerging phenomenon of the individual and his family as an isolated unit fragmented from the matrix of the community by virtue of his individual means of transportation. This emphasis breaks down the need for more direct forms of civic spirit through personal interaction and subsequent pride in the city. It, therefore, follows that the most prominent expression of our contemporary communities are the relays and linkages that relate the family to the city, and to the regional and national networks of roads. The secession by the suburbanite from the city is an expression of a change of attitude toward the possibilities the city can offer. The individual must precede any design concept that attempts to generate civic design. It becomes increasingly apparent that movement per se has become a major expression of the spirit of our times and it is perhaps through a skillful articulation of the various forms of movements that the gestation of these commonly shared values can be refined, and subsequently the structuring of a completely different framework for the city.

The affect of the car upon Seattle has been an ever increasing dependence on it with activity centers forming at intervals based upon traveling time and ease of access in spite of planning philosophies which indicate a sense of community. The result has been a change in the texture of the city which suits the demands of the automobile. It is resulting in a degrading environment at the scale of the pedestrian who is forced to use a city which suffers from the traditional

difficulties of a city primarily designed for one scale and is now being used at another. It is, however, buildings and the spaces between buildings that provide the human being with a sense of place and an affirmation of human scale as the central concern of urban design.[14]

Seattle is losing (and will continue to lose) much of its uniqueness through the demands of federal standards in highway planning and city development. Many changes in the city occur spontaneously and without the deliberate guidance of any of the environmental disciplines. This, compounded with the private corporate efforts at simplifying the design of facilities through the use of stock plans with fixed requirements, is reducing the character of Seattle. The number of possibilities and opportunities offered to its citizens for the evolution of new life styles are, thus, drastically limited.

Even though Seattle has never been noted for its civic pride, when the citizens of King County observe the need for something for the general welfare of the community, they have shown no reluctance to assess themselves for the necessary financial resources. The Seattle population has a tradition of self-reliance and initiative toward providing a higher quality environment in which to live, while also defeating proposals that may vaguely resemble private economic or social gain, or may eventually become a detriment to the natural beauty of the area.

In the 1950's the people of King County established a metropolitan approach for solving problems of water pollution and assessed themselves so to build a sewage collection and treatment system. Again in 1962, the people of Seattle staged a highly successful World's Fair Century 21 Exposition with the intent of later transforming it into the Seattle Center. However, many projects that appeared to be detrimental to the environment or not intended to be beneficial to the general public have been suddenly halted by citizen opposition. Examples of this include the preliminary downtown location of the Domed Stadium, the apartment/convention center proposed for the Pike Place Market, and the construction of a third and fourth floating bridge across Lake Washington (intended to extend Interstate 90 into downtown Seattle).

Recent concern about downtown Seattle developed as the need to stem the national trend of economic decline and death of the City Center became obvious even to the average citizen. The Central Waterfront is recognized by the Seattle City Planning Commission, the Port of Seattle and the Central Association of Seattle as one of several areas within Seattle's CBD which needs revitalization. The Port of Seattle has indicated in its comprehensive Port Plan that the Central Waterfront should be used for urban recreation.[13]

During the past dozen years, several of the old piers and pier sheds have been torn down and turned into open parking lots or left as open water. Some of the other piers have been developed as restaurants and shops, with most of the pier sheds being used either for fish procession, cheap warehouse space, or still vacant.

Noting the sub-optimal use of the Central Waterfront, City Planners in the 1963 Comprehensive Plan for the Central Business District of Seattle defined the objectives for the Central Waterfront as revitalization of this area as an integral part of the CBD. It was desired to establish for the citizens of Seattle a strong

orientation to the water.[13]

In 1965 the Central Waterfront Park Plan was chosen as the vehicle for a more comprehensive development of the area. Upholding their tradition, the voters of King County in 1968 approved a $118 million dollar bond issue to pay for the acquisition and development of public park and recreational facilities in the county. An item within this bond issue called for the expenditure of $5 million for acquisition and development of approximately 15 acres of public park and recreational facilities within the area of Piers 50-63, including necessary expenditures for harbor breakwater, all in conjunction with adjacent public and private commercial uses.[13]

However, both the 1963 CBD Plan and the 1965 Central Waterfront Park Plan lacked the public support necessary for carrying out a program for implementation. It was found that the wording of the 1968 Bond Resolution lacked sufficient definitions for moving directly into a detailed design. Therefore, in redefining the total area of the Central Waterfront to formulate an urban design redevelopment plan for the area, the objectives shall include:

1. establishing the elements of the waterfront's character for development.
2. establishing the study area as the focal point for the redevelopment of the City's most important natural asset, Seattle's Elliott Bay.
3. develop the Elliott Bay Waterfront into an area of amenity and unique national image.
4. relate the Waterfront to the CBD by bridging the gap between Pike Plaza on the north and Pioneer Square on the south.
5. recommending development guidelines as to scale, form and land use in in areas adjacent to the park to insure that the public investment in the study area is protected and enhanced.

Policies & Proposals

Theme: Seattle Maritime Park

The proposed theme for the Central Waterfront development will be one that not only emphasizes and promotes the maritime activities of the past and the present, but also allows the viewing of such activities in an overlap of the "participants" and the "spectators". While flaunting the amenities that only an intensive-use waterfront port can offer, the Waterfront must also offer the opportunity for the inter-mingling of the waterfront activities and the viewers of these activities.

The Central Waterfront will be the central jewel in a necklace of entertainment oriented activities extending from the south end of Lake Union, through Seattle Center, all along the Central Waterfront, and into Pioneer Square and the International District. Different from the fine traditional parks along Lake Washington and around Green Lake, this will provide an exciting and unique waterfront recreation experience for the people of Seattle and its visitors.

A park of urban orientation would be different from the many others within the Seattle park system, thus achieving a desired uniqueness. Such an urban park is most appropriate because of its location close to downtown Seattle and because of its past history as a commercial center of the city. The great number and variety of activities appropriate to an urban park will attract both residents and tourists, providing them with a unique experience and aiding the local economy.

A maritime park in this area of Seattle would provide a complete change from the bustle and noise of the downtown Central Business District. The water's edge, which is now cluttered with decrepit and largely unnecessary piers and sheds, can be open at last to the magnificent water and mountain views. Maritime commercial activies can continue to take place along the waterfront complementing rather than interfering with recreational uses.

The character, although containing the appropriate amenity of trees and landscaping, should be primarily active rather than passive, an exciting, intensive-use, multiple activity, multiple-level urban facility. It should reflect the history of the area as a port and its water's-edge location. It should be designed not only for local and foreign visitors, but as a major activity area for in-city dwellers.

Therefore the policies set forth for the Central Waterfront Park are as follows:

1. Park character should be urban, rather than pastoral.
2. Uses within the park should be limited to water-oriented recreation and water-oriented commerce.
3. Uses adjacent to the park should also include general commerce, housing and public services.
4. Park implementation should include both park acquisition (Piers 55-61) for optimum public control and park development for maximum public accessibility.

A substantial number of key issues received both public and governmental support both vocally and financially: a public viewing aquarium, a small boat marina and breakwater, easier pedestrian access, Alaskan Way vacation, the removal of railroads, treatment of Alaskan Way Viaduct, and additional public parking facilities are all issues in which all indications are that agreement could be achieved providing that all governmental agencies, commercial and industrial interests, and public concerns can reach a feasible agreement.

PUBLIC VIEWING AQUARIUM

The proposed public viewing aquarium would be highly useful at the northern end of the park in the area near the Pike Plaza. It should be publicly owned and correlated with marine research to the extend possible. (The aquarium determined by the City Council to be located at Golden Gardens in north Seattle is at a site remote to the Central Waterfront and has subsequently received disapproval through a citizens petition which would prohibit the City from building the aquarium there). An aquacircus could be developed in connection with the public aquarium. Both activities, through their compatibility, would complement and enhance each other while offering completely different aspects of Seattle to its viewers.

SMALL BOAT MARINA

A small boat basin for the berthing and mooring of transient boats, resident boats, some fishing vessels, historic ships and other appropriate water craft should be constructed. The marina would also accomodate both private and public operation of boat mooring, storage, repair and other appropriate facilities. A breakwater would then be constructed, protecting and enclosing the small boat marina while also providing maximum opportunity for strolling, viewing, fishing, sitting and other appropriate recreational activities to occur around the marina.

PEDESTRIAN ACCESS AND ALASKAN WAY VACATION

Adequate pedestrian access to the park from downtown, between the northern end of the study area and the Pike Plaza project, and from the southern end of the waterfront to Pioneer Square should be provided. This, together with the park location requires that Alaskan Way be vacated——partially at first with vehicular traffic eventually rerouted to the east of the Alaskan Way Viaduct.

RAILROADS

The railroad tracks along Alaskan Way should be moved, perhaps underneath the viaduct, then removed from the waterfront entirely. Negotiations should immediately commence for the removal of railroad tracks from Alaskan Way and the ultimate rerouting of railroad traffic through the Burlington Northwest Tunnel.

ALASKAN WAY VIADUCT

The viaduct and the area underneath it should be improved visually and accoustically to the extent possible. The placing of structures underneath and/or adjacent to the viaduct to screen its noise and unsightliness should be investigated. Alternate uses or removal should be investigated when it becomes economically feasible.

PUBLIC PARKING

No public parking facilities shall be allowed on or adjacent to the piers with adequate parking facilities then located east of the Viaduct.

IMPLICATIONS OF THESE PROPOSALS

Extensions beyond boundaries shall include:

1. an eastward pedestrian extension across the Alaskan Way right-of-way.
2. a westward extension out into Elliott Bay by means of a marina.
3. a southward promenade and pedestrian bridge extension past Pier 54 to the ferry terminal.

Environs should be brought under a new design district, with specific height and mass limits to insure appropriate development adjoining the Waterfront Maritime Center and Central Business District. Within the limits of the proposed design district, several new developments should be encouraged:

1. To the east of the study area, a commercial development including parking and remodeling existing buildings.
2. To the south, on piers 50-51, a tourist and water-oriented commercial development physically linked to the park and to inland parking.

3. North of Piers 64-66, a maritime commerce development including the Port of Seattle offices, cruise terminal, International Trade Display Center, and fish processing plant--all providing outboard pedestrian circulation.
4. Inland from Piers 60-66, a multi-use development including residential development and tourist-oriented commerce located on a parking garage base—all linked with Pike Plaza and the Waterfront Park.

Development shall include a major waterfeature and skybreaks between piers for pedestrian weather protection.

Circulation systems serving and passing near the Maritime Center should be revised:

1. The existing railroad traffic should be rerouted through the existing Burlington Northern Tunnel under downtown.
2. The existing Alaskan Way automobile traffic should be rerouted along Western Avenue and be reallocated to public transit.
3. The existing Alaskan Way viaduct should be visually and accoustically improved, but kept in service until it is no longer useful.
4. Automobile parking in the area should be limited to no more than 4000 spaces, should be located east of Alaskan Way, should primarily serve the waterfront and should be supplemented by CBD parking and public transit.
5. A shuttle bus system should serve visitors destined for elements of the Entertainment Crescent, including the Maritime Center.
6. A walkway/ramp system should be constructed to serve downtown workers, residents and visitors, to connect the CBD and the waterfront.

(Source: Seattle Central Waterfront: 1968-1971 "A Comprehensive Plan for Future Development")

Description of Proposed Development

Park

The people coming to the Central Waterfront will have every kind of nature and lead every different kind of life. They will be seeking different kinds of experiences. Some will be seeking a quiet place, while others will look for an active place where they can put on their party clothes and plunge into fun.

Most of Seattle's parks are pastoral in character, emphasizing passive recreation or outdoor games. In this location close to the Central Business District and Port of Seattle activities, the waterfront park offers a unique opportunity to provide active recreational experiences full of life and activities that are different from the routine. Already attracting people to this area despite the unappealing environment, are such uses as the Ferry Terminal, the Fireboat Station, seafood restaurants, import stores, curio shops, tour boats, fishing boats, cruise ships and an aquashow. The proposed plan attempts to incorporate and emphasize these activities.

Also attracting people to the area are the more passive opportunities to stroll, sit, fish, and look at the views. While not emphasizing these passive activities, the proposed Park Plan provides places where these too can occur.

Before providing places for either form of recreation, certain inappropriate uses must be removed (See Unacceptable Existing Uses, page 71) in order to have space for such recreation. Uses such as idle warehousing, wholesaling outlets, and commerce that is not water or tourist-oriented shall be relocated to other suitable parts of the City. Shops and piers (57-61) holding such uses are either removed or used as a base structure for the Maritime Center. Sheds and piers (54-56) that currently contain seafood restaurants, marine supplies, and import stores are retained. Small tourist-oriented shops currently blocking views between the pier lines are to be relocated to kiosks spotted throughout the Park. Tour boats and sport fishing boats should have ample parkside locations from which to operate.

New uses of a recreational nature are included in the proposed Maritime Center (See Proposed Uses map, page 73). Active uses are served by a privately developed aqua-center, providing facilities for formal and informal outdoor gatherings, and facilities for indoor exhibitions and art shows. Facilities for passive uses such as picknicking, outdoor photography, and just plain sightseeing are also proposed.

Aquarium

The coupling of a public viewing aquarium, an aquashow, and the Central Waterfront Park would be a highly desirable combination. The Park, the aquashow, and the aquarium are marine and public-oriented facilities which, in this setting, can only complement one another. Indeed, all three will help each other attract more people and more use. Locating them together will also be a great convenience for the public and will provide the public with a truly memorable experience.

The preferred site for both the Aquarium and Aquashow would be one in which views of the fish processing and the marina activities are possible. With these latter activities taking place on pier level, so that fishing boats can unload their catch in the protected waters of the marina, a second-level viewing terrace can tie into the second-level pedestrian circulation system (combining all major waterfront activities plus Pike Plaza) overlooking the marina providing magnificant views of maritime activities and the fish processing plant.

The following activities are recommended for inclusion in a complete Aquacenter:

Multi-species display tanks.

Tanks for special environments and isolation of species.

Outdoor ponds for holding specimens and food fish.

Frozen Fish Display.

Bay "corrals" for whales.

Underwater viewing rooms related to submersibles.

Exhibition area to include photo shows and black-lighted transparencies.

A no-chair auditorium for movies, lectures, orientation of tours.

Display area for shell collections.

Salmon fish ladder and hatchery facilities.

Area for changing research and industrial exhibits.

Sales area for books and specimens, postcards and guides.

Library space.

Sea animal shows.

(Source: Citizens Waterfront Task Force)

Breakwater

The Corps of Engineers, working cooperatively with the City of Seattle and the Port of Seattle, has conducted a study of Elliott Bay for the location of a small boat basin. The proposal explained below comes about through analysis by the Corps.

The depth of water off the central waterfront makes the traditional rip rap type of breakwater too costly and impractical to build, thus the proposal for a floating structure was put forth.

While the purpose of the breakwater is primarily to form the proposed boat basin, the breakwater can satisfy many other demands. The Department of Community Development indicates the need for permanent and transient fishing fleet and pleasure boat berthing facilities. Both of these needs can be satisfied by a marina with the necessary protection coming from a floating breakwater.

Major findings in the Corps' report are noted here:

From an engineering standpoint, the breakwater is completely feasible.

The size of the breakwater is dependent on the capacity of the marina enclosed within. Whether the capacity is 300, 500, or 700 boats, the breakwater size is feasible.

The optimal plan for the breakwater is a curve, but a combination of straight line elements is also feasible.

The entry point is best located at the north end of the project, since storms tend to come from the southwest and the greatest existing ship traffic is to the south of the project.

A short pier or breakwater section is needed to protect this northern entry point.

The breakwater section is basically hollow with fins extending from the bottom to handle wave action. An access platform rests on top of the tube (See Breakwater sections, page 67).

Anchorage is achieved by cables attached at appropriate points to the breakwater and to the bottom of Elliott Bay.

Within the breakwater, in addition to the marina, other suitable facilities can be placed (i.e., an aquashow, museum of old ships and fishing fleet moorage.)

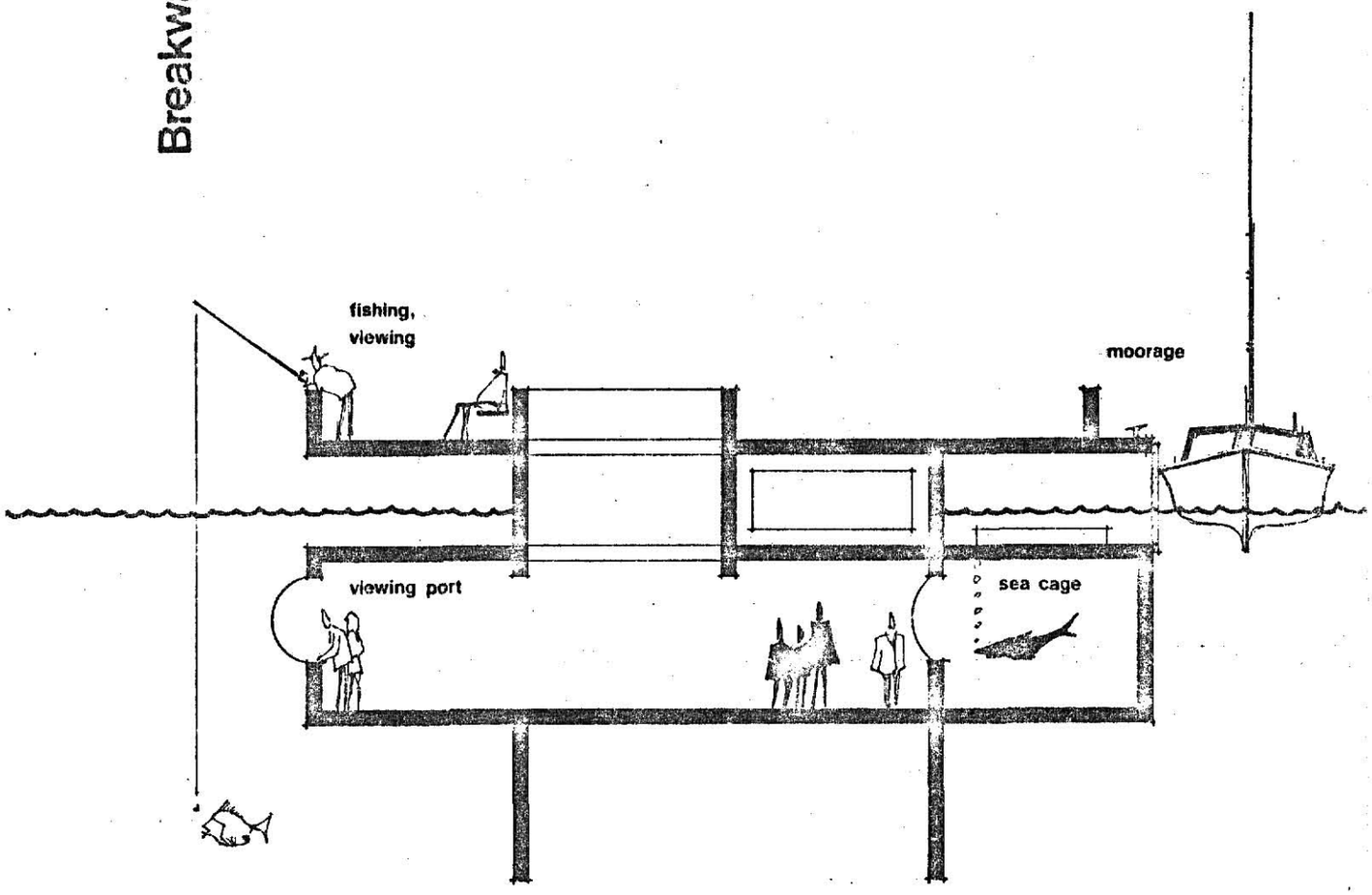
On the breakwater, appropriate activities are viewing, walking, sitting and

fishing. Also appropriate are activities that take advantage of the marine location, such as a small diving bell that would provide trips to the bottom of Elliott Bay, 200 feet deep in the outermost point of the breakwater. In the breakwater structure, some of the air cells can be used for a maritime museum, which is an extension of the aquarium and underwater marine life viewing rooms (See Breakwater sections, page 67).

(Source: Corps of Engineers)

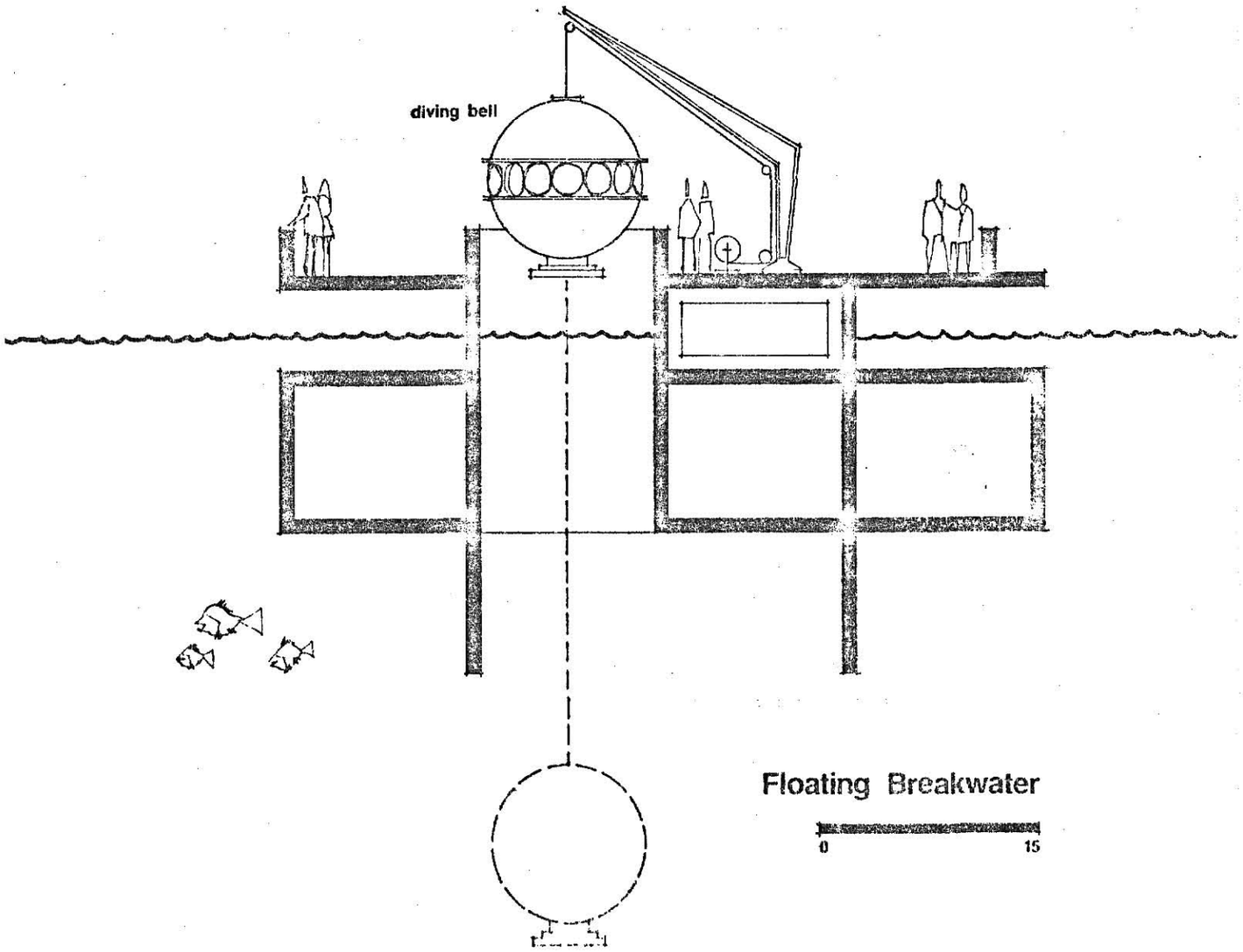
Following the findings obtained during the investigation phase of this breakwater study, Seattle should locate the breakwater between existing Piers 58 and 64 to obtain maximum exposure to the open water and also so that the marina traffic will cause minimum interference with the ferry and fireboat sea lanes. The construction of a floating breakwater in the northerly area of the Central Waterfront study area, while also economically feasible, should provide maximum opportunities for strolling, viewing, fishing, sitting, and other appropriate recreational activities.

Every effort must be made to continue close cooperation with The Corps of Engineers, to continue to press for those recommended features which will provide maximum public enjoyment of the breakwater, and to establish closer contact with the State agency responsible for changes in harbor lines so that the required changes in the future may be accomplished easily.



Floating Aqarium/Breakwater

0 15



Floating Breakwater

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Marina

A small boat basin would be an appropriate waterfront activity in keeping with the projected future of the area and is a necessary addition to the Seattle berthing supply. Not only would it be a complementary use to the park, but also to the Central Business District, proposed residential and hotel development, and to the proposed Port of Seattle fish processing plant as well.

The very essense of a marina makes it both water and viewer oriented; a visual amenity in conformity with all governmental policies concerned with waterfront uses. Its location close to the Central Business District and the Central Waterfront will prove to be an asset to those pleasure boat users seeking an interesting destination for their day's sail. Both the CBD and Park will benefit economically. In addition, the marina will form an attractive front door for the proposed developments along the water's edge of the Pike Plaza Redevelopment Project, and will make it possible for these developments to be high quality and to be of greater economic value to the City. Further, berthing for commercial fishing boats adjacent to the Port's proposed fish processing plant will make that plant's chances of economic success considerably greater.

Problems concerning the boat basin include the particular size, location, and type of berthing to be offered. Although the berthing demand is large, the waterfront area is limited and questions about the appropriate size and location are easily raised. Sea lanes for the ferries, fireboats, and cruise ships must be left clear as much as possible, as must the potential views from the Park. There appear to be several possible marina sizes, ranging from 300 to 800 boats—300 being the minimum size which can be economically feasible and 800 is the maximum. Using the Outer Harbor Line as the westward limit, a linear 300-berth marina would replace approximately four piers, a 500-berth would replace seven piers, and a 700-berth would replace nine piers, or almost all the the study area's waterfront and piers. From visual experience, the larger the capacity of a linear marina, the more it will dominate the study area.[13]

However, there also appear to be possible shapes and locations that will provide the necessary capacity, yet would not dominate or use up too much of the shoreline as the linear configuration would. By consolidating the plan and extending beyond

the Outer Harbor LIne, fewer piers need be removed and shorter berth to entry distances are obtained. By locating the marina to the north of the study area rather than in the center, fewer of the existing recreation-oriented piers need removing and boat traffic is removed further from the ferry boat lanes.

Development Research Associates, economic consultants, found the existing unmet demand for pleasure craft moorage, including those marinas not yet completed, to be 7,000 berths in the Seattle Region. Also disclosed in this survey, two-thirds of all boat owners are either businessmen or professionals——indicating a luxury market. The survey also shows that 40% of all boat owners, and 75% of owners of craft over 20 feet in length, are interested in some type of downtown Seattle moorage.

The effect of weather on berthing is clear; great transient berthing and mooring during the summer months, frequent temporary and permanent use during the spring, and only occasional transient use with larger amounts of permanent storage during the fall and winter months.

It is recommended that a marina of approximately 300 berths in a consolidated form be located near the north end of the study area, preferably north of Pier 59. This size and location has the advantages of demanding less land, less interference with adjacent Ferry and Fireboat sea lanes, and being close to the marina parking. A consolidated plan, although extending beyond the Outer Harbor Line, allows more convenient passage within the marina and requires less waterfront than a linear plan.

In planning for a mixture of moorage types such as commercial fishing and pleasure boat berths, both transient and permanent berths shall be provided. The various types of boats will add interest to the pedestrian viewer. Commercial fishing wharfage will not only serve a need, but will also share in the cost of the marina's floating breakwater. Transient and pleasure boat berths will serve the summer season demand for berths for visitors coming to the Central Waterfront and downtown Seattle, while permanent pleasure boat berths will serve to take up the financial slack that may be expected to occur during the winter season.

A full complement of marina facilities should be provided for boat owners. Desirable marina facilities are:

Boat Repair, Storage and Sales

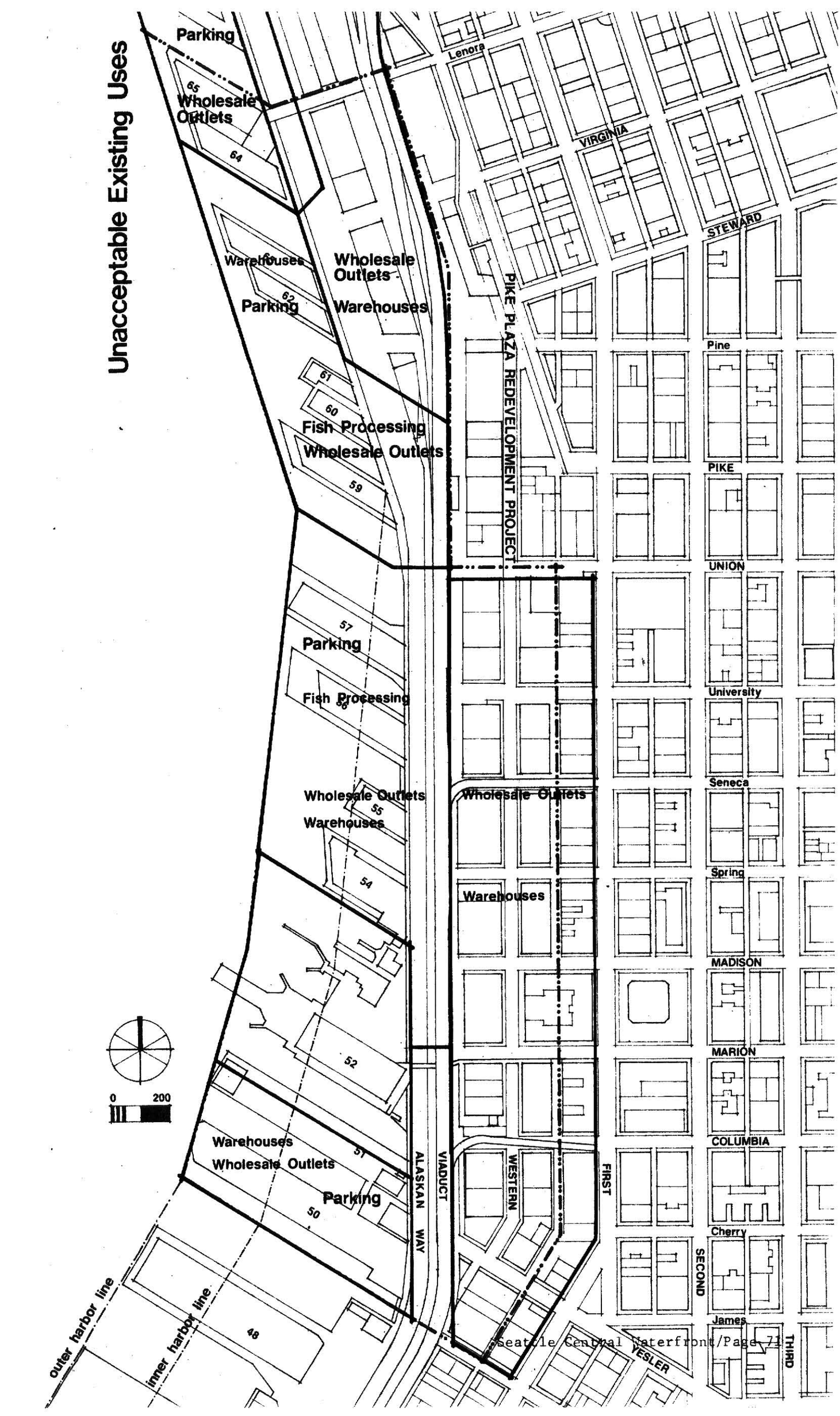
Fuel & Oil Supply

Electric Power	Ice Supply
Engine Repair	Launching Hoist
Fishing Supplies	Marine Supply
Fresh Water	Small Lockers

Certain on-shore entertainment and recreational facilities that are compatible with the marina are:

Children's Playground	Picnic Area
Hotel/Motel	Restaurant
Night Club	Swimming Pool

(Sources: Waterfront Task Force and Department of Community Development)


Unacceptable Existing Uses
Parking
65
Wholesale Outlets
64
Warehouses
Wholesale Outlets
62
Parking
Warehouses
61
60
Fish Processing
Wholesale Outlets
59
57
Parking
Fish Processing
56
Wholesale Outlets
55
Warehouses
54
52
Warehouses
Wholesale Outlets
51
Parking
50
48
outer harbor line
inner harbor line
0
200
Lenora
VIRGINIA
STEWARD
PIKE PLAZA REDEVELOPMENT PROJECT
Pine
PIKE
UNION
University
Seneca
Wholesale Outlets
Spring
Warehouses
MADISON
MARION
COLUMBIA
Cherry
James
ALASKAN WAY
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YESLER
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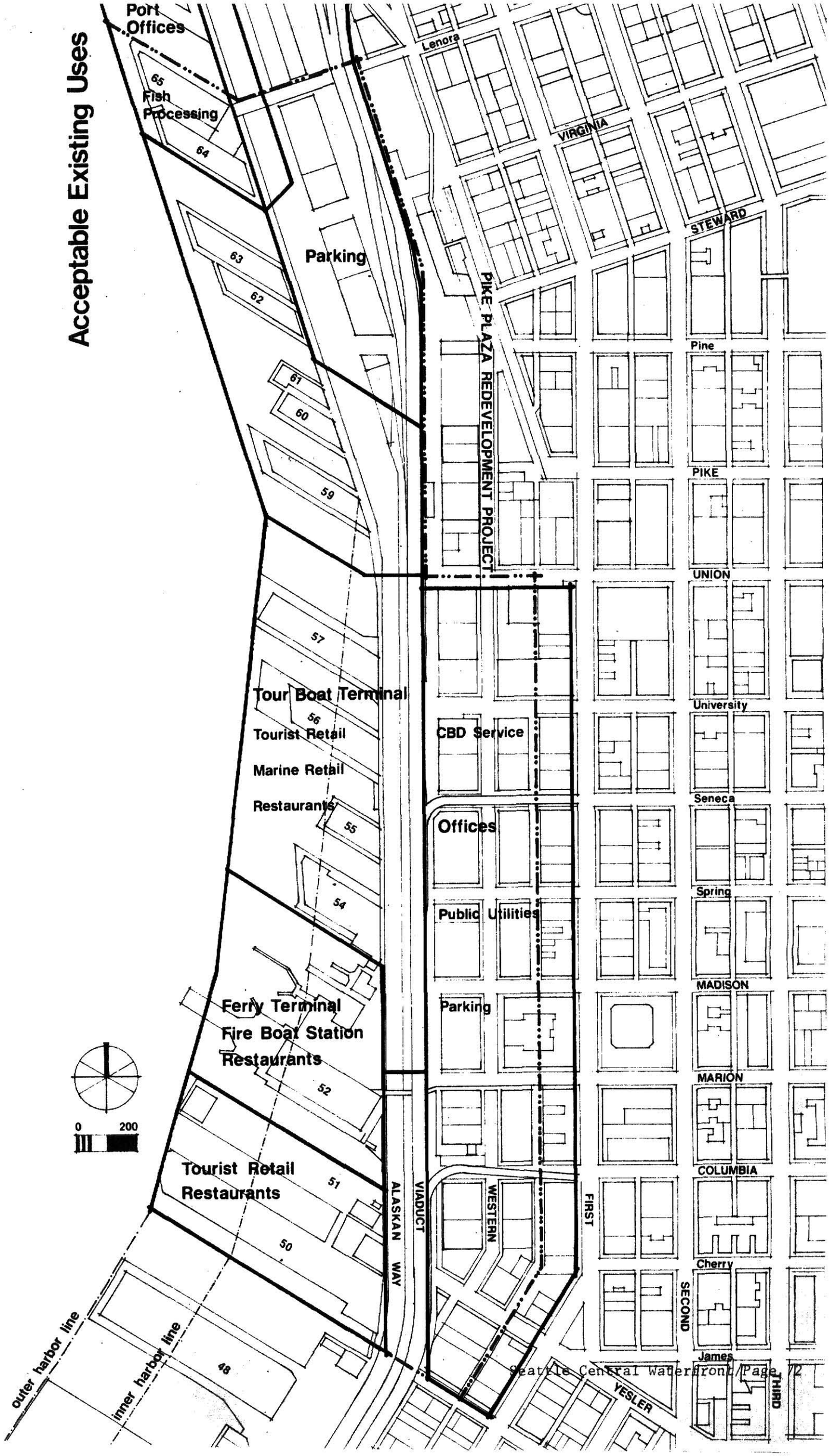
Acceptable Existing Uses
Port Offices
65
Fish Processing
64
Parking
63
62
61
60
59
57
Tour Boat Terminal
56
Tourist Retail
Marine Retail
Restaurants
55
54
Ferry Terminal
Fire Boat Station
Restaurants
52
Tourist Retail
Restaurants
51
50
48
outer harbor line
inner harbor line
0
200
Lenora
VIRGINIA
STEWARD
PIKE PLAZA REDEVELOPMENT PROJECT
Pine
PIKE
UNION
University
CBD Service
Seneca
Offices
Spring
Public Utilities
MADISON
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Cherry
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ALASKAN WAY
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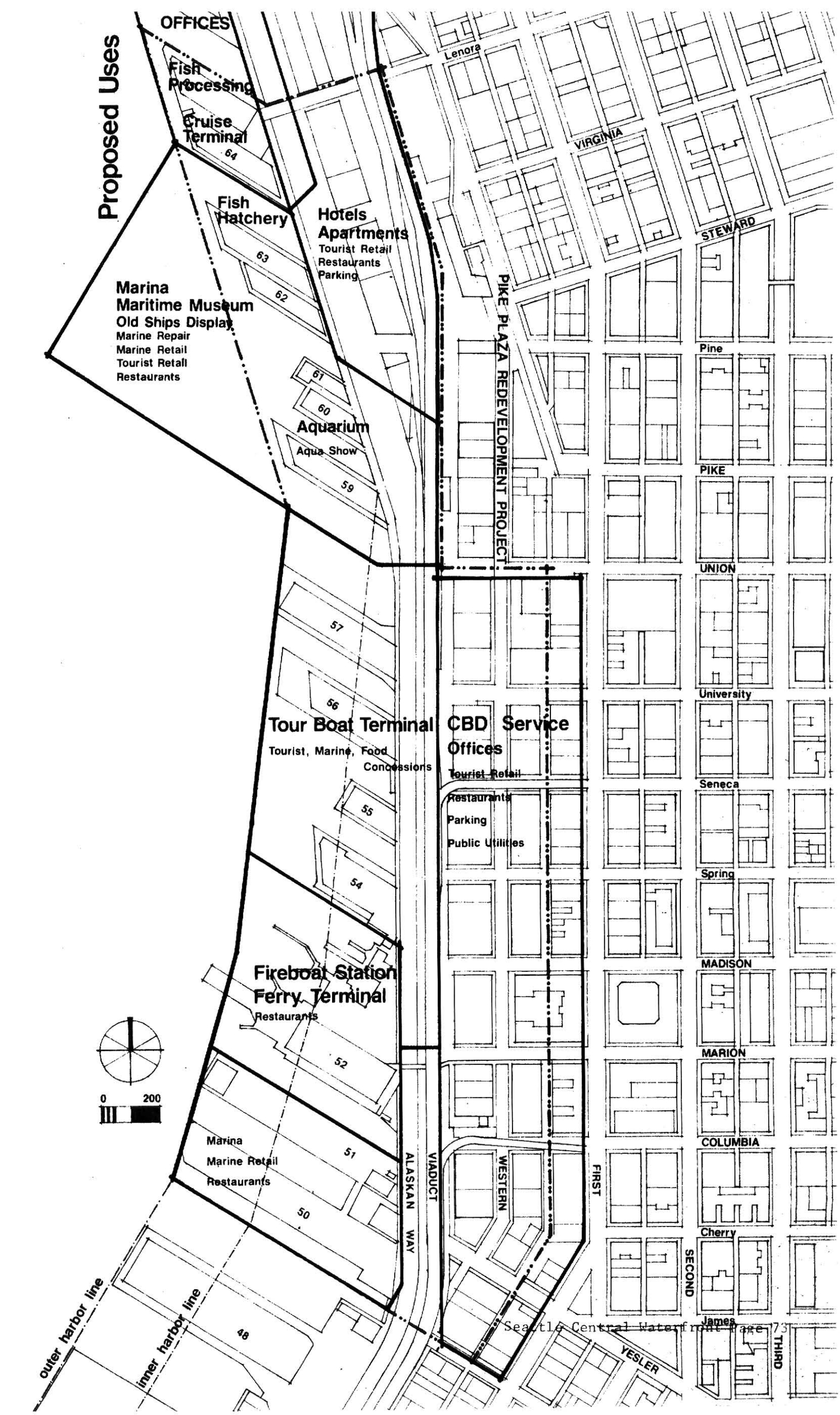
Proposed Uses
OFFICES
Fish Processing
Cruise Terminal
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Fish Hatchery
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Hotels
Apartments
Tourist Retail
Restaurants
Parking
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Maritime Museum
Old Ships Display
Marine Repair
Marine Retail
Tourist Retail
Restaurants
61
60
Aquarium
Aqua Show
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56
Tour Boat Terminal
Tourist, Marine, Food
Concessions
55
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Fireboat Station
Ferry Terminal
Restaurants
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48
Marina
Marine Retail
Restaurants
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outer harbor line
inner harbor line
Lenora
VIRGINIA
STEWARD
PIKE PLAZA REDEVELOPMENT PROJECT
Pine
PIKE
UNION
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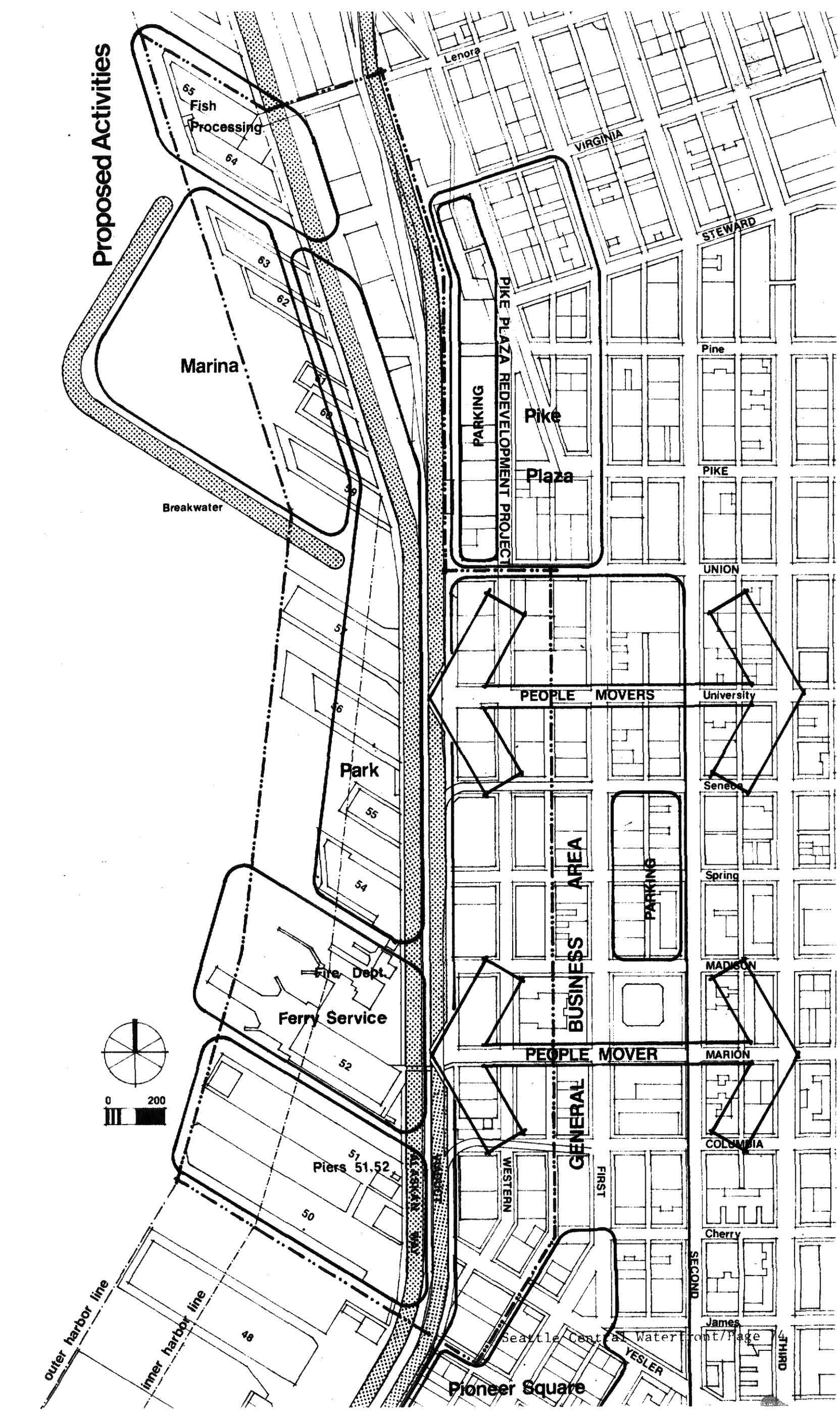
Proposed Activities
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Cherry
James
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Fish
Processing
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Marina
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Breakwater
PIKE PLAZA REDEVELOPMENT PROJECT
PARKING
Pike
Plaza
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56
Park
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PEOPLE MOVERS
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Fire Dept.
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52
PEOPLE MOVER
GENERAL
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SECOND
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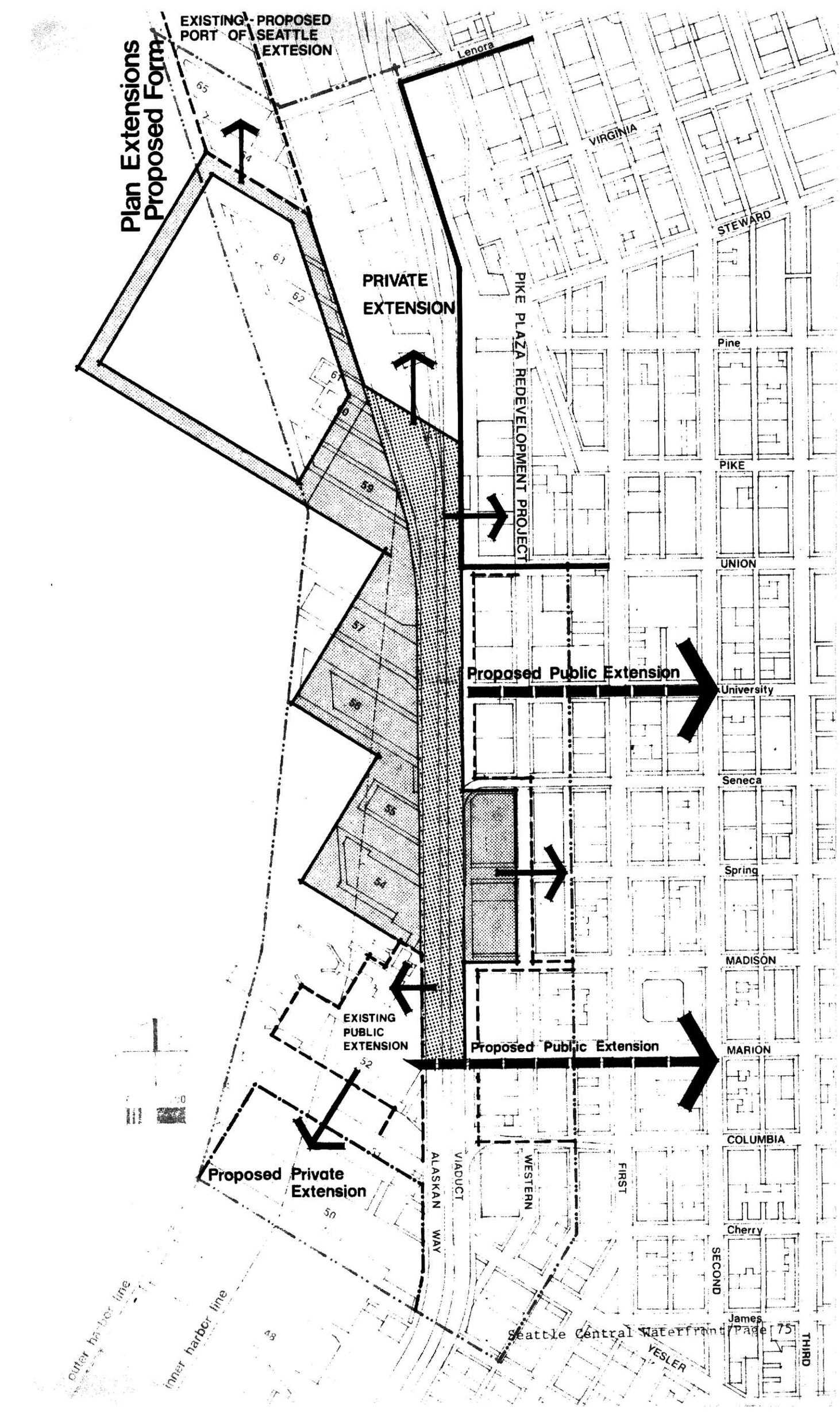
Plan Extensions
Proposed Form
EXISTING - PROPOSED
PORT OF SEATTLE
EXTESION
Lenora
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STEWARD
PRIVATE
EXTENSION
PIKE PLAZA REDEVELOPMENT PROJECT
Pine
PIKE
UNION
Proposed Public Extension
University
Seneca
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MADISON
EXISTING
PUBLIC
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Proposed Public Extension
MARION
COLUMBIA
Proposed Private
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Extensions of Study Area

Northern sector

The waterfront portion north of the study area (Piers 64-66) is currently a useful area with even greater use potential than now exists. The inland portion (north of Union Street between Pike Plaza and Alaskan Way) is by far the worst part of the Central Waterfront, and perhaps because of this, it is the part with the greatest economic potential.

The piers are occupied by both appropriate and inappropriate uses with a potentially fine environment, but with poor public access to the water. The Port of Seattle Headquarters and fish processing plants are quite suitable for the waterfront, but the warehousing and wholesale outlets can be located elsewhere. The location over water and next to the proposed Aquacenter is potentially outstanding. However, pedestrian access is now very difficult and hazardous, with little opportunity for people to approach or view the water.[13]

The inland portion's only existing virtue is that it is inexpensive to acquire. Zoned M-Manufacturing, the area is given over to warehousing, wholesaling and surface parking, all inappropriate uses to the waterfront or are inefficient use of the area. The Port office buildings to the west eliminate any possibility of views at or near grade. Vehicular and pedestrian access is poor. Little continuous property exists——most of the area is street right-of-ways and railroad easements.[13]

However, it can become an important link between the Central Waterfront, Pike Plaza, and the retail center because of the low valuation of the property. Because it is inland, uses other than strictly water-oriented are permitted. And, in Seattle, air rights over streets and railroads can be obtained and developed.[11]

Despite its numerous drawbacks, this area can become an important extension of the Central Waterfront and a major asset to Seattle as an in-city residential and hotel development, a maritime commerce center, and a major Central Business District/Waterfront pedestrian link.

The waterfront portion is suitable for additional water-oriented and tourist-oriented uses. The existing cruise ship terminal (Pier 64) is in poor condition and could benefit from new facilities. In addition, the Port of Seattle was once

very interested in obtaining a trade display facility for its customers.

The inland portion is suitable for low-rise hotels, apartments, and Central Waterfront parking. A DRA market survey indicates a 1990 demand on the Central Waterfront area of 2200 hotel rooms in addition to those which were proposed and defeated for Pike Plaza. Both the park and the Port of Seattle will acquire space and parking for their workers and visitors.

It is recommended that private enterprise in cooperation with the Port of Seattle authority construct a new cruise ship terminal, fish processing plant and a trade display center in the area of Piers 64-66, and include a public pedestrian access along their outboard edges. Using the Port Office Building as a nucleus, a new combination of uses would be developed on Piers 64,65, and 66. At the grade level, provide a new unified fish processing plant——preferably on existing Pier 65, so that the fishing boats can once again unload their catch in the protected water of the proposed marina. Above the plant on Piers 64-65, the Trade Display Center can be located. Between this facility and the Port offices, a new cruise ship terminal can occur, with pedestrian access to all of these buildings at the second level above grade. This second-level pedestrian terrace can also tie into the second-level pedestrian circulation system overlooking the marina and Aquacenter providing magnificent views of maritime activities and the fish processing plant——and finally terminating in a funicular link between Pike Plaza and the Central Waterfront.

Further development of the existing vehicular bridges can provide excellent auto access. Parking is best provided, not on the piers, but across Alaskan Way. Ground level of the new hotel/apartment/ restaurant structure will provide parking for the workers and visitors of the Port of Seattle and Central Waterfront. Immediately above, additional parking for the apartments and hotels will be provided. (See section, page 79).

Because these levels are sufficiently high above ground, apartment and hotel units can be located along the outer western face and take advantage of the views over the bay, marina, and park. A considerable number of units can be provided in this manner so that the apartment/hotel structures that complete the development can be relatively low and widely spaced, permitting views from Pike Plaza to be unobstructed.

When this development is achieved, the following will have been accomplished:

A large, necessary supply of parking provided in an accessible yet inconspicuous location and fashion.

The Alaskan Way Viaduct, railroads, and Alaskan Way covered and their adverse environmental impact reduced.

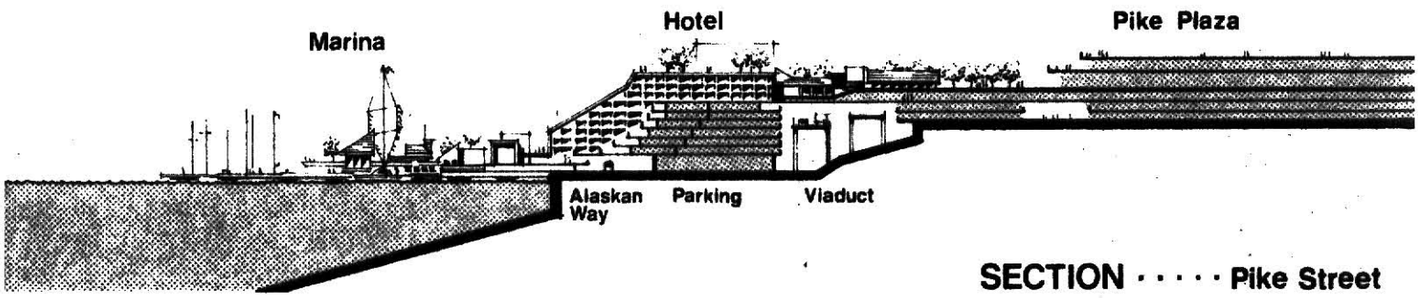
Existing views maintained as well as new views created.

Waterfront extensions into Pike Plaza and downtown Seattle developed.

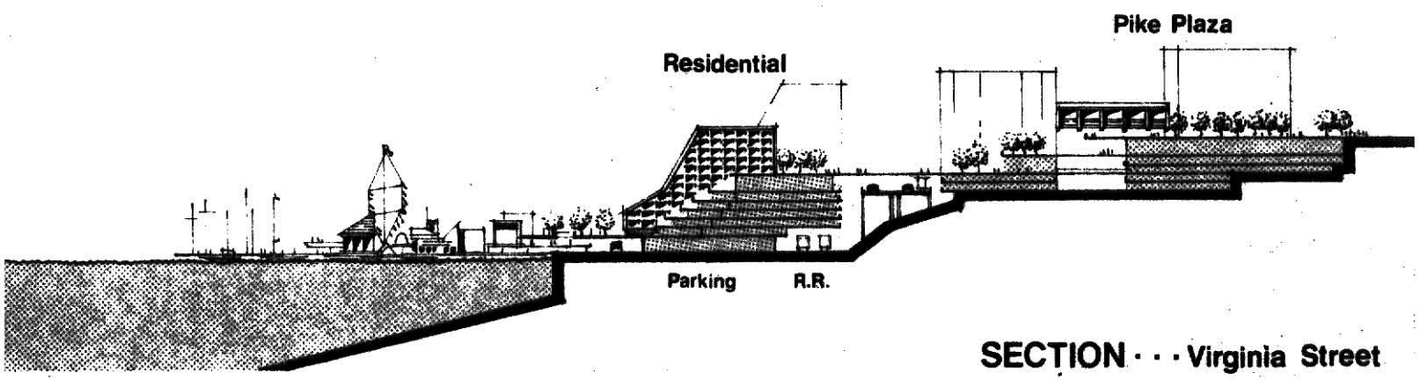
The demand for apartment and hotels met, while proposing no threats to Pike Plaza's character.

The City of Seattle and the Port of Seattle agencies will need to cooperate extensively to realize the recommended development of this area. As mentioned earlier in the section under "Public Opinion", a similar project was defeated by the majority vote of the citizens of Seattle. However, the defeated project had proposed that the Pike Place Market would be replaced with hotels and apartments, with only a fragment of the original Market remaining----whereas the Northern Sector proposal attempts not only to preserve and protect the Market, but to act as inconspicuous as possible when it comes to vehicular circulation, pedestrian circulation, views, parking, etc. In short, where there was once virtually nothing, now there will be a waterfront complex that will serve the waterfront, Pike Plaza, and downtown Seattle.

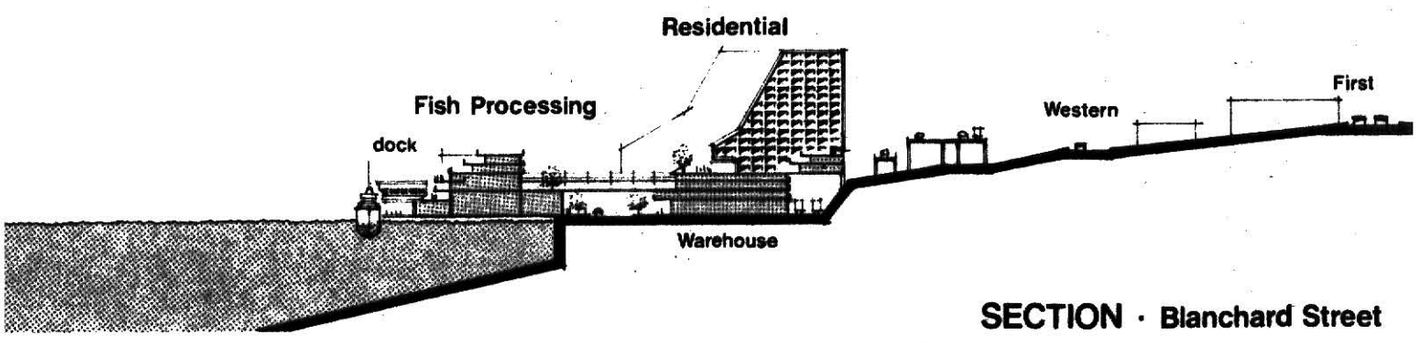
Northern Sector



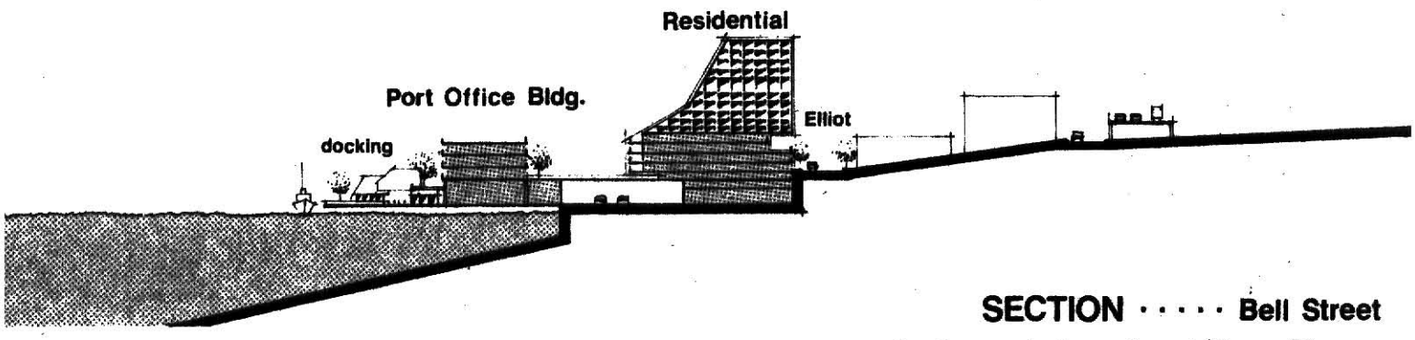
SECTION · · · · · Pike Street



SECTION · · · Virginia Street



SECTION · Blanchard Street



SECTION · · · · · Bell Street

Central sector

The central part of the Waterfront Park environs (east of Alaskan Way Viaduct between Yesler and Union Streets) is a forgotten, poorly developed par of downtown Seattle, but one which has considerable potential.

Current uses, access, appearance and building regulations are poorly developed elements in this area. Zoned as M-Manufacturing and CM-Metropolitan Commercial, plus the historic change in waterfront fortunes, have permitted a number of uses which are no longer appropriate to this area: warehousing, wholesale outlets, and manufacturing. These uses contribute to the general unattractive, uninviting appearance of the area. The crude bulk regulations and lack of height control contributes to the lack of view protection and little opportunity for view development. Transit access at this time is non-existant, but the Marion Street elevated footbridge assists the pedestrian up, over, and past the area.[13]

Despite this poor development, the area has excellent economic and visual potential. The Central Sector's location between the Central Business District and the proposed Central Waterfront Maritime Center offers developers excellent opportunities to provide needed services to these two major elements. Most of the existing buildings are in good condition, valuations are low, and the increased economy from this addition can be attractive. Vehicular access is satisfactory and the local parking supply is large. The area is located on an upward slope which, with proper development, can permit sharing of outstanding westward views.

The Central Business District needs numerous supporting services and additional entertainment facilities. These services need locations close to the major businesses they serve, but in spaces with modest rates such as offered in the Central Sector. Both residents and visitors are seeking additional ways of spending their leisure time. Seattle's development as a regional headquarters city can only increase the number of visitors and, thus, the entertainment and supporting services needed. Here too, the Central Sector becomes another link in the chain of opportunities in the entertainment crescent.

The Central Business District also needs to preserve the westward views. One of the major advantages of the high-rise buildings in the commercial center is

the magnificent panoramas available to the tenants. The Central Sector area, falling between the CBD and the prime westward views, can perform as a transition from the low-level waterfront to the high-rise commercial district in order to preserve that view. (See section, page 83.)

The waterfront needs protection of its pedestrian scale. The Central Sector, occuring between the monumental buildings of the CBD and the pedestrian-oriented buildings of the Waterfront Park, can act as a very important transition area between the two as it protects the pedestrian-scaled park from an over encroachment by the large, massive buildings which may damage that scale.

Seattle very much needs a visual image. Every great city has a visual image that remains in the mind of the visitor long after he has left. Visitors are thrilled by it; residents take pride in it. The ingredients for Seattle to create such an image exist. The land slopes dramatically from Elliott Bay up to the CBD, with the tall buildings of downtown emphasizing this slope even more. The waterfront at the toe of the slope is about to be reclaimed as a public open space——with only the transition area, the Central Sector, between the two areas as yet undefined. Insensitive development could ruin this opportunity for a lasting visual image by interrupting the dramatic rise from the water's edge to ridge crest. Appropriate development would exploit this potential and make this area memorable.

Because of the reasons stated above, and because downtown Seattle needs certain services and offices which, due to their economic situation, cannot occupy prime rate space, it is recommended that a multi-level commercial complex shall be constructed which will also bind together the waterfront and downtown Seattle. Basically, the commercial development should include and link together the following features:

New commercial space under the Viaduct and along Western Avenue.

Remodeled office and service space in existing buildings along Western Avenue.

Parking for 540 automobiles with an additional 3,500+ automobile spaces in the immediate vicinity.

Existing ferry terminal via Marion Street elevated pedestrian walkway.

New Aquacenter via University Street elevated pedestrian walkway.

CBD available via both pedestrian walkways.

The development should be centered on a new multi-level commercial center occupying

the blocks bounded by Seneca, Western, Madison and Alaskan Way. The design of such a complex should satisfy the following urban design objectives:

Recognize the existing scale and architectural character of the area as an extension of the Pioneer Square preservation concept.

Provide ground level activities which relate and encourage use of the area.

Minimize the impact and effects of the automobile on Western Avenue and the waterfront area.

Establish a standard of development to serve as an impetus for rehabilitation.

Properly integrate parking as a part of an enduring balanced transportation system with mass transit.

Provide roof level development to take advantage of view potential from within buildings as well as when viewed from buildings above.

The sound from the adjacent Alaskan Way Viaduct can be handled in two basic ways; screening and absorbtion.

Guard rails are treated for sound screening and absorbtion.

On the lower level, large planters extending outward and upward are added to the outside of the Viaduct.

New and existing buildings underneath and adjacent to the Viaduct are provided with a vibration absorbing separation between them and the Viaduct structure, while at the same time doing their part in screening sound.

Undersides of both Viaduct levels are provided with suspended ceilings of glass-beaded accoustical material which absorbs sound well and is easily cleaned.

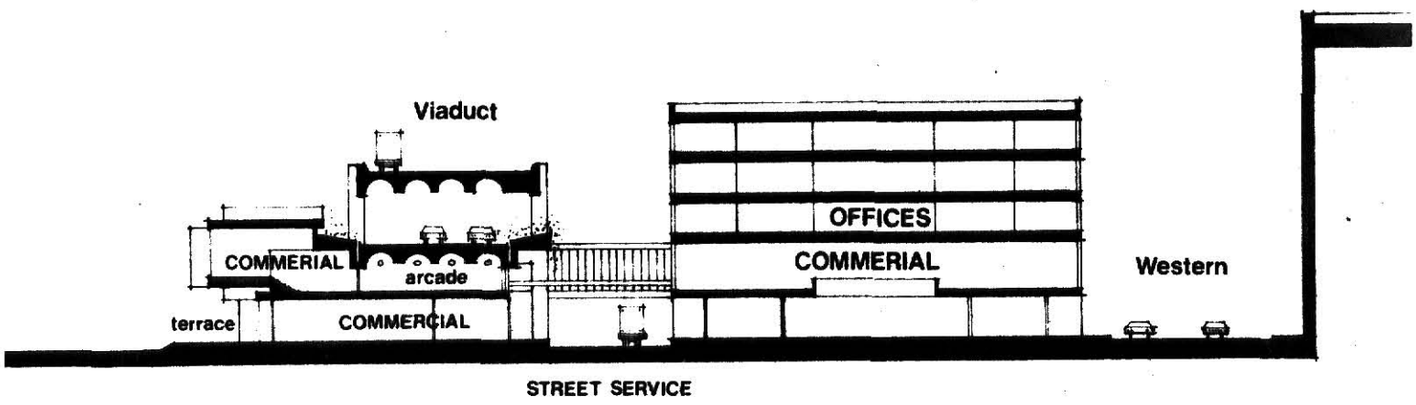
Nearby buildings directly opposite the Viaduct traffic levels can control noise by installing sound-resisting glass and other materials, and by allocating uses to those floors where sound levels are not critical and windows are not necessary.

This proposal will provide many advantages:

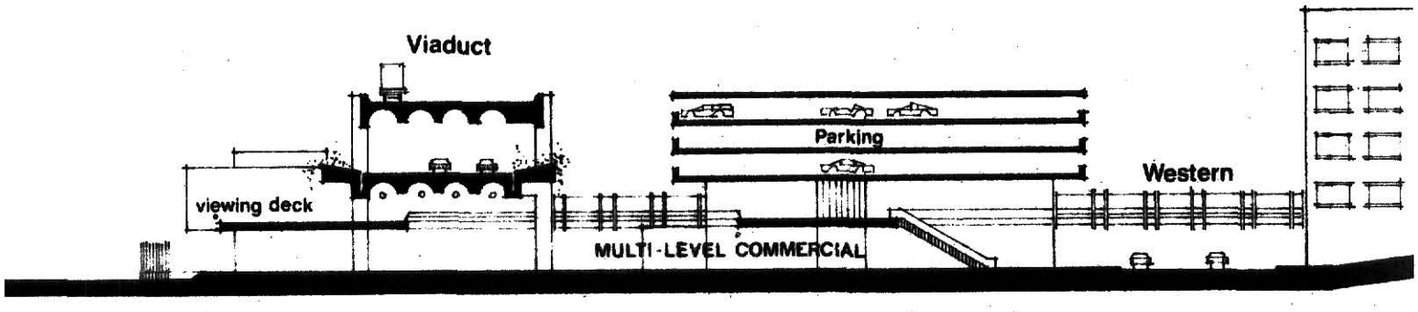
An existing visually economically depressed area will be converted into an attractive and economical development.

It will provide an extremely interesting and desirable connection between the proposed downtown pedestrian links, the Ferry Terminal and the proposed Aquacenter.

The Alaskan Way Viaduct will be effectively screened, both visually and accoustically.[13]



University Street Section



Spring Street Section

Southern sector

Because of the location, ownership, and market factors, the Southern Sector (Piers 50-51) has great potential. Piers 50-51 anchor the recreational oriented activities of the Waterfront Park on the south at the logical terminus of the commercial port ending with Pier 49. The site contains the largest privately held, contiguous, developable area on the Central Waterfront. However, current development has not realized this potential.[13]

Circulation, foundation, and zoning factors are tending to inhibit suitable development. The pedestrian circulation in the Waterfront Park cannot reach Piers 50-51 without crossing the rather heavy traffic that uses the Ferry Terminal. Vehicles can only approach this area from one side, that being the landward side. Parking, currently the primary use for the Piers, is not appropriate for this over-water site and no convenient alternative parking facilities exist. New construction would have to extend piers down into the bay bottom, which at this point is an expensive procedure. The zoning is currently M-Manufacturing, also not conductive to suitable development.[13]

The Southern Sector requires sensitive handling in order to preserve the views, serve the pedestrian, and achieve strong visual and physical relationships to the Waterfront Park, Pioneer Square, and Elliott Bay. Any project at this location should:

Maximize this site's relationship to the waterfront, the Pioneer Square Historic District, and Elliott Bay.

Establish and maintain a strong sense of water meeting the land and provide for the physical contact with the water.

Recognize the visual aspects of the Port's activity from Pier 49 southward.

Maximize the physical connections with the existing pedestrian levels of the Ferry Terminal and possible raised pedestrian levels within the Central Waterfront.

Provide strong pedestrian connections to the Central Business District and Pioneer Square.

Preserve the views from the CBD to Elliott Bay Through Yesler Way, Washington Street, and Columbia Street.

Afford protection from the prevailing southwesterly winds and Seattle's inclement weather.

Consider the average tidal variation of 11.2 feet (extreme variation is approximately 15.0 feet) when relating to the water.

Provide a cohesive architectural composition of its vertical and base elements that will:

1. Provide a pleasing massing (volume) relationship between elements and a carefully developed rapport (not repetition) of architectural vocabulary for the major elements as well as the details and materials.
2. Provide pleasant and ample access to the site for pedestrians.
3. Provide a series of linked spaces of civic significance and scale which relate equally well to the major and minor architectural elements, the surrounding water and the Central Business District.
4. Provide a direct and visual connection to the marine surroundings from every element whether architectural or spatial.

(Source: "Seattle World Trade Center Analysis Report")

It is recommended that private enterprise develop a low-rise tourist-oriented commercial center which conforms to the character and scale of the Central Waterfront Maritime Center. The tourist-oriented commercial uses, which can include the existing Polynesia restaurant and Ye Olde Curiosity Shop, are best limited to approximately 100,000 square feet. This total will provide an optimum amount of site coverage and requires no new over-water construction, while permitting other areas near the waterfront (the Central and Northern Sectors) to provide suitable portions of specialty retail and restaurant uses.[13]

Also included and forming the focal point for the development, can be a small transient marina located between the existing Piers 50 and 51. Weather protection for both the marina and outdoor pedestrian circulation can be provided by a transparent "skybreak" spanning overhead between the piers. The upper level of the two-level circulation system would span over the water between Piers 50 and 51 connected by a pedestrian bridge to the existing Ferry Terminal and thence on to the Waterfront Park. This upper level would also connect to the Marion Street elevated pedestrian walkway which passes by a proposed parking facility on its way to the Central Business District.

Hotels and apartments are not recommended because economics would probably require high-rise, high-density construction, which is not suitable for this site as far

as the existing structural capacities, the disruption of views, or the availability of additional parking is concerned.

Physical separation of this Southern Sector from the proposed Waterfront Park and the limits on public park funds, make any development on this site unlikely except as a private development. Since appropriate development is desired, cooperation with developers is encouraged. A likely area for cooperation is parking structures. Parking structures, if located on the site of the piers, will inhibit suitable development, add expense, and increase traffic congestion. A suitable working agreement should be worked out with the private developers regarding land purchase, garage construction, and parking operation on an inland site convenient to the Southern Sector.

Factors Limiting Development

Before the Central Waterfront renaissance can occur, some very difficult problems must be investigated and resolved. The remainder of the report reviews these problems, analyses their constraints and opportunities, and recommends suitable solutions.

Of particular concern are the physical barriers presented by the railroad tracks, Alaskan Way, Alaskan Way Viaduct and the topography. These barriers not only create an environmental detriment to the study area, they also conspire to prevent easy public access to the area. Poor environment and poor access are detrimental to almost any area.....to a public facility, they could be fatal.

In trying to view this Central Waterfront development as realistically as possible, this report attempts to shed light on all aspects of the barrier problem; land use, circulation, topography, environment, finance and law---even though many of these topics were purposely left unexamined throughout most of the report.

Railroads

Railroad circulation is oriented to through traffic passing from the South King Street yards to the new grain terminal and other northern destinations. Although service to the grain terminal is expected to bring a significant overall increase in railroad use, no favorable effects are discernible to the study area. In fact, the existing railroad situation is clearly detrimental to the optimum development of the Central Waterfront, including numerous and critical adverse effects:

Many trains frequently block pedestrian, vehicular movement.

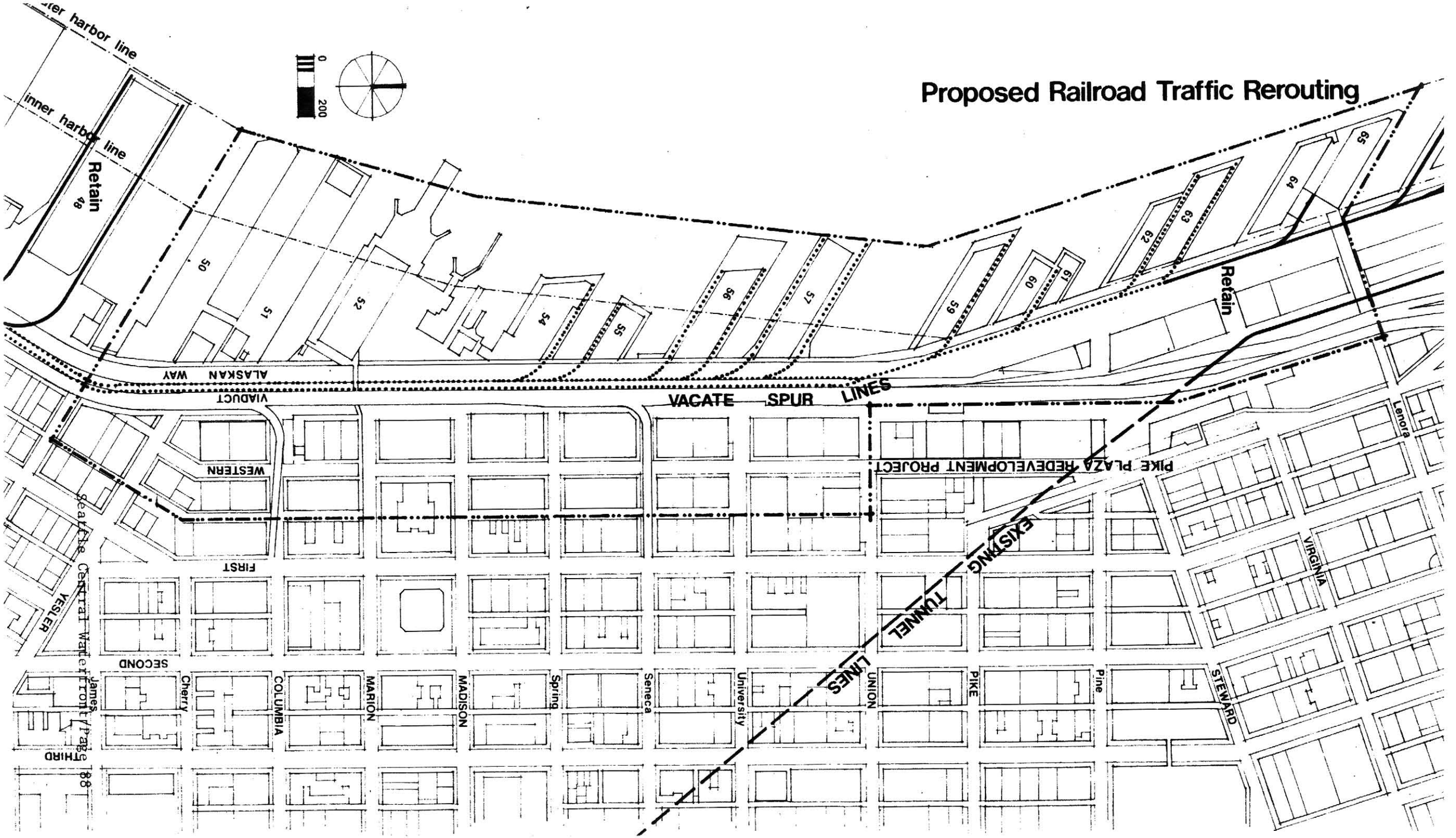
Blockages should increase with the increase in use of the new grain terminal.

The trains and tracks are offensive to sight, sound, smell, and cleanliness.

The railroad right-of-way effectively occupies up to 110 feet of potential park related area extending the length of the waterfront.

Presently, three lines run through the study area within the Alaskan Way right-of-way. Burlington Northern is responsible for all train operations within the Central Waterfront area although Union Pacific and Milwaukee Road hold rights to through the area. Near the study area is the downtown tunnel, owned and operated by Burlington Northern.[13]

Rerouting the railroad traffic to the existing tunnel under the CBD provides great improvements as all adverse effects listed above will be removed. This proposal


Proposed Railroad Traffic Rerouting
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Lenora
Seattle Central Waterfront Piers 88

involves only moderate expense, but with considerable legal and operational problems because of the ingenuity and cooperation by the local rail systems essential with this alternative. A mutual sharing of the tunnel by the three different rail lines may be unsatisfactory financially and functionally as all need to reach the grain elevators north of the CBD.[13]

In order to resolve the many physical, financial, operational and environmental constraints needed to impliment this proposal, it will be necessary to institute and complete a comprehensive railroad system study before rerouting can take place which will coordinate and schedule all present and anticipated future rail traffic utilizing Central Waterfront trackage.[13]

Viaduct

The Alaskan Way Viaduct runs parallel to the waterfront for the entire length of the study area. Approximately 95 feet from the seawall, the Viaduct is 54.5 feet tall and 50 feet wide, with the lower level 26.6 feet above Alaskan Way.[13]

The existing traffic on the Viaduct is detrimental to the optimum development of the Central Waterfront. As described earlier in the report, the adverse effects are not numerous but very powerful just the same. The Viaduct itself is out of character with the community, acting as a visual and psychological barrier between the CBD and the waterfront.

The favorable effects relate only to circulation. While providing diminished traffic on local surface streets, the elevated Viaduct does not impede local pedestrian or vehicular movements. Rather, it is the combined distance of the Viaduct right-of-way, railroad right-of-way, plus the street right-of-ways, plus street traffic and railroad traffic added together that present a formidable circulation barrier.

Upon investigation there appear to be only two significantly different alternatives to the existing situation. The first, as mentioned earlier, is to minimize its its adverse effects on the surrounding community until the Viaduct eventually becomes obsolete and is ultimately torn down. The second, is to relocate the traffic to a new tunnel under Alaskan Way (see Alaskan Way Viaduct map, page 92).

Relocation to a new tunnel under Alaskan Way removes the environmental defects,

while also providing additional right-of-way for waterfront development. The local circulation can, after construction, move in an unobstructed manner. Commercial development can proceed uninhibited by the presence of the Viaduct. However, this proposal assumes that sufficient traffic to justify construction of a tunnel will continue along this route in the future.

There are also many inhibitive factors that will be encountered below ground. Numerous utilities run under the right-of-way here, including the new Metro sewer system. The seawall relieving platforms project into this area for much of its length (See Alaskan Way Viaduct map, page 92). The high water table and its hydraulic pressure add a cost penalty.[13]

It is, therefore, recommended that the existing Viaduct structure remain until it is no longer needed and that improvements be made to ameliorate its bad effects on the environment. Concentration, instead, shall be placed on other elements (Alaskan Way, railroads, parking lots) that adversely affect the area.

The existing surface traffic situation on Alaskan Way is wholly detrimental to the optimum development of the waterfront. As with the railroad situation, adverse effects are numerous and critical. The wide 5 lane street with its high-speed traffic is a considerable detriment to pedestrian movement. This expanse of pavement and the movement of vehicles are offensive to sight, sound, smell and cleanliness to the surrounding community. The street itself occupies 55 feet of potential park area extending the entire length of the Central Waterfront.

The only favorable effect, relative to the waterfront, is the ease of access provided to potential visitors to the Central Waterfront.

Upon investigation, there appear to be three significantly different alternatives to the existing surface traffic situation worthy of consideration: relocation of Alaskan Way underneath the Viaduct, relocation to a new tunnel under the present right-of-way (similar to the Viaduct relocation), relocation of traffic onto Western Avenue and a new surface distribution road system completely by-passing the Waterfront.[13]

Relocation of Alaskan Way under the Viaduct, in comparison to the other alternatives

is relatively inexpensive and has fewer legal or operational problems as no buildings will need to be removed, the Viaduct need not be physically modified, no additional right-of-way need by purchased, and no new elevated or depressed construction need occur (See Alaskan Way map, page 92). However, this proposal provides only a minor improvement in existing conditions as the traffic visibility would worsen, pedestrian movement would still be hindered, the visual, oral and olfactory pollution problems would certainly remain, development of this area would be impeded, and the only improvement would be the additional 55 feet of existing street right-of-way to the proposed park.

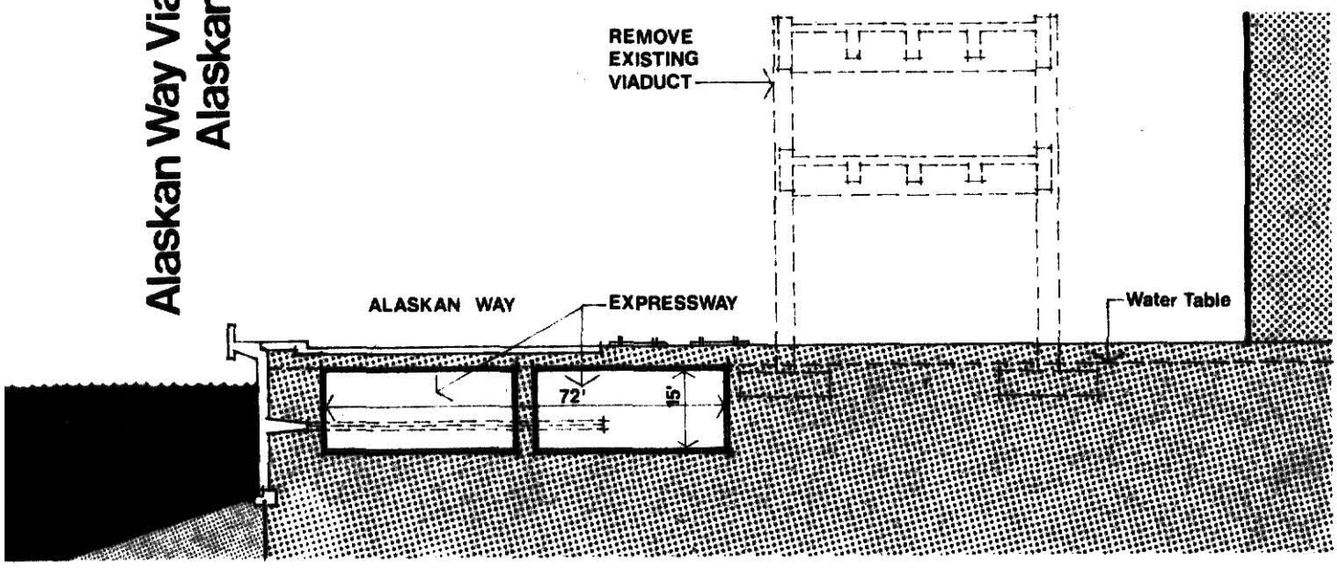
Relocation of surface traffic to a new tunnel (See Alaskan Way map, page 92) allows pedestrian movement to be unencumbered almost regardless of any vehicular traffic increase. It also allows the development of economically viable commerce, new and existing, the development of the park within the 55 feet of existing right-of-way, and the vehicular sounds, smells and grime will be removed from the area. Park and ferry-bound traffic would use the Western Avenue approaches.

Although the physical problems involved with a new tunnel for Alaskan Way traffic are identical to those encountered with the tunnel proposed for the Alaskan Way Viaduct, the construction expense estimates for both tunnels indicate that relocation of Alaskan Way traffic underground would be considerably less than that amount projected for the Viaduct traffic relocation.[13]

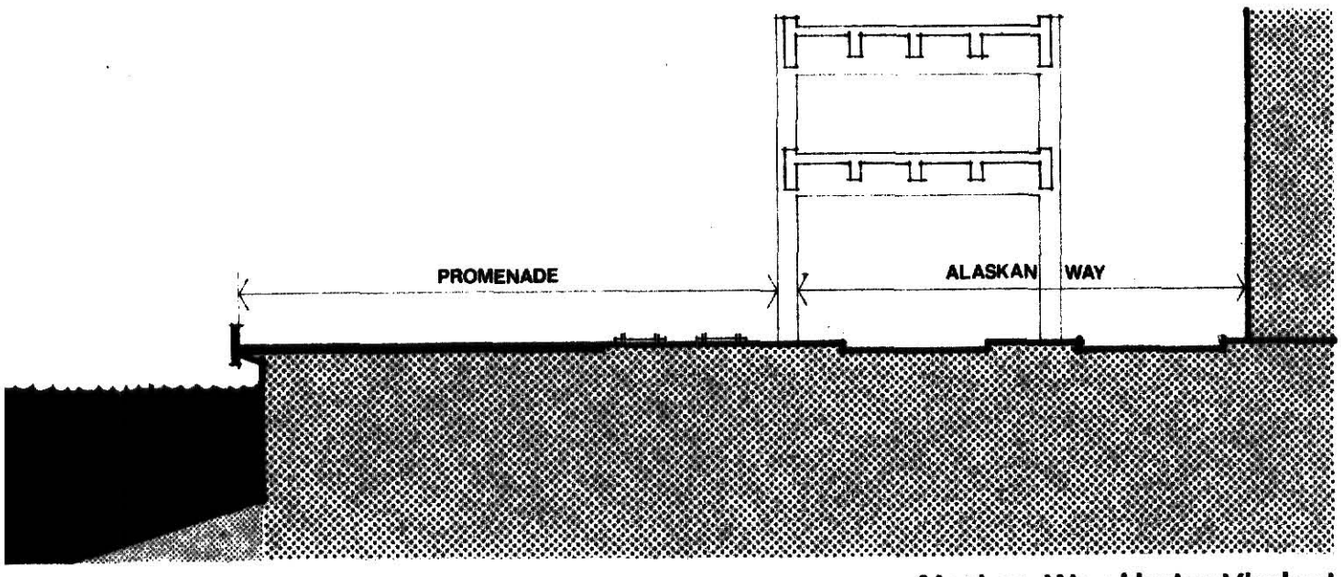
However, it is recommended that the existing Alaskan Way surface be rerouted along Western Avenue and that much of the existing and future traffic destined for the CBD be borne, not by additional roadways, but by public transportation systems. This solution offers substantial improvement without great cost directly attributable to the Waterfront development. As seen in the first two alternatives, an increase in detriments or costs seems to be prohibitive. Thus it appears that any optimal solution must include a means of reducing traffic——or at least maintaining it at present levels. The proposed, but not as yet approved, mass transit system offers the best means of achieving this goal for the waterfront. It will be expensive, but so are vehicular traffic alternatives (whose environmental costs are also high). In addition, the costs and benefits of a mass transit system would be community-wide, not just restricted to the Central Waterfront.

In order to achieve this recommended proposal, not only must the proposed rapid

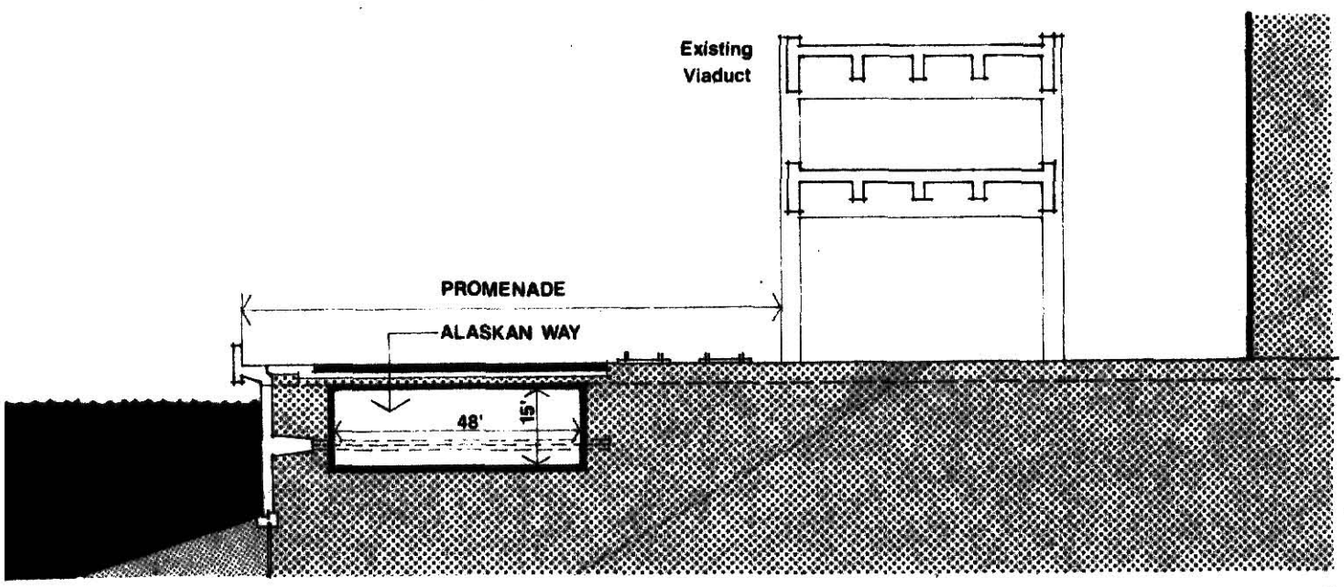
Alaskan Way Viaduct
Alaskan Way



Underground Viaduct



Alaskan Way Under Viaduct



Alaskan Way Underground

transit system be approved, but a feasibility study by the Seattle Engineering Department of relocating existing Alaskan Way traffic to Western Avenue and a comprehensive traffic and parking study designed to update the 1963 Central Business District Plan must also be conducted.[13]

The proposed rapid transit system should again be offered to the voters of the area with these additional arguements in its favor:

1. A county-wide authority would manage and coordinate planning for all public circulation systems.
2. Alternatives to rapid transit systems would have appalling effects in key areas of the city.
3. A major public works program would alleviate the unemployment situation in King County.

Public transportation

Although mass transit service to the waterfront is now virtually non-existent, the proposed development along the Central Waterfront will generate a demand which must be served. Some physical barriers to public transportation service do exist. The topography from Seneca Street north is too steep for standard transit vehicles or systems. Additionally, if the railroads remain, heavy railroad traffic impedes transit system schedules.

These barriers are not insurrmountable, but depend upon several variables for successful completion. The topography from Seneca Street south is not too steep nor is access difficult via Alaskan Way at the north or south end of the study area. Existing bridges connect Elliot Way and Piers 64-66 (both north of the study area). Many east-west streets (Yesler, Columbia, Madison, Marion) can serve likely routes, thus avoiding come conflicts with railroad traffic.[13]

Two major segments of the public will be attracted to the Central Waterfront Maritime Center: one segment can be termed "visitors", made up of metropolitan area residents and out-of-town travelers who come for shopping or recreational purposes; the second segment will be area "residents", consiting of people who live and/or work in downtown Seattle and who pass through the Central Waterfront for reasons of convenience and interest.

The first segment of the public will come from their homes, while the tourists

will come from their hotels and motels. This traffic will be heaviest during the summer, holidays, and weekends, lasting from late morning to late evening. The most desired characteristics of a public movement system will be convenience (not necessarily speed) and a pleasant experience.[7]

The primary traffic from the second segment, however, will come from commuters travelling between home and place of employment. Origins will be residential units (Pike Plaza), parking reservoirs (Pike Plaza and the Central Waterfront), and public transportation terminals (Ferry Terminal, Cruise Ship Terminal). Destinations will be primarily along the retail/commercial/governmental spine through downtown Seattle. This traffic will continue to peak in the morning and the late afternoon on weekdays throughout the year. Convenience and speed will be the most desired characteristics for a public movement system.

Secondary traffic will originate from downtown workers of all strata having lunches, entertaining clients, socializing after work, etc. Origins will be the many places of work and destinationss will be the dining and entertainment establishments of the City——many of which will be on the waterfront. As implied, this traffic will occur mainly during the lunch hour and directly after working hours on weekdays throughout the year. Lunch-time will require speed while after-hours traffic will be less demanding.

In order to properly serve the two primary kinds of traffic, two kinds of public transportation systems are recommended: a shuttle bus system for the "visitor" traffic and an elevated moving sidewalk/ramp system for the "residents" traffic.

The shuttlebus system would serve the length of the Central Waterfront plus nearby attractions. The vehicles used should reflect the nature of their service by being roomy and comfortable, permitting excellent passenger viewing during transit, and by being agreeably different in appearance from standard vehicles.[7]

The elevated walkways will help tie together important CBD and Central Waterfront facilities, thus serving the Seattle downtown "resident". The Center Cities Transportation Project (CCTP) recommended a moving sidewalk or belt system featuring a route running north/south through the retail/commercial/governmental spine of the city, eastward to the First Hill residential area, and westward to the Central Waterfront. Such a system would properly serve the downtown "resident" while the extentions to the waterfront would tie into the proposed rapid transit

systems thus affording both "visitors" and "residents" easy waterfront access.

However, several suggestions relative to route location are as follows:

> Three extensions to the Central Waterfront be developed occuring along Marion Street, terminating at the existing Ferry Terminal; along University Street; and across Pike Plaza, terminating at the future Aquacenter. These extensions should tie directly into the upper levels of both the Ferry Terminal and the Aquacenter, and at street level as they connect to the downtown area.

These extensions to the waterfront would open up more of downtown to customers and the waterfront to potential patrons, thus encouraging commercial development and use of the two areas. The two major traffic generators, the Ferry Terminal, and the Aquacenter would each have a convenient, direct link to downtown, and vice versa. Also, the proposed new parking garage locations (see next section) would be directly linked to downtown.

The key to implementation lies with the agency charged with comprehensive transportation planning (under "Alaskan Way Relocation", the advice to form a county/city agency responsible for comprehensive transportation planning and implementation has been made). While the Central Waterfront Park is being implemented, this special department can plan the systems in this subsection. Once the park is complete, and the shuttle bus system can then be readily instituted. At a later date, when the railroads have been relocated and Pike Plaza has gone forward, the elevated walkways can be added.[7]

Parking

As noted in the "Background Information" section, most of the parking in the study area is being used by the commuters who work in the Central Business District. In addition, most of the parking facilities are located in areas better suited for park or commercial uses (See Unacceptable Existing Uses, page 71). Piers 50-51 hold 740 cars; the Alaskan Way right-of-way holds approximately 300 cars; the inland area opposite the Port of Seattle serves about 375 cars and the two blocks opposite Piers 54-55 have a capacity of over 300. In each case, park or commercial development is recommended as a future use (See Proposed Uses and Proposed Activity maps, pages 73 & 74).

Careful consideration reveals that there are likely to be two characteristic parking demand situations that require resolution, and that there are a number of major problems which will hinder that resolution.

The future weekend and weekday parking peak loads for the waterfront are shown diagramatically on pages 98 and 99. Because of the tremendous variation between weekend and weekday parking needs for the CBD, the means to a rational parking solution must be achieved. However, current traffic planning and parking planning are in the hands of different public agencies that are not as well coordinated as they might be. Also, the costs of land acquisition and garage construction and the requirement that support facilities outside the study area must be funded from sources other than park monies.[13]

It is recommended that no parking facilities be located west of Alaskan Way, and no more than 4000 parking spaces be within the study area. Location of automobile parking away from the water's edge will permit optimal development of a pedestrian oriented waterfront. Such a parking location will allow people to walk freely throughout the park without the danger of vehicular traffic. Further, existing surface parking lots will no longer occupy property of increased value which is better suited to recreational and commercial uses.[13]

Limiting the amount of parking will also reduce the adverse effects of automobile traffic while meeting the future waterfront demand. As noted earlier, the difference between remaining parking supply and future demand approaches 5000 spaces. The proposal of 4000 spaces within the study area meets 80% of the demand. The additional 1000 spaces—which serve the CBD, not the waterfront can well be located within the nearby fringe of the CBD or in physically remote lots such as those now served by the bus service. When the greater demand for waterfront parking occurs on the weekend, many of the nearby CBD parking garages will not be full and will be able to absorb the additional 1000 cars, allowing less garage construction, and more efficiency.[13]

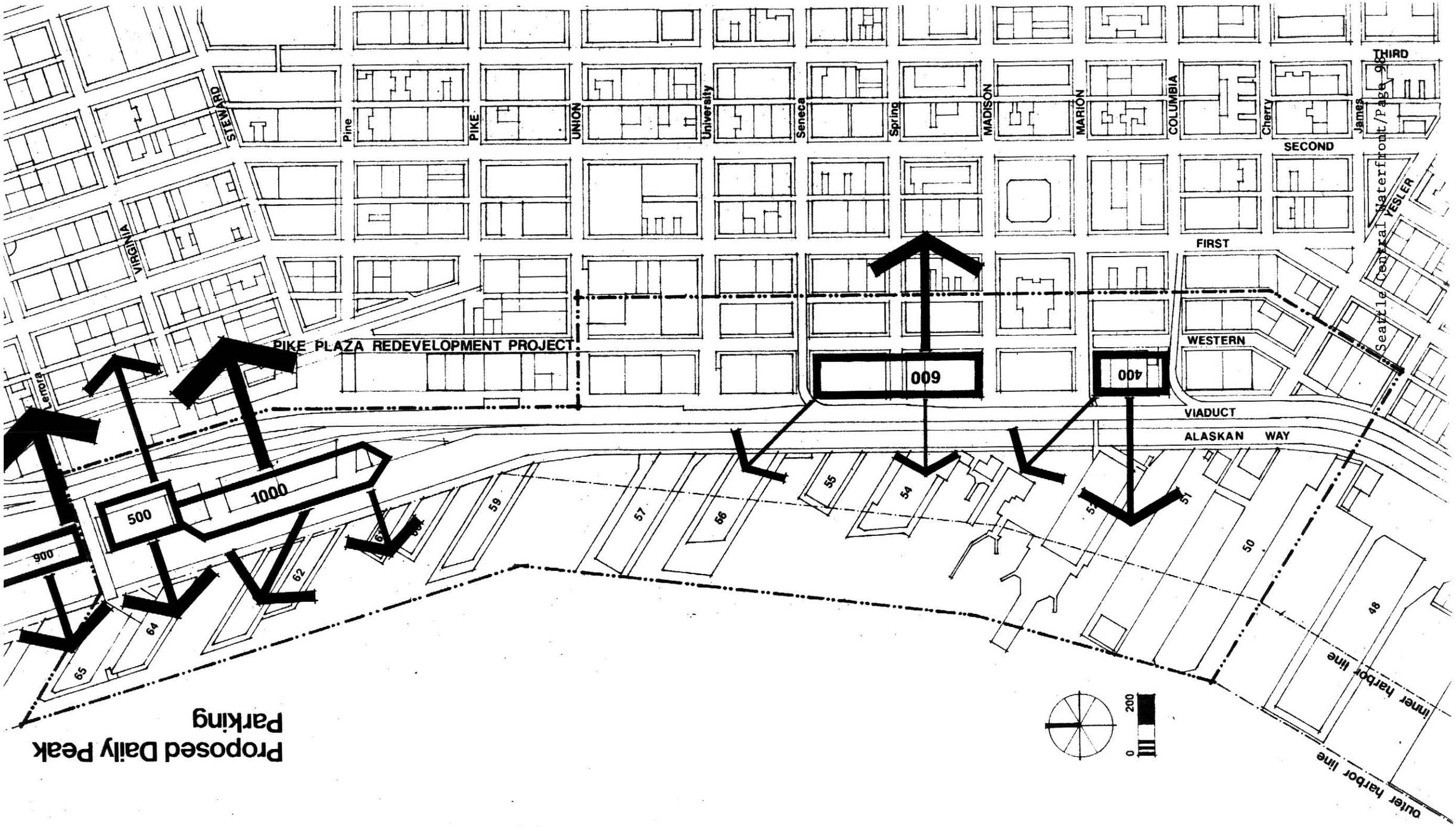
In order to encourage use of proposed rapid transit facilities, the Department of Community Development made the following recommendations:

1. encourage use of smaller vehicles within the city by taxing the size of the vehicle or the space it requires.
2. eliminate on-street parking.

3. license all parking lots.

4. meter and tax all privately owned public parking.

5. develop public parking as a part of a balanced, integrated transportation system.



Proposed Daily Peak Parking

Proposed Weekend Peak Parking

Concluding Material

Well aware that in a democracy where every interest fervently asserts itself, effective urban design has become as much a matter of the smoke-filled room and legislative chamber as it is of the drawing board. Participation and responsibility guide lines for the various disciplines (government, design team, etc.) and the public have been outlined in the Introduction; however, the legislative bodies must continually strive for these comprehensive and dramatic solutions to the pressing problems even while the designers are executing equal effort and resolution in pursuing the design.

Urban design is not only the art of defining and devising grand schemes...it is also the art of implementation of the small, feasible improvements in our existing environment that can make life human again. But there are many buildings and districts in urban areas that are beyond such redemption. Consequently, we cannot exclude, but we also cannot rely entirely on, restoration.

On the contrary, we must find other methods of designing not only for business, but for people in cities. This, of course, requires rebuilding and replanning. But these solutions can only emerge from concepts based on an understanding of the nature of the city and of city living. And this is only possible if there is a change in our attitude toward the city.[15]

Although America is predominantly an urban country, we have never really loved the city. We are enraptured by the Garden of Eden myth and the Jeffersonian myth of the small farmer. With few exceptions, our most influential writers and philosophers——Emerson, Thoreau, Hawthorne, Melville, Poe, Henry Adams, Henry Jones, and John Dewey——hated cities. And this predominant social attitude, of course, has a deep effect on urban planning.[15]

In order for the decision-making process to become more objective and representative of the people's needs, it is important that the interrelationships that constitute an environment be analyzed so that decisions that will affect this environment can be made intelligently. The formulation of an urban design process which would take the three spatial dimensions into account as well as that of the fourth, time, can construct a process which allows a continuing management of the urban resources (social, economic, political, etc.) within the

urban center. This however, is not to be interpreted as merely a concern for the operational systems in the city such as housing, industry, etc. It would also include consideration of the human user's needs for environmental quality.

The urban designer must make sure that the physical environment does not create additional sources of stress in people's lives, and more positively, that it gives them as much satisfaction as possible. This may sound no different from past definitions of the role of the city planner in mental health. However, the determination of what adds stress and what provides satisfaction should not entirely be made by the designer——but by and for the citizens for whom he is planning.

In addition to removing sources of stress (i.e. poverty rather than slums) wherever possible, designers must insure that the physical environment can help people live the way they want to live. This means less concern with aspects of physical structure that are of primary interest to the tourist, but play only a minor role in the lives of the citizens of the area. In other words, he is attempting to make the city more livable for the occupants.

Planning for the way people live and want to live may have little direct relevance to their mental illness and mental health (stress), but it will provide them with a more satisfying, rather than frustrating, physical environment. Moreover, since there is some relationship between satisfaction and mental health, the designer is actually making a contribution to mental health by proposing developments that maximize people's satisfactions.

This may be the only proper role of the designer, and only role in planning for mental health. Perhaps the designer should forego the temptation to justify physical design solutions as mental illness preventive schemes, or to make psychiatric judgements about those features of the community which displease him socially or aesthetically.

"Urban design is that part of city planning concerned with perceiving and contributing <u>order</u>, with the development of a master form and a master program. It is the most creative phase in which <u>inspiration</u> and <u>artistic capacity</u> plan an essential role. This process must be based on <u>rationality</u> as a system of procedure, which does not exclude inspiration which acts as an <u>acceleration</u> on the path to

the desired goal. Inspiration is a special moment in a rational process. The two are inseparable."[17]

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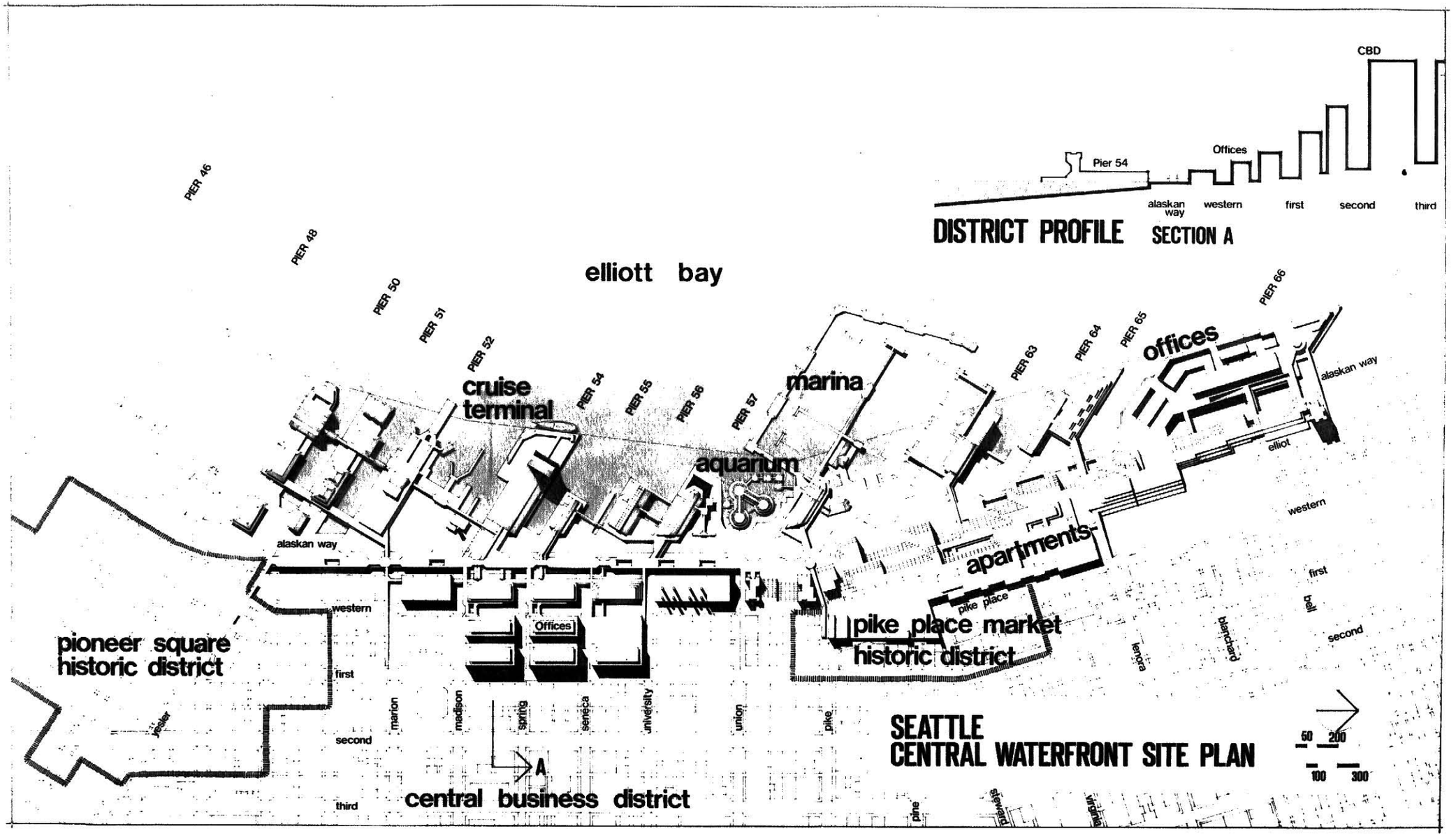
Seattle Urban Design Report: "Determinants of City Form", James Bramen, Director of Department of Community Development, January 1971.

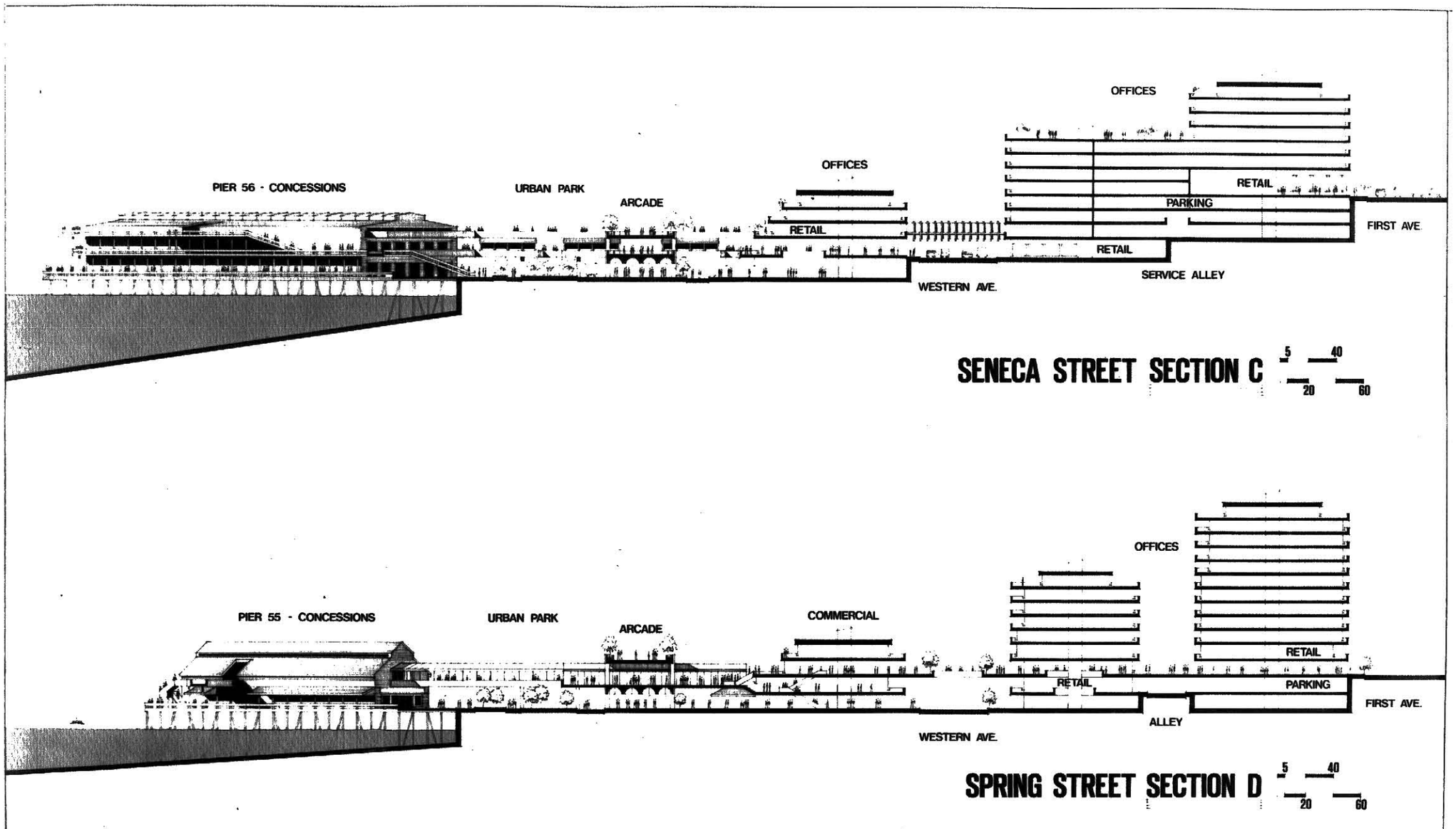
Physical Design Proposal


CBD
Pier 54
Offices
alaskan way
western
first
second
third
DISTRICT PROFILE SECTION A
PIER 46
PIER 48
PIER 50
PIER 51
PIER 52
PIER 54
PIER 55
PIER 56
PIER 57
PIER 63
PIER 64
PIER 65
PIER 66
elliott bay
cruise terminal
marina
aquarium
offices
alaskan way
elliot
western
apartments
first
bell
second
pike place
pike place market historic district
blanchard
lenora
alaskan way
western
Offices
pioneer square historic district
first
second
third
jesler
marion
madison
spring
seneca
university
union
pike
pine
A
central business district
SEATTLE
CENTRAL WATERFRONT SITE PLAN
50
200
100
300

SEATTLE CENTRAL WATERFRONT SITE PLAN
Seattle Aquarium
Pier 57 - Public Gallery
Pier 56 - Concessions
Pier 55 - Concessions
Pier 54 - Cruise Ship Terminal
Pier 52 - Ferry Terminal
Pier 51 - Commercial
Pier 50 - Commercial
Pier 48
life boats
tour boat
alaskan way
western
columbia
first
yesler
Pioneer Square
marion
madison
spring
seneca
Offices
university
union

SEATTLE
CENTRAL WATERFRONT SITE PLAN
Pier 66 - Offices
Pier 66 - Offices (above)
Pier 64 - Fish Processing (below)
Pier 63 - Maritime Museum
Floating Breakwater
300 Boat Marina
Historic Ships
Maritime Supply
Pike Place Market
Pike Place
Virginia
Lenora
Blanchard
Bell
Western
Elliot
Aquariums
Seaport Way

MARITIME ACTIVITIES


PIER 56 - CONCESSIONS
URBAN PARK
ARCADE
OFFICES
RETAIL
WESTERN AVE.
OFFICES
RETAIL
PARKING
RETAIL
SERVICE ALLEY
FIRST AVE.
SENECA STREET SECTION C
5
40
20
60
PIER 55 - CONCESSIONS
URBAN PARK
ARCADE
COMMERCIAL
WESTERN AVE.
OFFICES
RETAIL
RETAIL
PARKING
ALLEY
FIRST AVE.
SPRING STREET SECTION D
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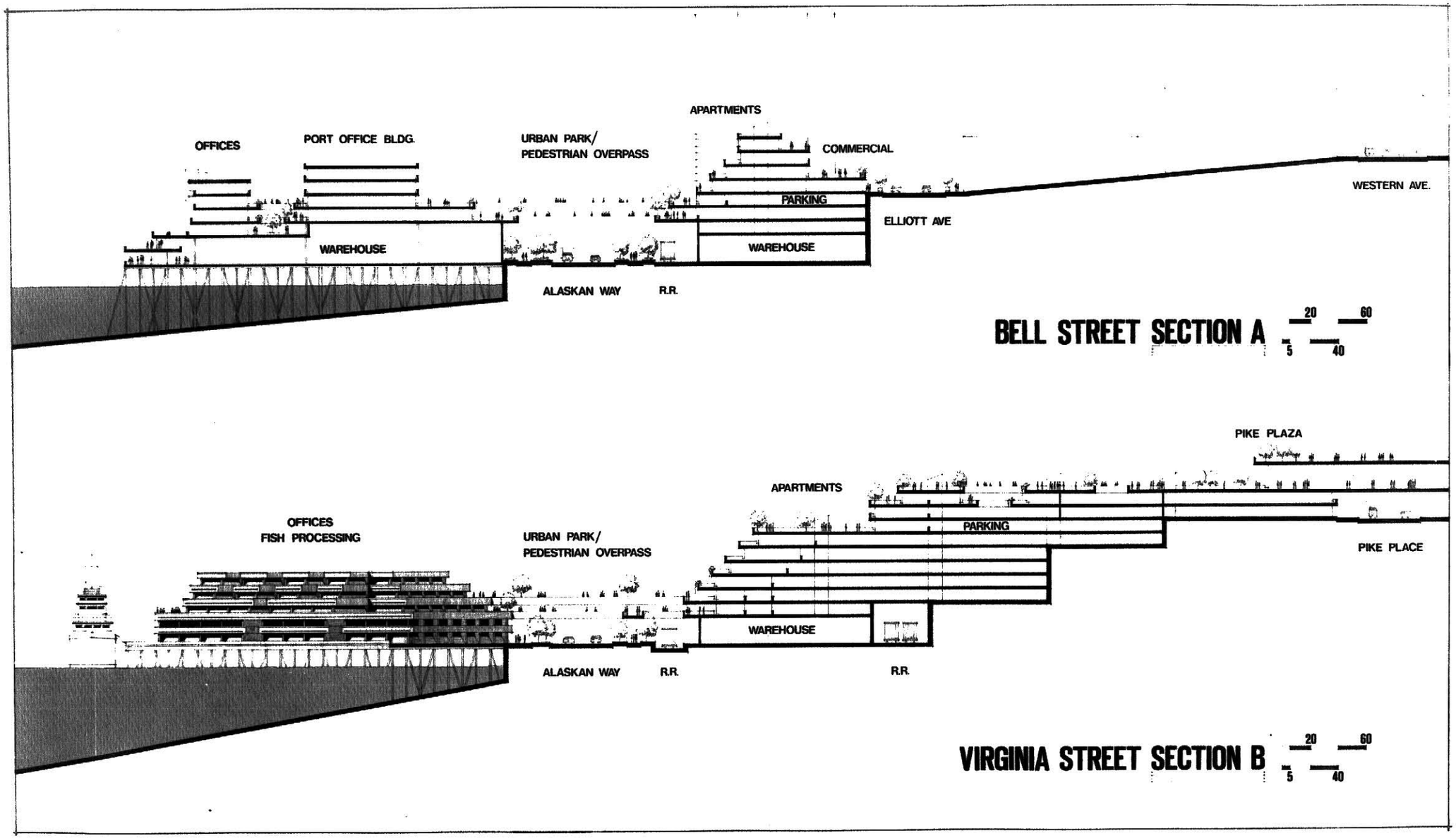
APARTMENTS
OFFICES
PORT OFFICE BLDG.
URBAN PARK/
PEDESTRIAN OVERPASS
COMMERCIAL
WESTERN AVE.
PARKING
ELLIOTT AVE
WAREHOUSE
WAREHOUSE
ALASKAN WAY
R.R.
BELL STREET SECTION A
20
60
5
40
PIKE PLAZA
APARTMENTS
OFFICES
FISH PROCESSING
URBAN PARK/
PEDESTRIAN OVERPASS
PARKING
PIKE PLACE
WAREHOUSE
ALASKAN WAY
R.R.
R.R.
VIRGINIA STREET SECTION B
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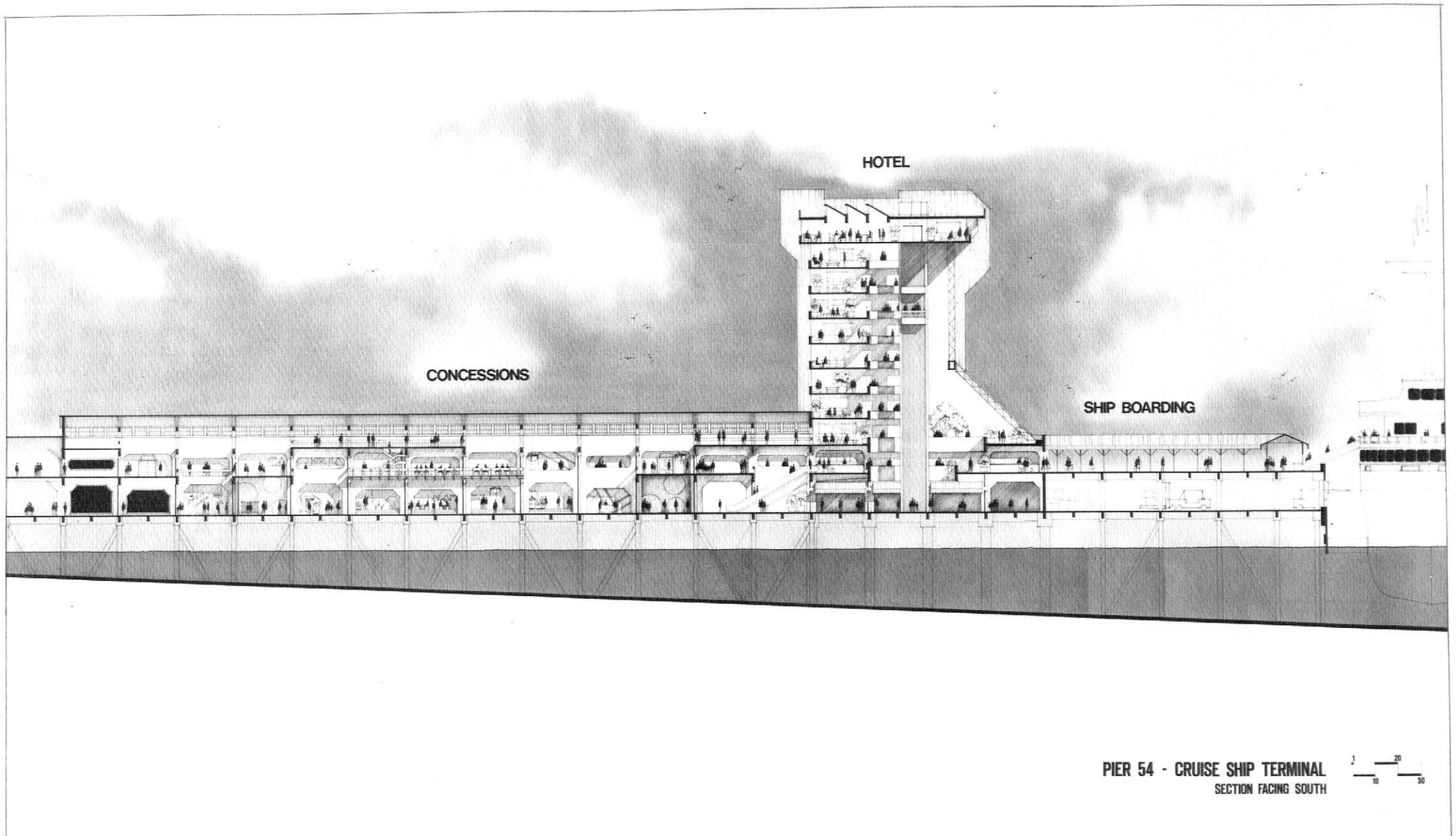
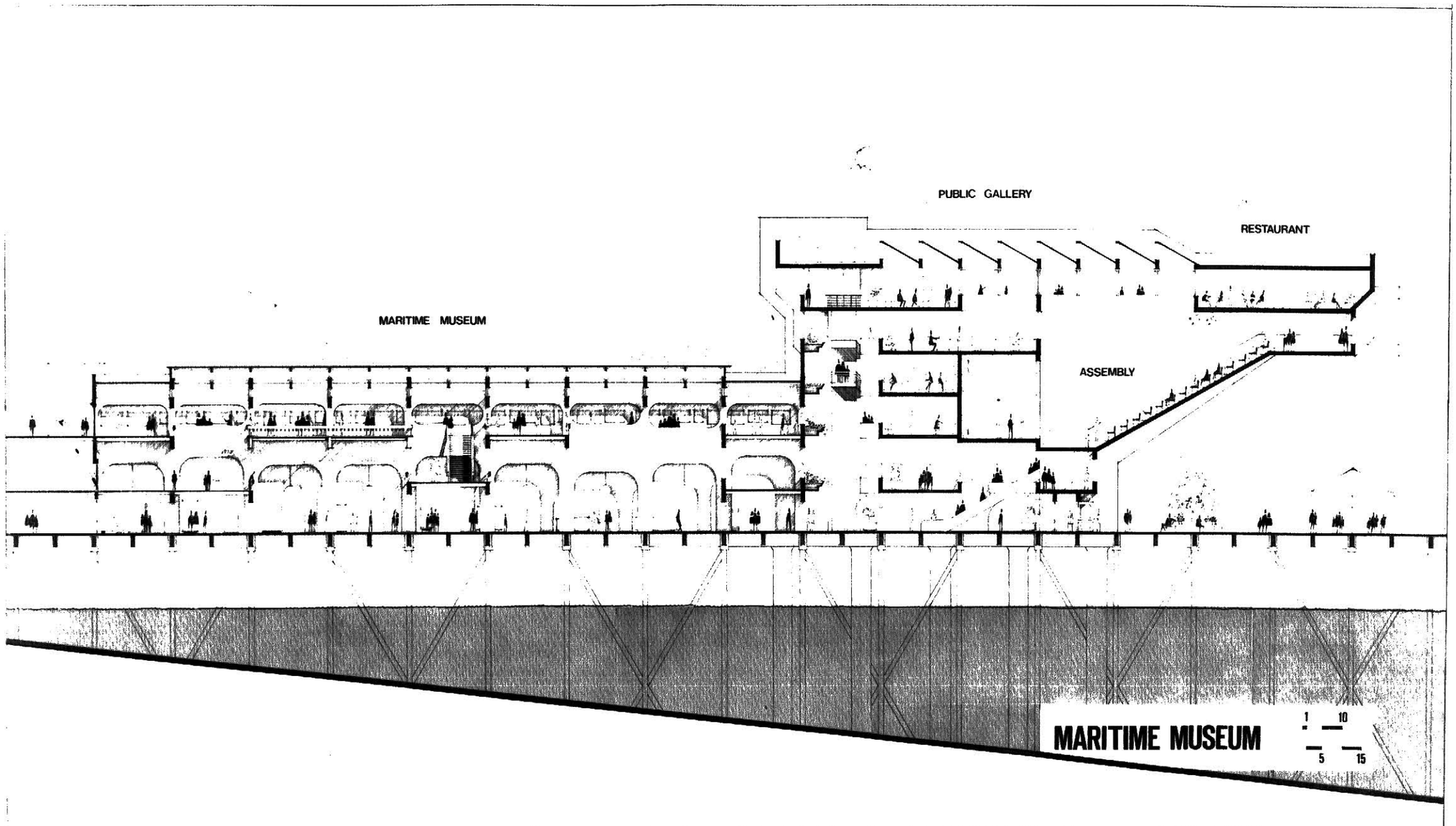


PIER 54 - CRUISE SHIP TERMINAL
SECTION FACING SOUTH

IMPORT SHOPS PIER 55

LINEAR PARK
FACING NORTH BY APARTMENTS


PUBLIC GALLERY
RESTAURANT
MARITIME MUSEUM
ASSEMBLY
MARITIME MUSEUM
1
10
5
15

OFFICES PIER 66

SEATTLE CENTRAL WATERFRONT: A COMPREHENSIVE PLAN FOR ITS FUTURE DEVELOPMENT

by

GERALD EDWIN SCHLIE

B.A.E.D. University of Washington, 1973
B.Arch. Kansas State University, 1975

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF ARCHITECTURE

Department of Architecture and Design

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1975

The city of Seattle is situated in a unique region surrounded by mountain ranges, natural lakes, forests, and inland salt-water bays on all sides. Seattle's physical character, therefore, is largely determined by its proximity to nature, its shorelines, and panoramas.

However, the shoreline area closest to the heart of Seattle's Central Business District, known as the Central Waterfront, has gradually become a decayed urban community. Because Seattle no longer considers the Central Waterfront as part of its economy, the shoreline has become the deposition site for "spillover" parking, "by-passing" highways, and inappropriate industrial uses. These are problems that the CBD could not control.

Paradoxically, the very existence of decay on the Waterfront is evidence that certain older uses are no longer necessary and that Seattle has an excellent opportunity to improve the Central Waterfront as an active working waterfront district. The future redevelopment of the Waterfront should encourage a resurgance of economic activity, once again making it a major component in Seattle's urban eonomic structure.

In responce to the present situation of the Waterfront, this report also attempts to examine the utilization of existing natural and man-made amenities rooted in the Central Waterfront's uniqueness by promoting and creating a safe and stimulating environment for leisure time activities.

Seattle's urban waterfront can be treated as a new resource for the economy of leisure. But this must result from a plan with an understanding of the area's assets and safequards, or the waterfront will be despoiled all over again in the very name of the public. It will be from the use of such a plan, not the mere existence of it, that the benefits flow.