

A Plan for the Newport Waterfront

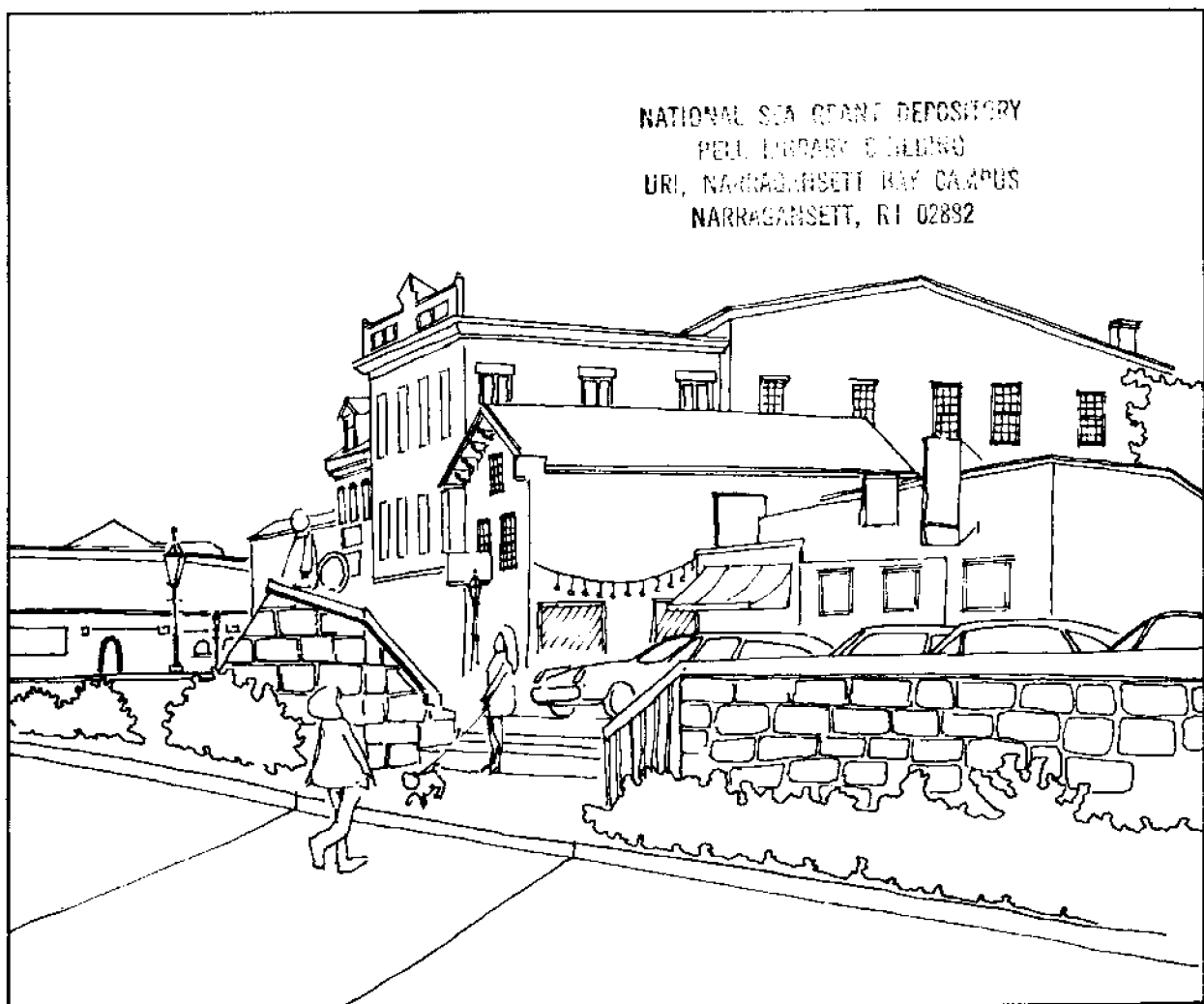


A Plan for the Newport Waterfront



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This report is based on a studio project directed by Dieter Hammerschlag, Professor of Urban Design, and completed in the fall of 1978 as part of the requirements of the Graduate Curriculum in Community Planning and Area Development at the University of Rhode Island.

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Introduction

In less than a decade Newport, Rhode Island, has made a remarkably smooth transition from a major naval center to a major tourist center. Dire predictions accompanied the departure of the Navy from this coastal town in the early 1970s foretelling economic collapse. Newport's economy has not collapsed but has flourished in the wake of a tourist boom spurred by such events as Operation Sail's Tall Ships spectacle and the America's Cup yachting competition.

The rapid growth of the Newport tourist industry has provided many economic benefits for the city, but it has created some problems as well. Growth in tourism has created traffic and circulation problems, has made Newport's economy a seasonal one, and has increased development pressure, particularly on the waterfront.

This report is the result of a three-month study by a team of University of Rhode Island graduate students in Community Planning. Its purpose is to provide a fresh perspective to development of the Newport waterfront. The original assignment presented to the study team was to analyze present use of the waterfront and suggest ideas for future development that would be appropriate and feasible and would lead to orderly and productive growth of this historic resource.

The study was conducted in three parts. First, information was collected on land use, traffic and pedestrian circulation, ownership patterns, economic activities and trends, and 14 other subjects. Then the information was sorted and analyzed, and goals for future development were formulated. Finally, sketch plans were prepared and analyzed, redrawn, then assembled into an overall plan for the waterfront.

Because of the limited time and resources available to the study team, the final plan is not all-inclusive. Instead, it concentrates on a dozen major proposals that form a framework for overall development patterns. This is not a master plan. It presents the results of the study project and suggests specific projects to be undertaken by the city and by private development to stimulate and guide the direction of growth in tourism, fisheries, and other commercial, residential, civic, and private activities.

We want to gratefully acknowledge the patient assistance afforded us by the many civic leaders and other persons who provided background information, constructive criticism, and support for our efforts. We hope the results of this study are as valuable to them as their time and advice was to us.

We especially want to thank Niels Rorholm, Coordinator of the URI Sea Grant Program, for the financial assistance that allowed us to carry this

study beyond the level of a student project. We also thank Gerry Cook, Chairman of the Newport Waterfront Commission; Sam Jernigan, Newport Planning Director; Ron Wood, architect and visiting critic; and Brian Barber, adjunct professor, for giving their time to review our ideas and offer constructive suggestions. Special thanks go to Russell Kolton, URI Publications Office, for his invaluable help in designing this publication.

A concerted effort was made during the course of this study to seek out and listen to the opinions and attitudes of concerned Newport citizens. A survey of waterfront-related issues was conducted (see "Survey of Public Attitudes"). When the study reached the phase where preliminary recommendations were possible, our findings were incorporated into an audio-visual presentation. This presentation was shown in December 1978 to a selected group of Newport city officials, in February 1979 to the Newport Rotary, and in March to the Hill Association. We solicited comments and criticisms at these presentations, and were rewarded with a large number of well-thought-out points of view. We have incorporated much of what we learned at these presentations into this final report and would like to thank those who gave us their comments.

Summary of Recommendations

- Land uses which are not dependent on waterfront access (i.e., power plants, oil companies) should be phased out of the harbor front area.
- Land uses which are dependent on visual access to the water (i.e., hotels, restaurants) should be differentiated from those needing physical access (i.e., fishing, boating), and future development should be regulated accordingly.
- A network for pedestrian access to the waterfront should be created. This would include closing Thames Street to traffic from Washington Square to Church Street, creating a pedestrian mall.
- A parking garage should be constructed on the present site of the Waterfront Parking Lot.
- Delineated bus stops, color coding of bus routes, and corresponding color-coded maps would improve the usefulness of the present bus system.
- A new visitor center, located in a portion of the Perry Mill Building, would improve visibility and accessibility to tourists and make tourist information more available.
- A comprehensive historic trail information package, available at the visitor center, would allow for self-guided tours of Newport's historic waterfront area.
- An integrated multi-purpose development is recommended for the J. T. O'Connell property and surrounding properties. This would contain a hotel, pedestrian mall on Long Wharf, parking garage, bus station, and convention center. It would serve to attract activity on a year-round basis, reducing the existing heavy dependence on the summer tourist activity in Newport's economy.
- One hundred one- and two-bedroom townhouse units are proposed for the vacant waterfront land bounded by Thames Street and Wellington Avenue.
- A fishing harbor that would extend from the State Pier in the northern part of the waterfront would provide support services and attract more boats to this vital year-round industry.
- A new harbor master's station, on the end of a lengthened Ann Street Pier, would improve harbor control and ease boat traffic congestion by providing first-time visitors with information in a readily accessible and visible location. Four locations for dinghy stacks for the use of Newport residents are proposed.
- A cooperative task force, with representatives from existing commissions and boards, should oversee future developments in the waterfront area.

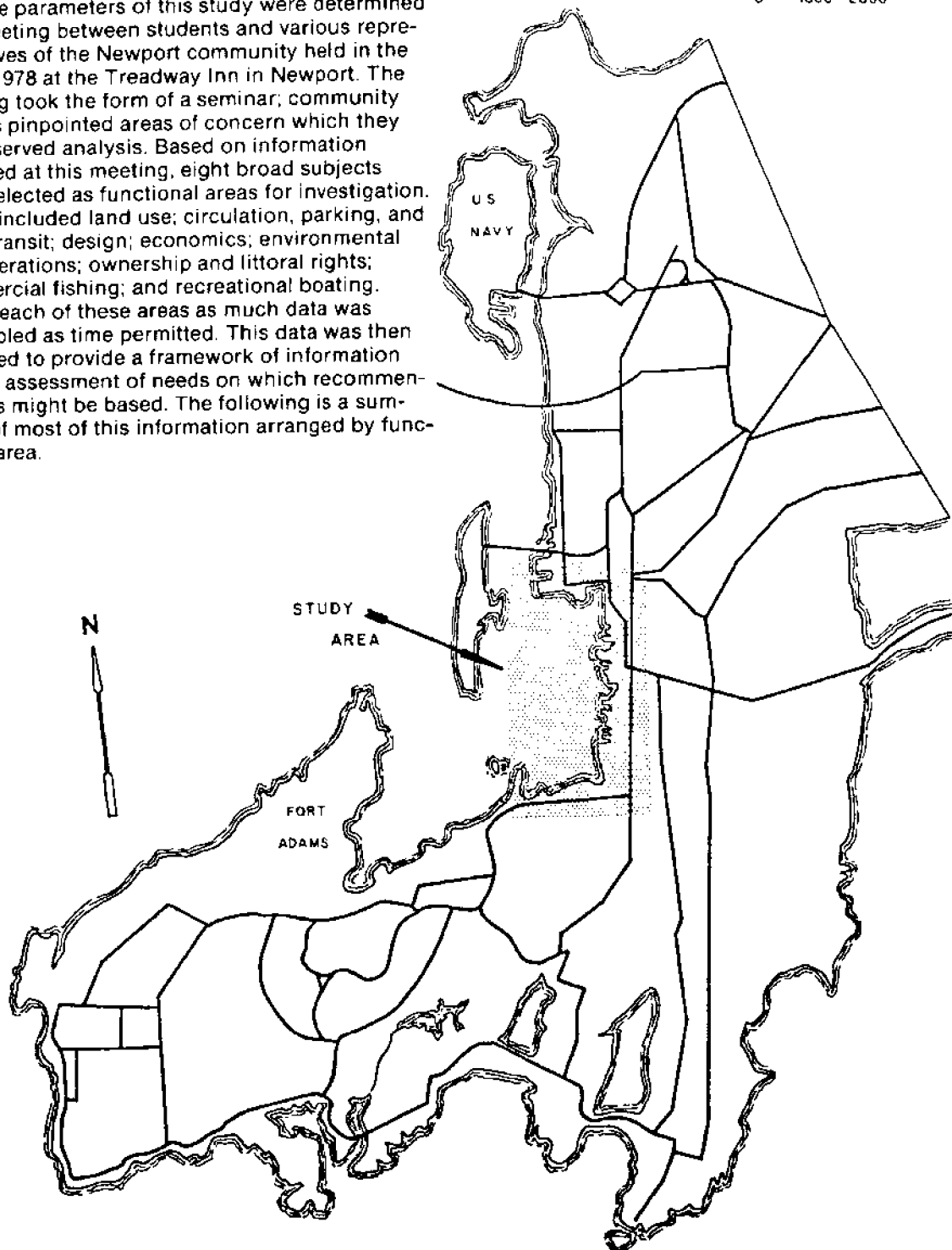
Functional Areas: Data Inventory and Needs Assessment

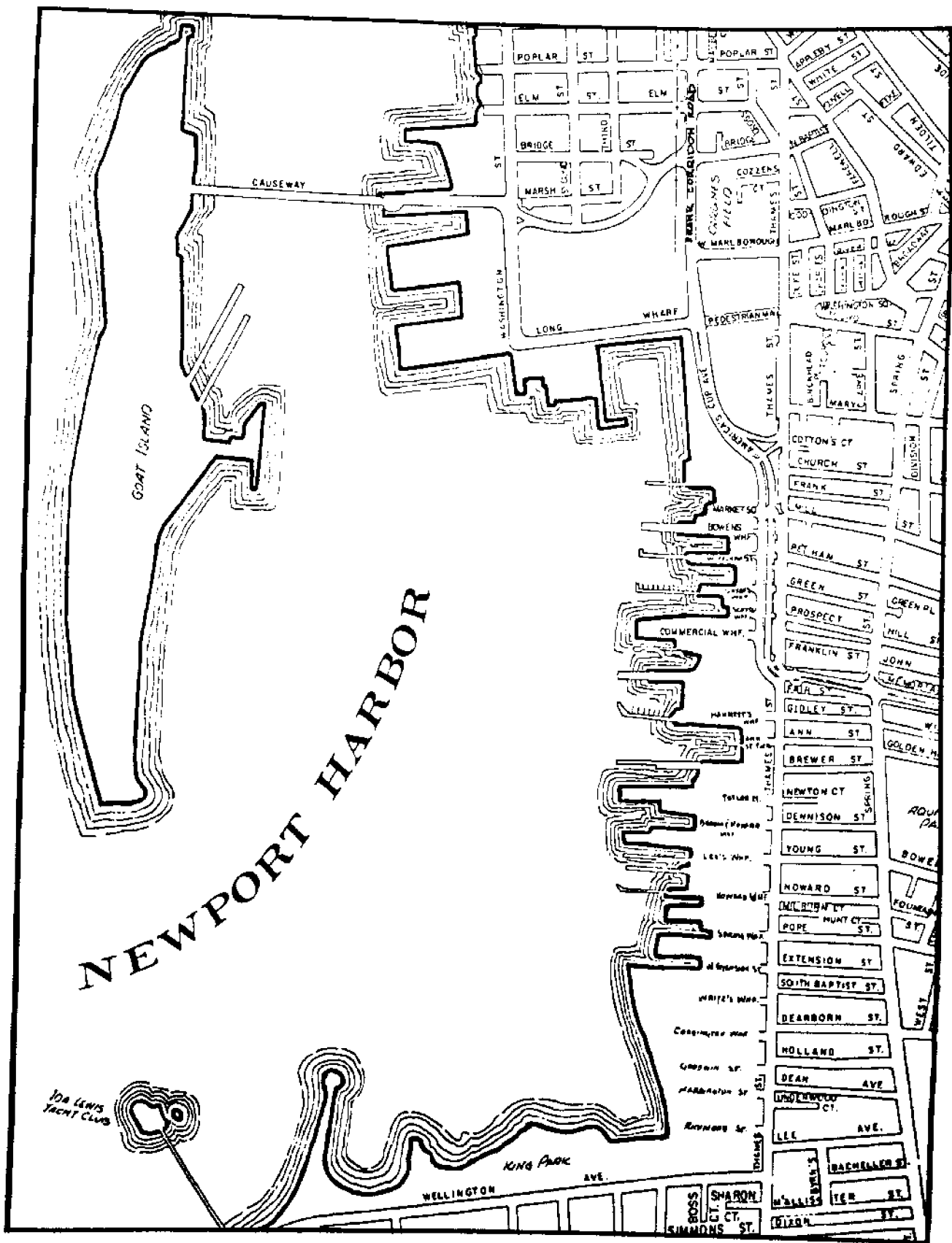
The parameters of this study were determined at a meeting between students and various representatives of the Newport community held in the fall of 1978 at the Treadway Inn in Newport. The meeting took the form of a seminar; community leaders pinpointed areas of concern which they felt deserved analysis. Based on information obtained at this meeting, eight broad subjects were selected as functional areas for investigation. These included land use; circulation, parking, and mass transit; design; economics; environmental considerations; ownership and littoral rights; commercial fishing; and recreational boating.

In each of these areas as much data was assembled as time permitted. This data was then analyzed to provide a framework of information and an assessment of needs on which recommendations might be based. The following is a summary of most of this information arranged by functional area.

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Land Use

Perhaps Newport's most important asset is its proximity to the water. The concentration of commercial and industrial activity on the waterfront has historically provided a secure economic foundation for the city. In the face of shifting economic trends and priorities, it is important for the residents of Newport to realize that the shoreline real estate is a finite resource. Development and exploitation of this resource can offer significant economic potential if it maximizes the opportunities that this unique location provides.

An assessment of the potential of the waterfront must begin with a clear understanding of existing waterfront land use. To this end, a survey of prevailing uses of waterfront land was conducted during the data collection phase of this study. During the survey, it was noted that the waterfront hosts numerous activities that compete for available space and yet, in many instances, are mutually supportive. The range of activities is so diverse that they were grouped into ten broad categories of activity for simplicity:

1. **Residential Land Use.** Residential activity has been expressed in terms of the total area that is occupied by both single- and multifamily structures and their surrounding lands.

2. **Retail/Wholesale.** This category contains those commercial establishments which sell consumable goods, such as gas stations, hardware stores, appliances, gift shops, sporting goods, etc.

3. **Service.** Service activities are those commercial functions that sell a service rather than a consumable product. Restaurants, motels, bars, banks, real estate establishments, professional and medical offices are examples.

4. **Mixed Use.** This category designates those activities that coexist on a single parcel of land, generally observed as a single structure that is occupied by more than one distinct yet compatible function. Examples include structures occupied by residential, retail, and service establishments. The Brick Market Place is a good example of mixed use on the waterfront.

5. **Marine Commercial.** Besides the service and retail commercial activities there are the marine commercial activities, which generally appear as boat yards, marine hardware, supply and fuel stores, and boat dealers and marinas.

6. **Fishing.** Those industrial and commercial functions associated with the fishing industry have been consolidated and include docking and supplies; packing plants, retail and wholesale sales of fish products; equipment storage; etc.

7. **Utilities.** This category includes land used for the generation of electricity, the storage of fuel oil, sewage treatment facilities, water pumping stations, railroad facilities, and other similar uses.

8. **Industrial.** All manufacturing and assembly



The Brick Market Place is an example of mixed use on the waterfront.

activities including welding have been identified under the industrial classification.

9. **Public Land.** Land used for public purposes (whether publicly or privately owned) has been included in this classification. Some examples are parks, post offices, churches, clubs, fire stations, museums, and preservation society facilities.

10. **Vacant Land.** This classification includes all land not in any apparent use at the time of the survey. Vacant land includes both undeveloped tracts and undeveloped portions of large tracts which may be partially developed in other uses.

Analysis focused on the relationship of the individual functional land use classifications to the study area. This relationship is expressed in two ways: first, as the total area of each category and its share of total study area; second, as a measure of the frontage or direct contact that each category has with the harbor, which reflects the degree of water access possessed by a parcel. Table I summarizes the status of each land use category in terms of area, frontage, and share of total area and frontage.

These values are also graphically illustrated by land use maps (see Figures 1-3). The table and maps illustrate the value of the waterfront in terms of land area and harbor frontage devoted to various economic activities.

The study area described by the land use maps includes 92.1% acres of real estate, 81.3% of which is developed or committed to a specific private use. The remaining 18.7%, or 17.3 acres, is either vacant land or land designated for public use.

The importance of the various land uses in the



The J.T. O'Connell property, currently vacant

study area is indicated by the relative share of frontage and area possessed by each of the land use classifications. The use which occupies the most surface area—residential use with 28.4 acres, or 30.0% of total area—has no frontage at all. On the other hand, the use which has the greatest amount of frontage—marine commercial use (including fishing) with 55.7% of total frontage—ranks third in terms of area. Nonetheless, it seems apparent that marine commercial use and residential use represent the most important land use activities in the study area.

The second largest land use category in terms of area is the mixed use category, which occupies 15.2% of total land area but no frontage. In view of the value of frontage, it is understandable that most uses which have no need for access to the water have none.

Frontage is not a complete indicator of access, however, since it represents only physical access to the water. Visual access to the water is also important in that it serves to enhance many land uses, particularly service uses (restaurants and hotels) and residential use.

Unfortunately, recent developments along the waterfront have served to block visual access to the water, leading restaurants and hotels to purchase waterfront lots in order to obtain visual access. In the process, these service uses consume frontage although they are not dependent on it. Service industries occupy only 11.0% of the total surface in the study area but are the third largest occupant of frontage with 14.4% of the total.

Furthermore, this is a potentially self-perpetuating trend, as the continued encroach-

ment of service and commercial businesses onto the waterfront not only consumes frontage which is essential for marine commercial and fishing activities but also blocks visual access. If visual access is not preserved, the day may come when only frontage lots have visual access, a condition which might severely detract from the value of Newport's waterfront. The future development of land uses in Newport should be undertaken with consideration of the various needs of different land use activities for access.

Future uses can take advantage of the natural topography of the waterfront to allow physical access to those land uses which are dependent on it, and still permit visual access to future hotels and restaurants. For the most part, land uses which require direct physical access to the water—i.e., boating and fishing—do not block visual access for other uses—such as hotels and restaurants, which can be located in larger buildings set back on the hill overlooking the water. Currently, the Treadway Inn, Bowen's Wharf, and The Mooring occupy premium sites that have a great deal of aesthetic appeal, a factor which overshadows the functional requirements for harbor access.

The fishing industry has a large commercial requirement for harbor frontage while requiring only a moderate amount of land area. This is evidenced by tie-up and off-loading facilities which presently account for nearly 18.7% of the frontage in the study area and yet occupy only 8.6% of the total land area. Marine commercial activities, which include recreational boating facilities, place the heaviest demand on the harbor frontage, as 37% of the total frontage is devoted to this use. Marine commercial requirements for land, however, are small in comparison to other activities, with only 3.6 acres, or 3.8% of the total area, devoted to this use.

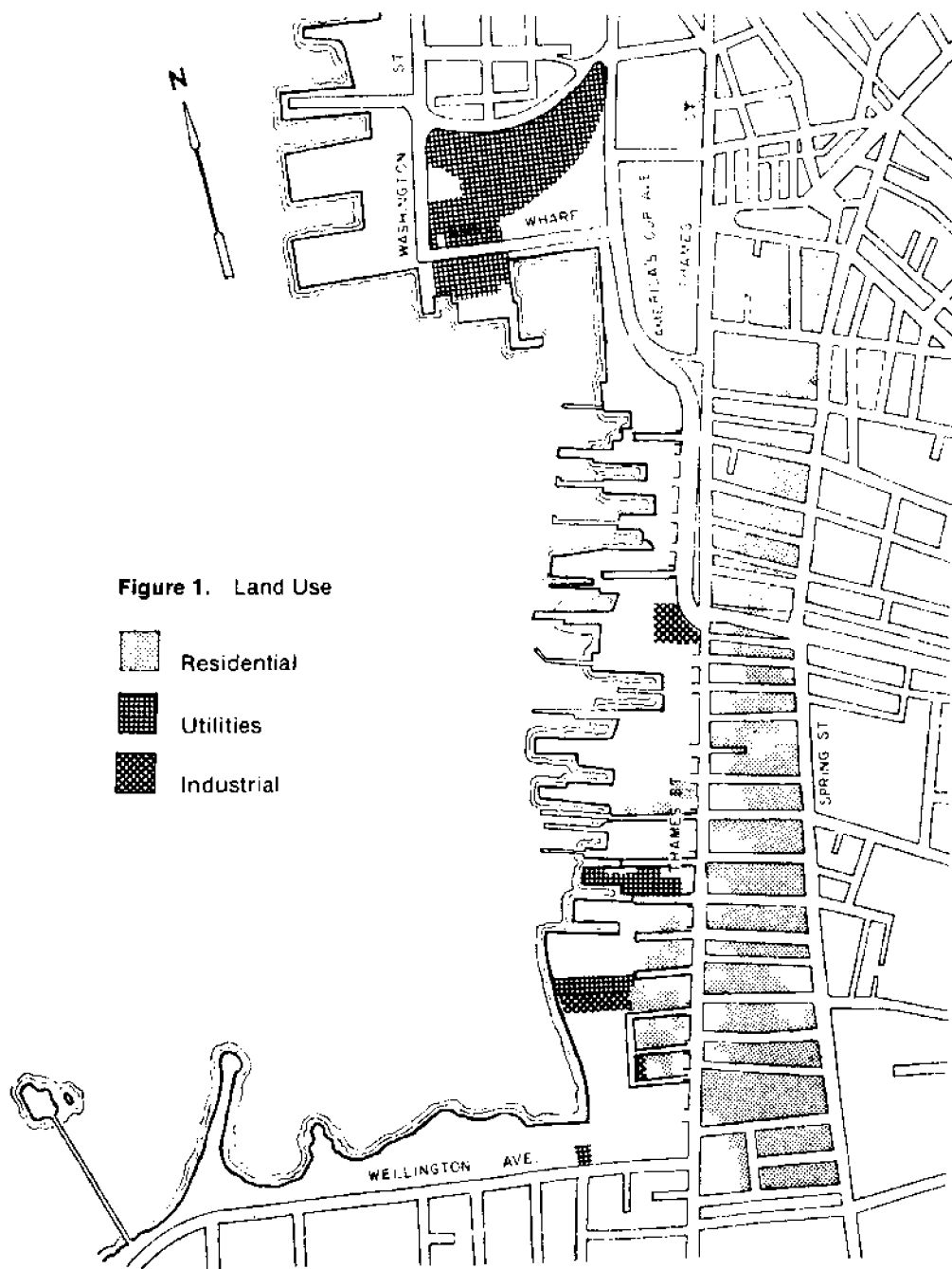
Table 1. Land Use Frontage and Area

	Frontage (ft.)	% of Total	Area Acres	% of Total
Residential	0	0	28.4	30.0
Retail/Wholesale	200	1.0	4.4	4.7
Service	2800	14.4	11.0	11.9
Mixed Use	0	0	15.2	16.5
Marine/Fishing	10775	55.7	11.6	12.5
Utilities	312	1.6	3.6	3.9
Industrial	150	.7	.6	.7
Public	4150	21.4	11.7	12.7
Vacant Land	925	4.7	5.6	6.0
Total	19312 ¹	100.0 ²	92.1	100.0 ²

¹ Includes the perimeter measure of major wharves that are of adequate size to sustain circulation and structures

² Totals may not equal 100.00% due to rounding

Source: URI/CPAD Land Use Survey, 1978

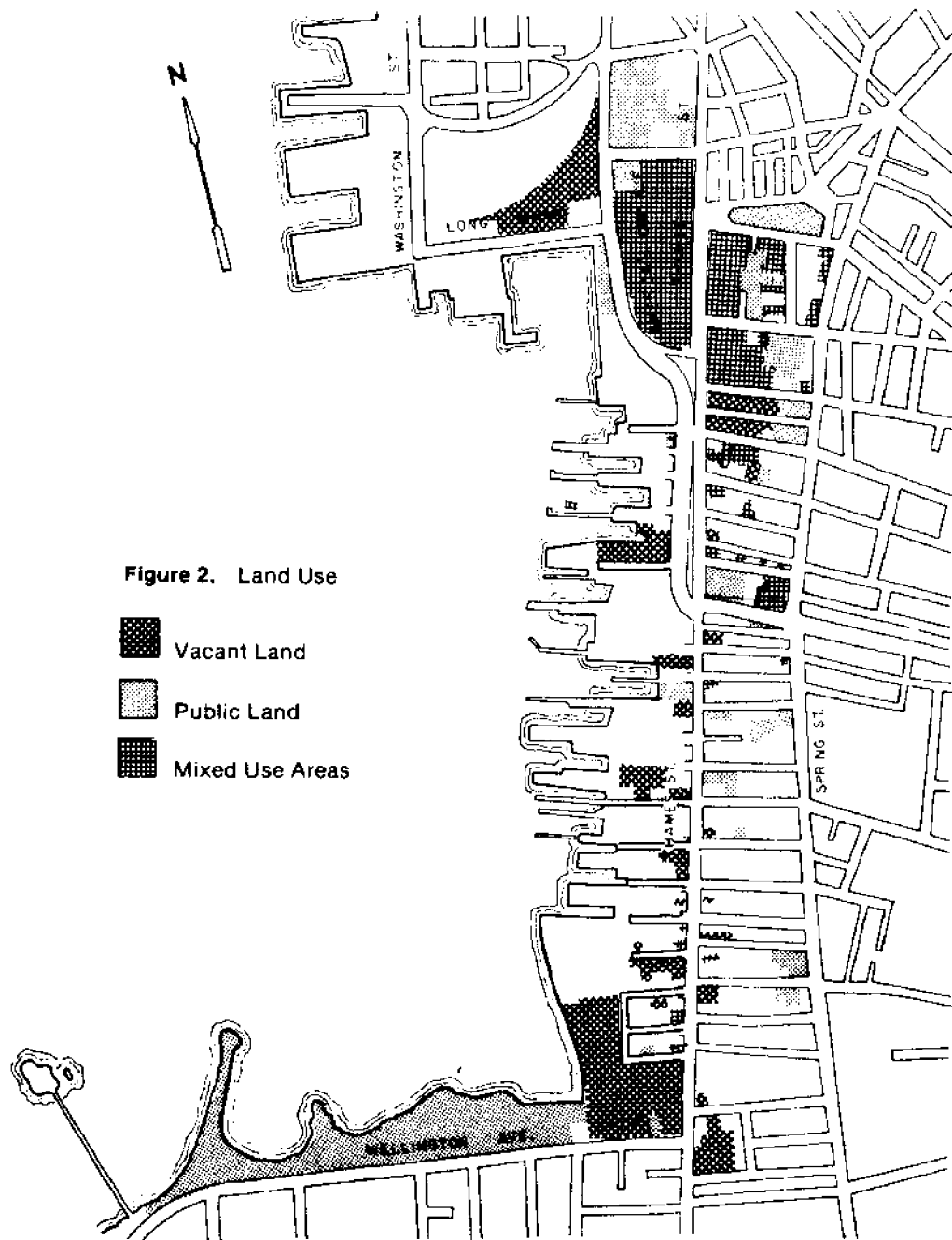


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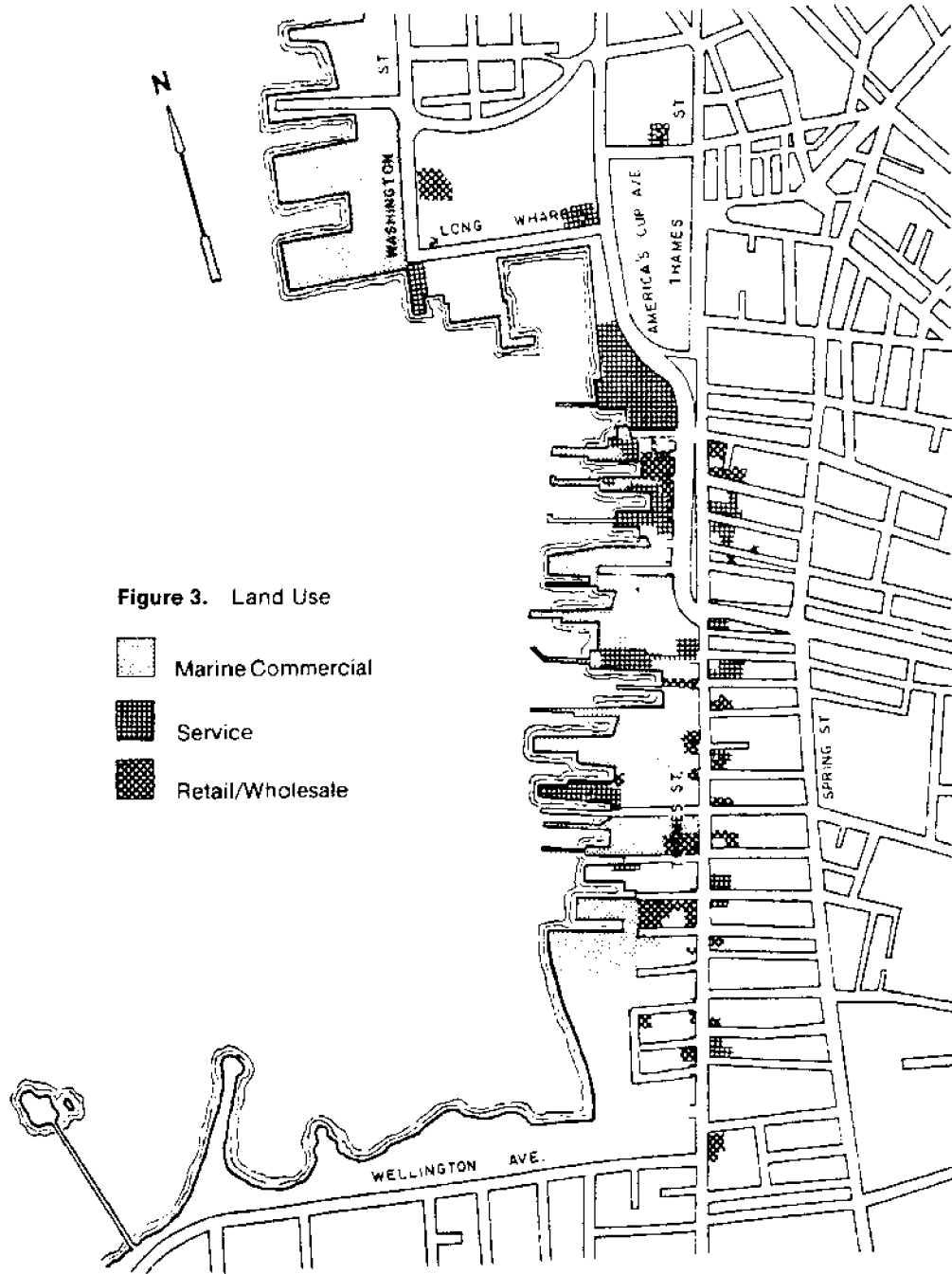





Figure 3. Land Use

-  Marine Commercial
-  Service
-  Retail/Wholesale

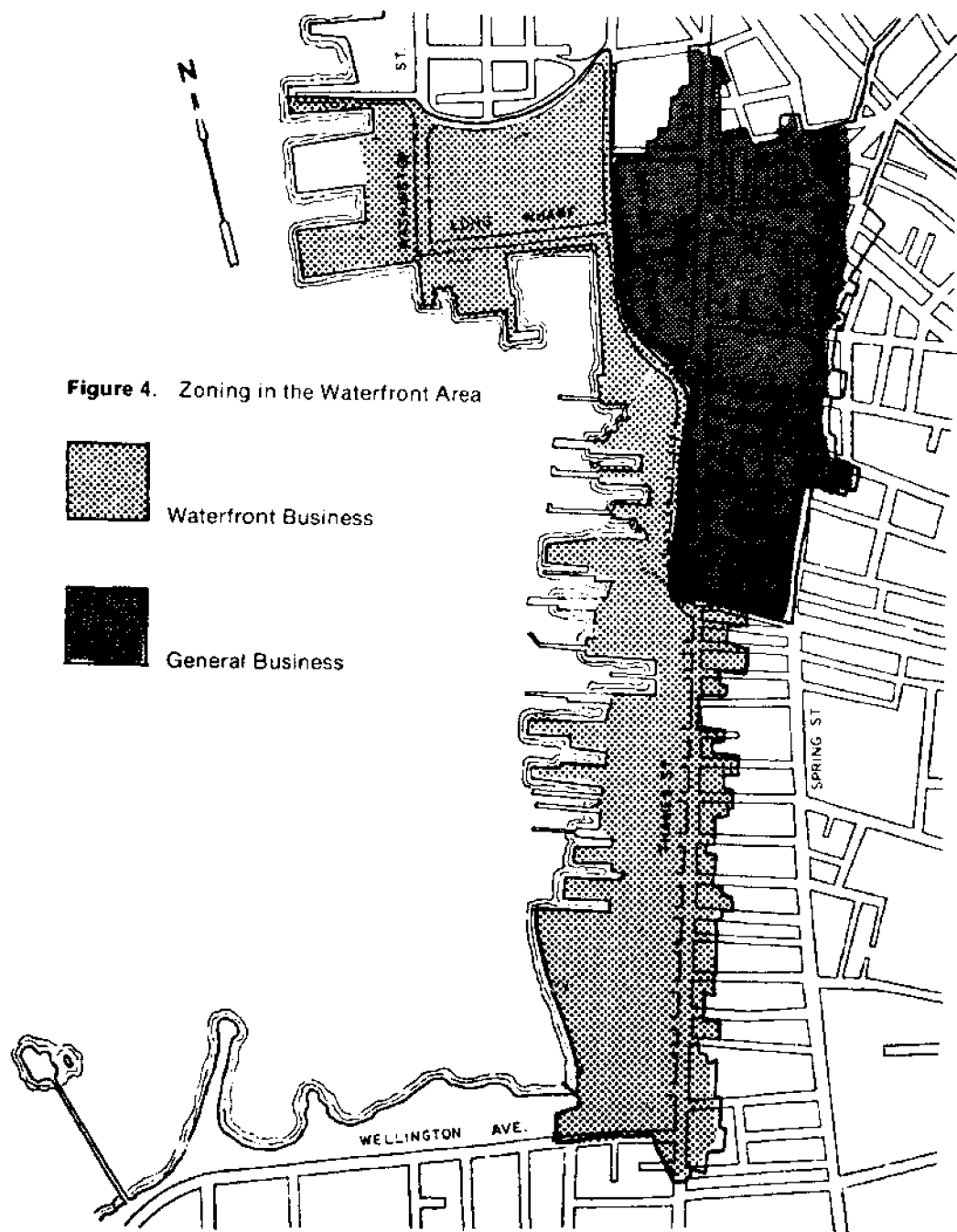
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Figure 4. Zoning in the Waterfront Area



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Zoning. The pattern of land use has evolved through commercial pressure which has been tempered by municipal land use controls. The city's zoning ordinance, last revised in 1977, permits five categories of activity to take place within the waterfront area (see Figure 4). The permitted uses are waterfront business (WB); general business (GB); residential requiring 3,000-square-foot lots (R3), residential requiring 10,000-square-foot lots (R10), and residential requiring 20,000-square-foot lots (R20).

General business and waterfront business classifications are very similar in general, the major difference being that the latter is intended to permit all uses that are directly required by fishermen and boaters. Also, banks and other financial institutions, permitted under GB, require a special exemption in WB. Printing and publishing establishments, permitted in GB zones, are not permitted in WB areas. Nursing homes, gasoline filling stations, and automobile repair shops are permitted by special exception in GB zones but not permitted in WB zones. Conversely, manufacturing, processing, assembly, and storage of goods and commercial storage of fuel and bottled gas, which are not permitted under GB classification, are allowed by special exemption in WB areas.

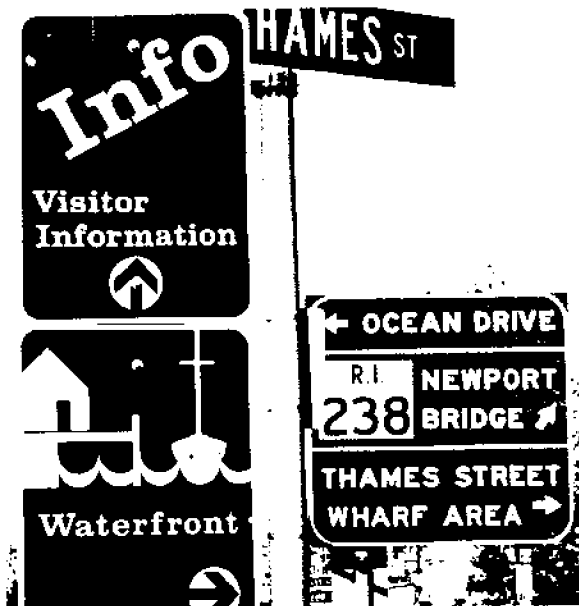
As a result, the waterfront area west of America's Cup Avenue and Thames Street, which is zoned WB, has become a diverse combination of activities. Thames Street has traditionally been a line of demarcation between the water-related activities of the harbor and the community activities of the city.

Land use in the waterfront area is also restricted by flood hazards. Because of its low elevation and proximity to the water, much of the waterfront property is subject to flooding (see Figure 5).

Conclusions. Nearly 5% of the harbor frontage and 7% of the waterfront land area was found to be vacant. Analysis of the trend in land use along the waterfront indicates that this land should be considered for uses that have a direct functional dependence on physical access to the water. In order to protect and improve access, both visual and physical, there is a need for more community control over development and redevelopment within the study area.

Circulation, Parking, and Mass Transit

As with any commercial or industrial area, the movement of people and goods is essential to the vitality of the Newport waterfront. In the interest of improving the efficiency of this movement, a thorough examination of the transportation systems currently in operation in the study area was undertaken. The key transportation elements examined



Traffic signs at the corner of America's Cup Avenue and Memorial Boulevard are confusing.

were problems with vehicle circulation, pedestrian circulation, parking, and mass transit systems.




Vehicle Circulation. Examination of the transportation system and transportation patterns in the study area brings to light a number of factors which impede efficient movement of vehicles and pedestrians. Probably the most important of these are the signs that guide traffic within the area, which are often confusing and inadequate.

There are three types of signs in the waterfront area: those guiding traffic through the area, those guiding vehicles to parking locations, and those identifying areas of interest. Since a high percentage of the traffic in Newport is composed of vehicles whose operators are not familiar with the city (44% come from out of state, according to Wilbur Smith Associates) and since Newport's roads are very intricate, a clear, concise, and consistent system of signs is very important to ensure smooth traffic flow. Unfortunately, the signs which are designed to guide traffic on the waterfront do not constitute such a system. In fact, they do not appear to represent a system at all.

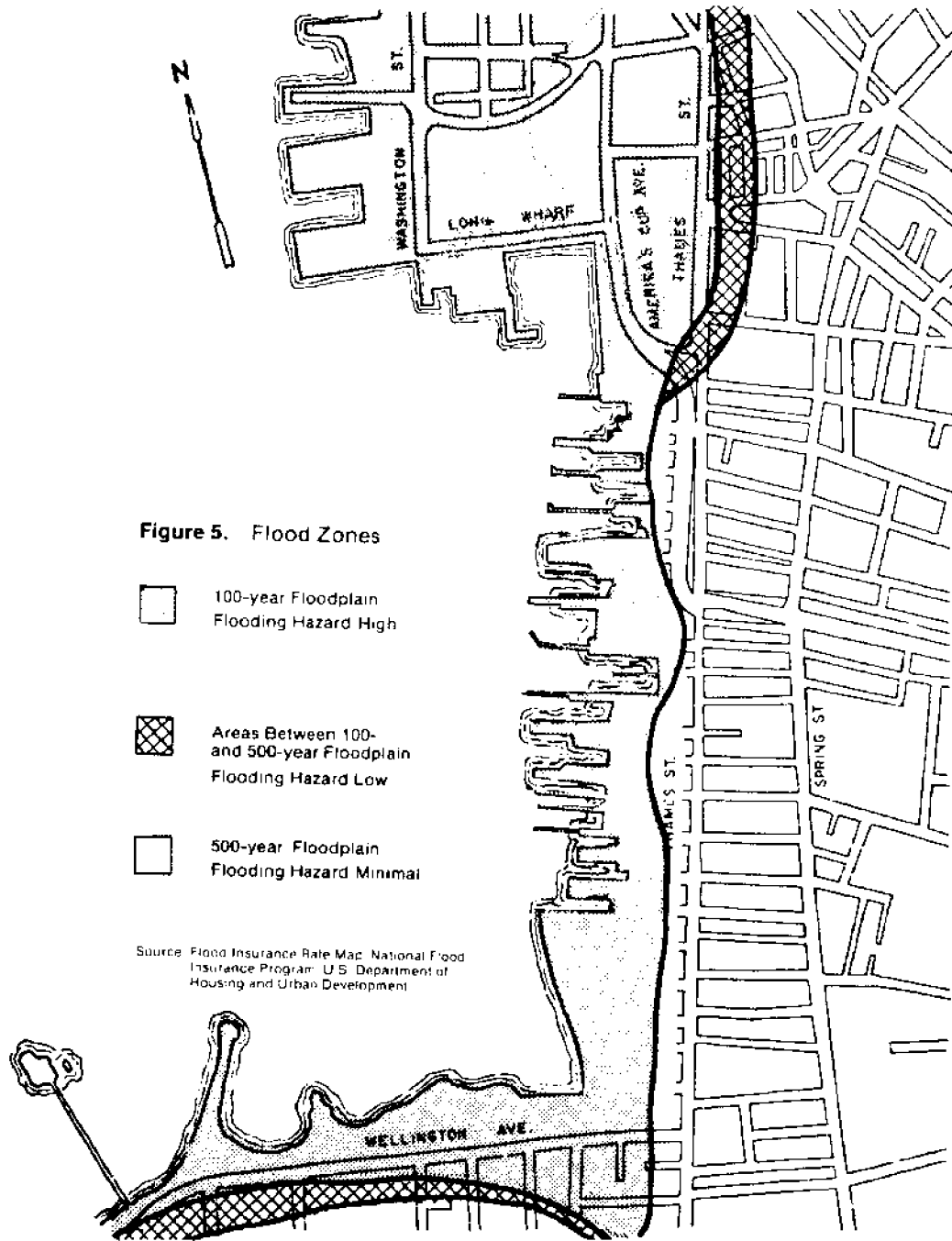
Signs may provide ample information to vehicles entering the city but offer little or no assistance in leaving it. For example, signs which guide traffic into the area on America's Cup Avenue are large and clear, in the character of interstate highway signs, but signs which guide traffic out of the area, such as the blue and white "Newport Bridge" signs, are small and appear to be distributed randomly throughout the waterfront instead of consciously placed at important intersections.

Signs guiding vehicles to parking locations on

Figure 5. Flood Zones

-  100-year Floodplain
Flooding Hazard High
-  Areas Between 100-
and 500-year Floodplain
Flooding Hazard Low
-  500-year Floodplain
Flooding Hazard Minimal

Source: Flood Insurance Rate Map, National Flood Insurance Program, U.S. Department of Housing and Urban Development



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the waterfront are almost wholly lacking. This is possibly a reflection of the general lack of organized parking spaces on the waterfront. Some public parking, in areas such as the Mary Street Parking Lot, does exist, but visitors are left to fend for themselves in discovering it. There have been recent efforts to post signs identifying key areas of interest such as the mansions, the Tennis Hall of Fame, and Cliff Walk. While these can be helpful, their placement has often detracted from their usefulness by creating a visual clutter of signs at intersections. In general, what is needed for efficient traffic flow in the study area is not more signs but more orderly and systematic positioning of signs.

Sign problems are not the only factors impeding efficient vehicle circulation along the waterfront. Another is the design of the existing street system and the pattern of vehicle flow within the system.

There are four types of streets in any street system. The first type consists of highways and thoroughfares. These are designed to move a maximum number of vehicles through an area at a maximum speed. Typically, they are divided highways with limited access permitted only by means of ramps. The second type is arterials. These are designed to provide for efficient movement of vehicles between points within a given area and to provide access to and egress from the third type of street, the collector. Collector streets are designed to connect arterials with local streets; local streets provide access to land and parking areas and provide those occupying the land with access to collectors, arterials, and thoroughfares.

Figure 6 shows traffic volumes on a typical weekday afternoon in the summer of 1977. It shows the number of vehicles traveling in both directions along specific sections of roadway within the waterfront street system. As shown by this map, the bulk of traffic flow occurs along America's Cup Avenue from either Frank Corridon Road or Memorial Boulevard, a route which in spite of heavy use is rarely used to its design capacity. Note that most of Spring Street and the southern part of Thames Street, which carry 800 vehicles per hour, carry nearly as much traffic as Frank Corridon Road and Memorial Boulevard, each of which carry 990 vehicles per hour. This is surprising in view of the differences in the design capacities of these routes. Spring Street and the southern part of Thames Street are narrow residential streets on which curbside parking is permitted. Frank Corridon Road and Memorial Boulevard, on the other hand, are four-lane divided highways.

The use of these dramatically different street types by similar volumes of traffic dramatizes a major transportation problem along the waterfront. Waterfront streets are often called upon to

fulfill roles for which they were not designed and there is often considerable confusion as to what role any given waterfront street is serving.

In particular, our analysis has shown a lack of arterials with respect to peak demand along the waterfront. This has compelled the use of collector roads and local streets for the movement of vehicles from place to place, resulting in heavy traffic on what should be quiet residential streets (see Figure 7). An attempt has been made to remedy this situation by the construction of America's Cup Avenue. Unfortunately, this road was designed with many of the characteristics of a thoroughfare, in that it is a divided highway with sign systems characteristic of major highways. This route encourages high-speed travel in the immediate vicinity of the waterfront but is not a limited-access road. To make matters worse, it was not designed to blend with the surrounding street system.

Beginning at Frank Corridon Road in the northern part of the study area, this major route travels only half the length of the waterfront before turning abruptly east onto Memorial Boulevard. In essence, it is a freeway which begins nowhere and ends nowhere. It also represents an imposing barrier to pedestrian traffic, effectively cutting the city of Newport off from the waterfront. The construction of high-capacity routes such as America's Cup Avenue through the waterfront does not seem to be a viable solution to the traffic problem, as these highways generally seem to create more problems than they solve. Furthermore, the destruction of buildings and condemnation of private property required for such construction is unjustifiable, since it could seriously detract from the appearance of Newport's historic streetscapes (as America's Cup Avenue apparently did). These considerations make the problem of finding major routes through the study area a difficult one.

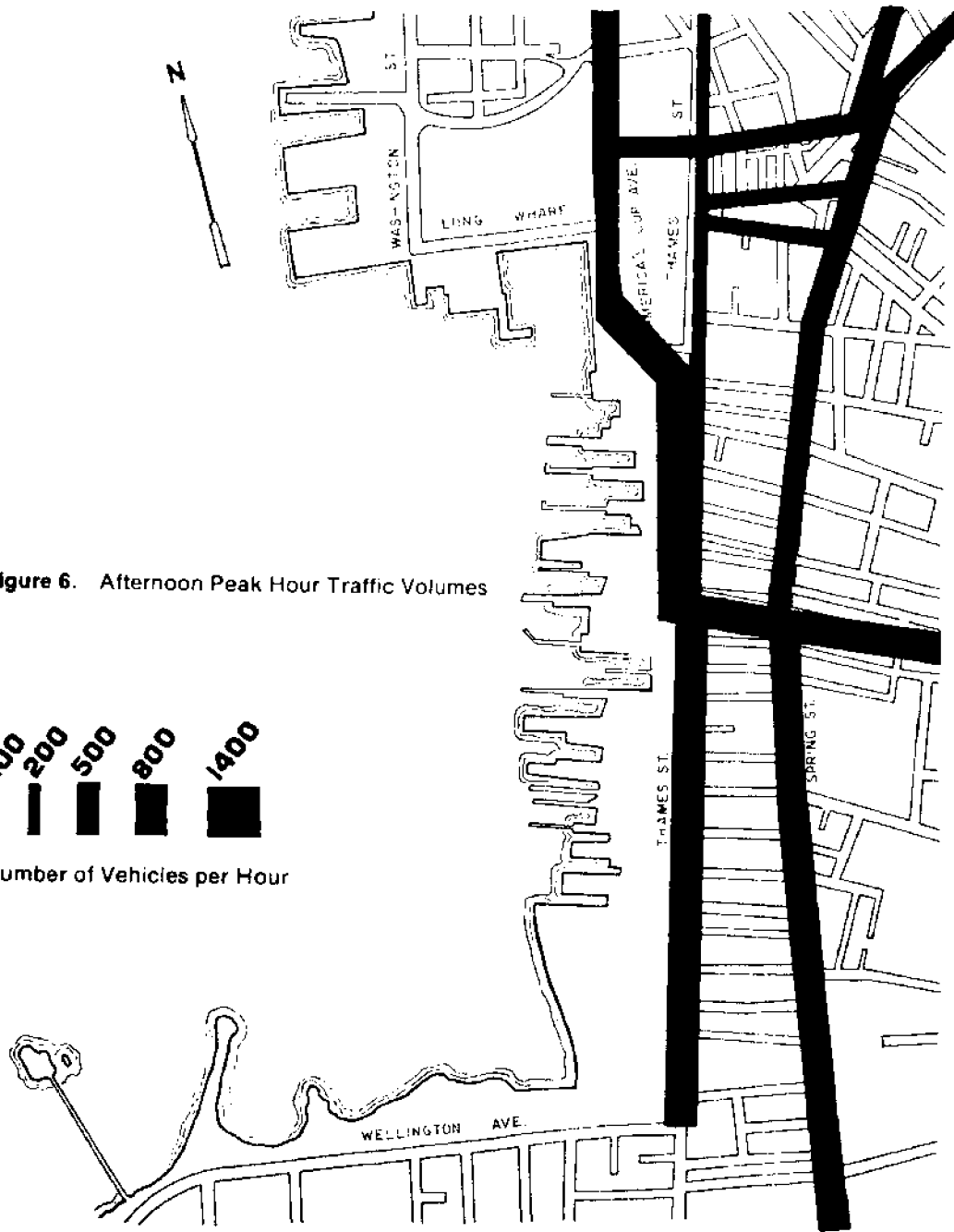
There are other specific traffic circulation problems in the study area. For example, the present circulation pattern directs traffic one-way (south) along Thames Street from Washington Square to its intersection with Mill Street and America's Cup Avenue. This road, carrying about 250 vehicles per hour, is another example of a road which routes traffic to nowhere. Upon reaching the end of this section of Thames Street, vehicles encounter a section which has been made one-way north. They must therefore leave Thames Street for America's Cup Avenue or Mill Street. Traffic flow in this section of Thames Street is further limited by its narrowness; the street presents many visual attractions and invites visitors to slow down or stop but provides no easy access to off-street parking.

None of the traffic signals along the various routes through the city appear to be synchronized.

Figure 6. Afternoon Peak Hour Traffic Volumes



Number of Vehicles per Hour



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The wall along America's Cup Avenue is a barrier to pedestrian access.



Alley between Bowen's Wharf and the HMS Rose, a major thoroughfare for pedestrians

This means that it is not possible to travel along these routes without being stopped. This also limits the capacity of roads which intersect America's Cup Avenue by backing up traffic at intersections. This is not only annoying and frustrating for motorists but it also increases air pollution levels (particulates and carbon dioxides) and noise levels in the area, detracting from its attractiveness.

Conclusions. Analysis of vehicle circulation in the study area indicates that there is a need for more orderly and systematic positioning of signs, establishment of designated major routes through the area, and synchronization of traffic signals.

Pedestrian Circulation. Circulation problems are not limited to vehicles in the study area. Pedestrians fare no better. The effect of America's Cup Avenue as a barrier to pedestrians has already been mentioned. This has been further intensified by the construction of a wall about five feet high along almost a quarter of a mile of this road. Since there is no way to cross this barrier, pedestrians must walk to either of its ends to approach the water's edge. Other barriers to pedestrian transit along the waterfront include a fence at the northern edge of the Treadway Inn property and another just south of Ann Street Pier.

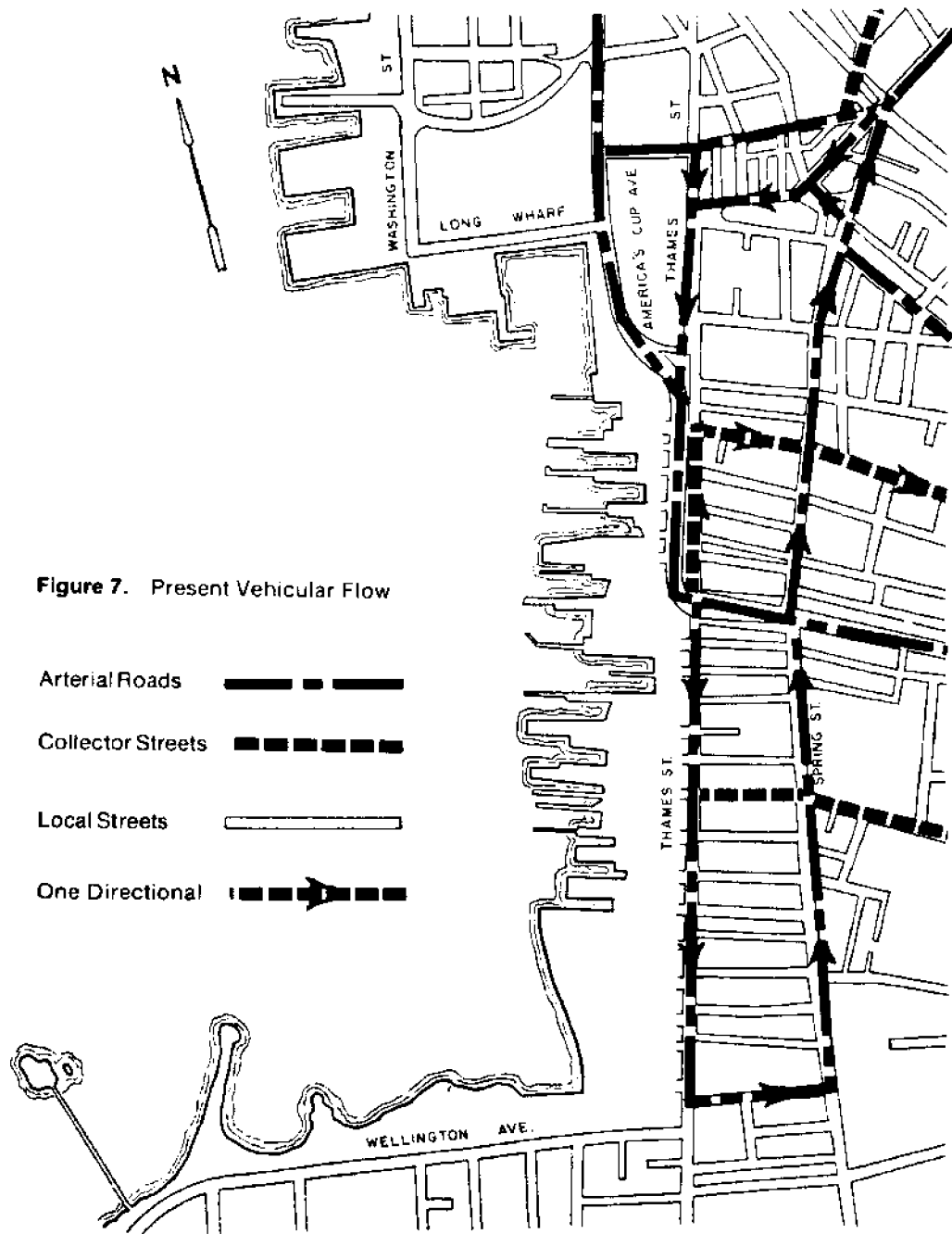
There is also no continuous system of pedestrian pathways from one attraction to another along the waterfront. Attractions are often separated by buildings and parking lots which force pedestrians to search for connecting pathways or often to cross unsightly areas to reach them. An example of this is to be found between Bowen's

Wharf and the HMS *Rose*, two significant attractions on the waterfront. Passage through an alley containing a garbage dumpster is presently the quickest route between these attractions.

Perhaps the most serious problem for pedestrians in the study area is the lack of information and rest room facilities. The waterfront is almost devoid of pedestrian-oriented signs. The Chamber of Commerce operates a drop-in center for visitors in the northern part of the waterfront, but its facilities are inadequate and it is not well publicized. This deficiency is a reflection of the continued emphasis on designing for automobiles in waterfront development instead of designing for people (see "Design" section).

Conclusions. Analysis of pedestrian circulation in the study area has led to the conclusion that there is a need for the removal of barriers to pedestrian movement, for the creation of an integrated system of pedestrian pathways, and for provision of public facilities, particularly rest rooms and a comprehensive information center, which are conveniently located and well publicized.

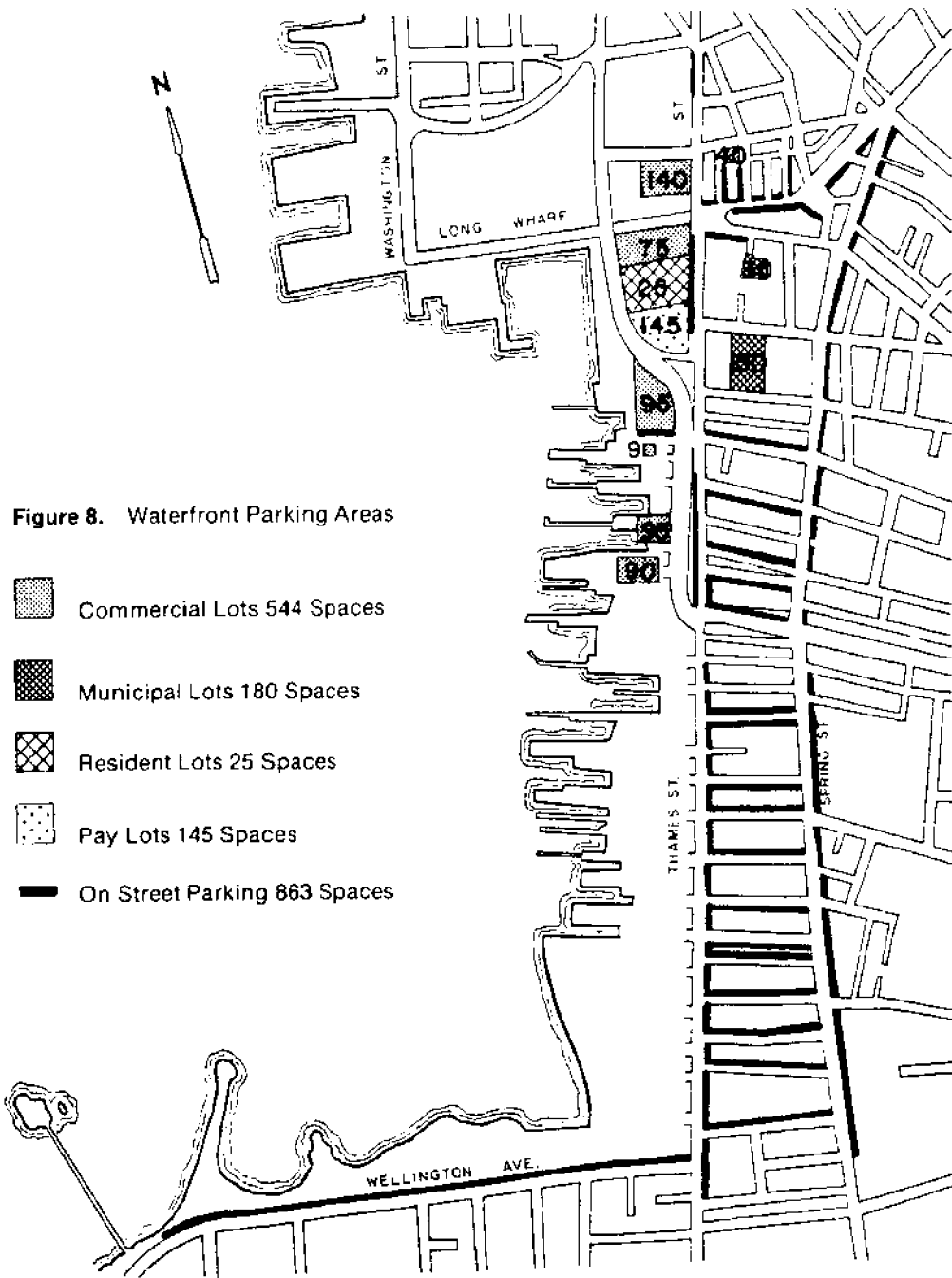
Parking. A lack of parking space and access to parking space contributes to traffic congestion on the waterfront. Figure 8 shows the numbers and distribution of parking places in the study area. For purposes of analysis, the study area was divided into two parts, one north and the other south of Memorial Boulevard. The northern part contains a recently redeveloped section which contains all of the lot parking in the study area: ten parking lots. In contrast, the southern part



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contains no parking lots but depends solely on on-street parking.

In the northern part of the study area there are 1,118 parking spaces. Of this number, 403 are curb spaces and 715 are lot spaces. Two of the parking lots are city-owned, one at Touro Street and the other at Mary Street. These supply 30 spaces and 150 spaces, respectively. The remaining lots are:

Brick Market Pay Lot	145 spaces
Brick Market (free)	75
Brick Market (residential)	25
Treadway Inn	95
Shopping Mall (customer)	140
Charles Street	40
The Mooring	95
Commercial Wharf	90

Access to 535 of these lot spaces is provided from the northern section of Thames Street, a low-capacity, congested route, as noted in "Vehicle Circulation."

Of the 403 on-street spaces in the northern study area, only 80 spaces are placed in the relatively efficient angle-to-curb format. There are 47 angled parking spaces along the central portion of Thames Street, between Memorial Boulevard and Mill Street. There are 24 such spaces along the northern part of Thames Street, from Washington Square to Mill Street, and 20 more in Washington Square. The remaining 323 on-street parking spaces are parallel, contributing to congestion in this area.

In the southern part of the study area there are 460 parking spaces, none of which are in lot formation. Of these, 339 are curbside parallel parking spaces. Access to most of these is provided by Thames Street, limiting the capacity of this route. There are a relatively large number of angled parking spaces, 121, on Wellington Avenue along the boundary of Kings Park.

A study of parking characteristics on a typical July weekday in 1977 revealed that peak parking occurs at 2:00 p.m., when 87% of the spaces in the northern part of the study area are filled (Wilbur Smith Associates). In this area there is a turnover of 4.5 cars per parking space per day average. The purpose for parking and average length of stay for these parked cars is shown in Table 2. Thirty-seven percent of the people parking in this area were from Newport, 19% from other points in Rhode Island, and 44% from out of state.

The southern portion of the study area is primarily residential and differs markedly in parking characteristics from the northern portion, which is more business-oriented. In this area, the average daily turnover rate is 1.2 cars per parking space. The purpose for parking and average length of stay for cars parked in this area is shown in Table 3. Forty-eight percent of the people park-

Table 2. Parking in Northern Part of Study Area

Purpose	Relative Percent	Time Parked
Recreation	38%	1.83 hours
Shopping	27%	1.95 hours
Working	16%	5.7 hours
Business	10%	2.0 hours
Visiting	8%	2.68 hours
Other	1%	—

Source: Wilbur Smith Associates

ing in this area were from Newport, 18% were from other points in Rhode Island, and 34% were from out of state. The size of this last figure suggests that many out-of-state tourists seek parking in this less accessible part of the waterfront. This may be due to pressure on parking spaces in the more commercial northern part of the study area and to lack of convenient access to these spaces.

This pressure, coupled with the tendency of traffic to flow from America's Cup Avenue south onto Thames Street, forces southern Thames Street to serve the function of a major arterial as well as a local street for parking access in this area. The two functions conflict: parking vehicles impede the flow of through traffic and through traffic makes entering and leaving parking spaces hazardous.

Conclusions. Besides an overall insufficiency of parking spaces in the study area, there is a lack of conveniently situated spaces, particularly at times of high demand. Shoppers are forced to spend a significant amount of time looking and often park in inappropriate places or occupy spaces needed by residents. There is a need for construction of conveniently located, easily accessible parking facilities in the study area.

Mass Transit Systems. The current bus service in Newport is well routed and provides generally adequate service for Newport residents familiar with the system. For a tourist or occasional user, however, the bus system can be confusing. There are no marked bus stops and no posted signs which display routes and timetables. Even the main stop at Washington Square is unmarked.

Although timetables and route maps are available, each covers only one route. Transfer points and the overall route system are not given. The

Table 3. Parking in Southern Part of Study Area

Purpose	Relative Percent	Time Parked
Residential	61%	—
Returning Home	22%	—
Business	19%	6.1 hours
Shopping	18%	1.65 hours

Source: Wilbur Smith Associates



The YMCA on Washington Square is the central stop for local bus routes.

first-time user is placed in an impossible situation, since one cannot catch a bus without a timetable and one is unlikely to get a timetable without requesting one from a bus driver. This provides a disincentive to first-time users and limits expansion of ridership.

Conclusions. In order to expand ridership and thereby reduce traffic congestion, the Newport city bus system should be understandable to first-time users and convenient to use. Bus stops



Asbestos shingle siding is an example of an inappropriate modification to an otherwise high-scoring building.

should be marked, and complete system maps, as well as some indication of frequency of service, should be posted on every bus and at major stops.

Design

Part of Newport's attraction for tourists is the diverse visual experience offered by its unique collection of houses, shops, churches, and open space. The physical environment of the waterfront must be preserved and enhanced if it is to remain a focus of tourist and commercial activity. Various private groups are making substantial investments in the preservation and restoration of valuable historic assets. Nevertheless, there is a need for a broader understanding of the various factors which add or detract from the aesthetic quality of construction in the area. This section is devoted to urban design and its relationship to the present physical character of the waterfront.

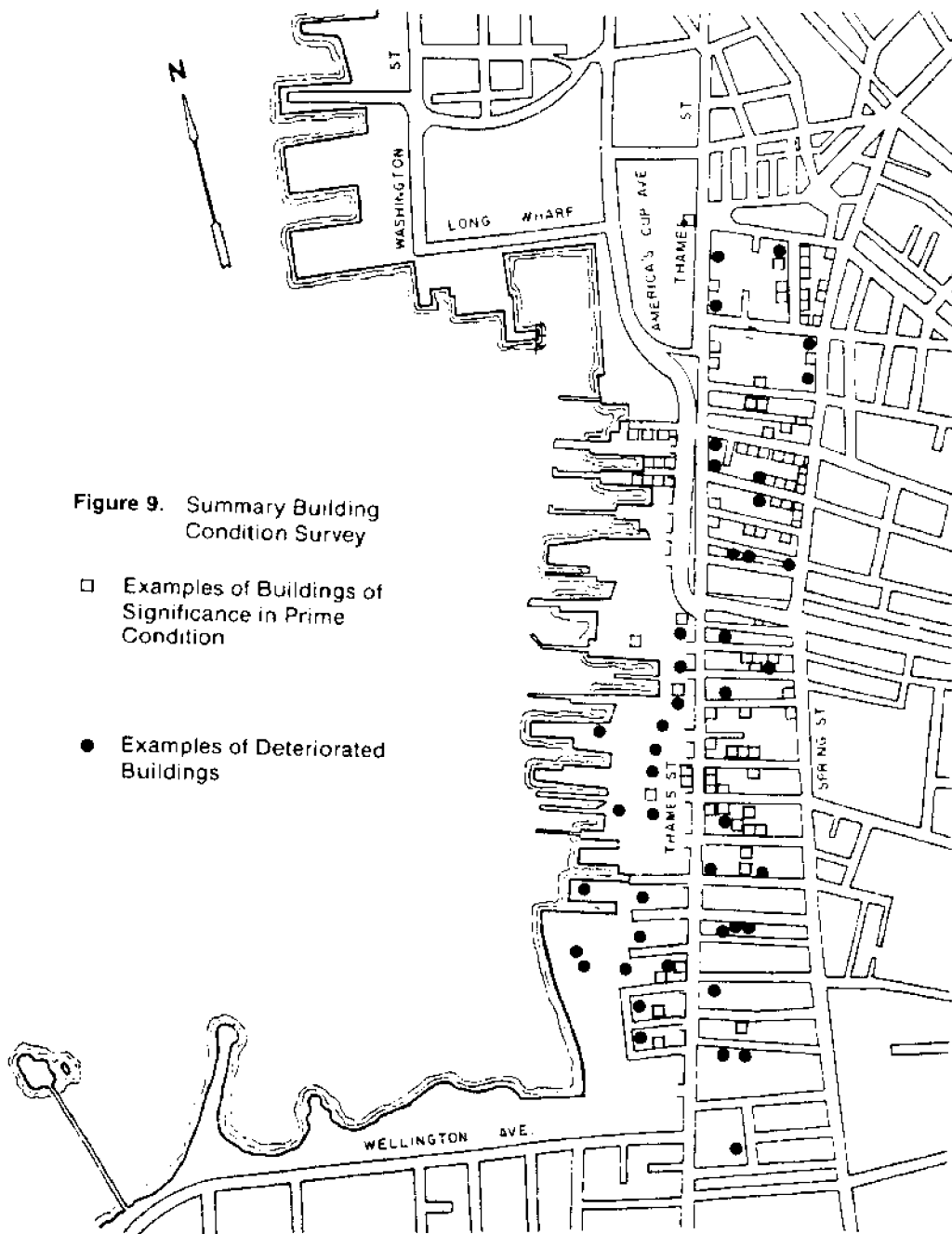
As used in this section, the term "design" comprises a various number of elements of the waterfront environment, such as building design, historic preservation, signs, public facilities, streets and wharves and street furniture. The overall appearance of the waterfront is a product of these elements, their character and condition, and their relative size and position.

Furthermore, the way the waterfront looks now is the result of development and redevelopment of the past, of its improvements and mistakes. In order to quantify and evaluate these design elements, an on-site survey was undertaken which identified and documented seven principal components of the physical environment:

- the condition of existing structures
- the quality of open space
- the condition, location, and function of signs
- focal points
- vistas
- barriers to access
- pavement and street furniture

Existing Structures. Buildings were evaluated by a team of three people who did on-site inspection. Each building was evaluated on the basis of the following system:

- I. Overall Condition of Structure (1 to 5 points)
 - 5—excellent condition, new or newly restored
 - 4—cosmetic attention required (e.g., paint, glazing, etc.)
 - 3—moderate carpentry or masonry required
 - 2—major repairs needed
 - 1—need for complete restoration or destruction



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II. Occupancy (0 to 3 points)

- 3—full occupancy
- 2—mostly occupied ($\frac{1}{2}$ - $\frac{3}{4}$)
- 1—partially occupied ($\frac{1}{3}$ - $\frac{1}{2}$)
- 0—vacant

III. Architectural Characteristics (1 to 5 points)

Points were given after field inspection was verified by library research. They were based on the following criteria:

- A. historical significance
- B. continuity of style, including blending with surrounding streetscape and adherence to appropriate era materials
- C. period features

Results of this analysis were tabulated by compiling composite scores for each building in the study area. As the format of this report does not lend itself to display of complete results, a summary of the best and the worst buildings has been provided in Figure 9. More detailed results are available from the Graduate Curriculum in Community Planning and Area Development.

During the survey, it was found that numerous anomalies have resulted from inappropriate modi-

fications to otherwise distinctive buildings. Specifically, the extensive use of aluminum and vinyl siding and its earlier equivalent, asbestos, has weakened the harmony within individual streetscapes. On the other hand, numerous restoration efforts have been undertaken which greatly enhance the character of the study area. Specific restoration sites will serve as a catalyst in reversing a trend of deterioration in some areas of the waterfront.

Open Space. This survey focused on the physical character of open areas to determine their condition and relationship to neighboring properties. Open space, it was observed, could be classified into two categories: undeveloped and developed.

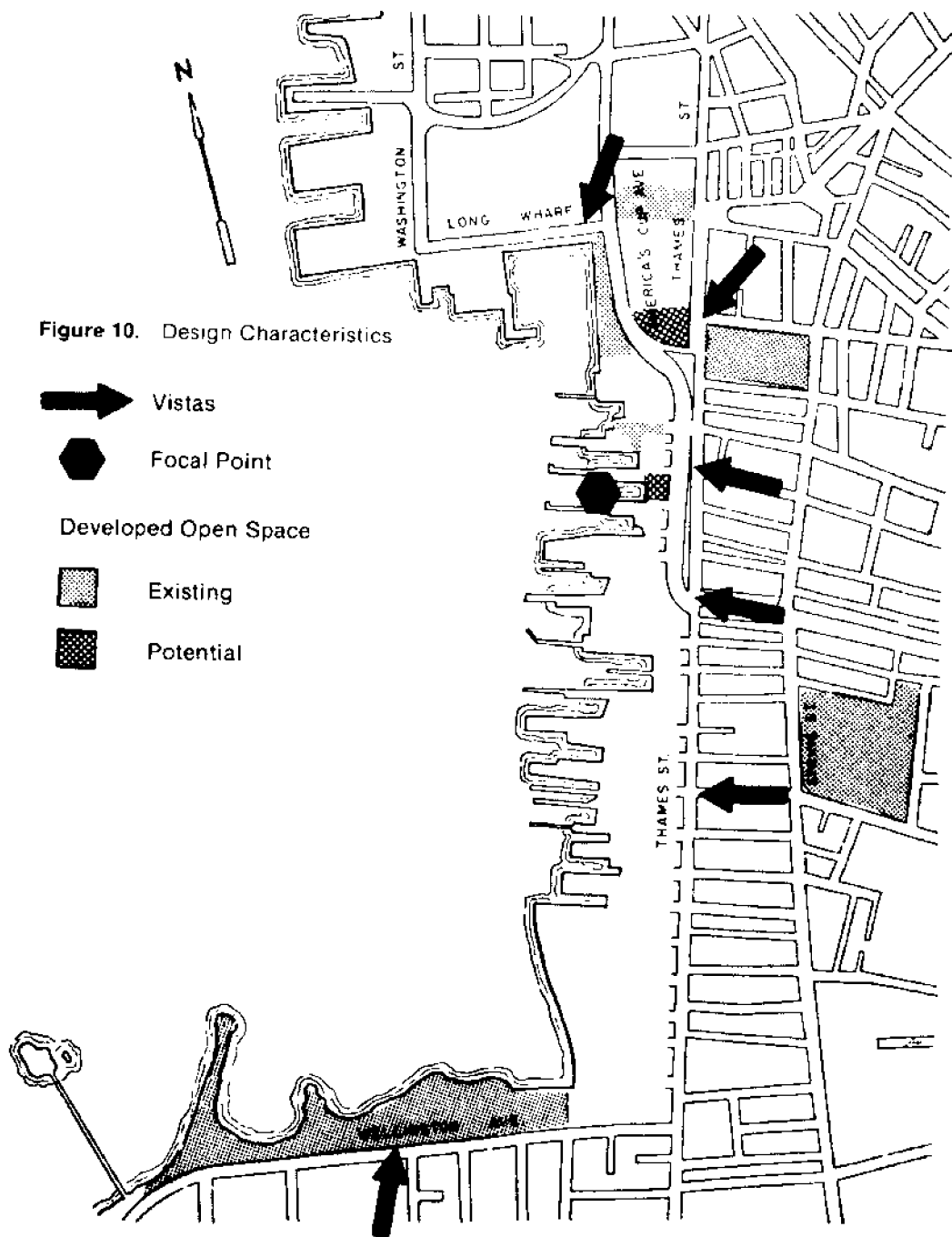
Undeveloped open spaces are those found to be neglected, or used in a manner incompatible with surrounding buildings and activities. For example, many vacant spaces were occupied by rubbish dumpsters or unsightly pockets of litter and debris, in stark contrast with the appearance of adjacent commercial and residential structures.

Developed spaces are those that enhance and complement surrounding structures through the use of landscaping and by providing amenities for pedestrians. Developed open space enhances the commercial vitality of the waterfront by attracting



Before and after picture of the same house illustrates evaluation system. Moderately low score has been considerably improved by restoration of the facade.

Figure 10. Design Characteristics



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The large "Ryan's" and "Leather" signs show the unpleasant visual impact typical of many store signs.



"One Way" and "Do Not Enter" signs attached to a street sign detract from the pleasant period gas lamp and the building's facade.

shoppers and providing them with focal points such as lawns, benches, and walkways. It also preserves and enhances vistas (see Figure 10). Some of the most notable examples of treated open space are found in the northern part of the study area between Long Wharf and Bannister's Wharf, where commercial vitality is closely linked to the overall visual quality of public space.

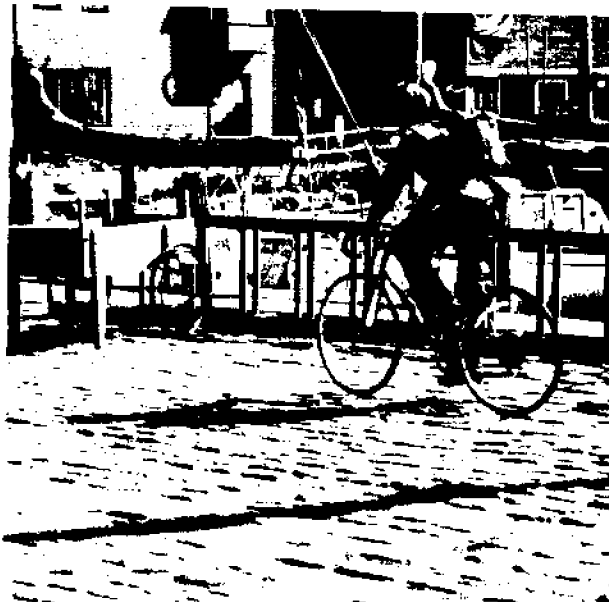
Signs. Signs are another major element in the overall visual impact of the waterfront. While time restrictions prevented a complete inventory of the signs in the waterfront area, a number of specific cases have been identified where advertising and directional signs detract from the visual harmony and character of the area. The accompanying photographic examples illustrate how signs can either detract from the visual quality of buildings and spaces or provide a valuable complement.

Focal Points. Prominent focal points are some of the great assets of the waterfront. Many of these focal points serve to attract visitors to specific areas of intensive commercial activity. Other major features serve as landmarks which provide visitors with a constant visual reminder of their location and orientation within the waterfront. Our survey revealed a notable lack of connection between many of the most interesting and important focal points. The absence of linkages, such as pathways, between these points results in an inefficient use of focal points as a means of attracting and guiding people to and from concentrations of activity.

Vistas. Vistas are the product of treated open space and focal points. Essentially, a vista is an open space that terminates in a focal point. Examples include all streets perpendicular to the waterfront which have visual access to the water and areas which overlook prominent landmarks. Commercial and residential land use can be enhanced through the protection and wise use of vistas. Construction or development which destroys vistas should be discouraged.

Barriers. Barriers to pedestrian circulation have been extensively discussed in "Pedestrian Circulation." These are not the only kind of barriers to be found in the study area, however. This area also contains a variety of barriers to the handicapped. Curbstones and staircases which most people negotiate with little trouble can represent insurmountable obstacles to a person confined to a wheelchair. Throughout the study area there is a need for curb cutting and ramp pouring to provide access for the handicapped.

Pavement and Street Furniture. An area that tries to encourage use by pedestrians must provide a variety of amenities to make its public spaces attractive and appealing. Pavement and street furniture are important ingredients in the design of public spaces, as they set the standards for comfort, convenience, and design. Street furniture in the form of benches, lighting, water fountains, planters, and telephones not only is an important component of the outdoor environment but can



Rough cobblestones in Bowen's Wharf are a problem for the handicapped and for bicyclists, as well as difficult for pedestrians

also serve to visually unify the various separate zones of activity.

Paving materials which relate to specific types of activity can provide a clear demarcation between activity zones and a means of integrating separate areas into a unified whole. The integration of paving and street furniture into a cohesive system is seen as a major objective for the waterfront. Our survey of the present conditions of pavement and street furniture shows numerous instances where inappropriate materials appear to detract from the optimal use of public space. For example, rough cobbles make foot passage somewhat hazardous and offer serious discomfort to bicyclists.

Conclusions. Based on an examination of specified design elements within the study area, it has become apparent that there is a need for more active city control of development in the waterfront. To actively promote the restoration of buildings and the development of open space, to control signs, create focal points, enhance vistas, and remove barriers in the study area, the city must take an active interest in design controls.

Economics

The economic health and vitality of any community is the basis for its future growth and development. In Newport, the waterfront area provides a substantial proportion of the city's economic activity, resulting in a direct link between physical change on the waterfront and economic progress

in the city as a whole. To quantify this relationship, this study has examined the waterfront economy from several viewpoints. The first focuses on the relative level of economic activity on the waterfront as compared with the total level of activity in the city. This has been measured by comparing the number of jobs and businesses located in each of these areas. The second is an analysis of employment trends to determine the degree of seasonal change that results from the emphasis on tourism in the economy. Third, the fishing industry and its related functions have been examined to provide an assessment of their contribution to the local economy. And, finally, there is an assessment of property tax revenue from the waterfront as compared with the revenue from the city's total area.

Waterfront Jobs and Businesses. There are approximately 272 business establishments on the waterfront, representing about one-third of all business and employment establishments in the city of Newport. The waterfront businesses supply roughly 2,500 to 3,000 jobs during the course of a year, including seasonal, part-time, and full-time jobs. This represents about 35% of all the jobs available in Newport except for government jobs. Of the 593 wholesale trade, retail trade, and service industry establishments in Newport that were in operation in 1977, 228, or 38% of the total, establishments were located on the waterfront. Employment in these industries is roughly 2,000 jobs, or 30% of Newport's total. The waterfront therefore contains not only one-third of the business establishments in the city but also about one-third of the jobs in the city.

Tourism and Seasonality of Employment. It has become apparent that a large part of the waterfront's contribution to the city's economy is related to tourist activity. Over the last five years, Newport has experienced a large increase in the number of tourists visiting its attractions. The increase in popularity has been documented by a variety of statistics kept by local institutions involved in tourist-related services. First, the Chamber of Commerce Visitor Information Center has recorded a 2289% increase in requests for information from visitors between 1973 and 1977. It should not be construed that there is a direct correlation between the level of Visitor Information Center activity and the growth of Newport's tourist industry. The increase in demand is indicative, however, of the increasing importance of tourism in the local economy. Another indicator of the amount of tourists visiting the city is the number of vehicles that travel to Newport and Aquidneck Island. Between 1973 and 1977, the number of vehicles crossing the Newport and Mount Hope Bridges increased from 4.9 million to

6.4 million, an increase of 31% over the five-year period.

In order to analyze the impact that tourist activity has on Newport's economy, a number of factors were studied. First, employment data was collected and analyzed for the years 1973 through 1977. This data, broken down by month, identifies those industries that are heavily affected by tourist activity.

For purposes of comparison, seasonal employment was broadly defined as that level of employment over and above employment during the slowest months of the year. By this standard, the number of seasonal jobs in Newport during the 1976-77 employment period was an average of 1,876 jobs, or 24.6% of all employment during this period. Of the tourism-related jobs, 1,756, or 62.9%, were seasonal, and of jobs not related to tourism 691, or 14.4%, were seasonal. Obviously, seasonality of employment is much greater in the tourist-related industries than in those industries not related to tourism. The following types of industries were classified as tourism-related for the purposes of this study:

- local and interurban passenger transit
- food stores
- automobile dealers and service stations
- apparel and accessory stores
- eating and drinking establishments
- miscellaneous retail (souvenir shops, drug stores, liquor stores)
- hotels and other lodging places
- amusements and recreation services (except motion pictures)

The industries which appear to contribute most significantly to seasonal employment are hotels and other lodging places and eating and drinking establishments. During 1976 and 1977, the average number of seasonal jobs in these industries was 1,294, or 84.7% of all jobs in these groups. The average annual wage during 1977 in the former was \$4,613 and in the latter \$3,729. While it is generally known that wages in these two industries are low, it is not known how many full-time and part-time jobs make up this average wage. Since both these average wages are below what a full-time minimum wage earner would make in a year, it is probable that many of these jobs are part time, especially in eating and drinking places. At one hotel, the owner was interviewed and he indicated that all employees were full time and that twice as many full-time workers were employed during the summer months as during the winter months.

Figure 11 illustrates monthly employment in Newport during the 1973-77 period. To show the effects of seasonality, non-tourist employment and tourism-related employment have been plotted individually. These figures reflect all persons

employed, part time or full time, in Newport, except government workers. The graph clearly indicates that employment fluctuates seasonally in Newport in general, with the bulk of this seasonal shift due to tourism-related industries. Also, the graph illustrating tourism-related employment demonstrates that the seasonal shift in employment during a period of general economic recession, such as 1973-75, is much less than that occurring when the general economy is experiencing a period of relative prosperity, as in 1976-77. This implies that an economy with a tourism-related base, as opposed to other types of economies, is less vulnerable to economic declines and more responsive to economic growth. Furthermore, it can be seen that periodic peaks in tourist activity have a lasting effect. For example, the impact of the Tall Ships event is reflected in the 1976 employment curve, showing a large increase of employment during the summer months. Although the duration of high levels of tourism employment during the summer months was longer during the 1976 Tall Ships season than during the 1977 season, the high levels of summer employment in 1976 were duplicated in 1977, suggesting a general trend of increasing tourism-related employment.

Water-related Commercial and Industrial Activities.

Water-related commercial and industrial activities are an important part of the economy of Newport, since it relies heavily on fishing and pleasure boating. In order to quantify the economic impact of this sector of the economy, those businesses that are marine-related have been segregated from the total list of business and industrial activities that operate within the city. This has resulted in the identification of six primary marine-related functions:

- commercial fishing
- ship or boat building and repair
- services incidental to water transportation (including cargo handling)
- groceries and related products (wholesale)
- fish (seafood) and meat markets (retail)
- boat dealers

There are a number of methods which can be used to measure the actual level of commercial activity within any one of the above economic sectors. The amount of annual sales in each sector is an excellent indicator of economic activity, but sales information for as small a geographic area as the Newport waterfront cannot be used without revealing confidential information about specific businesses. The level of employment in each sector, however, is a reasonable substitute for sales information as an indicator of economic contribution and is certainly a more practical indicator, since this information is readily available, up-to-date, and not confidential.

Figure 11. Employment in Newport by Month, 1973-77

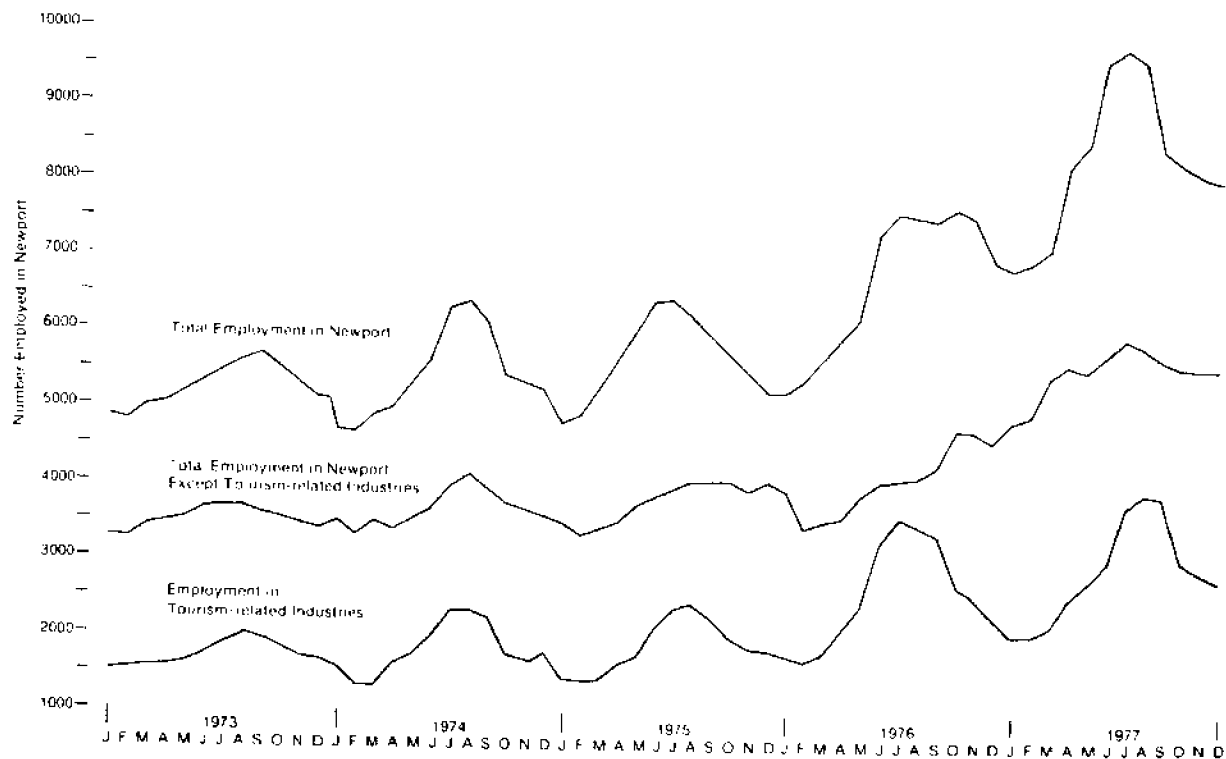


Figure 12. Persons Employed in Marine-related Industries in Newport, 1974-77



Source: Department of Employment

Employment information for Newport was collected for the three-year period 1974-77 (see Figure 12). During this period, employment rose to a peak of 400 jobs in 1975 and dropped to a low of 226 jobs early in 1977 in marine-related industries. As can be seen in the figure, the marine-related firms follow a slightly seasonal pattern of employment, with the summer months placing the heaviest demands on the labor market. In each of the years enumerated, employment was higher during June, July, and August than during the balance of the year. In 1977, for example, the summer increase in employment in marine-related firms was 14.7%, accounting for a 12.6% increase in marine-related wages.

Commercial Fishing. Unfortunately, the study group found that, for reasons of confidentiality, it was impossible to obtain first-hand economic data from fishermen and fish buyers in Newport. However, with the cooperation of the National Marine Fisheries Service, it was possible to enumerate statistics of landings and catch leading to a direct comparison between Newport and Galilee, the other main fishing port in Rhode Island (see Table 4). Although the landings in terms of pounds of product landed are more than twice as great in Galilee in a given year, the value of Galilee's catch is less than that of Newport's. In fact, the value of the Newport catch in dollars is much higher per pound. One explanation for this is shown in Table 5; the Newport catch has a much higher percentage of lobster by weight. This table shows the landings of offshore pot boats, which are larger than the more traditional inshore boats and which fish in deeper waters, off Georges Bank. In 1977, these boats alone landed 1,766,000 pounds of lobster, worth \$3,523,000, in Newport, which represents 38% of the dollar value of the total catch for that year. The inshore pot boats, which tend to fish in the Bay and near shore, caught \$368,200 worth of lobster in 1977, as shown in Table 6; this is approximately 4% of the total dollar value of the Newport catch. Lobster in Newport thus accounts for about 42% of the total catch value. Offshore pot boats are an important factor in Newport's fishing economy. They are a relatively new fishery, mostly of the last decade, and they are the main beneficiary of the new State Pier established by the Department of Environmental Management.

Property Taxes and Revenues. Table 7 displays the tax rate in Newport along with the assessment ratio for four selected years. The "effective" tax rate is defined as a rate that has been equalized by adjusting the local variations in assessment ratio. The state average has been calculated in order to determine the local tax burden in Newport as it relates to the 39 cities and towns in Rhode Island.

Table 4. Total Landings and Value of Catch, 1972-77

Port of Newport		
Year	Landings (lbs.)	Value of Catch (\$)
1977	18,410,000	9,246,000
1976	21,131,000	9,614,000
1975	17,088,000	7,802,000
1974	18,625,000	6,342,000
1973	22,321,000	5,580,000
1972	23,311,000	4,988,000
Port of Galilee/Pt. Judith		
Year	Landings (lbs.)	Value of Catch (\$)
1977	43,705,000	6,685,000
1976	46,606,000	6,591,000
1975	54,484,000	6,464,000
1974	77,730,000	6,606,000
1973	69,649,000	5,742,000
1972	50,765,000	5,361,000

Source: National Marine Fisheries Service, Newport

The figures for the years 1967 and 1969 represent the situation before revaluation took place. In both years, the effective tax rate in Newport was substantially higher than that for Rhode Island communities—18% and 25%, respectively. This earned them rankings of 2 and 3.

The figures for 1974 would initially indicate that the gap had been substantially closed, with Newport ranking eleventh in effective rate with only a 6.7% difference from the state mean. However, it is important to remember that a general revaluation occurred in 1972 which considered the raise in market values. Of the ten Rhode Island communities with a higher rate, only three (Central Falls, East Providence, Woonsocket) had chosen to revalue during that period. Of the 39

Table 5. Lobster Landings, 1972-77, Offshore Pot Boats

Port of Newport					
Year	No. of Boats	Catch (lbs.)	Value (\$)	No. of Employed	No. of Pots
1977	25	1,765,000	3,513,000	101	19,300
1976	25	1,847,000	3,392,000	116	16,430
1975	20	1,722,000	3,052,000	72	na
1974	na	1,550,000	2,420,000	na	na
1973	na	1,009,000	1,531,000	na	na
1972	na	946,000	1,248,000	na	na
Port of Galilee/Pt. Judith					
Year	Catch (lbs.)		Value of Catch (\$)		
1977	515,000		1,064,000		
1976	598,000		1,156,000		
1975	849,000		1,580,000		
1974	770,000		1,251,000		
1973	770,000		1,200,000		
1972	1,856,000		2,378,000		

na = not available

Source: National Marine Fisheries Service, Newport

Table 6. Lobster Landings, 1972-77, Inshore Pot Boats

Newport County					
Year	No. of Boats	Catch (lbs.)	Value (\$)	No. of Employed	No. of Pots
1977	71	376,900	686,700	189	10,295
1976	93	293,000	519,600	249	14,585
1972-75	na				
Port of Newport					
Year		Catch (lbs.)	Value of Catch (\$)		
1977		204,100	368,200		
1972-76		na			

na - not available

Source: National Marine Fisheries Service, Newport

communities in the state, only 15 had revaluated, and out of this group Newport had the fourth-highest property tax burden.

By 1976 the local tax rate had soared, which translates to an increase in the effective rate of \$8. Although ranking fourth in the state in absolute terms, only one of the three communities higher had chosen to reevaluate, which leaves Newport in the number two position in property tax burden.

Newport owners appear consistently to have one of the highest assessments in the state. In an attempt to provide some tax relief for residential property owners, and in recognition of the dramatic increase in the value of commercial waterfront property, the city recently chose to revalue property selectively. The area revalued was along both sides of Thames Street, from Marlboro Street to Memorial Boulevard, down to the waterfront.

As a result of this revaluation, the assessed value of real property within the waterfront study area is \$21,571,407. The total assessed value of

Table 7. Comparative Data on Tax Burden, Newport and State of Rhode Island

		Ratio*	Tax Rate	Effective Rate	% Difference	Ranking
1967	Newport	46%	\$74.00	\$34.00	+48%	2
	State Mean	59%	43.34	23.00	—	—
1969	Newport	42%	\$77.00	\$32.00	+28%	3
	State Mean	56%	45.25	24.00	—	—
1974	Newport	80%	\$40.00	\$32.00	+8.7%	11
	State Mean	65%	46.26	30.00	—	—
1976	Newport	80%	\$50.50	\$40.00	+29%	4
	State Mean	67%	48.05	31.00	—	—

Source: Rhode Island Department of Economic Development

*The assessment ratios for 1974 and 1976 indicate the approximate rate at which new real estate is assessed. The figures for 1967 and 1969 represent an average assessment for properties including those which are older or unimproved. Newly built or acquired property would tend to be assessed at a slightly higher percentage.

taxable real estate in the entire city is \$169,753,960.* This means that the study area, representing 2.2% of the city's total area, contributes 13% of the city's property tax revenue, dramatizing the importance of this area to the city.

Budget Analysis. In 1977-78, the budget in Newport took on a new format, which included an effort to identify performance goals and objectives and to focus on measurable work objectives. It has appropriations for eight program categories and sources for funds (see Table 8).

It is beyond the scope of this analysis to provide commentary on all aspects of the budget. Only selected expenditures which appear to relate directly to the waterfront study area will be considered.

Community Redevelopment. This is a sub-program which is classified under the umbrella program of Home and Community Environment. We are primarily concerned here with two particular projects, Thames Street and Historic Hill.

1) *Thames Street:* This project refers to the major redevelopment which occurred in the Thames Street, Long Wharf, Market Square area. A large proportion of the funds for the redevelopment of this area came from the federal government, with a considerable proportion of the local share provided in the form of street and utility improvements. This project has been completed with no appropriation for 1977-78.

Local expenditures on this project were as follows:

Expenditure	1974-75	1975-76	1976-77	1977-78
Supplies and Services	2,377	63,347	23,968	—
Source of Funds				
Property Tax	2,225	59,863	22,504	—
Operating	—	—	278	—
Other	152	3,484	1,186	—

2) *Historic Hill:* This redevelopment project was carried on exclusively with the use of federal funds. The following funds were spent primarily on historic preservation and restoration:

Expenditure	1974-75	1975-76	1976-77	1977-78
Supplies and Services	855,708	622,363	1,409,323	—

Harbor Control. These funds, classified under Leisure Time Opportunities, are spent to assure the orderly and efficient operation of Newport Harbor. A large proportion of this expenditure goes for the harbor master and his support services.

Expenditure	1974-75	1975-76	1976-77	1977-78
Personal Services	12,496	12,219	12,883	16,985
Supplies and Services	1,964	2,310	3,902	4,429
Total	14,460	14,529	16,785	21,414

*R.I. Basic Statistics: The Economy, Summary and Trends, R.I. Dept. of Economic Development

<i>Source of Funds</i>				
Property Tax	9,922	9,264	6,710	18,202
Operating	—	—	80	214
Other	4,538	5,265	9,995	2,998
<i>Total</i>	14,460	14,529	16,785	21,414

Kings Park. This recreation facility is located on the south side of Newport Harbor, just off Wellington Avenue. It serves both the tourist and the resident.

<i>Expenditure</i>	1974-75	1975-76	1976-77	1977-78
Personal Services	13,778	13,573	15,418	15,169
Supplies and Services	1,753	1,865	1,834	2,271
Capital Outlay	5,875	—	—	—
<i>Total</i>	21,406	15,438	17,852	17,440

<i>Source of Funds</i>				
Property Tax	14,539	14,589	16,281	14,824
Operating	—	—	293	174
Other	6,867	849	1,278	2,442
<i>Total</i>	21,406	15,438	17,852	17,440

Community Promotion. This is a sub-category of the program for Social and Economic Well-Being. Listed here are the funds which the city outlays for public relations activities:

<i>Activity Expenditures</i>	1974-75	1975-76	1976-77	1977-78
Aquidneck Island Development	2,500	8,333	20,000	20,000
Newport County Chamber of Commerce	25,000	25,000	25,000	25,000
Newport County Tourist Association	2,000	2,000	2,000	2,000
Newport Council of Community Services	—	—	1,000	—
Bicentennial Activities	2,000	6,000	—	—
Newport Council of International Visitors	500	500	500	500
Aquidneck Island Police Parade	1,000	800	800	800
<i>Total</i>	33,000	42,633	49,300	48,300

The stated goal of this sub-program is "to provide financial support to the expansion of commercial

Table 8. Expenditure Dollar, 1977-78

<i>Program</i>	<i>Dollar</i>
Community Protection	10¢
Health	5¢
Home and Community Environment	48¢
Social and Economic Well-Being	3¢
Leisure Time Opportunities	1¢
Transportation	1¢
Education	25¢
General Administration & Support	7¢
<i>Source</i>	<i>Dollar</i>
Federal and State Grants	56¢
Licenses and Fees	1¢
Bond Funds	1¢
Charges and Services	7¢
School Services and Trust Funds	1¢
Intergovernmental Revenue	4¢
Property Tax	30¢

Source: Tax Assessor, City of Newport

development, tourism and employment in Newport."

Lobster Fishermen Loans. This is perhaps the most interesting expenditure in the local budget for the past few years. In 1974, the Russian fleet caused a great deal of damage to the equipment of local lobstermen, and the U.S. Economic Development Administration provided \$246,000 in loans to be administered by the city of Newport. Up to this point, very little has been paid back on these 4% loans, and it is doubtful that any steps will be taken toward collection.

Conclusions. It is extremely difficult to determine what proportion of the annual budget the city allocates in support of waterfront activity, since expenditures rarely are broken down by geographic area. Services such as fire and police protection deal with the city as a whole. The importance of the study area as a taxable resource is undeniably apparent, however. The concentration of 13% of the city's tax base on 2% of its land area indicates both a heavy dependence on this portion of the city as well as a need for continued city involvement in guiding the development and protection of the waterfront as a resource. Furthermore, future development in the vicinity of the waterfront may draw even more taxable activity to the area, thereby increasing its contribution to the community.

Environmental Considerations

The Harbor. There are actually two harbors in Newport Harbor: the main harbor, between Goat Island and the waterfront, and Brenton Cove, to the south. The main harbor contains nearly all built-up facilities and a large number of private moorings. It is exposed to prevailing southwest winds but is well protected from all other directions. Water depth ranges from 12 feet to 22 feet and is clear of obstacles. Brenton Cove is bounded by Fort Adams State Park on the west and the Newport estate area on the east. There are many private moorings, most of them used primarily for day trips or overnight visits rather than for seasonal usage.

The total area of the harbor at Mean Low Water is 518.1 acres. The volume at Mean Low Water is 10,935,784 m³, with a flushing rate of 17% of the harbor water per tidal cycle. The total docking and mooring capacity is 703 boats. The main harbor area, including Goat Island, has undergone a dramatic transformation and redevelopment in the last decade. The waterfront itself is considered to have limited suitability for further marina development, but in the harbor as a whole there are sites deemed suitable for marinas.

Water Quality. As rated by the Rhode Island Department of Health, the main harbor has a Class SC rating. Shellfish cannot be taken from Class SC waters and swimming is not advised. Brenton Cove has a Class SB rating, which is suitable for swimming and limited shellfishing (depuration required). Brenton Cove is a popular swimming area. Because of the popularity of Newport Harbor as a yachting center, the large number of boats using the harbor has a definite role in affecting water quality.

Adverse effects on the environment from large-scale pleasure boating facilities may result from three sources: (1) boat operations, (2) marina development, (3) activities by tenants in a marina. Boat operations may create adverse environmental effects in five principal areas: (1) engine operations (release of hydrocarbons and lead); (2) marine discharges of sewage (release of organic matter, coliform bacteria, and pathogenic organisms); (3) spillage or litter by boat operators; (4) noise from boat engines, radios, etc.; and (5) leaching of anti-fouling paints (release of copper or toxic compounds). These contaminants may have impacts on shellfish and will result in a decrease in water quality.

Most of these adverse effects are generally considered controllable. At marinas, management can control undesirable activities by restricting: (1) disposal of effluent; (2) disposal of rubbish; (3) spillage of oil; (4) fouling of ground by animals; and (5) noise of radios, engines, animals, children, etc.

There are potential environmental impacts from increased activity in a harbor area. The negative impacts which can result from facility construction include loss of habitat for marine vertebrates and invertebrates, waterfowl and wildlife; removal of natural vegetation; creation of barriers for migratory species; disruption of natural water circulation patterns; and diminished aesthetic values. The positive aspects of marine construction include creation of man-made habitats such as breakwaters, jetties, and dock pilings, and structures which have recreational and economic benefits.

The potential impacts of harbor maintenance include increased turbidity, decreased dissolved oxygen, and burial of organisms associated with dredging activities. Positive impacts of dredging will be increased water circulation and flushing rates, and the possible use of dredged materials for construction purposes such as marsh creation and beach nourishment.

Newport Harbor is a potential site for a ship channel maintenance dredging project. The estimated volume to be removed over the next ten years is 30,000 cubic yards.

The disposal of dredged sediments from polluted harbors is of primary concern because these

sediments are likely to be contaminated with organic matter, heavy metals, hydrocarbons, and other pollutants which may be environmentally damaging at the disposal site. Research indicates that most pollutants are strongly adsorbed to the bottom sediments and are not easily released while the sediments are retained in the aquatic environment.

The fate of pollutants contained in dredged bottom materials depends on the disposal method chosen for a particular project. Disposal alternatives include: (1) near-shore ocean dumping, (2) inland disposal, (3) marsh creation, and (4) island creation. The potential impact of each disposal alternative must be critically assessed before a dredging project of Newport Harbor is undertaken.

Harbor activities require support from Newport's municipal services in the categories of security, utilities, and transportation. The area in which stress on local capacity might occur is in sewage disposal, particularly as marine toilet pump-out stations become mandatory.

Sewers. Newport's existing sewers serve most of the city. Unsewered areas consist primarily of the large-estate development and recreational facilities in the southwestern part of the city. The sewers throughout much of the central part of the city are combined, conveying both sanitary sewage and stormwater flows. The sewers in the outlying areas are designed as separate sewers (only sanitary sewage flows), but roof and basement drain connections to sewers, in effect, make them combined.

Most of the city's sewage is conveyed to the Long Wharf pumping station, where it is pumped through a 24-foot force main to the sewage treatment plant located off J. T. O'Connell Highway at the north end of the city. Sewage from the Navy facilities and Middletown is also treated at this plant. The existing plant provides primary treatment for up to 7.6 million gallons per day of sewage before discharge into Narragansett Bay off Coddington Cove.

The city of Newport is in the process of making repairs and modifying the existing system, including construction of additional sanitary sewers, replacement and rebuilding of the pumping stations, separation of combined sewers, disconnecting roof and basement drains, and construction of additional storm drainage facilities.

Newport's program of improvements also includes upgrading the treatment facility from primary to secondary treatment and increasing the capacity of the plant from the present 7.6 million gallons per day (mgd) to 12 mgd. In 1975, average flow to the plant was 7.1 mgd. Of this total, 1.2 mgd was from Middletown, 2.4 mgd from the Naval facilities, and 3.5 mgd from Newport. Aver-

age design flow of 12 mgd for 1995 is based on projected flows from the city of Newport, Middletown, and from a small amount from Naval facilities which remain on the island. However, reuse of Navy lands may alter the projected wastewater flows.

The city of Newport's sewage system discharge is the main reason for the Class SC classification of Newport Harbor. The primary wastewater treatment plant discharges about 6,700 lbs. BOD₅ (biological oxygen demand for five days) daily into the harbor. Overflows of untreated sewage and stormwater from combined sewer systems occurs during periods of rainfall, contributing an undetermined amount of pollutants to the harbor. Navy housing at Fort Adams discharges untreated sanitary wastewater into Newport Harbor, and the U.S. Coast Guard station at Castle Hill also discharges sanitary effluent into the surrounding waters. The Newport Electric Company's cooling water discharges compound a bad situation by raising the temperature of the harbor water. Bacterial surveys of Newport Harbor and vicinity are the basis for harbor classifications of SB and SC.

Urban Runoff. Non-point source pollution on Aquidneck Island can be primarily attributed to urban and stormwater runoff. Leachate and seepage from subsurface disposal systems and sanitary landfills, erosion and sedimentation from land-use practices, marinas, and hydrologic modifications are other possible sources of pollution. The degree and quantity of pollution from these sources have not been fully assessed, nor has a strategy been devised to deal effectively with the urban runoff.

Urban runoff problems may be attributed to the cleansing and transportation of dirt, oils, rubber, salts, metals, and other pollutants into the nearest watercourses from areas of varying permeability. Runoff during storm periods can greatly exceed that of municipal wastewater treatment plants. This condition is likely to preclude meeting water quality standards regardless of the degree of treatment afforded the point sources of pollution. In Newport, the combined systems collect not only stormwater but untreated municipal and industrial wastewater. During high flows, combined systems have flow-splitting devices which bypass a high percentage of the untreated combined sewage directly to the receiving waters.

Polluted runoff contains substantial amounts of organic materials, inorganic solids, and coliform bacteria. Other pollutants include nutrients, pesticides, and heavy metals, which severely degrade the receiving water quality. Runoff problems related to water quality degradation are the accelerated erosion of land areas, sediment deposition in channels, increased flooding, increased

potential for public health problems, and the deterioration of aesthetic quality. If Newport is to maintain its municipal well-being and enhance its tourist-based economy, it must strive to enhance the water quality of the harbor.

Boating Safety and Oil Spill Protection. Marine safety is apparently not a problem in Newport Harbor. Interviews with U.S. Coast Guard search and rescue personnel indicate that nearly all of their calls for assistance come from boats outside the harbor. During the Tall Ships spectacle in the summer of 1976, the harbor held a peak number of small craft, sightseeing boats, and large, hard-to-manuever sailing craft. The only marine-related fatality recorded during this celebration was the pilot of a small private airplane that crashed near Beavertail Point.

As for the danger from oil spills, Newport has never experienced a major oil spill from the heavy petroleum shipping in Narragansett Bay. The historical incidence of spills has been from transfer of fuels to boats and storage tanks along the waterfront, and overflows or leaks of fuel from boats in the harbor. Cumulative damage from small spills could easily exceed the one-time damage of a large spill. The potential for a major spill is perceived as a significant threat, however, by many persons with an interest in the harbor. To determine whether this threat warrants further investigation, we took a look at the conditions of wind, tidal currents, and land configuration to assess the likelihood of damage to the harbor.

Petroleum products are the major commodities shipped through Narragansett Bay to Providence, Fall River, Brayton Point, and other locations. Since there are no crude oil refineries in Rhode Island or southeastern Massachusetts, all of the shipping is refined products, primarily heating oils and gasoline.

Different petroleum derivatives create different problems for pollution control and spill cleanup. Heavy fuel oils sink to the bottom, destroying benthic organisms and making their removal virtually impossible. Light distillates such as gasoline partially evaporate, but pose threats of fire and are difficult to separate from the water. Most crudes and light oils can be corralled by surface-floating booms if caught soon after a spill, in calm water, and pumped into lighters for safe disposal.

A typical oil boom consists of a series of floats connected by cables that are stretched between two boats, two land points, or a boat and a land point. Below the float a heavy fabric curtain is sunk to a depth of three feet or more. Such booms can be easily transported to a spill site by aircraft and deployed quickly under normal weather conditions. Their use is severely limited in heavy weather, however: first, the booms are difficult to control in high waves and wind; and, second, the

oil tends to drift beneath the curtain, regardless of its depth, when water speed exceeds three knots. The combination of wind speed, tidal current, and deliberate movement of the boom to corral the oil can easily exceed three knots.

One suggestion that has been offered for protecting the harbor from spills is to install oil booms that could be moved into place between Fort Adams and Goat Island and along the Goat Island causeway. The combined distance of the two harbor openings is approximately 3,600 feet. It would be a fairly simple task to install such booms, and the cost would not be significant in proportion to the value of yachts and other vessels moored in the harbor.

Both entrances to Newport harbor face north. The harbor is protected to the east by the city, to the south by Newport Neck, and to the west by Fort Adams and Goat Island. Oil pollution would have to be driven into the harbor by tidal currents and wind from the northwesterly quadrant.

Tidal currents rarely exceed 0.2 knots through the harbor, a speed that would not significantly influence the direction of spill flow, nor hinder control of a spill by booms. Movement of spilled oil into the harbor would result almost entirely from wind movement. Prevailing summer winds come from the southwest. Summer storm winds come predominantly from the southeast. Prevailing winter winds are from the northwest. Oil from the Bay would therefore tend to be driven away from the harbor during summer months, and into the harbor in winter.

Preliminary investigation, however, indicates that harbor entrance booms may not be necessary, and probably would not stop an oil spill if installed. A major spill is unlikely to occur in Narragansett Bay. Tankers that ply the Bay are relatively small, generally less than 225,000 dwt. The Bay is too shallow for supertankers. The Bay is also very well protected from adverse sea conditions, which are the cause of nearly all major spills in shipping. And, finally, major oil spills are statistically very rare worldwide.

If a major oil spill were to occur in Narragansett Bay, the oil is not likely to enter Newport Harbor. Because of the natural configuration of the harbor entrance, only a spill within 1½ miles of the Newport Bridge could enter the harbor—and, even then, only under a north to northwest wind. Much of the oil reaching shore under these conditions would be blocked by Goat Island and Rose Island. The remainder would tend to settle into Brenton Cove, where it could be contained and removed.

If oil did enter the harbor from a major spill in the Bay, it would probably not cause a great amount of damage. Since a spill could enter only on a northwest wind, and such winds rarely occur during the boating season, oil damage would most likely happen off season, when most yachts are

removed from the harbor. At no time would a Bay spill be likely to hit the Thames Street waterfront. And bottom pollution would not be as detrimental as it would be in other areas, since the harbor bottom is already polluted and closed to shellfishing.

If all of the above conditions coincided and a major oil spill drifted into the harbor, booms could not contain the oil because they are effective only in calm water. In other words, a spill in calm water would not enter the Bay, and a spill in rough water could not be contained by booms.

If, in light of these findings, the Harbor Commission still believes that semi-permanent oil booms may be justified, a more detailed feasibility study should be commissioned. The Coast Guard's Atlantic Coast Oil Pollution Strike Force, based in Elizabeth City, North Carolina, should be consulted. This group is continually developing and refining new hardware for oil spill containment and removal. They also work closely with private contractors that specialize in oil spill control.

Conclusions. For the purposes of the Newport Harbor design study, no special provisions should be made for marine safety and oil spill control. Both problems should be borne in mind, however, in recommending facility locations for pleasure boats and commercial shipping. Concentration on control of minor oil spills within the harbor is far more important than protection from a hypothetical major spill in the Bay.

Ownership and Littoral Rights

As the result of a late-nineteenth-century U.S. Supreme Court case (*U.S. v. City of New Orleans*, 98 U.S. 381, 25 L.Ed 225, 1878), the municipal powers of a harbor town or city were enlarged so as to embrace the building of wharves, docks, levees, and piers. A harbor town or city can place regulations and restrictions on the construction and use of such waterfront appendages. The state may also restrain and limit the power of the waterfront owner over his property. Presently, a permit is required from both the city of Newport and the state as well as from the Army Corps of Engineers in order to build a wharf, pier, etc. However, neither the city nor the state can force existing and established waterfront owners to allow for public access onto their private wharves, docks, or piers. Nor can the city or state force existing waterfront owners to allow the public to walk through their property in order to gain access to the water. A basic principle of private property is that an owner may exclude or admit persons to his land at his "unfettered discretion."

Where property rights have not been firmly established through prior deed contracts, coastal cities, under various situations, have been able to acquire land for public access without providing

compensation to the owner. By a 1920 State Supreme Court case involving the city of Newport (*Armour and Co. v. City of Newport*, 110 A. 645, 43, R.I. 211), it was established that in a case where a town has conveyed shore lands to private individuals, in consideration of the benefits to be received by the town from improvements of the lands, it is valid for the town to ask that a certain section of the wharf, which is to be built by the grantees, be left open for the benefit of the inhabitants. In this particular case, the city of Newport requested that a 30-foot-wide strip of the proposed wharf be reserved for public access. As part of the lease agreement between the city and the yacht club, the city required the yacht club to provide for public access along the perimeter of the property. A 1959 State Supreme Court case (*Thompson v. Sullivan* 148 A. 2d 130, 88, R.I. 305) established that it was valid for the city, in leasing the property to the yacht club, to request that a certain area be left open for public use.

Public Access. There are literally dozens of public right-of-ways, alleys, easements, piers, etc., leading to and providing physical access to the water. Unfortunately, however, an accurate identification of their location is extremely difficult, since historic records of easements and ownership are not complete and successive fillings have altered the original pattern of the shoreline in the vicinity of the harbor. As observed during a survey of the harbor, there are several opportunities for public (physical and visual) access to the water in the northern section of the harbor. For example, the causeway leading to Goat Island is open to the public and is a favorite spot for local rod fishermen. The State Pier, which is adjacent to the causeway, is not open to the public; only authorized personnel are allowed admittance.

Other areas where the public has direct access to the water include Long Wharf, the observation walkway or pier adjacent to the Periwinkle Restaurant, the perimeter of the wharf on which the Newport Yacht Club is presently located, the M. T. Perrotti Park, and Bowen's Wharf near the Black Pearl Restaurant. Visitors are also permitted to walk along the shore in front of the Treadway Inn and in the area leading to the harbor tour boat dock, which has been dedicated as a public walkway. The Wholly Mackerel Restaurant and the Aquidneck Lobster Company do restrict physical access to the water. Bannister's Wharf is private property and public access is restricted. The Mooring is similar to Bannister's Wharf, in that the public is granted limited access. Commercial Wharf, the site of Mathinos Shipyard, is off limits to the public as is Perry Mill Wharf.

In the southern part of the waterfront, the public is permitted access onto Christie's Landing; however, immediate physical access to the water

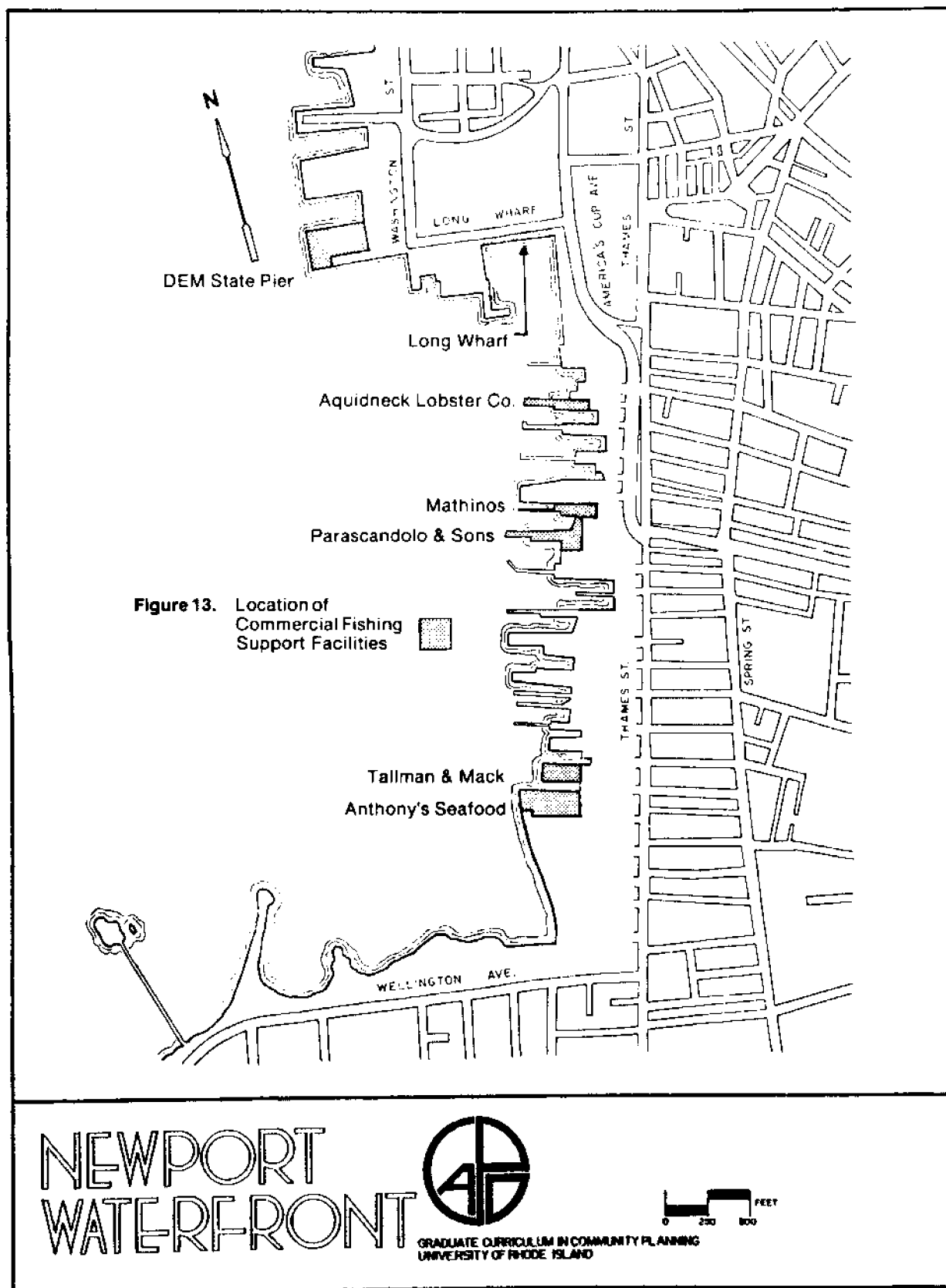
is restricted to restaurant patrons. Nearby, there is a small public pier across from Ann Street which was established as an observation point for the public. Access to this pier along the waterfront is limited, however, and the pier is effectively hidden behind the National Guard Armory from Thames Street.

From that point south, both visual and physical access to the water is limited. The Newport Offshore Ltd. area is fenced off, and buildings along Thames Street block most visual access to the water. The public can walk down to the water and onto small piers via Lee's Wharf Road and Howard Street, but the electric power company, between Howard Street and Spring Wharf, virtually blocks all visual and physical access. There is a public boat launching ramp off Spring Wharf Road. The Tallman and Mack Company and Anthony's Seafood Market block physical access to the water south of this, but the public has access to the water by Coddington Point and all along the southern shore of the harbor, where Kings Park permits immediate physical and visual access.

Littoral Rights. For navigational reasons, a harbor line has been established by Congress for Newport Harbor. With a permit from the city and state, a littoral owner may build a wharf, dock, or pier up to but not beyond the harbor line. With a special permit, a littoral owner is allowed to fill up to the harbor line. The U.S. government may at any time remove any portion of a pier or wharf that extends beyond the harbor line without compensation to the owner. In fact, as established by a 1915 U.S. Supreme Court case (*Greeleaf-Johnson Lumber Co. v. Garrison*, 35 S.Ct. 551, 237, U.S. 251, 59 L.E. 939), littoral owners who have erected wharves conforming to a harbor line adopted by the federal government have no right to compensation, under U.S.C.A. Constitutional Amendment 5, where Congress establishes a new harbor line requiring destruction of a portion of such structures. It is interesting that, as part of the lease agreement with the city, the yacht club was required to build finger piers which extend beyond the harbor line.

In Newport all waterfront owners have title to land up to the mean high water mark by state law. The state has title to all land out beyond the high water mark and up to the federal jurisdiction point King James did not grant land out beyond the mean high water mark to any waterfront owner in Newport Harbor. (The U.S. does recognize property deeds which were issued by the King of England prior to the time the state was admitted into the Union.) Others feel that property rights to submerged land have been extended out beyond the mean high water mark for some littoral owners by King James.

As mentioned earlier, if granted a permit an



owner is allowed to build a wharf, pier, dock, etc., out beyond his line of property. However, the owner does not have title to any of the submerged land underneath that portion of the wharf, pier, dock, etc., which extends beyond his property line.*

Commercial Fishing

Commercial fishing is a vital economic activity for the study area. More than nine million dollars' worth of catch was landed in Newport in 1977, according to the National Marine Fisheries Service. However, fishermen must compete for space with other waterfront activities, and must also compete with one another for dock space and facilities (see Figure 13).

There are seven major onshore facilities related to commercial fishing in the study area:

- Department of Environmental Management State Pier
- Long Wharf
- Aquidneck Lobster Company
- Mathinos Shipyard
- Parascandolo and Sons
- Tallman and Mack Company
- Anthony's Seafood

Department of Environmental Management State Pier. Under pressure from fishing interests in Newport, the Rhode Island Department of Environmental Management (DEM) has recently leased a large parcel of land from the Newport Shipyard to help provide essential dock space for local fishermen. The lease is for five years, and currently includes one finger pier and the peripheral space around the large wharf at the western end of Long Wharf.

On January 1, 1979, a second finger pier with 18 more slips for smaller fishing vessels became available to the state. The DEM has further plans for this area, which is known as the South Bulkhead, and plans to develop suitable dock facilities for more fishing vessels. In November 1978, 13 offshore lobster boats, one scalloper, one small dragger, and four inshore lobster boats were using this facility. Conversations with local fishermen during the course of this study indicate that many inshore lobster fishermen currently using Mathi-

*It has not been fully established what rights an owner has to submerged land out beyond the mean high water mark where granted by way of a royal deed contract. Normally, the owner is given legal title to all submerged land. However, in a 1913 U.S. Supreme Court case (Lewis Point Oyster Cultivation Co. v. Briggs 33 S.Ct. 679, 229, U.S. 82, 57 L.Ed 1083), an owner who had legal title by way of a royal deed to submerged land was denied compensation for the destruction of his oyster plantation, which had been destroyed as the result of dredging of a deep water channel across the bay by the U.S. in the interests of navigation.



South Bulkhead, the Rhode Island Department of Environmental Management's pier for Newport fishermen

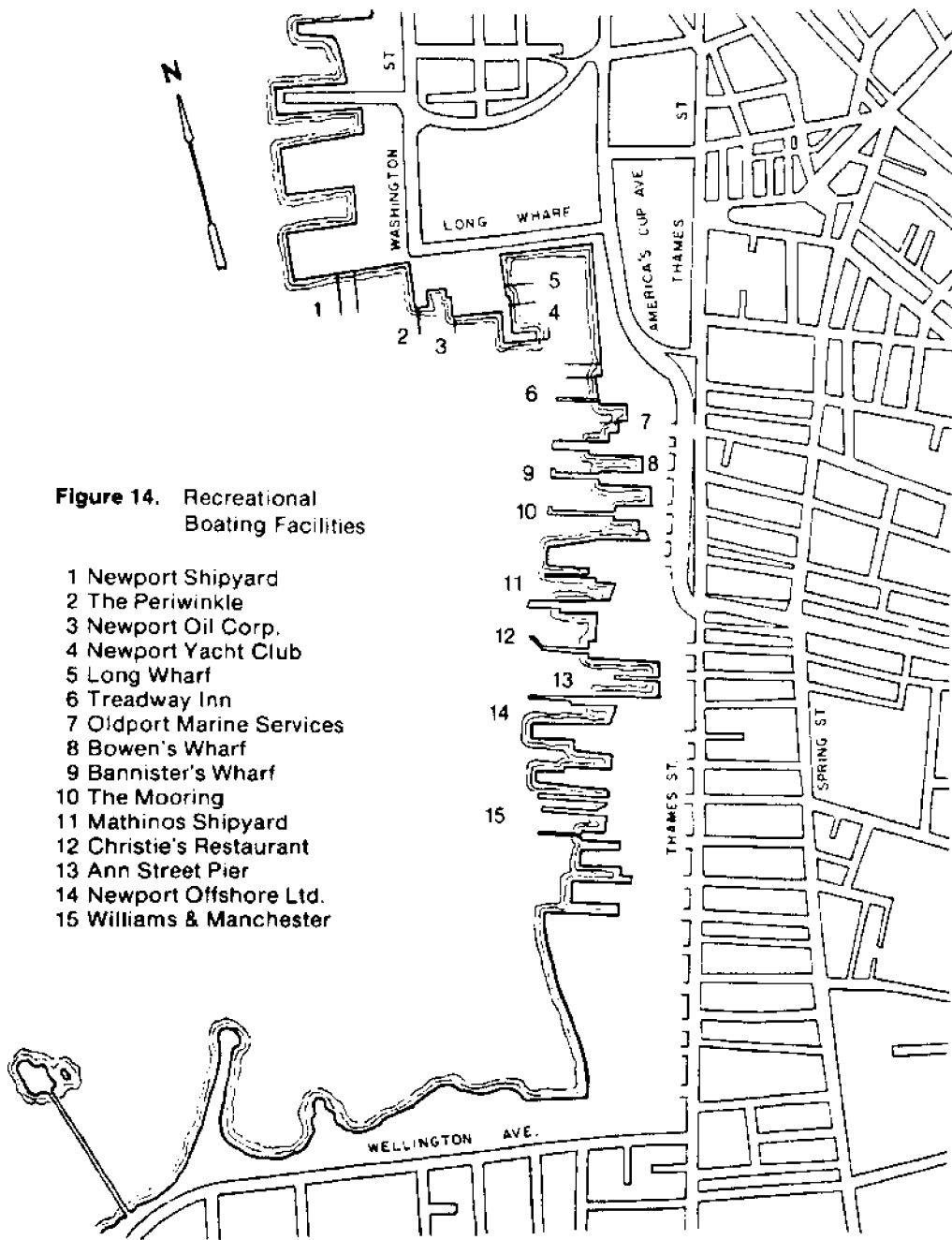
nos Shipyard would be interested in moving to the State Pier.

Long Wharf. A mixture of fishing and pleasure boats are tied along the bulkhead of Long Wharf in the inner harbor between Perrotti Park and the yacht club. This is possible because of an informal arrangement between the boaters, the city, and neighboring property owners. The availability of Long Wharf for long-term tie-ups may be in jeopardy, however, because of the sale of the J. T. O'Connell property and its impending development. Seven inshore lobster boats currently use this area.

Aquidneck Lobster Company. Aquidneck Lobster Company, which buys most of the lobster landed in Newport, has limited dock space, used primarily for unloading returning boats. At the present time this limited dock space is inadequate even for this purpose, an inadequacy that often causes long delays while vessels wait for space to unload.

The owner, who was instrumental in implementing the new DEM State Pier, has indicated that he feels his business generates sufficient traffic to use all of the available dock space in the harbor.

Mathinos Shipyard. Mathinos appears to be the only boatyard in the harbor that caters to the fishermen almost exclusively. Nonetheless, only local inshore lobster boats are in evidence in this yard. The boats are older and mostly under 40 feet in length. Lobster pots and other gear are also stored at the site.



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Parascandolo and Sons. Situated in the center of the waterfront north and south, Parascandolo lands most of the finfish in Newport. Most of the vessels that use this facility are from out of state. Parascandolo also has a large fleet of refrigerated semitrailer trucks which are used to ship the catch they purchase to markets such as Boston, New York City, Philadelphia, and Baltimore. Very little of the catch landed in Newport is consumed there.

Tallman and Mack Company. The Tallman and Mack Fish and Trap Company operates fish traps in Narragansett Bay and other Rhode Island waters. They do not land catches from other boats but operate with their own small fleet of two haul boats and three net boats. Four inshore lobster boats, belonging to company employees, use dock space here.

Anthony's Seafood. Anthony's Seafood is the only major retail outlet for fresh fish in the study area. Tony Bucolo, the owner, buys both lobsters and finfish, and has several refrigerated semitrailer trucks with which he ships the majority of his fish out of state.

Conclusions. Initially, our research was based on the premise that a serious conflict existed in the study area between the fishermen and other commercial waterfront interests, particularly that of recreational boating, because of competition for space and facilities. It became apparent, however, that more conflict existed among the fishermen themselves.

Considering general land use trends in the study area, it is likely that economic pressure will not be equally distributed among the various fishing companies. Because of their locations relative to recent development, some companies are more likely to feel such pressure than others. Aquidneck Lobster, Mathinos Shipyard, and Parascandolo and Sons, located in the Bowen's Wharf and Commercial Wharf area, where commercial and service sector growth has been high, are likely to feel the effects of tourist-related growth in the near future. Tallman and Mack and Anthony's Seafood, at the southern end of the waterfront, are not located in high-growth areas and therefore may not be heavily affected by commercial and service growth.

The point to which displaced fishing firms are most likely to relocate is the DEM State Pier. The relocation of fishing activity displaced by commercial and service sector growth to this central location would have the benefit of removing the fishing vessel traffic from the most crowded part of the harbor, off Bowen's Wharf, but would remove the attractive mixed-use aspect of combined fishing and yachting activities from the Bowen's Wharf environment. This could be offset

by real gains in revenue to the city of Newport from a healthy concentration of fishing vessels, which might make infrastructure investment in support facilities feasible.

Recreational Boating

Not all of the tourists who visit Newport arrive by land; many people arrive by water. Recreational boating is an important part of the Newport economy, and it is not limited to tourists, since many Newport residents own and maintain boats. It is important that Newport recognize the value of recreational boating in the harbor and encourage this economically beneficial activity, both in terms of attracting transient boating tourists to the shops and restaurants of the city and in providing the necessary services to residents and seasonal boat owners. Figure 14 and Table 9 show the location and services of major facilities which are currently available to recreational boaters.

Our analysis of recreational boating in Newport Harbor has revealed a number of issues of prime concern. The first of these is congestion in the harbor. Newport is a very popular yachting port and has been called the yachting capital of the world. Its numerous tourist attractions, fine restaurants, and seasonal sporting events serve to attract large numbers of boaters. The result is that at certain times of the year, particularly when major sporting events are conducted in the vicinity, Newport Harbor is overcrowded with boats. This contributes to water pollution problems, and places severe strains on the already heavily taxed services available to boaters.

The second major concern deals with the availability of information on the waterfront. Since many of the yachts visiting the harbor are piloted by individuals unfamiliar with Newport, visitor information is of critical importance. If not provided with directions and explanations of services available, visitors cruise randomly through the harbor, contributing to congestion problems. There are two notable shortages in the information systems within Newport Harbor. First, there is an insufficient number of signs at the ends of docks to alert visitors to the location of services. This means that they must stop and ask about facilities, a practice which needlessly burdens transient dock space. Second is the lack of a central visitor information facility. There is a harbor master's station at the north end of the waterfront but it is not prominent and is not equipped to serve as a tourist information center.

This station is another prime concern isolated in the course of this study. Its location and structure is not conducive to the efficient performance of the harbor master's duties. Consisting of little more than a small shack perched on a waterfront pier, it does not provide a strategic vantage point

Table 9. Inventory of Facilities Available to Recreational Boaters

	Slips	Docks	Piers	Moorings	Food	Fuel	Ice	Room Rentals	Showers	Electrical Hookups	Water	Bar/Entertainment	Permanent Dockage	Transient Dockage	Laundry	Winter Storage	Ship Repair	Dry Dock	Restaurant	Launch Service	Sauna	Swimming Pool	Boat Rentals	Harbor Tours
Newport Shipyard	54	3	2							•														
The Periwinkle	12	1	1									•							•					
Newport Oil Corp.	10		1																					
Newport Yacht Club	54	2	2	50	•	•	•				•		•							•				
Long Wharf	14																							
Treadway Inn	72	6	1					•	•	•	•	•	•	•					•		•	•		
Oldport Marine Service				50																•			•	•
Bowen's Wharf	6	1	1											•	•									
Bannister's Wharf	35	6	1	1	•	•	•	•	•						•									
The Mooring	45		10					•	•	•	•	•	•	•										
Mathinos Shipyard	32	2	2																					
Christie's	38	6	1						•	•	•	•	•	•					•					
Ann St. Pier	8	1	1																					
Newport Offshore Ltd.	55	6	7			•			•	•	•		•	•	•	•	•	•						
Williams & Manchester	46	7	3			•			•	•	•		•	•			•		•					

from which to view operations within the harbor. Such a vantage point is essential if the harbor master is to ensure harbor safety and proper law enforcement. This facility should also serve as a central receiving center to which boaters could go for information regarding moorings and slips, short-term tie-ups, and other services available in Newport. At the present time it does not do so.

The only area on the waterfront with a boat ramp that provides maneuvering and parking space for trailers is at Kings Park. As a result, boaters who do not own moorings or slips and must trailer their boats have difficulty in finding a place to put these boats into the water. This is a problem that concerns many Newport residents.

Probably the most pressing concern on the waterfront is the shortage of mooring and dock space. Because space within the harbor is limited, competition for docks and moorings is intense. This situation leads to conflicts between residents and non-residents over seasonal spaces, and causes prices for moorings and dock space to rise to exorbitant levels.

There is also a shortage of transient dock space in the form of short-term tie-ups for boating tourists in the harbor, even though the trend in Newport seems to favor the conversion of seasonal dock space to transient dock space. This conversion trend increases animosity between tourists and residents.

Because of the shortage of transient dock space, visitors occupy temporarily vacant spaces belonging to residents and seasonal renters or they decline to stop and debark, which is a loss of potential profit to Newport merchants.



Harbor master's station

Goals and Recommendations

Circulation

In less than a decade Newport has made a remarkably smooth transition from a major naval center to a major tourist center. While this transition has brought healthy economic benefits, it has also created severe problems of traffic circulation in the downtown and waterfront areas.

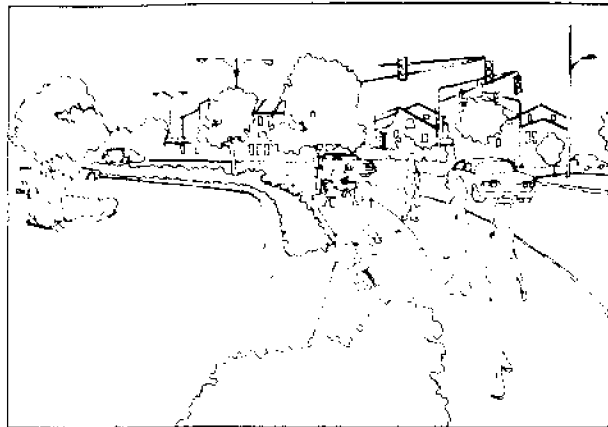
This section offers specific recommendations to provide more efficient circulation of vehicles and pedestrians in both downtown and waterfront areas, as well as in Newport generally.

Vehicular Flow. Newport's waterfront has only one major thoroughfare, the corridor that includes Memorial Boulevard, Memorial Boulevard Extension, America's Cup Avenue, and Frank Corridon Road. This pattern results in a severe deficiency of conduits enabling traffic to cross the city and in intolerable congestion at the height of the summer tourist season.

The present circulation plan has been constrained by the densely developed and historically valuable cityscape of the waterfront area. This constraint has led to use of local streets, intended only to provide access to abutting property, as major traffic collectors and arterials. The result is seasonal traffic loads far in excess of design capacity. Recognizing the importance of this constraint, we offer several suggestions to improve circulation. Our goal is to provide efficient and convenient transport of persons and goods throughout the Newport Harbor area. The following objectives serve this goal:

1. create a system of major thoroughfares which will connect the arterial roads focused on the waterfront;
2. provide detailed refinements on which successful operation of the general system will depend;
3. remove obstructions to efficient traffic flow on waterfront streets where possible;
4. reserve areas for exclusive pedestrian use; and
5. minimize obstructions to pedestrian traffic.

In our plan, the corridor from Memorial Boulevard to Frank Corridon Road would be preserved as a high-capacity thoroughfare; the intersection on America's Cup at Market Square and Thames Street would be eliminated; and slight changes would be made at other intersections to connect parking areas. The major change from the present system would be the creation of a high-capacity arterial road connecting the waterfront with Broadway and the Aquidneck Island routes to Providence and Boston. West Broadway would be two lanes inbound to West Marlborough, which



would be two lanes inbound to America's Cup Avenue. Two lanes of outbound traffic would be provided by the following links: one lane up West Marlborough to Thames Street; two lanes south on Thames to Washington Street; and two lanes north on Washington, continuing up Broadway to the intersection with West Broadway near Newport Hospital. (See Figure 15.)





Mass Transit. The local bus transit system should be easy to use by first-time riders, provide convenient and efficient service, and follow a simple route pattern that is comprehensible to visitors. Newport's present transit system could be improved in several areas to better meet these goals. Designated bus stops, additional passenger shelters, and better dissemination of route maps would help. Route maps are now available from drivers on request, but there are no maps displayed in buses or at stops. Color-coded maps showing transfer points and all routes, such as that shown in Figure 16, should be posted in all buses and at regular stops along the routes. The timetable should also be revised to make it easier to read and understand.

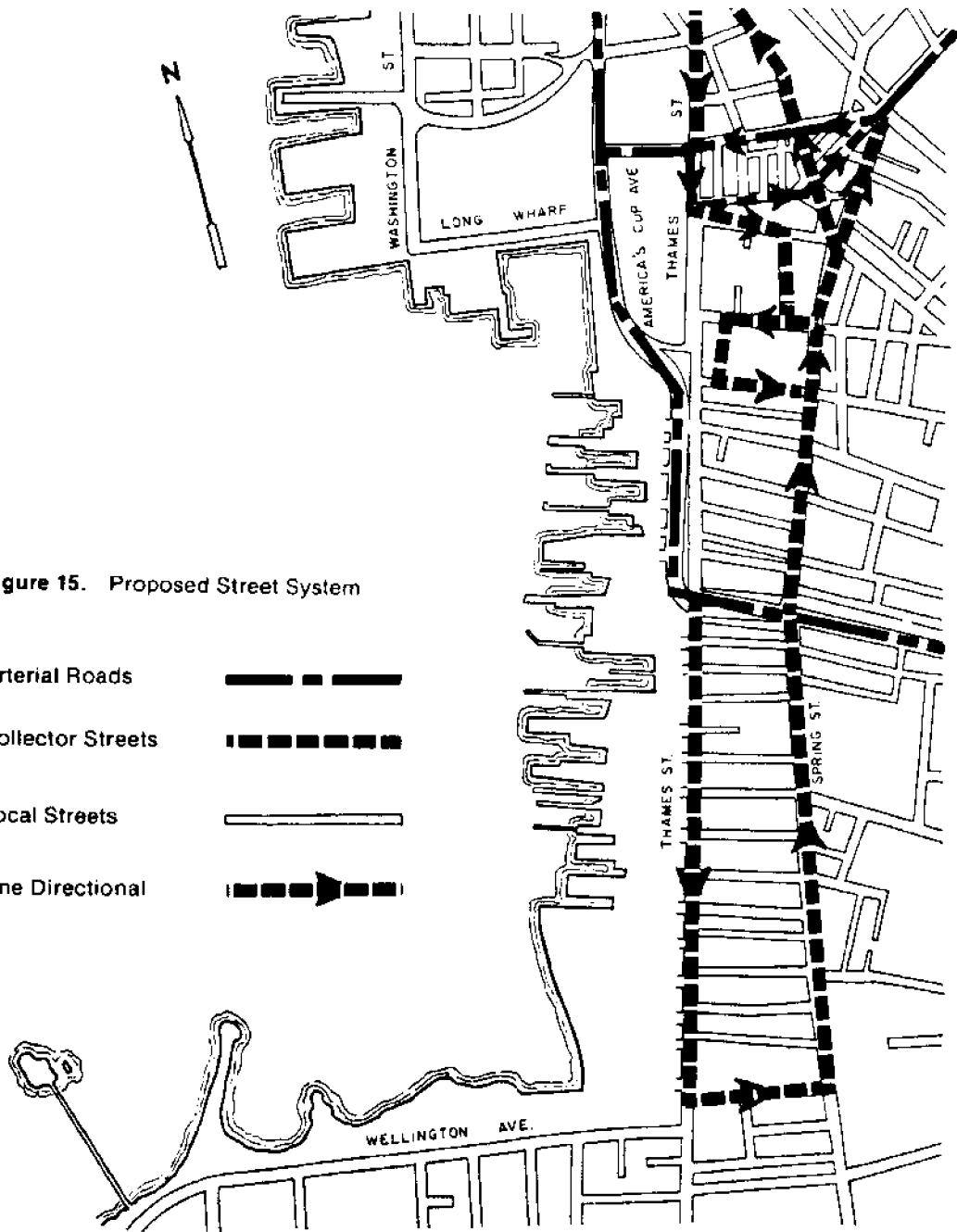
Specific bus stops should be designated throughout the city, instead of the present system with buses stopping on demand, a system that tends to impede vehicular traffic flow. Shelters should be provided at major bus stops to protect waiting passengers from rain and wind.

Only minor changes would be needed in the existing route system. The red line should be extended during the tourist season beyond Washington Square to Bailey's Beach. This change would provide better access to the beach, mansions, and the Cliff Walk. The green line bus, instead of turning onto Narragansett Avenue, should continue straight and turn around at Rogers High School. The blue east line should be extended to Goat Island.

During special events which draw exceptionally heavy tourist traffic to the Newport waterfront, perimeter parking lots in locations such as the jai

Figure 15. Proposed Street System

- Arterial Roads 
- Collector Streets 
- Local Streets 
- One Directional 



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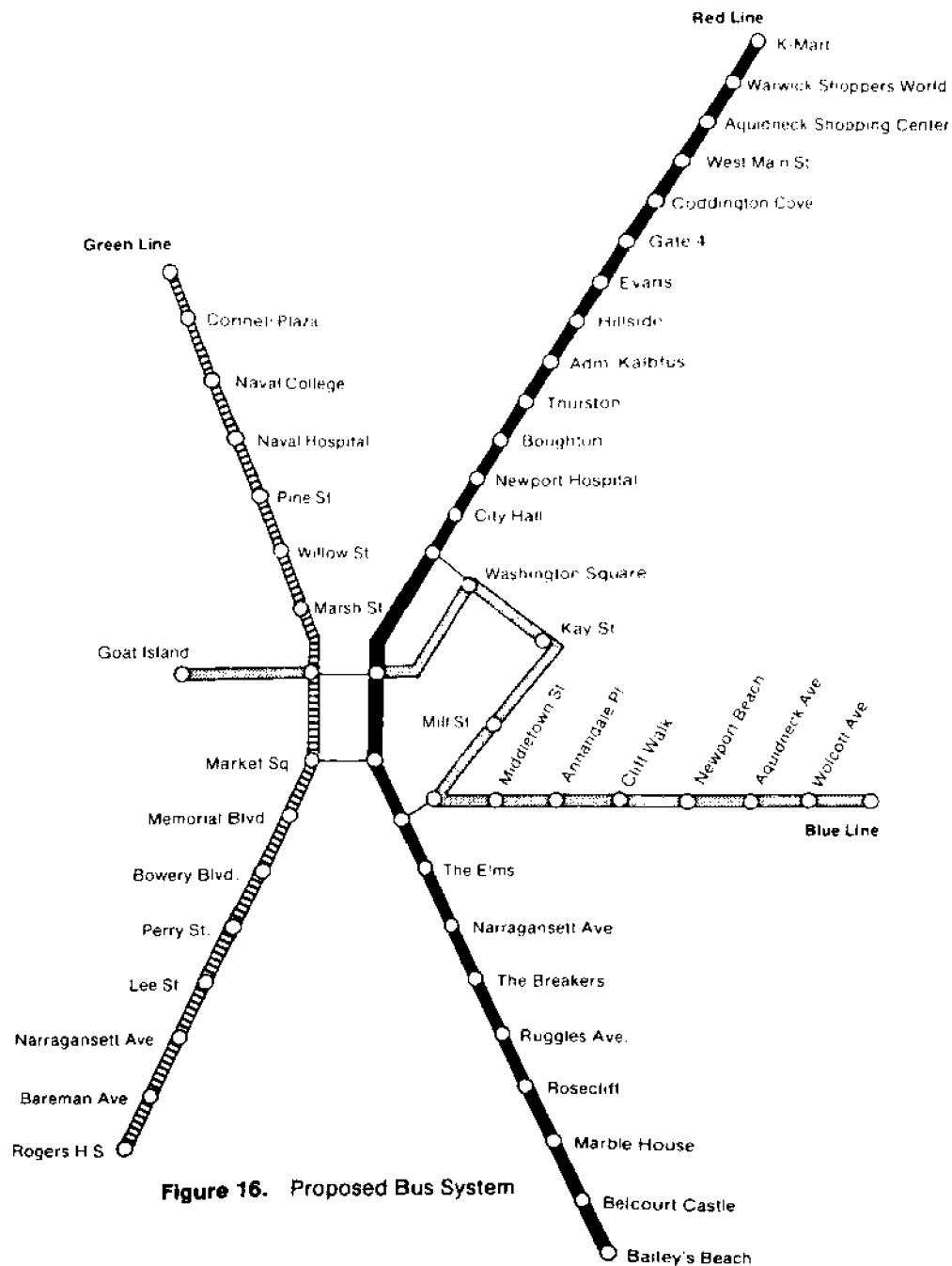
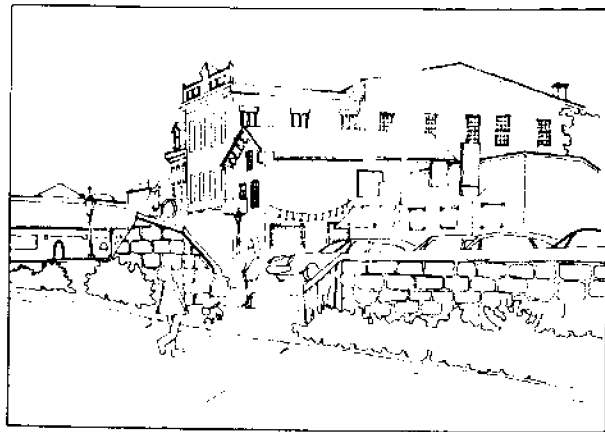
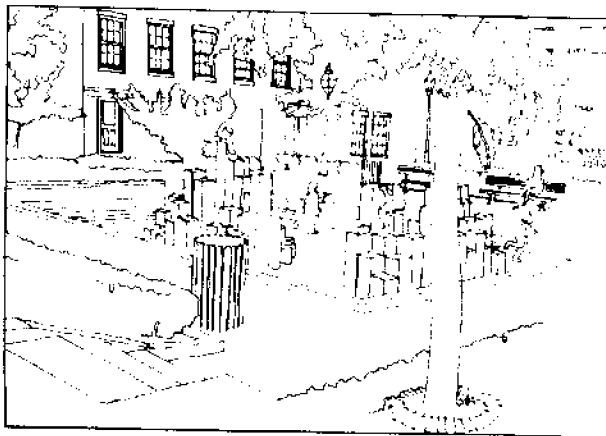
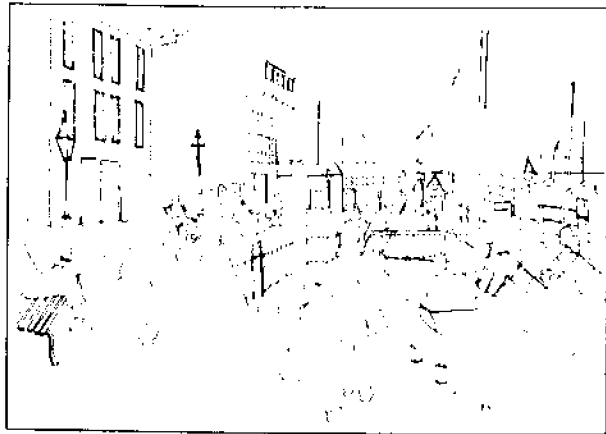
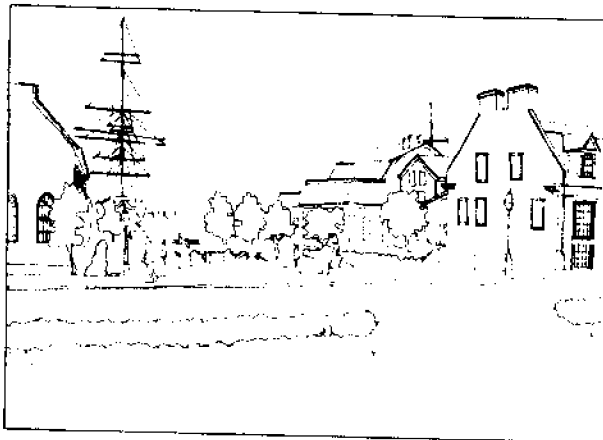


Figure 16. Proposed Bus System

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alai fronton should be used, as they were during the Tall Ships spectacle. Stricter enforcement of downtown parking and travel bans is needed, however, for this system to work.

Pedestrian Network. An integrated pedestrian network along the Newport waterfront would provide visual and functional links between areas of historic and tourist interest. Several strategies are offered here to maintain a high level of pedestrian access to important retail areas while avoiding direct conflict with service access. This is vital if the viability of mixed retail and industrial activity is to be retained.

One problem is the number of physical barriers to pedestrian access that presently exist. These barriers should be removed. Examples include the fence at the northern property line of the Treadway Inn and the bulkhead line behind the Black Pearl Restaurant. Relocation of this bulkhead would provide an alternate access to The Mooring parking lot and continuous access along the water's edge.

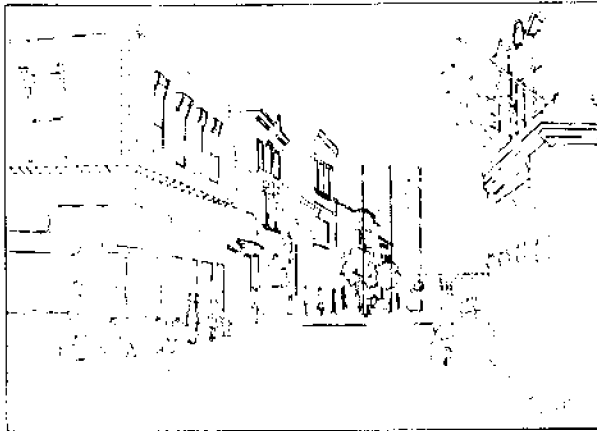
The pedestrian network should integrate public facilities such as visitor information centers with private retail and service facilities along the waterfront.

The hostile winter climate in Newport

undoubtedly contributes to shortening the retail business season. This effect could be mitigated by constructing covered walkways in the Bannister's Wharf area. Covered walkways extending outward from the wharf areas to America's Cup Avenue would serve as a visual and psychological link to the waterfront from bus stops and parking lots.

A shift of emphasis from pedestrians to vehicles has detracted from the human side of the waterfront. Vehicular access to the wharf areas should be limited to light service on a scheduled basis and to emergency use. The architectural diversity of the waterfront should be maintained. The vast variety of architectural styles that now exists is beneficial to a comfortable human environment. Paving, building materials, and street furniture such as lamps and benches should be consistent with the human scale objective.

Auto-Restricted Zone (ARZ). One means of alleviating conflicts between pedestrians and vehicles, and stimulating trade along upper Thames Street, would be construction of an auto-restricted pedestrian mall. The proposed ARZ would extend approximately ten blocks (1,040 feet) along upper Thames Street and Long Wharf. Width would vary from 40 to 60 feet. The zone would provide a functional linkage between points of retail and tourist



interest, as well as a positive transition from vehicle-oriented shopping activity to pedestrian-oriented areas.

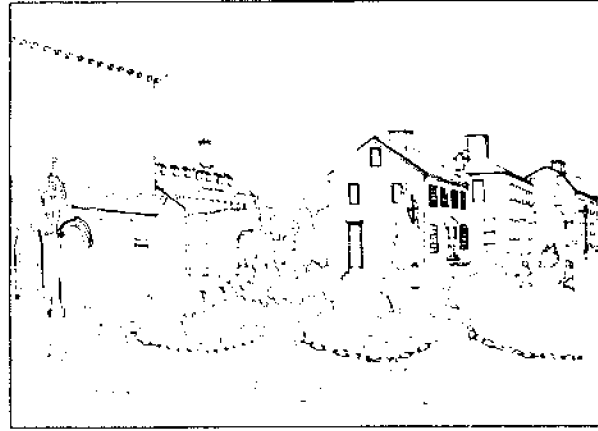
Features and facilities that could be part of the ARZ include fountains, landscaping, and sitting areas; sidewalk sales, art and cultural exhibits, display boards and informational signs; telephones, rest rooms, and other public service items. Paving materials and street furniture should follow the consistent pattern recommended for the proposed pedestrian network.

Parking Garage. Short-term parking for stores along Thames Street, the newly developed Queen Ann's Park, and the proposed auto-restricted zone would be provided by a multilevel garage located between Mary Street and Church Street. The present municipal parking lot on Mary Street contains about 150 spaces and occupies most of the block; the proposed garage would provide 292 spaces and occupy only the center of the block, leaving ample room for commercial development or historic house relocation on Mary and Church Streets.

While the proposed ARZ will eliminate 45 parking spaces, the proposed garage will provide a net gain of 147 spaces. This additional parking near Thames Street, with the improved pedestrian activity supplied by the ARZ, will enhance sales volume for Thames Street stores and Brick Market Place businesses.

Access to the proposed garage would be via a circular route from America's Cup Avenue, down West Marlborough Street, right on Thames Street, left on Touro, right on Clarke, right on Mary, and down the hill to a new street that would provide access to the parking garage and rear entrances to Thames Street stores.

The garage would have four levels, the first open to the proposed service road, the third open to Church Street, and Church Street would be one-way toward Spring Street. If kept to four levels, and built into the side of the hill, the garage would not intrude visually on the neighborhood.



From Thames Street, the store fronts would block the front of the garage. With historic buildings and shops along Church and Mary Streets, the garage would be less obtrusive than an open parking lot.

Waterfront Development

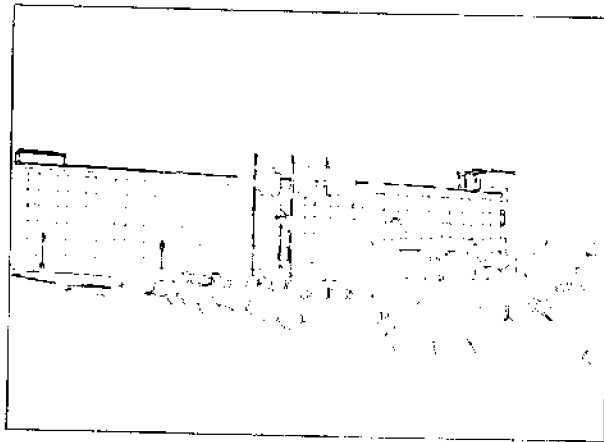
The number of tourists visiting the Chamber of Commerce Visitor Information Center has increased dramatically in the past five years. From a total of 35,346 persons in 1973, visitor inquiries jumped 2,284% to 842,552 in 1977. Tourist services and facilities, however, have not increased proportionately. We recommend visitor information centers, a historic trail system, and redevelopment of Long Wharf and Wellington Landing to remedy this deficit.

Visitor Centers. The present information center is severely hampered by its physical location and by its inability to meet the enormous demand for its services. It is visible only from America's Cup Avenue, yet accessible only from Thames Street. It shares an overcrowded parking lot with the Brick Market Place, and it cannot provide a full range of tourist services.

We offer a reasonable solution to these problems: a new center, in a visible, accessible, and central location, providing a full range of services and supplemented by a network of satellite centers in strategic locations. The center should serve not only the popular waterfront area but also the historic districts, mansions, hotels and restaurants.

Careful study of aerial photographs shows graphically how the various areas of tourist attraction relate to each other and to traffic circulation. Analysis of these relationships leads to an obvious location for a central visitor center: the Perry Mill Building. Our plan is to use the western end of the building, all three floors and the loading dock, comprising about 15% of the structure's floor area.

The first floor would house a reception lobby,



rest area, play area for children, and information desk. The second floor would have rest rooms, and a small auditorium with an audio-visual presentation of Newport's history and special events. The top level would be an observation deck overlooking the waterfront and city. The three levels would be connected by the existing stairwell and elevator.

The Perry Mill Building has many advantages as a site for a center. It is highly visible, central to the waterfront and located on major transit routes at an intersection that carries nearly all tourist traffic through the city. The building is structurally sound, in excellent condition, has historic significance, and is available. It abuts a commercial fishing operation, which would add character and interest for tourists. Location of a visitor center in the Perry Mill will serve as a catalyst for rehabilitation of the rest of the building and for the southern half of the waterfront.

Traffic circulation is excellent. Cars could easily be directed in a one-way pattern around the building without removing any barriers or requiring new curb cuts or traffic lights. Ample space for parking is available around the building.

In addition to the proposed central facility, several satellite centers should be located at key points throughout the city. These centers could take several forms. Small information booths would be appropriate in hotel lobbies, in the wharf area and ARZ, and at major entrances to the city. These could be staffed during busy tourist times. Unmanned kiosks and automated information tellers could be placed in strategic points where the cost of staffing would not be justified. Tape-recorded messages could give directions and information in a choice of languages at the push of a button. Maps and brochures could be automatically dispensed from vending machines.

None of the visitor centers should include concessions for the sale of food or souvenirs. Such services complicate management problems, and are adequately provided by other facilities.

Historic Trail System. There is no comprehensive historic information presently in Newport. The Historical Society offers visitors several guided tours, but arrangements must be made in advance. This results in long waiting periods for large numbers of visitors. The Historical Society and other museums in Newport have much to offer, but these museums have not seen as many visitors as they could during both summer and off-season months. We believe that appreciation of Newport's history could be improved by increased visibility and coordination of its historic resources.

The proposed visitor center would serve as a means of promoting a historic appreciation of Newport. Within the center would be located a rotating display of artifacts on loan from the various museums. These displays would mark specific periods in Newport's history and include early costumes, tools, nautical equipment, and literature. The rotating display would offer the museums a central location for showing their artifacts, and would offer the visitors a different display each time they came to Newport.

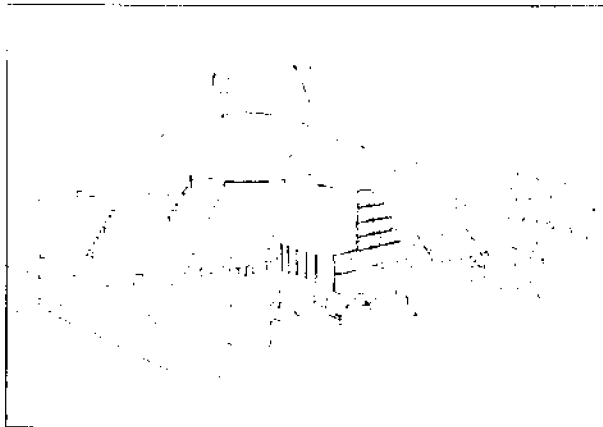
An audio-visual presentation in the visitor center would give a general account of Newport's history from its founding. This presentation would be a prelude to the Newport historic walking trail system we propose.

The trail system would be composed of a Red Trail and a Blue Trail. The Red Trail would begin at the proposed visitor center and would encompass the area known as The Hill and a section of the waterfront from Bowen's Wharf to the Perry Mill. The Blue Trail would begin at a satellite visitor center in the Brick Market Place and would encompass the area commonly referred to as The Point.

The historic trail system would be designated by arrows (red or blue, depending on the trail) spaced appropriately with special directional emphasis. These arrows would be painted on the sidewalks or streets. Since the tours would be self-guided, a pamphlet containing a detailed map with a numbered sequence of historic sites would direct the visitor on the trails. As an option, visitors could rent a tape-recorded guide to the tours.

The Newport Restoration Foundation, which schedules periodic open house tours of Colonial and Victorian homes they have restored, could open houses located on the trail system to the public on given dates. Brochures announcing open house dates, as well as other historic information, would be placed at all visitor centers.

Harbor Square. Newport's tourist-based economy is highly seasonal. Many of the visitor attractions and facilities relate directly to the waterfront or involve outdoor activities. The harsh winds and low temperatures of winter discourage use of this area during half the year, leading to underutiliza-



tion of services and facilities, unemployment, and vandalism. It would be advantageous to the city to lengthen the tourist season by offering indoor facilities during the winter.

One way to do this is to provide facilities for trade shows, banquets, conventions, and exhibitions. Needed are an exhibition hall and more hotel rooms. Ancillary facilities such as a parking garage, bus terminal, restaurants, and meeting halls would also be needed. We call this proposal Harbor Square.

The block of property to the north of Long Wharf appears to be the area on the waterfront most suitable for the proposed development. This site is approximately halfway between the two existing waterfront hotels, and is the proposed location of a third hotel. A parking garage could be developed in conjunction with the proposed hotel, and would also benefit nearby Cardine Field. A garage in this location could intercept automobile traffic in summer months, thereby reducing congestion along the waterfront.

Much of the land in this block is either blighted or given to a use not related to the waterfront. We recommend a three-phase development program for this area. Phase one is the acquisition of land by the Newport Redevelopment Commission and the allotment of sites for the recommended uses. This should be done with consideration of plans for a new sewage treatment plant on a portion of the site, the necessity of retaining the existing sewage pumping station, and the importance of preserving the historic character of the residential area immediately north of the site.

Phase two of the development process includes four steps:

1. Construction of the front portion of a 300-room hotel on the designated site of approximately 2.6 acres fronting Long Wharf. The first level of this structure would consist of a parking garage for use by hotel patrons, which would be partially below grade. The design of this facility should allow for future expansion of a public park-

ing garage and hotel wing in the rear, and the main portion of the hotel should be elevated above the flood line. A design competition might be considered

2. Construction of the proposed sewage treatment plant in the northern portion of the site, adjacent to the Goat Island connector.

3. Closing of the eastern portion of Long Wharf to vehicles, and its conversion to a pedestrian promenade, to be integrated with the proposed waterfront pedestrian network.

4. Development of the area just south of Long Wharf. This would include an open-air restaurant, landscaped plaza, and boating tie-up for hotel and convention patrons. Consideration should also be given to the potential of this area as a landing for the Bay Islands Ferry system.

Phase three also includes four steps:

1. Construction of a convention center fronting Long Wharf west of the proposed hotel. This would be a two-level structure. The first floor would contain a 10,000-square-foot exhibition area, lobby, offices, storage and loading area. The upper level would contain a large meeting/dining room, kitchen, and lounge, to serve groups of at least 800 persons.

2. Construction of a three-tiered public parking garage to the rear of the hotel garage. This combined facility could store approximately 1,400 vehicles. An additional hotel wing would later be built over the garage.

3. The construction of a bus terminal fronting America's Cup Avenue, which would serve as the primary node for mass transit in the city.

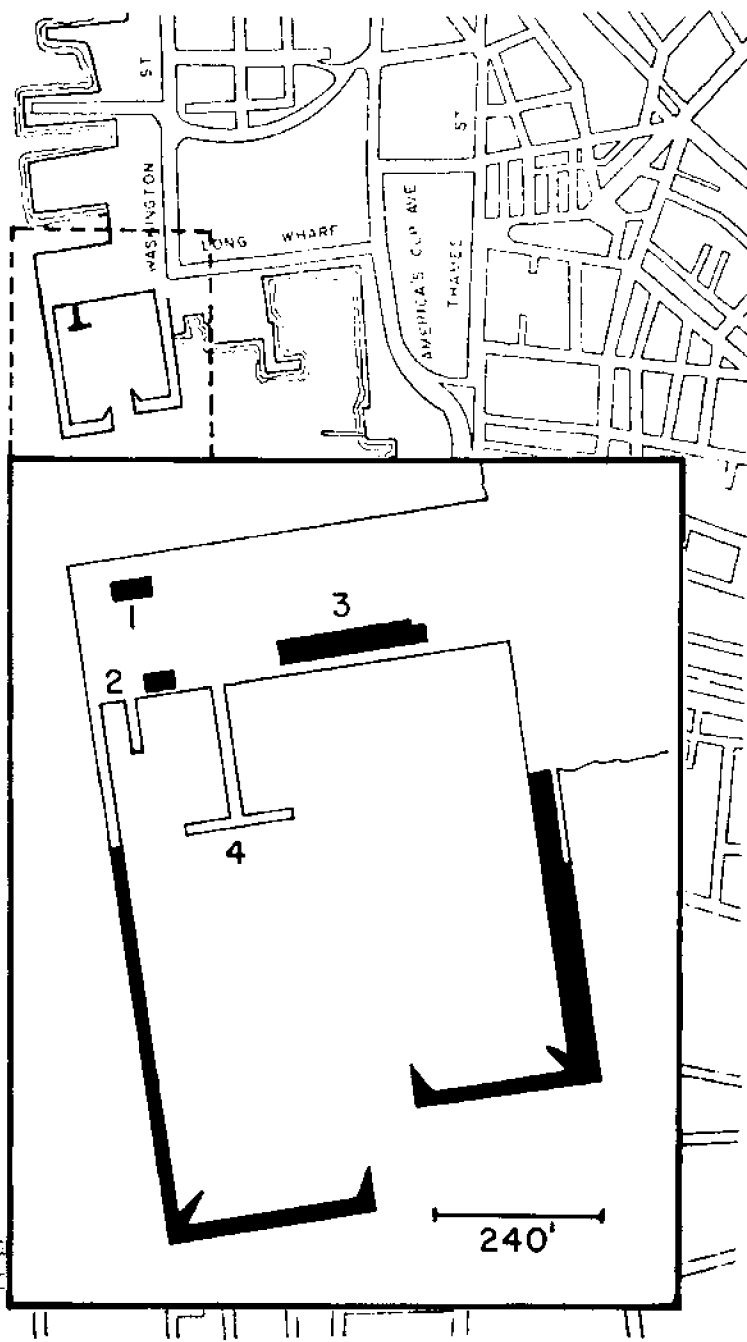
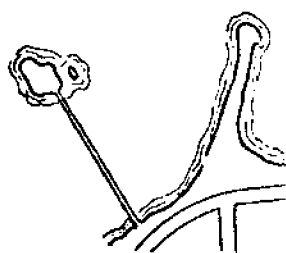
4. The closing of the remaining western portion of Long Wharf and completion of the pedestrian promenade.

Wellington Landing Townhouses. Housing is an essential element in the mixture of land uses that gives the Newport waterfront its attractive character. New multifamily units have recently been added at Brick Market Place and Goat Island, linking residential use to the waterfront. We propose that an additional 100 units of one- and two-bedroom townhouse dwellings be built at the southern end of the waterfront. This development, to be called Wellington Landing, would occupy a now vacant site at the intersection of Thames Street and Wellington Avenue.

The proposed townhouses would serve as a node and terminus of waterfront development, a key element in the overall development plan. It would provide an effective and aesthetically pleasing buffer between the existing residential area south of Wellington Avenue and the mixed uses along the waterfront. The development would

Figure 17. Proposed Facility for Commercial Fishing Boats at State Pier

- 1 Bait and Ice Building
- 2 Engine Shop Next to Existing Travelift Well
- 3 Offloading/Auction Building. Also contains Fish Cutting, Retail Shop, and Offices
- 4 Fuel Dock



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require a minimum of municipal services, and produce substantial property tax revenue for the city.

The nature of the lower waterfront is quickly changing. The adjacent property to this site, now a metal fabrication shop, has been sold and will be changed to housing. An old warehouse two blocks north is being converted into townhouses, and many residential structures in the neighborhood are undergoing extensive renovation. These changes have been initiated by private investment, fostered by the large amount of public and private ventures in the rest of the waterfront. We propose a continuation of this trend.

Parking and service needs should be provided on the ground floor of each unit. This would minimize the need for open parking lots, and raise the living areas above the 100-year flood level. A private yacht club or marina would be an integral component of the development. This direct link to the water would provide added stimulus for potential tenants and would be an important feature that should not be overlooked. A small commercial convenience center should be built on the opposite side of Thames Street. The pedestrian network recommended for the northern waterfront should be extended through this development, linking up to Kings Park.

This project should be privately developed. The locale suggests that the housing would be expensive, although a portion of the units, possibly 20%, might be set aside for Section 8 rent subsidies, if agreed to by the Rhode Island Housing Mortgage and Finance Corporation, the agency that allocates such subsidies in the state.

The proposed design is merely an illustration of what could be done with this site. The density and mix of units could be adjusted as needed. The important point is that this parcel could most effectively be used for housing to serve as a buffer against the spread of mixed land uses down Thames Street and to preserve the residential character of the neighborhood.

Water-related Activities

Water-related activities, both commercial and recreational, have long been an intrinsic part of the Newport community. In the past decade, however, the attractiveness of Newport's waterfront has brought intense pressure for development. A drastic increase in tourism, coupled with a sharp rise in recreational boating, has been the root of this growth. Commercial fishing has needs of its own, and has had to struggle to remain afloat with tourist and recreational boating industries.

This study has sought to address the complex problem of providing all water-related activities with the proper space they require to remain

healthy and productive. Continued mixed use of Newport's waterfront has remained a key goal. A realistic assessment of what each specific activity requires for a viable existence must be included, however. Our proposals seek to retain the Newport "flavor" while creating an atmosphere conducive to continued controlled growth and development of the city's waterfront activities.

Commercial Fishing. The economic benefits from commercial fishing in Newport are minimal. Most of the catch is immediately shipped elsewhere for processing and sale; a lack of vital support services, such as bait supply and engine repair, forces boats to fill these needs—and spend their money—in other ports. As recreational boating becomes more popular, and the 200-mile fishing limit leads to expansion in the fishing industry, guaranteed dock space becomes more necessary.

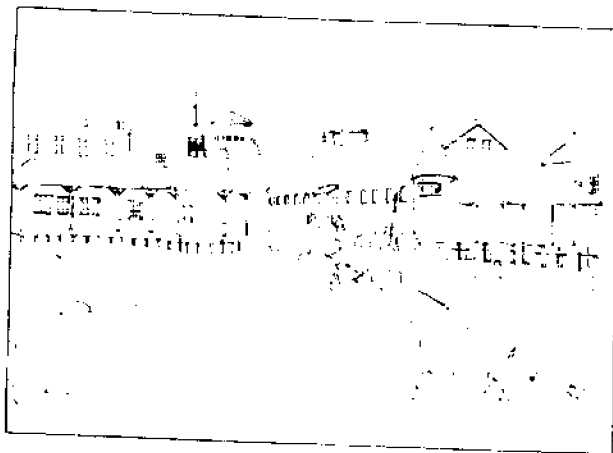
With improved conditions for commercial fishing, Newport could realize a higher economic return from this primary industry. The gain would result from (1) the inclusion of secondary industry into the local economy in the form of support services, and (2) expansion of the number of boats in the harbor.

The proposal offered here grows from circular needs. In order to make profitable businesses of services such as engine parts and repair, there must be a "critical mass" of 60 to 100 vessels available. Conversely, in order to attract boats to the harbor, services must be readily available.

We propose a new facility, located at the south bulkhead of the State Pier (see Figure 17). This is the largest underutilized parcel on the waterfront, and contains enough space for docking facilities. Under terms of a five-year lease from the Newport Shipyard, the Rhode Island Department of Environmental Management must develop a proposal for further use of the south bulkhead by the fishing industry.

The proposed structure, based on a European model, would consist of two L-shaped steel bulkheads extending approximately 650 feet from an existing pier, and forming a protected "container" in the shape of a square. Within this area boats can tie up side by side with only the bows secured, without damage. Because this system saves space, the structure can accommodate over 70 boats. The two bulkheads would be 20 and 30 feet wide to allow trucks to load fuel, ice, and gear. The 30-foot width allows room for a pedestrian walkway, giving tourists and residents a close view of the fishing activity without hampering it.

Services that should be provided on the site include an engine parts and repair shop, ice and refrigeration, bait and gear, fuel and oil, and electronic repair. A wholesale market should be considered to avoid the practice of trucking fish to



other areas for processing and thereby keep more direct revenue in Newport.

The proposed facility is designed to attract commercial fishermen to a protected area where a large number of fishing boats can be easily unloaded, serviced, and docked. The separate facility would mean that commercial vessels would no longer have to compete with pleasure boats for access to docks.

Recreational Boating. Newport Harbor is not an easy place for a sailor to get into and out of during the summer months. To ease congestion and improve safety, we recommend additional transient dock space in the upper harbor, relocation of the harbor master's station, and installation of additional moorings for residents in the Kings Park area.

Additional mooring space should be provided by extension of the city-owned Ann Street Pier, and the addition of new slips along Long Wharf and Perrotti Park. The harbor master's station should be moved from its present location near the Newport Yacht Club to the second level of a new building at the end of the Ann Street Pier extension. The first level of this structure should house a satellite visitor center which would serve tourists who arrive by boat.

Boating facilities for Newport residents are also inadequate, a condition that has worsened in recent years as increased demand from transient boaters has raised slip rentals to among the highest in the Northeast. The Newport Yacht Club, which prides itself on serving local residents at reasonable costs, is being pressured to move from its leased space on Long Wharf. The Ida Lewis Yacht Club is small and comparatively expensive. There are no other boating facilities in the Newport waterfront that cater predominantly to residents.

Newport needs more dock space and moorings exclusively for the use of city residents. The area immediately west of Kings Park would provide an ideal location for a recreational boating marina. We propose new beam piers and floating

docks with boat cradles at the end. The cradles could hold dinghies and small sailboats. Possibly a hoist could be used to lift small boats onto the dry storage cradles.

A new launching ramp should also be provided in this area and more moorings made available in the open water section west of the beach. There are no ramps available now with adequate parking space for trailers. The existing ramp in Kings Park might be improved. Installation of recreational boating facilities in this area will relieve some of the pressure from more congested facilities in the upper waterfront.

Plan Implementation

A plan is of no value if it is not used. Changes in land use and physical development take time, cooperation, and money. This final section of the summary report briefly outlines an administrative mechanism for getting the plan off the ground, lists potential sources of federal funding and technical assistance, and suggests a program for phasing development over a period of several years.

Administrative Mechanisms. In researching the problems and opportunities presented by the Newport waterfront, we have identified many areas of concern. Our first impression is that existing municipal agencies, organizations, and quasi-public commissions are addressing these problems and opportunities in a fragmented fashion, often acting more in a spirit of competition than in a spirit of cooperation. It is essential that everyone with an interest in the waterfront coordinate his efforts toward a unified plan for rational growth and development.

We propose bringing existing efforts into focus on the Newport waterfront through creation of a task force comprised of public officials, property owners, users, merchants, designers, and others. This task force would serve a leadership role in reviewing and finalizing our proposals and others for recommendation to the planning board.

At the present time, there is no public body specifically responsible for the use and development of the waterfront. The Planning Board is responsible for developing a comprehensive plan and conducting studies in land use, housing, transportation, and other issues of physical and social development. The Board of Review serves to hear and decide on appeals for zoning changes, variances, and special exceptions.

The Historic District Commission has the responsibility for preserving districts and buildings in Newport which reflect the city's cultural and architectural history. The jurisdiction of this commission, however, is restricted to areas designated on a historic map. The Waterfront Commission deals largely with harbor-related matters such as docking facilities, moorings, and water

safety. These boards and commissions, as well as countless others, have varying interests and responsibilities in the future of the waterfront. The importance of this area to the city, however, demands that a more comprehensive approach be taken to develop a consensus on its future use.

Responsibility for developing a more comprehensive approach might be given to one of the existing public bodies. Expanding the jurisdiction of an existing commission or board will undoubtedly meet with opposition from other bodies having interests in the waterfront area. A second alternative might be the creation of a new commission to plan for future waterfront development. This would require cumbersome legislative action, and would expand a government structure that some people consider to be already too pervasive. A third alternative is to bring existing boards and commissions into focus on the waterfront through the creation of a cooperative task force.

Members should have interests and expertise in the following substantive areas and represent the following groups:

<i>Substantive Areas</i>	<i>Representatives</i>
Government Planning	City Council Planning Board Redevelopment Agency
Zoning	Board of Review
Historic Preservation and Architecture	Historic District Commission Newport Historical Society Newport Preservation Society
Fishing	Newport Fishermen
Social Concerns	Neighborhood Groups Taxpayers Association
Business	Chamber of Commerce
Water-related Activities	Waterfront Commission
Boating	Recreational Boaters Association
Law	City Solicitor
Real Estate	Waterfront Landowners
Public Relations	Chamber of Commerce
Development/Construction	Aquidneck Island Development Corporation

Through the efforts of the mayor and other leaders in the community, representatives from these groups and others would be invited to serve on a task force to oversee development of a comprehensive plan for the waterfront. The task force would appoint technical committees to review these proposals, drawing on such resources as the planning department and other municipal departments, the University of Rhode Island, and outside consultants. Their work would serve to finalize our proposals, develop alternatives, and assist the task force in formulating a plan for waterfront development.

This plan would contain recommendations for capital improvements, land use and zoning policies, public facilities, a transportation network, economic development, ecological considerations, and social concerns. If adopted by the City Council, the plan would not only act as a guide for

waterfront growth and development but, more important, represent a statement of what Newporters want to do with their most valuable resource.

Funding Sources. Government assistance will be needed if the proposals presented here are to be implemented. Although federal funding programs may be of help, it is important to recognize that most assistance programs require complementary funding from local sources.

Through the aid of the Federal Assistance Programs Retrieval System (FAPRS), a United States Department of Agriculture service provided by the University of Rhode Island Cooperative Extension Service, several funding categories have been defined, and potential sources of assistance identified. The reader should understand that detailed discussion with each federal agency would be necessary to further ascertain eligibility for assistance and availability of funds for any given project.

Preliminary research in the 1978 Catalog of Federal Domestic Assistance has disclosed many potential sources of money and technical assistance. The following categories are relevant to our waterfront project proposals:

- Public Roads and Bridges
- Land Acquisition
- Construction and Equipment Assistance
- Public Building Programs
- Site Preparation for Housing
- Historic Preservation
- Research and Development

Titles and related catalog numbers of possible sources of funding for the above categories can be found in Appendix B. Further investigation in the current Catalog of Federal Domestic Assistance is recommended.

Phasing of Proposals. The following general development strategy is recommended to put this plan into effect. (Also see Figures 18-20.) This ten-year, three-phase program takes into account the need for relatively long lead times for expensive or complex proposals. It also recognizes the need for immediate action if Newport is to continue its growth as a major tourist center and world yachting capital.

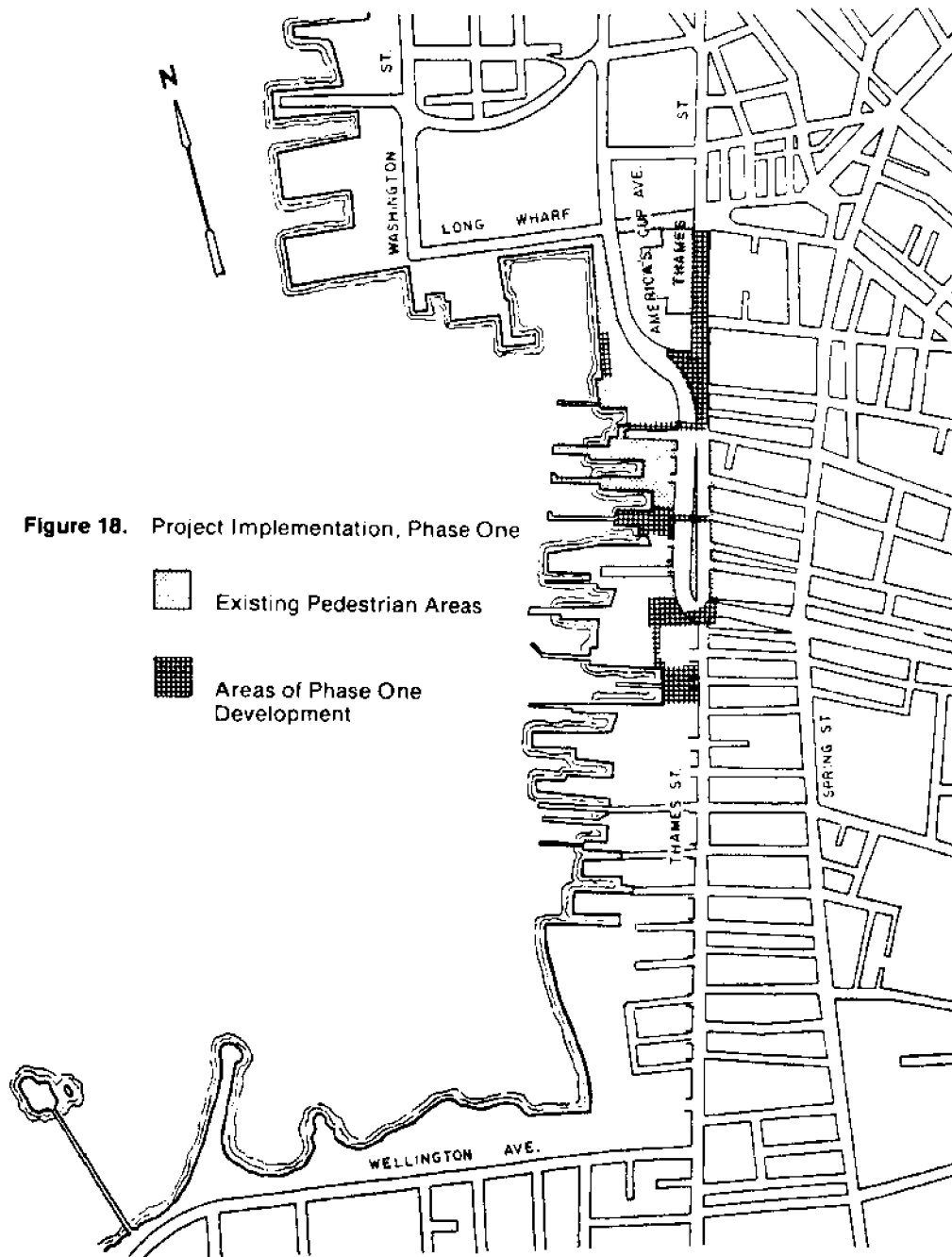
Phase One (0 to 3 years)

- Mary Street Parking Garage
- Auto-Restricted Zone
- Pedestrian Circulation System
- Historic Trail Network
- Perry Mill Visitor Center
- Fishing Pier (Phase One)
- Thames Street Bus Stops

Phase Two (3 to 5 years)

- Harbor Square: Hotel and Parking
- Fishing Pier (Phase Two)

Figure 18. Project Implementation, Phase One



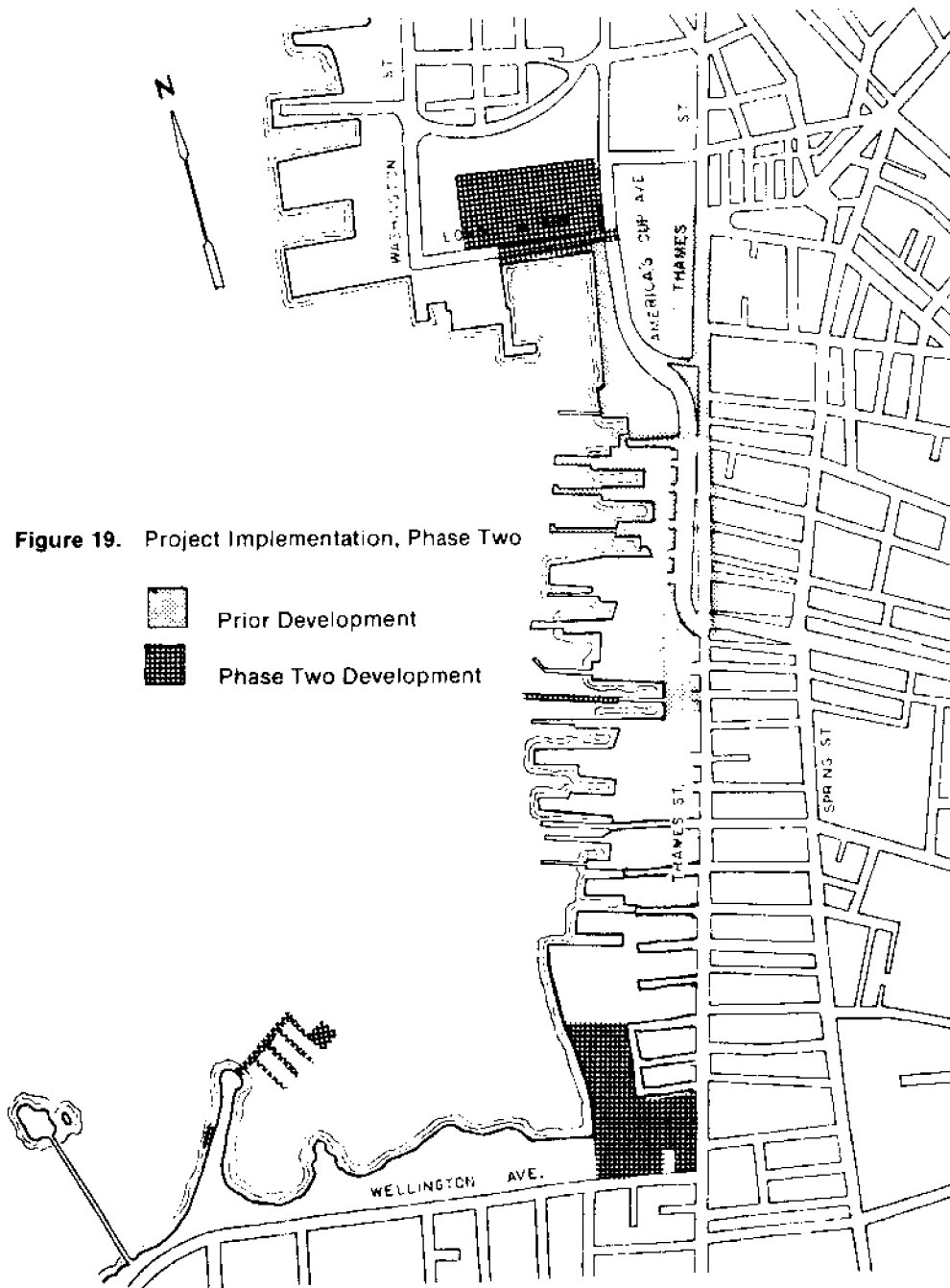
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Figure 19. Project Implementation, Phase Two

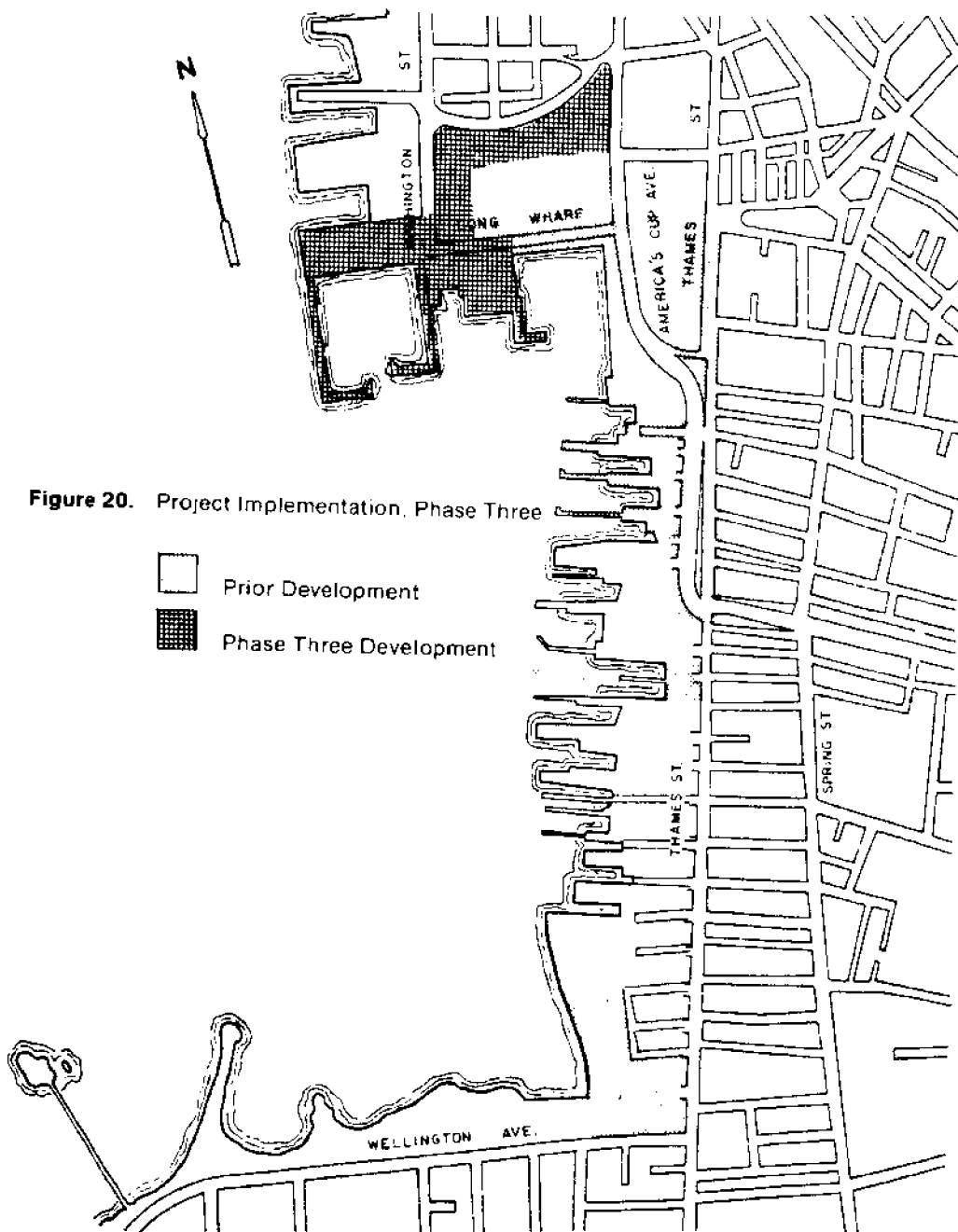


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Wellington Landing Townhouses
Recreational Boating Facilities

Phase Three (5 to 10 years)

Harbor Square: Third-Level Parking
and Convention Center
Long Wharf ARZ
Satellite Visitor Centers
Fishing Pier (Completion)

Costs. Estimating costs of construction projects is difficult because of the local nature of the construction industry and rapid cyclical changes in material and labor costs. In addition, where federal subsidies are involved it is sometimes difficult to equate local costs with benefits to be derived from a project. To give a rough idea of the cost of our proposals, however, we list here most of the key projects recommended, with estimated costs and sources of funding. Note that these costs do not include the price of the land.

<i>Project</i>	<i>Cost</i>	<i>Funding</i>
Perry Mill	\$ 300,000	federal CDBG
Visitor Center		
Historic Trail	15,000	city
Auto-Restricted Zone	3,500,000	50% federal, 50% local
Mary Street Garage	1,800,000	authority bonding
Transit Shelters	100,000	federal UMTA
Fishing Facility	1,500,000	70% federal EDA
Townhouse Complex	8,000,000	private
Long Wharf Mall	800,000	50% federal, 50% local
Harbor Square Hotel	7,000,000	private
Harbor Square	8,400,000	authority bonding
Garage		
Convention Center	5,000,000	authority bonding
Transit Terminal	500,000	federal UMTA
Restaurant	400,000	private
Total Cost	\$37,315,000	
federal	4,100,000	
state	450,000	
city	2,165,000	
authority	15,200,000	
private	15,400,000	

Survey of Public Attitudes

As part of the data collection phase of this study, a questionnaire was drafted and used to determine attitudes of Newport residents toward the waterfront. The survey was conducted by a team of 12 students on an afternoon in October 1978, well past peak tourist season. Respondents were selected at random from among individuals in the study area. The survey was designed to provide information and ideas, and not necessarily to obtain a statistically valid representation from the community.

In the survey, 136 people were interviewed and asked about traffic and parking, tourism, recreational boating, and commercial fishing. In

addition, there was an open-ended question, which provided an open forum for Newporters to voice their opinions about the waterfront area. The questions and responses appear in Appendix A.

Respondents were 59.8% male and 40.2% female, although 1970 census data for the area shows that 51% of the population is male and 49% female. Of those responding, 87.9% were Newport residents; 37.3% owned dwellings in the community and 50.7% rented space.

In response to specific questions, 82% of those surveyed felt that parking represented a serious problem on the waterfront. Only 74.1% considered traffic congestion to be a serious problem, indicating that people are more concerned about parking in the waterfront area than about driving there. Of the respondents, 62.7% felt that more tourism would improve the well-being of the community, but 80.6% felt that development which would encourage tourism in the off-season would be a good idea. This is in keeping with our analysis of economic seasonality in Newport.

In response to the open-ended question, comments varied widely. Many of the respondents indicated their disapproval of plans to construct a 100-foot-tall hotel on the waterfront, seeming to feel that it would intrude on or block the view of the water. Others complained about congestion in the waterfront, both on land where traffic and parking can be a problem and on the water where residents often have trouble finding dockage and mooring space. Some commented about rapidly rising rents and taxes, two concerns which were not part of the original scope of this project.

There was almost universal dislike for America's Cup Avenue, with a range of complaints, from a claim that the intersections were poorly designed to a criticism of the way the highway separates the community from the waterfront. Several complained about the construction of the wall between Thames Street and America's Cup Avenue, and suggested that it should be removed or that some means of access should be provided through it, a conclusion reached by this study team.

Several individuals also commented on the lack of public facilities on the waterfront, particularly rest rooms. Others said they felt that fishermen's problems with dockage at the waterfront were a serious problem. Some urged the institution of a water-oriented visitor information station to advise boating visitors of the location of facilities and harbor regulations. Many expressed concern about the discharges of marine toilets from boats into the harbor. In fact, water quality in the harbor seemed to be a concern of many of the respondents.

Data collected in the survey was compiled and analyzed, and was used to guide design teams in evolving specific plans for dealing with problems and issues considered in this study.

Appendix A. Responses to Public Opinion Poll

		Agree	67.9%
		Moderately Agree	12.7%
		Moderately Disagree	6.0%
		Disagree	13.4%
1. Sex of respondent:			
Male	59.8%		
Female	40.2%		
2. Race of respondent:			
Black	8.3%		
White	91.7%		
3. Age of respondent:			
16-20	3.7%		
20-29	29.9%		
30-39	20.1%		
40-49	13.4%		
50-59	12.7%		
60-69	11.2%		
70 & Over	9.0%		
4. Residency of respondent:			
Home in Newport	37.3%		
Rent in Newport	50.7%		
Non-Resident	11.9%		
5. Residents have little trouble using the waterfront. Do you:			
Agree	49.2%		
Moderately Agree	13.3%		
Moderately Disagree	8.3%		
Disagree	29.2%		
6. The right of access to the waterfront is more important for the commercial fisherman than for pleasure boaters. Do you:			
Agree	40.7%		
Moderately Agree	26.0%		
Moderately Disagree	19.5%		
Disagree	13.8%		
7. The waterfront area is a major producer of jobs for the community. Do you:			
Agree	40.2%		
Moderately Agree	23.6%		
Moderately Disagree	15.7%		
Disagree	20.5%		
8. Attracting more tourists is necessary to the future well-being of the community. Do you:			
Agree	47.8%		
Moderately Agree	14.9%		
Moderately Disagree	13.4%		
Disagree	23.9%		
9. Waterfront development that would encourage tourism during the off-season is a good idea. Do you:			
		Agree	67.9%
		Moderately Agree	12.7%
		Moderately Disagree	6.0%
		Disagree	13.4%
10. How serious is Newport's traffic problem?			
		Serious	74.1%
		Somewhat Serious	20.7%
		Not Serious	5.2%
11. How serious is the parking problem near the waterfront?			
		Serious	82.0%
		Somewhat Serious	15.8%
		Not Serious	2.3%
12. How serious a problem is overcrowding in the vicinity of the waterfront?			
		Serious	51.5%
		Somewhat Serious	26.2%
		Not Serious	22.3%
13. How serious is the problem of managing pleasure boating?			
		Serious	27.0%
		Somewhat Serious	25.0%
		Not Serious	48.0%
14. How serious a problem do you feel fishermen have finding docking and facilities?			
		Serious	65.8%
		Somewhat Serious	23.7%
		Not Serious	10.5%
15. Open-ended question: Are there any comments you might have, or are there any issues you feel we haven't raised pertaining to the Newport waterfront? (Responses to this question are offered exactly as reported by the survey team.)			
		Boat crowding—not to expand docking—too many boats already.	
		Keep Newport Yacht Club where it's at; removal of commercial fishermen would allow more space for sailing and pleasure.	
		Expensive stores—can't afford to buy anything.	
		Water traffic bad for both fishermen and pleasure boaters.	
		Oil in water and pollution; residents should have passes for fishing off docks—make tourists pay for dock use.	
		There is a need for disposal facilities for waste-holding tanks for pleasure boaters, there is only one at Fort Adams. Holding tanks will be mandatory by 1988.	

There is a need for more police patrol, more visibility by them—problem with crime.

Need for cooperation among the mariners in reference to the pleasure boats—managing their activities.

Fishermen need more space for expansion, state pier won't provide enough space.

City not willing to provide reasonable security in the waterfront; problem with police visibility in the waterfront area.

Too much congestion and mobility problem; should have more parks in Newport.

Dockage problem for pleasure boaters.

Like to see fishermen and lobstermen get more in waterfront; they're not being helped enough.

Incomplete development past Treadway; finish waterfront development.

Can't do much sailing—power boats in the harbor rough on small sailboats.

Don't like building height—too tall. Holiday Inn will be too high.

Needs more repair, lower part of Thames Street—piers and frontage for existing uses.

More waste disposal containers—bike racks—another information booth around post office.

Do something with island; do something with federal building where post office is.

Trouble in getting around, traffic too fast, won't let them get to stores; old folks shop down on Bellevue Ave.

Too much parking downtown (shuttle service); walking city.

Difficult to get dockage; city has done good job since Navy left.

Parking and movement of traffic O.K.; Thames St. area, more residential and less commercial.

More police patrol.

Public rest rooms.

Mooring for transients; bath houses.

Worried about size of hotel; industry—jobs—topedoes on Goat Island.

Fishermen are important to the area; ecological drawbacks of pleasure boaters; strict controls needed on harbor discharging from pleasure boaters.

Not just tourism on the waterfront; more commercial, white collar; convention center where hotel is going.

Costs too high (taxes, harbor, etc.); need trade center with all ethnic groups.

Improve architecture; nothing moderately priced, i.e. rooms, another hotel needed to level off price; mixture of tourism and government-related—not against Navy, but have to watch over it.

Rents too high, nothing for low-income people.

Water-related projects should be on waterfront; highway is poor.

Public facilities, e.g. rest rooms for tourists, information booths.

Taxes too high, going up.

Not enough parks.

Legalized casino gambling.

Long Wharf sewage problem.

Like hotel in J. T. O'Connell land; extend tourism to benefit the economy.

Improve sewage system.

Wall in the center of America's Cup Ave. is bad because it separated water from business.

Hope the Holiday Inn goes in.

The development of hotels should be monitored to make sure they fit.

Parking problem; the rents and home prices are too highly inflated.

More docking spaces to bring in more tourists.

Fix the sidewalks.

Congestion with mooring conflict.

They should get more industry (aside from waterfront).

Restoration is a good idea.

Keep the waterfront for pleasure boaters.

Tourism is a good idea, but it doesn't provide year-round jobs; wind blows like crazy on the waterfront in the winter.

Maintain building height level of 4 stories; create an architectural review board.

Bathroom facilities.

Like to see Navy back.

Locate fishing in Melville; lobster is the major fleet.

Keep the waterfront clean.

Don't like the 8-story hotel, this is setting precedent; control sign use; variances exist for hotels and motels.

More jobs for the handicapped.

Toilet facilities for tourists.

Rent control; bring fleet back to Newport.

More permanent jobs; wall divides old and new Newport; natives pay for parking; regulate housing costs.

Greatest asset is historic nature of waterfront.

More commitment to America's Cup; problem with historic purists; more commercial development—zoning commercial.

Tourists create problems, e.g. traffic, parking, etc., but are necessary to the community.

More facilities for fishermen.

Parking lots.

Clean up the water.

Like to see Navy back; trying to squeeze too much in small town; no comfort stations.

Generally like waterfront, but too many people in the summer; snow removal problems.

Problem with rights-of-way; ownership and access, ownership and rights-of-way on the waterfront are confusing, abused, and unpublished; should try and attract year-round soft-industry; the loss of jobs when General Electric closed was very bad; traffic congestion is bad in the waterfront area; parking is too expensive for residents; pockets of crowding, not consistent.

Roads should be marked better with street signs and lane lines; the intersection of Thames and America's Cup Ave. designed poorly—Hill residents using Thames cannot use Newport Bridge or turn in that direction. All streets on "Hill" area are used as shortcuts when they should only be used as residential type streets; wall on America's Cup Ave. is too long and should have more breaks in it; America's Cup Ave. ruined the waterfront area, and cars on it travel too fast, and police don't patrol it; like quiet atmosphere when tourists are gone; tourists end up parking on the "Hill" streets, leaving no room for the residents.

What will be done with vacant land?

When will Navy clean war junk on Fort Adams?

Need more places to sit and relax.

Too many tourists.

No room for commercial fishermen; too much pleasure boaters, tourism.

Appendix B. Funding Sources

Catalog Number*	Title
10-903	Soil Survey
11-300	Economic Development Grants and Loans for Public Works and Development Facilities
11-304	Economic Development Public Works Impact Projects
11-307	Economic Development—Special Economic Development and Adjustment Assistance Program
12-105	Protection of Essential Highways—Highway Bridge Approaches and Public Works (Applicant is responsible for all project costs exceeding \$250,000)
20-205	Highway Research—Planning and Construction (State highway departments only)
20-214	Highway Beautification—Control of Outdoor Advertising
20-507	Urban Mass Transportation Capital & Operating Assistance Formula Grants
48-002	New England Technical and Planning Assistance
10-422	Business and Industrial Loans
14-211	Surplus Land for Community Development
14-218	Community Development Block Grants/Entitlement Grants
15-400	Outdoor Recreation—Acquisition—Development—Planning
15-402	Outdoor Recreation—Technical Assistance
39-002	Disposal of Federal Surplus Real Property
48-001	New England Regional Economic Development
10-424	Industrial Development Grants
11-301	Economic Development—Business Development Assistance
11-309	Trade Adjustment Assistance
11-407	Commercial Fisheries Research and Development
11-509	Development & Promotion of Domestic Waterborne Transport Systems
20-500	Urban Mass Transportation Capital Improvement Grants
20-501	Urban Mass Transportation Capital Improvement Loans
20-506	Urban Mass Transportation Demonstration Grants
60-007	Museums—Assistance and Advice
13-923	Institute of Museum Services (Private nonprofit entity must have tax-exempt status)
15-403	Disposal of Federal Surplus Real Property for Parks, Recreation, and Historic Monuments
15-405	National Registry of Natural Landmarks
15-411	Historic Preservation Grants-in-Aid
15-414	National Historic Landmark
15-415	Technical Preservation Services
15-416	National Register of Historic Places
15-906	Park and Recreational Technical Assistance
45-130	Promotion of the Humanities—Challenge Grant Program
45-201	Arts and Artifacts Indemnity
14-506	General Research and Technology Activity

*Catalog of Federal Domestic Assistance

Appendix C. Economic Data

Net Changes in Major Industry Categories in Newport, 1973-77 Annual Averages of Employment, Wages, and Firms

Industry Group	SIC Code	Average Employment		Average Wage (Annual)		Average # of Firms		Average # of Employees per Firm		% of Total Employment		1973-77 Change Av.		Firms
		1973	1977	1973	1977	'73	'77	'73	'77	'73	'77	Emplmt.	Wages	
		#	%	\$	%	#	%	#	%	#	%	#	%	#
Agriculture, Forest, Fisheries	01-09	137	137	8334	10387	18	28	7.6	4.9	2.6	1.6	0	0	+10
Contract Construction	15-19	382	363	8996	9953	108	93	3.5	3.9	7.3	5.9	-19	-5.0	-15
Manufacturing	20-39	348	734	9158	11324	20	26	17.4	28.3	6.7	8.7	+387	+111.2	+6
Trans. Commun. & Public Utilities	40-49	506	563	8421	10846	33	26	15.3	21.6	16.4	6.7	+57	+11.3	-7
Wholesale & Retail Trade	50-59	1453	2376	4842	5744	278	306	5.2	7.8	27.8	28.2	+922	+63.4	+28
Finance, Insurance & Real Estate	60-69	219	322	7188	8469	44	40	5.0	8.1	4.7	3.8	+103	+47.0	-4
Services	70-89	2170	3982	5258	7399	262	287	8.3	13.9	41.6	47.2	+1812	+83.5	+25
Total		5218	8428	6142	7702	764	806	6.8	10.5			+3260	+62.5	+42

Net Changes in Selected Two-Digit Industries in Newport, 1973-77 (Major Employing Industries) Annual Averages of Employment, Wages, and Firms

Two-Digit Level Industry	SIC Code	Average Employment		Average Wage (Annual)		Average # of Firms		Aver. # of Employees per Firm		% of Total Employment		1973-77 Change		
												Emplmt.		Firms
		1973	1977	1973	1977	'73	'77	'73	'77	'73	'77	#	%	#
Food Stores	(54)	78	242	2841	7251	22	23	3.5	10.5	1.5	2.8	+164	+210.0	+1
Automotive Dealers & Service Stations	(55)	183	226	4721	8916	31	32	5.9	7.1	3.5	2.7	+43	+23.5	+1
Apparel & Accessory Stores	(56)	92	138	3889	5965	28	25	3.3	5.5	1.8	1.6	+46	+50.0	-3
Eating & Drinking Places	(58)	515	1042	3211	3729	83	89	6.2	11.7	9.9	12.4	+527	+102.3	+6
Miscellaneous Retail	(59)	239	331	4525	5707	67	87	3.6	3.8	4.6	3.9	+92	+38.5	+20
Hotels & Other Lodging Places	(70)	384	535	3939	4613	12	10	32.0	53.5	7.4	6.3	+151	+39.3	-2
Business Services	73	198	400	6141	9455	30	35	6.6	11.4	3.8	4.7	+202	+102.0	+5
Amusement & Recreation Services	(79)	73	230	4340	7752	13	15	5.6	15.3	1.4	2.7	+157	+215.0	+2
Health Services	80	220	1285	4832	8460	64	72	3.4	17.8	1.5	2.6	+1065	+484.0	+8
Educational Services	82	176	299	7539	5806	11	7	16.0	42.7	1.6	2.1	+123	+69.8	-4
Membership Organizations & Social Svcs.	86 & 83	588	717	5963	5454	41	40	14.3	17.9	11.3	8.5	+129	+21.9	-1
Total		5218	8428	6142	7702	764	806	6.8	10.5	-	-	+3260	+62.5	+42

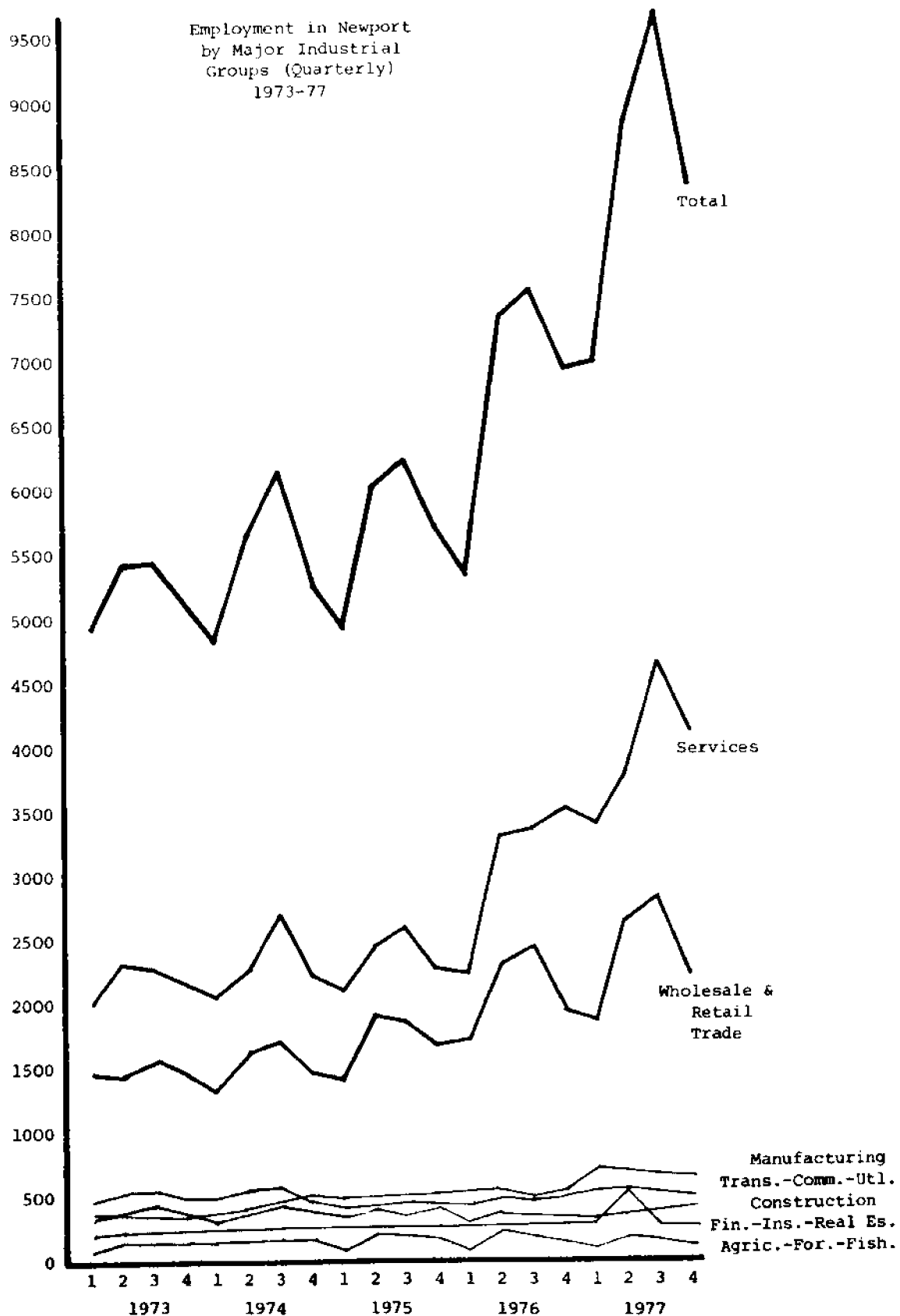
() indicates industry groups which were combined as tourism-related industries

Net Changes in Employment and Average
Wages in Newport, 1973-77

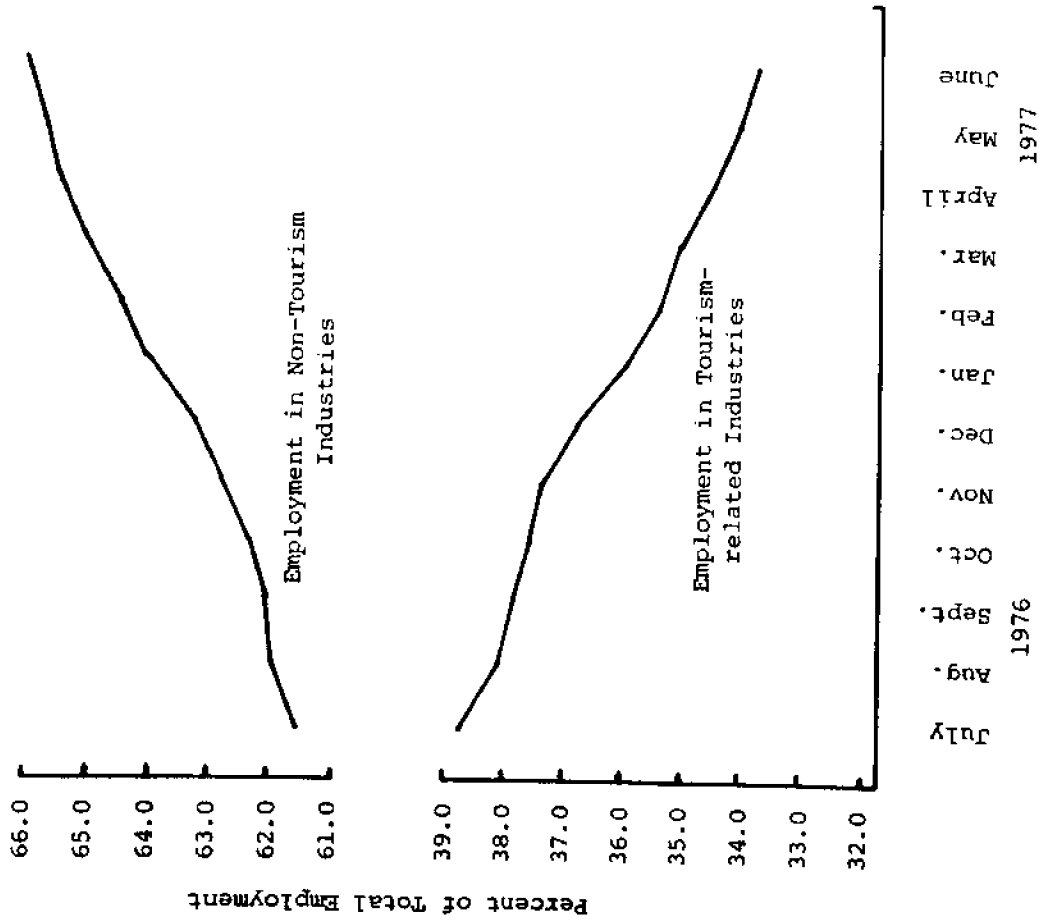
	1973 Annual Average			1977 Annual Average			1973-77 Change				
	Employ.	% of Total	Av. Wages (Annual)	Employ.	% of Total	Av. Wages (Annual)	Employ.		% of Change	Av. Wages	
	#			#			#	%		\$	%
Tourism-related Employment SIC #41, 54, 55, 56, 58, 59, 70, 79	1703	32.6	\$3949	2888	34.3	\$5241	+1185	+69.6	+1.7	+1292	+32.7
Non-Tourism Employment	3515	67.4	\$7204	5539	65.7	\$9056	+2024	+57.6	-1.7	+1852	+25.7
Total Employment	5218	100.0	\$6142	8428	100.0	\$7702	+3209	+61.5	-0-	+1560	+25.4

Seasonality of Employment in Newport, 1976 and 1977

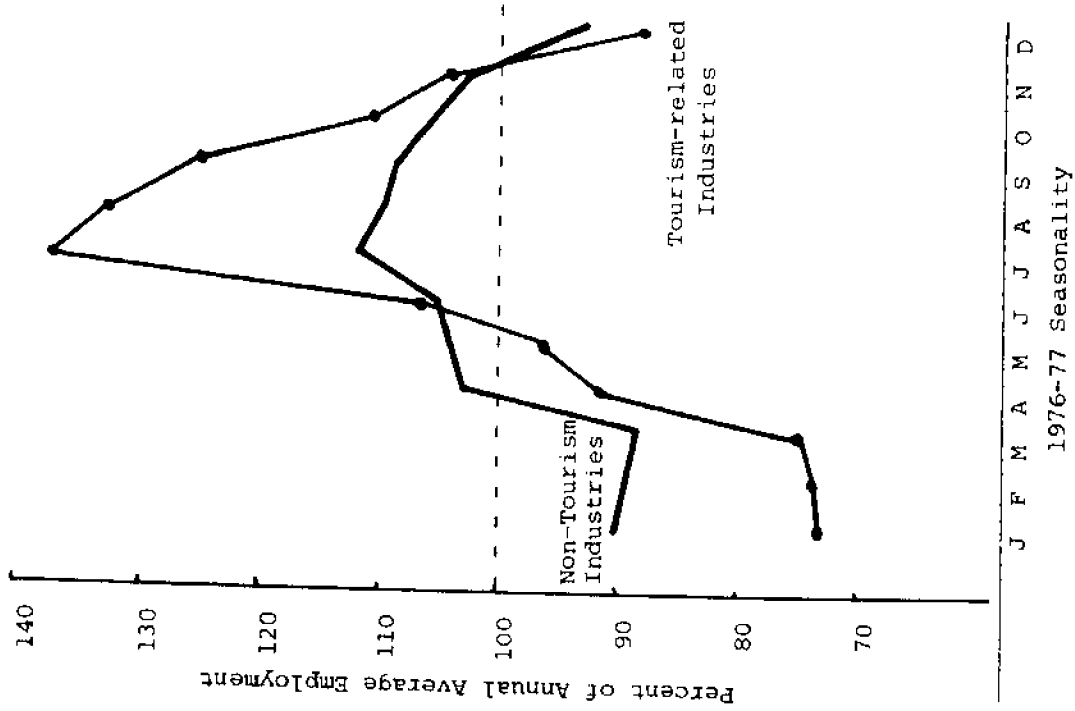
	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Seasonal Jobs	
Seasonality Index (% of Annual Av.)	Total Employment												#	%
	89.1	87.8	87.4	100.4	103.0	105.0	112.0	108.9	106.5	106.3	101.6	92.0		
	Average Shift in Jobs 1976-77	-830	-929	-960	+30	+228	+381	+914	+678	+495	+480	+122	-609	1874
Seasonality Index (% of Annual Av.)	Tourism-related Industries (SIC #41, 54, 55, 56, 58, 59, 70, 79)													
	74.4	74.1	75.9	89.7	95.8	105.0	137.0	131.0	123.0	106.3	101.4	86.4		
	Average Shift in Jobs 1976-77	-715	-723	-673	-288	-117	+140	+1033	+866	+642	+176	+39	-380	1756
Seasonality Index (% of Annual Av.)	Non-Tourism Industries													
	96.5	96.1	95.7	108.2	108.9	106.9	96.2	95.2	95.5	105.4	100.9	94.5		
	Average Shift in Jobs 1976-77	-168	-187	-206	+393	+427	+331	-182	-230	-216	+259	+43	-264	691
Seasonality Index (% of Annual Av.)	Eating & Drinking Places and Hotels & Other Lodging Places (SIC #58 & 70)													
	64.4	64.2	67.8	89.9	101.4	113.7	148.9	140.6	128.5	103.7	94.8	84.0		
	Average Shift in Jobs 1976-77	-544	-547	-492	-154	+21	+209	+747	+620	+435	+56	-79	-244	1294



Trend of Percent of Total Employment
in Newport for Tourism and Non-Tourism
Industries, 1976 and 1977



Seasonality of Employment in
Tourism and Non-Tourism
Industries in Newport, 1976 and 1977



Chamber of Commerce Visitor Information Center Monthly Main-In Tourist Figures

	1977	% Increase Prior Year	% of Total	1976	% Increase Prior Year	% of Total	1975	% Increase Prior Year	% of Total	1974	% Increase Prior Year	% of Total	1973	% Increase Prior Year	% of Total
Jan.	250		1.1%	412	+65%	.5%	972	+136%	.5%	412	+65%	1.1%	339,775		295,100
Feb.	300		1.3%	451	+50%	.5%	1,061	+135%	.5%	451	+50%	1.3%	315,815		273,577
Mar.	500		2.2%	947	+89%	1.0%	1,782	+88%	1.0%	947	+89%	2.2%	379,625		334,530
Apr.	700		3.1%	2,145	+206%	2.5%	3,869	+80%	2.1%	2,145	+206%	3.1%	381,321		369,463
May	1,216	+99%	5.3%	2,864	+136%	3.4%	4,426	+55%	3.4%	2,864	+136%	5.3%	434,056		415,350
June	2,753	+26%	12.1%	5,516	+100%	6.5%	9,322	+69%	5.1%	5,516	+100%	12.1%	461,555		442,662
July	5,054	+34%	22.2%	12,586	+149%	14.8%	46,839	+272%	25.3%	12,586	+149%	22.2%	496,140		530,565
Aug.	5,864	+20%	25.7%	31,768	+476%	39.7%	57,805	+61%	33.7%	31,768	+476%	25.7%	537,755		571,608
Sept.	2,321	+84%	10.2%	16,408	+607%	19.3%	30,823	+88%	16.9%	16,408	+607%	10.2%	442,448		468,688
Oct.	2,478	+88%	10.8%	7,408	+199%	8.7%	16,128	+118%	8.9%	7,408	+199%	10.8%	411,271		422,132
Nov.	962		4.2%	1,728	+80%	2.0%	6,374	+36%	3.8%	1,728	+80%	4.2%	358,727		369,233
Dec.	406		1.8%	894	+120%	1.1%	2,262	+153%	1.1%	894	+120%	1.8%	326,715		353,417
Total	22,804		100%	85,127	+273%	100%	182,618	+115%	100%	85,127	+273%	100%	4,899,659		4,846,355

Mount Hope and Newport Bridge Traffic Figures

	1977	% Increase Prior Year	% of Total	1976	% Increase Prior Year	% of Total	1975	% Increase Prior Year	% of Total	1974	% Increase Prior Year	% of Total	1973	% Increase Prior Year	% of Total
Jan.	1,553		.7%	2,130	+119%	.5%	332,093		332,093	-2.2%			339,559		295,100
Feb.	3,632		1.2%	3,949	+27%	.6%	353,935		353,935	+16.6%			303,502		273,577
Mar.	6,814		1.9%	6,181	+47%	1.0%	411,284		411,284	+22.4%			355,813		334,530
Apr.	17,636		4.0%	12,833	+232%	2.1%	446,291		446,291	+12.1%			397,971		369,463
May	31,432		6.7%	21,258	+36%	3.4%	505,470		505,470	+7.5%			470,148		415,350
June	32,938		17.6%	56,394	+65%	5.1%	649,893		649,893	+35.6%			479,107		442,662
July	181,425		27.3%	86,771	+50%	11.7%	645,485		645,485	+16.0%			556,356		530,565
Aug.	73,521		15.2%	40,154	+56%	16.9%	617,251		617,251	+7.6%			573,775		571,608
Sept.	36,817		8.3%	46,547	+26%	8.9%	553,383		553,383	+20.2%			460,224		468,688
Oct.	9,887		1.7%	5,487	-21%	3.8%	507,746		507,746	+15.7%			438,766		422,132
Nov.	2,280		.5%	1,594	-30%	1.1%	458,571		458,571	+15.3%			397,590		369,233
Dec.	543,582		100%	317,636	+74%	100%	409,773		409,773	+11.2%			368,446		353,417
Total	2,280		.5%	1,594	-30%	1.1%	5,891,175		5,891,175	+14.4%			5,151,247		4,846,355

Total Admissions to All Newport Preservation Society Attractions in
Newport, 1970-71

	Number									
	1									Total Year
	April	May	June	July	August	September	October	November 1-15th	Winter (November March 31)	
	2								2	
1970	NA ²	16,095	24,533	41,834	62,770	29,356	15,199	5,925	NA ²	195,728
1971	NA ²	21,098	28,597	45,570	79,536	31,830	23,956	4,483	NA ²	236,601
1972	9,104	21,365	33,984	59,445	72,340	33,194	25,959	2,583	10,843	268,817
1973	10,733	22,031	36,222	65,904	83,535	43,441	39,627	4,607	8,817	314,917
1974	14,384	31,402	52,054	94,928						440,000 ³
Percent Distribution										
1970	NA ²	8.2%	12.5%	21.4%	32.1%	15.0%	7.8%	3.0%	NA ²	100.0%
1971	NA ²	8.9%	12.1%	19.3%	33.6%	13.4%	10.1%	1.9%	NA ²	100.0%
1972	3.4%	7.9%	12.6%	22.1%	26.9%	12.3%	9.6%	1.0%	3.9%	100.0%
1973	3.4%	7.0%	11.5%	20.9%	26.5%	13.8%	12.6%	1.5%	2.8%	100.0%
1974	3.3%	7.1%	11.0%	21.6%						100.0%
Percent Increase										
1970-1971	NA ²	31.1%	16.6%	8.9%	29.7%	8.4%	57.6%	-24.3%	NA ²	20.9%
1971-1972	NA ²	1.3%	18.8%	30.4%	-9.0%	4.3%	8.4%	-42.4%	NA ²	13.6%
1972-1973	17.9%	3.1%	6.6%	10.8%	15.5%	30.9%	52.6%	78.4%	-18.7%	17.1%
1973-1974	34.0%	42.5%	43.7%	44.0%						19.8%

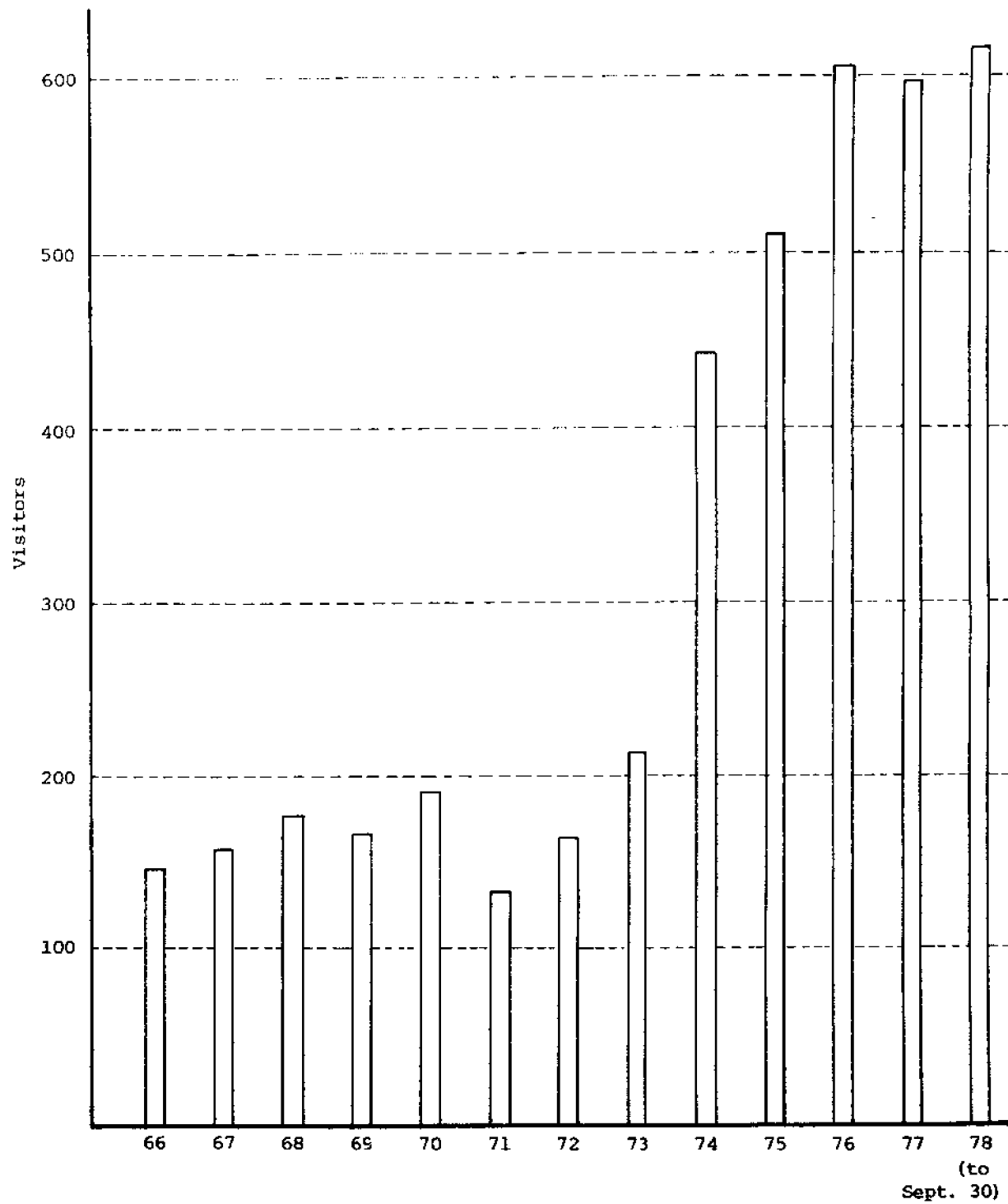
1/ Open weekends only.

2/ Not open at this time.

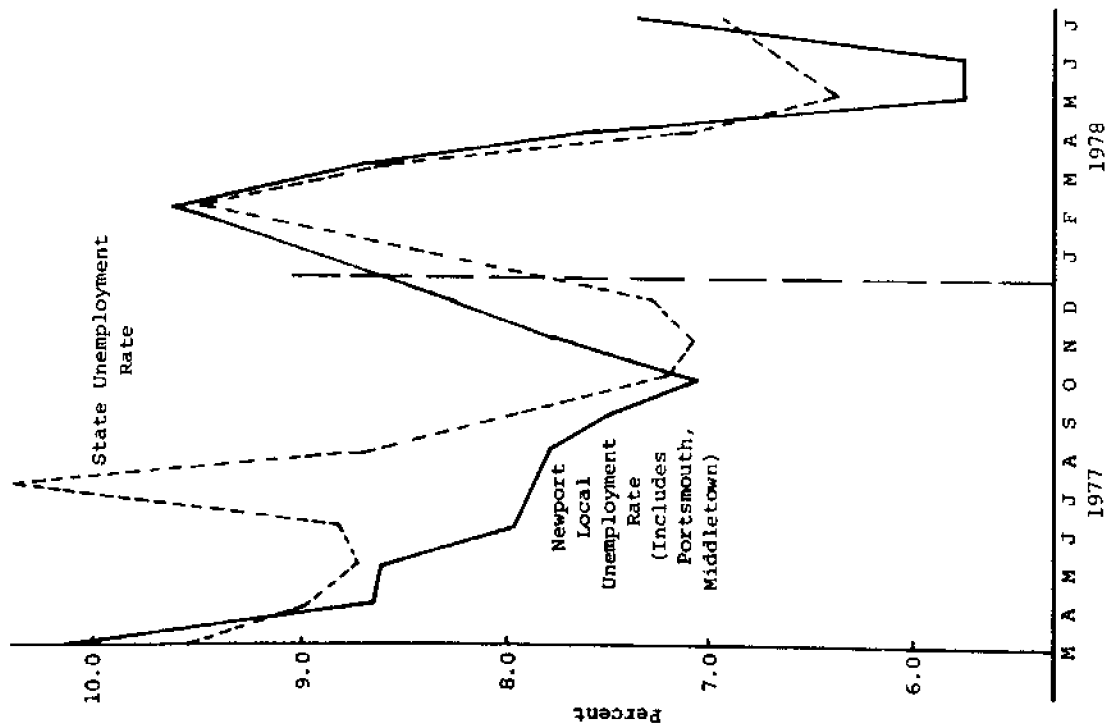
3/ Admissions as of November 1974.

Source: Newport Preservation Society; Gladstone Associates.

Newport Preservation Society Mansion Attendance,
1966-78

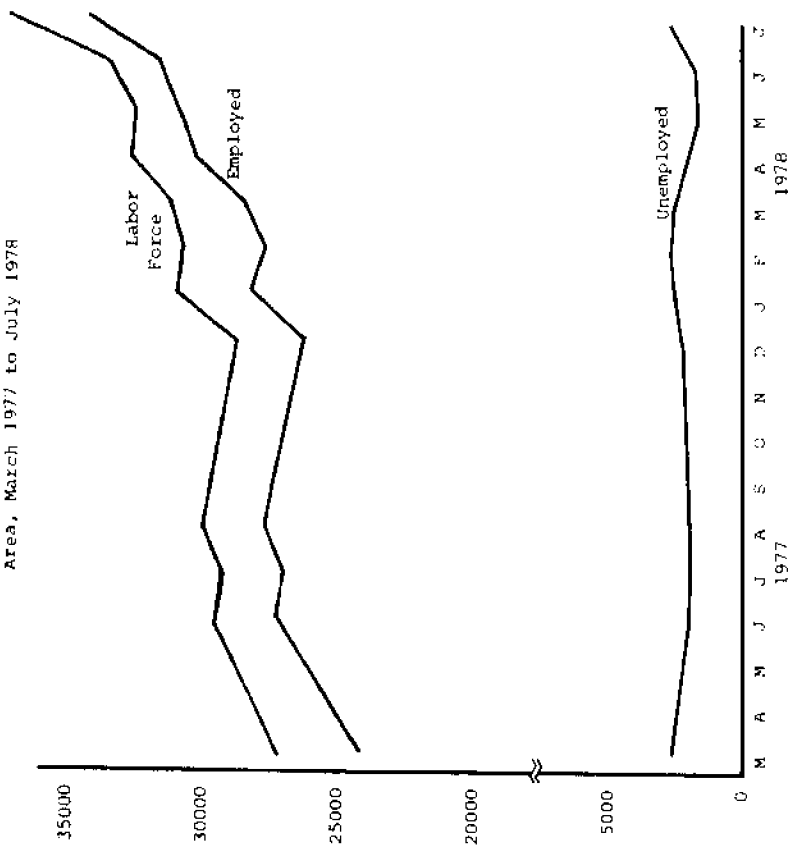


Unemployment Rates for Newport and State,
March 1977 to July 1978



Source: R.I. Dept. of Employment Security

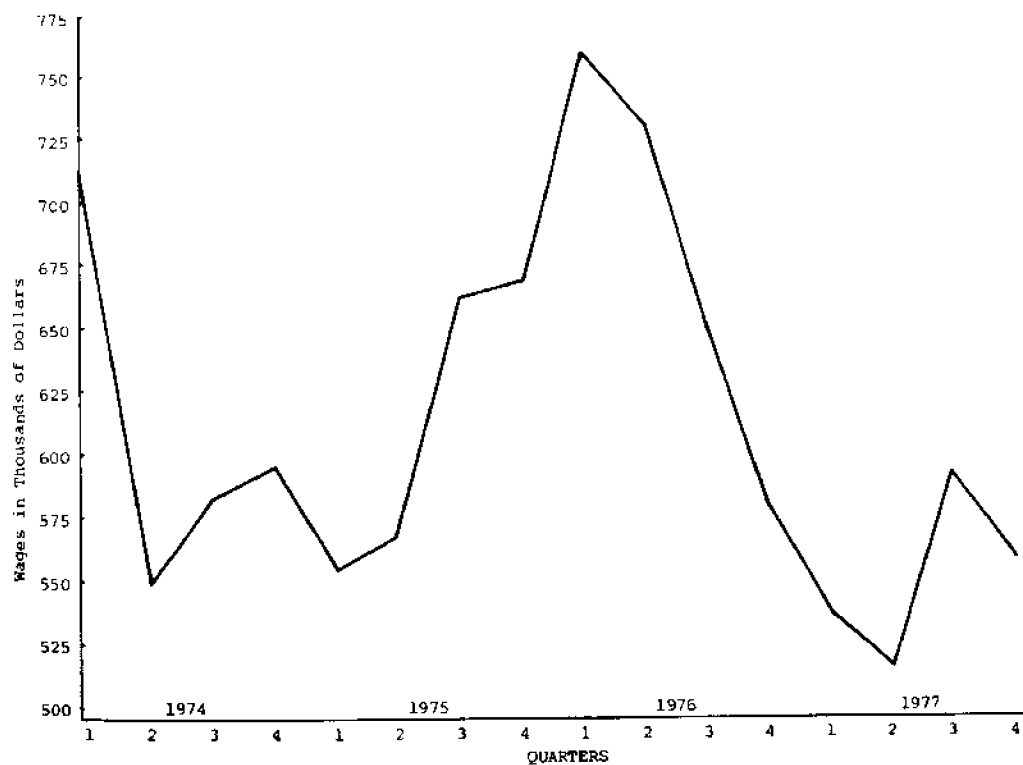
Labor Force and Employment
in Newport Labor Market
Area, March 1977 to July 1978



Commercial Fishing in Newport

Year	Employment by Month												# of Firms/Wages by Quarter (\$)				
	J	F	M	A	M	J	J	A	S	O	N	D	1st	2nd	3rd	4th	Total
													7	6	6	6	25
1973	35	30	29	34	46	52	40	37	42	45	47	25	92,734	122,035	88,365	178,286	481,420
													6	6	8	9	29
1974	25	24	24	18	44	39	66	61	59	65	57	45	88,937	109,360	161,050	222,981	582,332
													9	10	10	12	41
1975	42	35	38	41	64	73	61	64	57	62	58	51	128,296	170,636	214,976	247,941	761,849
													12	12	14	14	52
1976	34	32	27	58	59	80	75	74	72	66	67	48	153,336	179,013	283,701	270,480	886,530
													14	15	14	13	56
1977	37	37	36	60	66	66	66	63	62	65	61	51	150,771	194,777	241,028	251,401	837,977

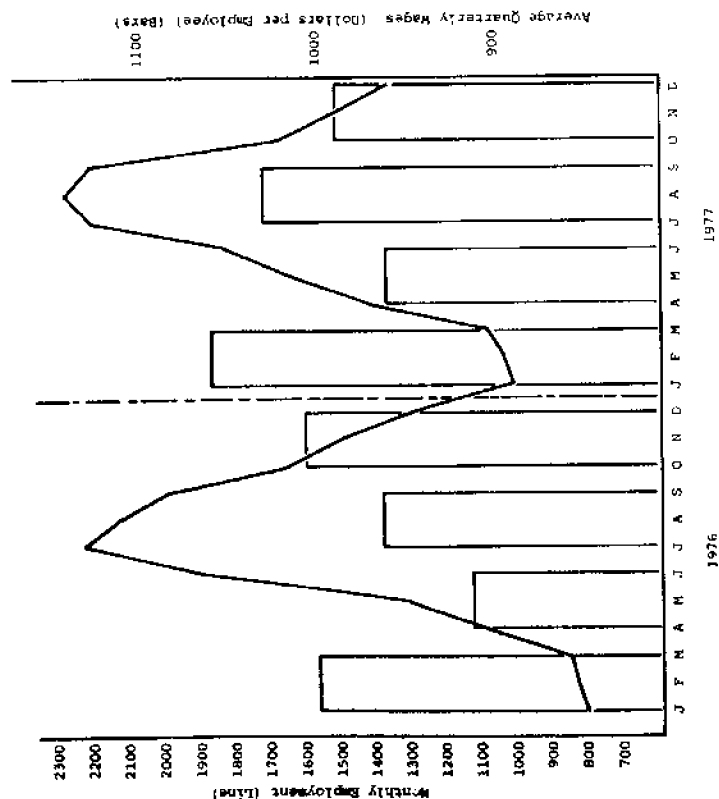
Source: R.I. Dept. of Employment Security



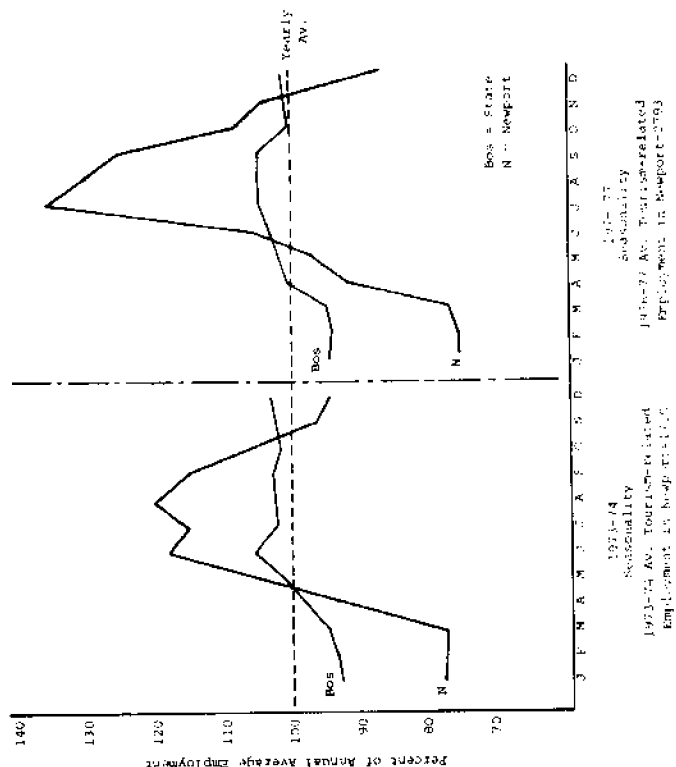
Total Wages in Marine-related Industries Exclusive of Commercial Fishing in Newport, 1974-77

Source: R.I. Dept. of Employment Security

Employment and Wages of
Eating and Drinking Places
and Hotels and Other Lodging Places
in Newport, 1976 and 1977



Seasonality of Employment in
Tourism-Related Industries for
Newport and the Remainder of R.I.



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