
THE NORTH SHORE ESPLANADE

Staten Island, New York



DEPARTMENT OF CITY PLANNING
New York City

WALMSLEY & COMPANY, INC.

with

GEIGER ENGINEERS
PROJECT FOR PUBLIC SPACES, INC.
WEBSTER AND SHEFFIELD

1988

THE NORTH SHORE ESPLANADE: A PLAN FOR WATERFRONT PUBLIC ACCESS
Staten Island, New York

prepared for:

Department of City Planning
City of New York

prepared by:

Walmsley & Company, Inc.
Landscape Architecture, Urban Design, Planning
Anthony Walmsley, ASLA, AICP, President
Charles Birnbaum, ASLA, Associate, Project Director

with

Geiger Engineers
Project for Public Spaces, Inc.
Webster & Sheffield (Donald H. Elliott, Esq.)

OCTOBER, 1988

NORTH SHORE ESPLANADE PLAN

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INTRODUCTION

I. INTRODUCTION

The New York Department of City Planning's North Shore Study, issued in 1983, recommended creation of a continuous waterfront esplanade linking Sailors Snug Harbor to the Verrazano Narrows Bridge/Fort Wadsworth. The intent of the North Shore Esplanade Plan is to carry this general objective forward into specific recommendations for the esplanade's:

- Alignment;
- Access points;
- Overall design;
- Development costs; and
- Implementation priorities.

The city's overall goals for the esplanade are to:

- Connect with the Gateway National Park and South Shore esplanades, thereby providing public access to more than thirty continuous miles of Staten Island waterfront;
- Provide residents and visitors of all ages with safe, barrier-free, attractive paths for walking, jogging, biking and passive recreation;
- Improve access to, and increase use of, nearby restaurants, stores, cultural and historic sites, civic and recreational facilities;
- Provide improved access to the Staten Island Ferry from new waterfront development and adjacent communities; and
- Attract visitors and tourists to the North Shore's views of New York harbor, the Manhattan skyline, Brooklyn landmarks and the Verrazano Bridge.

To further these goals, the esplanade plan indicates sites for cafes and food stands, signs and information kiosks and improved parking facilities to accommodate residents and attract visitors.

Creation of a North Shore Esplanade will also advance the goals and policies of the city's Waterfront Revitalization Program (WRP). This comprehensive management and planning program for the city's waterfront was adopted in 1982, pursuant to the federal Coastal Zone Management Program. The objectives of the Waterfront Revitalization Program are to encourage appropriate economic development, protect natural shorelines and expand public access to the waterfront. WRP Policies relevant to this project are listed in Appendix 1, page 85.

Project Area

The North Shore Esplanade project area spans approximately six miles from the boundary of the Snug Harbor Cultural Center (at Kissel Avenue and Snug Harbor Road) to the southern boundary of Fort Wadsworth (at Lily Pond Avenue), and includes portions of five shorefront communities:

- I. New Brighton,
- II. St. George/Tompkinsville,
- III. Stapleton,
- IV. Clifton,
- V. Rosebank/Fort Wadsworth.

As outlined in the accompanying exhibits, the project area extends to the shore and waterfront piers along the Kill Van Kull and Raritan Bay; inland, it is bounded by Richmond Terrace or Bay Street.

This project area includes the main thoroughfares, existing waterfront access routes and sufficient upland area to consider the physical, scenic and aesthetic qualities of the proposed esplanade and its connection to the shorefront communities.

Methodology

Planning for the North Shore Esplanade began in April 1986 with a presentation of the project's scope of work to an Esplanade Task Force consisting of public officials, community and agency representatives who continued to participate at key milestones as the work progressed (see Appendix, page 131, for Task Force participants).

The phases of work included six sequential tasks:

- Inventory of Existing Conditions: Extensive field investigations were conducted to document existing Land Use, Zoning, Public Utilities and Streets, Circulation and Scenic/Public Views.
- Analysis of Existing Conditions: To evaluate conditions along the proposed esplanade route, seventeen functional areas were analyzed as to Land Use, Ownership, Transportation, and Visual Conditions.
- Alternate Schematic Master Plans: Taking into account the opportunities and constraints outlined in Tasks 1 and 2, three alternate schematic master plans were presented.
- Final Schematic Master Plan: Following Task Force review, a final schematic master plan was recommended with a preferred overall alignment (location) and a recommended design vocabulary, phasing plan and schematic cost estimates for acquisition and construction.

- Schematic Site Design: A schematic site plan for Area II in St. George was executed at a larger scale, allowing for more detailed recommendations for improved alignment, access, circulation, linkage, parking site/landscape elements, compatible land uses, design guidelines, and site-specific cost estimates.

The Proposed Plan

This report, the final task, summarizes the information and findings generated by the study. Elements of the study not presented in the report are in working papers and original large-scale exhibits available at the Department of City Planning's Staten Island Office.

The recommended master plan is intended as a conceptual framework for phased development of the esplanade. The report sets forth the planning criteria and objectives for selection of the preferred route and treatment of particular sites along the route as well as the rationale for ranking implementation priorities. It is not, however, a rigid set of standards to be followed in every detail by the many public and private entities that would be directly responsible for implementation. Nor does the plan recommend a specific scheme for the ultimate control, management and maintenance of the esplanade, once completed. The plan assumes that the esplanade will be developed incrementally by both public and private property owners in accordance with this plan and the city's waterfront public access policies.

The report that follows provides a valuable base of information for the detailed planning that lies ahead. Most important, it offers a far-reaching vision of a revitalized, publicly-accessible waterfront for Staten Island's North Shore.



INVENTORY & ANALYSIS OF EXISTING CONDITIONS



LAND USE: EXHIBITS 1 & 2

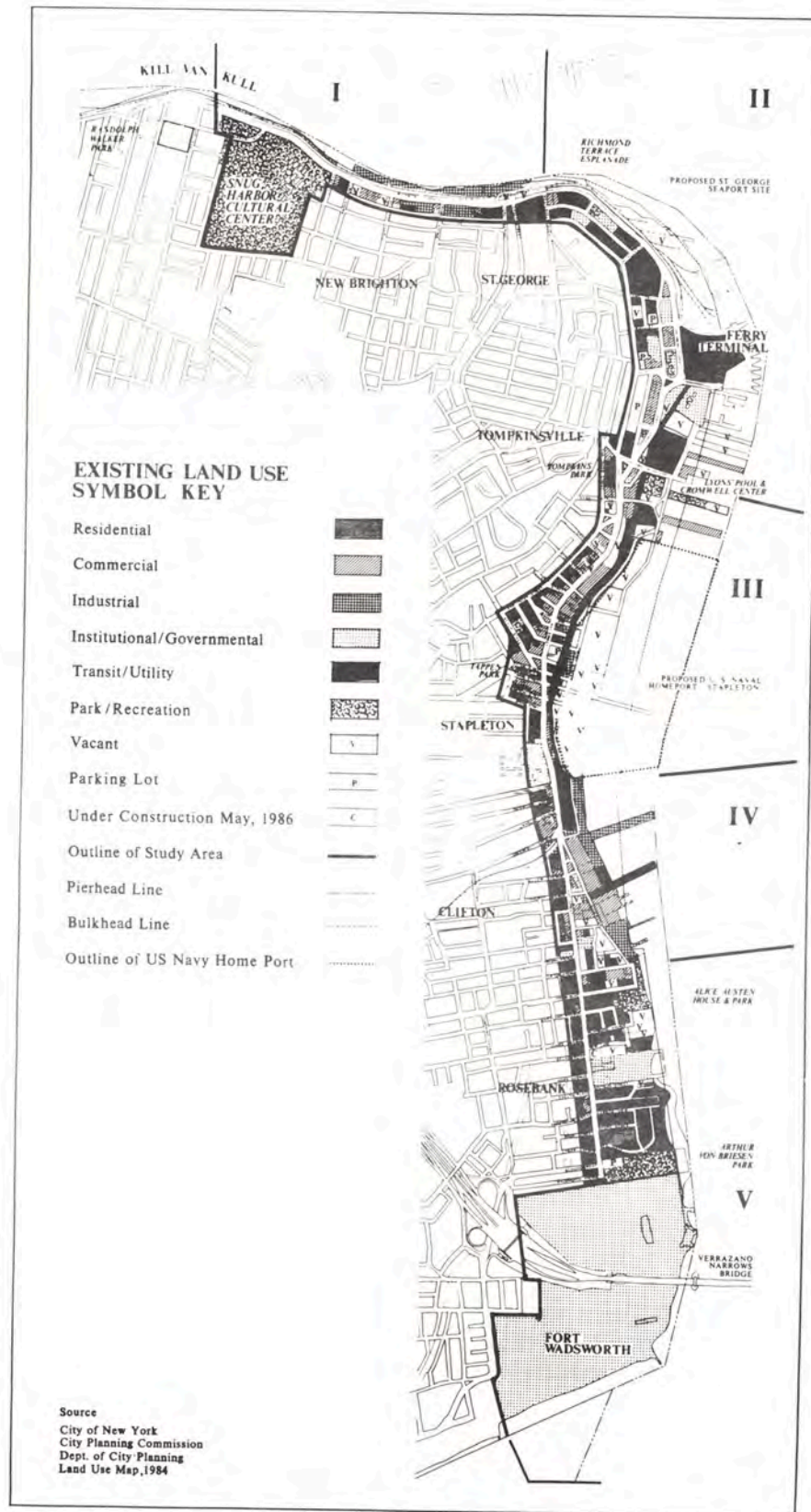
The project area contains a diversity of land uses as indicated by the categories shown in Exhibit #1, page 6. Two land uses anchor the project area -- a park, Snug Harbor Cultural Center, on the northwest end and a government use, Fort Wadsworth, on the south. In the center, vacant land along the waterfront is proposed for another government use, the United States Naval Homeport. For each of the five community sub-divisions of the project area, key sites and their existing land uses are described below.

The New Brighton Community, Area I, is dominated by park and industrial land uses along the waterfront, with some residential properties and four vacant sites inland.

- The Snug Harbor Cultural Center (photographs 1-3), a thirty-acre site, is the largest single land use in the New Brighton project area and the largest park and recreation use in the entire project area. Snug Harbor is an historic landmark which originally served as a retirement home for sailors and has become a multiple use cultural and recreation center. It boasts an unequalled collection of period architecture on a dramatic shoreline site. The Snug Harbor property extends northwest across Richmond Terrace to include a steep bank and former small boat dockage.
- Shoreline industrial uses include Atlantic Salt and the former U.S. Gypsum Plant (photographs 4, 5), a key site for the proposed esplanade.
- Residential uses are inland and move up the slope. The four vacant sites in the area average 400 square feet each.

The St. George/Tompkinsville communities, Area II, contain a mix of transit/utility (ferry terminal and SIRT), residential, commercial and institutional/governmental (Coast Guard, Borough Hall and Courthouse) uses. The key sites in this area are:

- The Chessie Railroad site (photographs 6, 7) on twenty-nine land acres of abandoned railroad yard (plus twenty-six associated water acres), has been the subject of numerous proposals over the last decade. The current proposal by Emanuel & Company and CSX Resources, Inc., known as "The St. George Development Project" is predominately residential with support retail and a commercial parking structure.
- The Ferry Terminal (photographs 8, 9) is a 16.7 acre facility with 9.3 acres in the triangle site, a wedge that is located along the edge of Richmond Terrace and extends northeast to the SIRT tracks.



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North Shore Esplanade Staten Island 1. Existing Land Use

With its recently restored slips and two new passenger ferries in operation, the ferry terminal is in the process of being renovated. The site also provides some 1,500 daily commuter parking spaces.



1. View of Snug Harbor from the Kill Van Kull.



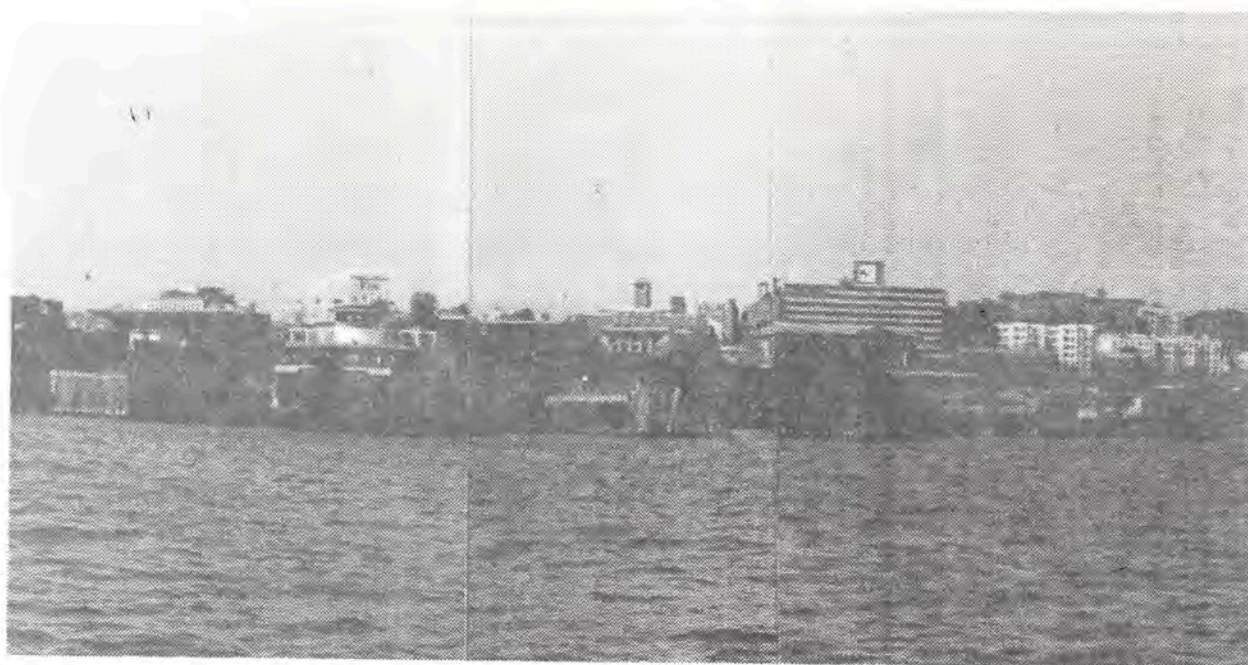
- 2. Snug Harbor north of Richmond Terrace;
- 3. Perimeter fence of Snug Harbor at Richmond Terrace South.



4, 5. U.S. Gypsum plant: an active industrial site.

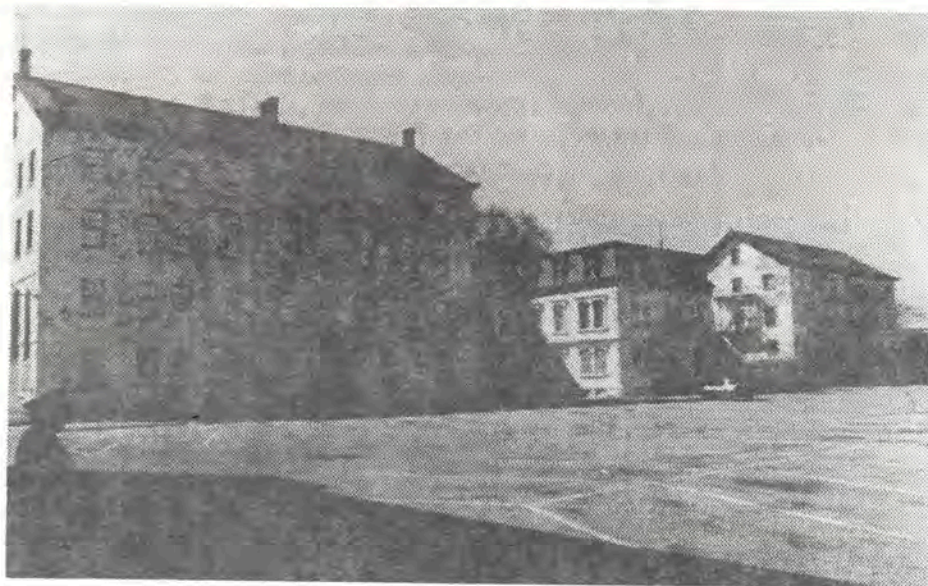


6,7 Chessie Railroad site. View from Richmond Terrace Esplanade, and below at vacant site.



8, 9. Ferry Terminal: View of northern access ramp and view from incoming ferry.

- The Coast Guard Site (photographs 10, 11), a 22-acre site immediately south of the ferry terminal, is under the jurisdiction of the Bureau of Ferry and General Aviation Operations. The site contains four buildings on the National Register, one of which is a NYC designated landmark. Current proposals include development of a ferry maintenance facility to replace the existing facility at Pier 7. Development of the inland portion of the site could potentially include restoration of the historic buildings, development of commercial space and creation of public open space.

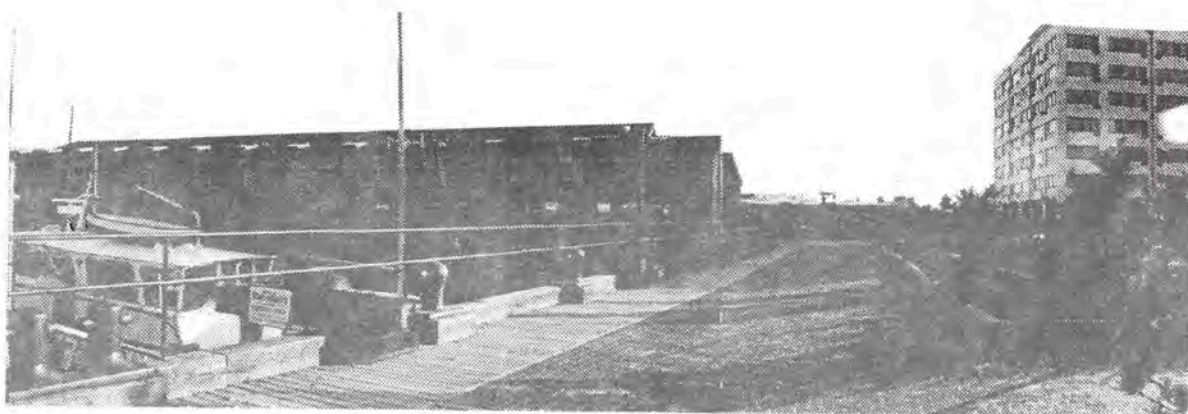


10, 11. View of Coast Guard site historic buildings from the water's edge and from access road along southern ferry terminal ramp.

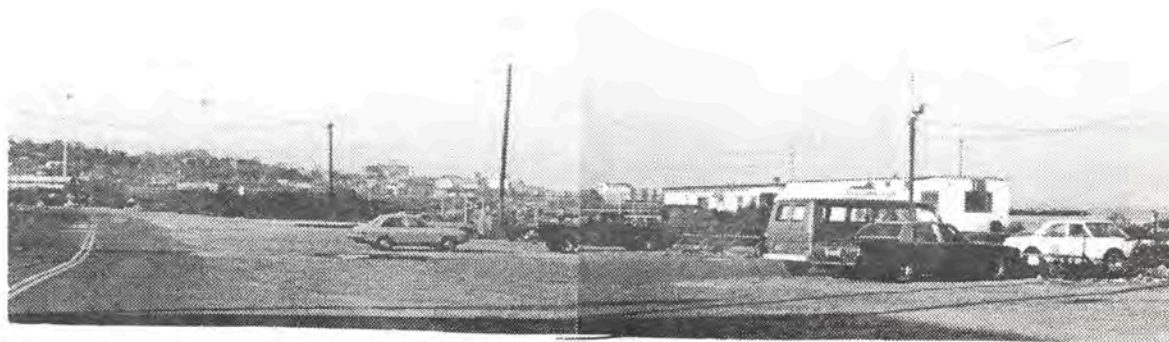
- Bay Street Landing (photograph 12). This 22.5 acre site consists of three warehouses converted to residential use, a 50 foot wide public esplanade, a marina and commercial space.

Stapleton, Area III, is dominated by vacant sites (combined to create the proposed U.S. Naval Homeport). Commercial land uses along Bay Street, residential uses west of Bay Street, and three park/recreational sites (Lyons Pool, Cromwell Center and Tappen Park) complete the area land use. The key sites in this area are:

- U.S. Naval Homeport (photograph 13), on 52.2 acres of vacant land, will accommodate a fleet of one battleship, one cruiser, one destroyer, two guided missile destroyers, and two frigates, in addition to support facilities for 1,400 enlisted men.

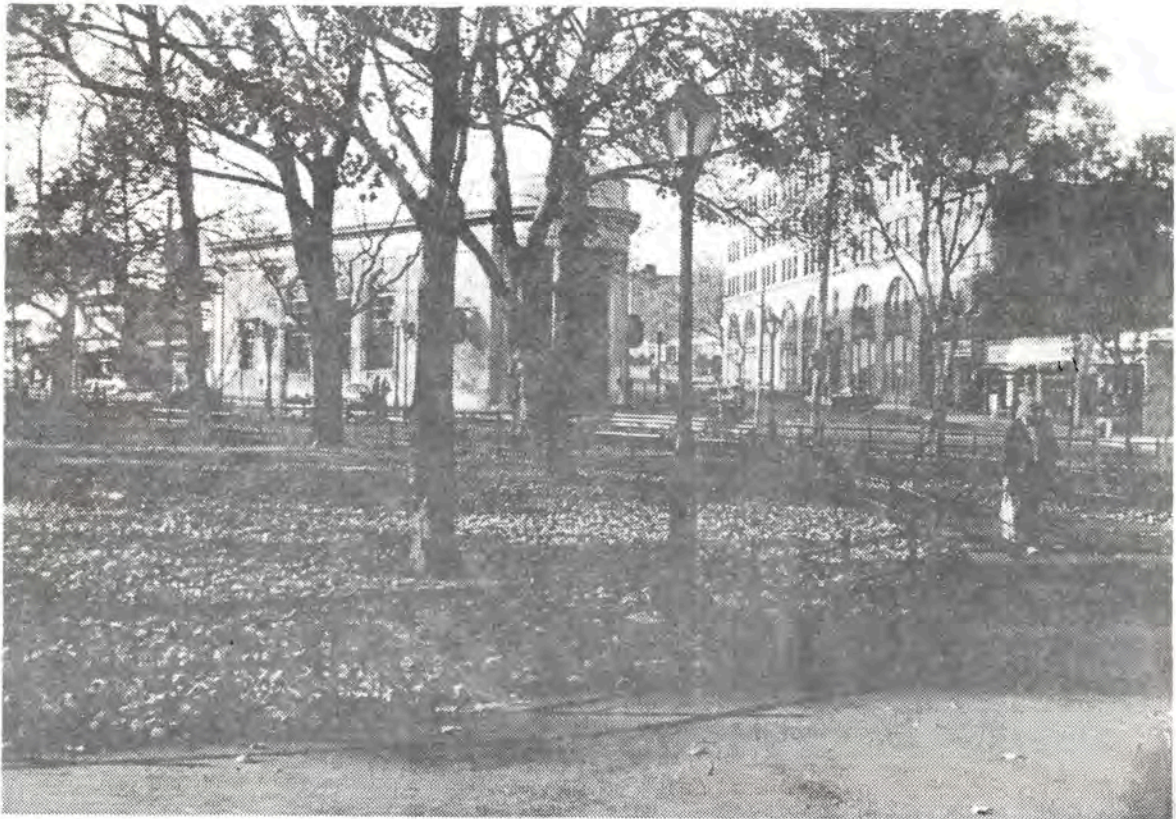


12. View of Bay Street Landing's first-phase marina, esplanade and housing.



13. Proposed U.S. Homeport site.

- Lyons Pool, a Parks Department facility covering 2.8 acres, recently received \$6.7 million in capital funds for improvements to the pool, deck areas, public spaces, boilers, heaters, roofs, rotunda and landscape. The circa 1936 building is under landmark consideration.
- Cromwell Center is a large indoor recreational facility also operated by the Parks Department. The first phase of a three-phase restoration plan, begun in 1984, includes the rehabilitation of the second floor recreational spaces. Phase 2 will restore the support piling and Phase 3, with a scope of over \$1 million, will restore flooring, boiler systems and other structural components.
- Tappen Park (photograph 14). A recent restoration of this neighborhood open space retained its existing mature trees and added new World's Fair benches, lights, pipe rail fence and other amenities.



14. Tappen Park

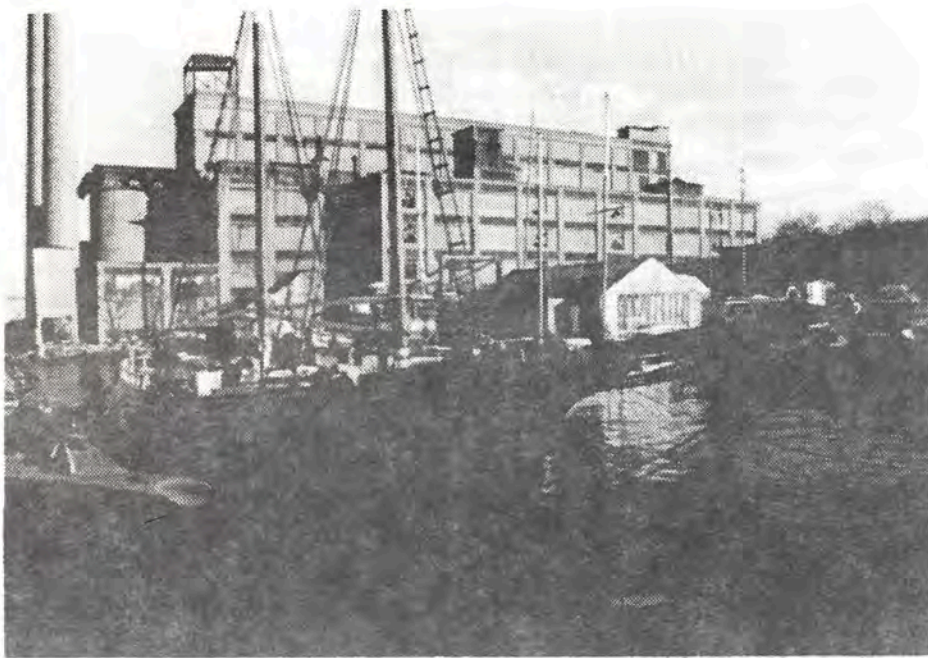
- Bayley-Seton Hospital, west of Bay Street, is the only other large scale land use in the Stapleton community.

Clifton, Area IV, has the most diverse range of land uses within the project area. Pouch Terminal, east of Edgewater Road, is a large industrial parcel. Commercial uses are primarily related to waterborne transportation (Sea Knights, Reynolds Launch, Narrows Marina, see photograph 16) and retail frontage along Bay Street. Transit/Utility uses such as SIRT and MTA bus routes and parking sites are present east of Bay Street. Residential uses and vacant sites are interspersed throughout the commercial frontage on Bay Street. The key site in this area is:

- Pouch Terminal (photograph 15) occupies 7.4 acres. Opened in 1983 and employing 400+ people, Pouch has become the second-largest steamship line in the country. Originally a warehouse, this seven-story building has become a thriving industrial site.



15. Pouch Terminal

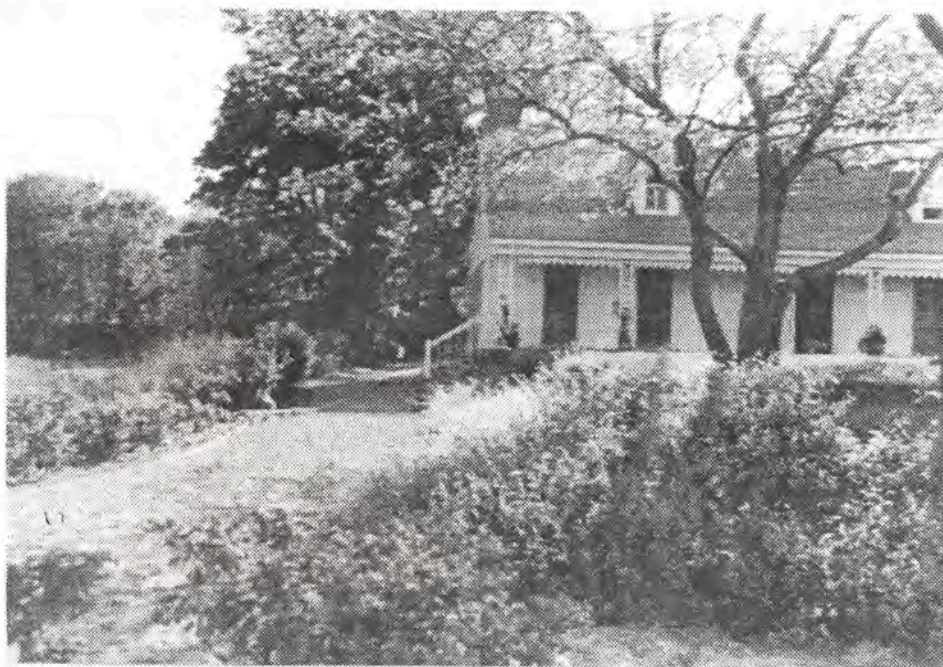


16. The Sea Knights.



17. Esplanade at New Lane Housing.

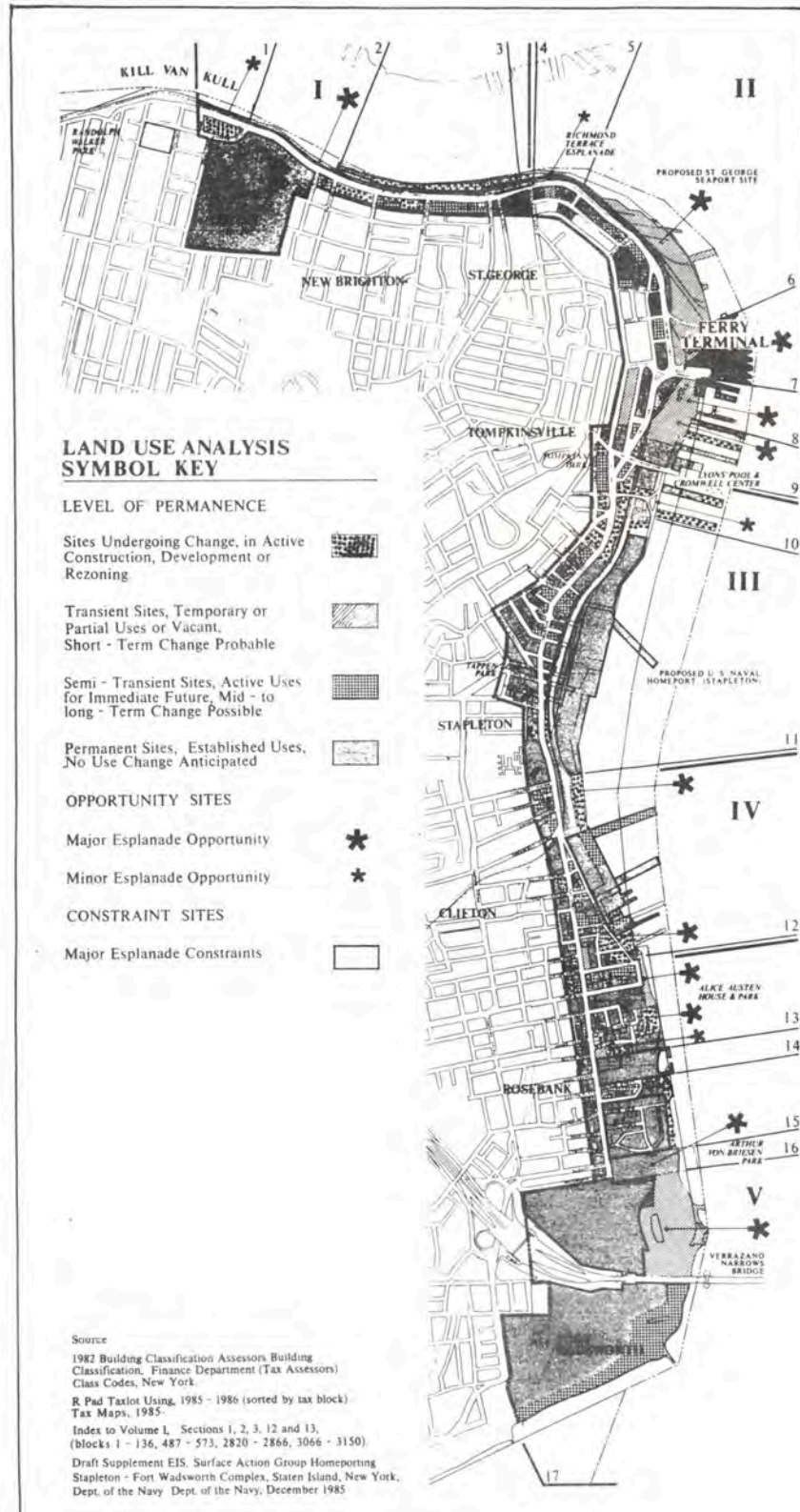
Rosebank, Area V, is dominated by governmental uses such as the U.S. Coast Guard Rosebank Family Housing and Fort Wadsworth (now known as the Naval Station, New York) and residential uses such as New Lane Housing (photograph 17) and Shore Acres Community. In addition, Alice Austen and Arthur Von Briesen Parks (photographs 18, 19) provide waterfront open space.



18. Alice Austen House and Park.



19. Arthur Von Briesen Park.



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North Shore Esplanade Staten Island 2. Land Use Analysis

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GEIGER ASSOCIATES, P.C.

WEBSTER & SHEPHERD (DONALD H. ELLIOTT ESQ.)



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Land Use Opportunities and Constraints

Major and minor opportunity sites, as indicated on Exhibit 2, page 17, are those sites undergoing change or sites where short-term change is probable. As development proceeds, there will be opportunities at these transient sites to incorporate public esplanades or provide linkages between proposed esplanade alignments.

Key transient sites are the Chessie and U.S. Coast Guard sites, both abutting the ferry terminal, the Alice Austen Park water frontage, and the area in Fort Wadsworth including the Fort and Battery Weed.

These opportunity sites with impermanent land uses include:

- In Area I, potential for both inboard and water's edge public access corridors, including the pier at Snug Harbor.
- In Area II, potential for limited vehicular access from Richmond Terrace to the water via Bank Street and a major opportunity for public access and views at the Chessie site. Extensive pedestrian circulation elements at this site could link with the ferry terminal as design for new development proceeds. Parking areas for residents of the proposed development could also provide for esplanade visitors.

The ferry terminal "Triangle Site" (photograph 20) currently serves as a surface parking facility. It presents opportunities for linkage between the Chessie site and the ferry terminal, and for esplanade user parking during times when it would not conflict with commuter parking.



20. Ferry terminal "triangle" opportunity site.

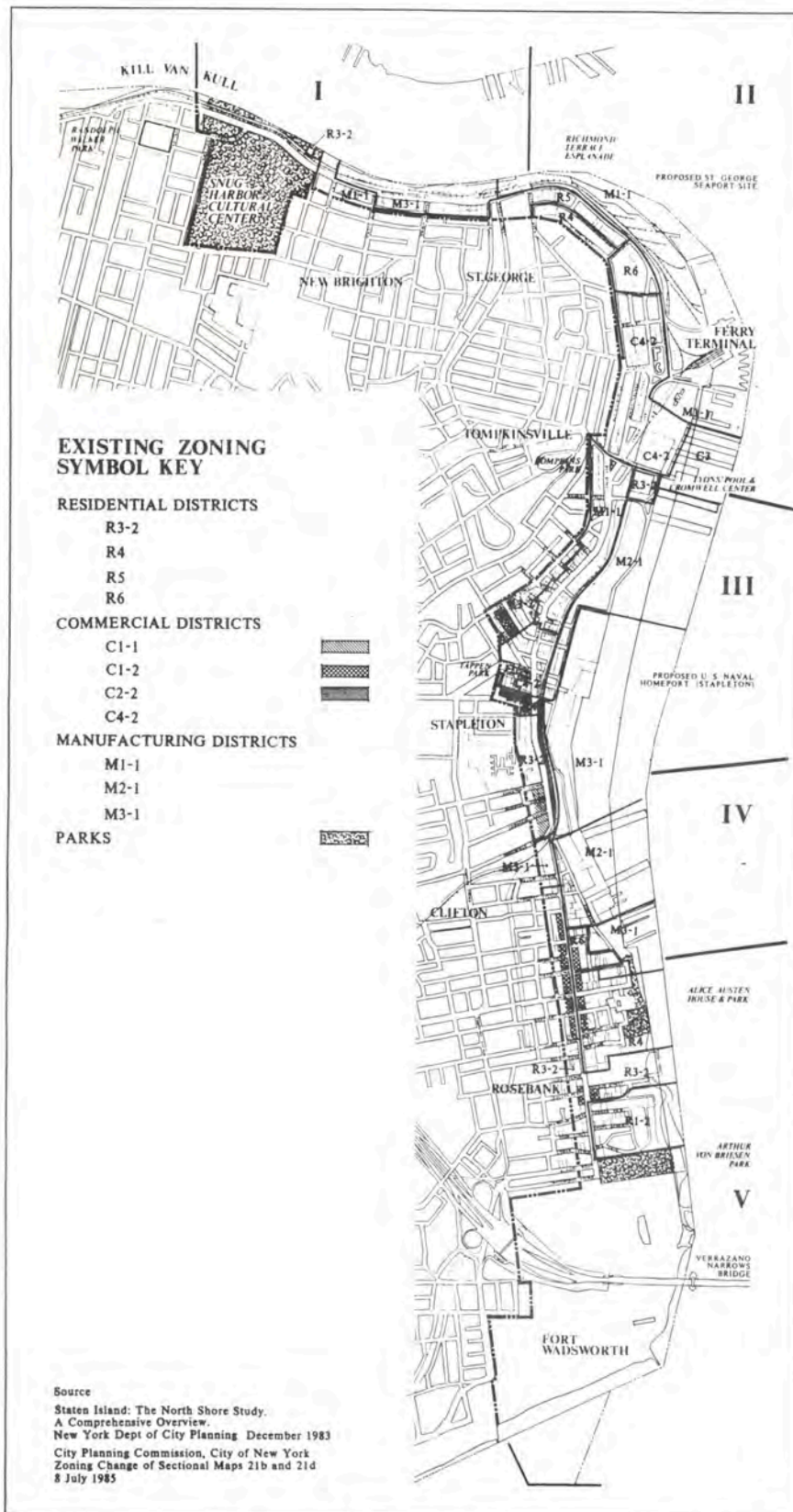
- In Area III, the Hannah Street Bridge can provide a more aesthetically pleasing access and terminate in a dramatic viewpoint for Stapleton residents.
- In Area IV, two sites, one city owned and one private, are undergoing change and present opportunities for esplanade implementation.
- In Area V, the Alice Austen Park and two private sites under development create linkage opportunities for the Rosebank community. Von Briesen Park offers an opportunity for bluff and water edge access enhancement, and connection to historic Battery Weed and the surrounding area in Fort Wadsworth.

Constraint sites present obstructions to esplanade implementation. Often occurring at the water's edge, they could force the alignment of the esplanade inboard, limiting direct association with the waterfront at least in the short-term. If, however, these constraints were eliminated by a change in use for example, the preferred routes would be at the waterside in all instances. These sites are outlined with a dark line. They include:

- Atlantic Salt and U.S. Gypsum in Area I;
- The ferry terminal in Area II;
- The proposed U.S. Naval Homeport in Area III;
- A block of established commercial and industrial uses in Area IV, including the Pouch Terminal, MTA, Sea Knights Marina, U.S. Pilot and Wrigley properties;
- In Area V, the Coast Guard Rosebank Family Housing, the Sea Cliff Tower Apartments and Shore Acres residential community.



21. Rosebank Family Housing "constraint" site. Pier use restricted to Coast Guard personnel.



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North Shore Esplanade Staten Island 3. Existing Zoning

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ZONING: EXHIBIT 3

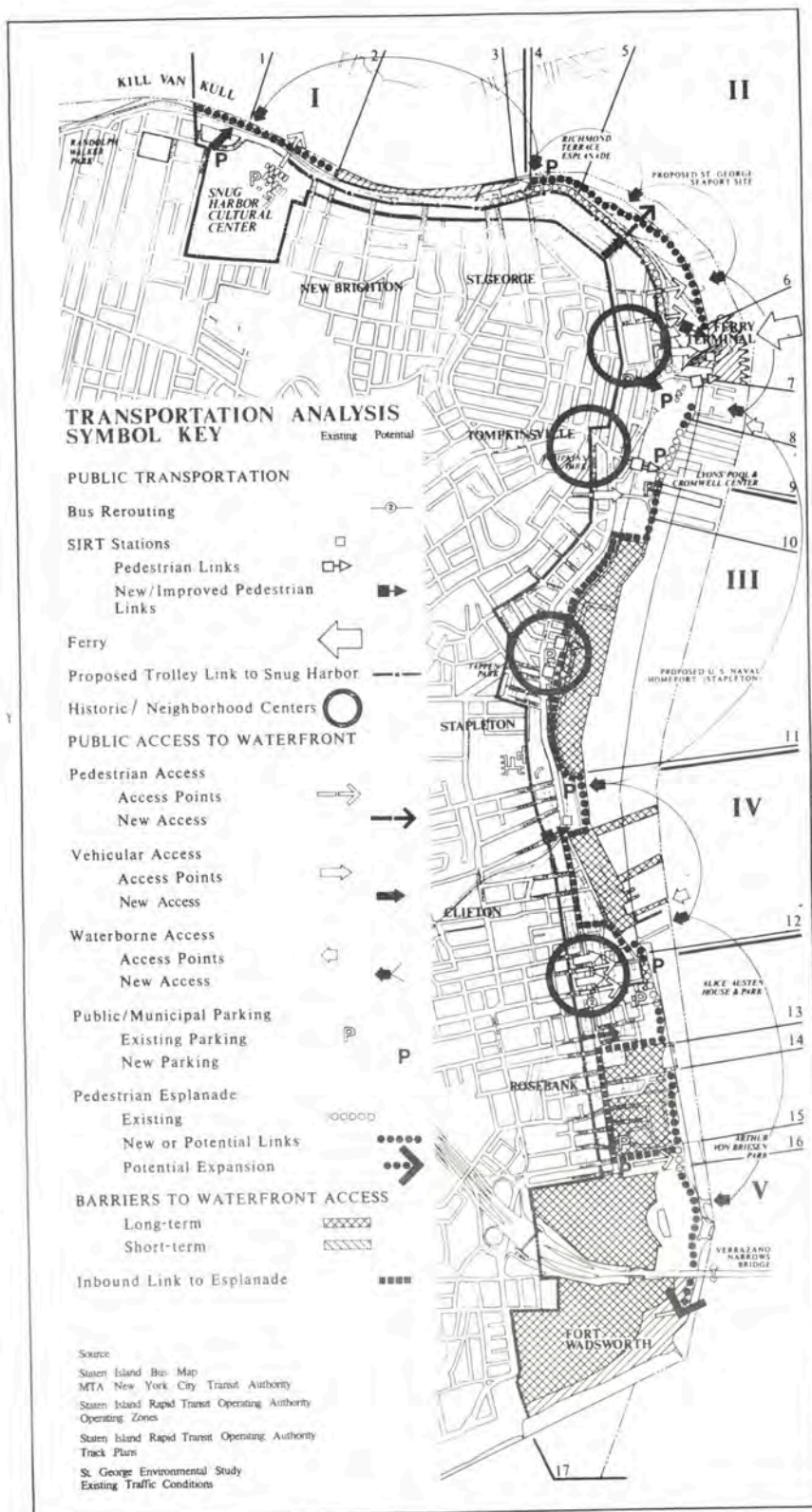
With the exception of the Snug Harbor Cultural Center and Park, most of the land in Area I, New Brighton, is zoned for heavy manufacturing, predominantly M3-1 with smaller areas of M1-1 and R3-2.

Moving south to Area II, St. George, all land east of Richmond Terrace is zoned M1-1 including the ferry terminal and the Chessie Site. All land west of Richmond Terrace to Hamilton Avenue is zoned residential (R4, R5, R6) with greatest density permitted between Nicholas and Hamilton Avenues (R6). Remaining land south of Hamilton (west of Richmond Terrace) and south of the proposed Coast Guard Site is zoned commercial, C3 and C4-2.

In Area III, Stapleton, all the area east of Bay Street and west to Wave Avenue are zoned for manufacturing use (M1-1, M2-1, M3-1) with the exception of the Lyons Pool and Cromwell Center. Commercial use is present in the community center surrounding Tappen Park and a narrow strip east of Bay Street and south of Broad Street. Residential use (R3-2 and R4) is in all cases west of Bay Street and north and south of the commercial core at Tappen Park.

Area IV, Clifton, is zoned entirely for manufacturing (M2-1, M3-1) with the exception of the Bay Street commercial strip (C1-2), and a residential district (R6) between Bay Street and Edgewater at Clifton Avenue.

In Area V, the Bay Street commercial strip continues to St. Johns Avenue. Alice Austen Park and Von Briesen Park are entirely surrounded by the residential districts (R1-2, R3-2, R4, R6) of the Rosebank community. The only manufacturing zone (M3-1) in this area is along the north edge at the waterfront.



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North Shore Esplanade Staten Island 4. Transportation Analysis

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TRANSPORTATION ANALYSIS: EXHIBIT 4

Leading directly to the development of alternative access points and routes, the Transportation Analysis Exhibit brings together all existing and potential land and waterborne transportation elements. This complex exhibit shows three main groups of information:

1. Public transportation: including potential bus re-routing, Staten Island Rapid Transit stations and pedestrian links, ferry access, a proposed trolley link and historic and/or neighborhood centers.
2. Public access to waterfront; including pedestrian, vehicular and waterborne access, public or municipal parking, and existing and potential pedestrian esplanades.
3. Barriers to waterfront access: including long and short-term barriers, and necessary inboard esplanade links.

Existing Circulation

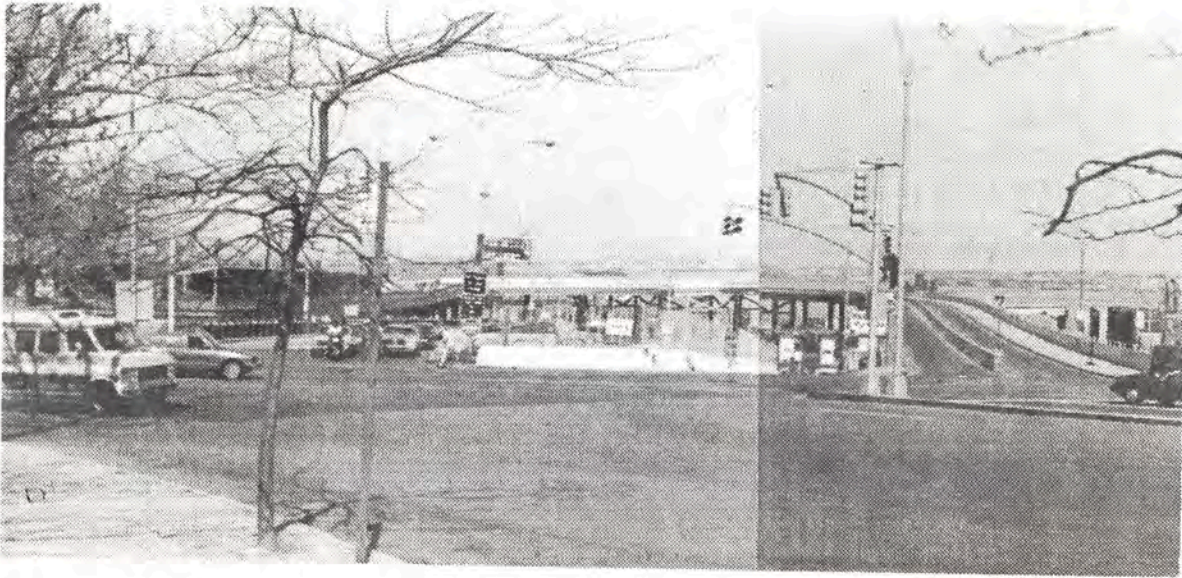
The existing public transportation system includes:

- 1) Local bus routes traversing main thoroughfares and generally terminating at the ferry terminal (photograph 22);
- 2) Staten Island Rapid Transit (SIRT) corridor and stations in four communities as indicated;
- 3) Waterborne public transportation at the ferry terminal.

Pedestrian and vehicular access to the waterfront is limited and sometimes circuitous. In Area I, limited pedestrian access to the waterfront occurs at three locations: the shore side of Harbor Road, opposite the north gate entrance of Snug Harbor Cultural Center, and down Bank Street from Richmond Terrace. The sole vehicular access point is at Bank Street. A steep bank throughout the area also creates a physical barrier to the water along Richmond Terrace.

Area II contains a major public access pedestrian esplanade along Richmond Terrace beginning north of Westervelt Avenue and terminating at the bus entry point at the ferry terminal. This esplanade, constructed and maintained by The Department of Parks and Recreation, offers seating, lighting, plantings, and scenic views. A small esplanade at Bay Street Landing beginning at Victory Boulevard was recently built in conjunction with that residential conversion project. Peak hour vehicular congestion is evident on Richmond Terrace and Bay Street throughout the project area. Automobile and bus commuters to and from the ferry terminal are the major contributors. The largest assemblage of parking is available to accommodate ferry users. Commuters traveling via the SIRT also find the St. George and Tompkinsville stations within this area.

Physical barriers are present in Area II. A retaining wall, bank or cliff, presents a continuous barrier throughout this area. Steep streets occur at Westervelt Avenue, Hamilton Avenue, Wall Street and Hyatt Street. Overall, circulation in St. George/Tompkinsville is the most complex and congested within the North Shore Esplanade project area.



22. Pedestrian and vehicular access to ferry terminal.



23. Raised SIRT tracks allowing vehicular access to the waterfront.

Stapleton, Area III, has five waterfront access routes for pedestrians and four for vehicles. Although these routes are neither readily apparent nor aesthetically pleasing, they do provide basic access. This area, with public bus routes, a SIRT station and heavy vehicular traffic, supports a moderate level of access and subsequent waterfront use.

In Area IV, the elevation begins to drop and the physical barriers related to topography decrease, resulting in a more readily accessible waterfront. Waterborne access is available at Narrows Marina as well.

Area V, Rosebank, is very similar to Area I. Banks or cliffs impede access to the waterfront (photograph #24) and vehicular activity is lessened (although vehicular congestion is present between Hylan Boulevard and St. John's Avenue). Vehicles can reach the waterfront at Clifton Avenue and Hylan Boulevard. Pedestrian access is possible at three locations in Alice Austen and Arthur Von Briesen Parks.

Overall, the existing circulation system is at its peak of congestion in Area II, with lesser activity as one moves either north or south.



24. Steep Slopes limit pedestrian and vehicular access.

Access and Circulation Improvements

Access from each community and through each area is an objective of this project. Exhibit 4 indicates the potential for reinforcing existing access to the extent feasible. Public transportation access can be augmented by:

1. Rerouting bus service in Rosebank down Hylan Boulevard to the Alice Austen House and Park.
2. Improving the SIRT pedestrian link at Greenfield Avenue in Clifton and pedestrian access at the ferry terminal.
3. Creating a trolley/jitney route from the ferry terminal to Snug Harbor.
4. Providing cycling lanes throughout the esplanade route.
5. Expanding waterborne access which is currently concentrated at the ferry terminal and a few small marinas. This exhibit depicts potential waterborne access at eight points along the esplanade which could be linked by a small scale ferry service.
6. Using the former B & O right-of-way from Travis to St. George for light rail service. The City's Department of Transportation is currently studying the feasibility of this proposal.

Potential pedestrian and vehicular access is shown at the Chessie site; vehicular at the Coast Guard site; and pedestrian at New Lane and Scarboro Avenue to reach the Alice Austen House and Park.

Potential parking is indicated in seven locations and is generally related to vehicular access points. Pedestrian pathways are shown and related to new or potential water's edge links and inboard links. The potential expansion of the North Shore Esplanade along the south shorefront at Fort Wadsworth and beyond is also indicated.

Long and short-term barriers to water's edge esplanade alignments are shown. These barriers cross reference to the constraint sites shown on Exhibit 2, Land Use Analysis.

VISUAL CONDITIONS ANALYSIS: EXHIBIT 5

Based on thorough knowledge of conditions in the project area and of the configuration of proposed developments, Exhibit 5 depicts existing scenic qualities and indicates the potential for enhancing three different visual conditions.

1. The enhancement and modification of public views including panoramas, viewpoints and view corridors.
2. The preservation and extension of existing positive conditions, including trees, bluffs, shorefronts and historic sites (photograph 25).
3. The correction or improvement of existing negative conditions, including blighted sites, billboards, cut and fill and commercial or industrial streetscapes (photographs 26, 27).

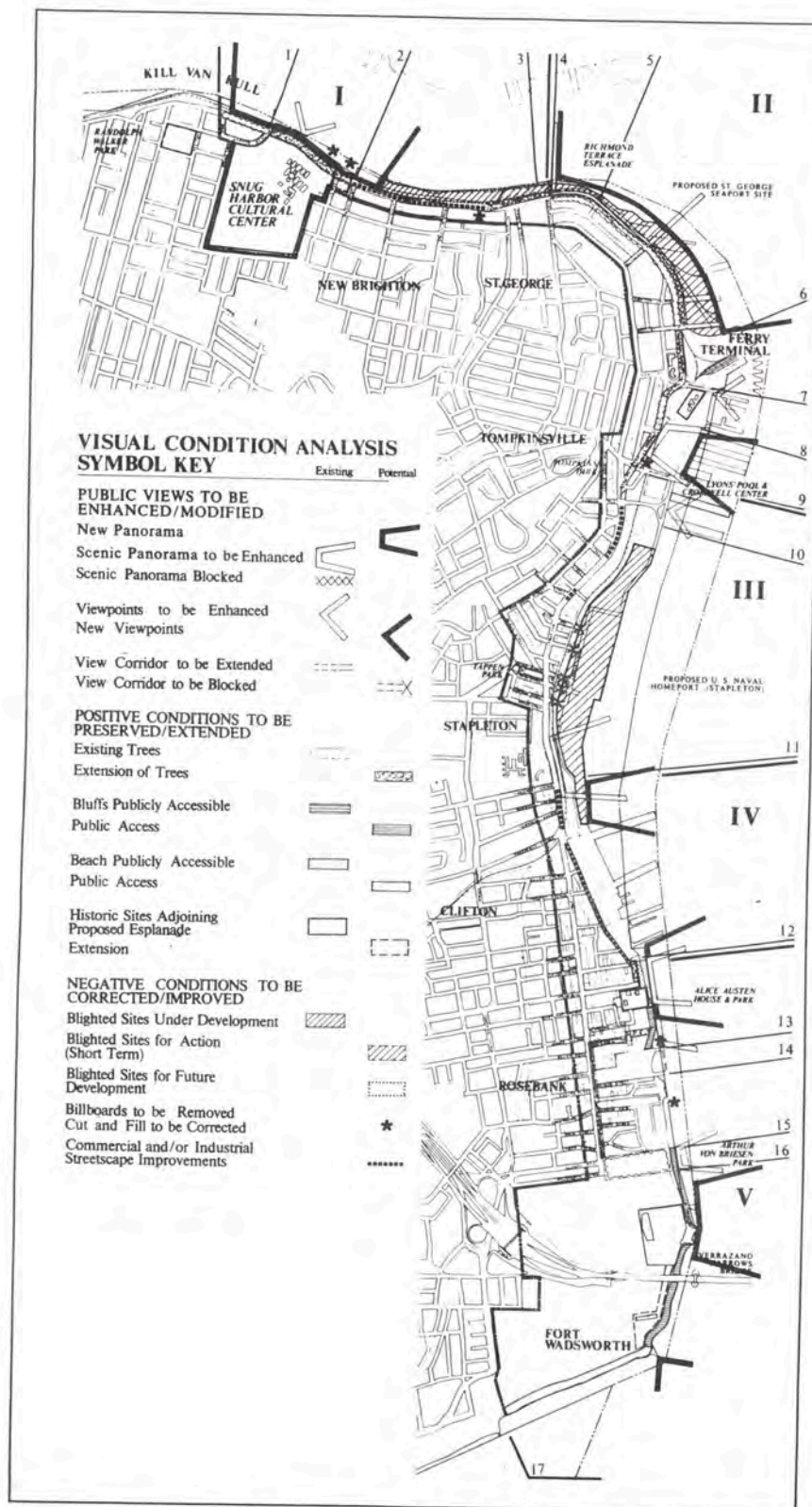


25. Richmond Terrace Esplanade. Potential to enhance public views and extend trees.

Existing Public Views

Four categories of public views are delineated: Scenic panoramas, positive viewpoints, negative viewpoints and view corridors.

The first and most significant is the "Scenic Panorama", a broad, impressive vista that often includes a midground view over water and a



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North Shore Esplanade Staten Island 5. Visual Condition Analysis

GEIGER ASSOCIATES, P.C.

Walmsley & Company, Inc.

WEBSTER & SHEFFIELD (DONALD H. ELLIOTT ESQ.)



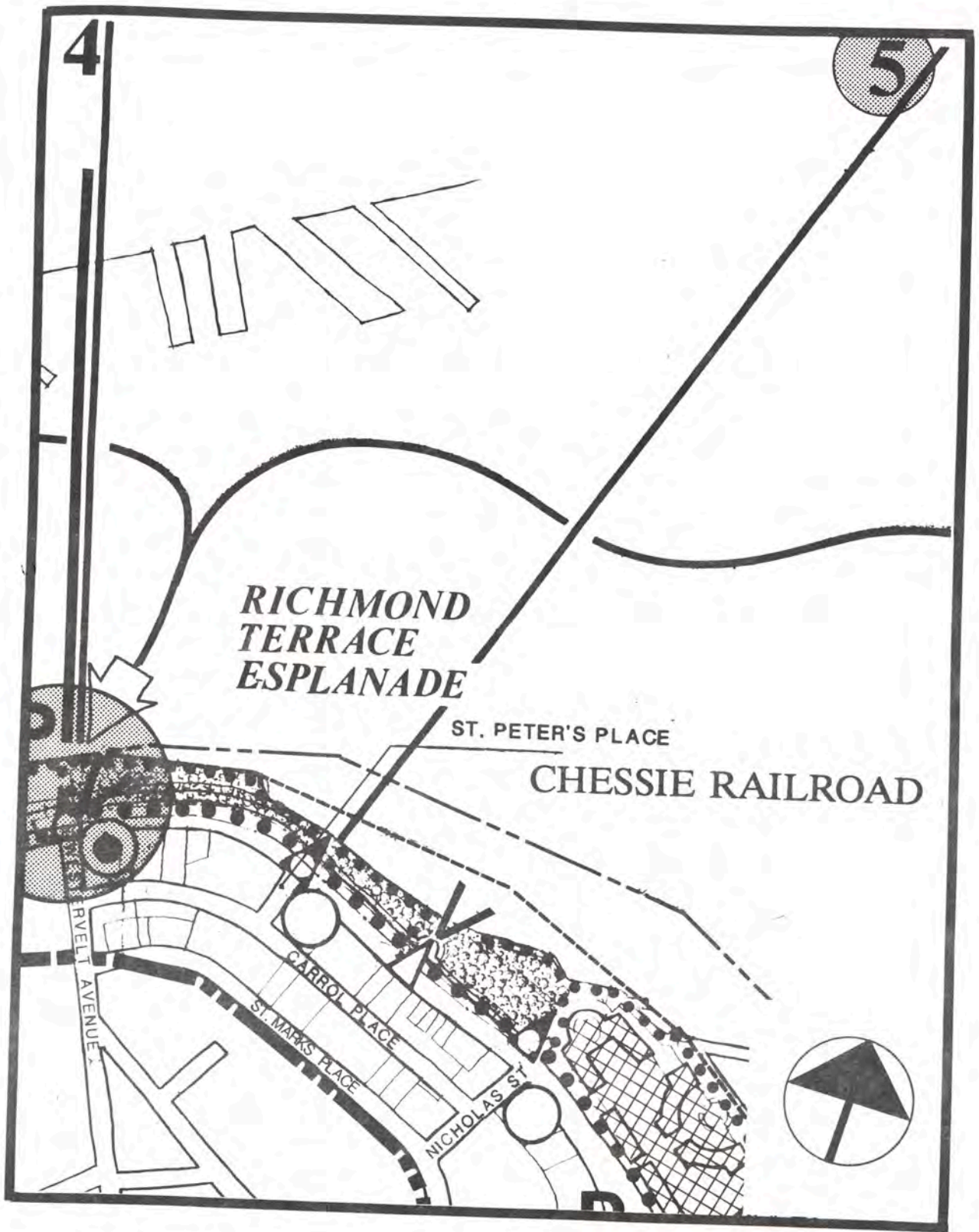
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dramatic background. Seven scenic panoramas are shown. The first along Richmond Terrace at Snug Harbor has an extensive view over Kill Van Kull to the New Jersey shore primarily industrial area. It was judged as dramatic though all viewers may not judge it to be positive. The second panorama is experienced from the existing Richmond Terrace Esplanade. The foreground view takes in the presently derelict Chessie railroad site but mid and background views over the water, New Jersey shore and New York City skyline are dramatic. The third and fourth panoramas are paired to the south of the ferry terminal; both from a higher elevation at Bay Street and from the waterfront near Victory Boulevard, a dramatic panorama over the water to the New York City skyline is experienced. The fifth panorama occurs along Bay Street directly opposite Bayley Seton Hospital. The foreground view is again over a vacant and derelict property with mid and background water and skyline respectively. The sixth panorama from the shoreline at Alice Austen Park has a foreground and midground of water and background of city skyline. Both panoramas six and seven have southern views to the Verrazano Narrows Bridge. The seventh panorama is experienced from the elevated cliff at the waterfront edge of Arthur Von Briesen Park. The view includes water, the New York City skyline and the bridge.

Positive viewpoints are available from a single location rather than an expansive length. Seven are noted at three different locations. The first, at Snug Harbor's historic dock, is near water level and indicates two positive views, east and west to the Bayonne Bridge along Kill Van Kull. The second, at the turn of the bus ramp of the ferry terminal, provides two views out to the east over the water and to the south along the shore. The third set of views occurs at the foot of the Hannah Street Bridge offering views to the north, south and east.

Negative viewpoints are viewed from a single location and are adversely affected by foreground, mid-ground or background elements or conditions. The assignment of a negative value is a judgement that is open to personal interpretation. Only two are noted, one at the Snug Harbor historic dock viewing the industrial frontage of the New Jersey shore and another at the ferry terminal with the convoluted road system and the terminal itself as the negative elements.

The North Shore's unique and varied topography provides superb views of the New York Harbor. The best of these view corridors, or "windows to the water" are in the upland ridge of the St. George community. As illustrated, moving north to south, view corridors include Nicholas Street, Hamilton Avenue, Wall Street and Hannah Street. These should be preserved and enhanced where possible.



AREA 5: WESTERVELT AVENUE TO ST. PETERS PLACE

This area runs from the foot of Westervelt Avenue (the western end of the Richmond Terrace Esplanade) about 900 linear feet to St. Peters Place. It is the beginning of the major directional shift to the south that continues throughout Area 6.

Esplanade Route

An upper route along the existing Richmond Terrace Esplanade is recommended for Area 5. The feasibility and cost-effectiveness of a waterside route in this area requires further investigation.

Esplanade Use

Passive uses: strolling, viewing and sitting. Active uses: jogging and biking. Richly vegetated slopes just west of St. Peters place will accommodate sunning and small-scale free play (e.g. frisbee).

Esplanade Treatment/Facilities

The change in direction at the eastern end of this area merits special treatment to highlight the views now opening up to the harbor. The grassy slopes in this area and in Area 6 to Nicholas Street, should be richly planted with large and medium low-maintenance shrubs to screen the railroad right-of-way.

The esplanade at Richmond Terrace should be enhanced with the proposed esplanade features including new hexagonal paving, benches, lights, and trees to fill in some "gaps".

Esplanade Access

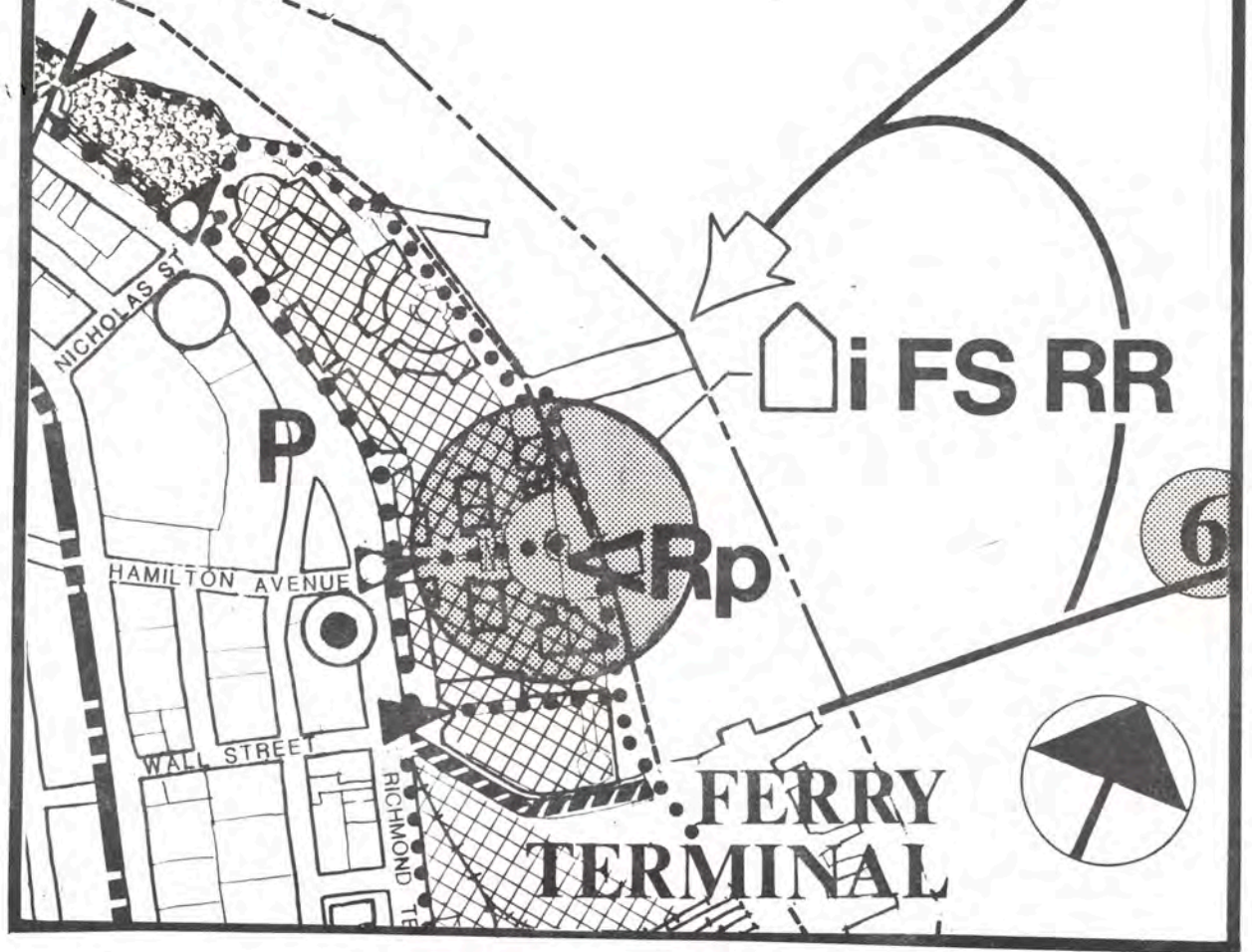
Vehicular access (visitors, maintenance, security and emergency) would be possible from the proposed Bank Street parking area in the adjoining Area 4. Pedestrian bridges from the upper level at Westervelt Avenue and from St. Peters Place are proposed to provide access for walkers, cyclists and the handicapped, as well as improved security.

Bus stops at Westervelt Avenue and St. Peters, and a trolley/jitney stop at Westervelt integrate transit with the inboard end of each bridge. Both bridges would provide direct access to the water for the St. George community.

Waterbus/taxi access can be provided at the recommended Westervelt Avenue floating dock, at the western edge of Area 4.

II

CHESSIE RAILROAD SITE



AREA 6: CHESSIE RAILROAD SITE

This 29-acre, privately owned abandoned railroad yard, plus 26 associated acres of land under water, from St. Peters Place to the north viaduct of the ferry terminal, is proposed for a mixed-use but predominantly residential development. This major proposal creates a unique opportunity to develop a new continuous waterside esplanade for as much as 4,700 linear feet. In addition, development of the site will create the opportunity to expand and upgrade the existing Richmond Terrace promenade. Most important, there will be opportunities to create new pedestrian connections between the upper and lower routes making the waterfront easily accessible to the upland community and a focal point for visitors.

Esplanade Route

A two-tier esplanade should be continued throughout the site: a new public waterside route at the lower level (elevation about 6.0' above mean sea level); and a rehabilitated and extended inboard route along the edge of Richmond Terrace at the upper level (elevation about 28.0' above mean sea level). Both routes continue the upper-lower pair established from Bank Street to St. Peters Place (Areas 3 and 5).

The waterside route may be of variable width, but, on average should be no less than 50' unobstructed. All inboard edges adjacent to the development should be lined with active uses, or heavily landscaped.

The upper route along Richmond Terrace should be an upgraded, expanded, and extended Richmond Promenade. A 50' easement into the property should be developed as a landscaped continuation of Richmond Promenade for the entire length of the property. It will be necessary to cross the easement at several points for access into the property. Every effort should be made to resolve conflicts between pedestrians and vehicles in this area. While major new views will be available to the public for the entire length of the waterside route, significant views from the Richmond Promenade should not be entirely blocked especially in the following areas: opposite St. Peters Church and School, and at the intersections of St. Nicholas Avenue, Hamilton Avenue and Wall Street.

Esplanade Use

The site offers one of the few opportunities to develop major new open space at the water's edge. A full range of passive, recreational and commercial uses should be developed on both the waterside and upper esplanades.

The largest open space devoted to active and passive public recreation should be at the northern end of the site opposite St. Peters Church. Waterside views of St. Peters and Curtis High School, both N.Y.C. landmarks, should be unobstructed. Sunning, strolling, and sitting areas should be provided as well as active recreation, e.g. tennis courts or ballfields. Another active area should be located closest to the ferry at the water's edge where special treatments should be considered and salvageable piers preserved for recreational use.

Esplanade Treatment/Facilities

Landscape materials should include trees, shrubs and groundcover in sufficient variety and volume to naturalize the site and screen the abutting railroad right-of-way.

An iron casting of the esplanade route (as in the Wetlands Frontage in Area 1) should be installed to orient Staten Island visitors and local residents. Street markers should also be placed at all pedestrian connections between the upper and lower routes.

Esplanade Access

The circulation connections between the upper and lower routes can provide new and potentially exciting ways to come to the water which are not now available to the public. A 20-24' drop from Richmond Terrace to the waterside can be handled by a combination of ramps, stairs and elevators. The major pedestrian connections to the water should be close to the ferry terminal.

The existing sidewalk on the north viaduct should be expanded by at least 10 feet. A fully weather-protected connection from Richmond Terrace should lead directly into the ferry terminal. Elevator access for the handicapped should also be provided as close to the ferry terminal as possible.

The main outdoor pedestrian approach to the water should be a continuation of Hamilton Place, an existing street which connects directly to the upland community. It should terminate in a major open space surrounded by commercial uses to give it an urban, round-the-clock flavor. Arcades, terraces, ramps, overlooks, landscaping and water features are all elements that could be used to advantage here.

At least two additional connections should be made between the upper and lower esplanades at St. Nicholas Avenue and St. Peters Place. These connections should be less urban and more parklike in their design than the Hamilton Place entry.

The bus stop along Richmond Terrace should be coordinated with these through connections. The opportunity to reuse the existing piers along the waterside route for waterborne transit should be considered in the design of the esplanade.

AREA 7: STATEN ISLAND FERRY

This 16.7 acre site (see page 56) consists of the ferry terminal on two levels (SIRT and commuter parking below, bus platform and passenger concourse above) with its complex of viaducts and ramps, and the city-owned "triangle" site behind the terminal, currently used for surface parking.

Esplanade Route

Existing ferry terminal connections to Richmond Terrace, both to the north and south, are less than satisfactory. Visitors arriving or departing by ferry should have clearly marked pedestrian linkages through the terminal to the Chessie Railroad Site to the north (Area 6) and the U.S. Coast Guard development to the south (Area 8).

The through route (for people not using the ferry) would avoid terminal traffic. An upper level esplanade along Richmond Terrace's eastern sidewalk would continue south across the front of the "triangle" site to the start of the signalized crosswalk at Borough Hall, then along the western sidewalk of Bay Street to the crosswalk at Stuyvesant Place.

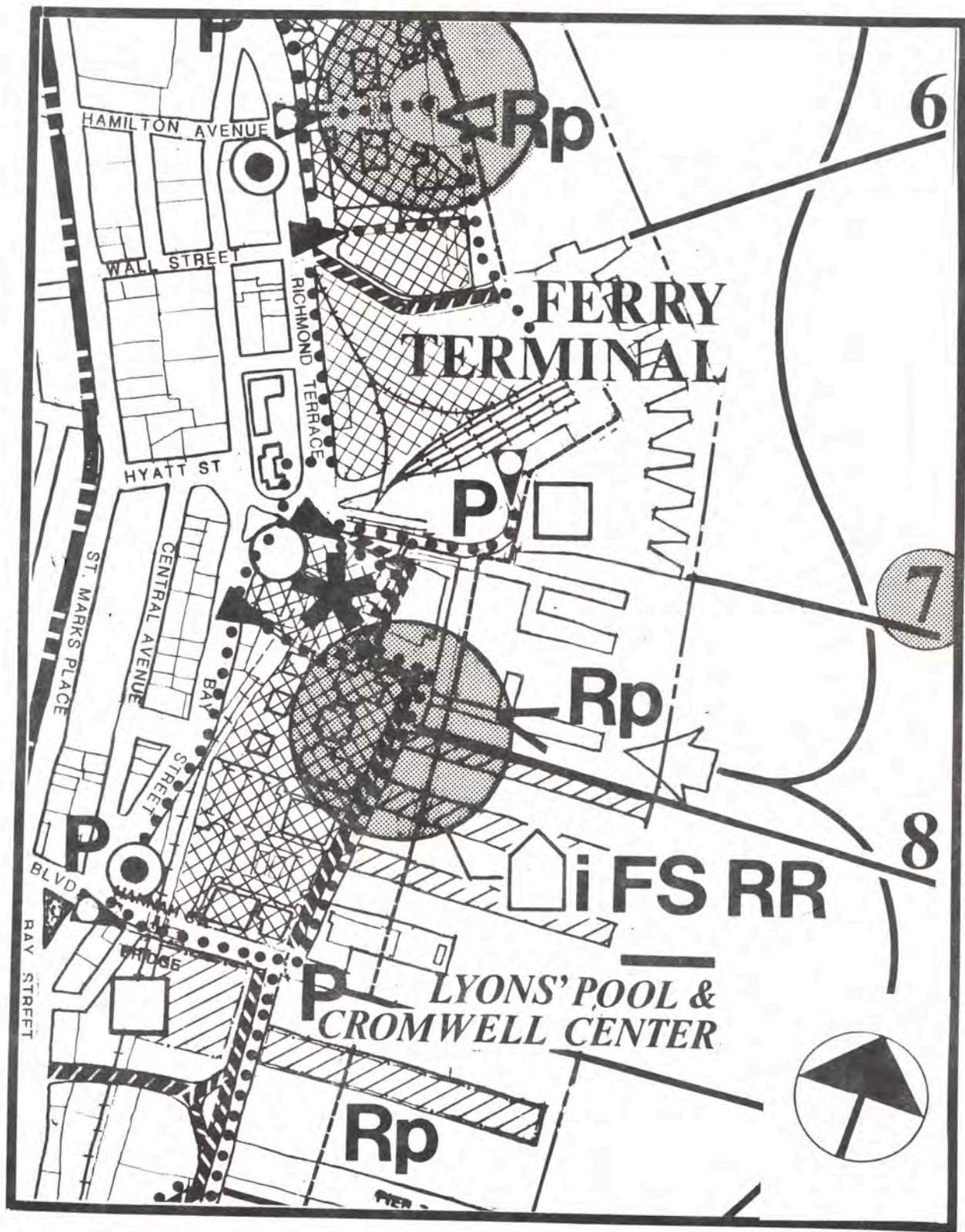
Esplanade Use

The main use for the ferry terminal site is the movement of people (both commuters and tourists). No recreational uses are present or recommended, although dramatic views of the Manhattan skyline can be seen from the southern ramp.

Esplanade Treatment/Facilities

Directions to the esplanade north and south should be provided at information kiosks at either end of the main passenger concourse. Kiosks should also be used to advertise events at area institutions served by the esplanade such as Snug Harbor Cultural Center, Botanical Gardens, Children's Museum, Alice Austen House and Park, Arthur Von Briesen Park and Fort Wadsworth, as well as jitney and waterbus routes and timetables, esplanade restaurants and cafes, and other waterfront attractions.

A 50' pathway should be reserved for the esplanade along the frontage of the "triangle" site. The paving materials, furnishings, street trees and other pedestrian amenities of the rebuilt promenade to the north should be continued. Improvements should include median tree plantings and signalized pedestrian crossings to the St. George Government Center.



Along the curved bus ramp from the ferry terminal to Richmond Terrace, the following improvements are recommended: a specially designed handrail with integral light poles, banners (bearing the esplanade logo), a soft canvas cover (which is vandal resistant), and standard esplanade paving. (see Appendix 3, pages 116-117.) This will enhance views to the water, provide a climate controlled cover and a safer approach for pedestrians which clearly separates them from the adjacent buses. At Richmond Terrace, esplanade signage should direct pedestrians to nearby historic/government buildings, (e.g. Borough Hall, Court House, Coast Guard Site) and to Bay Street and Richmond Terrace.

Esplanade Access

Strong, clear and attractive pedestrian links to the esplanade, both north and south, are recommended starting from the information kiosks at the north and south ends of the passenger concourse. To the south the preferred route is from the concourse through an existing entrance and stairway which should be substantially improved (a covered escalator, widened stair or ramp) to the 8' sidewalk on the southern bus ramp. Currently unprotected and exposed, this walkway offers broad views east and south and should become an important, attractive gateway to the esplanade.

To the north, upper and lower level connections are recommended: the upper level would start at the north end of the concourse through an existing upgraded corridor and would lead pedestrians directly to Area 6; the lower level would start at the same north end and would exit through a new entrance to a broad ramped open walkway descending around the eastern side of the old administrative wing of the ferry terminal to the lower level at about the foot of the north viaduct. Reorganization of the parking area to provide a safe, attractive, pedestrian zone is recommended.

MASTER PLAN DESCRIPTION

The proposed esplanade route, uses, treatment/facilities and access are presented in detail for each of seventeen functional areas. The subdivisions range in length from 0.1 mile (U.S. Coast Guard Site, Victory Boulevard/Pier 7) to 1.1 miles (Fort Wadsworth). The areas were differentiated in order to tailor the esplanade plan to specific conditions, including:

- Topography and elevation;
- Land Use;
- Character;
- Access;
- Ownership or jurisdiction.

SYMBOL KEY

ESPLANADE ROUTE

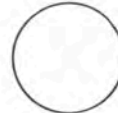
(Rehabilitated)
(New)



ESPLANADE USE

Integral Use

Activity Node



Shelter/Weather Protection



Food/Snacks

FS

Restrooms

RR

Information

i

Important Viewing Area

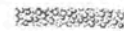


Abutting/Accessory Use

Fenced/Security Area



Park/Sports Field



Shore Front



Recreation Pier

RP

Recreation Structure/Facility



Related Development



Historic Building/Site



ESPLANADE ACCESS

SIRT Station



Bus Stop



Bus & Trolley Stop



Waterbus/Boat



Vehicular Access



Pedestrian Access(Non Handicap Accessible)



Pedestrian Access(Handicap Accessible)

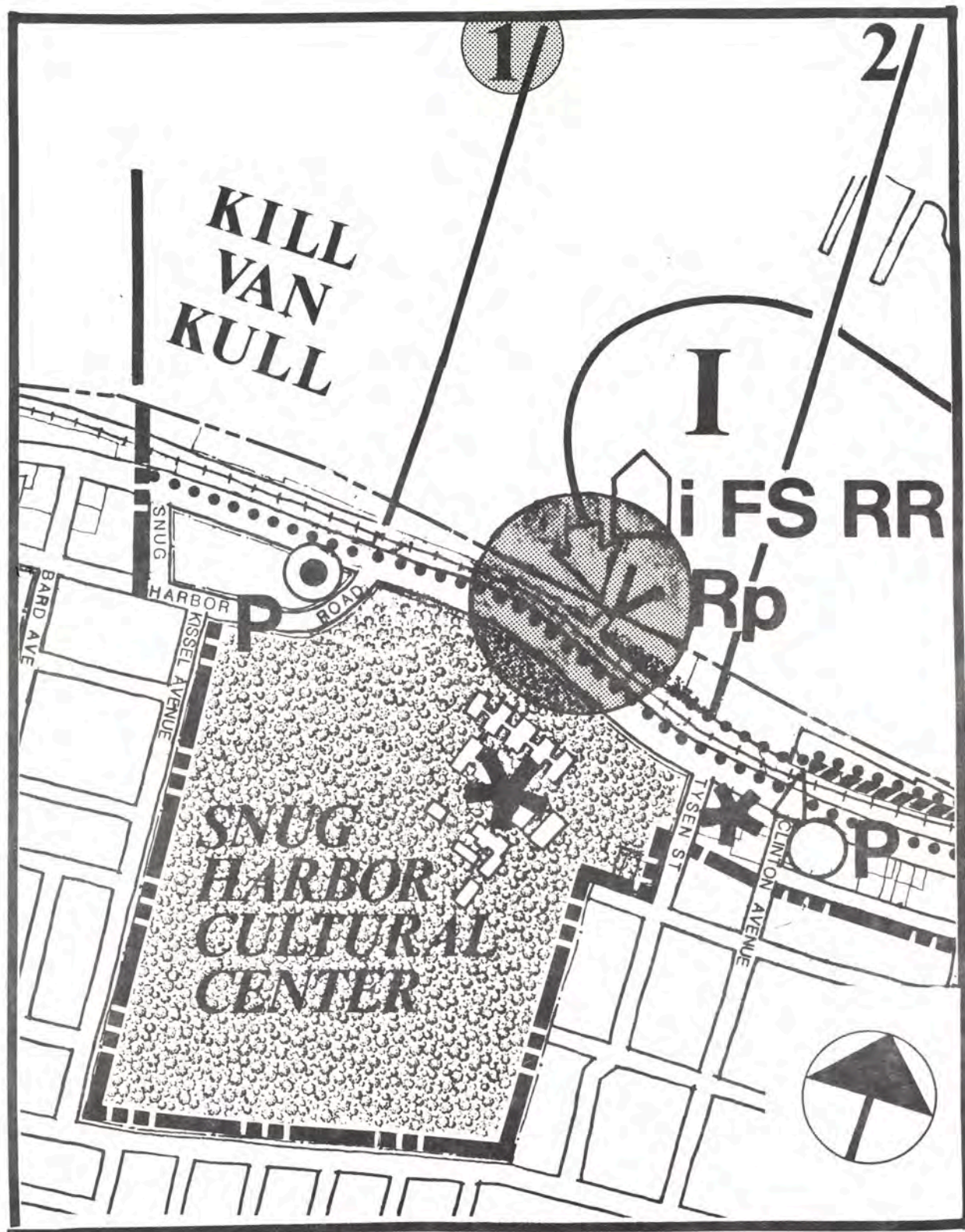


Covered Pedestrian Access(Handicap Accessible)



Parking

P



KILL
VAN
KULL

I

i FS RR

Rp

SNUG
HARBOR
CULTURAL
CENTER



AREA 1: WETLANDS FRONTAGE

This city-owned frontage of about 1,125 linear feet, adjacent to the Snug Harbor Cultural Center, is currently undeveloped.

Esplanade Route

The entry point to the proposed esplanade is at the eastern end of Snug Harbor Road. The recommended esplanade route is along the potentially attractive north sidewalk of Richmond Terrace.

Esplanade Use

Both passive (strolling and viewing) and active (jogging and biking) recreation can be accommodated in this first section of esplanade.

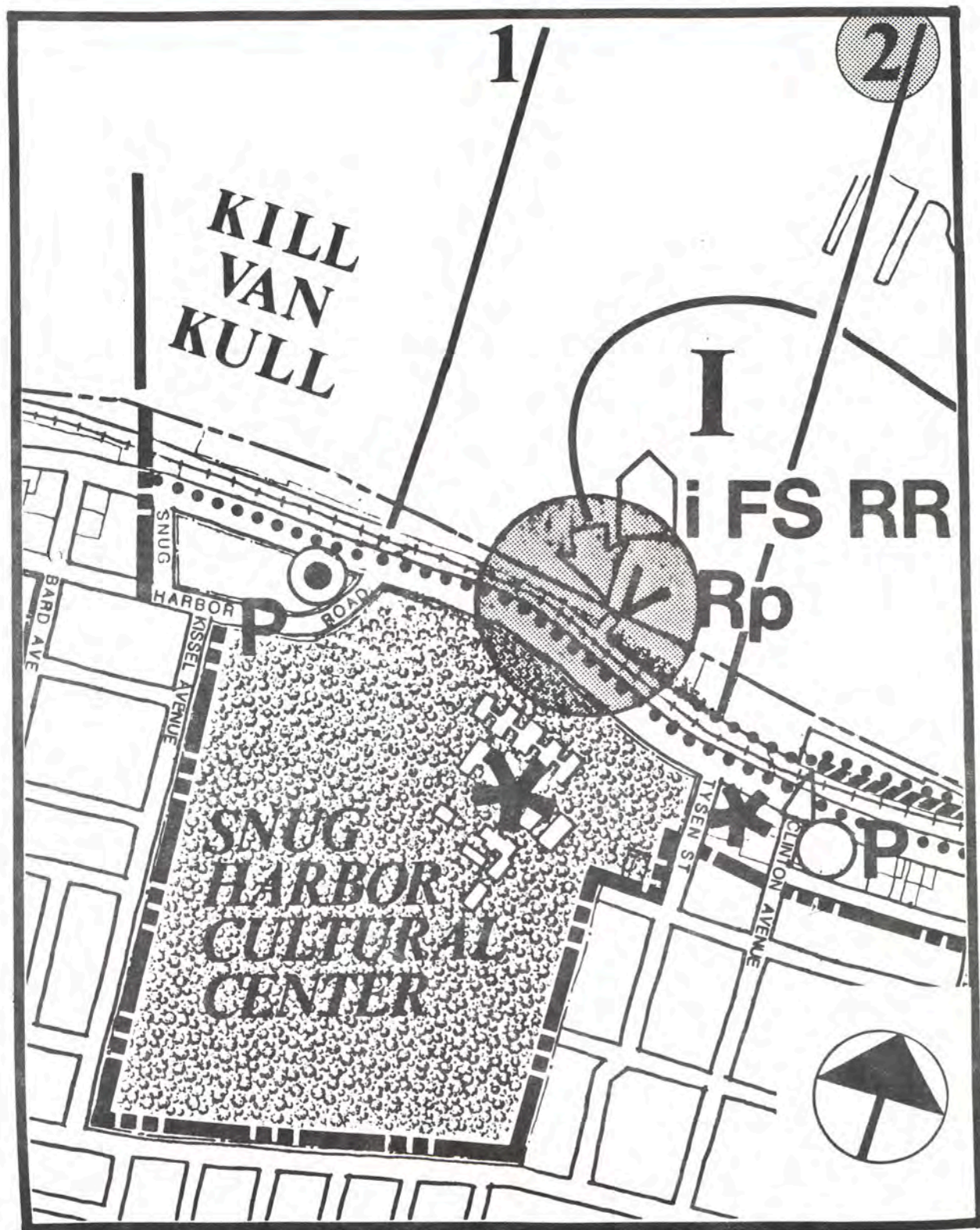
Esplanade Treatment/Facilities

The entry point should be marked with the uniform "North Shore Esplanade" logo and the esplanade route treated with the recommended standard esplanade lights and paving. The overgrown bank in this area should be cleared selectively to open the scenic views of the water. New trees should be planted wherever necessary to bring tree plantings on both sides of Richmond Terrace up to the recommended 30 to 40 feet spacing between trees. The mapped wetland at Richmond Terrace and Snug Harbor Road should remain in its natural state with a descriptive educational marker describing the natural habitat.

A cast iron esplanade map installed in the sidewalk should indicate the start of the esplanade and approximate distances to principal features along the esplanade route. A small bronze location marker with the street name, Snug Harbor Road West, should also be installed here. This element will be used throughout the esplanade to accentuate all key features, and at points of esplanade access to orient pedestrians.

Esplanade Access

Parallel on-street parking for 25 cars could be provided on Snug Harbor Road (for an area of about 500 linear feet). Buses and/or jitneys should stop at the east end of Snug Harbor Road at Richmond Terrace.



AREA 2: SNUG HARBOR CULTURAL CENTER

The Snug Harbor Cultural Center frontage on Richmond Terrace runs for about 1,500 linear feet from Snug Harbor Road to Tysen Street. The center and park is designated parkland under the jurisdiction of the New York City Department of Parks and Recreation, and managed by the Snug Harbor Cultural Center. A consultant has been appointed to develop a master plan for site development.

Esplanade Route

Initially, the esplanade route would be on the north side of Richmond Terrace. In the long term, as part of the city's Harbor Park system, a pier and waterside esplanade should be considered. This could be accomplished by widening the parkland north of Richmond Terrace.

Esplanade Use

Passive uses: strolling, sunning and viewing. Active uses: jogging and biking.

Esplanade Treatment/Facilities

When the pier and waterside esplanade are built, the first small "pavilion" containing a snackbar, restrooms, information and overlook should be provided.

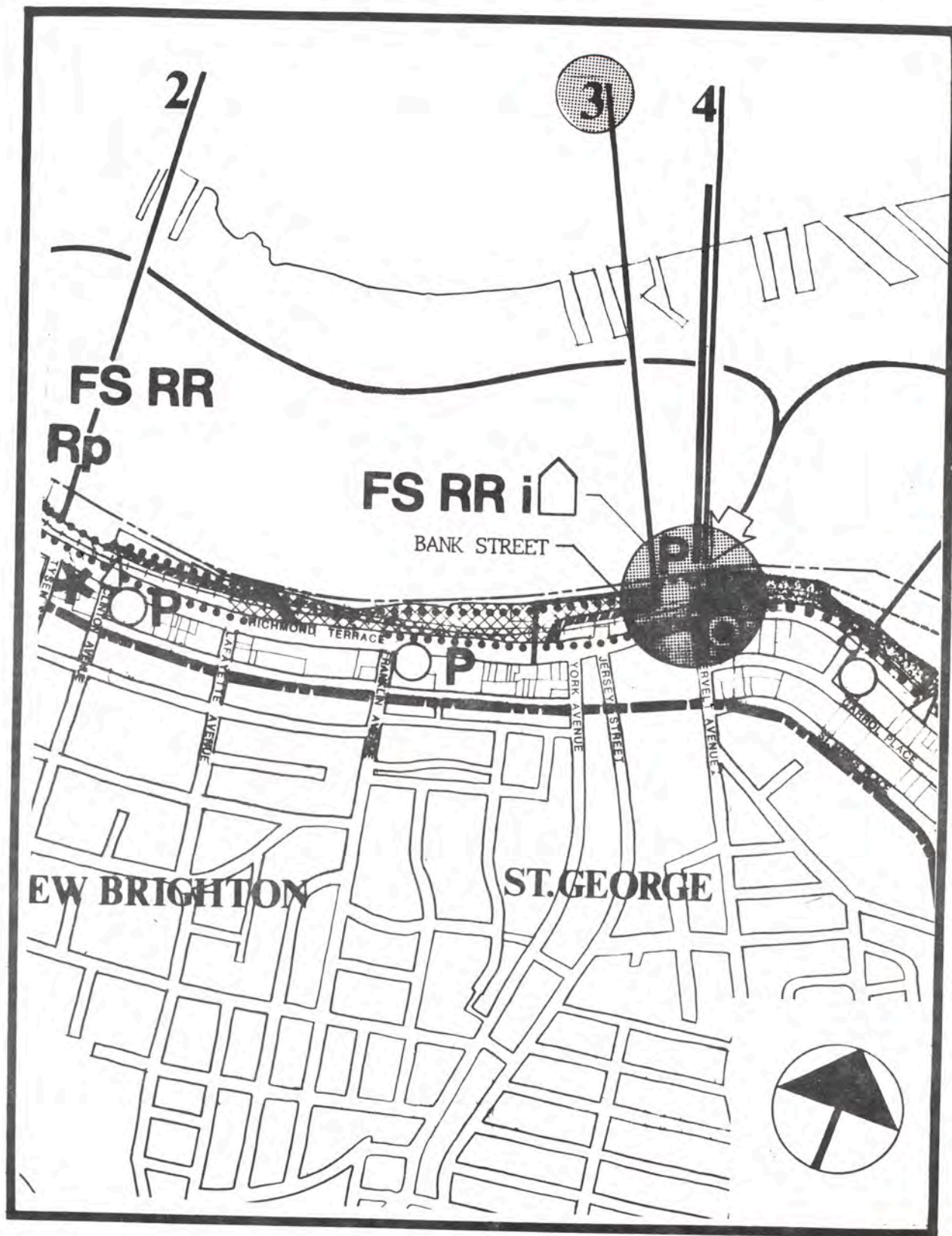
At the dock a sign should display jitney information including timetable and boat course of the Harbor Park system.

To the extent possible, the Snug Harbor Master Plan should consider integrating the historic structures (stairs, overlook, wall) with the North Shore Esplanade and pier.

Esplanade Access

An existing short vehicular ramp at the west end of Snug Harbor can be improved for service, emergency, and handicapped access. Parking for the esplanade and Snug Harbor Cultural Center could be provided in the portion of Snug Harbor Road from Kissel Avenue to Richmond Terrace. Signalized crosswalks on Richmond Terrace are recommended for the safe crossing of the heavily trafficked Richmond Terrace.

A boat and waterbus landing at the pier would, in addition, offer an important view of the entire Snug Harbor Cultural Center from the water.



AREA 3: U.S. GYPSUM

This site, the privately-owned former U.S. Gypsum Plant, runs about 3,400 linear feet from the Snug Harbor Cultural Park at Tysen Street to the foot of Bank Street (Area 4). It is a narrow bulkheaded site, 200' to 250' wide. A double track railroad runs along the inboard edge, about 8' to 20' below Richmond Terrace. There are numerous industrial buildings and silos in varying conditions; an engineering survey rates about half as feasible for conversion to other uses. The west end of the site is actively used by Atlantic Salt and has vehicular access from Lafayette Avenue.

Esplanade Route

The ideal route is a waterside one but this cannot be realized unless the site is redeveloped. This is not anticipated in the short-term. An improved north sidewalk of Richmond Terrace is recommended as an interim route and to benefit the Brighton community to the south.

Esplanade Use

Passive: strolling and viewing. Active: jogging and biking. Temporary uses, such as the fruit and vegetable market on the north side of Richmond Terrace near Franklin Avenue, should be encouraged and expanded.

Esplanade Treatment/Facilities

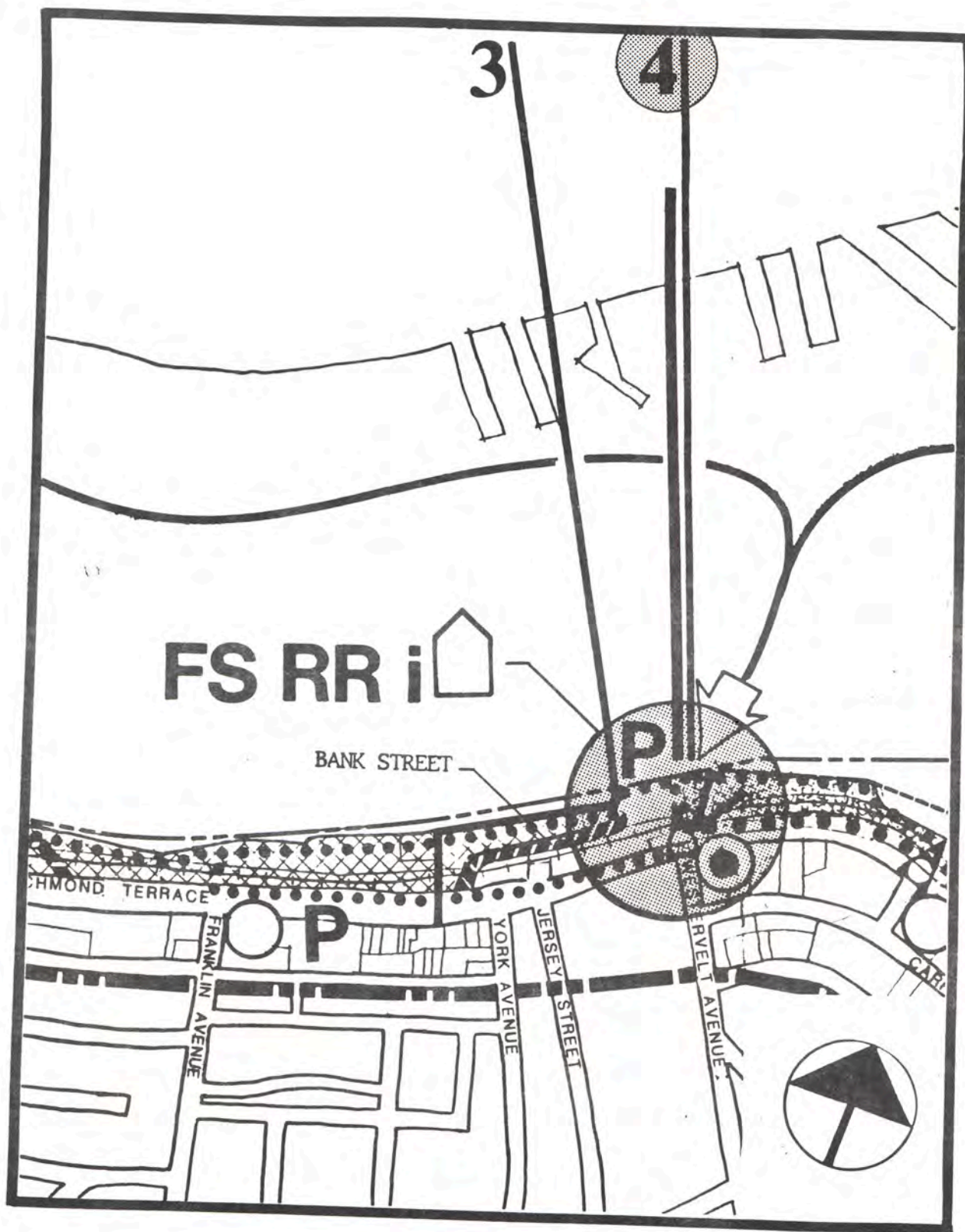
In many places, the existing sidewalk is only 8-10 feet; it should be widened to 12-15 feet, the maximum width possible because of the Richmond Terrace roadway. Recommended improvements include billboard removal, street resurfacing, crosswalks, patching and/or painting of abutting walls and fences and limited off-street parking at the produce market between Lafayette and Franklin Street.

Over the long-term, this site could be redeveloped with an upper and lower esplanade, joined frequently at major view corridors. A street marker should be located on the waterside of Richmond Terrace indicating the historic Von Pelzer Mansion (at Tysen Street).

Esplanade Access

Until a waterside esplanade at this point becomes a reality, the present vehicular access from a ramped street between Lafayette and Franklin Avenues will continue to serve Atlantic Salt. Once the waterside of Snug Harbor Park (north of Richmond Terrace) is developed, a ramp or stairs should connect the Gypsum site to the Snug Harbor waterside path and to the upland along an improved Richmond Terrace.

Area 3 may also be entered by an existing, structurally sound, steel overpass at Franklin Avenue which could be a useful future access point. Existing bus stops should be maintained at Clinton and Franklin Avenues.



AREA 4: BANK STREET TO WESTERVELT AVENUE

This area extends along the waterfront 800 linear feet from Bank Street to Westervelt Avenue. Bank Street, a city-owned right-of-way over two railroad tracks, leads to a turnaround at about 8.0' above Mean Sea Level. On the east, a vacant privately-owned property of about 2 - 4 acres, extends from the turnaround to the western end of the Chessie property. An undeveloped strip of city-owned land lies between the railroad and Richmond Terrace.

Esplanade Route

The short-term recommended route is along the north side of Richmond Terrace. In the long-term, the preferred route is at the waterside from the foot of Bank Street to the waterside esplanade in Area 5. This would involve acquiring the small privately-owned property noted above or an access easement through it.

Esplanade Use

Passive uses: strolling, sunning, sitting, viewing and eating. Active uses: jogging and biking. When the waterside route is developed, a floating dock should be located at Westervelt Avenue to be used for recreation/boating by nearby residents.

Esplanade Treatment/Facilities

In the short-term, an upper route on the north side of Richmond Terrace should be created by installing a new sidewalk, trees, lights and crosswalks to link with the west end of the Richmond Terrace Esplanade at Westervelt Avenue.

Over the longer term, in conjunction with the west end of U.S. Gypsum (Area 3), the foot of Bank Street would become an important entry point and center of activity for the esplanade. Street markers for orientation and esplanade identity should be located at Bank Street and Westervelt Avenue, and special signage should be provided at the proposed Westervelt Avenue floating dock (including a boat schedule and route).

Esplanade Access

Bank Street should be rehabilitated as a vehicular access to the esplanade and a small parking lot of about 30 cars developed. Part of this rehabilitation should include improving an existing 4' wide sidewalk on the west and north sides.

A small neighborhood parking area could be provided in the dead end section of Jersey Street on the waterside. A bus stop should be established at Bank Street/Richmond Terrace.

A new pedestrian bridge is recommended for the eastern edge of Westervelt Avenue to bring pedestrians, bikers and handicapped directly to the waterfront and the esplanade activity node.



26, 27 Blighted sites to be improved include unsightly cut and fill and commercial billboards.

Existing Property Conditions

Property conditions are divided into two sub-categories, positive and negative. Positive conditions include concentrations of street trees in five locations, picturesque bluffs in three locations, two beaches and 15 historic buildings or groups of buildings.

Negative conditions contain blight, junk, decay and abandonment having an adverse effect on scenic quality. Four billboards were noted in the project area. In Rosebank, one unsightly cut and one unsightly fill were noted. Commercial or industrial strips are shown in four areas along main thoroughfares.

Enhanced Scenic Qualities

A bold new panorama across Kill Van Kull from Richmond Terrace is possible at Snug Harbor. The lower viewpoint, from the stairs and landing across from the Snug Harbor entrance, is indicated as enhanced by their rehabilitation. The removal of billboards completes the visual improvements for this area. Visual conditions along Richmond Terrace would change for the better with streetscape improvements, billboard removal and the improvement of waterfront sites proposed for short-term action.

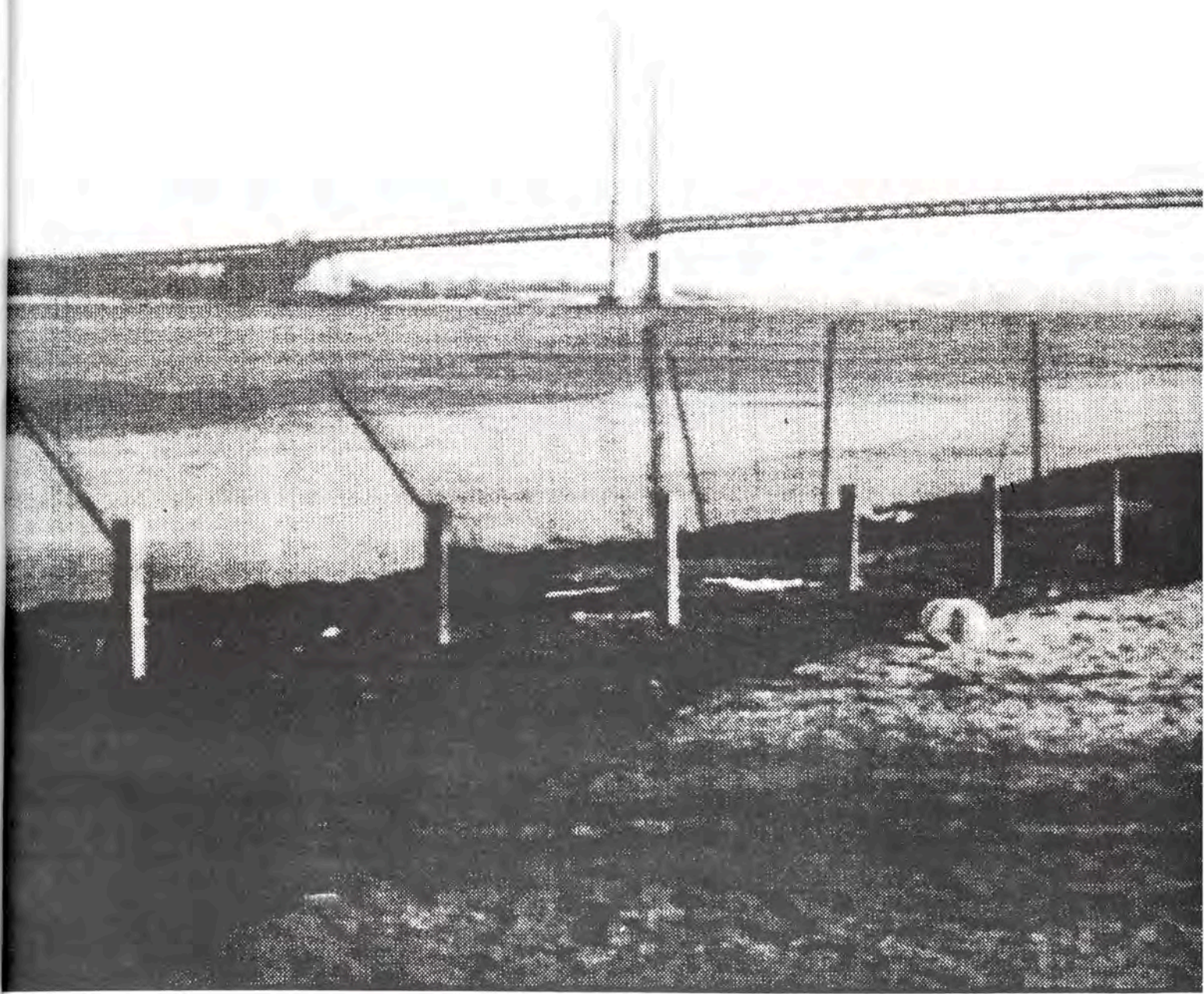
Current development plans at the Chessie site call for a partially blocked scenic panorama along Richmond Terrace which would be replaced by a new panorama at the water's edge. View corridors down Nicholas, Hamilton and Wall Streets would be extended through the proposed development. Extending tree planting along Richmond Terrace and Bay Street west of the ferry terminal would provide visual continuity (see photograph 25).

The viewpoint from the bus access ramps of the ferry terminal could also be enhanced. Historic structures at the Coast Guard site could augment the visual conditions.

In Tompkinsville, a panorama could be enhanced at a high elevation along Bay Street by extending tree planting, removing billboards and installing streetscape improvements. A new lower panorama is shown at water's edge overlooking several piers to the open water and Manhattan skyline beyond. The terminus of the Hannah Street overpass provides an opportunity for the enhancement of a viewpoint. Across from Bayley Seton Hospital, the Bay Street panorama is shown as enhanced and a water's edge panorama added. Streetscape improvements along Bay and Edgewater Streets transition into the Clifton community leading to the Alice Austen House and Park. This area shows the extension of street trees, the enhancement and extension of a scenic panorama, the correction of cut and fill, and the improvement of a blighted site.

The extension of trees along New Lane and Bay Street connects the main corridor of Rosebank to Arthur Von Briesen Park where the enhancement of the panorama along the park frontage will connect to the Battery Weed historic site at Fort Wadsworth. This Fort Wadsworth access would add a broad panorama and a new viewpoint, as well as a publicly-accessible shorefront.

Visual access to the waterfront in the Stapleton community will be partially blocked by the proposed U.S. Naval Homeport. The exhibit depicts five view corridors that would be blocked.



A PLAN FOR WATERFRONT PUBLIC ACCESS



North Shore Esplanade Staten Island 6. Final Master Plan

Staten Island Office · Department of City Planning, Walmsley & Company, Inc.
PROJECT FOR PUBLIC SPACES, INC. DESIGN ASSOCIATES, P.C. WRITERS AND DRAFTSMEN (DONALD R. KELLEY SR.)



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1996

A PLANNING APPROACH

After review of three alternative plans by the Task Force, the Master Plan presented in this report was selected as the preferred long-range plan. The plan achieves the general objectives outlined at the start of the project and responds positively to the planning approach that evolved during the course of the project. Specifically:

- The plan recommends a continuous, unbroken route with the maximum length of waterside esplanade; necessary inboard sections are designed to maintain consistency and seamless continuity.
- The plan focuses activity nodes with a wide variety of amenities and uses at sites where: panoramas and viewpoints are striking (and negative conditions can be screened or corrected); there are principal transit access points; there are nearby historic sites and other attractions; and where adjoining communities can be well served.
- The plan enhances existing commercial centers at St. George/Tompkinsville, Stapleton and Clifton/Rosebank.
- The plan incorporates existing portions of the esplanade, either waterside (at Alice Austen House or Von Briesen Park) or inland (at the Richmond Terrace Esplanade).
- The plan takes into account established or committed uses which may force the alignment of the esplanade inboard (e.g. the ferry terminal, the proposed ferry repair facility, the proposed U.S. Naval Homeport, the block of successful commercial and industrial uses in Area IV, the U.S. Coast Guard site, and Fort Wadsworth).
- The plan recognizes the potential of proposed development sites (such as the Chessie site, Stage 3 of Bay Street Landing and the adjoining U.S. Coast Guard site) where new public waterside facilities and access can be provided.
- The plan respects individual community projects and/or neighborhood objectives, reinforcing them wherever possible. For example, the Snug Harbor Cultural Center Development Plan will be integrated into the northern end of the esplanade. The right-of-way of the northern portion of the SIRT, though presently unused, will be maintained.
- The plan establishes connections to existing SIRT stops in the operative southern portion of the SIRT, consolidating them into proposed activity nodes.

ESPLANADE DESIGN

There is little or no coordinated design vocabulary for the existing portions of esplanade at Richmond Terrace, Bay Street Landing, Alice Austen Park and Arthur Von Briesen Park. One of the objectives for the North Shore Esplanade is to identify strong design features that will establish a unified image for the six-mile esplanade, one that evokes "Staten Island".

At the same time, there will be a great range in the types of uses and numbers of users along the proposed route: ferry terminal, active commercial/industrial areas, residential sections, and several historic sites. Therefore, the esplanade vocabulary has to allow for considerable local variation - in width, number and frequency of built elements, degree of formality/informality, from structural bulkhead with seawall fence to shorefront without fence, and so on.

Historic park sites are unique and special. The Department of Parks and Recreation is about to develop comprehensive site plans for Snug Harbor Cultural Center, Alice Austen Park and Arthur Von Briesen Park, and their esplanade facilities, materials and even routes may vary due to historical research and other concerns. The plans for these parks will nonetheless respect the overall recommendations of this plan, with the goal of creating waterfront park settings that connect seamlessly with the rest of the esplanade and form activity nodes for it.

Although additional design reviews will be required to create the esplanade recommended in this study, participating public and private organizations should consider the overall esplanade guidelines outlined below. These include recommendations for esplanade dimensions, pavings, steps, walls, curbs, fences, furnishings, pedestrian bridges, structures, and plantings which are meant to indicate the design intent and on which magnitude of cost estimates may be generated.

Esplanade Dimensions

A successful esplanade attracts a wide variety of users: pedestrians, cyclists, skaters, children in strollers, people in wheelchairs and sedentary viewers. To avoid conflict among these differing uses, and to afford safe and pleasant passage, the ideal width of the public pathway should be 18 feet, unobstructed by seating, landscaping, kiosks or other permanent structures. At large-scale developments, buildings should be set back 50 feet from the water to provide a buffer area which may be landscaped or otherwise designed to separate public and private uses.

Modification of this general standard may be considered where there are unavoidable site constraints, opportunities for separate bicycle and pedestrian paths, or reasonable expectations of minimal use.

Paving, Steps, Walls and Curbs

Waterside esplanade paving should establish the basic esplanade material. It should be flexible and allow a wide variety of applications, equally appropriate for "urban" and "natural" areas.

Exposed aggregate concrete is recommended with a great variety of paving patterns (from large to small scale) as the most adaptive, realistically priced and permanent pavement. A light, warm gray tone is suggested.

Upper esplanade and connections to the water, which relate more to the urban environment, should use a "city" material. Hexagonal asphalt block is the most appropriate and is also cost effective and durable.

These two basic esplanade materials may be supplemented by other materials, for example:

- Square asphalt block, or granite cube for raised terraces and overlooks.
- Brick or brick tile, flagstone or gravel/crushed stone for historic areas.
- Crushed stone for shorefront areas or light-use areas (such as Fort Wadsworth).
- Heavy timber on a concrete or timber superstructure for piers and boardwalks.

Steps and walls should be concrete with an appropriate finish - non slip inserts on the stairs and striated on the walls with fiberglass form liners. Precast or granite copings are recommended for walls, including bench height walls, which should match or relate to the capstone on the bulkhead wall.

Bulkhead walls should be repaired and, in particular, the capstone rehabilitated for the seawall fence. North and south of the central zone (i.e. Areas 1 and 2 above U.S. Gypsum and Areas 12 to 17 below Clifton Avenue) the shorefront is predominantly rip-rap dyke or eroded shoreline. Existing fieldstone retaining walls should be repaired and extended as necessary.

Curbs for lawn or planted areas should be pre-cast concrete (with an aggregate finish to match or relate to the adjoining paving) or granite block (salvaged, if available).

Fences

The seawall fence should be steel railing specially designed for the North Shore Esplanade, approximately 3' - 3" high, and supported about every 7' - 6". For maximum protection, it would have vertical steel pickets. At marinas or less exposed situations, the pickets may be omitted. With the typical arrangement of outboard lights on concrete piers, the seawall fence will run in between (see "Furnishings", below).

Furnishings

Basic esplanade lights are typically 10' high "B" pole pedestrian fixtures approximately 60' apart. They should be in continuous runs of 10 or more to establish a steady rhythm. They are to be mounted on concrete piers, approximately 2'-0" x 2'-0" x 3'-6" high at the bulkhead wall, or 2'-0" x 2'-0" granite bases inboard, and elsewhere.

Additional lighting will vary from area to area but could include:

- Street lights for vehicular and parking areas;
- Integral lighting for pedestrian bridges;
- Special lighting for historic structures and landscapes;
- Bollard lighting for marinas and water bus/boat piers;
- Night lighting to increase security and enhance the esplanade's image.

Benches should be treated wood (teak preferred) with cast iron ends, of both back and backless types. The "World's Fair" type is durable and established. It or a comparable type, could establish a distinctive North Shore Esplanade "house style". In historic settings, special benches, garden scale or other suitable, may be introduced. In "natural" areas, boulder walls or granite slabs could be used.

Trash receptacles should be cylindrical metal, painted dark to match fences and lights.

Bridges

Two new bridges are recommended in the northern section of the esplanade for essential pedestrian access. A light, airy cable stay construction type is recommended with a pre-cast concrete or painted steel superstructure and galvanized bridge strand cables. Bridge and

ramp decks are pre-cast concrete or poured concrete on a galvanized steel box frame.

Bridges should have a wire mesh screen on inverted "U-shaped" supports approximately 10' high and 7'6" apart. Handrail and lights could be mounted on these frames.

Structures

Pavilions proposed throughout the course of the esplanade would contain: snack bars, restrooms, covered seating and viewing space, drinking fountains, telephones, information (including "you are here" maps), storage and the like (see Appendix 3, pages 114-115).

These should be designed as a series of different but related small pavilions with an open, nautical flavor, high pitched roofs, porches, unified graphics, lantern openings in the roof, weathervanes, porthole windows, and the like.

Two particularly important pavilions would be the information kiosks at the north and south ends of the ferry terminal passenger concourse. These pavilions should display esplanade route, key cultural/park sites, museum schedules, trolley/bus information, esplanade logo and a unified graphic system including standard typeface and color.

Overhead Coverings

At one special access, the south viaduct of the ferry terminal, a light, fabric membrane roof cover is proposed to highlight a key entry to the southern portion of the esplanade and to give protection for pedestrians entering or leaving the terminal. The technology for such a structure has advanced over the last twenty years and offers a light weight, durable, translucent covering, and often a striking visual form. This special design would incorporate fences, lights and supports for banners/flags (see Appendix 3, pages 116-117).

Signage

A graphic program will need to be designed. The city's recently developed waterfront symbol should be used in combination with the North Shore Esplanade logo (see Appendix 3) for:

- "You are here" signs at all entries;
- Street markers of cast bronze in the paving to identify street intersections and distances;

- Cast iron maps at the ferry terminal entrances to the esplanade and at the north and south ends of the esplanade, (Areas 1 and 16);
- Historic markers and information directing people to sites such as Snug Harbor Cultural Center, St. George, the Coast Guard site, Alice Austen, Von Briesen and Fort Wadsworth;
- Trolley/jitney and waterbus signs and schedules;
- Advance notification signs to direct visitors to the esplanade.

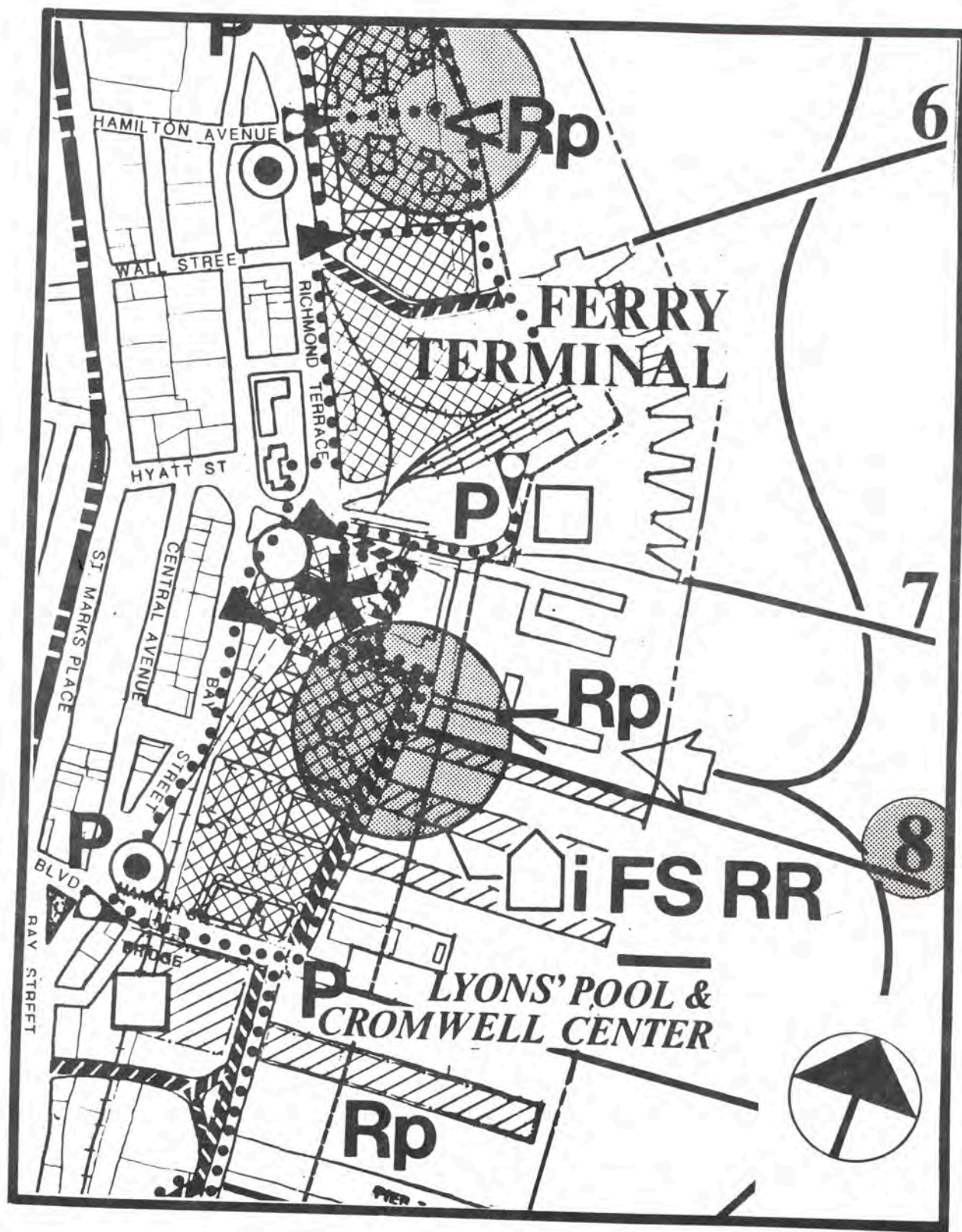
Planting

The esplanade environment is harsh and demanding for any plantings. The soil and plant materials should be selected for qualities of hardiness, drought tolerance, good response to container planting, and relatively low maintenance. Plant material native to Staten Island should be selected, as practical. (See Appendix 4 for list of recommended species.) The soil should be specified as humus rich, porous, and well drained with a neutral to slightly acidic pH value. All plantings on the esplanade should be in pits.

Raised planting beds should be aggregated to maximize the size of growth areas (research has indicated that larger areas for multiple plants result in improved vigor and growth rates).

Nonetheless, plant materials growing on the esplanade will be slightly dwarfed. Their life span will also be shortened. Adequate maintenance, including watering, fertilizing, weed removal and disease control, will enable plantings to thrive even under these exposed conditions.

Spacing of 30 to 40 feet between trees is the recommended standard along the esplanade route.



AREA 8: FORMER U.S. COAST GUARD SITE

This 22-acre site is under the jurisdiction of the city's Bureau of Ferry and General Aviation Operations. It has about 10 acres of land and 12 acres under water. About 3 acres next to the water and south of the terminal is committed to the ferry maintenance and repair facility. The balance of the site is available for private development. A 60' public street right-of-way has been established in front of historic buildings surviving from the old facility. These buildings are programmed for adaptive re-use. The city may consider rehabilitating an existing pier, south of the new ferry operation, for recreation purposes.

Esplanade Route

If it is not feasible to incorporate an esplanade into the design of the ferry maintenance facility, the recommended route is along a 15' wide sidewalk of the new right-of-way in front of the historic buildings. At its south end, it turns east to the waterfront at the pier. For reasons of security, and to discourage this from becoming a major vehicular route to the ferry terminal, the proposed road should be designed to limit access only to potential parking for the Coast Guard site and to emergency/service vehicles. One or two alternative alignments are recommended depending on the development proposal for the site and the adjoining Phase 3 Bay Street Landing: limited access extension of the 60' street right-of-way south to the Bay Street Landing property line (bollards will prevent non-authorized vehicles from moving through); or reservation of a 25' pedestrian right-of-way east to the waterfront along this line.

Esplanade Use

Passive uses: strolling, sitting, viewing and eating. Active uses: jogging, biking, boating and fishing.

Esplanade Treatment/Facilities

Besides the potential recreation pier, a small waterfront park (about 150' x 100') is proposed between the entrance to the pier and the most northerly Bay Street Landing pier. Suggested elements are a raised, tree-shaded overlook area; a small restaurant, restroom and storage; a 20' wide paved esplanade with rail, lights, benches, running between the piers and returning along the north side of the Bay Street Landing pier; and a raised planted area and street trees that continue the proposed Bay Street Landing treatment.

Within the 60' wide right-of-way in front of the historic buildings, esplanade paving should be combined with an allee of trees, lighting, shrubs in beds of groundcover, and concealed uprights to accentuate the historic structures.

There are several esplanade features unique to this historic site, that warrant preservation: the historic buildings, vaults tucked into the steep vegetated slopes, old brick walls (curved with wrought iron starshaped studs), and ornate iron fences and gates.

Signage describing the site's history should be placed on the main entrance walk to the three historic buildings, and street markers should be located along Bay Street at the historic brick wall (on the center line of the first two trees), and at the base of the wooden staircase, at the Bay Street Landing access.

Esplanade Access

The missing pedestrian link between the ferry terminal (Area 7) and Bay Street Landing (Area 9) would now be provided. In addition to the esplanade sidewalk route through the site, an improved, covered pedestrian walkway and connecting stairs from the south viaduct of the ferry terminal are recommended. This access and associated treatments are critical to the esplanade and should be part of the Request for Proposals for the former Coast Guard Site.

Boat and waterbus access should be provided at a rehabilitated pier, clear of the commercial marina activities at Bay Street Landing.

AREA 9: BAY STREET LANDING

This area of approximately 35.2 acres (20.3 acres land, 14.9 acres water) is the site of the Bay Street Landing residential development, with about 1000 linear feet of public esplanade, the first phase of a 450 boat commercial marina proposed for three piers, and commercial development of a fourth pier (see page 62).

Esplanade Route

The esplanade route, dimensions, materials and amenities have been established by prior agreement, and are mostly completed.

Esplanade Use

Passive uses: strolling, dining, viewing and sitting. Active uses: jogging, biking, fishing and boating (ultimately the site will accommodate approximately 450 boat slips).

Esplanade Treatment/Facilities

In general, Bay Street Landing is an attractive amenity. But, additional waterfront lights, street trees on both sides of the frontage street, benches and/or seating areas, and signage would strengthen its "esplanade" image.

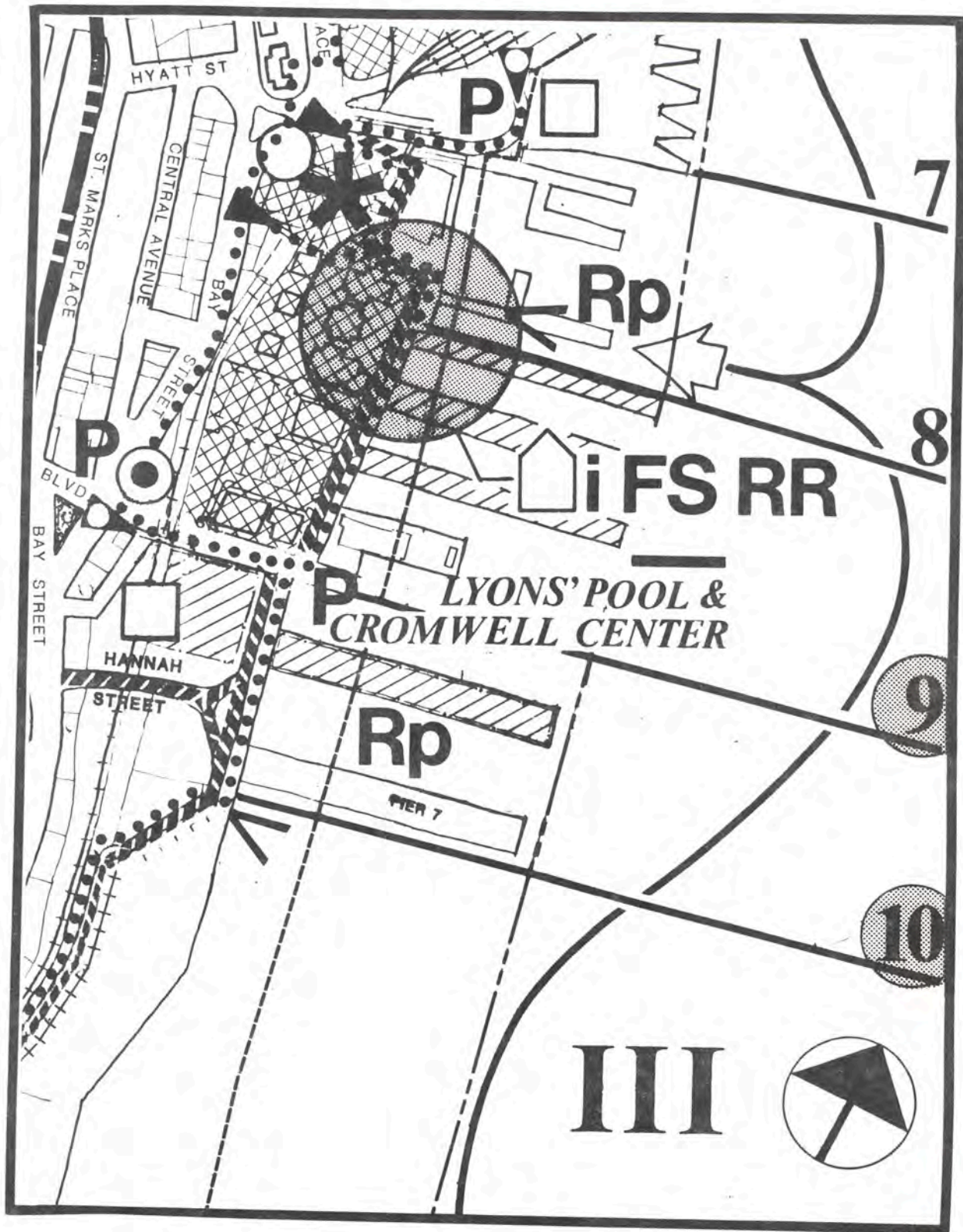
Of the four piers, one is in active use as a commercial marina, and two are programmed for marina expansion with integral parking and appropriate landscape and lighting treatment. A fourth has an existing restaurant overlooking the marina.

If Victory Boulevard, inboard of the SIRT, were demapped, it could provide parking, combined with canopy trees, and esplanade pavement and lighting. Flowering trees should be planted along the view corridor from the Bay Street Landing right-of-way, and appropriate restaurant signage (readable from Bay Street) should be combined with low-maintenance plant materials.

Esplanade Access

Primary vehicular access is from the Hannah Street Bridge in Area 10 which leads to the Bay Street Landing frontage road.

Pedestrian access from Bay Street should be significantly improved at Victory Boulevard. An 8-foot-wide ramped approach, a new bridge over the SIRT Railroad, stairs to the Tompkinsville Station, and a ramp and stairs at the Lyons Pool entrance are recommended to replace the existing narrow, deteriorating, uninviting approach. Inboard of the railroad, a minimum of 50 parking spaces could be provided within the Victory Boulevard right-of-way to Bay Street. This area has the potential to be a major entrance to the esplanade, at a point where many facilities converge and many travel modes are integrated -- train, bus, trolley/jitney, car, pedestrian and handicapped.



AREA 10: VICTORY BOULEVARD TO PIER 7

This area runs about 1,100 linear feet from Victory Boulevard to the northern boundary of the proposed U.S. Navy Homeport. Important city-owned recreation facilities - Lyons Pool and Cromwell Center - are undergoing major rehabilitation. The ferry maintenance repair facility at Pier 7 is being relocated to the former Coast Guard site south of the terminal (Area 8). Pier 7 is to be demolished.

Esplanade Route

The recommended esplanade route is waterside, from Bay Street Landing south to the Homeport. The pedestrian route would be at the water's edge, screened by vegetation from the adjacent vehicular route.

Traveling toward the water, along the Hannah Street Bridge access, there is an important panoramic view (and from the Cromwell Center southwards).

Esplanade Use

Strolling, viewing, jogging and biking can be accommodated in this transitional section of esplanade.

Esplanade Treatment/Facilities

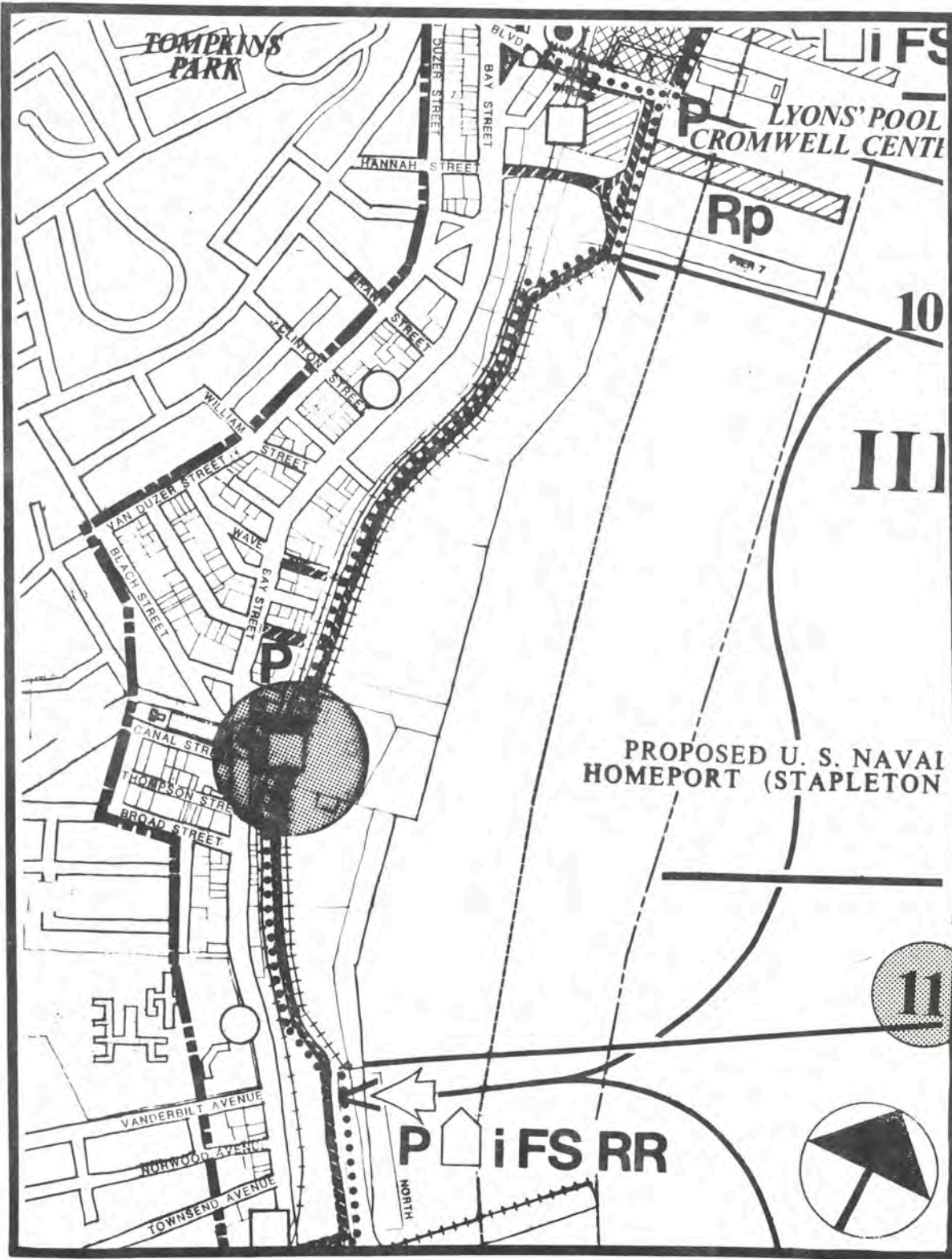
This area should have an 8-10' raised, planted area separating the esplanade from the frontage street. Parking could be provided in bays, on each side of the street. Street trees, lighting at the entrance to Cromwell Center, and rehabilitation of the bulkheading similar to Bay Street Landing (Area 9) is recommended in conjunction with the city removal of Pier 7. Funding for bulkhead reconstruction in this area may be available in fiscal 1990, according to the Department of Ports, International Trade and Commerce.

The Bay Street Landing commercial facilities, along with Lyons Pool and Cromwell Center, make a strong combination of esplanade-related facilities.

The area between the Cromwell Center and the Homeport should be developed as a "window-on-the-water" park.

Esplanade Access

Vehicular and pedestrian access exists over the Hannah Street Bridge. The extension of the esplanade "treatment", in whole or in part, across the bridge to Bay Street would emphasize this important entrance to the waterfront.



AREA 11: U.S. NAVY HOMEPORT

This 52-acre site from Pier 7 to the city-owned property north of the Pouch Terminal is committed to the U.S. Homeport. It occupies about 4,000 linear feet of water frontage, immediately outboard of the SIRT Railroad.

Esplanade Route

The recommended route is necessarily inboard of the Homeport, on the west side of the new Front Street. Approximately 30 feet of right-of-way should be added to the new Front Street to provide a decent promenade. The alignment should be close to Front Street to reinforce connections to the Stapleton community. This route would also remove pedestrians from an 8' high chain link fence, required for naval security. The transitions from outboard to inboard at the north and south ends require clearly demarcated esplanade crosswalks.

Esplanade Use

The 30' wide pedestrian right-of-way should accommodate sitting, strolling, jogging and biking.

Esplanade Treatment/Facilities

Esplanade treatment would include an allee of trees, esplanade pavement, lights and benches. The special pavement, lights and benches may be carried out to Bay Street, creating a stronger link between the esplanade and the Stapleton community.

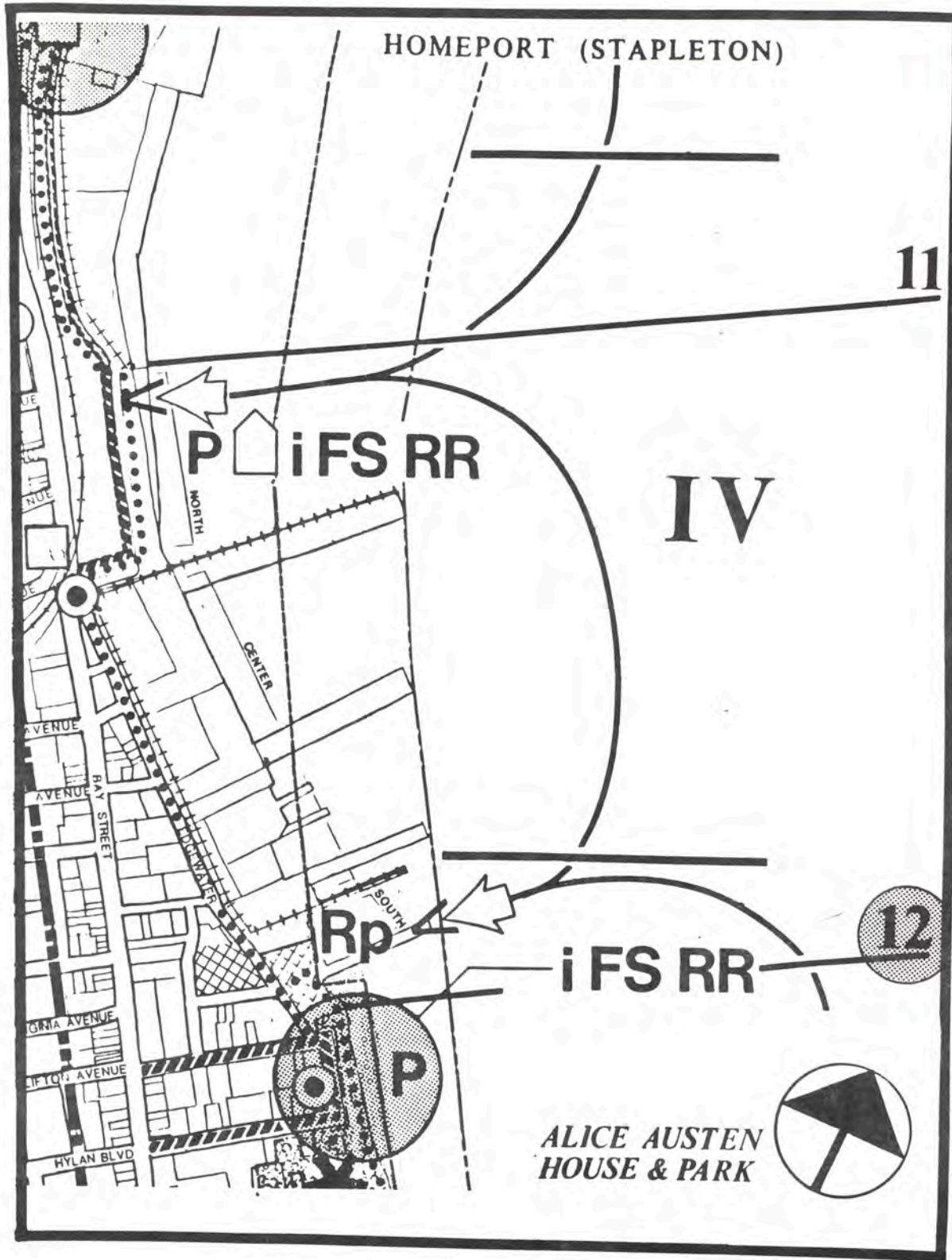
Street markers should be placed on this new allee at access points along Wave Avenue, Prospect Street, Water Street, Canal Street and Thompson Street. Esplanade signage should include an informative sign, with a plan of the Homeport site, and general information about its operation.

Although current Homeport plans do not fully illustrate proposed building locations, a view corridor to the water from Tappen Park should be preserved and enhanced.

Esplanade Access

The five underpass streets provide direct vehicular and pedestrian access to the inboard esplanade. Public transportation stops have a clear pedestrian signage system that indicates public parking areas.

For clearer, improved pedestrian access, the extension/consolidation of Stapleton business district activities along the five underpass streets (Wave Avenue, Prospect, Water, Canal and Thompson Streets) linking Bay Street to the new Front Street is recommended. Better connections to an improved SIRT Stapleton Station and additional parking are also recommended.



AREA 12: ACTIVE INDUSTRIAL/COMMERCIAL

This area runs from the southern end of the proposed Homeport to Clifton Avenue. It consists of three parts:

1. North, about 1,000 linear feet by 75 feet (1.7 acres) of waterfront, between Front Street and the water. It is city-owned and leased in part to a commercial launch service. The remaining portion of the site is undeveloped.
2. Center, about 1,800 linear feet by 200 feet (8.3 acres) of commercial/industrial, transit and utility uses: Pouch Terminal, Sea Knights, Narrows Marina, SIRT and NYC MTA Bus/Parking. This is a mix of city and privately owned sites in active use.
3. South, about 500 linear feet by an irregular width on both sides of Edgewater Street, includes the Sandy Hook Pilots Association and Reynolds sites.

AREA 12, NORTH

Esplanade Route

The recommended esplanade route is at the waterside, crossing Front Street at the north and returning, on the south, to Bay Street at the Clifton/Rosebank SIRT station.

Esplanade Use

Strolling, sitting, eating, viewing, jogging and biking are accommodated in all three sections of this area.

Esplanade Treatment/Facilities

The recommended waterside route would create a "window on the harbor" with esplanade paving, rail, lights, benches and, if possible, a restored pier for recreation use, as part of an integrated development proposal. Funding for the rehabilitation of the existing bulkhead has been allocated in the city's fiscal 1991 capital budget. The city-owned parcel south of the Homeport should be developed as a waterfront park for the Stapleton community.

Esplanade Access

Vehicular access would be possible from Front Street. Once the southern open space is developed, on-site parking could be provided.

Provision of permanent parking and other access improvements should be an integral part of the site's eventual development, e.g. SIRT Station upgraded stairs, sidewalk connection, bus stop, pier, boat, and waterbus.

AREA 12, CENTER

Esplanade Route

This portion of the esplanade by necessity skirts the Pouch Terminal and other active commercial/industrial properties along the east side of Edgewater Street.

The existing street right-of-way is only about 30' wide. On the west side of the existing Edgewater Street, there are many opportunity sites. Running south to Camden Street all seven parcels are vacant. The next three blocks, (Willow, Lynhurst and Janis Lane) also contain many vacant sites, and opportunity areas such as the MTA parcels, Wrigley site, and New York Telephone. Once these sites are developed, an esplanade right-of-way, leading to and along the water, should be provided as appropriate.

Esplanade Use/Facilities

The ultimate development of this link should include a walkway with shade trees on either side, esplanade lights and benches at entrances to the Pouch Terminal, Sea Knights, and Narrows Marina. Street markers should be placed on the east side of Edgewater street at Willow and Lynhurst Avenues).

Esplanade Access

Vehicular access will be from Edgewater Street. Some designated on-street parking on one side of the street could be provided.

AREA 12, SOUTH

Esplanade Route

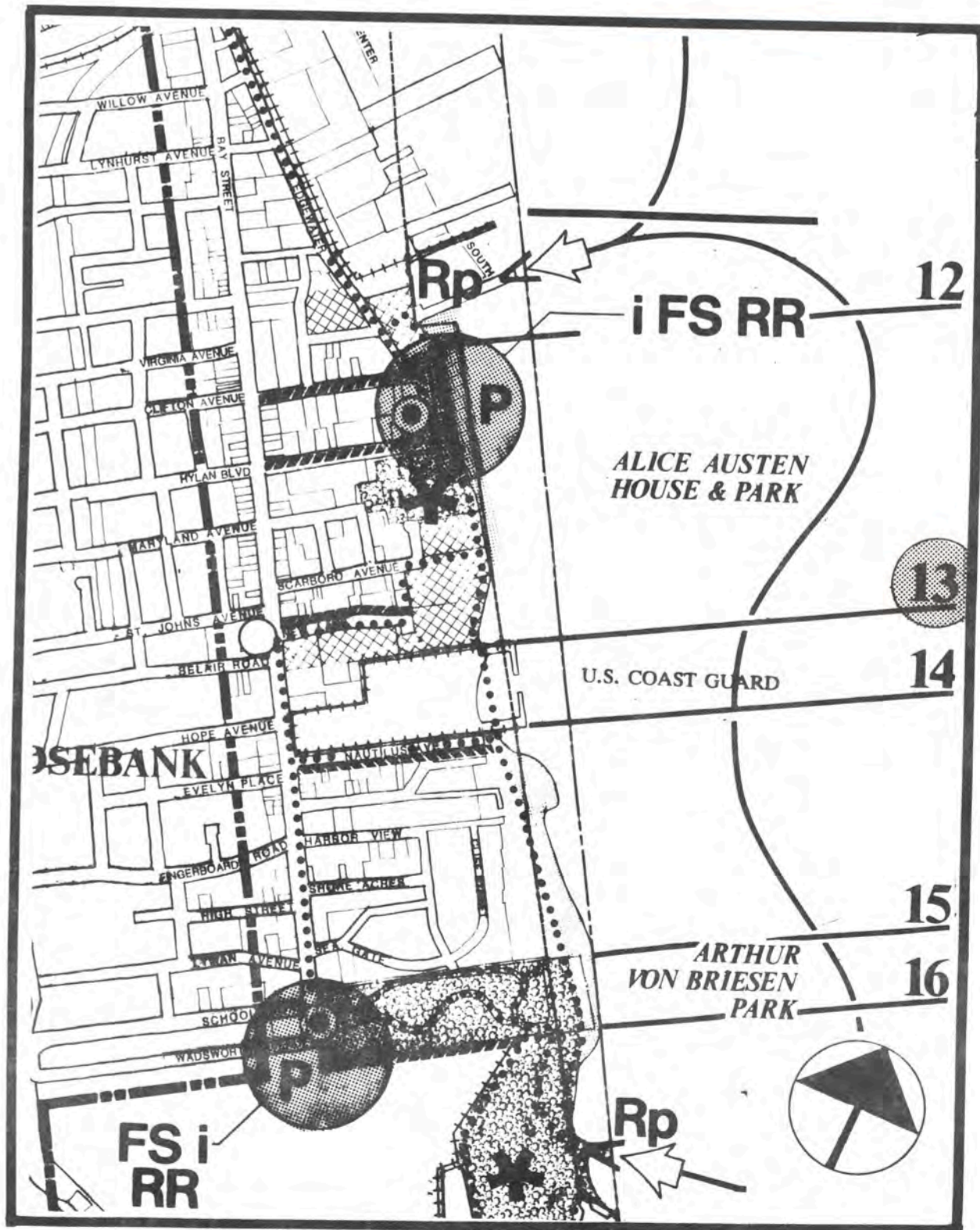
The recommended route continues on the east side of Edgewater Street and traverses the Reynolds site to become a waterside route. Esplanade design guidelines should govern the entire length of the route.

Esplanade Treatment/Facilities

The existing Reynolds pier should be retained as a publicly-accessible recreational boat and fishing pier. The standard esplanade details in the northern and center sections of this industrial district should be used. Plant materials should include trees along the esplanade, and a rich plant pallet of flowering trees, shrubs and groundcovers between the esplanade and proposed development. Street markers should be located at Clifton Avenue and Hylan Boulevard.

Esplanade Access

Vehicular and pedestrian access would be from Clifton Avenue and Hylan Boulevard. On-site parking would be restricted to residents with only limited visitor parking. (Expanded esplanade parking is recommended for Area 13.) Boat and waterbus access is possible from the pier.



AREA 13: CLIFTON AVENUE TO NEW LANE APARTMENTS

Area 13 signals the end of industrial/commercial uses and the start of residential uses. From north to south, this 1500 linear foot section includes:

1. The National Register landmark Alice Austen House and Park with the original c. 1700 one-room Dutch style house and the 1845 National Register McFarlane-Bredt House. The shorefront of the park extends from Clifton to Hylan Boulevard and has a waterfront walkway.
2. Two vacant, undeveloped sites.
3. New Lane apartment housing, which includes a portion of esplanade, now mostly enjoyed by residents since it dead ends at the northern line of the U.S. Coast Guard's Rosebank Family Housing.

Alice Austen House and Park is a city-owned park undergoing restoration. This site is the key to establishing a waterside esplanade, improving access, stabilizing the low cliffs here and making the shorefront more attractive. A southerly extension of the esplanade to link up with New Lane is highly desirable and distinctly possible.

Esplanade Route

The ongoing phases of the Alice Austen Park improvements should include a new waterside esplanade, linking the Reynolds site to the north (Area 12) to the currently undeveloped sites, and continuing south to the existing section of esplanade at New Lane apartments.

From Clifton Avenue southwards, there are increasingly pronounced cliffs, starting at about 8 - 10 feet (at Austen Park) and achieving 25 - 40 feet elevational grade changes at New Lane. A new esplanade should extend the existing esplanade at the Alice Austen Park through the adjacent parcels to the Coast Guard site. The new esplanade would have to respect the various elevational changes without sacrificing handicapped access.

Presently, the Coast Guard Site forms a pedestrian/vehicular barrier along the shorefront. As an interim route, users must switch back to a recommended right-of-way through the parcels to the north, then continue along Andreason and New Lane Streets to Bay Street.

Esplanade Use

The major attraction in Area 13 is the Alice Austen House and Park, public shorefront and the soon-to-be rehabilitated Bredt House and shorefront. The Bredt House is currently scheduled for \$5 million in renovations. It will become a community-oriented anchor on the waterfront, housing classes/workshops in photography, gardening, maritime education and senior services. Exhibit space for art work may

be included and a sitting area with chairs and tables will be available for snacking or reading.

Passive uses, especially in the pastoral setting of the Alice Austen Park, include sunning, picnicking or snacking, sitting, viewing and strolling. Recreational uses include fishing, jogging and small-scale free play. Esplanade activities will not be visible from the Alice Austen House.

Esplanade Treatment/Facilities

Through the park area, the esplanade is backed by grass areas, screened from parking with trees clustered in groups at each park entry point, like shady porches into the open space.

The sloped area to be shorefront varies from boulders in a large rip-rap formation, to a combination of boulders and ground cover banks. Proposed stairs and ramps with an outboard handrail will provide shorefront access.

South of the Austen Park at the top of the bluff, an 18 - 25' right-of-way should be reserved to connect to the Alice Austen waterfront esplanade. It should accommodate the standard esplanade vocabulary, as appropriate. One row of trees should be planted inboard. A dense vegetative buffer should be planted at the top of the bluff at New Lane to screen private parking and site features (e.g. pool).

The views across Upper New York Bay are particularly attractive in this section. A pier could be built as part of the Alice Austen complex; however, the Reynolds pier, if it becomes available for recreation use, could serve instead as the Harbor Park/waterbus "stop" for the Alice Austen House and Park, and would not intrude on the historic setting.

Finally, a historic sign should be located at Alice Austen Park, in addition to street markers for the park at Hylan Boulevard.

Esplanade Access

Vehicle access is currently possible from Clifton Avenue and Hylan Boulevard. These are tiny blocks but, possibly, the esplanade treatment could be brought back, at least in part, to Bay Street, with signed ramps to the waterfront. Additional parking is proposed as part of the park improvements. The rerouting of Bus #2 to make a bus stop at the waterfront should be considered. Esplanade trolleys/jitney could have stops at the shorefront and at the Bay Street/New Lane intersection. A boat and waterbus stop for the Alice Austen House and Park would provide waterborne access.

Along Edgewater Street, 45 degree angle parking (45 spaces) could provide esplanade access and parking for the community services at Brett House.

AREA 14: U.S. COAST GUARD ROSEBANK FAMILY HOUSING (FORMER QUARANTINE STATION)

This area, illustrated on page 74, extends approximately 500 linear feet in front of the historic St. Johns Church and the U.S. Coast Guard site at Rosebank, from Belair Road to Nautilus Street.

Esplanade Route

The recommended interim inboard route from/to New Lane (Area 13) would continue along the east sidewalk of Bay Street to Cliff Street Apartments and Shore Acres (Area 15). Dimensions and design features would be similar to Area 13. The recommended long-term route, should the use change, would be at the waterside.

Esplanade Use

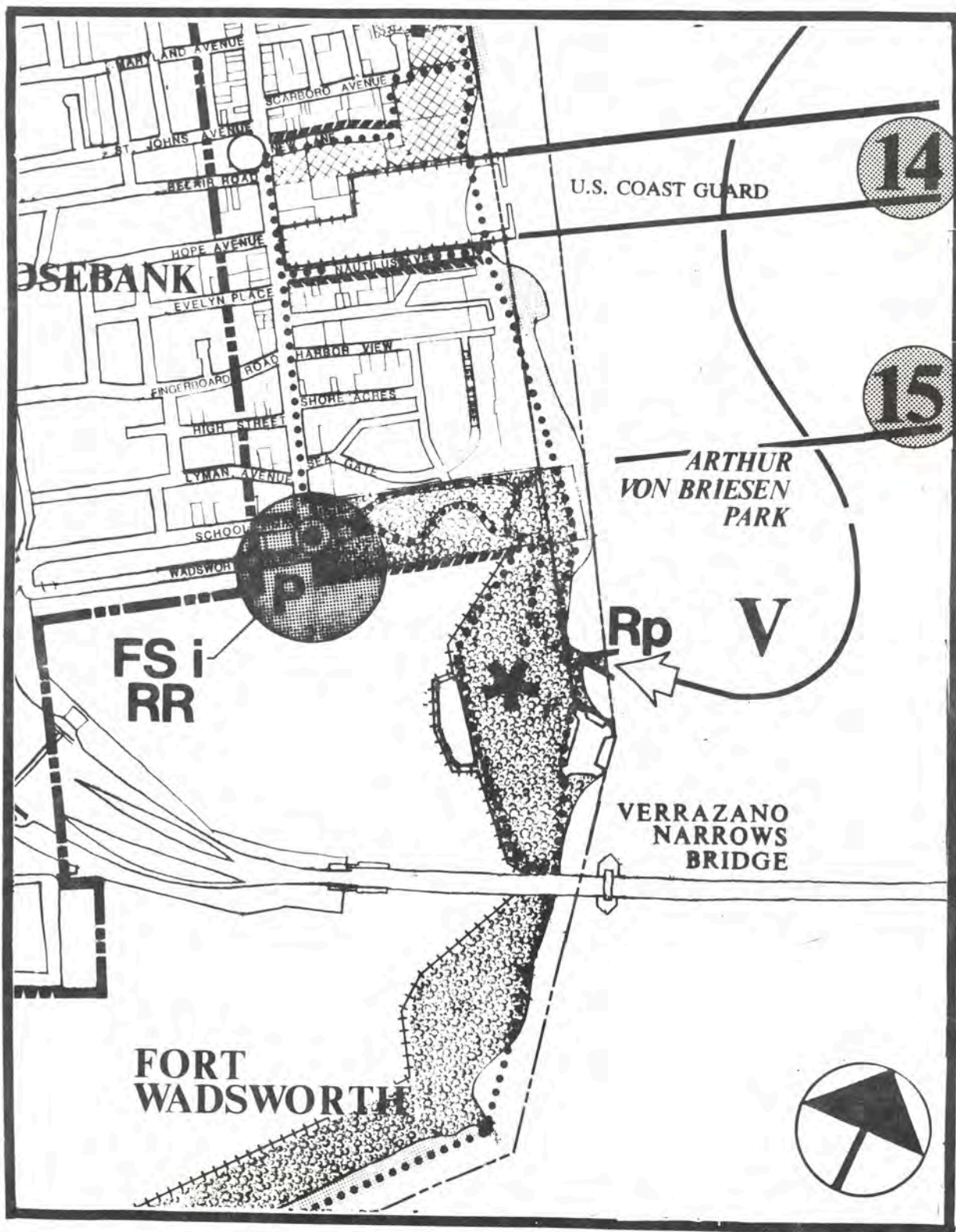
The esplanade route along the Coast Guard site functions as a linkage portion, thus limiting uses to strolling, jogging and biking.

Esplanade Treatment/Facilities

The attractions of this section are the historic Church and grounds, and the overall attractive streetscape of this portion of Bay Street. The introduction of informative signs at the Coast Guard site and St. John's Church should be coupled with brass inlay distance markers, at Hope and Nautilus Avenues, and other esplanade features, including a single row of trees, lights and benches.

Esplanade Access

No special access other than that currently provided by Bay Street is proposed. Bus stops at New Lane and Nautilus Street should be maintained.



AREA 15: CLIFF STREET APARTMENTS AND SHORE ACRES

This area runs approximately 1280 linear feet from Nautilus Street to the northern edge of Arthur Von Briesen Park. It includes the Cliff Street apartments just to the south of the U.S. Coast Guard and the distinctive Shore Acres residential community. The City owns a 20 by 40' shorefront parcel which is largely inaccessible because of the 30 - 50' high cliffs and the continuous private property south of Cliff Street. The waterfront facing the Cliff Street Apartments, where an esplanade might have been, is used for parking. The shorefront to Fort Wadsworth and the Verrazano Narrows Bridge is marred by stone fill.

Esplanade Route

There are two potential paths for the pedestrian to follow in this section. The first, and more direct approach to Von Briesen Park (Area 16) and Fort Wadsworth (Area 17) is along Bay Street. To provide waterfront access, a stair and ramp could be built at Nautilus Avenue to move pedestrians from the top of the bluff to the city-owned shorefront. The pedestrian would then have the option of staying along the shorefront through Von Briesen Park, into Fort Wadsworth.

Esplanade Use

Both passive uses, including strolling, sitting, sunning and viewing, and active uses including jogging, biking, fishing and small-scale free play can be accommodated in this section of esplanade, most specifically at the shorefront behind the Shore Acres community.

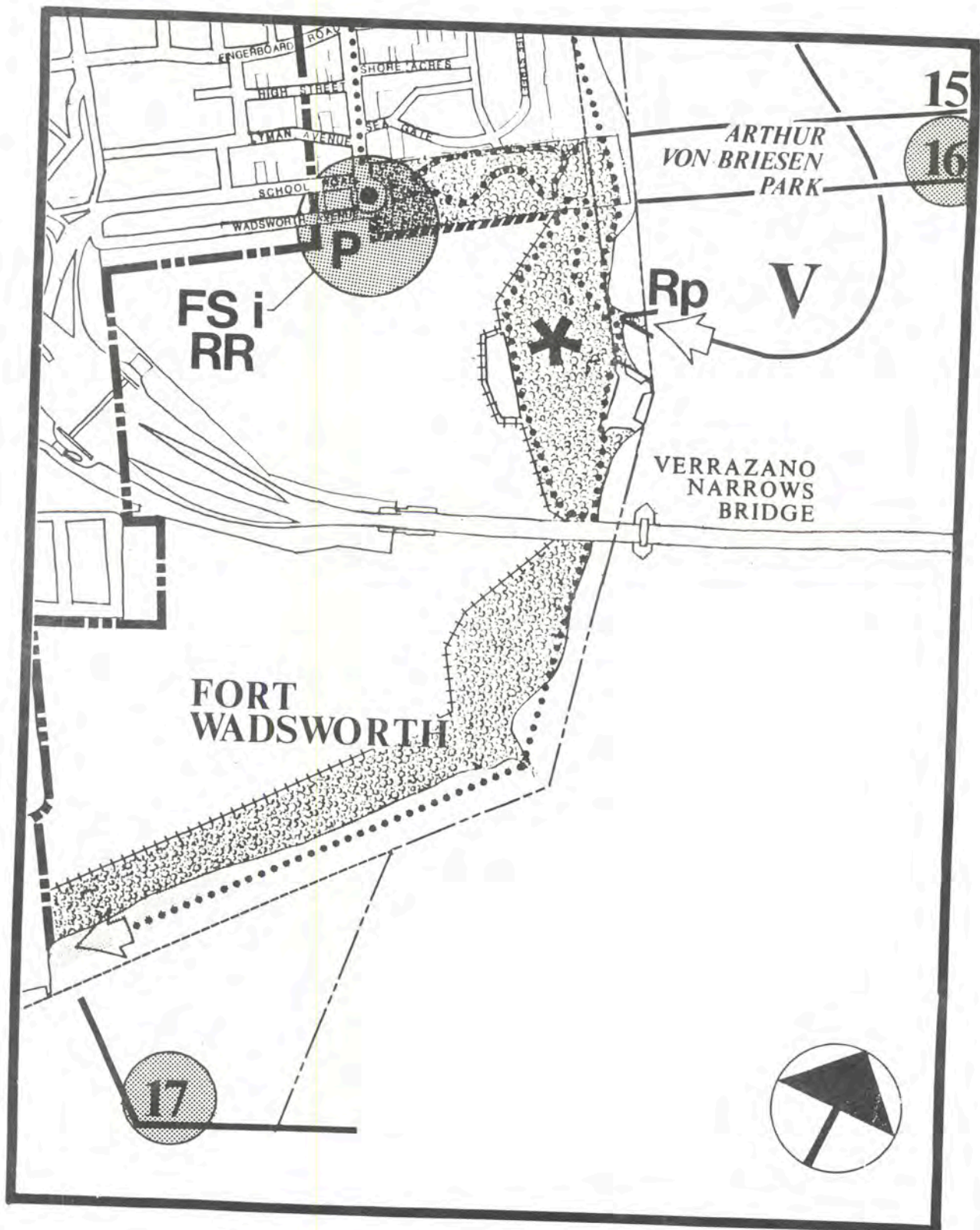
Esplanade Treatment/Facilities

Bay Street is an attractive streetscape enhanced by the Shore Acres main gate with its stone walls and piers. A historic marker for this unique community at this location would be appropriate. Esplanade pavement and lighting should be placed along the Bay Street section, and a street marker installed at Nautilus Street (on Bay Street) to direct pedestrians to the waterfront.

Along the Nautilus Avenue approach, replanting and repaving are the first priority for this badly deteriorated road and sidewalk. A double row of trees coupled with new lighting should line Nautilus until a treated wooden staircase can be built to bring pedestrians down to the shore.

Esplanade Access

Bay Street provides vehicular and public transport access. Due to the steepness of the slopes, direct pedestrian access to the water's edge would not be possible unless construction of a ramp or stair proved feasible.



AREA 16: VON BRIESEN PARK

This 12.8 acre park runs approximately 410 linear feet from the Shore Acres community to Fort Wadsworth, extending inland to Bay Street.

Arthur Von Briesen was the founder of the Legal Aid Society, at the turn of the century. In 1945, the family deeded the land to the City and in January 1949 the park was opened to the public. In 1954, a promenade overlooking the shoreline was added.

Recently, a consultant to the New York City Department of Parks and Recreation has completed a preliminary design investigation for the park.

Esplanade Route

There are two potential paths for the pedestrian to follow in this section. The first and most direct approach to Fort Wadsworth (Area 17) is along Bay Street. Pedestrians who prefer the waterside would continue along the shorefront from Shore Acres (Area 15). The connection from Von Briesen Park to Fort Wadsworth would be a pathway descending to the Fort's gates. For reasons of security at both parks, these gates will be opened only during park hours.

Esplanade Use

Arthur Von Briesen park is rich in both passive and active opportunities. Strolling, sitting, sunning, viewing and picnicking coexist with jogging, biking and small-scale free play.

Esplanade Treatment/Facilities

Within this special park, specific facilities should preserve and enhance its pastoral setting in conformance with the master plan for the park. To the maximum extent possible, the alignment and materials used at the waterfront should harmonize with any wateredge treatment established in Shore Acres (Area 15).

The overall esplanade treatment should be continued along Bay Street, including trees, lights and benches. A bronze marker and signage should identify the park and display a park plan showing the waterfront path and historical information. A cast iron esplanade plan should be located at Wadsworth Avenue and Bay Street at the southern terminus of the esplanade along Bay Street.

Access

The proposed rehabilitation plan for Von Briesen Park calls for retention and improvement of 24 parking spaces. Combined with a trolley/bus stop at Wadsworth Avenue, this will provide improved access to the park and the esplanade.

AREA 17 FORT WADSWORTH (NAVAL STATION, NEW YORK)

This twenty-acre site (illustrated on page 76) is currently under the jurisdiction of the U.S. Navy. Surplus land is to be transferred to the National Park Service. The future of the waterfront stretch south of the Verrazano Bridge has not yet been determined. Fort Wadsworth, which begins at the south end of Bay Street, includes 1,850 linear feet of pedestrian esplanade route and two landmark structures:

- Battery Weed: This trapezoidal structure named in honor of General Stephen H. Weed (killed at Gettysburg) was built to control the Narrows. The structure dates back to 1636 and is one of the oldest continuously manned military posts in the U.S.
- Fort Tompkins: Built at the same time as Battery Weed, it is a long, low polygonal fort, constructed of granite. Overlooking the Narrows, the fort guarded the entrance to Upper New York Bay.

Esplanade Route

There are two potential esplanade routes within Fort Wadsworth: along the waterside servicing Battery Weed, and at the top of the bluff along the Fort Tompkins frontage. These paths would continue, meeting as a turnaround at the Verrazano Narrows Bridge. The turnaround would link the existing Battery Weed Road with Hudson Road (north of the bridge).

It would be desirable to extend the route of the esplanade south of the bridge toward South Beach.

Esplanade Use

Both passive uses, including strolling, sitting, sunning and viewing and recreative uses including jogging, biking, fishing and small-scale free play are provided in this southernmost portion of esplanade.

Esplanade Treatment/Facilities

The existing natural setting should be enhanced with additional vegetation to frame the historic structures, emphasize walks and stabilize slopes.

Materials used may be similar to those recommended in Arthur Von Briesen Park, especially at the waterside where a smooth transition is preferred.

The vehicular road at the northern edge of the Navy property (along Von Briesen) is strictly for emergency/fire access and should not be highlighted. This road will lead emergency vehicles to the pedestrian route. The Navy will also permit maintenance and security access within the base in order to service the esplanade north of the bridge.

Signage bearing historical information about the Fort's history and its key historic structures should be located at the entrance gates from Von Briesen Park.

The bronze marker located at Wadsworth Avenue (Area 16) should also note Fort Wadsworth.

Access

Emergency vehicles can enter the site along the northern edge of the Fort Wadsworth and may circulate within the Fort. Drivers of private vehicles may park in Von Briesen Park (Area 16) and reach the site through Von Briesen and the gates that lead to Fort Wadsworth (at the top of the bluff along Hudson Road).

Pedestrian access is also provided along the shorefront, extending a continuous path that began at Nautilus Avenue (Area 15).

COSTS AND IMPLEMENTATION

The \$27.5 million North Shore Esplanade from Snug Harbor to Fort Wadsworth is an ambitious but achievable idea. It will link together existing but currently separate sections of esplanade built at various times in the past. In the central portion on either side of the ferry it will have upper and lower segments. Throughout, it will connect and serve the five waterfront communities.

ESTIMATED COSTS BY FUNCTIONAL AREA (See Appendix 2 for details)

1.	WETLANDS FRONTAGE:	
	Total Public Funding.....	290,300
2.	SNUG HARBOR CULTURAL CENTER:	
	Total Public Funding.....	1,700,600
3.	U.S. GYPSUM:	
	Total Public/Private Funding.....	1,891,400
4.	BANK STREET TO WESTERVELT AVENUE:	
	Total Public/Private Funding.....	1,696,700
5.	WESTERVELT AVENUE TO ST. PETERS PLACE:	
	Total Public/Private Funding.....	1,173,700
6.	CHESSIE RAILROAD SITE:	
	Total Private Funding.....	7,001,300
7.	STATEN ISLAND FERRY:	
	Total Public Funding.....	827,500
8.	U.S. COAST GUARD SITE:	
	Total Public/Private Funding.....	2,647,100
9.	BAY STREET LANDING:	
	Total Public/Private Funding.....	2,836,800
10.	VICTORY BOULEVARD TO PIER 7:	
	Total Public Funding.....	488,800
11.	U.S. NAVY HOMEPORT:	
	Total Public/Navy Funding.....	2,331,700
12.	ACTIVE INDUSTRIAL/COMMERICAL:	
	Total Public/Private Funding.....	2,019,000
13.	CLIFTON AVENUE TO NEW LANE APARIMENTS:	
	Total Public/Private Funding.....	677,400
14.	U.S. COAST GUARD AT ROSEBANK:	
	Total Public Funding.....	193,100
15.	CLIFF STREET APARIMENTS/SHORE ACRES:	
	Total Public Funding.....	736,800
16.	ARTHUR VON BRIESEN PARK:	
	Total Public Funding.....	99,100
17.	FORT WADSWORTH:	
	Total Public Funding.....	<u>888,000</u>
	TOTAL ALL AREAS	\$27,499,500

All elements of the plan are important if the vision of a continuous waterfront esplanade is to become real, but not all can be pursued simultaneously. To develop objective priorities for implementation, each segment of the proposed esplanade was measured against the ten criteria listed below and ranked accordingly.

Esplanade Amenities

- Standard: pavings/furnishings
- Special features, e.g., pier
- Overhead protection/shelters
- Eating facilities/restrooms
- Historic/cultural buildings/Structures

Community/Public Access

- Public parking/walk
- Public Transportation/train bus
- Esplanade transportation/boat/trolley
- Pedestrian crosswalks/bridge/stairs
- Handicapped access

Community/Public Access

- Close to community CBD
- Close to residential areas
- Community/cultural value
- Frequency - more important if few options
- Esplanade start/finish

Proximity to Water

- At waterside
- Diversified piers, overlooks
- Near better than far
- Far better when high/open
- Far better when attraction foreground

Visual Quality (Near)

- Plantings/furnishings
- Scenic townscape/streetscape
- Historic structures/setting
- Special elements, i.e. public art, fountains
- No negative aspects, i.e., billboards

Scenic Vista/Views (Far)

- Water vistas/broad panoramas
- Water views/limited directional
- Views of Manhattan/mjr. bridges
- Long views better than short
- No negative aspects, e.g. oil tanks

Linkage Characteristics

- Continuous/interrupted by streets
- Grade/directional change
- Broad better than narrow
- Dual or single routes
- Short links better than long

Variety of Use

- Basic: sitting/strolling/jogging/biking
- Active: tennis, free play
- Water: boating/fishing/beach
- Food: snacking/dining
- Special: historic/cultural buildings/structures

Cost to Acquire

- Magnitude of cost
- City share/developer share
- \$ relative to public benefit
- \$ relative to site value
- Extra \$ for prime location

Cost to Develop

- Magnitude of cost
- City share/developer share
- \$ relative to public benefit
- \$ relative to site value
- Extra \$ for special adverse conditions.

Based on this evaluation, the following order of priority is recommended (with the single exception of the Homeport inboard route, which scored low but is judged to be the best that can be achieved).

0 PROJECTS UNDERWAY

The City should continue to pursue those initiatives already started at:

- Chessie Railroad Site: waterside and Richmond Terrace, (Area 6);
- U.S. Coast Guard Site: from south viaduct to recreation pier, (Area 8);
- Bay Street Landing: additions, (Area 9);
- U.S. Homeport: Front Street, (Area 11);
- Reynolds Site: waterside and Edgewater Street, (Area 12 South);
- Alice Austen House, park and shorefront, (Area 13);
- Fort Wadsworth: walkways to historic structures and shorefront, (Area 17);
- Von Briesen Park: park and shorefront (Area 16).

1 FIRST PRIORITY

The City's next initiatives should be:

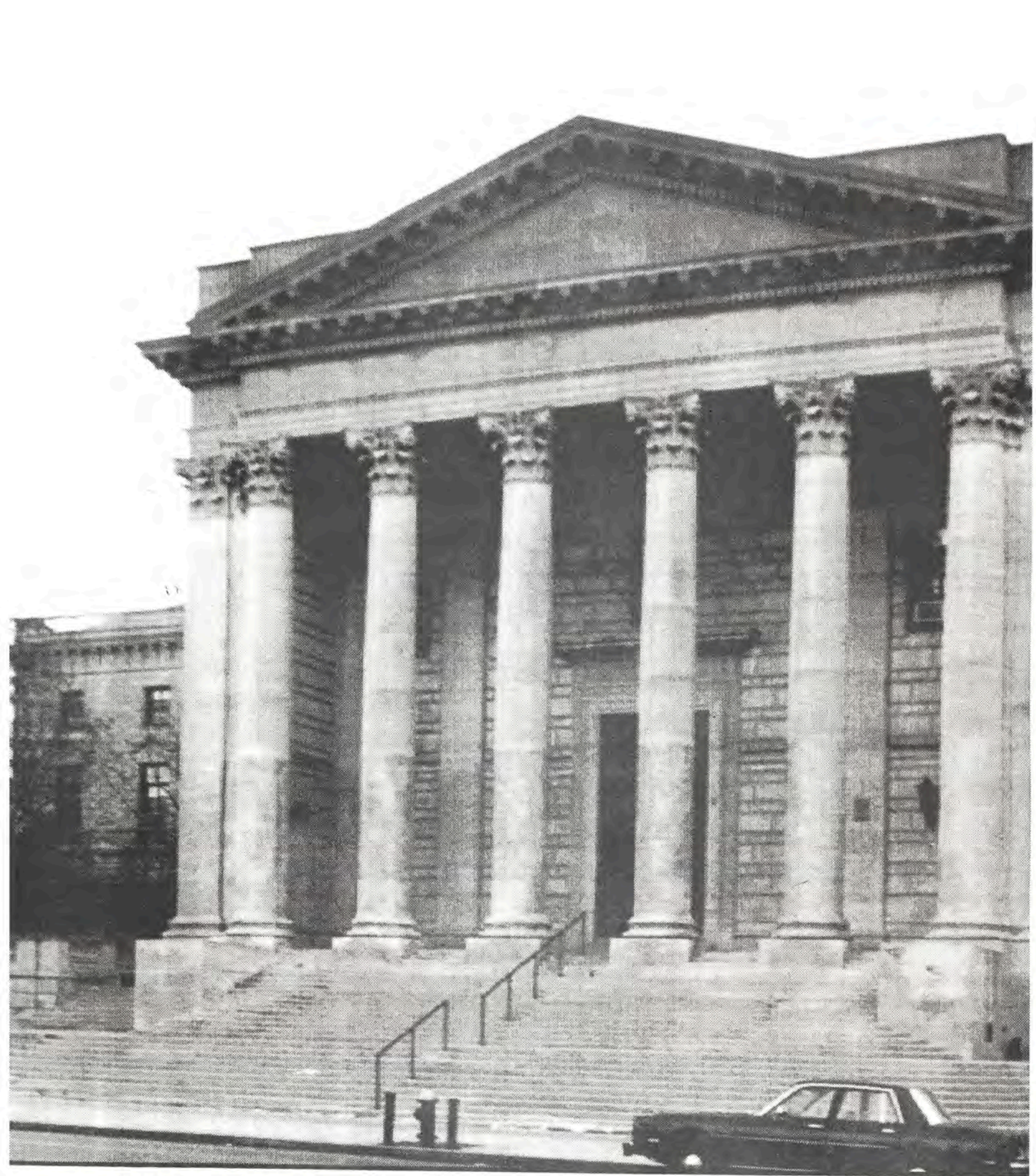
- Snug Harbor Cultural Center Park: (Area 2);
- Bank Street to Westervelt Avenue: acquisition and access improvements, waterside, (Area 4);
- Westervelt Avenue to St. Peters Place: waterside and Richmond Terrace, (Area 5);
- Ferry terminal: linkages north and south, (Area 7);
- Victory Boulevard to Pier 7: access and waterside, Pier 7 removal, (Area 10);
- Commercial Site south of Homeport: interim and long term development, (Area 12 North).

2 SECOND PRIORITY

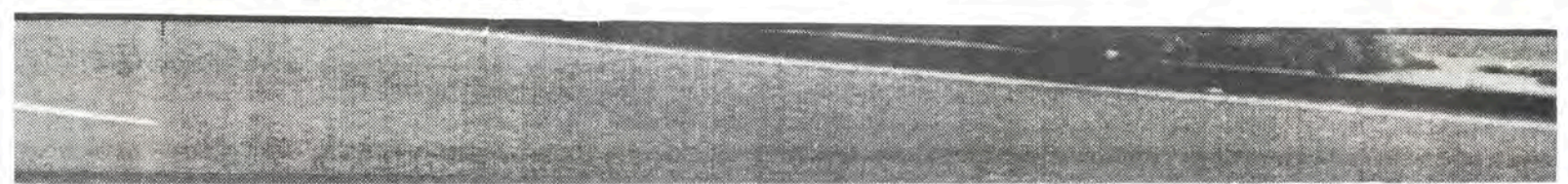
- Wetlands: frontage improvements, (Area 1);
- U.S. Gypsum: interim and long-term development, (Area 3);
- Bank Street to Westervelt Avenue: Richmond Terrace improvements, (Area 4);
- Ferry "triangle": site development, (Area 7);
- Bay Street: improvements, (Areas 8, 9);
- Shorefront and street improvements: Scarboro to Andreason to New Lane, (Area 13);
- Cliff Street/Shore Acres: shorefront and Nautilus Street access, (Area 15).

3 THIRD PRIORITY

- Edgewater Street improvements: (Area 12 Center);
- Bay Street improvements, (Areas 14, 15).



APPENDIX



Appendix 1. Waterfront Revitalization Program Policies

The public access policies of the Waterfront Revitalization Program seek to protect New York City coastal lands and waters and to promote public use and enjoyment of these resources. Policies relevant to the North Shore Esplanade Plan are as follows:

- Protect, maintain and increase the level and types of access to public water-related recreation resources.
- Access to the publicly owned foreshore or water's edge, and to the publicly owned lands immediately adjacent to these areas shall be provided in a manner compatible with adjoining uses. To ensure that such lands remain available for public use, they will be retained in public ownership.
- Water dependent and water enhanced recreation will be encouraged and facilitated, and will be given priority over non-water related uses along the coast.
- Priority shall be given to the development of mapped parklands and appropriate open space where the opportunity exists to meet the recreation needs of:
 - Immobile user groups;
 - Communities without adequate waterfront park space and/or facilities.
- Maintain and protect New York City beaches to the fullest extent possible.
- Development when located adjacent to the shore will provide for water-related recreation activities whenever such recreational use is appropriate in light of reasonably anticipated demand for such activities, and the primary purpose of the development.

Appendix 2: Detailed Cost Estimate

The estimates that follow detail the costs for each of the seventeen functional areas. Estimates for Area 4 through Area 9 were calculated in greater detail in line with the 1" = 50' scale drawings of these areas which comprise Area II: St. George. Three types of route were defined in these areas and estimated per square foot as follows:

Type 1: WATERSIDE \$22/SF

- All removals and excavation,
- Exposed aggregate concrete paving and curbing,
- Repair of existing seawall cap,
- New continuous sea rail,
- World's Fair type bench or equivalent (lea 60 LF);
- Custom design trash receptacle (lea 500 LF),
- Water fountains (lea 1000 LF),
- Esplanade lighting (lea 60 LF),
- Esplanade banner and logo (e.g. light fixture),
- Tree planting (aug. 1 ea 25' LF).

Type 2: STREET \$16/SF

(e.g. Richmond Terrace, Bay Street)

- All excavation and removals,
- Hexagonal block paving and curbing,
- Pruning and fertilizing existing trees,
- Planting new street trees (aug. lea 25' LF),
- Benches (lea 60 LF),
- Lighting (lea 60 LF),
- Game tables (lea 950 LF),
- Waste receptacles (lea 500 LF),
- Water fountains (lea 1000 LF),
- Banner logos (e.g. light fixture),
- Maintenance of existing railings and walls.

Type 3: PARK ("Soft landscape") \$13/SF

- Stone dust path 8 - 10' wide,
- Benches (lea 60 LF),
- Lights (lea 60 LF),
- Trash receptacles (lea 500 LF),
- Water fountains (lea 1000 LF),
- Associated landscape buffer: trees, shrubs, groundcover.

These square foot costs were then extrapolated to estimate the cost of "standard" esplanade treatment for the remaining functional areas. All other special esplanade amenities were costed as separate line items (e.g. fountains, stairs, pavilions, piers and bulkheads).

AREA 1, WETLAND FRONTAGE

- (x) Public Funding
- () Private Funding
- () Public/Private Funding

<u>No/Description</u>	<u>Unit</u>	<u>\$/Unit</u>	<u>Quant.</u>	<u>Amount</u>	<u>Total</u>
Street Esplanade-15' wide (Northern Sidewalk, Richmond Terrace)	SF	16	16875	270000	
Selective Cleaning/Bank	SY	1	10100	10100	
Supplement Street Trees (Southern Sidewalk, Richmond Terrace)	EA	300	17	5100	
Natural Wetland: Treat with Pervious Parking Surface				NIC	
Descriptive Sign	EA	600	1	600	
Cast Iron Esplanade Map	EA	2000	1	2000	
Bronze Marker	EA	500	1	500	
Pedestrian Signal	EA	2000	1	2000	
TOTAL					\$290,300

AREA 2, SNUG HARBOR CULTURAL CENTER

- (x) Public Funding
 () Private Funding
 () Public/Private Funding

No/Description	Unit	\$/Unit	Quant.	Amount	Total
1 SHORT TERM					
a Street Esplanade-15'wide (Northern Side, Richmond Terrace)	SF	16	22500	360000	
b Improve Vehicular Ramp					
c Pedestrian Signal	EA	2000	1	2000	
TOTAL					(\$362000)
2 LONG TERM					
a Pavilion (with snackbar, restrooms, information)	EA	72000	1	72000	
b Pier	allow			850000	
c Signage	EA	600	1	600	
d New Bulkhead					
e Backfill					
f Park Esplanade	SF	13	32000	416000	
TOTAL					(\$1,338,600)
AREA 2 TOTAL					\$1,700,600

Note: Size and location of pier to be determined in the Snug Harbor Master Plan and cannot be estimated in detail at this time. An allowance of \$850,000. has been allocated for future construction.

AREA 3, U.S. GYPSUM

- () Public Funding
 () Private Funding
 (x) Public/Private Funding

No/Description	Unit	\$/Unit	Quant.	Amount	Total
1 SHORT TERM					
a Street esplanade (North Side, Richmond Terrace) 12' wide	SF	16	32640	522240	
b Street Resurface	SY	2000	1	2000	
c Street Markers	EA	500	3	1500	
d Historic Signage	EA	600	1	600	
TOTAL					(\$569,858)
2 LONG TERM					
a Waterside Esplanade 25' wide	SF	22	60000	1320000	
b Street Markers	EA	500	3	1500	
TOTAL					(\$1,321,500)
AREA 3 TOTAL					\$1,891,358

AREA 4, BANK STREET TO WESTERVELT AVENUE

- () Public Funding
 () Private Funding
 (x) Public/Private Funding

No/Description	Unit	\$/Unit	Quant.	Amount	Total
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1 SITE PREPARATION

a Construction Fence	LF	18	1735	31230	
b Tree Pruning & Fert.	Ea	125	0	0	
c Tree Removal	Ea	200	0	0	
d Temporary Tree Guards	Ea	75	0	0	

TOTAL SITE PREPARATION

\$31,230

2 REMOVALS & EXCAVATION

a Remove Paving (6")	SY	12.50	1550	19375	
b Remove Benches	Ea	40.0	0		
c Excavate Tree Pits	CY	16.0	73	1168	
d Unclassified Excavation	allow	0	0		

TOTAL REMOVALS & EXCAVATION

\$20,543

3 STONE

a Granite Block Curb	LF	18	560	10080	
b Cut Granite Curb	LF	40	900	36000	
c Repair/Rehab Seawall Cap	LF	45	350	15750	
d Repair Terrace Wall	LF	80/104	55	4900	

TOTAL STONE

\$66,230

4 PAVING/DECKING

a Hex Block Pmnt on Conc.	SY	75	1550	116250	
b Granite Block on Sand	SY	90	0	0	
c Concrete Paving	SY	40	91	3640	
d Special Concrete Paving	SY	75	744	55800	
e Concrete Curb	LF	12	785	9420	
f New Asphalt Paving	SY	18	1800	32400	
g Resurface Asphalt Paving	SY	7	1600	11200	

TOTAL PAVING/DECKING

\$228,710

No/Description	Unit	\$/Unit	Quant.	Amount	Total
5 SITE FACILITIES					
a Tree Grates	Ea	200	0	0	
b Benches - Standard	Ea	800	4	3200	
c Benches - Backless	Ea	1000	0	0	
d Game Table/Benches	Ea	950	0	0	
e Drinking Fountains	Ea	1800	1	1800	
f Trash Receptacles	Ea	200	4	800	
g Street Markers	Ea	500	2	1000	
h Bollards	Ea	600	0	0	
i Esplanade Banner/Logo	Ea	200	0	0	
j Signage	Ea	600	1	600	
k Information Kiosk	Ea	12000	0	0	
l Install Water Service	allow	5000	0	0	

TOTAL SITE FACILITIES

\$7,400

6 LIGHTING

a Install Electric Service	allow			5000	
b Single Pole Luminaire	Ea	3000	7	21000	
c Uplighting	Ea	2000			
d Pier Lights (bollards)	Ea	500	5	2500	

TOTAL LIGHTING

\$23,500

7 LANDSCAPING

a Shade Tree 3-4" cal.	Ea	450	73	32850	
b Flowering Tree 2" cal.	Ea	250	-	-	
c Evergreen Tree	Ea	150	-	-	
d Shrubs-Ground Cover	SF	7	4286	300055	
e Fill for Berm	CY	20	-	-	
f Sod for Lawn	SF	.50	3850	1925	
h Topsoil- Tree Pits 4'	CY	23	173	3979	
i Topsoil- Planting Beds	CY	23	1587	36514	
j Mulch for Planting Beds 3"	SY	1.75	42865	75013	

TOTAL LANDSCAPING

\$450,336

8 RAILINGS/FENCE

a Seawall Railing	LF	125	330	32850	
b Terrace Rail Rehab/Paint	LF	15	-	-	
c New Terrace Railing	LF	80	730	58400	
d Decorative Iron Railing	LF	100	770	38500	

TOTAL RAILING

\$129,750

No/Description	Unit	\$/Unit	Quant.	Amount	Total
9 SITE STRUCTURES					
a Shelter/Pavilion	allow	0	0	72000	
b Canvas Overhead (soft)	LF	40	0	0	
c Overhead Cover (hard)	LF	80	0	0	
TOTAL SITE STRUCTURES					\$72,000
10 SPECIAL ESPLANADE FEATURES					
a Pedestrian Bridge	allow			420000	
b Dock	allow			59000	
c Cantilever/Overlook	allow			-	
d Pedestrian Ramp	allow			-	
e Stairs	allow			-	
f Fountain	allow			-	
g Pool	allow			-	
TOTAL SPEC. ESP. FEATURES					\$479,000
11 LAND ACQUISITION					
a All property purchased	allow			188000	
TOTAL LAND ACQUISITION					\$188,000
ESTIMATE TOTALS FOR AREA 4					
1. SITE PREPARATION				31,230	
2. REMOVALS & EXCAVATION				20,543	
3. STONE/MASONRY				66,230	
4. PAVING				228,710	
5. SITE FACILITIES				7,400	
6. LIGHTING				23,500	
7. LANDSCAPING				450,336	
8. RAILINGS/FENCES				129,750	
9. SITE STRUCTURES				72,000	
10. SPECIAL ESPLANADE FEATURES				479,000	
11. LAND ACQUISITION				188,000	
GRAND TOTAL					1,696,699

AREA 5, WESTERVELT TO ST. PETERS PLACE

- () Public Funding
 () Private Funding
 (x) Public/Private Funding

<u>No/Description</u>	<u>Unit</u>	<u>\$/Unit</u>	<u>Quant.</u>	<u>Amount</u>	<u>Total</u>
1 SITE PREPARATION					
a Construction Fence	LF	18	1100	19800	
b Tree Pruning & Fert.	Ea	125	43	5375	
c Tree Removal	Ea	200	8	1600	
d Temporary Tree Guards	Ea	75	43	3225	
TOTAL SITE PREPARATION					\$30,000
2 REMOVALS & EXCAVATION					
a Remove Paving (6")	SY	12	2005	25062	
b Remove Benches	Ea	40	3	120	
c Excavate Tree Pits	CY	16	76	1216	
d Unclassified Excavation	allow			5000	
TOTAL REMOVALS & EXCAVATION					\$31,398
3 STONE					
a Granite Block Curb	LF	18	1024	18432	
b Cut Granite Curb	LF	40	910	36400	
c Repair/Rehab Seawall Cap	LF	45	980	44100	
d Repair Terrace Wall	LF	80/104	920	73600	
TOTAL STONE					\$172,532
4 PAVING/DECKING					
a Hex Block Pvmnt on Conc.	SY	75	2005	150375	
b Granite Block on Sand	SY	90	0	0	
c Concrete Paving	SY	40	0	0	
d Special Concrete Paving	SY	75	2115	278925	
e Concrete Curb	LF	425	0	0	
f New Asphalt Paving	SY	18	0	0	
g Resurface Asphalt Paving	SY	7	0	0	
TOTAL PAVING/DECKING					\$587,925

No/Description	Unit	\$/Unit	Quant.	Amount	Total
5 SITE FACILITIES					
a Tree Grates	Ea	200	0	0	
b Benches - Standard	Ea	800	36	28800	
c Benches - Backless	Ea	1000	0	0	
d Game Table/Benches	Ea	950	4	3800	
e Drinking Fountains	Ea	1800	1	1800	
f Trash Receptacles	Ea	200	10	2000	
g Street Markers	Ea	500	1	500	
h Bollards	Ea	600	0	0	
i Esplanade Banner/Logo	Ea	200	0	0	
j Signage	Ea	600	0	0	
k Information Kiosk	Ea	12000	0	0	
l Install Water Service	allow	5000	0	0	
TOTAL SITE FACILITIES					\$36,900
6 LIGHTING					
a Install Electric Service	allow	5000		5000	
b "B" Pole, Single	Ea	3000	17	51000	
c Uplighting	Ea	2000	0	0	
TOTAL LIGHTING					\$56,000
7 LANDSCAPING					
a Shade Tree 3-4" cal.	Ea	450	46	20700	
b Flowering Tree 2" cal.	Ea	250	20	5000	
c Evergreen Tree	Ea	150	10	1500	
d Shrubs-Ground Cover	SF	7	3720	26040	
e Fill for Berm	CY	23	104	2392	
f Sod for Lawn	SF	.50	13000	6500	
h Topsoil- Tree Pits 4'	CY	23	190	4370	
i Topsoil- Planting Beds	CY	23	137	3151	
j Mulch for Planting Beds 3"	SY	1.75	3720	6510	
k Topsoil- Lawn Areas 4"	CY	23	0	0	
TOTAL LANDSCAPING					\$76,163
8 RAILINGS/FENCE					
a Seawall Railing	LF	125	980	122500	
b Terrace Rail Rehab/Paint	LF	15	920	13800	
c New Terrace Railing	LF	80	0	0	
d Decorative Iron Railing	LF	100	0	0	
e Chain Link Fence (10')	LF	50	930	46500	
TOTAL RAILING					\$182,800

No/Description	Unit	\$/Unit	Quant.	Amount	Total
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9 SITE STRUCTURES

a Shelter/Pavilion	allow	0	0	0	
b Canvas Overhead (soft)	LF	40	0	0	
c Overhead Cover (hard)	LF	80	0	0	
TOTAL SITE STRUCTURES					\$0.00

10 SPECIAL ESPLANADE FEATURES

a Pedestrian Bridge	allow	0	0	0	
b Dock	allow	0	0	0	
c Cantilever/Overlook	allow	0	0	0	
d Pedestrian Ramp	allow	0	0	0	
e Stairs	allow	0	0	0	
f Fountain	allow	0	0	0	
g Pool	allow	0	0	0	
TOTAL SPEC. ESP. FEATURES					\$0.00

11 PUBLIC ART

a 1% of Area Const. Cost	allow	0	0	0	
TOTAL PUBLIC ART					\$0.00

ESTIMATE TOTALS FOR AREA 5

1. SITE PREPARATION	30,000
2. REMOVALS & EXCAVATION	31,398
3. STONE/MASONRY	172,532
4. PAVING	587,925
5. SITE FACILITIES	36,900
6. LIGHTING	56,000
7. LANDSCAPING	76,163
8. RAILINGS/FENCES	182,800
9. SITE STRUCTURES	0
10. SPECIAL ESPLANADE FEATURES	0
11. PUBLIC ART	0
GRAND TOTAL	\$1,173,718

AREA 6, CHESSIE RAILROAD SITE

- () Public Funding
 (x) Private Funding
 () Public/Private Funding

No/Description	Unit	\$/Unit	Quant.	Amount	Total
1 SITE PREPARATION					
a Construction Fence	LF	18	3200	57600	
b Tree Pruning & Fert.	Ea	125	95	11875	
c Tree Removal	Ea	200	19	3800	
d Temporary Tree Guards	Ea	75	95	7125	
TOTAL SITE PREPARATION					\$80,400
2 REMOVALS & EXCAVATION					
a Remove Paving (6")	SY	12.5	12350	154434	
b Remove Benches	Ea	40	2	80	
c Excavate Tree Pits	CY	16	486	7776	
d Unclassified Excavation	allow			12000	
TOTAL REMOVALS & EXCAVATION					\$174,290
3 STONE					
a Granite Block Curb	LF	18	3536	63648	
b Cut Granite Curb	LF	40	3140	125600	
c Repair/Rehab Seawall Cap	LF	45	3785	170325	
d Repair Terrace Wall	LF	80/104	1050	84000	
TOTAL STONE					\$44,3573
4 PAVING/DECKING					
a Hex Block Pvmnt on Conc.	SY	75	22065	1654875	
b Granite Block on Sand	SY	90	275	24750	
c Concrete Paving	SY	40	900	36000	
d Special Concrete Paving	SY	75	10890	816750	
e Concrete Curb	LF	12	500	6000	
f New Asphalt Paving	SY	18	1838	33084	
g Resurface Asphalt Paving	SY	7	1200	8400	
TOTAL PAVING/DECKING					\$2,579,859

No/Description	Unit	\$/Unit	Quant.	Amount	Total
5 SITE FACILITIES					
a Tree Grates	Ea	200	-	-	
b Benches - Standard	Ea	800	85	68000	
c Benches - Backless	Ea	1000	10	10000	
d Game Table/Benches	Ea	950	-	-	
e Drinking Fountains	Ea	1800	3	5400	
f Trash Receptacles	Ea	200	10	2000	
g Street Markers	Ea	500	8	4000	
h Bollards	Ea	600	5	3000	
i Esplanade Banner/Logo	Ea	200	-	-	
j Signage	Ea	600	-	-	
k Information Kiosk	Ea	12000	-	-	
l Install Water Service	allow	5000	-	5000	
TOTAL SITE FACILITIES					\$97,400
6 LIGHTING					
a Install Electric Service	allow	5000	-	5000	
b "B" Pole, Single	Ea	3000	60	180000	
c Uplighting	Ea	2000	-	-	
TOTAL LIGHTING					\$185,000
7 LANDSCAPING					
a Shade Tree 3-4" cal.	Ea	450	400	180000	
b Flowering Tree 2" cal.	Ea	250	67	16750	
c Evergreen Tree	Ea	150	21	3150	
d Shrubs-Ground Cover	SF	7	26360	184520	
e Fill for Berm	CY	20	1300	26000	
f Sod for Lawn	SF	.50	69365	34682	
h Topsoil- Tree Pits 4'	CY	23	1090	25070	
i Topsoil- Planting Beds	CY	23	26360	606280	
j Mulch for Planting Beds 3"	SY	1.75	26360	46130	
k Topsoil- Lawn Areas 4"	CY	23	855	19665	
TOTAL LANDSCAPING					\$1,142,247
8 RAILINGS/FENCE					
a Seawall Railing	LF	125	3785	473125	
b Terrace Rail Rehab/Paint	LF	15	230	3450	
c New Terrace Railing	LF	80	-	-	
d Decorative Iron Railing	LF	100	270	27000	
e Chain Link Fence (10')	LF	50	915	45750	
TOTAL RAILING					\$549,325

No/Description	Unit	\$/Unit	Quant.	Amount	Total
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9 SITE STRUCTURES

a Shelter	SF	80	640	51200	
b Canvas Overhead (soft)	LF	40	-	-	
c Overhead Cover (hard)	LF	80	-	-	

TOTAL SITE STRUCTURES

\$51,200

10 SPECIAL ESPLANADE FEATURES

a Pedestrian Bridge	allow			450000	
b Dock	allow			-	
c Cantilever/Overlook	allow			436000	
d Pedestrian Ramp	allow			490000	
e Stairs	allow			52000	
f Fountain	allow			100000	
g Pool	allow			70000	

TOTAL SPEC. ESP. FEATURES

\$1,698,000

ESTIMATE TOTALS AREA 6

1. SITE PREPARATION	80,400
2. REMOVALS & EXCAVATION	174,290
3. STONE/MASONRY	443,573
4. PAVING	2,579,859
5. SITE FACILITIES	97,400
6. LIGHTING	185,000
7. LANDSCAPING	1,142,247
8. RAILINGS/FENCES	549,325
9. SITE STRUCTURES	51,200
10. SPECIAL ESPLANADE FEATURES	1,698,000

GRAND TOTAL

7,001,294

AREA 7, FERRY TERMINAL

- (x) Public Funding
 () Private Funding
 () Public/Private Funding

<u>No/Description</u>	<u>Unit</u>	<u>\$/Unit</u>	<u>Quant.</u>	<u>Amount</u>	<u>Total</u>
1 SITE PREPARATION					
a Construction Fence	LF	18	200	3600	
b Tree Pruning & Fert.	Ea	125	22	2750	
c Tree Removal	Ea	200	4	800	
d Temporary Tree Guards	Ea	75	22	1650	
TOTAL SITE PREPARATION					\$8,800
2 REMOVALS & EXCAVATION					
a Remove Paving (6")	SY	12.50	2712	33900	
b Remove Benches	Ea	40	-	-	
c Excavate Tree Pits	CY	16	57	912	
d Unclassified Excavation	allow			2500	
TOTAL REMOVALS & EXCAVATION					\$37,312
3 STONE					
a Granite Block Curb	LF	18	1072	19296	
b Cut Granite Curb	LF	40	1050	42000	
c Repair/Rehab Seawall Cap	LF	45	-	-	
d Repair Terrace Wall	LF	80	600	48000	
TOTAL STONE					\$109,296
4 PAVING/DECKING					
a Hex Block Pmnt on Conc.	SY	75	2712	203400	
b Granite Block on Sand	SY	90	-	-	
c Concrete Paving	SY	40	-	-	
d Special Concrete Paving	SY	75	650	48750	
e Concrete Curb	LF	12	-	-	
f New Asphalt Paving	SY	18	-	-	
g Resurface Asphalt Paving	SY	7	2800	19600	
TOTAL PAVING/DECKING					\$271,750

No/Description	Unit	\$/Unit	Quant.	Amount	Total
5 SITE FACILITIES					
a Tree Grates	Ea	200	-	-	
b Benches - Standard	Ea	800	-	-	
c Benches - Backless	Ea	1000	-	-	
d Game Table/Benches	Ea	950	-	-	
e Drinking Fountains	Ea	1800	-	-	
f Trash Receptacles	Ea	200	4	800	
g Street Markers	Ea	500	1	500	
h Bollards	Ea	600	-	-	
i Esplanade Banner/Logo	Ea	200	28	5600	
j Signage	Ea	600	1	600	
k Information Kiosk	Ea	12000	2	24000	
l Install Water Service	allow	5000	-	-	
TOTAL SITE FACILITIES					\$31,500
6 LIGHTING					
a Install Electric Service	allow	5000	-	5000	
b Single Pole Luminaire	Ea	3000	23	69000	
c Uplighting	Ea	2000	-	-	
TOTAL LIGHTING					\$74,000
7 LANDSCAPING					
a Shade Tree 3-4" cal.	Ea	450	57	25650	
b Flowering Tree 2" cal.	Ea	250	-	-	
c Evergreen Tree	Ea	150	-	-	
d Shrubs-Ground Cover	SF	7	-	-	
e Fill for Berm	CY	20	-	-	
f Sod for Lawn	SF	.50	-	-	
h Topsoil- Tree Pits 4'	CY	23	135	3107	
i Topsoil- Planting Beds	CY	23	-	-	
j Mulch for Planting Beds 3"	SY	1.75	-	-	
k Topsoil- Lawn Areas 4"	CY	23	-	-	
TOTAL LANDSCAPING					\$215,700
8 RAILINGS/FENCE					
a Seawall Railing	LF	125	-	-	
b Terrace Rail Rehab/Paint	LF	15	1080	16200	
c New Terrace Railing	LF	80	-	-	
d Decorative Iron Railing	LF	100	1620	162000	
e Chain Link Fence (10')	LF	50	750	37500	
TOTAL RAILING					\$15,700

<u>No/Description</u>	<u>Unit</u>	<u>\$/Unit</u>	<u>Quant.</u>	<u>Amount</u>	<u>Total</u>
9 SITE STRUCTURES					
a Shelter	SF	80	-	-	
b Canvas Overhead (soft)	LF	40	860	34400	
c Overhead Cover (hard)	LF	80	-	-	
TOTAL SITE STRUCTURES					\$34,400

10 SPECIAL ESPLANADE FEATURES

a Pedestrian Bridge	allow	-	-	-	
b Dock	allow	-	-	-	
c Cantilever/Overlook	allow	-	-	-	
d Pedestrian Ramp	allow	-	-	-	
e Stairs	allow	-	-	16000*	
f Fountain	allow	-	-	-	
g Pool	allow	-	-	-	
TOTAL SPEC. ESP. FEATURES					\$16,000

*Total cost may be greater if an escalator is used

ESTIMATE TOTALS AREA 7

1. SITE PREPARATION	8,800
2. REMOVALS & EXCAVATION	37,312
3. STONE/MASONRY	109,296
4. PAVING	271,750
5. SITE FACILITIES	31,500
6. LIGHTING	74,000
7. LANDSCAPING	28,757
8. RAILINGS/FENCES	215,700
9. SITE STRUCTURES	34,400
10. SPECIAL ESPLANADE FEATURES	16,000
GRAND TOTAL	\$827,515

AREA 8, U.S. COAST GUARD SITE

- () Public Funding
 () Private Funding
 (x) Public/Private Funding

No/Description	Unit	\$/Unit	Quant.	Amount	Total
1 SITE PREPARATION					
a Construction Fence	LF	18	920	16560	
b Tree Pruning & Fert.	Ea	125	31	3875	
c Tree Removal	Ea	200	13	2600	
d Temporary Tree Guards	Ea	75	2	150	
TOTAL SITE PREPARATION					\$23,185
2 REMOVALS & EXCAVATION					
a Remove Paving (6")	SY	12.50	11414	142675	
b Remove Benches	Ea	40	0	0	
c Excavate Tree Pits	CY	16	190	3040	
d Unclassified Excavation	allow	-	-	-	
TOTAL REMOVALS & EXCAVATION					\$145,715
3 STONE					
a Granite Block Curb	LF	18	1216	21888	
b Cut Granite Curb	LF	40	2710	108400	
c Repair/Rehab Seawall Cap	LF	45	160	7200	
d Repair Terrace Wall	LF	80/104	800	64000	
TOTAL STONE					\$201,488
4 PAVING/DECKING					
a Hex Block Pmnt on Conc.	SY	75	6920	519000	
b Granite Block on Sand	SY	90	25	2250	
c Concrete Paving	SY	40	0	0	
d Special Concrete Paving	SY	75	444	33300	
e Concrete Curb	LF	12	0	0	
f New Asphalt Paving	SY	18	4500	81000	
g Resurface Asphalt Paving	SY	7	493	3451	
TOTAL PAVING/DECKING					\$639,001

No	Description	Unit	\$/Unit	Quant.	Amount	Total
5 SITE FACILITIES						
a	Tree Grates	Ea	200	10	2000	
b	Benches - Standard	Ea	800	48	38400	
c	Benches - Backless	Ea	1000	0	0	
d	Game Table/Benches	Ea	950	0	0	
e	Drinking Fountains	Ea	1800	2	3600	
f	Trash Receptacles	Ea	200	6	1200	
g	Street Markers	Ea	500	2	1000	
h	Bollards	Ea	600	3	1800	
i	Esplanade Banner/Logo	Ea	200	19	3800	
j	Signage	Ea	600	1	600	
k	Information Kiosk	Ea	12000	0	0	
l	Install Water Service	allow	5000	-	-	
TOTAL SITE FACILITIES						\$52,400
6 LIGHTING						
a	Install Electric Service	allow	5000	-	5000	
b	"B" Pole, Single	Ea	3000	19	57000	
c	Uplighting	Ea	2000	10	20000	
d	Pier Lights (bollards)	Ea	500	9	4500	
TOTAL LIGHTING						\$86,500
7 LANDSCAPING						
a	Shade Tree 3-4" cal.	Ea	450	78	35100	
b	Flowering Tree 2" cal.	Ea	250	42	10500	
c	Evergreen Tree	Ea	150	0	0	
d	Shrubs-Ground Cover	SF	7	47175	330225	
e	Fill for Berm	CY	20	0	0	
f	Sod for Lawn	SF	.50	57800	28900	
h	Topsoil- Tree Pits 4'	CY	23	300	6900	
i	Topsoil- Planting Beds	CY	23	1747	40181	
j	Mulch for Planting Beds 3"	SY	1.75	5242	9174	
k	Topsoil- Lawn Areas 4"	CY	23	714	16422	
TOTAL LANDSCAPING						\$477,407
8 RAILINGS/FENCE						
a	Seawall Railing	LF	125	120	15000	
b	Terrace Rail Rehab/Paint	LF	15	0	0	
c	New Terrace Railing	LF	80	0	0	
d	Decorative Iron Railing	LF	100	180	18000	
e	Chain Link Fence (10')	LF	50	0	0	
TOTAL RAILING						\$33,000

No/Description	Unit	\$/Unit	Quant.	Amount	Total
9 SITE STRUCTURES					
a Shelter/Pavilion	allow	0		172000	
b Canvas Overhead (soft)	LF	40	0	0	
c Overhead Cover (hard)	LF	80	180	14400	
TOTAL SITE STRUCTURES					\$86,400
10 SPECIAL ESPLANADE FEATURES					
a Pedestrian Bridge	allow	-	-	-	
b Dock	SF	20	43800	876000	
c Cantilever/Overlook	allow	-	-	-	
d Pedestrian Ramp	allow	-	-	-	
e Stairs	allow	-	1	16000	
f Fountain	allow	-	-	-	
g Pool	allow	-	-	-	
TOTAL SPEC. ESP. FEATURES					\$892,000
11 PUBLIC ART					
a 1% of Area Const. Cost	allow			10000	
TOTAL PUBLIC ART					\$10,000

ESTIMATE TOTALS FOR AREA 8

1. SITE PREPARATION	23,185
2. REMOVALS & EXCAVATION	145,715
3. STONE/MASONRY	201,488
4. PAVING	639,001
5. SITE FACILITIES	52,400
6. LIGHTING	86,500
7. LANDSCAPING	477,407
8. RAILINGS/FENCES	33,000
9. SITE STRUCTURES	86,400
10. SPECIAL ESPLANADE FEATURES	892,000*
11. PUBLIC ART	10,000
GRAND TOTAL	\$2,647,096

*This number includes \$876,000.00 for the recreational pier renovation.

AREA 9, BAY STREET LANDING

- () Public Funding
() Private Funding
(x) Public/Private Funding

No/Description	Unit	\$/Unit	Quant.	Amount	Total
1 SITE PREPARATION					
a Construction Fence	LF	18	2000	36000	
b Tree Pruning & Fert.	Ea	125	43	5375	
c Tree Removal	Ea	200	10	2000	
d Temporary Tree Guards	Ea	75	35	2625	
TOTAL SITE PREPARATION					\$46,000
2 REMOVALS & EXCAVATION					
a Remove Paving (6")	SY	12.50	12432	155400	
b Remove Benches	Ea	40	0	0	
c Excavate Tree Pits	CY	16	355	5680	
d Unclassified Excavation	allow	-	-	-	
TOTAL REMOVALS & EXCAVATION					\$161,080
3 STONE					
a Granite Block Curb	LF	18	2688	48384	
b Cut Granite Curb	LF	40	1250	50000	
c Repair/Rehab Seawall Cap	LF	45	0	0	
d Repair Terrace Wall	LF	80/104	960	99840	
TOTAL STONE					\$198,224
4 PAVING/DECKING					
a Hex Block Pmnt on Conc.	SY	75	7832	587400	
b Granite Block on Sand	SY	90	0	0	
c Concrete Paving	SY	40	0	0	
d Special Concrete Paving	SY	75	4600	345000	
e Concrete Curb	LF	12	1810	21720	
f New Asphalt Paving	SY	18	0	0	
g Resurface Asphalt Paving	SY	7	5233	36631	
TOTAL PAVING/DECKING					\$990,751

No/Description	Unit	\$/Unit	Quant.	Amount	Total
5 SITE FACILITIES					
a Tree Grates	Ea	200	0	0	
b Benches - Standard	Ea	800	16	12800	
c Benches - Backless	Ea	1000	0	0	
d Game Table/Benches	Ea	950	0	0	
e Drinking Fountains	Ea	1800	1	1800	
f Trash Receptacles	Ea	200	5	1000	
g Street Markers	Ea	500	2	1000	
h Bollards	Ea	600	0	0	
i Esplanade Banner/Logo	Ea	200	5	1000	
j Signage	Ea	600	0	0	
k Information Kiosk	Ea	12000	0	0	
l Install Water Service	allow	5000	-	5000	
TOTAL SITE FACILITIES					\$22,600
6 LIGHTING					
a Install Electric Service	allow	5000	-	5000	
b "B" Pole, Single	Ea	3000	39	117000	
c Uplighting	Ea	2000	0	0	
d Pier Lights	Ea	500	14	7000	
TOTAL LIGHTING					\$129,000
7 LANDSCAPING					
a Shade Tree 3-4" cal.	Ea	450	133	59850	
b Flowering Tree 2" cal.	Ea	250	39	2250	
c Evergreen Tree	Ea	150	0	0	
d Shrubs-Ground Cover	SF	7	22125	154875	
e Fill for Berm	CY	20	0	0	
f Sod for Lawn	SF	.50	2800	1400	
h Topsoil- Tree Pits 4'	CY	23	355	8165	
i Topsoil- Planting Beds	CY	23	273	6279	
j Mulch for Planting Beds 3"	SY	1.75	2458	4302	
k Topsoil- Lawn Areas 4"	CY	23	35	805	
TOTAL LANDSCAPING					\$237,926
8 RAILINGS/FENCE					
a Seawall Railing	LF	125	0	0	
b Terrace Rail Rehab/Paint	LF	15	960	14400	
c New Terrace Railing	LF	80	0	0	
d Decorative Iron Railing	LF	100	0	0	
e Chain Link Fence (10')	LF	50	0	0	
TOTAL RAILING					\$14,400

No/Description	Unit	\$/Unit	Quant.	Amount	Total
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9 SITE STRUCTURES

a Shelter	SF	80	0	0	
b Canvas Overhead (soft)	LF	40	830	33200	
c Overhead Cover (hard)	LF	80	0	0	

TOTAL SITE STRUCTURES					\$33,200
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10 SPECIAL ESPLANADE FEATURES

a Pedestrian Bridge	allow	-	-	960000	
b Dock	allow	-	-	0	
c Cantilever/Overlook	allow	-	-	0	
d Pedestrian Ramp	allow	-	-	0	
e Stairs	allow	-	-	16000	
f Fountain	allow	-	-	0	
g Pool	allow	-	-	0	

TOTAL SPEC. ESP. FEATURES					\$976,000
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11 PUBLIC ART

a 1% of Area Const. Cost	allow			27612	
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TOTAL PUBLIC ART					\$27,612
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Note: This estimate includes facilities and landscape for the proposed restaurant pier. No other pier costs are included in this estimate.

ESTIMATE TOTALS FOR AREA 9

1. SITE PREPARATION	46,000
2. REMOVALS & EXCAVATION	161,080
3. STONE/MASONRY	198,224
4. PAVING	990,751
5. SITE FACILITIES	22,600
6. LIGHTING	129,000
7. LANDSCAPING	237,926
8. RAILINGS/FENCES	14,400
9. SITE STRUCTURES	33,200
10. SPECIAL ESPLANADE FEATURES	976,000
11. PUBLIC ART	27,612

GRAND TOTAL	\$2,836,793
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AREA 10, VICTORY BOULEVARD TO PIER 7

- (x) Public Funding
- () Private Funding
- () Public/Private Funding

<u>No/Description</u>	<u>Unit</u>	<u>\$/Unit</u>	<u>Quant.</u>	<u>Amount</u>	<u>Total</u>
Waterside Esplanade	SF	22	16000	352000	
New Road	SF	18	17600	35200	
Angled Parking	SF	18	6000	12000	
Repair Bulkhead	LF				
Hannah St. Bridge	SF	16	5600	89600	
Esplanade Treatment					
TOTAL					\$488,800

Note: This estimate does not include the demolition of Pier 7 or the rebuilding of its associated bulkhead.

AREA 11, U.S. NAVY HOMEPORT

- () Public Funding
- () Private Funding
- (x) Public/Navy Funding

<u>No/Description</u>	<u>Unit</u>	<u>\$/Unit</u>	<u>Quant.</u>	<u>Amount</u>	<u>Total</u>
a Street Esplanade	SF	16	134400	2150400	
STREET LINKS					
a Wave Avenue	SF	16	3840	61440	
b Prospect Avenue	SF	16	3200	51200	
c Water	SF	16	2304	36864	
d Canal	SF	16	1024	16384	
e Thompson	SF	16	768	12288	
Street Markers	EA	500	5	2500	
Signage	EA	600			
TOTAL					\$2,331,676

Note: This estimate does not include 8' height security fence surrounding the homeport, improvements to the SIRT transit station, or the new road bed along the realigned Front Street.

AREA 12, ACTIVE INDUSTRIAL/COMMERCIAL

- () Public Funding
- () Private Funding
- (x) Public/Private Funding

No/Description	Unit	\$/Unit	Quant.	Amount	Total
1 NORTH SITE (PTTC OWNERSHIP)					
a 1000' Waterside Temporary (20' wide)	SF	16	20000	320000	
b 1000' waterside Permanent (25')	SF	22	25000	550000	
c Parking	SF	18	8000	144000	
TOTAL					(\$101,400)

Note: Not including snack/bar concession to be defined

2 CENTER					
a Street Esplanade (Around Pouch Terminal, Sea Knights and Narrows Marina) 800 KF x 8'wide	SF	16	6400	102400	
b Street Markers	EA	500	2	1000	
TOTAL					(\$103,400)

3 SOUTH					
a Street Esplanade (East Side Edgewater through Reynolds Launch) 700 LF x 8' wide	SF	16	5600	89600	
b Waterside Esplanade (Reynolds Proposal) 500 LF x 15' wide	SF	22	7500	165000	
c Esplanade Planting (Reynolds Proposal) 500' x 10' x 13'	SF	13	5000	65000	
d Rehabilitate Pier	SF	20	29100	582000	
TOTAL					(\$901,600)

AREA 12 TOTALS **\$2,019,000**

Note: Total does not include cost of bulkhead rehabilitation.

AREA 13, CLIFTON AVENUE TO NEW LANE APARTMENTS

- () Public Funding
- () Private Funding
- (x) Public/Private Funding

No/Description	Unit	\$/Unit	Quant.	Amount	Total
Pavilion (with restrooms, snackbar, information)	EA	72000	1	72000	
New 21'-6" wide average Waterfront Esplanade below Alice Austen Park	SF	22	10750	236500	
Street Esplanade (16' wide)					
-at Scarboro Avenue	SF	16	640	102400	
-at Andrese Street	SF	16	4800	76800	
-at New Lane	SF	16	5440	87040	
Angle Parking	SY	18	5600	100800	
Historic Sign	EA	600	1	600	
Street Markers	EA	500	3	1500	

TOTAL

\$677,640

Note: This estimate does not include waterfront esplanade improvements in the Alice Austen Park area as design guidelines are yet to be set by the NYCDPR.

AREA 14, U.S. COAST GUARD AT ROSEBANK (FORMER QUARANTINE STATION)

- (x) Public Funding
- () Private Funding
- () Public/Private Funding

No/Description	Unit	\$/Unit	Quant.	Amount	Total
Street Esplanade (20' wide)	SF	16	12000	192000	
Sign	EA	600	1	600	
Brass Street Marker	EA	500	1	500	

TOTAL

\$193,100

AREA 15, CLIFF STREET APARTMENTS AND SHORE ACRES

- (x) Public Funding
- () Private Funding
- () Public/Private Funding

No/Description	Unit	\$/Unit	Quant.	Amount	Total
Repave Nautilus Street	SF	18	2400	43200	
Street Esplanade					
-(20' wide) 1 side Bay Street, Nautilus to Von Briesen Park)	SF	16	24000	384000	
-(16' wide) Nautilus Avenue to Waterfront	SF	16	17280	276480	
Wooden Stair and Ramp	allow	32000	1	32000	
Historic Sign	EA	600	1	600	
Street Marker	EA	500	1	500	
TOTAL					\$736,780

AREA 16, ARTHUR VON BRIESEN PARK

- (x) Public Funding
- () Private Funding
- () Public/Private Funding

No/Description	Unit	\$/Unit	Quant.	Amount	Total
Street Esplanade on Bay Street (20' wide)	SF	16	6000	96000	
Cast Iron Esplanade Map	EA	2000	1	2000	
Bronze Marker	EA	500	1	500	
Signage	EA	600	1	600	
TOTAL					\$ 99,100

Note: This estimate does not include improvements within Von Briesen Park as a Master Plan is currently being developed and design guidelines are yet to be set by the NYCDPR.

AREA 17, FORT WADSWORTH

- (x) Public Funding
 () Private Funding
 () Public/Private Funding

No/Description	Unit	\$/Unit	Quant.	Amount	Total
Park Esplanade (15' wide)	SF	13	80000	780000	
Fence Security					
Emergency Access	SY	18	1933	34794	
Recreational Pier					
Historic Signage	EA	600	2	1200	
Pavilion (Restrooms, Snackbar, Information)	EA	72000	1	72000	
TOTAL					\$887,994

Appendix 3: Prototypical Details for the Shore Esplanade

This section contains "concept" sketch diagrams that could serve as design guidelines when establishing prototypical design details for the study area. These details may not be appropriate in all places as the esplanade contains a significant number of historic/cultural sites that could have their own design vocabulary. The details that follow include:

STRUCTURES

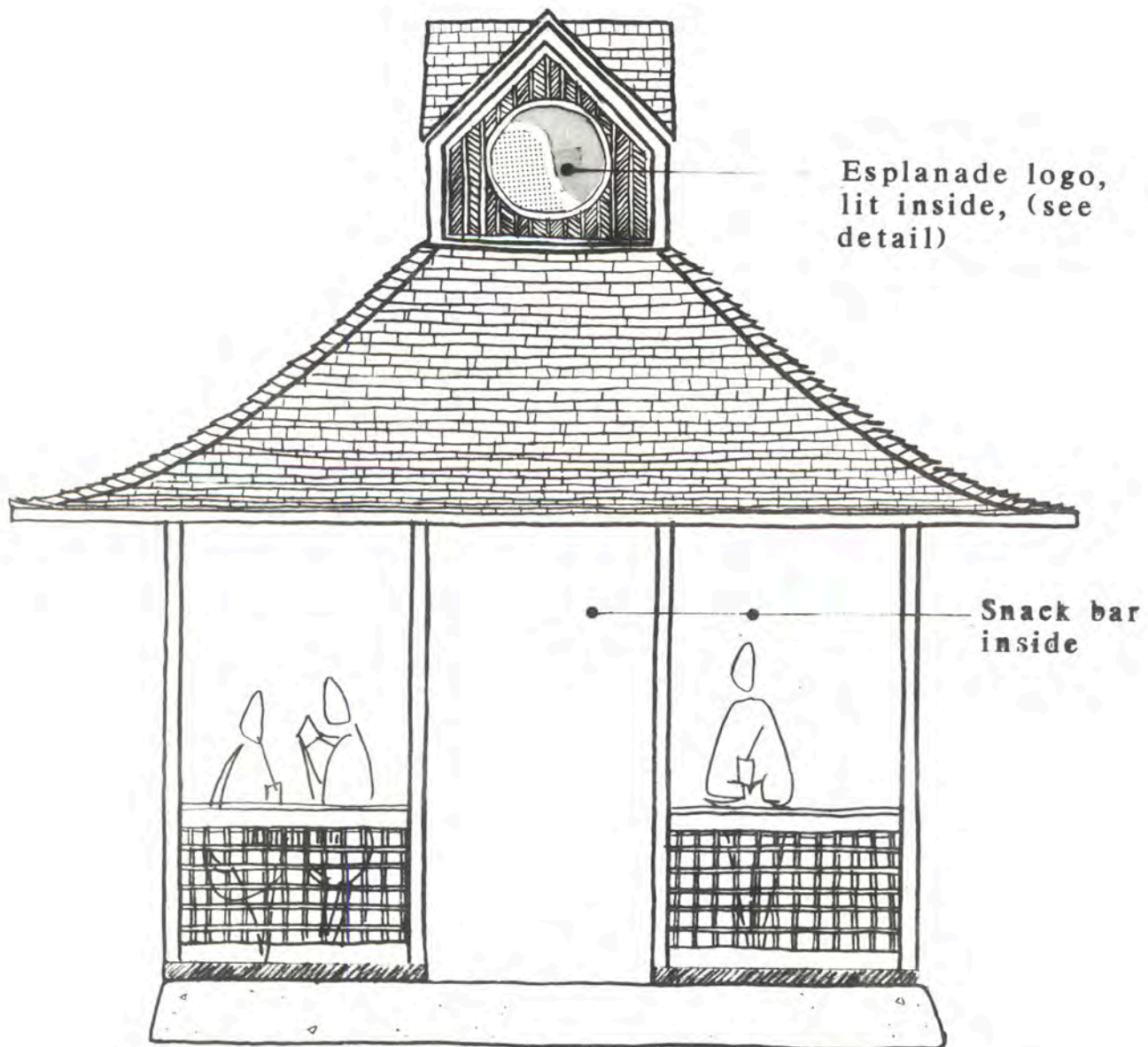
- Pavilion - Front Elevation
- Pavilion - Side Elevation
- Tension Structure/Terminal Ramp Plan
- Tension Structure/Terminal Ramp Elevation/Section

FACILITIES

- "Worlds Fair" Bench
- Esplanade Sea Rail/Section
- Esplanade Sea Rail/Elevation

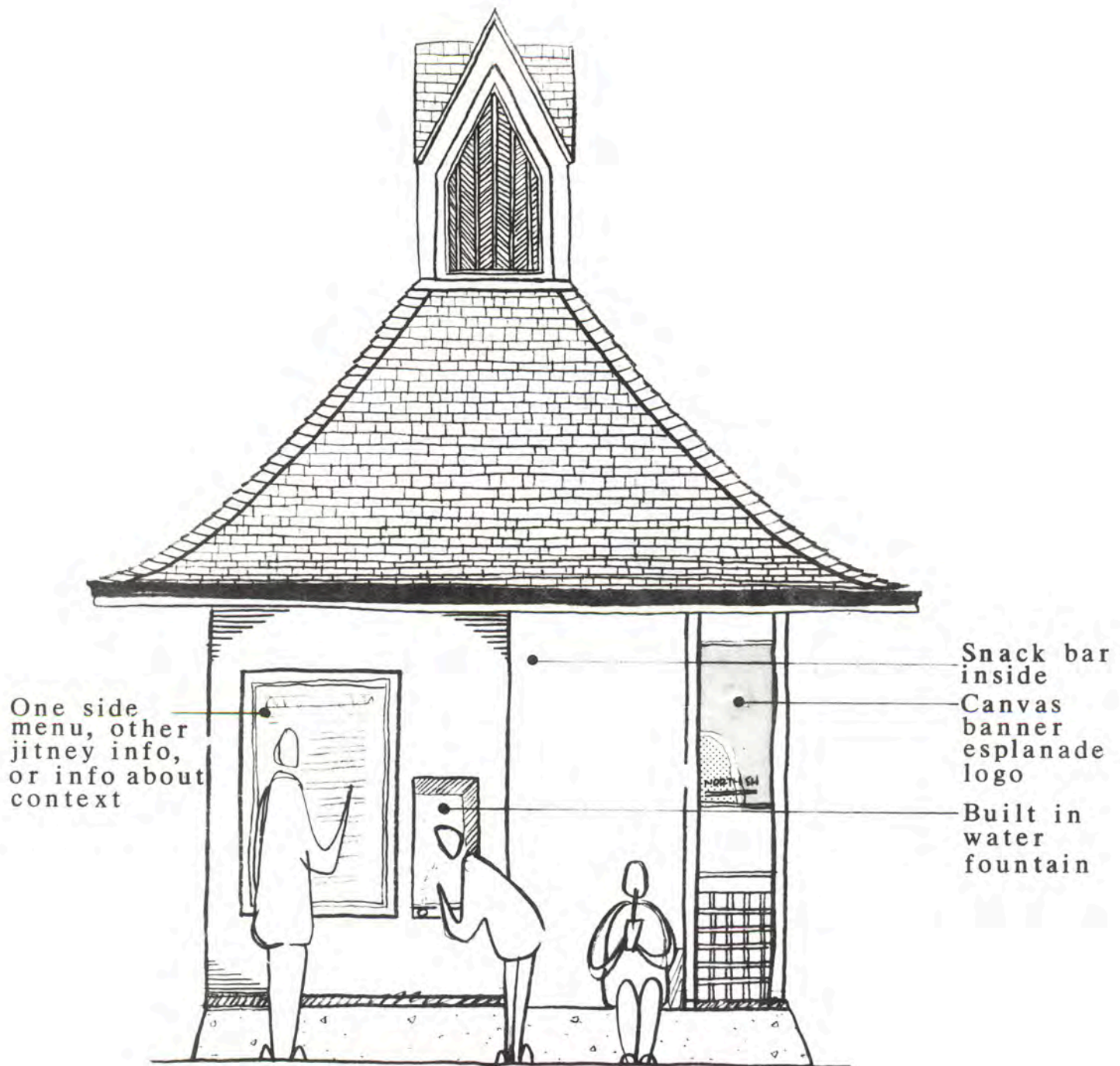
SIGNAGE/GRAPHICS

- Standard Esplanade Typeface
- Esplanade Information/Identity Kiosk
- Enlargement of Logo for Information Kiosk
- Detail for Canvas Banner
- Esplanade Logo for Potential Rail Insert
- Street Marker in Pavement
- Detail of Street Marker
- City-wide Waterfront Symbol (back cover)



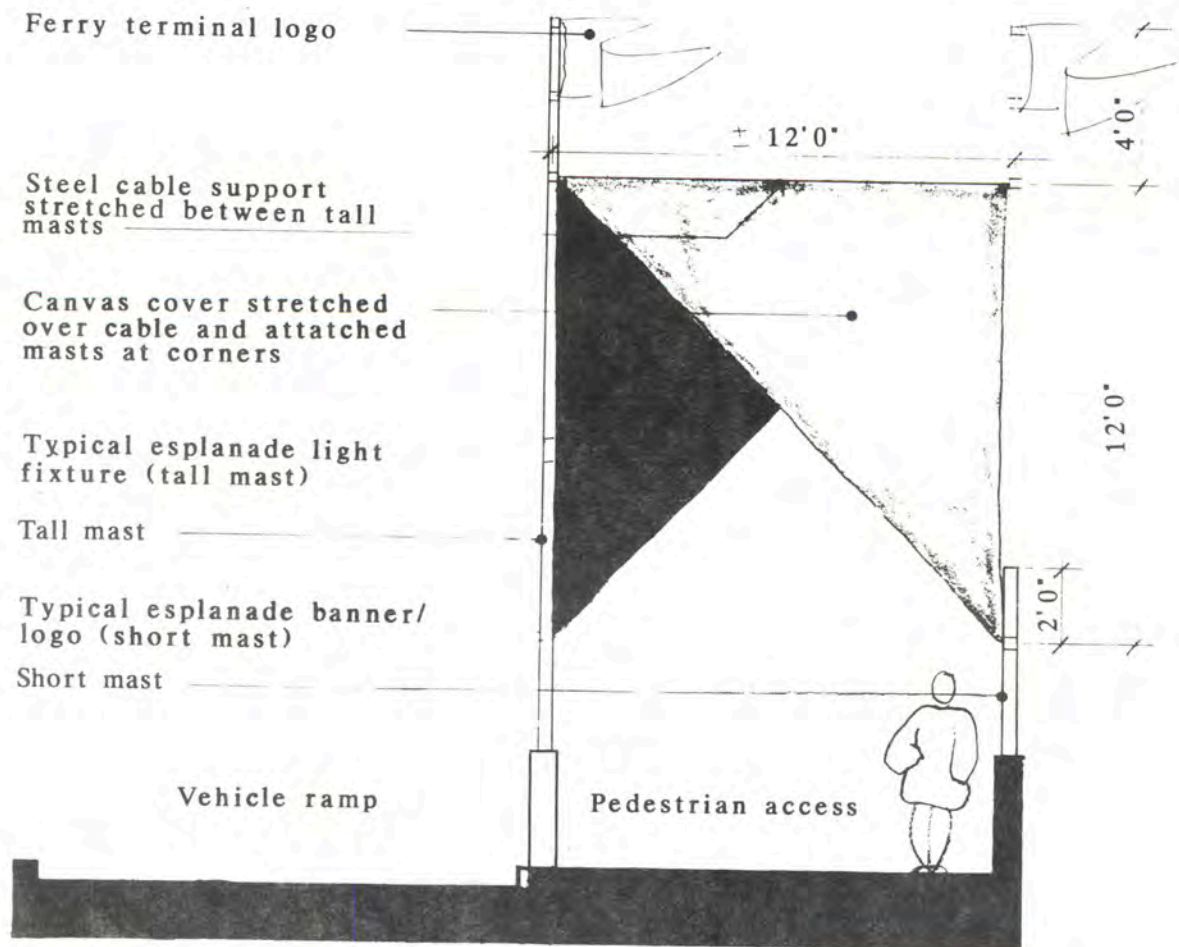
FRONT ELEVATION OF PAVILION

Not to scale



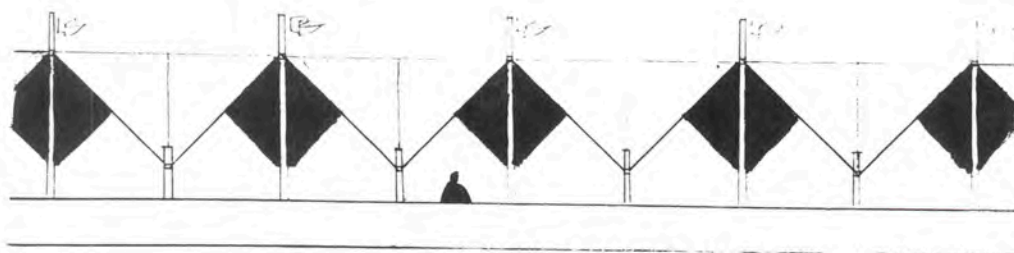
SIDE ELEVATION OF PAVILION

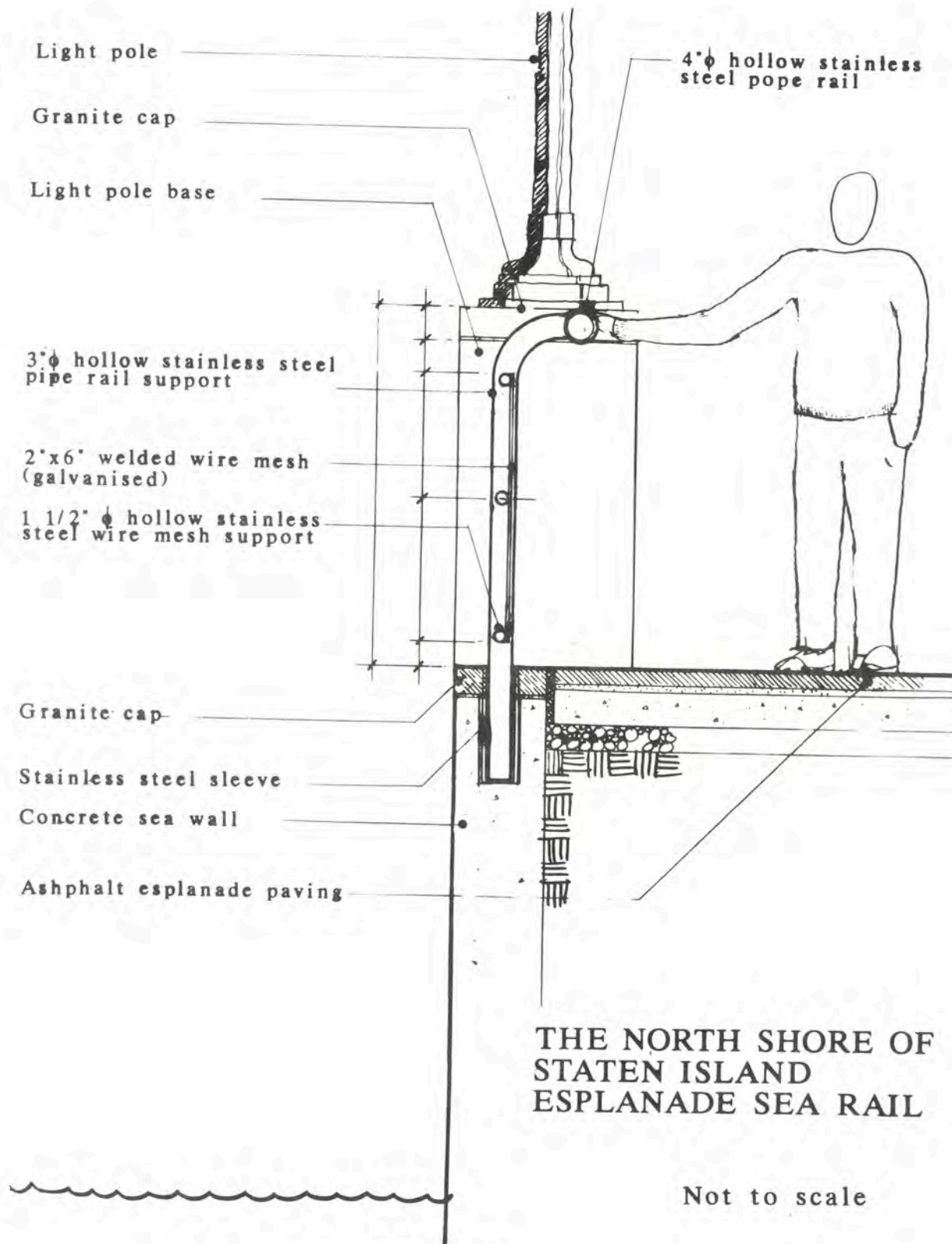
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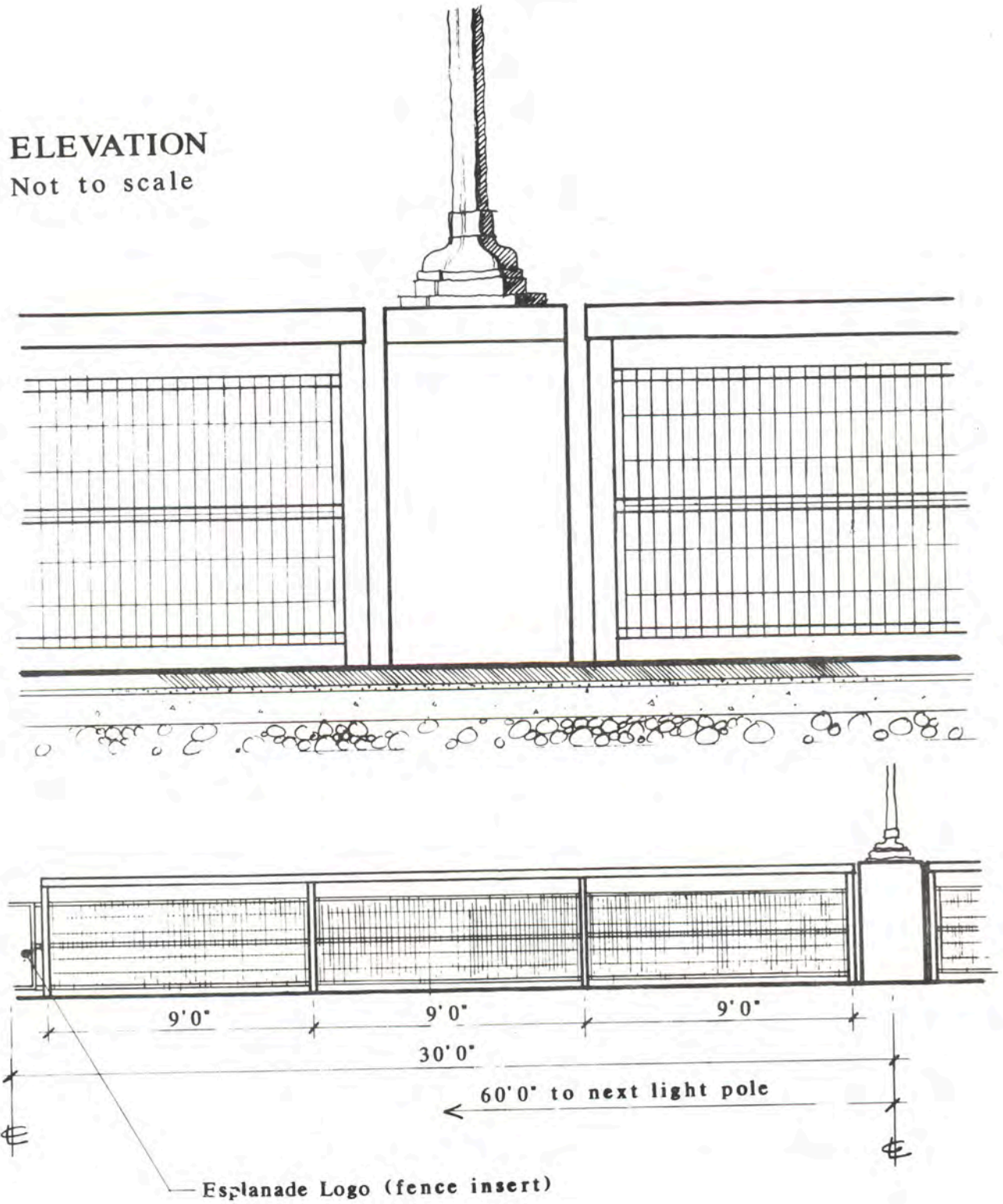
ELEVATIONS OF MAST AND BANNER DESIGN

Not to scale



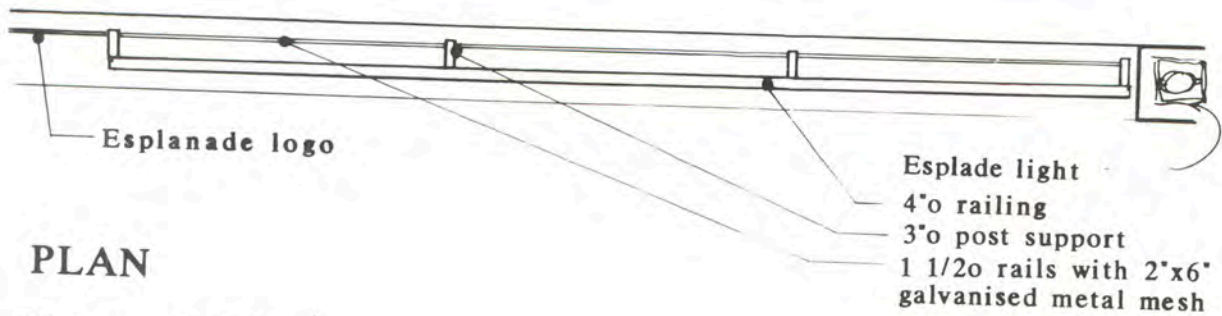
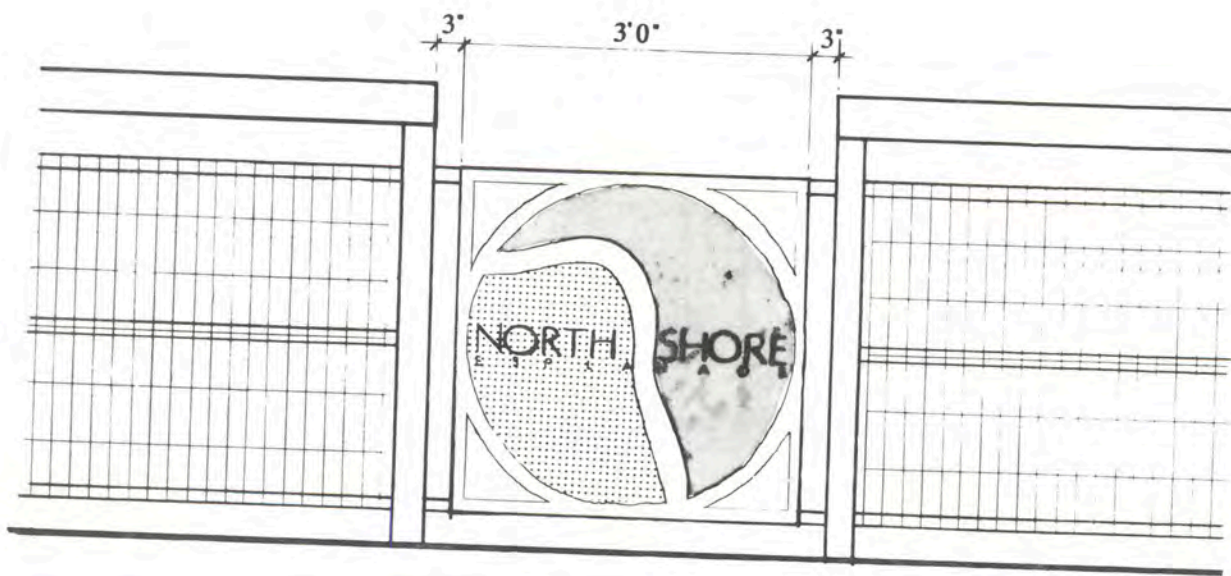


ELEVATION
Not to scale



ELEVATION ESPLANADE LOGO FENCE INSERT

Not to scale



PLAN

Not to scale

- ▶ Alice Austen House & Park
- ▶ Arthur Von Briesen Park
- ▶ Fort Wadsworth

NORTH SHORE
E S P L A N A D E

Fort
Wadsworth

NORTH SHORE
E S P L A N A D E



NOTE:
CARE MUST BE TAKEN TO
INSTALL THE "BYSTED"
IN CONCRETE INSTALLATIONS
WITHIN A DRAINAGE PIT OR,
IN GRASS

Bysted.

WEATHER RESISTANT BAKED
WHITE ENAMEL

LAMPHOLDER ASSEMBLY
& GROUNDING SUPPORT
PLATE

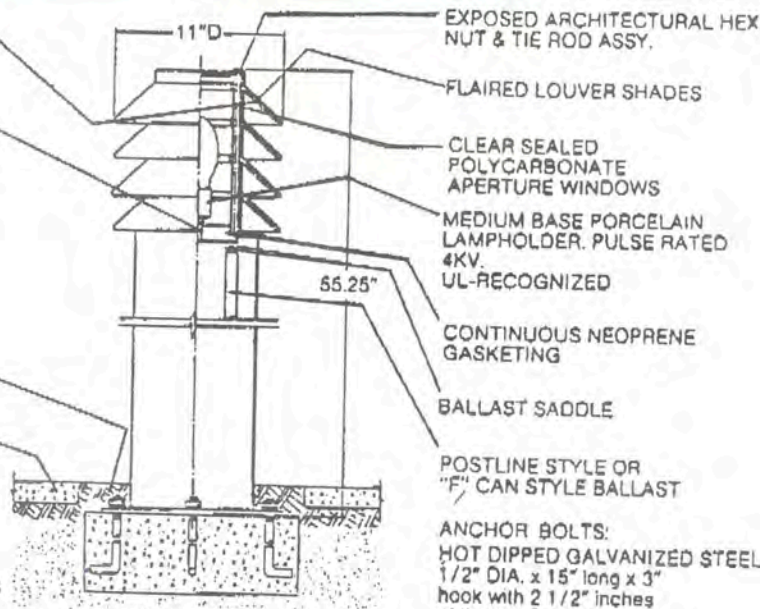
Recommended overall mounting
height is 44.4". The architect
shall coordinate the
elevation of the concrete
foundation accordingly.

DRAINAGE PIT
(EARTH, ROCK
OR SOD)

CONCRETE SLAB

NOTE:

This specification sheet supercedes
catalog data.



EXPOSED ARCHITECTURAL HEX
NUT & TIE ROD ASSY.

FLAIRED LOUVER SHADES

CLEAR SEALED
POLYCARBONATE
APERTURE WINDOWS

MEDIUM BASE PORCELAIN
LAMPHOLDER, PULSE RATED
4KV.
UL-RECOGNIZED

CONTINUOUS NEOPRENE
GASKETING

BALLAST SADDLE

POSTLINE STYLE OR
"F" CAN STYLE BALLAST

ANCHOR BOLTS:
HOT DIPPED GALVANIZED STEEL
1/2" DIA. x 15" long x 3"
hook with 2 1/2" inches
of thread. Provided with
double nuts & washers.

Design: Bysted

Designer: Peter Bysted

Specifications: A cylindrical
shaped bollard with flaired louver
reflector shades fabricated from
untreated heavy gauge "Corten
Steel". "Corten Steel" contains
copper and cast iron with
graphite. The inner surface of the
louver shades are finished in a
weather resistant Matte White
Enamel for reflectivity.

The lamp chamber is sealed
against the elements by use of a
polycarbonate enclosure, fully
gasketed. After weathering a thin
layer of uniform rust red oxidation
self protects the underlying steel.
This layer of "Rust", in contrast to
normal steel, provides a protec-
tive function considerably
reducing the rate of corrosion thus
eliminating the need for main-
taining the surface permanently.

The process of oxidation causes
the surface to bleed. Care must be
taken to install the "Bysted" in

concrete installations within a
drainage pit or, in grass. (See
Technical Manual "OUTDOOR
LIGHTING" for architectural
details). "Bysted" is perfect for
municipal installations and in
areas with highly corrosive
atmospheres. It is recommended
for use in high vandalism
locations due to its rugged
construction and virtually vandal
resistant hardware.

Color: Natural untreated Corten
Steel.

Mounting: On a concrete
foundation, with anchor bolts.

Electrical: Constant Wattage
Auto Transformer 120 V Post-
line style ballasts for Mercury
Vapor and High Pressure So-
dium. "F" Can Style Ballast
provided for Metal Halide.
Also available in Incandescent.

Voltages: Postline style ballasts
are available in Mercury Vapor
120, 208, 240 and 277 Volts.

High Pressure Sodium
120 Volt only.

"F" Can style ballasts are
available in 120 and 277 Volts.

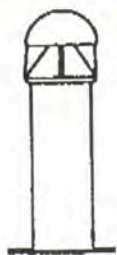
Label: UL Wet Location

Lamp data: For use with
Coated or IF lamps.

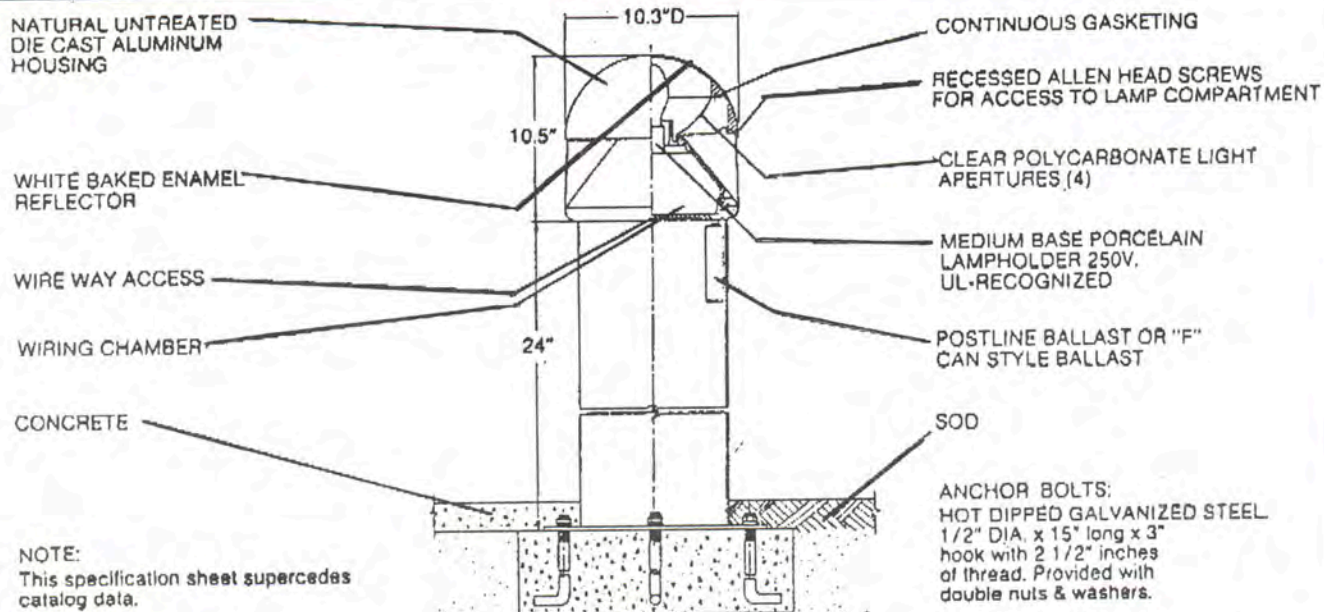
Lamp holder: Medium Base
Pulse Rated

Catalog Number	Dia.	Overall meter Height
BYS-002-100 MV-120	11"	55.25"
BYS-003-100 MH-120	11"	55.25"
BYS-004- 35 HP -120	11"	55.25"
BYS-005- 50 HP -120	11"	55.25"
BYS-006- 70 HP -120	11"	55.25"
BYS-007-100 HP -120	11"	55.25"
BYS-008-100 IN -120 (A21)	11"	55.25"

SOURCE : Poulsen Lighting Inc., Miami, Fl.



Waterfront.



Design: Waterfront

Designer: Dan Haslev

Specifications: A hemispherically shaped bollard luminaire providing a wide symmetrical distribution from three equally spaced window apertures.

The housing is formed from sand blasted smooth cast aluminum. (A silica aluminum alloy).

The lamp chamber is sealed against the elements by use of three sealed polycarbonate windows.

Finish is natural sand blasted aluminum.

Color: Luminaire - Natural aluminum
Pedestal Base - Natural Hot Dipped Galvanized

Mounting: Mounted on a galvanized steel pedestal base over concrete foundation with anchor bolts.

Electrical: Constant Wattage Auto Transformer 120 V Postline style ballasts for Mercury Vapor and High Pressure Sodium and "F" Can style ballast 120 V provided for Metal Halide.

Voltages: Postline style ballasts are available in Mercury Vapor 120, 208, 240 and 277 Volts. High Pressure Sodium 120 Volt only.

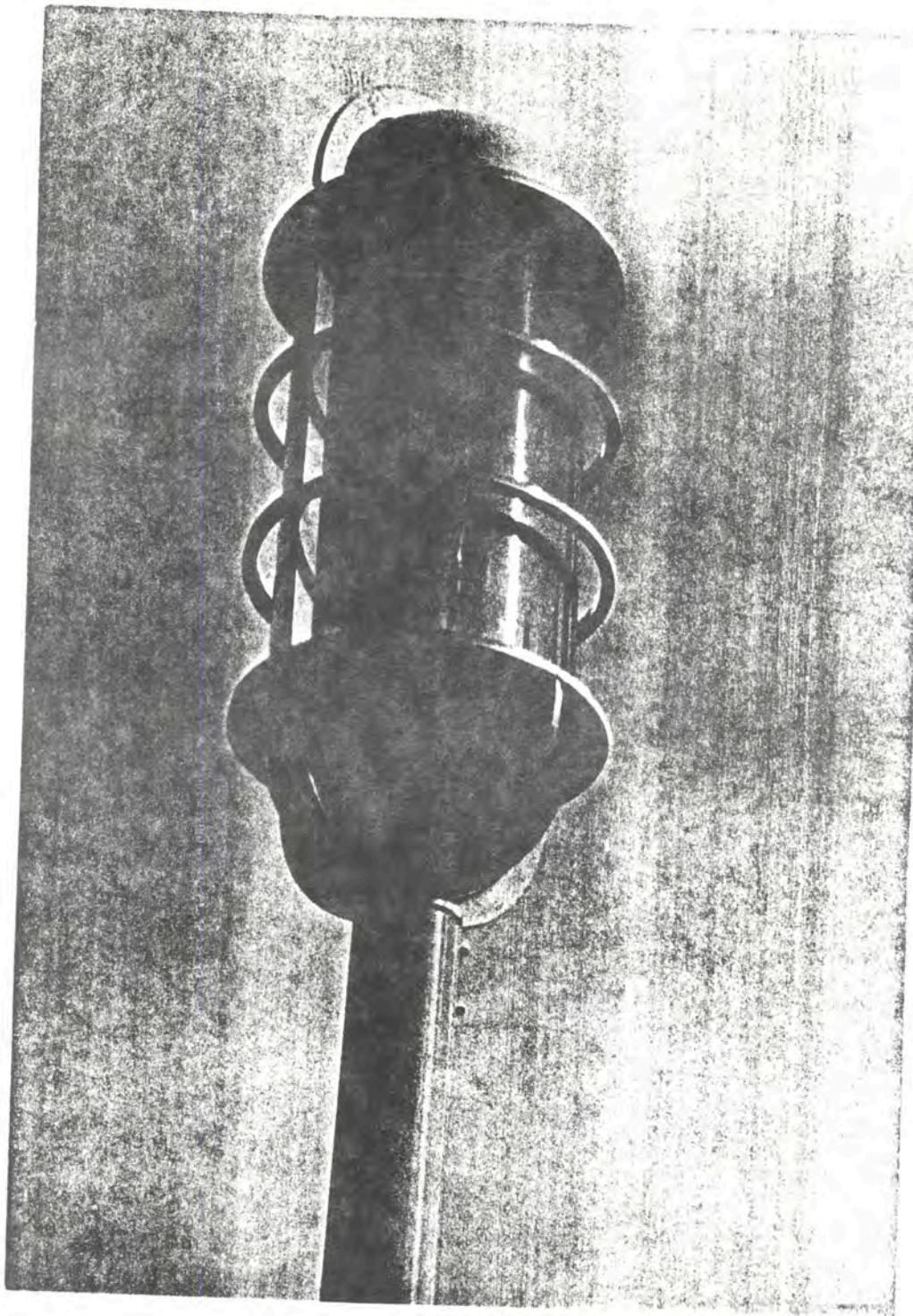
Label: UL Wet Location

Lamp data: For use with Clear lamps.

Lamp holder: Medium Base Pulse Rated

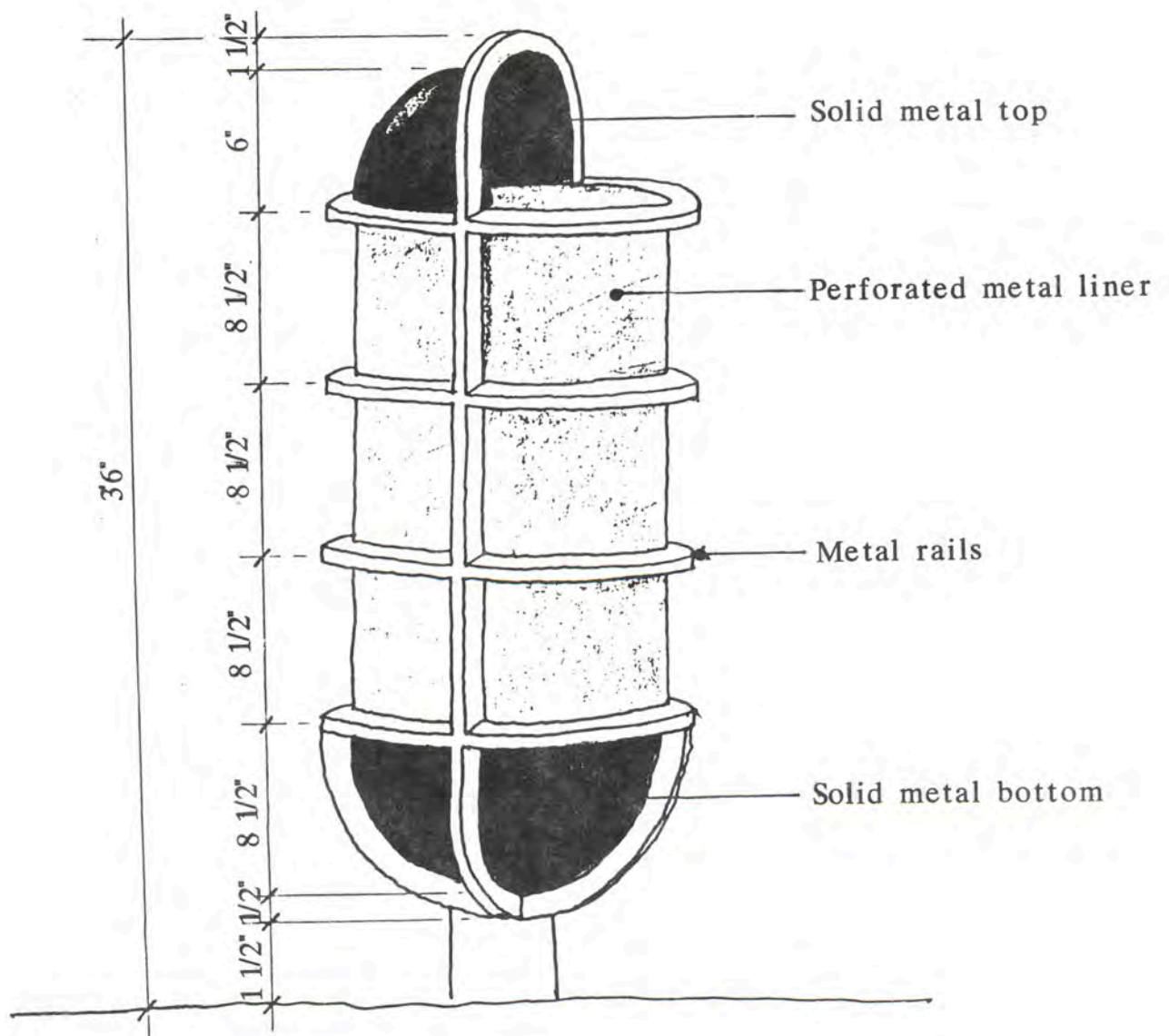
Catalog Number	Fixture Diameter	Overall Height
WAT-015-100MV-120	10.2"	33.8"
WAT-016-100MH-120	10.2"	33.8"
WAT-017- 35HP -120	10.2"	33.8"
WAT-018- 50HP -120	10.2"	33.8"
WAT-019- 70HP -120	10.2"	33.8"
WAT-020-100HP -120	10.2"	33.8"
WAT-021-150HP -120	10.2"	33.8"
WAT-022-150IN -120 (A 21)	10.2"	33.8"

SOURCE : Poulsen Lighting Inc., Miami, Fl.



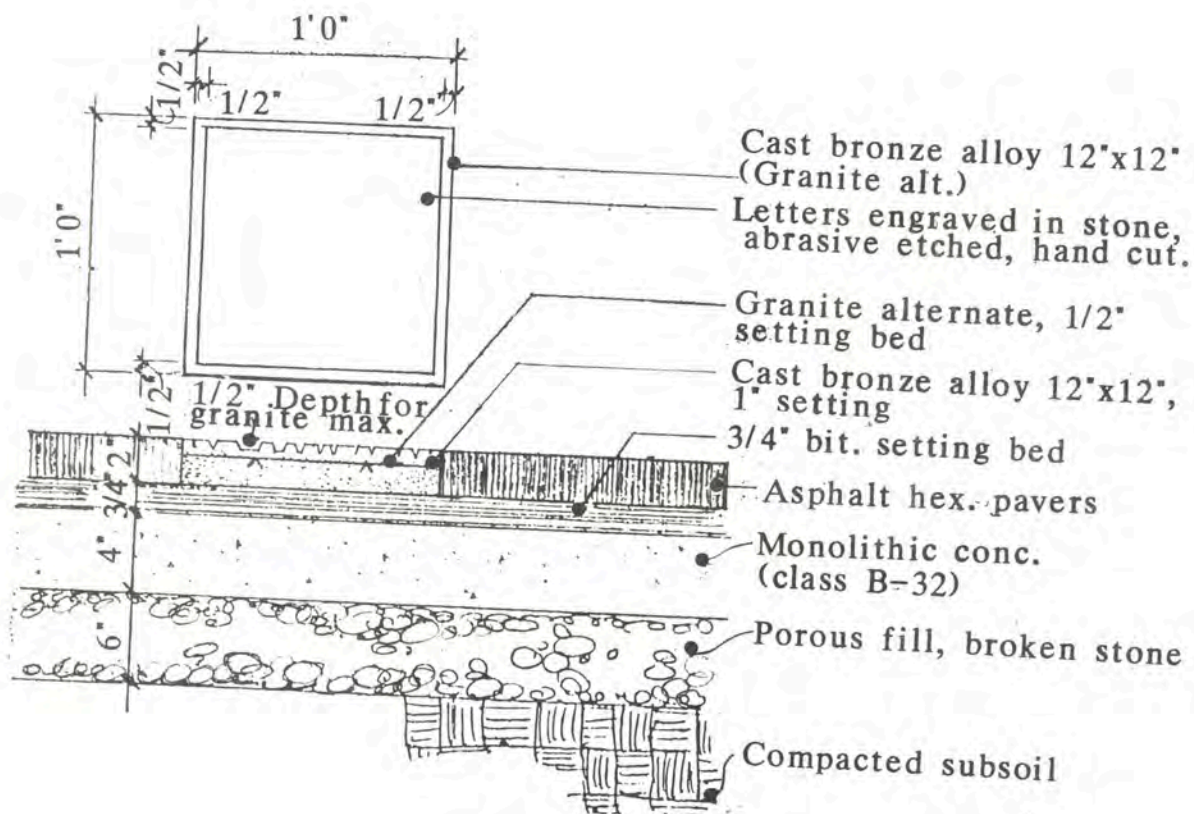
LIGHTING STANDARD

Not to scale



TRASH RECEPTACLE

Not to scale

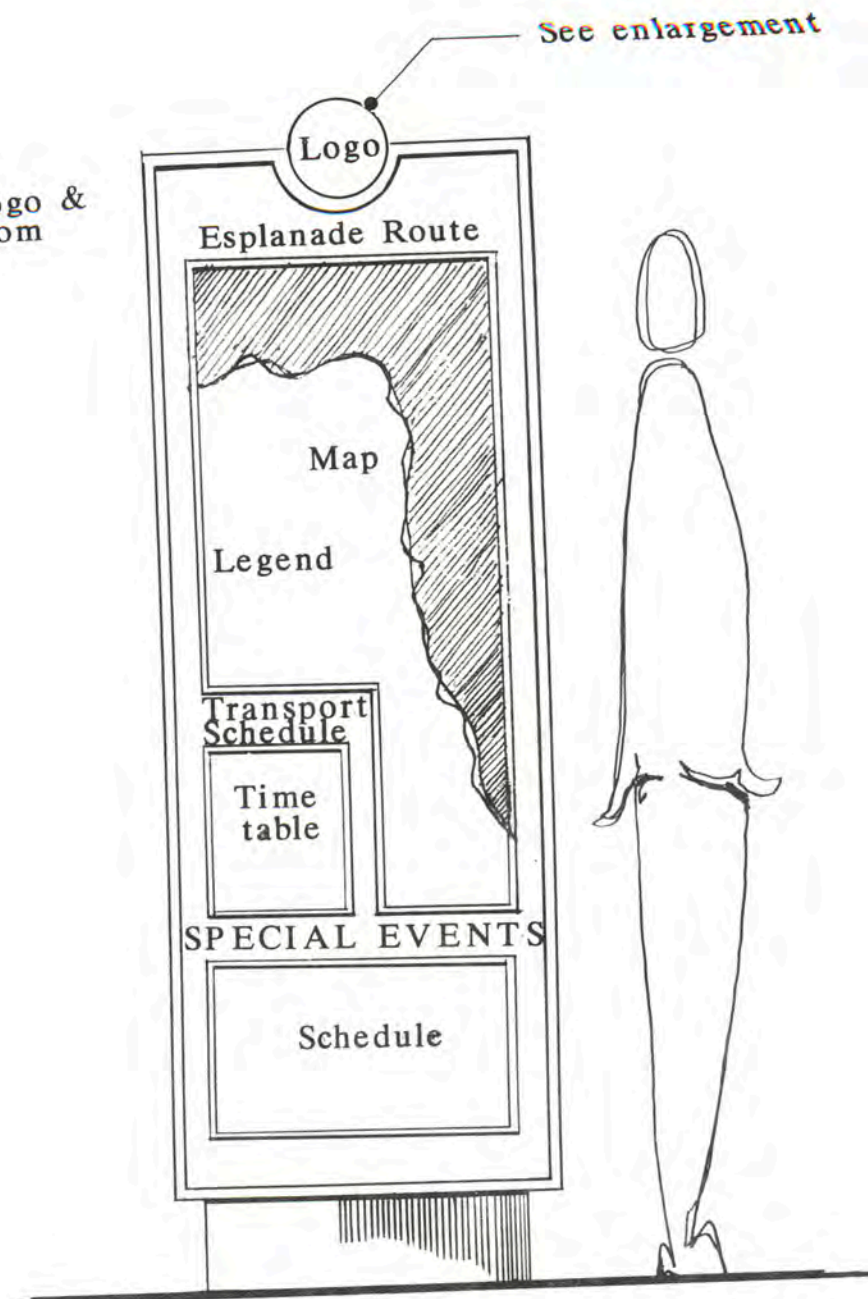


STREET MARKERS IN PAVEMENT

Source : Macklowe

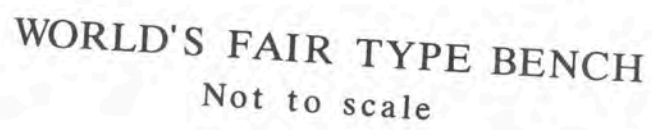
Note : Map, logo &
text are lit from
behind

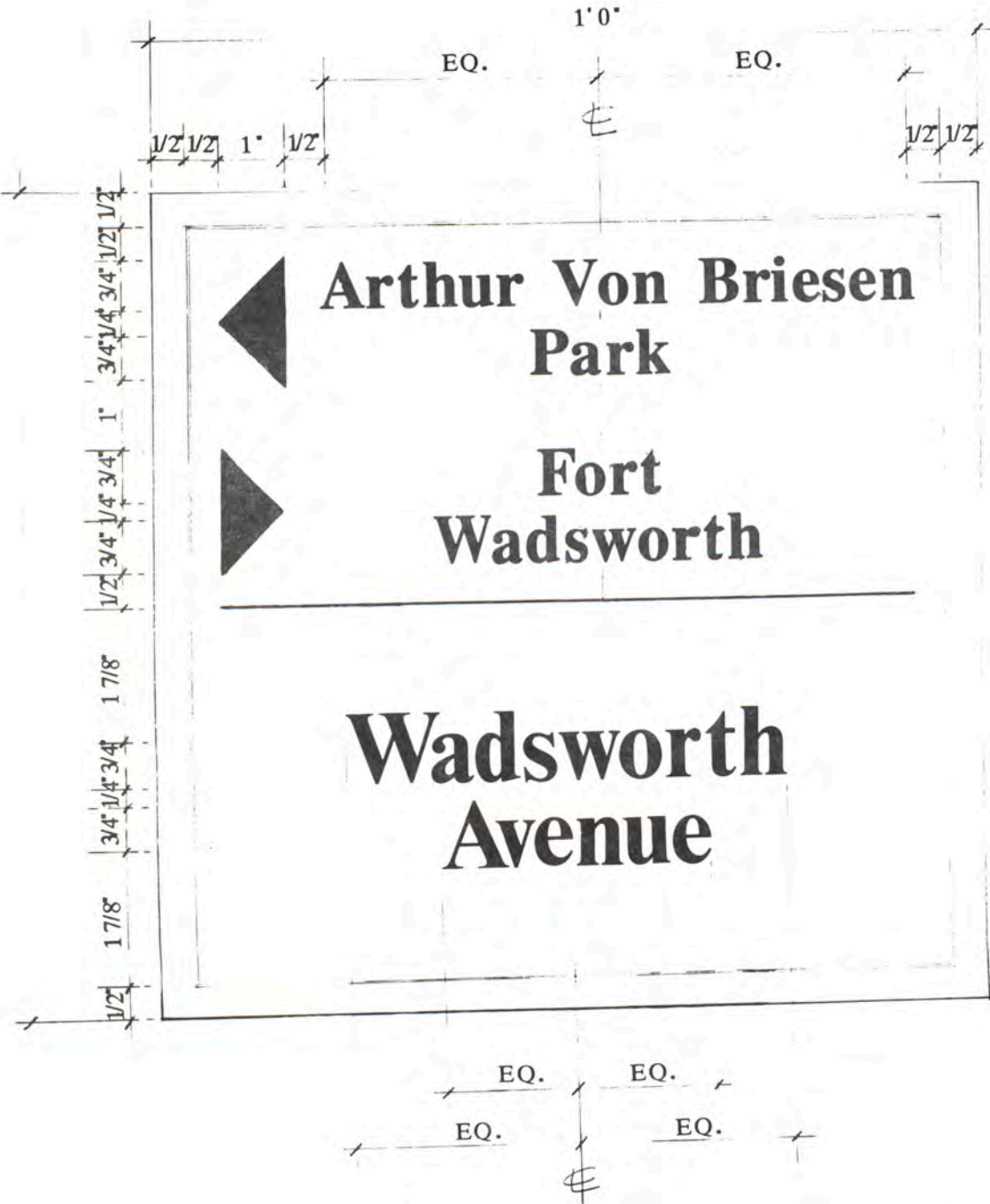
See enlargement



ESPLANADE INFORMATION/ IDENTITY KIOSK

Scale 1" = 1'0"





DETAIL OF STREET MARKER



**ENLARGEMENT OF LOGO
FOR INFORMATION KIOSK
(OR OTHER)**

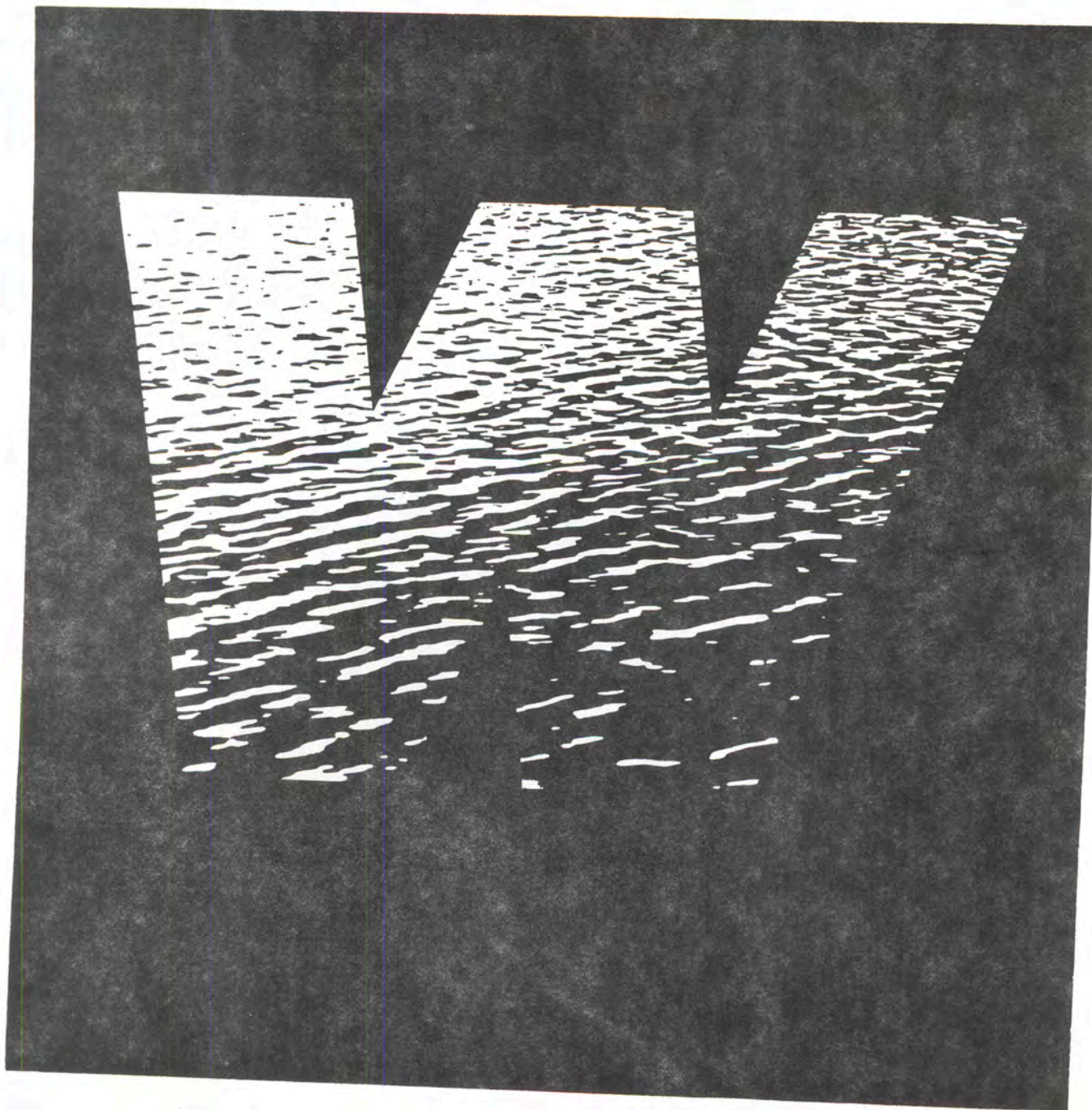
Other uses could include buttons, badges for maintenance clothing/
trucks, directional signage, waste receptacles, etc.

Sky or ice
blue (typ.)

Forest
green (typ.)

NORTH SHORE
E S P L A N A D E

DETAIL FOR CANVAS BANNER



THE CITYWIDE WATERFRONT SYMBOL.

Letters

Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll
Mm Nn Oo Pp Qq Rr Ss Tt Uu Vv
Ww Xx Yy Zz

Numerals

1234567890

STANDARD TYPEFACE FOR
THE NORTH SHORE ESPLANADE
TYPE : "OPTIMA"

Appendix 4. Recommended Plant Materials

SHADE TREES Botanical Name/Common Name

Fraxinus pennsylvanica lanceolata "Marshall's"/Marshall Seedless Green Ash
 Gleditsia triacanthos Inermis "Shademaster"/Shademaster Thornless Honey Locust
 Platanus occidentalis/Sycamore
 Tilia cordata/Little-leaf Linden
 Quercus rubra/Northern Red Oak

Each of these shade trees has performed well in street tree plantings and is well suited to planting on the Esplanade. The use of these five varieties, rather than any one or two, will aid in balancing the current monoculture approach to Esplanade planting and by providing greater diversity, decrease chances of loss through disease.

FLOWERING TREES Botanical Name/Common Name

Crataegus crusgalli/Cockspur Hawthorn
 Crataegus phanopyrum/Washington Hawthorn
 Elaeagnus angustifolia/Russian Olive
 Malus Radiant/Radiant Crab
 Malus Sargentii/Sargent Crab
 Ostrya virginiana/American Hophornbeam

The selected flowering trees are described more completely in the table below which includes information of the height they are likely to attain, their form, flowering time, flower color, fruit color or type, foliage, and autumn color. Each of these is a good performer with disease resistant qualities. They will require sufficient care, especially within the first two years after installation, as will all plant materials.

FLOWERING TREES

BOTANICAL/ COMMON NAME	HEIGHT	FORM	M	FL/MO	COLOR	FRUIT	FOLIAGE	FALL COLOR
Cornus Kousa/ Kousa Dogwood	20'	oval	June	white	red	green	bronze to red	
Crateagus crusgalli/	20'	round wide	May	white	small red	lustrous dense	orange to scarlet	

Cockspur
Hawthorn

Crateagus phaenopyrum/ Washington Hawthorn	20'	col- umnar	June	white	small red	lustrous dense	scarlet to orange
Elaeagnus angustifolia/ Russian Olive	15'	spd'g	June	yellow	yellow	dull grey- green	brown interesting bark
Malus Radiant/ Radiance Crab	10'	up- right	May	red	red	dense, green	red-green
Malus Sargentii/ Sargent Crab	10'	round broad	May	white	red	dense, green	yellow, bronze
Ostrya virginiana/ American Hophornbeam	25'	pyra- midal	May	not sig.	Pods	beech- like	yellow

SHRUBS Botanical Name/Common Name

Berberis mentorensis/Mentor Barberry
 Berberis thunbergii/Green Barberry
 Diervilla sessifolia/Diervilla
 Euonymus alatus compacta/Dwarf Euonymus
 Forsythia intermedia spectabilis/Showy Border Forsythia
 Ilex glabra/Inkberry
 Ilex meservae/Blue Holly
 Juniperus horizontalis "Bar Harbor"/Bar Harbor Juniper
 Leucothoe racemosa/Drooping leucothoe
 Rhus aromatica/Fragrant Sumac
 Rosa rugosa/Rugosa Rose
 Rose wichuriana/Memorial Rose

The shrubs listed range in height from 12" to 9'. Most of them are deciduous, flower in spring or summer and some have colorful fall foliage. The Ilex/Holly and Juniper are evergreen. They have been selected for vigorous growth under less than optimum conditions. The specific plant selection should be made for each shrub planting with consideration of size, seasonal interest, color, form and growth habit. Each of these plants would be worthy of testing somewhere on the Esplanade to judge performance.

Appendix 5: Task Force Participants

The Department of City Planning and the consultant team were ably assisted and advised by a panel of public officials, community and public agency representatives.

Philip Bull, Former Director of
Port Development, Department of
Ports, International Trade & Commerce

Joseph Carroll, District Manager
Community Board #1

Jane Cleaver, Director of Parklands
NYC Dept. of Parks & Recreation

Richard Corno
NYC Dept. of Parks & Recreation

Roz Diamond
NYC Dept. of Transportation

Lynne Grifo
Public Development Corporation

Michael Harding
Former President & Chief
Executive Officer
Snug Harbor Cultural Center

Lee Home, P.E.
NYC Dept. of Transportation

Walter Kramer, Office of Councilman
Jerome O'Donovan

Gene Langele, Office of Assemblyman
Eric Vitaliano

Albert Melniker, AIA
Private Consultant

Alfred Meyer, Asst. Vice-President
Public Development Corporation

Magnus Sjoberg
Public Development Corporation

James S. Spore, III, Commander
Civil Engineer Corps, U.S. Navy

Henry Stephenson
Community Board #1

Lorelei Stevens, Former Chairperson
Community Board #1

Allen Terjerson, formerly
Office of the Staten Island
Borough President

Rex Wasserman
NYC Dept. of Parks and Recreation

Edward Weinstein
Former Assistant Commissioner
Dept. of Ports, International
Trade & Commerce

Elizabeth Wright
NYC Dept. of Ports, International
Trade & Commerce

Shirley Zavin
NYC Landmarks Preservation
Commission Staff

CREDITS

Department of City Planning

Sylvia Deutsch, Director
Con Howe, Executive Director

Staten Island Office

Daniel Cornejo, Director
Thomas Hess, Deputy Director
Ron Meyer, Project Director
Morley Morgana, Graphics Coordinator

Marilyn Mammano, Former Director
Bonnie Goldschlag, Former Project Director

Planning Management

Barbara Weisberg, Assistant Executive Director
Anne Pizzicara, Director, Policy and Project Management

Waterfront and Open Space

Holly Haff, Former Director
Barry Seymour, Acting Director
Regina Myer

Consultants:

Walmsley & Company, Inc.
Anthony Walmsley, ASIA, AICP
Charles Birnbaum, ASIA
Geiger Associates
Kris Hamilton
Project for Public Spaces, Inc.
Ed Lubieniecki
Webster and Sheffield, Donald H. Elliott, Esq.

The North Shore Esplanade Master Plan was made possible by federal Community Development Block Grant funds allocated in fiscal year 1985.

