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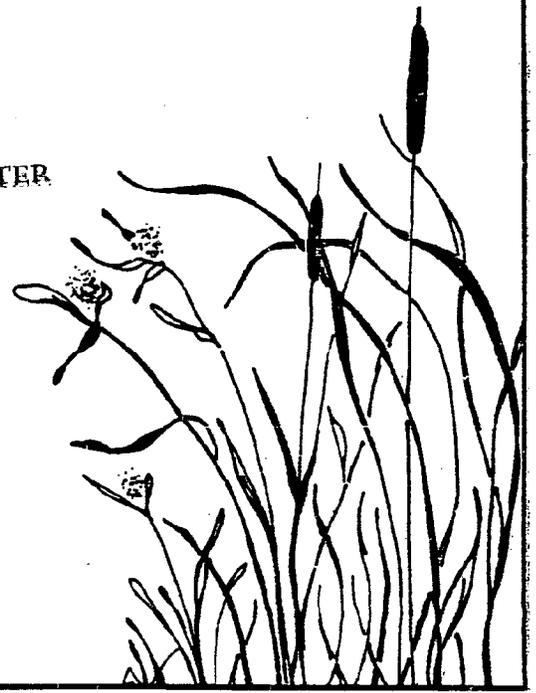
Township of Pennsauken Waterfront District Management Plan

FISH HOUSE COVE & TIPPIN'S POND

FISH HOUSE COVE AND
TIPPIN'S POND
WATERFRONT USAGE DESIGN CONCEPT
PLANS FOR TIPPIN'S POND AND FISH
HOUSE COVE

Dec 1981

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Township of Pennsauken
Burlington County, New Jersey

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**WATERFRONT USAGE DESIGN CONCEPT PLANS FOR
TIPPIN'S POND AND FISH HOUSE COVE,
PENNSAUKEN TOWNSHIP, NEW JERSEY**

U. S. DEPARTMENT OF COMMERCE NOAA
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Prepared for
The Township of Pennsauken,
Camden County, New-Jersey

by
Rogers, Golden & Halpern
Philadelphia, Pa.

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Draft Concept Plan and Slide Presentation (Task B.a and B.b)
of the Waterfront District
Management Plan: Fish House Cove
and Tippin's Pond

December, 1981

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OCT 8 1981

Project Support

This is the Waterfront Usage and Design Concept Plan Report (Task B) of the Waterfront District Management Plan for Fish House Cove and Tippin's Pond. This report is one product of a planning and design study done for the Township of Pennsauken by Rogers, Golden & Halpern with funds awarded to the township by a Coastal Energy Impact Program (CEIP) Grant from the New Jersey Department of Energy.

Credits and Acknowledgements

John Rogers of RG&H was partner in charge of this project. Robert W. Pierson, Jr. was project manager. This report and the sketch plan graphic that accompany it were written and drawn by Tim Baird, ASLA, and produced by Valerie Smith. The slides were taken by Mr. Baird and Kim Tomlinson. RG&H acknowledge the contribution of ideas to the sketch plan by John Bolton, Chairman of the Pennsauken Waterfront Management Committee, who lead a site visit to Fish House Cove and Tippin's Pond one windy day in October.

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- On grade path at wood's edge
- Boardwalk through wild rice
- Board walk at water's edge

Tippin's Pond

- Draft Concept Plan: Tippin's Pond
- Alternative pedestrian connection
- On grade path through woods adjacent to pond
- On grade path at water's edge

**WATERFRONT USAGE AND DESIGN CONCEPT PLAN FOR
TIPPIN'S POND AND FISH HOUSE COVE
PENNSAUKEN TOWNSHIP, NEW JERSEY**

The purpose of this report is to describe the concept plan for the recreational use of Tippin's Pond and Fish House Cove in Pennsauken Township and to list the slides of these two sites prepared for a slide presentation. Based on township review and comment on the concept plan, Rogers, Golden & Halpern will prepare a subsequent report on the final concept plan.

SCHEMATIC CONCEPT DESIGN

The concept design for Tippin's Pond and Fish House Cove is divided into separate plans, but the site should be considered as one. The plan for Tippin's Pond will provide for limited active recreation, while the plan for Fish House Cove calls for recreation of a more passive nature. The two sites complement each other with their very different natural features, providing the setting for very different kinds of recreational uses. Connecting the two sites by a path system is important as a way to limit access points and automobile/bicycle parking and to create a continuous park encompassing both areas.

The purpose of these plans is to explore all reasonable possibilities for utilizing the recreational resources through sound site design, which makes these resources available to people of all ages, colors, socioeconomic classes, and physical conditions. These plans are intentionally ambitious and assume that site development will proceed in stages as funds become available. In reading the description below, one should refer to the accompanying sketches in plan view and cross section.

Tippin's Pond

The Tippin's Pond site will become the primary entrance and access point or gateway to the entire park. The pond is a resource that lends itself to active recreation such as boating, fishing, and skating, while at the same time it acts as an esthetic focal point that reflects the surrounding vegetation as the seasons change. In providing active recreation and automobile/bicycle parking, this area complements

the more passive feeling of Fish House Cove and also relieves the pressure of overuse and active recreation present in the cove.

The primary public access point occurs near the intersection of the railroad tracks and Cove Road. A landscaped parking lot of porous material provides space for 20 cars and 10 bicycles. The pedestrian path begins here with a park map and description with park regulations. The path at this point is wide enough for emergency and service vehicles necessary to support the boating concession. Just beyond the concession the path joins a pedestrian underpass beneath the railroad tracks that leads to the cove side of the park. The path continues around the perimeter of the lake and moves from lake edge to wooded area adjacent to the lake; this presents the park user with numerous spatial and visual experiences. The path also leads people to the various use areas such as the picnic grove at the top of the escarpment near the old Tippin's home site. This picnic grove gives extended views across the lake because of its topographic location.

As one follows the main path around the lake, another picnic area in the wooded area adjacent to the lake is encountered. Entry to the area could be by another access point located in the Merchantville Ave right-of-way off River Road. This additional parking and access point would alleviate the burden of walking longer distances to picnic tables.

At the end of the path is a small remote picnic area for people who want to walk to the less active side of the lake. Between these two picnic areas is a fishing dock or pier accessible by a boardwalk. If fishing is to become a viable form of recreation here, restorative measures must be taken in order to create a healthy growing medium for the aquatic ecosystem. The final plan will address these and other implementation tasks.

Utilizing the existing recreational resources will be done with minimal environmental impact through the careful placement of only those supportive facilities and site furnishings necessary to support the activities desired. A boathouse and dock will be needed when it is decided to encourage boating as a park use. An amphitheatre in the natural "bow!" of the southwest corner of the lake could be used for educational and entertainment activities such as campfire programs, while doubling as a warming area with fire rings for the winter ice skaters. A fishing platform or

pier would congregate fishermen, thus alleviating bank erosion. The circulation of people in the park would be made possible through a continuous path system, two access points and parking areas for automobiles and bicycles, and a complete sign graphics system consisting of directional and interpretative signs.

The following uses are proposed for Tippin's Pond:

- Walking for pleasure
- Jogging
- Birding
- Picnicking
- Fishing
- Rowboating/Canoeing
- Nature study
- Ice skating

Fish House Cove

The major objective of the design for Fish House Cove is to enhance the existing wildlife habitat while providing amenities that will allow people to enjoy and study the natural systems of this freshwater marsh. Care must be taken to ensure that the encroachment by man does not interfere with the natural systems being studied and enjoyed.

While the major entry will be through the pedestrian underpass from Tippin's Pond, there is also the possibility of entering the site by way of a new access road paralleling the existing Texaco road. At the end of this road is a boat launch and parking area with a connection to the path and boardwalk system that traverses the Fish House Cove site.

The recreational use of the cove is primarily passive, with the users' experience being manipulated by different spatial and visual sequences providing varying aesthetic and educational viewpoints. These sequences are created by the changing height of the boardwalk, the placement of the path and/or boardwalk through both wooded areas and the various zones of marsh vegetation, and the change from an at-grade gravel path to elevated boardwalk. Views from land across the water, from

water to land, and variations of these two are created through the siting of the boardwalk and path. Spatial enclosure is achieved through vegetation and the topographic relief of the railroad embankment. Observation and teaching platforms provide resting areas as well as places for nature study, especially birding. A covered birding blind is a possibility at the edge of the railroad embankment. The actual location of this feature will depend on field checking of existing conditions. Although picnicking could be enjoyed at any of the observation and sitting areas along the boardwalk, there is a picnic grove under the trees at grade near the pedestrian underpass.

The path/boardwalk system is "U"-shaped with two termini, thus keeping observers on the edges of the cove and not in the middle where more disruptions of wildlife would occur. One terminus is an observation and teaching platform with capacity to accommodate small classes and to provide shelter from rain and sun. The other is a gravel-paved observation plaza at the end of Fishers Point. While the majority of the cove users are expected to use the path and boardwalk system for nature study and wildlife observation, it is also possible that fishing could take place here.

As in Tippin's Pond, a sign graphics program, especially interpretive signs, should be developed to lead users through the park experiences. The signs should enhance our sensory perception (touch, smell, sight, sound) of the natural environment. The placement of an interpretive braille sign system on the trail is recommended.

The following uses are proposed for Fish House Cove:

- Walking for pleasure
- Birding
- Picnicking
- Fishing
- Nature study

SLIDE PRESENTATION LISTING

A 35 mm slide presentation for Fish House Cove and for Tippin's Pond was prepared by Rogers, Golden & Halpern for Pennsauken Township based on photographs taken during a site visit with John Bolton, Chairman of the Waterfront Management Committee, and on colored graphics prepared for the Planning and Engineering Report (Task A.b) and the Draft Concept Plan (Task B.a). Below is a descriptive listing of the slides included in each presentation--one for Fish House cove, the other for Tippin's Pond. The numbers in the lists correspond to numbers found on the accompanying slides.

Tippin's Pond

Site Visit

- T.1 Trail leading from Cove Road parking area to edge of Tippin's Pond
- T.2 View across Tippin's Pond from western edge
- T.3 View from western corner of Tippin's Pond along southern edge
- T.4 View from old Tippin's house site toward River Road
- T.5 View from old Tippin's home site toward the tracks
- T.6 View from old Tippin's home site across Tippin's Pond
- T.7 Railroad underpass on Tippin's Pond side
- T.8 View south along railroad corridor between Tippin's Pond and Fish House Cove

Colored Figures from Planning and Engineering Report

- T.9 Vegetation (Fig. 3)
- T.10 Historical places (Fig. 6)
- T.11 Land use (Fig. 8)
- T.12 Zoning (Fig. 11)
- T.13 Land ownership (Fig. 13)
- T.14 Utilities (Fig. 15)
- T.15 Circulation and parking (Fig. 16)
- T.16 Constraints to recreational use (Fig. 18)

Draft Concept Plan

- T.17 Draft concept plan
- T.18 Draft concept plan detail
- T.19 Alternative pedestrian connection
- T.20 On grade path through woods adjacent to pond
- T.21 On grade path at water's edge

Fish House Cove

Site Visit

- F.1 View of Fish House Cove from railroad embankment
- F.2 View of woods along foot of rail embankment, foot house cove
- F.3 View from east corner of marsh of Fish House Cove
- F.4 Fill area along eastern edge of Fish House Cove
- F.5 View west across Fish House Cove marsh
- F.6 View of willow forest and rafted debris in eastern corner of Fish House Cove marsh
- F.7 View of Fish House Cove from eastern edge looking south toward marsh
- F.8 View south across Fish House Cove at edge of marsh
- F.9 View of Fisher Point from eastern edge of Fish House Cove
- F.10 View east across Fish House Cove from approach to Petty Island bridge

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- F.11 Regional setting of Fish House Cove and Tippin's Pond
- F.12 Vegetation (Fig. 2)
- F.13 Flood hazard (Fig. 4)
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- F.17 Zoning
- F.18 Land ownership
- F.19 Utilities
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Draft Concept Plan

- F.21 Draft concept plan
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- F.24 Cross section for both Fish House Cove and Tippin's Pond
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- F.26 Boardwalk through wild rice
- F.27 Boardwalk at water's edge

**FINAL CONCEPTUAL PLANS FOR
THE RECREATIONAL DEVELOPMENT OF
TIPPIN'S POND AND FISH HOUSE COVE**

Prepared for
The Township of Pennsauken,
Camden County, New Jersey

by
Rogers, Golden & Halpern
Philadelphia, Pa.

Final Conceptual Plans (Task C)
of the Waterfront District
Management Plan: Fish House Cove
and Tippin's Pond

January, 1982

Project Support

This is the Final Concept Plan Report (Task C) of the Waterfront District Management Plan for Fish House Cove and Tippin's Pond. This report is the final product of a planning and design study done for the Township of Pennsauken by Rogers, Golden & Halpern with funds awarded to the township by a Coastal Energy Impact Program (CEIP) Grant from the New Jersey Department of Energy.

Credits and Acknowledgements

John Rogers of RG&H was partner in charge of this project. Robert W. Pierson, Jr. was project manager. This report was written by Mr. Pierson and Tim Baird (ASLA). The final concept plan graphics were prepared by Mr. Baird with assistance from Kim Tomlinson and Joan Santucci-McCusker. Grace Witham assisted in report production. RG&H acknowledges the contribution of ideas to the final concept plan by John Bolton, Chairman of the Pennsauken Waterfront Management Committee and Kenneth Carruth, Planning and Zoning Coordinator for the Township. Additional review and comment were received from Ms Geraldine Fenner-McNulty of the New Jersey Department of Energy and during a public meeting on the draft plan.

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(on file at the Township office)

Final Concept Plan: Fish House Cove

Final Concept Plan: Tippin's Pond

FINAL CONCEPTUAL PLANS FOR RECREATIONAL USE OF TIPPIN'S POND AND FISH HOUSE COVE

INTRODUCTION

The purpose of this report is to present and discuss the final conceptual plans for the recreational use of Tippin's Pond and Fish House Cove, along the Delaware River waterfront in Pennsauken Township, New Jersey. The final plans are a revised version of the draft conceptual plans prepared by Rogers, Golden & Halpern. The draft concept plan presented all reasonable possibilities for utilizing the recreational resources through sound site design, which makes these resources available to people of all ages, colors, socioeconomic classes, and physical conditions. The revisions are based on review of the draft plans by Pennsauken Township officials, discussions between RG&H, New Jersey Department of Energy officials, and the township, and comments made by members of the Waterfront Management Committee and citizens at a public meeting held to review the draft plan on January 14, 1982.

Following the final conceptual plans, this report will present design concept standards for various park facilities, give preliminary cost data for park development, and discuss potential waterfront park sites for future study in Pennsauken along the Delaware River and Pennsauken Creek. Appendix A presents discussion of each parcel needed for the Fish House Cove-Tippin's Pond Park.

CHANGES TO THE DRAFT PLAN

The final concept plans for the recreational use of both Tippin's Pond and Fish House Cove are generally the same as the draft plans presented in a previous report. Several important changes were made, however. In each case, the change suggested during draft plan review reduces the overall intensity of possible activities so that the final plan, overall, projects a more passive use of both sites. The changes suggested and action taken are listed below.

Tippin's Pond

Boating is not an appropriate activity due to the size of the pond. It was felt that boating should not be intentionally supported by a boat house, dock, and renting of boats.

If boating by persons carrying in their own boats becomes a problem, this activity can be regulated by ordinance. Thus, the boat house is eliminated. The adjacent boat dock is retained to serve as a fishing pier.

There should be more parking available adjacent to Tippin's Pond. This suggestion was made in anticipation of a heavier demand for parking than the 33 planned spaces. Those spaces, if filled, would bring anywhere from 75 to 120 people, which may prove stressful to the park over the long term. The conclusion was to increase the parking spaces by 7 at the River Road entrance and to monitor the condition of the park and parking space usage to determine if more parking spaces are warranted at some future time. Along the mercantile avenue right-of-way, there is ample area to add parking spaces if needed.

Fish House Cove

The picnic areas at the foot of the cove near the underpass should be removed. This suggestion was made and followed, since it was thought that picknicing is not an activity appropriate to a wildlife sanctuary. Eliminating the picnic tables here will also decrease litter and other maintenance problems on the cove side.

The boardwalk along the Texaco facility out to Fisher's Point should be terminated before the boat launching area. This change was suggested for several reasons. First, the expense of such a long span of boardwalk would be considerable and perhaps prohibitive. Second, public access so close to the hazardous materials in the Texaco tank farm presents a potential safety hazard. Third, security and maintenance problems and expenses could be significant.

The boat launching ramp near the Texaco facility should be limited to use of emergency rescue personnel and their watercraft. The public should not have access to the boat launching area near the Texaco facility. The boat launching ramp should be limited to use by police and fire water rescue personnel and their watercraft. Accordingly, the size of this area has been reduced.

Public access to the cove by way of a grade crossing of the railroad tracks at Cove Road should be eliminated. For reasons of public safety it was suggested that public

access to the cove across the tracks be removed from the plan. The more logical design solution for access is by way of the old underpass at Tippin's Pond.

Emergency motor vehicle access to the boat launching ramp should use the road connecting the Texaco facility with Cove Road. Anticipating an arrangement with Texaco, emergency vehicles do not need a separate road connecting Cove Road to the boat launching site.

The boardwalk along the southwestern edge of the cove may be too long. For reasons of cost, security, maintenance, or environmental impact during construction, another boardwalk alignment may be appropriate. A shorter boardwalk alignment is discussed below.

SCHEMATIC CONCEPT DESIGN

The concept design for Tippin's Pond and Fish House Cove is divided into separate plans, but the site should be considered as one. The plan for Tippin's Pond will provide for limited active recreation, while the plan for Fish House Cove calls for recreation of a more passive nature. The two sites complement each other with their very different natural features, providing the setting for very different kinds of recreational uses. Connecting the two sites by a path system is important as a way to limit access points for automobile/bicycle parking and to create a continuous park encompassing both areas.

There are several reasons for considering the two sites as one. First, the two sites are related by access. Visitors to the cove arriving by automobile, bicycle, or foot will first enter the Tippin's Pond area where car and bike parking will be provided. Access to the cove is by foot through an underpass beneath the railroad tracks. This arrangement achieves several objectives. By using the underpass, pedestrians are kept from crossing the tracks, thus assuring a safe transition from the pond to the cove. In addition, automobiles are not allowed to intrude either visually or as a disturbance to wildlife in the cove.

The second reason the sites complement each other so well is that the very passive recreational activities appropriate to a wildlife sanctuary in the cove are naturally separated by the rail embankment from the more active recreation that can take place around the pond. Since visitors to the cove will probably not want to limit their visit

solely to wildlife observation, the pond site serves as an area immediately adjacent where other trip related activities can occur: gathering point before and after trips to the cove, pretrip lecture site, places to eat a picnic lunch, a pleasurable walk around a much more intimate natural setting that are offered by the open expanses of the cove. Without the pond and the facilities on its shores, trips to the cove would be much more limiting and access would be difficult or detrimental to the sanctuary nature of the cove.

Tippin's Pond

The Tippin's Pond site will become the primary entrance and access point or gateway to recreational opportunities of the pond and the cove. The pond is a resource that lends itself to several recreational activities such as picnicking, fishing, and skating, while at the same time its surface acts as an esthetic focal point that reflects the surrounding vegetation as the seasons change. In providing active recreation and automobile/bicycle parking, this area complements the more passive feeling of Fish House Cove and also serves as a convenient "staging area" for visits to the cove and for visit-related activities such as picnics and outdoor lectures. This relationship of the two sites helps to relieve the pressure of overuse on the cove, whose role as a wildlife sanctuary is more fragile than the more active recreational purposes of the pond. The main features of the concept plan for recreational use of Tippin's Pond are shown in Figure 1. The description below will generally follow a main path counterclockwise around the pond, starting with the main entrance off Cove Road.

The primary public access point occurs near the intersection of the railroad tracks and Cove Road. A landscaped parking lot of porous material provides space for 20 cars and 10 bicycles. Buses for school trips could also park here. The pedestrian path begins here with a park map and description with park regulations. The path at this point is wide enough for emergency and park maintenance vehicles. As the path emerges along the pond's northwestern edge, there is a short side path leading to a T-shaped fishing pier. Just beyond the fishing pier, the path joins a pedestrian underpass beneath the railroad tracks that leads to the cove side of the park. The underpass is now filled and would have to be opened to provide pedestrian access to the cove. A gate at the underpass can be used by the township to block access to the cove during particular times of year or at night if necessary.

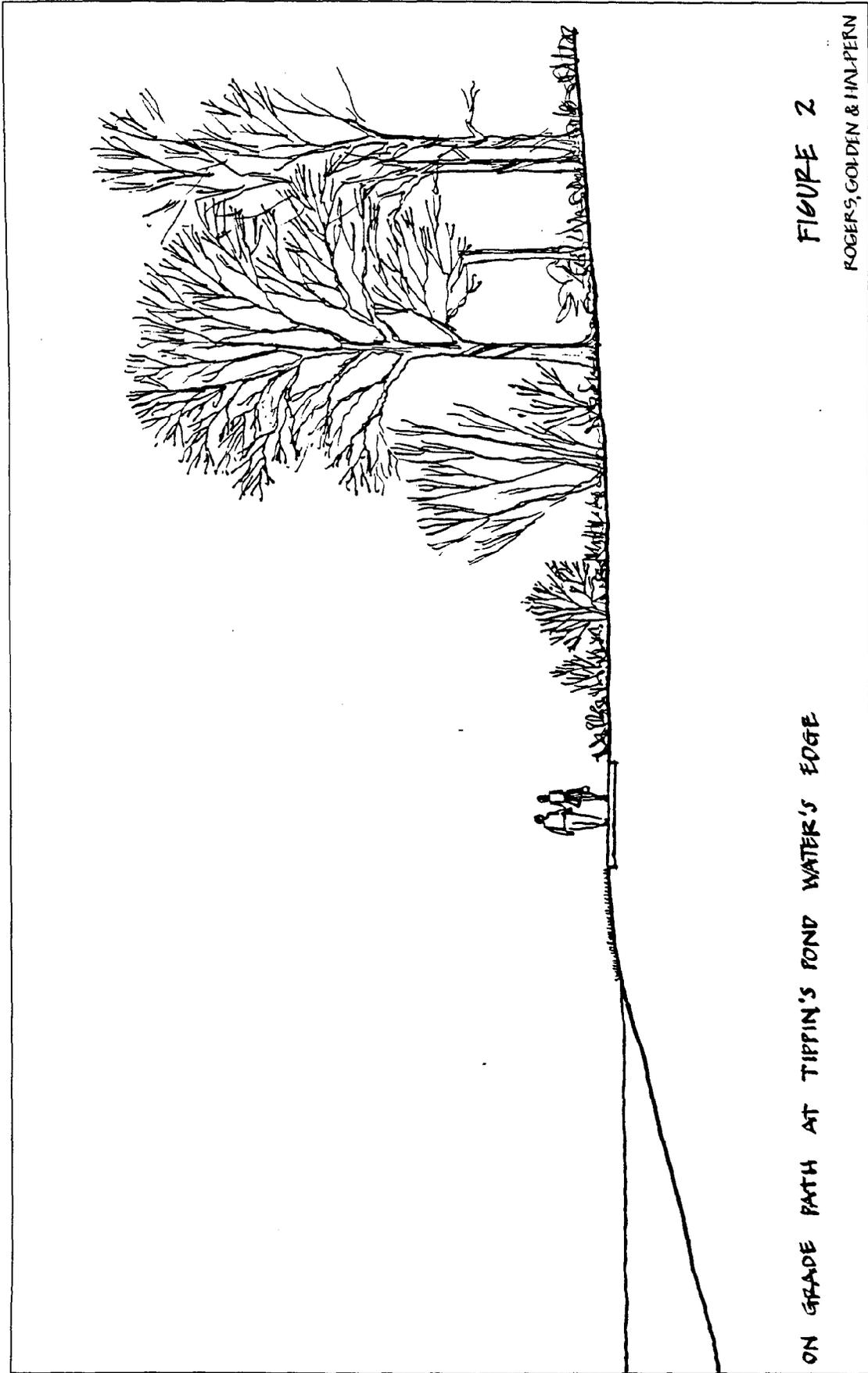
As the path turns around the western corner of the pond, there is an amphitheater consisting of semicircular bench seating facing the pond. The amphitheater can be used for performing art groups, campfires or lectures on cove wildlife in the warmer months, and as a skate changing area in the winter. A fire ring located near the pond's edge will contain fires to warm skaters. The lake should be lighted with one or two 20 foot high standards with flood lights to extend the usage of the park to hours after dark, especially for winter skating. These light standards should be located along the southern bank of Tippin's Pond near the fire ring. A side path at the edge of the amphitheater leads up to a plateau, the former Tippin's house site, where a picnic area overlooks the pond. The home site should be marked with a historical sign to denote importance to the area. A restroom in the woods near the picnic area is close to sewer and water hookups.

The paths planned from the main parking area to the picnic area and restrooms on the plateau and through the underpass to the cove boardwalks will be barrier free and the surface suitable for handicapped visitors.

The path continues around the perimeter of the lake and moves from lake edge to the wooded area adjacent to the southwest edge of the lake presenting the park user with numerous spatial and visual experiences (see Figures 2 and 3). As one follows the main path around the lake, a second picnic area in the wooded glen adjacent to the lake is encountered.

The second public access point to the cove and pond is from another parking area for twenty cars just off River Road on the Merchantville Avenue right-of-way. It can be expanded along the right-of-way if more spaces are needed. Paths from the parking area lead down the escarpment to the pond's edge to join the perimeter path along the southern corner of the pond. In this area, erosion control measures such as mechanical slope stabilization and planting are planned to stop or reduce local but severe erosion of the escarpment.

At the end of the main path on the pond's northeastern edge is a third picnic spot in a remote area for people who want to walk to the less active side of the lake. Between the last two picnic areas is a second fishing pier accessible by a boardwalk across a low-lying marshy area. This marsh area serves to filter storm water from two storm drains emptying into Tippin's Pond from the drainage area beyond River Road. The natural wet-adapted vegetation here can be supplemented by additional plantings and perhaps by



ON GRADE PATH AT TIPPIN'S POND WATER'S EDGE

FIGURE 2

ROGERS, GOLDEN & HALPERN

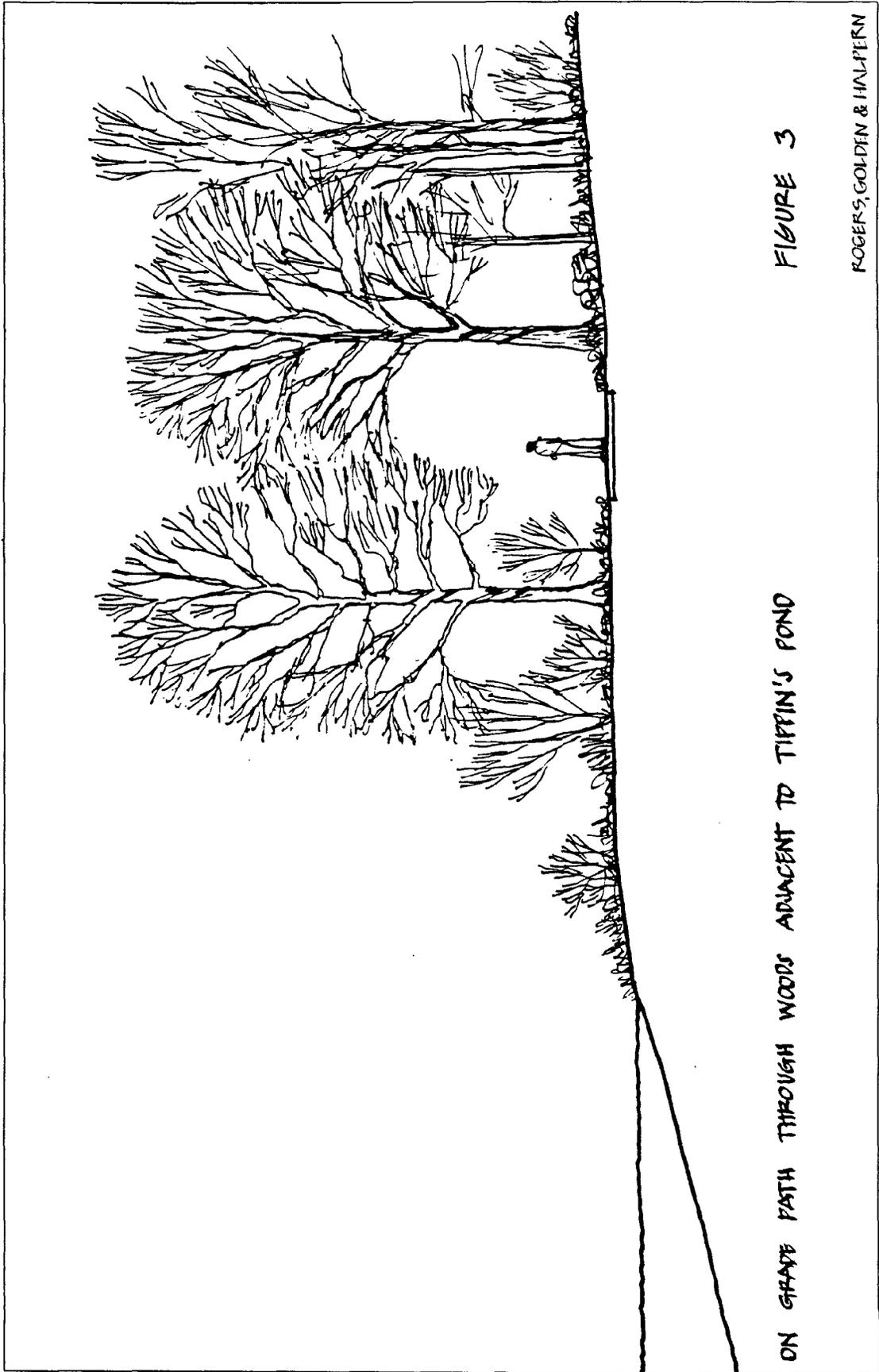


FIGURE 3

ON GRADE PATH THROUGH WOODS ADJACENT TO TIPPIN'S POND

ROGERS, GOLDEN & HALPERN

a minimal confinement structure that would assure the full benefit to the pond of runoff-filtering capabilities of the marsh.

Utilizing the existing recreational resources will be done with minimal environmental impact through the careful placement of only those facilities and site furnishings necessary to support the activities desired. The activities supported fit reasonably well into the natural environment of the pond. They include:

- o picnicking
- o ice skating
- o nature study
- o birding
- o jogging
- o walking for pleasure.
- o fishing

These activities, using the facilities provided, are of an intensity and scale that are compatible with the carrying capacity of the pond and its immediate uplands.

A cross section of the plan for Tippin's Pond is shown in Figure 4.

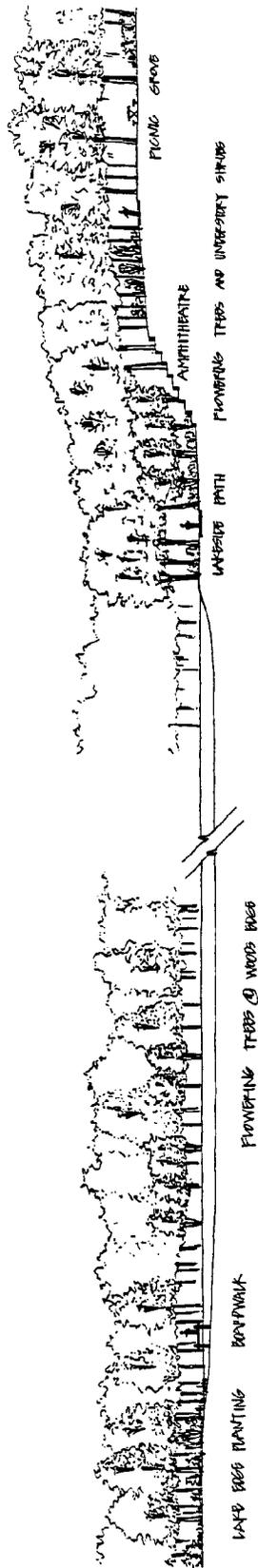
Fish House Cove

The major objective of the design for Fish House Cove is to preserve and enhance the wildlife habitat while providing select facilities that will allow people to enjoy and study the natural systems of this freshwater tidal marsh, the largest remaining such marsh along the Delaware River in Camden County. Care must be taken to ensure that the encroachment by man does not interfere with the natural systems being studied and enjoyed. The plan presented below attempts to achieve this by allowing strictly passive nature observation type activities in the type of facilities provided. A sketch of the final concept plan for recreational use of Fish House Cove is presented in Figure 5.

The passive recreational use of the cove is manipulated by different spatial and visual sequences providing varying aesthetic and educational viewpoints. These sequences are created by the changing height of the boardwalk, the placement of the path and/or boardwalk through both wooded areas and the various zones of marsh vegetation,

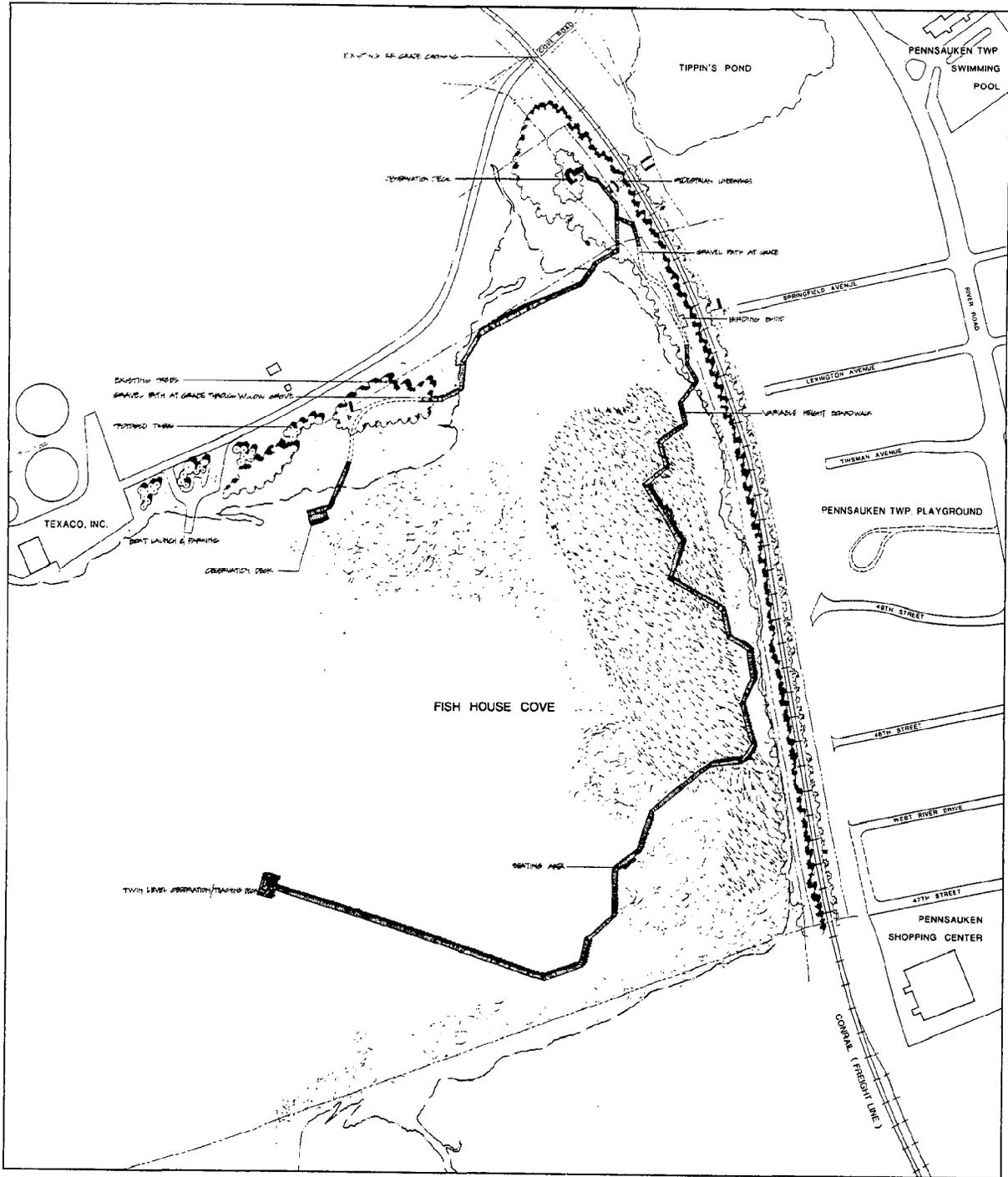
FIGURE 4

TIPPIN'S POND RECREATIONAL AREA
PENNSAUKEN TOWNSHIP, NEW JERSEY



SECTION - ELEVATION A-A'

ROGERS, GOLDEN & HALPERN



FISH HOUSE COVE

WILDLIFE SANCTUARY
 PENNSAUKEN TOWNSHIP
 WATERFRONT DISTRICT MANAGEMENT PROGRAM

ROGERS, GOLDEN & HALPERN
 PHILADELPHIA, PENNSYLVANIA



LEGEND

- EXISTING TREE CANOPY
- PROPOSED TREES
- GRASSES, MARSH PLANTS, SHRUBS, OR GROUND COVER
- LAWN
- PAVED BOARDWALK
- BRICK PAVED PEDESTRIAN PATH
- DITCHES OR DRAINAGE
- SURFACE WATER
- WILD RICE
- BALLARD
- CROSS SECTION REFERENCE LINE

FINAL CONCEPT PLAN

1/14/82

Figure 5

and the change from an at-grade gravel path (Figure 6) to elevated boardwalk (Figure 7). Views from land across the water, from water to land (Figure 8), and variations of these two are created through the siting of the boardwalk and path. Spatial enclosure is achieved through vegetation and the topographic relief of the railroad embankment. Observation and teaching platforms provide resting areas as well as places for nature study, especially birding. A covered birding blind is a possibility at the edge of the railroad embankment. The actual location of this feature will depend on field checking of existing conditions. Along the boardwalk and paths and on the platforms, there are various seating areas for visitors to rest or from which to observe the marsh. A cross section of the plan for Fish House Cove is shown in Figure 9.

The path/boardwalk system is "U"-shaped with two termini, thus keeping observers on the edges of the cove and not in the middle where more disruptions of wildlife would occur. One terminus is an observation and teaching platform with capacity to accommodate small classes and to provide shelter from rain and sun. The other is a smaller observation deck near the boat launch. While the majority of the cove users are expected to use the path and boardwalk system for nature study and wildlife observation, it is also possible that fishing may take place here.

If it is determined that the boardwalk as it appears in Figure 5 is too costly due to its length, an alternative, shorter alignment could be selected that achieves a similar variety of visual experiences, but may intrude into the center of the marsh. Such alternative boardwalk/path alignment is shown in Figure 10. Note that the open water experience is achieved by an extension of the boardwalk from the northeast shore and that the locations of the observation decks are changed.

As in Tippin's Pond, a sign graphics program, especially interpretive signs, should be developed to lead users through the park experiences. The signs should enhance our sensory perception (touch, smell, sight, sound) of the natural environment. The placement of an interpretive braille sign system on the trail is recommended.

The following uses are proposed for Fish House Cove:

- o walking for pleasure
- o birding
- o nature study
- o fishing

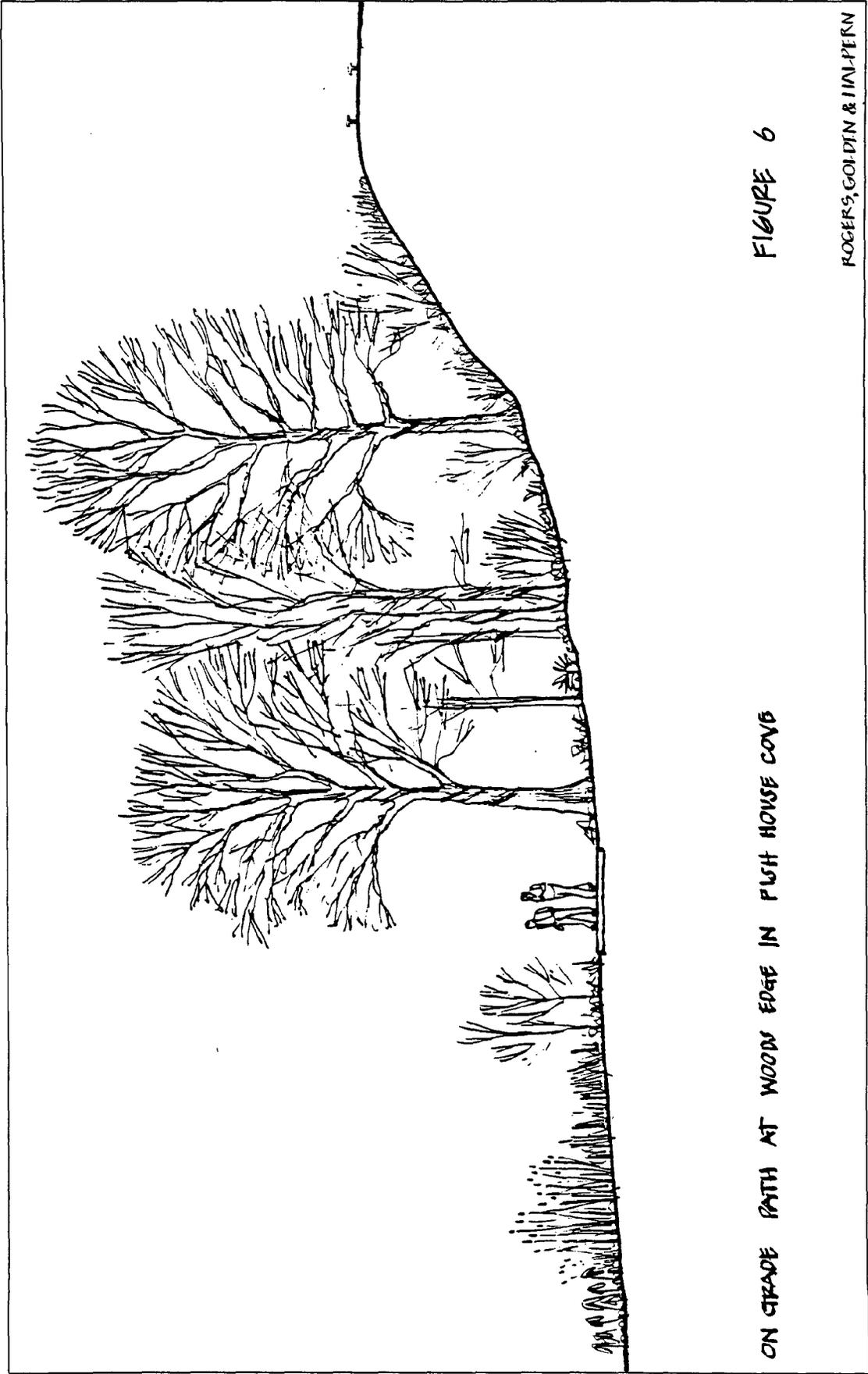


FIGURE 6

ON GRADE PATH AT WOODS EDGE IN PULP HOUSE COVE

ROGERS, GOLDIN & HILPERN

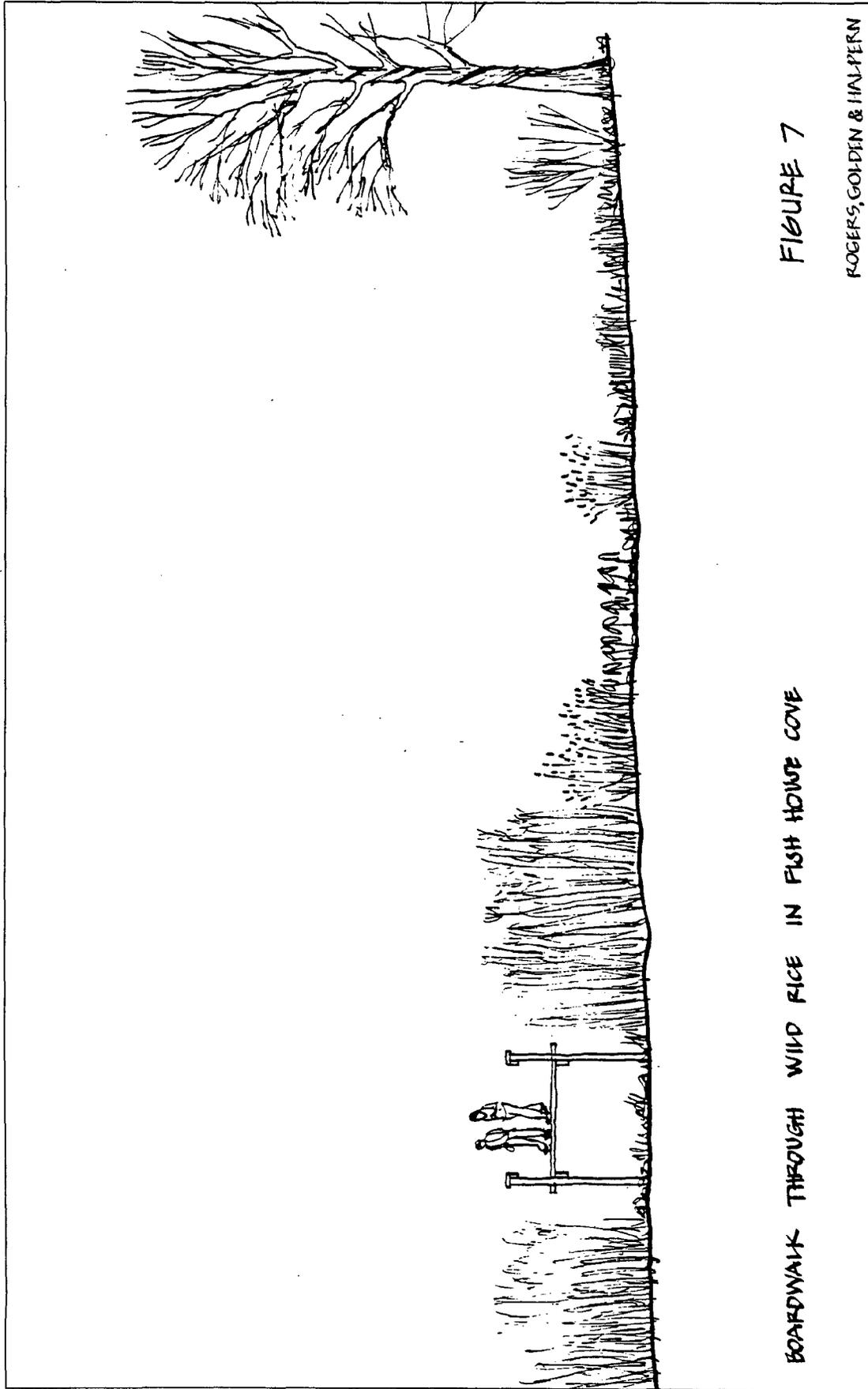


FIGURE 7

BOARDWALK THROUGH WILD RICE IN FISH HOUSE COVE

ROGERS, GOLDEN & HALPERN

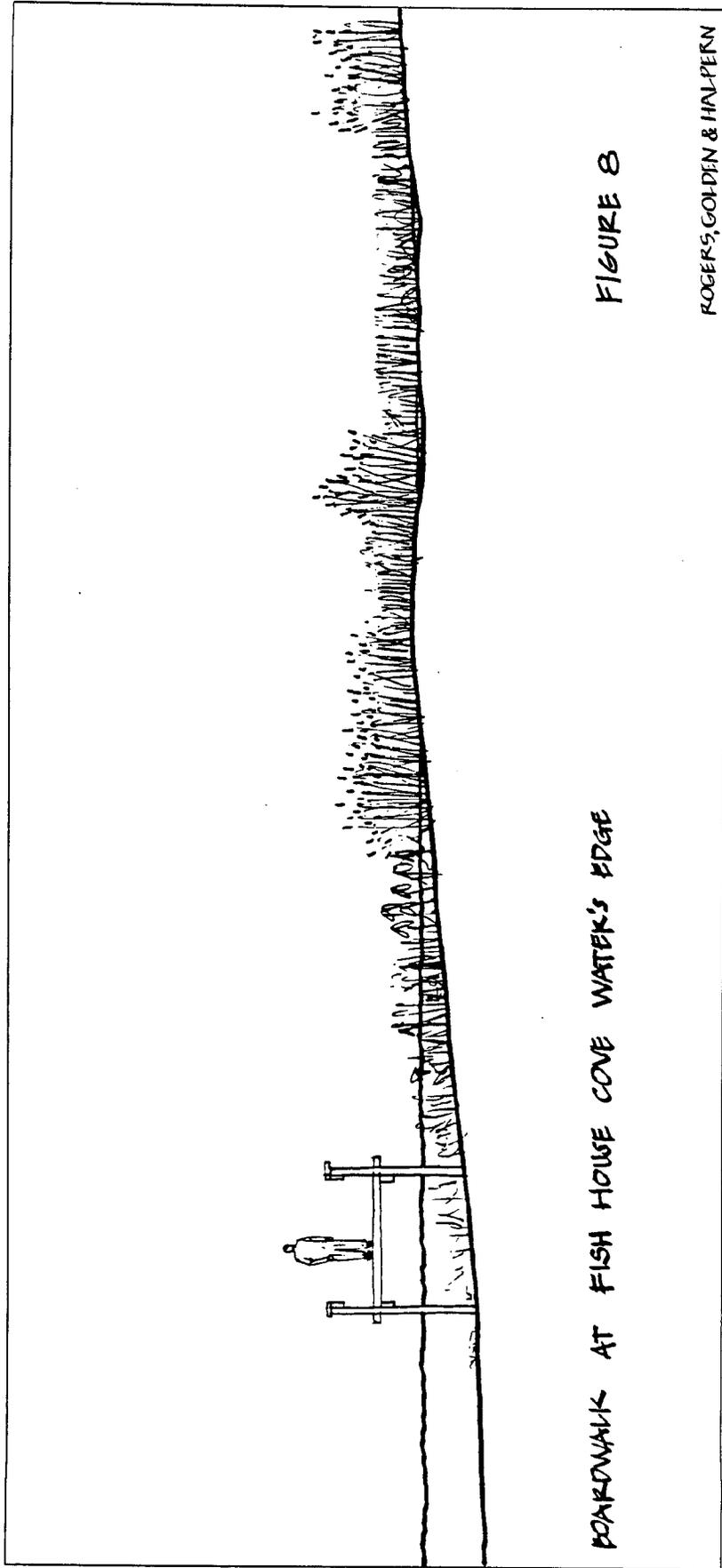


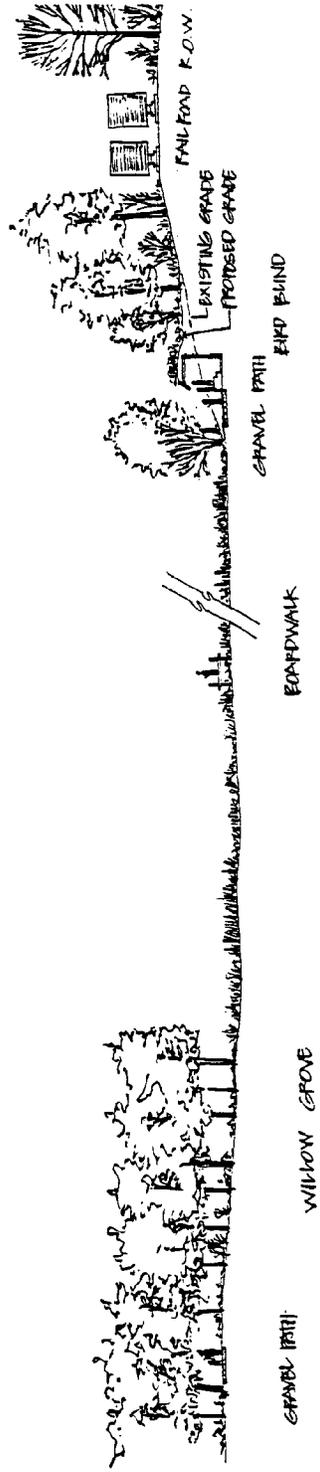
FIGURE 8

BOARDWALK AT FISH HOUSE COVE WATER'S EDGE

ROGERS, GOLDEN & HALPERN

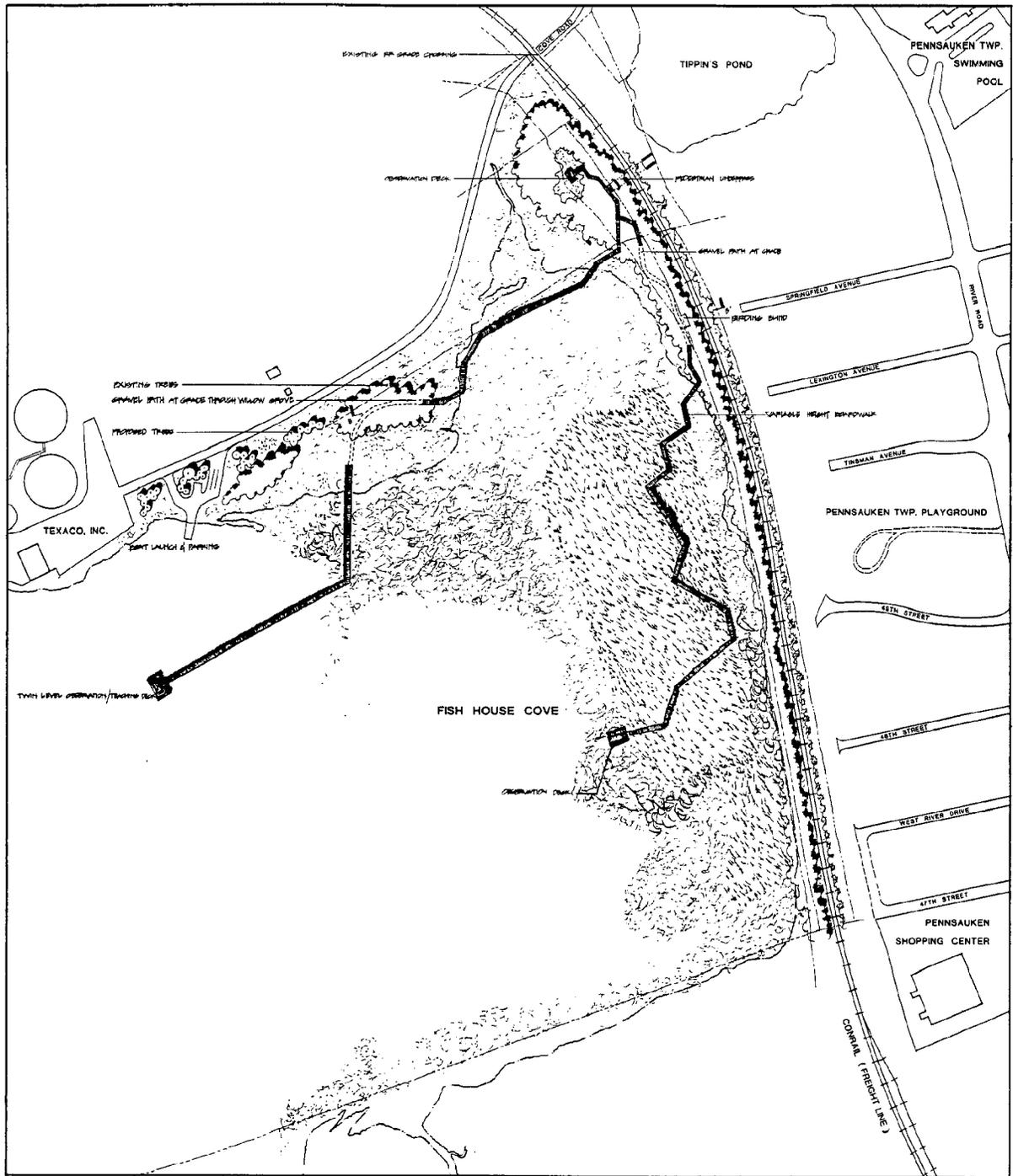
FIGURE 9

FISH HOUSE COVE WILDLIFE SANCTUARY
PENNINGTON TOWNSHIP, NEW JERSEY



SECTION ELEVATION B-B'

ROGERS, GOLDEN & HALPERN



FISH HOUSE COVE

WILDLIFE SANCTUARY

PENNSAUKEN TOWNSHIP
WATERFRONT DISTRICT MANAGEMENT PROGRAM

ROGERS, GOLDEN & HALPERN
PHILADELPHIA, PENNSYLVANIA

LEGEND

- EXISTING TREE CAVITY
- PLANTED TREE
- GRASSES, MARSH PLANTS, SHRUBS, OR GROUND COVER
- LAWN
- WOOD BOARDWALK
- GRAVEL PAVED PEDESTRIAN PATH
- BRICK PAVERS
- SURFACE WATER
- WILD RICE
- ISLAND
- CROSS SECTION REFERENCE LINE

FINAL CONCEPT PLAN

Figure 10

Alternative alignment of boardwalk in Fish House Cove

Impacts and Their Mitigation

The impacts to be expected from development and use of Tippins Pond are mostly positive since the plan incorporates features that correct existing problems found on the site. There may be minor erosion problems as paths, amphitheater seats and picnic tables are installed. Installation of fishing piers will require disturbance of the pond bottom resulting in brief water turbidity. Both these effects will be highly localized and transitory. Negative impacts associated with park use are not difficult to anticipate since the site has been used for many of the planned activities over the years. Use impacts that may occur will be associated with heavier participation in these same activities. Vandalism, littering, breaking of tree branches for winter fires, overfishing and trampling of understory vegetation are some of these impacts. One off-site impact may be the use of Cove Road for overflow parking during periods of high park use. Since this road receives heavy use by large trucks with hazardous loads, parking controls may have to be implemented.

There are no known historical or archeological resources of state significance on the Tippin's Pond site. The old Tippins Pond house, of local historical interest, unfortunately burned down several years ago. There is an old house adjacent to the Pond on Cove Road which once served as a stagecoach stop in colonial times. Park development and use is compatible and complementary to this structure and its setting.

For Fish House Cove, development consists of construction of paths, boardwalks with several seating areas, a birding blind and observation decks at either end of the boardwalks. Impacts associated with construction of the paths and birding blind at the foot of the railroad embankment are cutting vegetation for the path right-of-way, and some erosion that may occur before path aggregate is placed.

The largest impact of the entire plan for both sites will be the disturbance to the marsh that will occur in placing piles for the boardwalk and observation decks. During construction, a path 10-12 feet wide along the boardwalk right-of-way will be disturbed by pile driving equipment resulting in destruction of much of the vegetation in this path and suspension of organic marsh muck soils in the the tidal waters.

Impacts associated with the use of the cove are limited to littering, noise and other human annoyances perceived by wildlife.

There are no known specific historical or archeological sites in the Cove area. The Cove area is known as the home of Chief Tamane (seventeenth century) but no specific site is assigned. Preservation of the Cove and its marsh as a wildlife sanctuary is fully consistent with the previous Indian presence in the area.

There are a number of mitigating measures included in the plans to develop Tippins Pond and Fish House Cove for recreational use that will either reduce impacts associated with plan implementation or correct problems now in evidence. Table 1 lists these impacts and planned mitigation measures.

Environmental Trade-Offs

As indicated earlier, short term impacts associated with construction and installation of park facilities are likely to be highly localized and fade rapidly after the construction phase. The most serious impact will be the disturbance of the marsh and waters of Fish House Cove associated with the installation of pilings to support the boardwalks, although this too is expected to heal itself within a full growing season as marsh vegetation from adjacent areas invade the disturbed areas.

Long term impacts will develop gradually over time with more intensive use of facilities occurring as more people become familiar with the park. Long term negative impacts include gradual destruction of understory vegetation and damage to park facilities. The possibility of long term overuse, however, is somewhat self limiting in the design. Only 40 parking spaces are provided, so that visitors from outside the immediate neighborhood are denied convenient access to the park if those 40 parking spaces are filled. Pedestrian access is limited to visitors from the immediate neighborhood who could be expected to look after the park and monitor its condition.

Short and long term impacts that are unavoidable must be balanced against the recreational opportunities that this park will offer to New Jersey citizens. Located as they are in a heavily residential/industrial area, Tippin's Pond and Fish House Cove provide a rare opportunity for urban dwellers to experience a variety of natural settings within a relatively short distance.

IMPACT	MITIGATION MEASURE	MITIGATION MEASURE DESCRIPTION
Water pollution from storm water runoff entering Tippin's Pond	Marsh vegetation filter; porous surfaces.	The area below two storm water outfalls near River Road will be planted in marsh vegetation. Site preparation will include minor clearing, creation of a small sedimentation pool and grade level barriers to direct storm water through the planted vegetation before it emerges at the pond's edge. Gravelled parking areas and paths will reduce direct runoff to the pond from these park facilities.
Erosion of escarpment above south west edge of pond	Erosion control structures, bank stabilization, paths with steps to descend escarpment	Areas of severe erosion will be terraced and planted with a cover species. Pedestrian access to these areas will be blocked. Path alignment and construction will avoid areas of steep slopes or include railroad tie stepping where necessary.
Bank erosion	Fishing piers	Fishing piers will attract fisherman from nearby banks thus decreasing bank erosion caused by foot traffic.
Foot traffic damage to forest understory	Well marked paths.	Construction of well marked paths along the more heavily used trails will concentrate pedestrian traffic on these so that forest understory is protected.
Noise, dumping of litter, visual intrusion of River Road traffic.	Dense planting along River Road; litter baskets	A dense planting of sound absorbing and armored species along River Road at the top of the embankment will reduce several existing impacts at once: traffic noise will be reduced, traffic will not be visible in winter time and persons attempting to dump trash down the embankment will be discouraged by an armored species such as Pyrocanthus. Placement of litter baskets near picnic tables, amphitheater, fishing piers, park entrance and along the paths and boardwalks will reduce park littering. Controlled access to the parking area off River Road will prevent dumping near the old Tippin house site.
Trash at several spots on site	Clean up	Park development will include trash clean up activities. Collected trash can be placed in dumpsters for landfill disposal; a backhoe may have to be used to remove, grade, or bury dumped fill and aggregate.
Vandalism	Well built facilities	The simple park facilities and accessories are specifically designed to resist damage from misuse or vandalism (see Figures 11-20).
Destruction of marsh vegetation by pile driving equipment	Reestablishing marsh vegetation beneath boardwalk; retard edge erosion	Rock filled gabions can be placed across the scarred area to retard tidal velocities that scour edges and to trap plant debris. Over time native marsh species will be better able to invade the scarred areas to reestablish the marsh cover.
Disturbance of cove wildlife by human presence	Signage	Signs placed at the cove entrance will request visitors not to disturb the wildlife of the cove by unnecessary noise and quick movements.

Table 1. Environmental Impacts and mitigation measures for Tippin's Pond and Fish House Cove

Alternatives

Due to the uniqueness of Tippin's Pond and Fish House Cove in Pennsauken Township, there are really no alternative sites in the township that could provide such a rich variety of natural experiences at the water's edge. Less development of recreational facilities for the two areas than that planned is possible but would not be too much of an improvement in access to recreational opportunities than that which the site currently provides. A more ambitious plan would result in more intense use of the site either through addition of more facilities of the same type proposed or addition of facilities for more active recreation. In either case, a more ambitious plan would increase the use potential of the site and its attendant impacts. The draft plan did consider several more active recreational features for both sites that were subsequently eliminated in the Final Concept Plan since it was thought that use of these features could run counter to the objectives to conserve the natural setting of the two sites. These alternatives are discussed in the second major section of this report. The plan selected has built on traditional informal use patterns at the pond and has balanced a reasonably complete set of site-compatible recreational uses against possible long term impacts so that monitoring of park use and condition over the years can determine whether or not corrective measures should be taken to reduce impacts or whether expansion of facilities is possible.

Due to the uniqueness of these sites, either separately or together, there are not other means of meeting the project objectives significantly different from the plan as proposed.

WATERFRONT SITES FOR FUTURE STUDY

The waterfront recreational plans for Fish House Cove and Tippin's Pond presented in this report are part of an overall concept of a waterfront park system for Pennsauken Township that is made possible by the Waterfront Management Area regulations in the township zoning code (sec. 126.701.1). Except for water-related uses and development deriving economic benefit from direct access and proximity to the waterfront, all development proposed for the Pennsauken waterfront along the Delaware River and other natural streams must be setback 200 feet from the mean high water level in residential areas and 100 feet in commercial and industrial zones. This setback

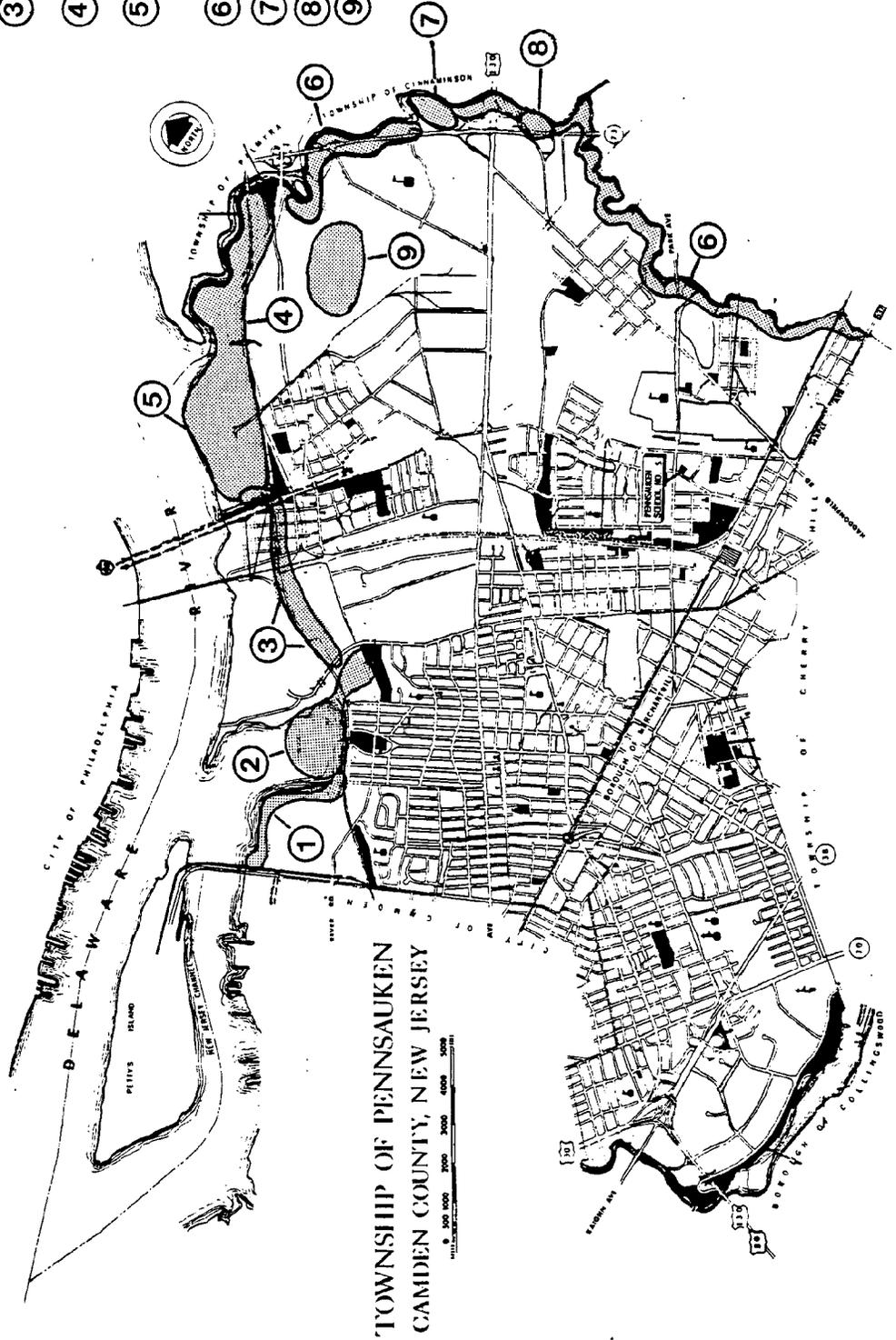
requirement is intended to create pedestrian access in a continuous corridor along the waterfront.

There are a number of sites along the Delaware River and Pennsauken Creek that bear attention by the Township in the future for the purpose of creating a waterfront park system. These sites are shown in Figure 21. Each site as numbered in the figure is described in terms of its location, approximate size, ownership and potential use.

1. Path along the Delaware River. This path to the south of Fish House Cove would connect to the planned boardwalk of the cove and terminate at the Pennsauken Township-Camden County boundary on 36th Street. This land is owned by the Vineland Construction Corporation.
2. Fish House Cove and Tippin's Pond. Located on the Delaware River, the cove and its access point through Tippin's Pond are the subject of this study. Currently, a grant application to New Jersey Department of Energy's Coastal Energy Impact Program is being made for land acquisition and park development (See Appendix B). The total site area is about 150 acres, only 12 acres of which is presently owned by the township. The State owns the largest parcel, a 123 acre lot that comprises the cove. These and other parcels of critical importance to this project are discussed in Appendix A.
3. Hiking/biking trail along the Conrail right-of-way. Although not a waterfront alignment a trail along the railroad up to Delair would connect Tippin's Pond to the waterfront north of Delair as described under site 5 below. This right-of-way is owned by Conrail and several individuals.
4. Historic Griffith Morgan House. Located in the Delair section of Pennsauken, the Griffith Morgan house is the oldest residential structure in Camden County. It was recently restored by the Griffith Morgan Committee of the Pennsauken Historical Society. The township could give this old structure a park setting by acquiring land between it and the Delaware for waterfront recreational uses, including restoration of the beach at Delair.
5. Site for planned waterfront community development. The township is currently looking into purchasing a several hundred acre tract of land from

Figure 21. Potential waterfront sites for future study

- ① Path along the Delaware River
- ② Fish House Cove and Toppins Pond waterfront park (planning underway)
- ③ Hiking/biking trail along rail ROW
- ④ Historic Griffith Morgan House
- ⑤ Planned waterfront community development including marina, boat launch
- ⑥ Path along Pennsauken Creek
- ⑦ Park with boat dock on Pennsauken Creek
- ⑧ Park on Pennsauken Creek
- ⑨ Ski slope on completed landfill



Camden. This large tract, used by Camden as a well field, lies along the Delaware between Delair and the mouth of the Pennsauken Creek. Portions of this site could be sold for development according to a master plan with residential and commercial uses focussing on various waterfront recreational opportunities including a public marina and a boat launching area, set in a continuous linear park along the Delaware.

6. Path along Pennsauken Creek. A continuous path could be established along Pennsauken Creek from the route 537 bridge in the southeast corner of the township to its mouth where it could tie into the planned waterfront community discussed above. This path would be located on the 200 foot waterfront buffer strip established by the Waterfront District Area regulations. There are many properties along this creekfront alignment.
7. Park with boat dock on Pennsauken Creek. The township owns a six-acre property along Pennsauken Creek just north of the intersection of routes 130 and 73. This site could be developed as a park with boat docking facilities and picnic areas for use by boaters arriving on Pennsauken Creek.
8. Park on Pennsauken Creek. There is another approximate six-acre parcel owned by the township along Pennsauken Creek less than a half mile upstream from the park-with-boat-dock site discussed above. The potential of this property for park purposes could be evaluated.
9. Ski slope on completed landfill. One section of the the Pennsauken landfill along River Road is completed and sealed. The topographic relief created could be put to recreational use by creating a ski slope and developing ski support facilities. This site's relatively limited potential for other land uses makes it a good candidate for a recreational use such as skiing. Although not physically part of a waterfront park its use as a ski slope offers a seasonal and recreational contrast to waterfront activities.

The concept of a waterfront park system begins with a broad definition of system components which the above list begins to do. All but the last form a continuous linear pattern along the Delaware River and Pennsauken Creek waterfronts. Along the

Delaware, only the waterfront between Delair and Fishers Point is excluded due to the petroleum transfer operations of Texaco and Amerada Hess Corporations.

Selection of the next system component for more detailed study could be made in several ways:

- o extend the system stepwise from the Fish House Cove/Tippin's Pond park.
- o select the next system component on the basis of current township ownership
- o focus on several key components of the system to create a logic for eventually connecting them.

The last criterion appears to be the best of these three as a strategy. Following this strategy, we recommend that two sites for future study be selected that are well distributed along the waterfront and will of themselves focus considerable attention on the Pennsauken waterfront. This approach points to the planned waterfront community development (5) along the Delaware near Delair as one site and the park with boat dock (7) along the Pennsauken Creek as the other. Although ambitious and complex, the planned waterfront development concept provides an excellent forum for public debate on the use of Pennsauken's waterfront and on the township's role as the creator of the waterfront's destiny. The park with boat dock site (7) is also a high profile project although in a much more limited sense than the planned waterfront development. Current township ownership of site 7 also favors its selection. As water quality in the Delaware River continues to improve there will be more demand for docking facilities in park settings that owners of small boats can reach this site and the Borough-Dover House for a holiday picnic or outing. These two sites complement each other well with respect to boat users.

After plans for sites 5 and 7 are prepared and development is assured, a much more compelling case can be made to connect them to each other and to Fish House Cove/Tippin's Pond with other system components.

While plans for sites 5 and 7 are progressing towards implementation, development applications for properties elsewhere in the waterfront management area may be received for township review and approval. The township should be prepared for these

with precise ideas on design treatment of the waterfront buffer areas provided for by ordinance. Our second recommendation for future study is that such design guidelines be developed, made public by ordinance or resolution, and used to judge proposals for waterfront development.

PRELIMINARY SITE DEVELOPMENT COST ESTIMATE

As part of the final concept plan a cost estimate for the major components of the park facilities discussed under Schematic Concept Design has been developed. This estimate, shown in Table 2 gives separate costs under earthwork, paving, structures, furnishings and planting. The unit basis for the cost estimate is given followed by the number of units and the unit cost which includes materials, labor and equipment operation. The totals listed on the right are the summed products of the units required and the costs per unit.

According to the table, the major cost component is for construction of the 6 foot wide boardwalk as shown in Figure 10. This cost could be reduced in several ways one of which is to shorten the total length. Soil tests may also indicate other cost reductions. One area of uncertainty is in the costs to open the pedestrian underpass. Excavation may reveal that the whole tunnel may have to be replaced which would be more expensive than what is shown.

Table 2. Preliminary site development cost estimate

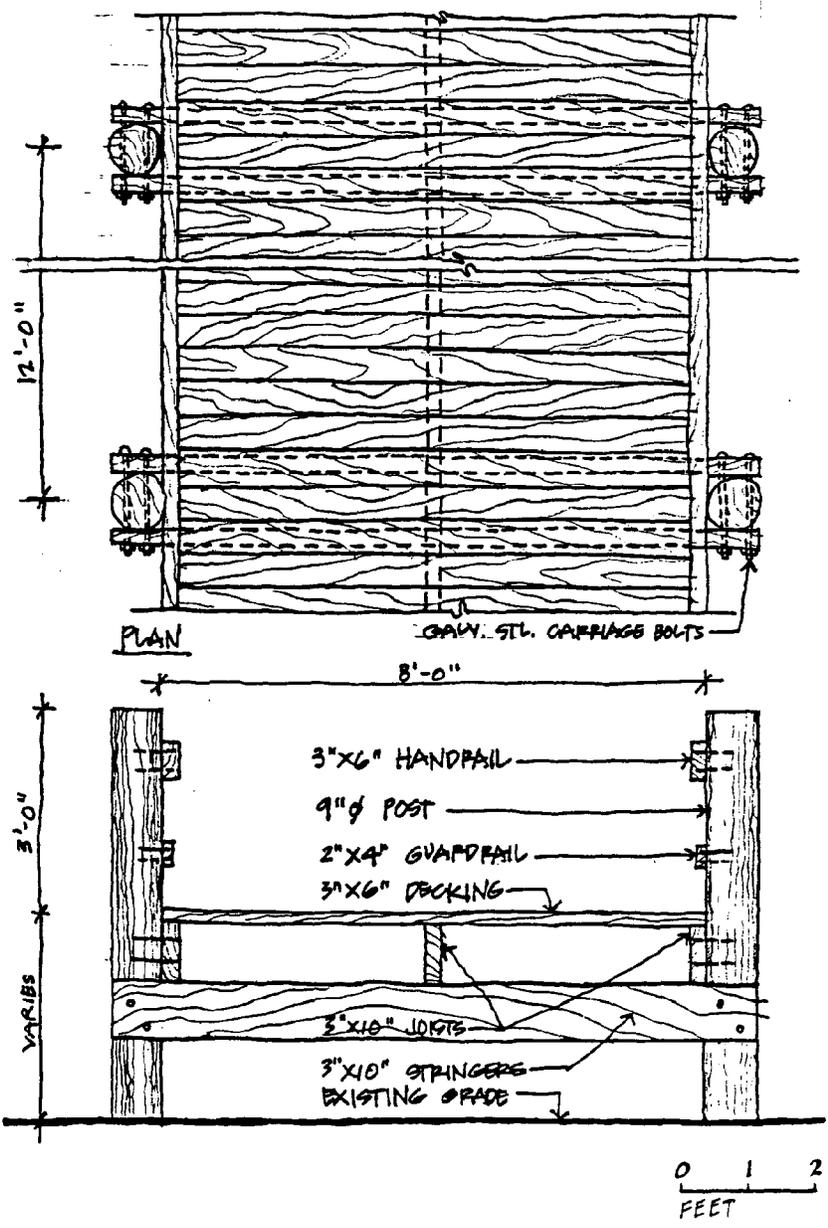
Item	Unit	No. of units	Cost/unit	Cost
Site preparation	L.S.	--	--	\$ 5,000
Boardwalks, 6 ft wide	sq ft	21,000	\$ 4.60	96,600
Observation decks/fishing piers	sq ft	6,860	4.60	31,560
Piles, 10 in diameter, 30 ft long	lf	21,000	10.00	210,000
Outdoor furniture				
Picnic tables	ea.	15	600.00	9,000
Litter baskets	ea.	5	300.00	1,500
Amphitheater benches, 8 ft	ea.	40	250.00	10,000
Bollards	ea.	6	50.00	300
Park sign	ea.	2	1,000.00	2,000
Light standards	ea.	2	1,000.00	2,000
Path lights	ea.	6	400.00	2,400
Chain link fence, 6 ft high, 9 gage	lf	700	14.60	10,220
Landscaping				
Shade trees 2-2½ in caliper	ea.	8	275.00	2,200
Flowering trees 8-10 ft	ea.	65	65.00	4,230
Evergreen buffer planting 42-48 in	ea.	30	100.00	3,000
Seeding, fertilizing, mulching	sq ft	37,800	.02	760
Cattail filter planting	sq ft	500	.50	250
Path paving, crushed stone	lf	2,660	3.00	7,980
Path paving, bituminous	lf	1,270	4.60	5,840
Parking area paving, crushed stone	sq yd	3,400	4.50	15,300
Parking area paving, bituminous	sq yd	90	7.00	630
Concrete boat ramp	cu yd	20	320.00	6,400
Restroom facilities and structure	L.S.	--	--	15,000
6-in sanitary sewer	lf	100	5.00	500
Excavation for pedestrian underpass	cu yd	500	.70	350
Bird blind	sq ft	600	15.00	9,000
Shoring and ramp for pedestrian underpass	L.S.	--	--	40,000
Gate	ea.	1	700.00	700
18-in RCP storm sewer	lf	400	16.00	6,400
Site development cost				499,120
Engineering fee (8%)				39,930
SUBTOTAL				539,050
Contingency (10%)				53,900
TOTAL				<u>592,950</u>

DESIGN CONCEPT STANDARDS

The facilities built for an urban park must be rugged and blend with the natural environment of the park. On the following pages are sketches of 10 park structural components that are required by the concept plan for Tippin's Pond and Fish House Cove. The boardwalk, picnic table, park sign, and bench are of sturdy bolted timber construction is a style that fits the usual context of these two sites.

The structural components include:

- o Boardwalk Fig. 11
- o Picnic table Fig. 12
- o Litter basket Fig. 13
- o Park sign Fig. 14
- o Bollard Fig. 15
- o Bollard light Fig. 16
- o Path paving Fig. 17
- o Parking area paving Fig. 18
- o Wheel stop Fig. 19
- o Bench Fig. 20

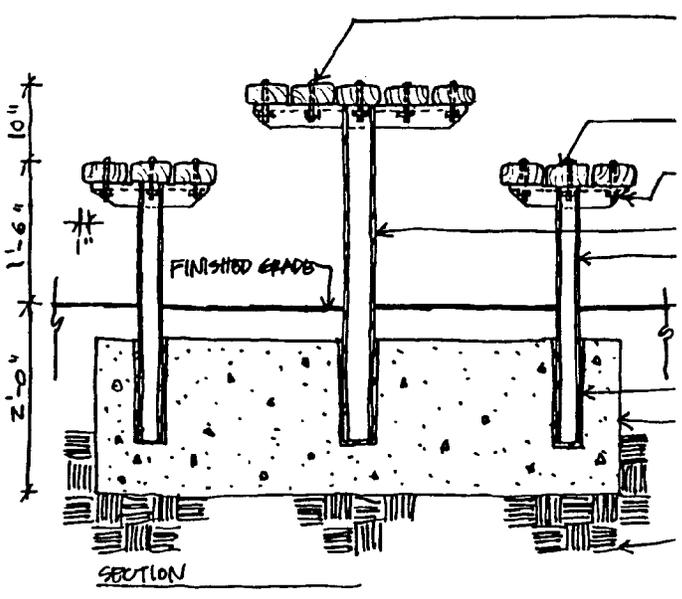
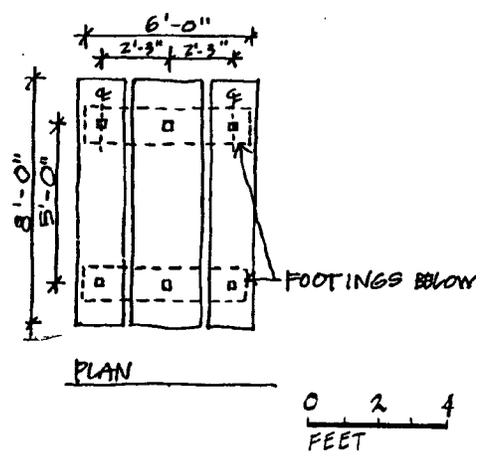
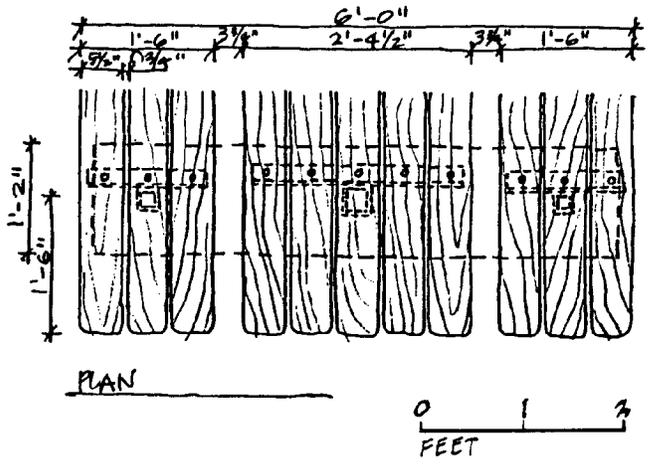


SECTION/ELEVATION

BOARDWALK

FIGURE 11

ROGERS, GOLDEN & HALPERN



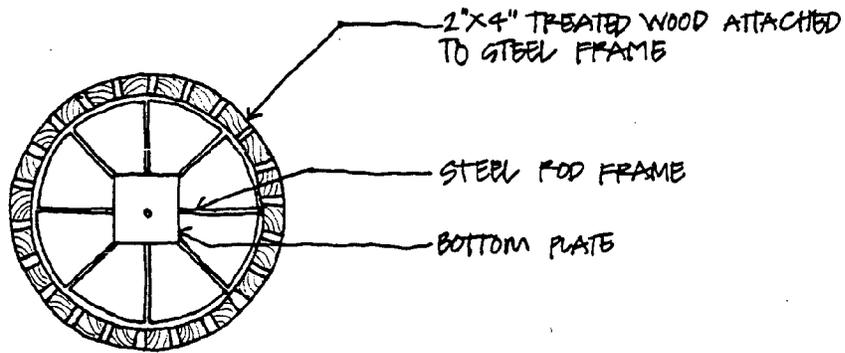
$\frac{9}{16}$ " ϕ HOLE OF L
 WITH $\frac{1}{2}$ " ϕ GALV. STL.
 CARRIAGE BOLTS - BURR
 THREADS @ ENDS
 3"X6" WOOD - ALL EDGES
 ROUNDED
 L 2 1/2 X 2 1/2 X 3/16 GALV.
 WELD TO STEEL TUBE
 4 X 4 X 1/4 STRUCT. STL. TUBE GALV.
 3 X 3 X 1/4 STRUCT. STEEL TUBE GALV.

GALV. STEEL SLEEVE
 CONCRETE FOOTING

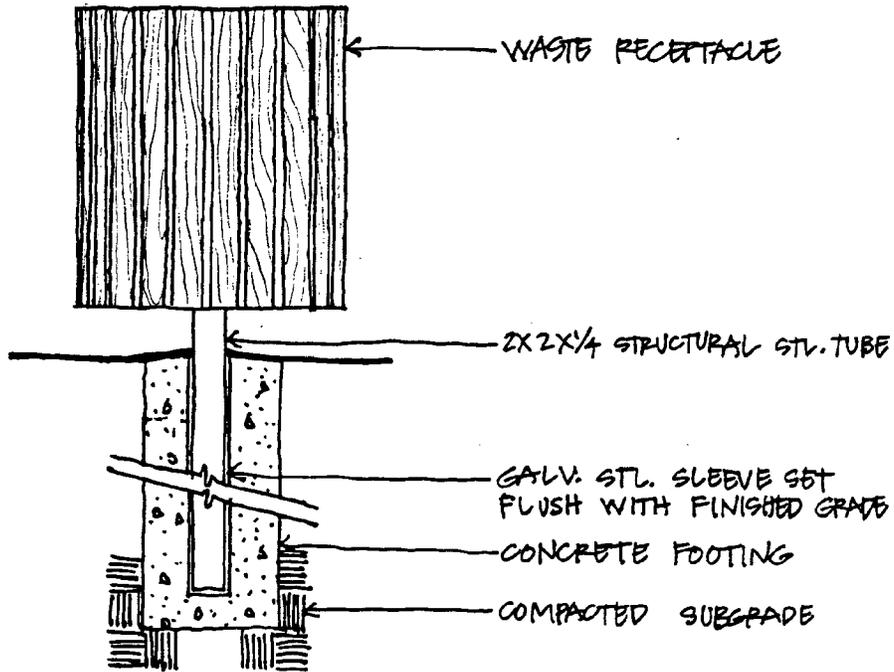
COMPACTED SUBGRADE

PICNIC TABLE
FIGURE 12

ROGERS, GOLDEN & HALPERN



PLAN



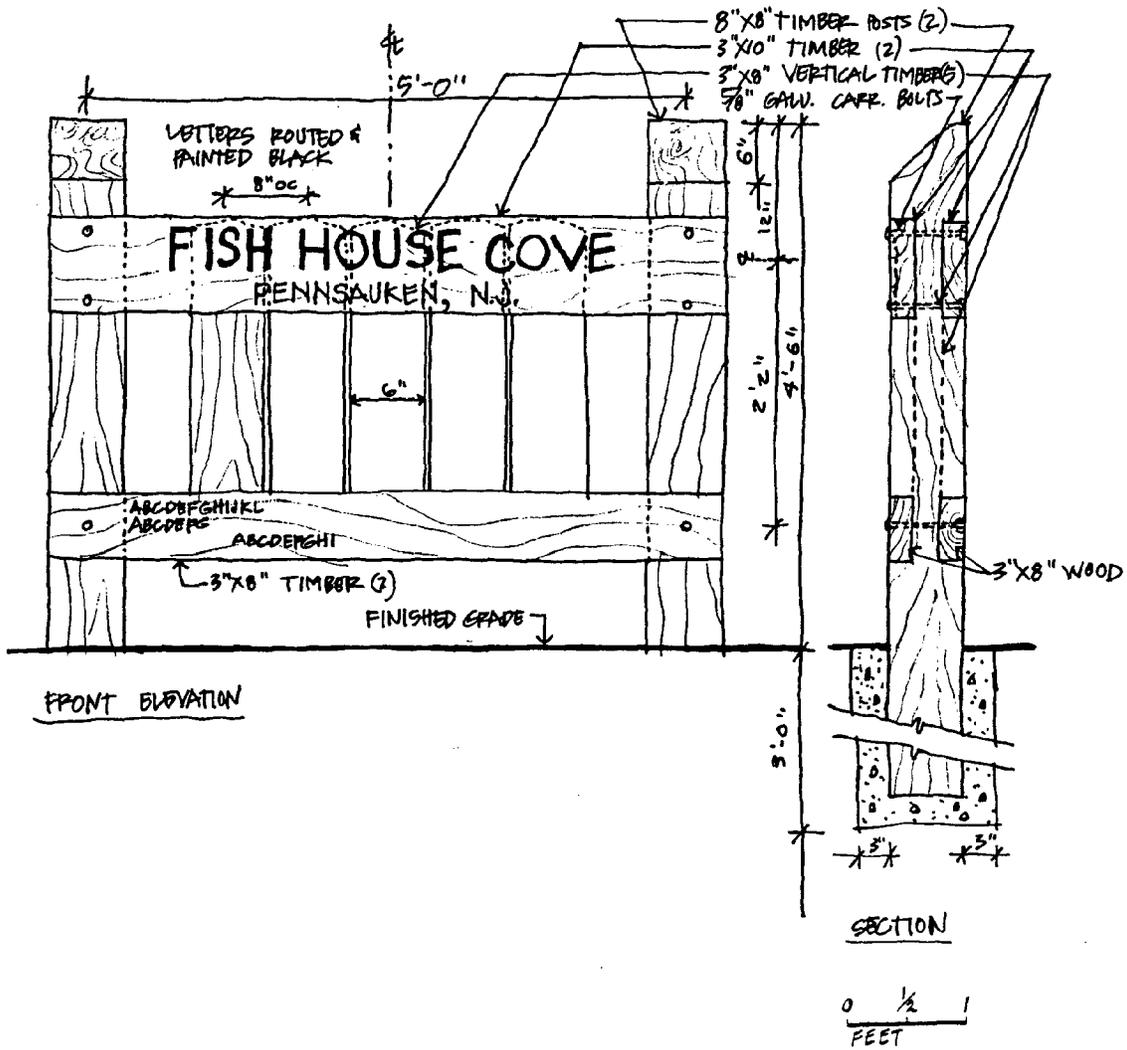
SECTION



LITTER BASKET

FIGURE 13

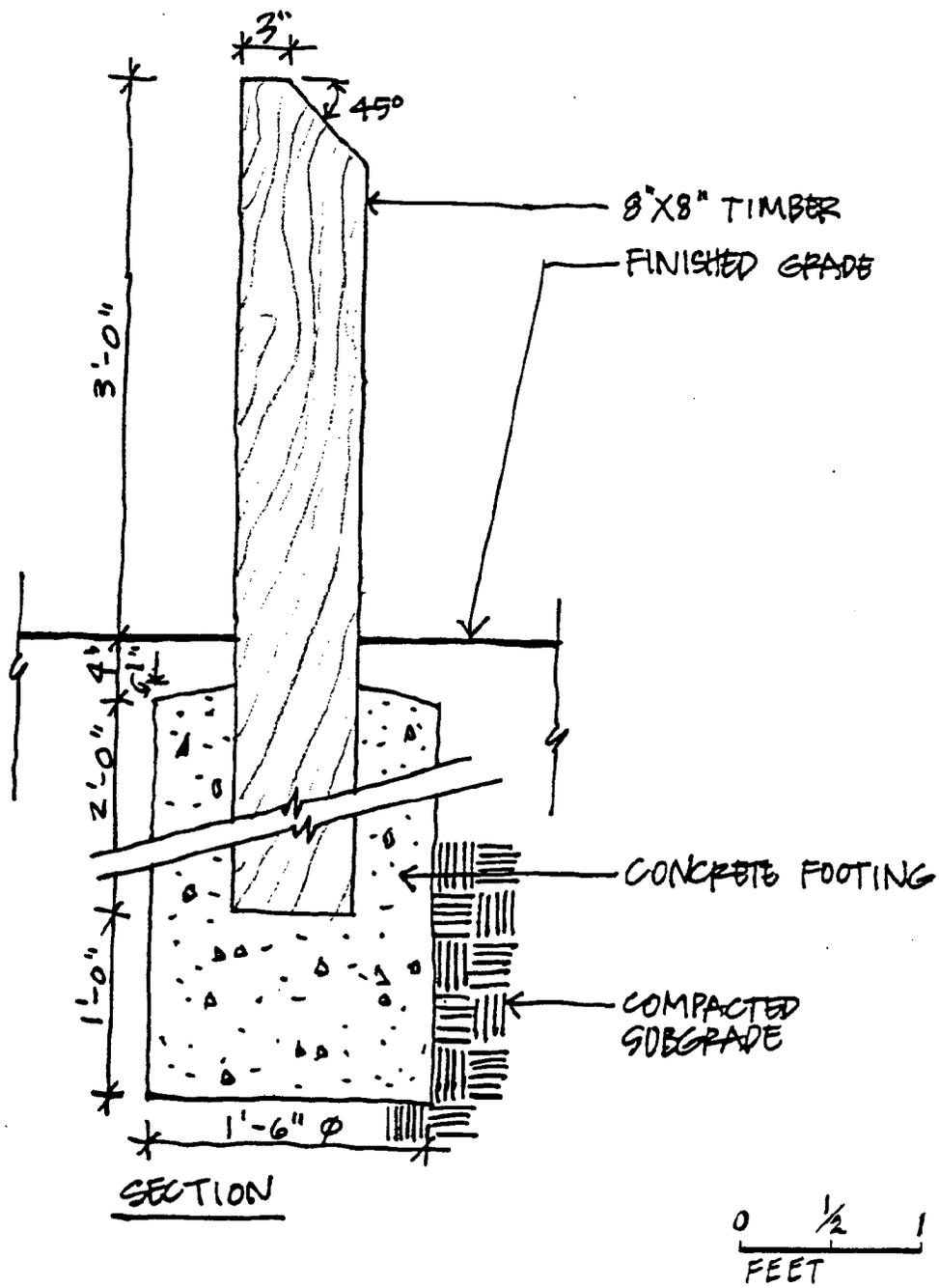
ROGERS, GOLDEN & HALPERN



PARK SIGN

FIGURE 14

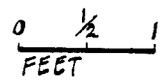
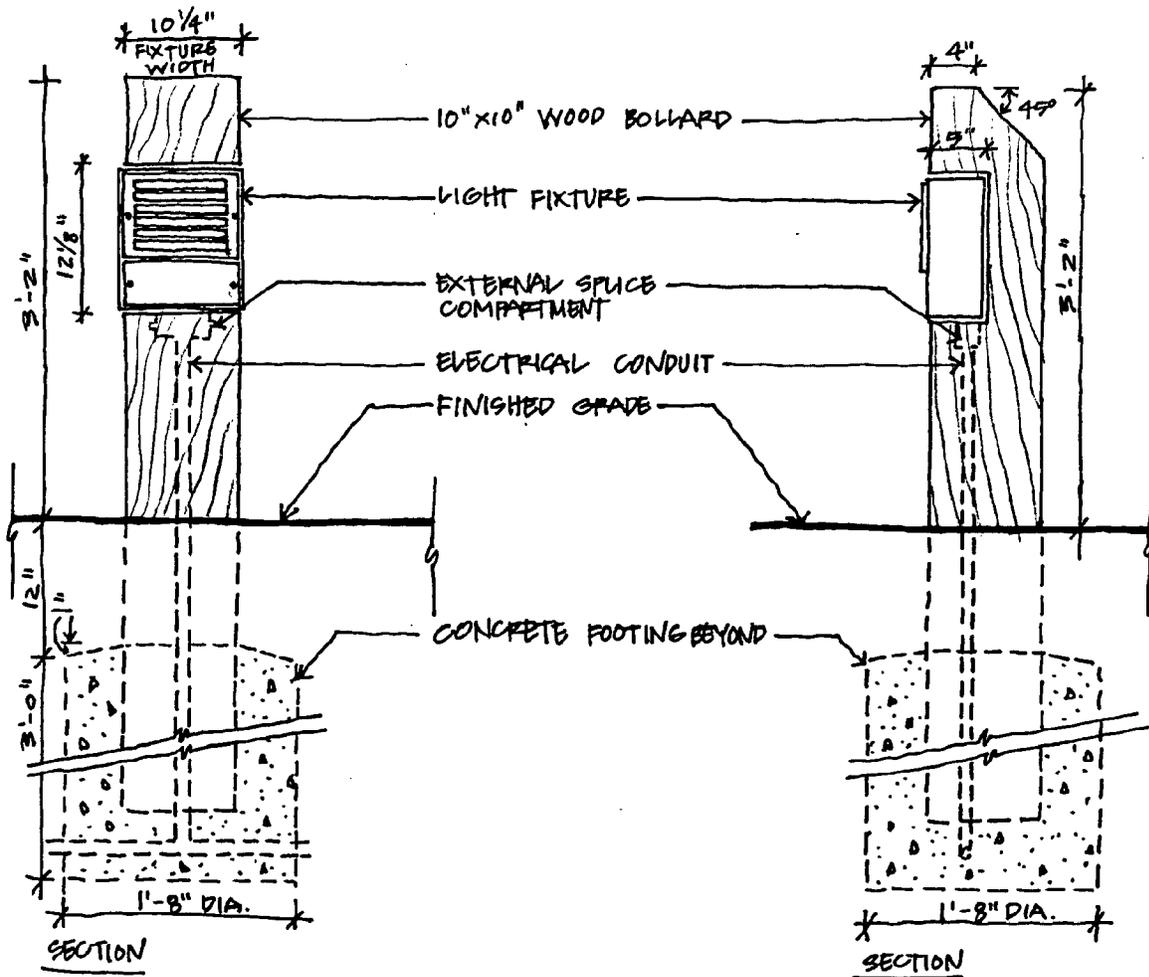
ROGERS, GOLDEN & HALPERN



BOLLARD

FIGURE 15

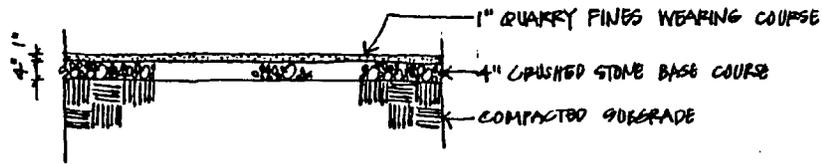
ROGERS, GOLDEN & HALPERN



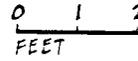
BOLLARD LIGHT

FIGURE 16

ROGERS, GOLDEN & HALPERN

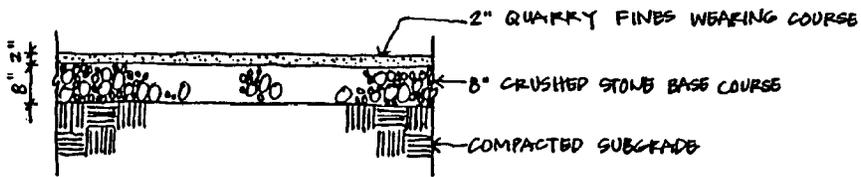


SECTION



PATH PAVING

FIGURE 17

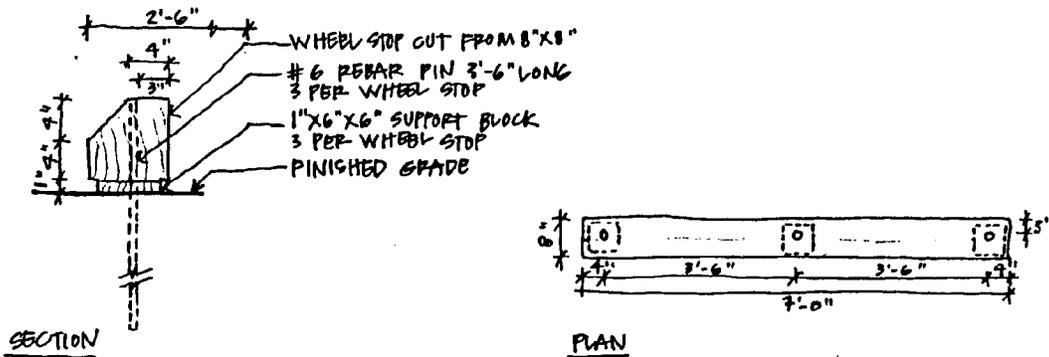


SECTION



PARKING AREA PAVING

FIGURE 18



SECTION

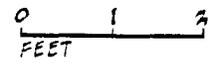
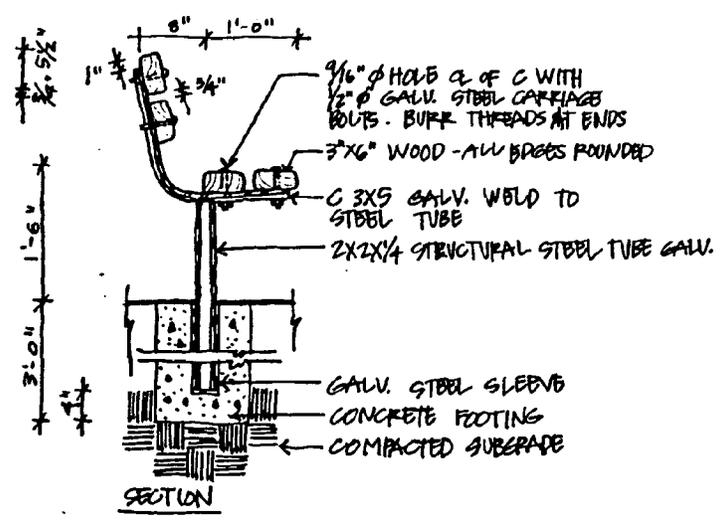
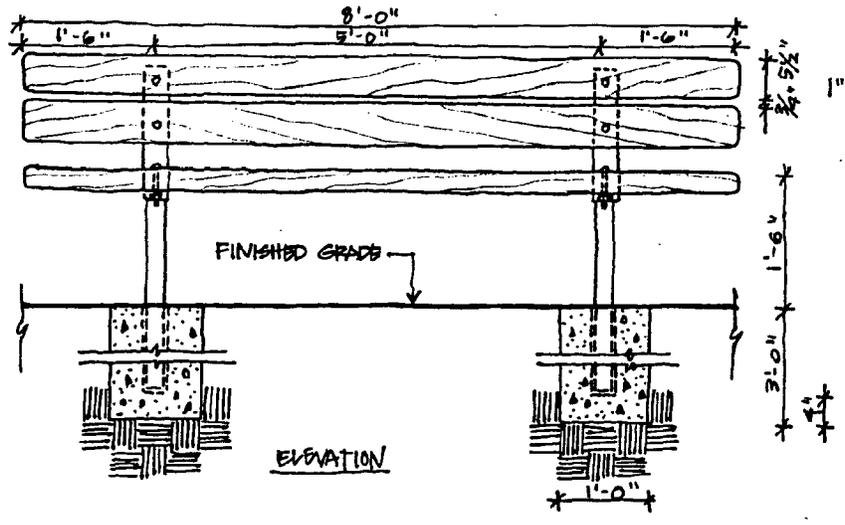
PLAN



WHEEL STOP

FIGURE 19

ROGERS, GOLDEN & HALPERN



BENCH

FIGURE 20

ROGERS, GOLDEN & HALPERN

APPENDIX A. LAND ACQUISITION FOR A PUBLIC PARK AT FISH HOUSE COVE AND TIPPIN'S POND

Public ownership or control of ten parcels of land is crucial to the success. These parcels are shown in Figure A-1. Parcels 11 and 12 are now owned by the township. In the discussion that follows each of these parcels as numbered in Figure A-1, is identified by Tax Map Block and Lot Number and by current ownership. The role of each parcel in the project is discussed and the level of township control of the parcel needed to achieve the project purposes are set forth.

Parcel 1

Lot 12 Block 1 is owned by the State of New Jersey. This parcel comprises most of what is referred to as Fish House Cove. It is roughly half marsh and half open water with some fill on its eastern edge. After the Township obtains control of Parcels 1-5, 1-5A and 1-5B, it can apply for a riparian conveyance to this parcel. Case law holds that the state must obtain market value for the conveyance for the use intended. The Tidelands Council, recently, has not given riparian grants so it is likely that a lease or license must be sought by the Township. The plan places boardwalks, seating areas and observation platforms on this parcel for nature observation and instruction.

Pennsauken Township's plans to create a wildlife sanctuary in Fish House Cove and visitor access and support facilities around Tippin's Pond.

Parcels 2 and 3

Lots 5 and 5B, respectively, Block 1 are owned by Joseph Cramer or his estate. Acquisition is critical. These parcels and parcel 4 are the immediate upland parcels to Fish House Cove (parcel 1). The township must have a controlling interest in these in order to apply for a riparian conveyance for Fish House Cove. One strategy might be to solicit a gift of the parcels from Mr. Cramer for tax advantages.

A path and birding blind are called for by the plan on Parcel 2.

Parcel 4

Lot 5A, Block 1, is owned by the State of New Jersey. It is one of three adjacent parcels upland to Fish House Cove. Township ownership of this upland parcel is necessary in order for the township to apply for a riparian conveyance to the adjacent areas of the cove. The township should request transfer of title from the State to the township for this parcel. Since this parcel is upland and not submerged land, it is not dedicated to the support of the public schools. Therefore, the State could convey title to the township for far less than market value.

Parcel 5

Lot 13A, Block 1, is owned by Paragon Oil Co. (Texaco). This parcel is needed to provide access to Fish House Cove since it is immediately adjacent to the underpass leading to the cove from Tippin's Pond and connects to Parcels 1 and 2. Trails and a nature observation deck on this parcel are called for by the recreation plan.

Parcel 6

Lot 13, Block 1 is owned by Paragon Oil Co. (Texaco). If purchase is not feasible, an easement is needed to provide waterfront access for a municipal emergency boat launch (Fire and Police Departments). This facility would consist of an access road on the existing private road that eventually joins Cove Road, and a boat launching site in the northwestern corner of the parcel. Use of easements on this parcel would be limited to township personnel for emergency purposes only and not to the general public.

Parcel 7

Lot 14, Block 1 is owned by Paragon Oil Company (Texaco). An easement for vehicle access by township emergency personnel along the existing road that joins Cove Road is called for by the plan.

Parcel 8

Lot 6, Block 1 is owned by Conrail. The wide portion of this parcel near Cove Road and adjacent to township-owned Lot 5, Block 516 is needed for parking off Cove Road and for access to Fish House Cove via the underpass. Acquisition, easement or long term lease is recommended. Part of an agreement with Conrail should consider:

- o a survey to determine portion of parcel to be used
- o placement of fencing all along both sides of the tracks to Merchantville Ave. to discourage pedestrians crossing tracks
- o maintenance of sight line for trains, trucks at Cove Road intersection with tracks.

Another portion of this parcel is needed to provide access to Fish House Cove under the tracks by clearing out an old underpass near the western corner of Tippin's Pond. An agreement with Conrail should specify use of the underpass (pedestrian, pond overflow conduit), and supervision of its reopening, including structural inspection.

Parcel 9

Lot 9, Block 516 is owned by Richard Tippin. It is needed to provide parking off River Road and path access to Fish House Cove from the parking area. A picnic area and restroom facilities at the back of this lot for use by cove visitors is included in the recreation plan. Acquisition is recommended.

Parcel 10

Lot 4A, Block 516 is owned by John Tomlin. There is an inhabited single family residential structure on this parcel. Part of this parcel could be used for visitor parking. The house can be preserved. Acquisition of this parcel is recommended.

Parcels 11 and 12 shown in Figure A-1 are owned by the township. Both parcels are integral parts of the plan for recreation use of and access to the cove. Paths from two parking areas to the pedestrian underpass leading to the cove are located on Parcel 11, an eleven acre tract consisting of Tippin's Pond, its banks and adjacent woods. Parcel 12, with frontage on Cove Road, will be used as one of two park entrances and parking areas according to the recreational plan for the cove.

**APPENDIX B. COASTAL ENERGY IMPACT PROGRAM APPLICATION FOR
FISH HOUSE COVE: LAND AQUISITION AND WATERFRONT PARK DEVELOPMENT
JANUARY 29, 1982**

RG&H

January 29, 1982

Ms Geraldine Fenner-McNulty
CEIP Program
Room 204
New Jersey Department of Energy
101 Commerce Street
Newark, NJ 07102

Dear Ms Fenner-McNulty:

On behalf of our client, Pennsauken Township, Rogers, Golden & Halpern is pleased to submit this application to the New Jersey Department of Energy for a CEIP grant to acquire land and develop recreation facilities along the Delaware River at Fish House Cove.

Sincerely,



Robert W. Pierson, Jr.

CEIP APPLICATION FOR FISH HOUSE COVE

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- Figure 2. History of filling in Fish House Cove
- Figure 3. Energy-related land use in the vicinity of Fish House Cove
- Figure 4. Parcel property map for waterfront park development
- Figure 5. Concept design plan of recreational facilities for
Fish House Cove
- Figure 6. Concept design plan of access and support facilities for
cove visitors at the Tippin's Pond site
- Figure 7. Cross section of the concept plan for Fish House Cove

CEIP APPLICATION FORM

(submit 15 copies)

State "Not Applicable" if appropriate

Attach additional pages if necessary

I. GENERAL INFORMATION

<u>Township of Pennsauken, Camden County</u>	<u>Fish House Cove: Land Acquisition and Waterfront Park Development</u>
<u>Applicant's Name (Agency)</u>	<u>Title of Project</u>
<u>Municipal Building</u>	<u>Area of Impact Pennsauken Township</u>
<u>5605 North Crescent Blvd.</u>	<u>Fish House Cove and</u>
<u>Pennsauken, NJ 08110</u>	<u>Area of Study adjoining lands</u>
<u>Address</u>	
	<u>Type and Amount of Funds Requested:</u>
<u>Mr. Kenneth Carruth</u>	\$ <u>337180.</u> (b)
<u>Contact Person</u>	<u>not applicable</u> (c)
<u>Phone (609) / 665-1000</u>	<u>Amount of Match \$ 505770.</u>
<u>(A/C)</u>	<u>Composition of Match</u>
	<u>Green Acres 50%</u>
	<u>Local share 10%</u>
	<u>Total \$ 842,950.</u>

PROJECT SUMMARY

Due to energy-related development and other industrial uses along the Delaware River waterfront of Camden County, public access to the waterfront is very limited and opportunities to provide access are being lost. This project, the creation of a wildlife sanctuary in Fish House Cove, represents a unique opportunity to provide public access to the Delaware waterfront and, just as important, to set aside as open space the last remnant of freshwater tidal marsh along the Delaware River in Camden County.

This project is urgent due to the possibility that public or private actions could foreclose access to or recreational use of the cove. Recently the Camden County Municipal Utilities Authority proposed a sewer interceptor alignment that eliminates safe, convenient, barrier-free public access to the cove, destroys a section of the site vegetation, and interferes with natural drainage patterns.

The entire site for this project consists of Fish House Cove, the main portion of which is owned by the state, and an area known as Tippin's Pond, through which access to the cove is planned. The location of the project site is shown on Figure 1, below.

This project will be accomplished in two phases: land acquisition and park development. Land acquisition will focus on ten key parcels in and around Fish House Cove to secure both the cove and the land around Tippin's Pond that is important to provide access and recreational support facilities for cove visitors. The park development phase will result in detailed specifications for passive recreational facilities in the park and their construction. Facilities planned include boardwalks and observation decks on the cove portion of the site, and parking, access trails to the cove, picnic areas, amphitheater and restrooms at Tippin's Pond.

Authorized signature Carl R. Bierbach

Title Mayor of Pennsauken Township

Date January 29, 1982

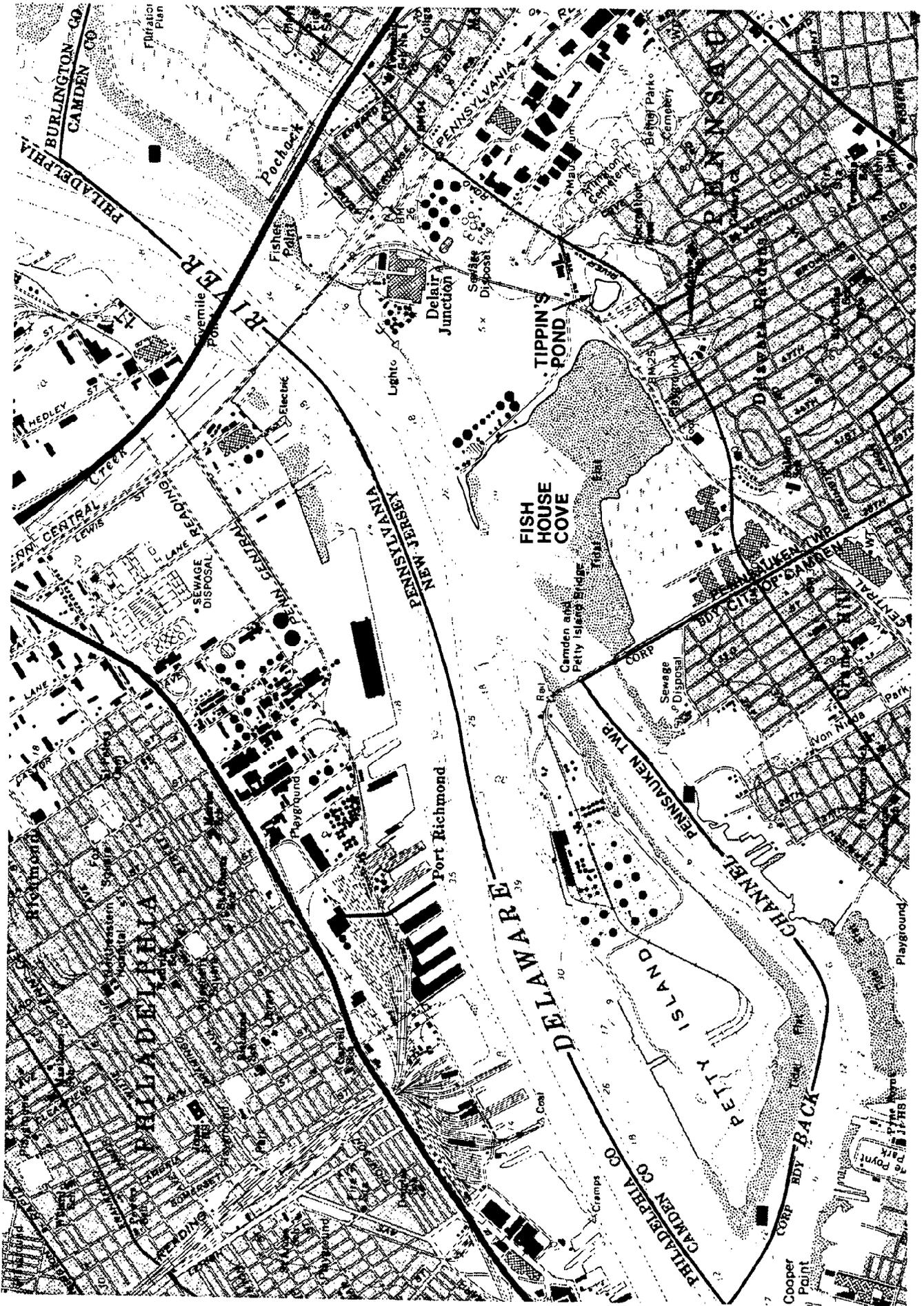


Figure 1. Regional Setting of Fish House Cove and Tippin's Pond (1"=2000').

II. INTRODUCTION

A. What problem/topic needs to be studied and why?

Public access to the Delaware River waterfront in Camden County has been dramatically reduced over the years due to industrial development and the extensive filling of valuable tidal wetlands that made this development possible. The Delaware waterfront in Pennsauken Township was once a rich recreational resource, used as a summer vacation spot with cottages, sandy beaches and boardwalks. Fishing, swimming, and boating were among the activities enjoyed. But since the beginning of this century a rich natural heritage has been abandoned to industrial progress. Figure 2 documents the loss of the tidal marshes along the Delaware River in Pennsauken Township.

It is the objective of this proposal to restore public access and passive recreational activities to the Pennsauken waterfront along the Delaware River and at the same time preserve the last remaining remnant of the once extensive freshwater tidal marshes along the Delaware in Camden County, an area known locally as Fish House Cove. Figure 1 above shows the regional setting of Fish House Cove and an adjacent site, Tippin's Pond, that provides direct and convenient access to Fish House Cove.

B. What energy facilities or energy activities are addressed by this project?

Much of the industrial development in the area of Fish House Cove are energy facilities and activities related to these facilities. Figure 3 shows land use patterns around the cove. From the Delaware River railroad bridge north of the site to the north edge of the cove, the filled land is owned and used by the Amerada Hess and Paragon (Texaco) oil companies for fossil fuel storage and transfer operations. Together these two energy-related firms occupy nearly 100 acres of filled tidal wetlands and nearly 5,000 feet of frontage on the Delaware River and on the northern edge of Fish House Cove.

To the south of the cove on Petty Island, City Service Corporation, another energy-related industry, operates a fuel storage and transfer operation. Proposed for Petty Island is an oil processing operation. Other industrial and transportation land uses adjoin Fish House Cove on its remaining boundaries.

C. What are the impacts of B? How likely are the impacts to occur? What region will the impacts affect? Over what time frame will the impacts occur?

The impacts of the energy related facilities in the immediate area of Fish House Cove are noise, water and air pollution, lack of public access and use of the cove waterfront and the potential for final preemption of public access.

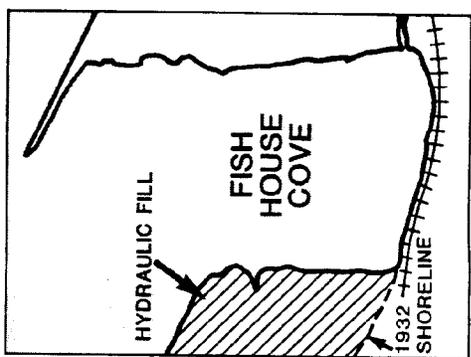
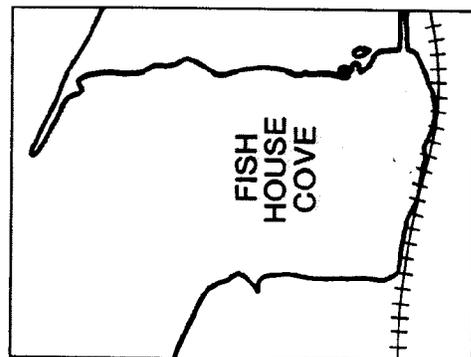
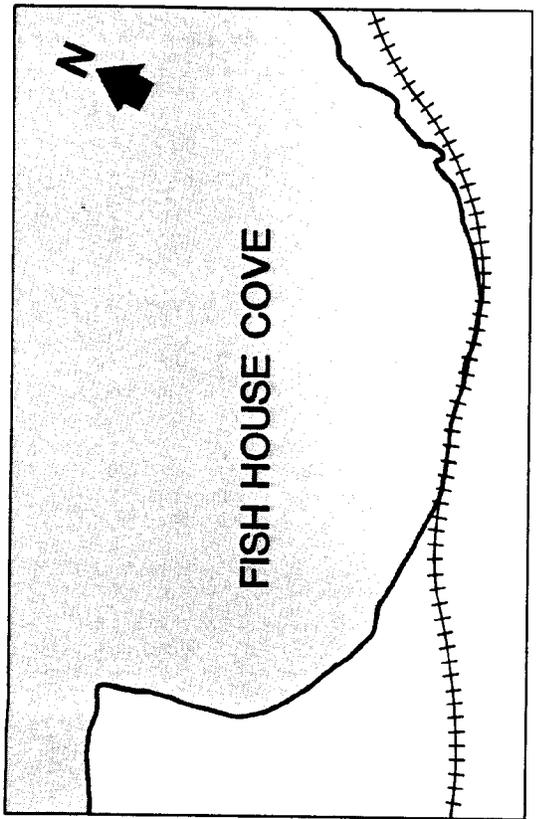
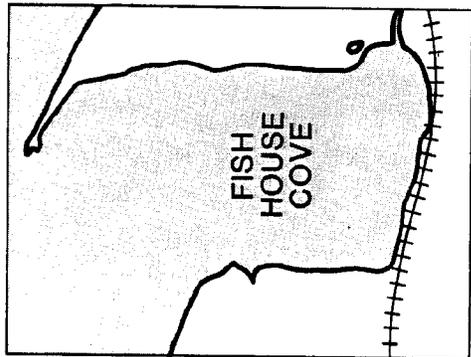
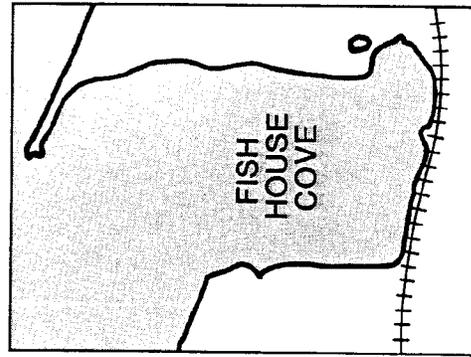
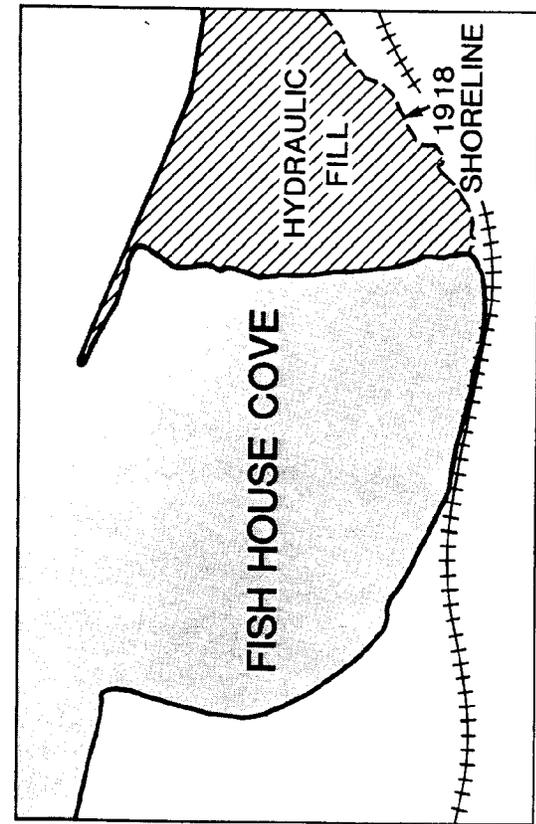
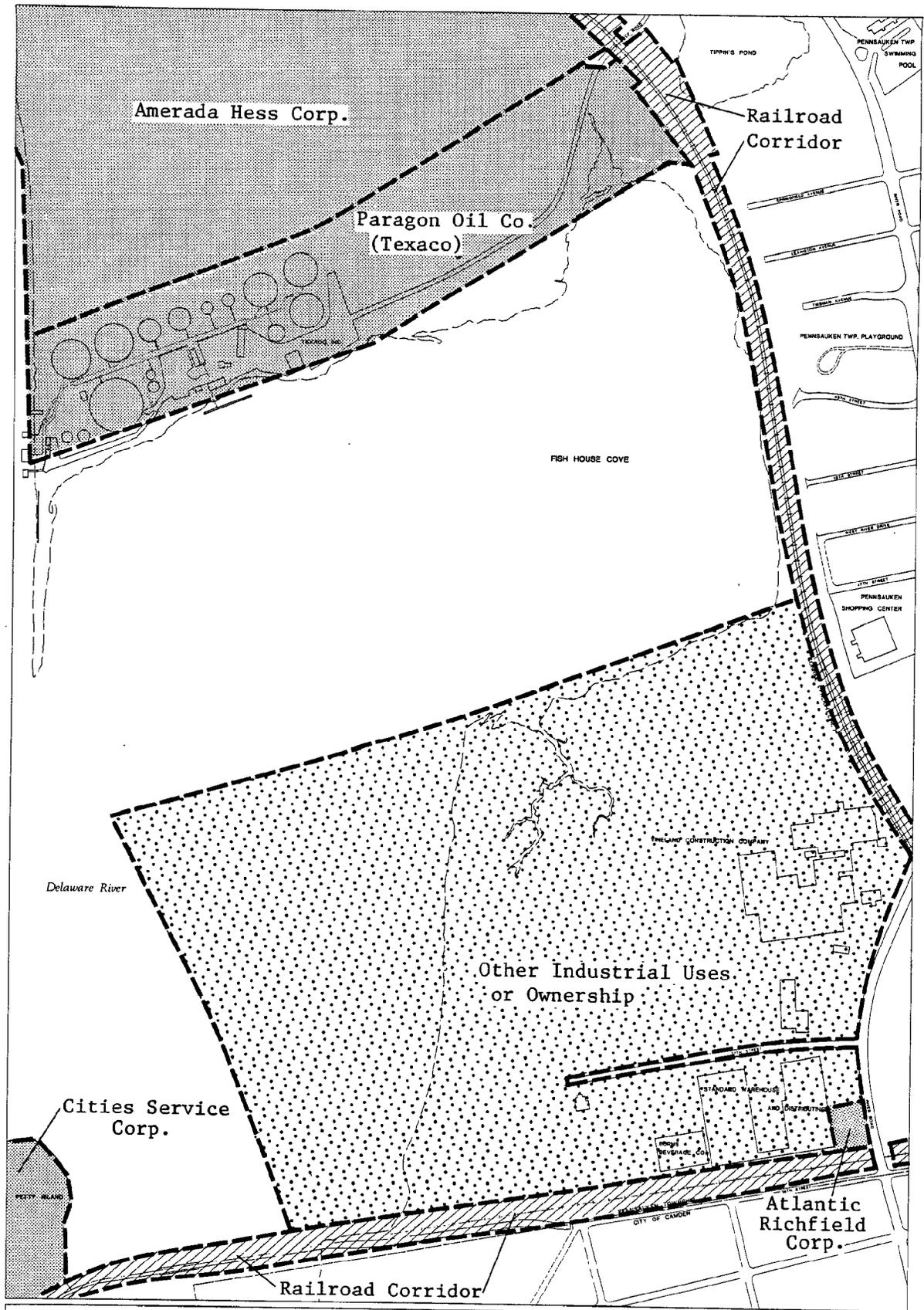


Figure 2. History of Filling in Fish House Cove (approximate scale 1"=2600').



FISH HOUSE COVE
WILDLIFE SANCTUARY
 PENNSAUKEN TOWNSHIP
 WATERFRONT DISTRICT MANAGEMENT PROGRAM

ROGERS, GOLDEN & HALPERN
 PHILADELPHIA, PENNSYLVANIA

ENERGY-RELATED LAND USE AROUND FISH HOUSE COVE

	Paragon Oil Co. (Texaco)		Atlantic Richfield Corp.
	Amerada Hess Corp.		Other Industrial Uses or Ownership
	Cities Service Corp.		Railroad Corridor

Figure 3

Cities Service, Amerada Hess, and Texaco all hold NPDES permits to discharge contaminated wastewater to the Delaware River. Tidal fluctuations introduce large volumes of polluted river water into the cove every day. Truck and tanker traffic and from tank farm fuel transfer operations introduces hydrocarbons, carbon monoxide, nitrogen oxides and particulates into the air. Recent earth moving operations on the Hess properties are a source of fugitive dust. These activities also contribute to elevated noise levels on the waterfront. Such impacts are current and can be expected to continue as long as oil is an energy source. There is always the potential for severe damage to the cove marsh environment from oil spills into the Delaware River from fuel transporting or transferring operations. Through the efforts of NJ Department of Environmental Protection and the U.S. Environmental Protection Agency, air and water quality in the Delaware River area is gradually improving. As these improvements occur, more and more people will be able to use the waterfront for an increasing variety of recreational experiences.

A continuation of trends toward increased industrial use of the Delaware River waterfront, including energy-related facilities, would eventually foreclose any further opportunity for public use of this common resource, as more and more waterfront is developed. This impact will be felt piecemeal, all along the navigable portion of the Delaware River, but is particularly acute in urban areas where public demand for waterfront recreation and nature study is high but such opportunities are so limited. Fish House Cove is a waterfront site that is subject to pressures for increased industrialization of the waterfront. A major OCS find of gas or oil within range of the Delaware River channels could significantly increase demand for park waterfront, as onshore support facilities are built or displace other industrial uses.

Other actions, either public or private, could result in loss of public access to these undeveloped waterfront areas--such as Fish House Cove--that have survived in a natural state. Actions to cut off access to waterfront areas could happen at any time. A recently proposed public action currently threatens the township's plan to provide access to Fish House Cove. Several years ago, an oil company illegally began filling the marsh of Fish House Cove. See Section E below for a fuller discussion of these actions..

D. Which of the impacts in C. will this project address?

There are two impacts addressed by this project. First, public access to the Delaware River waterfront in a passive recreational setting will be created and thus prevent any subsequent actions which could preclude access. Second, the project will protect the last freshwater tidal marsh in Camden County from possible filling and industrial development.

In addition, public access limited to emergency personnel for river rescue purposes is provided in this project.

E. How urgent is the undertaking of this project at this time?

The project to protect the cove and the pond and to provide recreational opportunities on these sites is quite urgent. The longer that opening of public access to the Delaware waterfront in Pennsauken Township is delayed, the more likely is it that private and government actions will preclude public access. A case in point for Fish House Cove happened very recently, when the Camden County Municipal Utilities Authority (CCMUA) announced plans to run a 48" regional sewer interceptor along the western edge of Tippin's Pond parallel to the railroad tracks. See Support Document 9. If built as originally planned, the interceptor will eliminate safe, barrier-free public access to the Fish House Cove via Tippin's Pond. Alternative access to the cove is either dangerous--grade crossing at Cove Road--or costly and impractical--a pedestrian bridge over the tracks. Besides invalidating a logical design solution to public access for the cove, this alignment for the sewer interceptor implies other serious impacts on the Fish House Cove-Tippin's Pond park.

- o Removal of a 40 foot wide swath of vegetation along the pipe alignment will ruin the special sense of enclosure provided by the pond environment. Some of the plants imperiled are large old trees, the loss of which would be tragic to the park setting and would take years to replace.
- o Replacement of the vegetation with fill to cover the pipe and a rip-rap surface will be a major visual intrusion into the pond environment.
- o Runoff from the pipe cover will be much greater than that occurring with natural vegetation. This runoff containing chemicals spilling from passing tank cars and used for railroad right-of-way maintenance would be collected and directed to Tippin's Pond, leading to degradation of pond water quality.
- o Placement of a linear feature along the western edge of the pond may have an impact on pond drainage to the cove by altering groundwater flow lines with unforeseen consequences to the pond hydrology and water quality. The township is now taking appropriate steps to get CCMUA to change the sewer alignment in order to avoid these impacts.

In spite of its identification as valuable marsh wildlife habitat, the marsh of Fish House Cove was nearly lost several years ago when Texaco illegally began filling the marsh from its western boundary to the cove. Only alert Camden County officials saved the cove from further destruction by notifying New Jersey Department of Environmental Protection who ordered Texaco to immediately cease filling operations. See Support Document 10.

Fish House Cove was saved from final destruction several years ago when plans for the Camden-Burlington Expressway were scuttled. The alignment for this highway was set to go right through the marsh in the cove parallel to the shore.

Another reason for urgency concerns riparian rights. There are three parcels immediately upland to the cove, two of which are in private ownership, the third being owned by the state of New Jersey. Upland owners have the right to apply for riparian conveyances, either a grant, lease or license for ownership and/or use of the riparian lands of the cove. Private owners of the parcels upland to the cove could apply for a riparian conveyance at any time. Thus it is important for the Township to obtain public ownership of the immediate uplands to Fish House Cove before private owners of these uplands apply for a riparian conveyance to portions of the cove.

For these reasons, the present project to acquire land and to provide access and recreational facilities for Fish House Cove is urgent.

- F. List all past and on-going studies that you are aware of which address the same and/or similar topics. How will this study differ from these other studies?

There is an extensive record of public concern for Fish House Cove and Tippin's Pond in the form of special studies, township committee actions, public meetings, and the creation of concept plans for the protection and recreational use of these complementary sites.

Special studies

1. CCEA (Camden County Environmental Agency). 1980. Potential Environmental Impacts of Energy Facilities and Other Development on Fish House Cove, Delaware River, Camden County, New Jersey. Final Report. Prepared for the New Jersey Department of Energy with the assistance of WAPORA, Inc.
2. Environmental Analysis, Inc. 1975. Natural Resource Inventory, Pennsauken Creek and Tippin's Pond. Prepared for the Pennsauken Township Environmental Commission.
3. Rogers, Golden & Halpern, 1981. Planning and Engineering Report for Fish House Cove and Tippin's Pond. Prepared for Pennsauken Township under a coastal Energy Impact Program grant from the New Jersey Department of Energy.
4. Rogers, Golden & Halpern, 1981. Waterfront Usage Design Concept Plan for Tippin's Pond and Fish House Cove. Prepared for Pennsauken Township under a coastal Energy Impact Program grant from the New Jersey Department of Energy.
5. Rogers, Golden & Halpern, 1982. Final Conceptual Plans for the Recreational Use of Tippin's Pond and Fish House Cove. Prepared for Pennsauken Township under a Coastal Energy Impact Program grant from the New Jersey Department of Energy.

6. Tyrawski, John M., 1979. Shallows of the Delaware River, Trenton, New Jersey to Reedy Point, Delaware. U.S. Army Corps of Engineers, Philadelphia District.
7. U.S. Army Corps of Engineers. 1979. Delaware River Dredging Disposal Study Stage I Reconnaissance Report.
8. U.S.F.W.S (Fish and Wildlife Service). 1957. A Detailed Report on Fish and Wildlife Resources in Relation to Channel Dredging for the Delaware River, Philadelphia, Pennsylvania to Trenton, New Jersey, Project. Bureau of Sport Fisheries and Wildlife.
9. Fichter, Jack, 1975. Our Pennsauken. The Pennsauken Bicentennial Commission, Pennsauken, New Jersey.

Township Actions

1. Creation by ordinance of the Waterfront Management Area in which land and water uses along the Pennsauken waterfront are controlled (Ordinance 80-35, adopted December 10, 1980: see Support Document 6).
2. Enactment of a resolution requiring environmental review by Environmental Commission of any land use change occurring in Fish House Cove Study Area (Resolution 82-52, adopted January 13, 1982).
3. Appointment of the Pennsauken Waterfront Management Committee.
4. Application for grant monies to plan for the preservation of waterfront marsh and access to the waterfront.
5. Selection of consultant to develop plan for preservation and recreational use of Fish House Cove and Tippin's Pond (see Support Documents 3, 4 and 5).
6. Purchase of key parcels of land on or near the site of the project (see Figure 4).
7. Instrumental in obtaining citation of Vineland Construction Company for various violations at a landfill operation adjacent to Fish House Cove.
8. Held public awareness program with media coverage, focusing on waterfront preservation (see Support Document 7).

Public meetings

1. Public meeting to discuss the draft concept plan for Fish House Cove and Tippin's Pond; Pennsauken Municipal Building 8:00 PM; January 14, 1982.

2. Monthly public meetings of Waterfront Management Committee for over 3 years to develop plans for protection and enhancement of the Pennsauken waterfront with particular emphasis on Fish House Cove.

This record of studies and local concern and involvement directed toward the preservation of Fish House Cove and Tippin's Pond represents a continuum of interest in these sites over the past decade. Of particular importance is the explicit recognition in the Pennsauken land use ordinances of a Waterfront Management Area, an overlay zone to the zoning ordinance which reserves undeveloped and abandoned waterfront areas for water-related uses, particularly recreation. This provision of the zoning ordinance to control future development of the waterfront was enacted in order to:

- o ensure preservation of the natural environment
- o prevent negative impacts on physical, economic, social, and aesthetic elements of the environment
- o ensure that a reasonable portion of the waterfront will be used for public open space to further public health, safety and general welfare
- o enhance the attractiveness of waterfront developments
- o provide public access to the Delaware River and other natural stream waterfronts

The Waterfront Management Area in Pennsauken was proposed by the New Jersey Department of Environmental Protection (NJDEP) according to guidelines of the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. A letter from NJDEP commended the Pennsauken Township Planning Board for its initiative in seeing the waterfront management area concept transformed to a meaningful ordinance. This letter is reproduced in Appendix A.

The township's Waterfront Management Committee provides an opportunity for citizens and township officials to work together to plan for the waterfront areas, particularly to create an extensive waterfront park system for the township. The NJDOE-CEIP sponsored reports cited above were prepared under the supervision of this committee. The concept plans prepared in this NJDOE-CEIP study form the basis of this project.

The current project is a logical outgrowth of the previous studies and differs from them by proposing to acquire the land necessary to preserve Fish House Cove, to provide public access to the cove via Tippin's Pond, and to develop access and recreational facilities consistent with the natural environment of the area.

III. ELEMENTS OF PROJECT

- A. What is the purpose of the project?

The purpose of this project is threefold:

- o to acquire land necessary to preserve Fish House Cove as a wildlife sanctuary and necessary for access to the cove.

- o to provide public access to Fish House Cove by way of Tippin's Pond.
- o to develop limited facilities in Fish House Cove for nature observation and supporting recreational facilities at Tippin's Pond for use by visitors to the cove.

These objectives combine to assure that Fish House Cove and public access to it are preserved for present and future generations as an exceptional natural enclave in a large urban area.

- B. Outline the work to be performed under this project. Use additional space if necessary.

The work to be done under this project is divided into two phases: land acquisition and park development. The tasks necessary to accomplish the land acquisition phase are:

- 1.1 Perform title search on properties to be acquired
- 1.2 Do outbound survey of properties
- 1.3 Conduct appraisal of properties
- 1.4 Negotiate for control of properties
- 1.5 Purchase or lease properties, or obtain easements

The tasks that will be performed in this project during the Park Development phase are:

- 2.1 Develop detailed construction designs and specifications
- 2.2 Obtain permits
- 2.3 Prepare documents for bidding on construction
- 2.4 Review proposals
- 2.5 Select contractors and award contract
- 2.6 Construct park facilities
- 2.7 Supervise and review construction for contract compliance

Land Acquisition

Public ownership or control of ten parcels of land is crucial to the success of this project. These parcels are shown in Figure 4. Parcels 11 and 12 are now owned by the township. In the discussion that follows each of these parcels as numbered in Figure 4, is identified by Tax Map Block and Lot Number and by current ownership. The role of each parcel in the project is discussed and the level of township control of the parcel needed to achieve the project purposes are set forth.

Parcel 1

Lot 12 Block 1 is owned by the State of New Jersey. This parcel comprises most of what is referred to as Fish House Cove. It is roughly half marsh and half open water with some fill on its eastern edge. After the Township obtains control of Parcels 1-5, 1-5A and 1-5B, it can apply for a riparian conveyance to this parcel. Case law holds that

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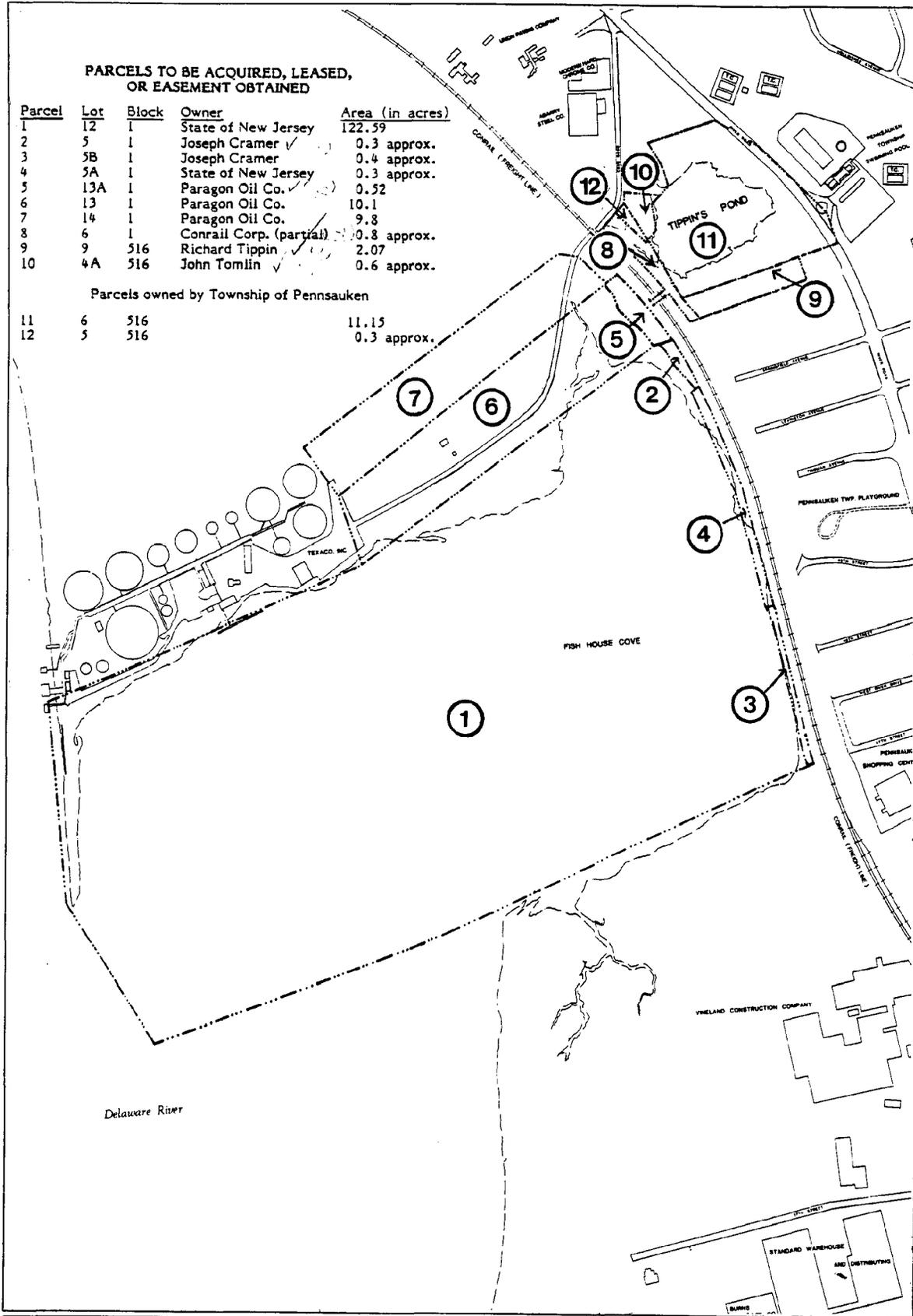


**PARCELS TO BE ACQUIRED, LEASED,
OR EASEMENT OBTAINED**

Parcel	Lot	Block	Owner	Area (in acres)
1	12	1	State of New Jersey	122.59
2	5	1	Joseph Cramer ✓	0.3 approx.
3	5B	1	Joseph Cramer	0.4 approx.
4	5A	1	State of New Jersey	0.3 approx.
5	13A	1	Paragon Oil Co.	0.52
6	13	1	Paragon Oil Co.	10.1
7	14	1	Paragon Oil Co.	9.8
8	6	1	Conrail Corp. (partial)	0.8 approx.
9	9	516	Richard Tippin ✓	2.07
10	4A	516	John Tomlin ✓	0.6 approx.

Parcels owned by Township of Pennsauken

11	6	516	11.15
12	5	516	0.3 approx.



FISH HOUSE COVE

WILDLIFE SANCTUARY
PENNSAUKEN TOWNSHIP
WATERFRONT DISTRICT MANAGEMENT PROGRAM

ROGERS, GOLDEN & HALPERN
PHILADELPHIA, PENNSYLVANIA



PARCEL PROPERTY MAP

This map shows parcels to be acquired, leased or easement obtained for waterfront park development.

⑪ Parcel Number: see table above and text for parcel characteristics and proposed use

--- Shoreline (approximate high tide)
..... Property Lines

Figure 4

the state must obtain market value for the conveyance for the use intended. The Tidelands Council, recently, has not given riparian grants so it is likely that a lease or license must be sought by the Township. The plan places boardwalks, seating areas and observation platforms on this parcel for nature observation and instruction.

Parcels 2 and 3

Lots 5 and 5B, respectively, Block 1 are owned by Joseph Cramer or his estate. Acquisition is critical. These parcels and parcel 4 are the immediate upland parcels to Fish House Cove (parcel 1). The township must have a controlling interest in these in order to apply for a riparian conveyance for Fish House Cove. One strategy might be to solicit a gift of the parcels from Mr. Cramer for tax advantages.

A path and birding blind are called for by the plan on Parcel 2.

Parcel 4

Lot 5A, Block 1, is owned by the State of New Jersey. It is one of three adjacent parcels upland to Fish House Cove. Township ownership of this upland parcel is necessary in order for the township to apply for a riparian conveyance to the adjacent areas of the cove. The township should request transfer of title from the State to the township for this parcel. Since this parcel is upland and not submerged land, it is not dedicated to the support of the public schools. Therefore, the State could convey title to the township for far less than market value.

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- o a survey to determine portion of parcel to be used
- o placement of fencing all along both sides of the tracks to Merchantville Ave. to discourage pedestrians crossing tracks
- o maintenance of sight line for trains, trucks at Cove Road intersection with tracks.

Another portion of this parcel is needed to provide access to Fish House Cove under the tracks by clearing out an old underpass near the western corner of Tippin's Pond. An agreement with Conrail should specify use of the underpass (pedestrian, pond overflow conduit), and supervision of its reopening, including structural inspection.

Parcel 9

Lot 9, Block 516 is owned by Richard Tippin. It is needed to provide parking off River Road and path access to Fish House Cove from the parking area. A picnic area and restroom facilities at the back of this lot for use by cove visitors is included in the recreation plan. Acquisition is recommended.

Parcel 10

Lot 4A, Block 516 is owned by John Tomlin. There is an inhabited single family residential structure on this parcel. Part of this parcel could be used for visitor parking. The house can be preserved. Acquisition of this parcel is recommended.

Parcels 11 and 12 shown in Figure 4 are owned by the township. Both parcels are integral parts of the plan for recreation use of and access to the cove. Paths from two parking areas to the pedestrian underpass leading to the cove are located on Parcel 11, an eleven acre tract consisting of Tippin's Pond, its banks and adjacent woods. Parcel 12, with frontage on Cove Road, will be used as one of two park entrances and parking areas according to the recreational plan for the cove.

Park Development

After appropriate interest in the parcels 1-10 discussed above has been obtained, either through fee simple purchase, easement, or long term lease, the applicant proposes to produce detailed construction plans and specifications, prepare documents for bidding, advertise, review, and select proposals, and then to construct various park facilities including parking for motor vehicles and bicycles, access paths to the cove, boardwalks and

nature observation decks in the cove, and picnic areas, amphitheater, and restrooms for use by cove visitors.

The concept design plan of these facilities is shown in Figures 5 and 6. Figure 5 illustrates the concept design for the cove part of the plan while Figure 6, at a larger scale, shows the access and support facilities for cove visitors at the Tippin's Pond site.

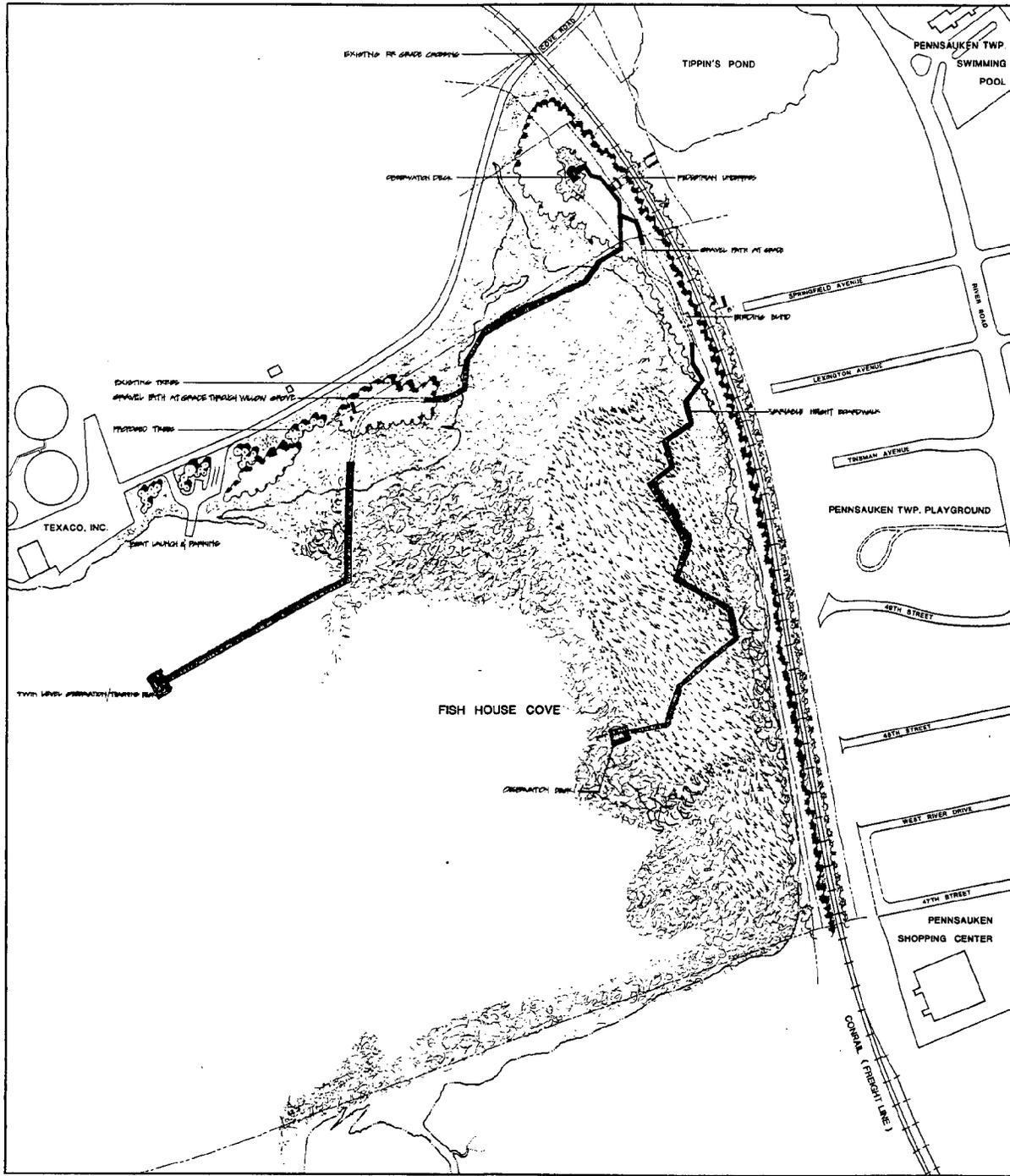
The concept design for Tippin's Pond and Fish House Cove is divided into separate plans, but the site should be considered as one. The plan for Tippin's Pond will provide for passive recreation, while the plan for Fish House Cove calls for recreation of a very restricted nature. The two sites complement each other with their very different natural features, providing the setting for different kinds of recreational uses. Connecting the two sites by a path system is important as a way to limit access points and automobile/bicycle parking and to create a continuous park encompassing both areas.

There are several reasons for considering the two sites as one. First, the two sites are related by access. Visitors to the cove arriving by automobile, bicycle, or foot will first enter the Tippin's Pond area where car and bike parking will be provided. Access to the cove is by foot through an underpass beneath the railroad tracks. This arrangement achieves several objectives. By using the underpass, pedestrians are kept from crossing the tracks, thus assuring a safe transition from the pond to the cove. In addition, automobiles are not allowed to intrude either visually or as a disturbance to wildlife in the cove.

The second reason the sites complement each other so well is that the very passive recreational activities appropriate to a wildlife sanctuary in the cove are naturally separated by the rail embankment from the more active recreation that can take place around the pond. Since visitors to the cove will not want to limit their visit solely to wildlife observation, the pond site serves as an area immediately adjacent where other trip related activities can occur: gathering point before and after trips to the cove, pretrip lecture site, places to eat a picnic lunch, a pleasurable walk around a much more intimate natural setting that are offered by the open expanses of the cove. Without the pond and the facilities on its shores, trips to the cove would be much more limiting and access would be difficult or detrimental to the sanctuary nature of the cove.

Tippin's Pond

The Tippin's Pond site will become the primary entrance and access point or gateway to recreational opportunities of the pond and the cove. The pond is a resource that lends itself to several recreational activities such as picnicking, fishing, and skating, while at the same time its surface acts as an esthetic focal point that reflects the surrounding vegetation as the seasons change. In providing for these activities and for automobile/bicycle parking, this area complements the more passive feeling of Fish House Cove and also serves as a convenient "staging area" for visits to the cove and for visit-related activities such as picnics and outdoor lectures. This relationship of the two sites helps to relieve the pressure of overuse on the



FISH HOUSE COVE
WILDLIFE SANCTUARY
 PENNSAUKEN TOWNSHIP
 WATERFRONT DISTRICT MANAGEMENT PROGRAM

ROGERS, GOLDEN & HALPERN
 PHILADELPHIA, PENNSYLVANIA

LEGEND

- EXISTING TREE CANOPY
- PROPOSED TREE
- EXISTING MARSH PLANTS, SHRUBS, OR GROUND COVER
- LAWN
- WOOD BOARDWALK
- PAVED PEDESTRIAN PATH
- EXISTING DRIVE
- SURFACE WATER
- WILD RICE
- ELEVATION
- CROSS SECTION REFERENCE LINE

FINAL CONCEPT PLAN

0 100 ft 200 ft 400 ft

Figure 5

cove, whose role as a wildlife sanctuary is more fragile than the more active recreational purposes of the pond. The main features of the concept plan for recreational use of Tippin's Pond are shown in Figure 6 above. The description below will generally follow a main path counterclockwise around the pond, starting with the main entrance off Cove Road.

The primary public access point occurs near the intersection of the railroad tracks and Cove Road. A landscaped parking lot of porous material provides space for 20 cars and 10 bicycles. Buses for school trips to the cove could also park here. The pedestrian path begins here with a park map and description with park regulations. The path at this point is wide enough for emergency and park maintenance vehicles. As the path emerges along the pond's northwestern edge, there is a short side path leading to a T-shaped fishing pier. Just beyond the fishing pier, the path joins a pedestrian underpass beneath the railroad tracks that leads to the cove side of the park. The underpass is now filled and would have to be opened to provide pedestrian access to the cove.

As the path turns around the western corner of the pond, there is an amphitheater consisting of semicircular bench seating facing the pond. The amphitheater can be used for performing art groups, campfires or lectures on cove wildlife or as a meeting point before or after group trips to the cove. A side path at the edge of the amphitheater leads up to a plateau, the former Tippin's house site, where a picnic area overlooks the pond and restrooms are located for use by park visitors.

The path continues around the perimeter of the lake and moves from lake edge to the wooded area adjacent to the southwest edge of the lake. The path also leads people to the various use areas such as the picnic grove at the top of the escarpment near the old Tippin's home site. This picnic grove gives extended views across the lake because of its topographic location. As one follows the main path around the lake, a second picnic area in the wooded glen adjacent to the lake is encountered.

The second public access point to the cove and pond is from another parking area just off River Road on the Merchantville Avenue right-of-way. This area should be built to park 20 cars and can be expanded along the right-of-way if more spaces are needed. Paths from the parking area lead down the escarpment to the pond's edge to join the perimeter path along the southern corner of the pond. In this area, erosion control measures such as mechanical slope stabilization and planting are planned to stop or reduce local but severe erosion of the escarpment.

At the end of the main path on the pond's northeastern edge is a third picnic spot in a remote area for people who want to walk to the less active side of the lake. Between the last two picnic areas is a second fishing pier accessible by a boardwalk across a low lying marshy area. This marsh area serves to filter storm water from two storm drains emptying into Tippin's Pond from the drainage area beyond River Road. The natural wet-adapted vegetation here can be supplemented by additional plantings and perhaps by a minimal confinement structure that would assure the full benefit to the pond of runoff-filtering capabilities of the marsh.

Utilizing the existing recreational resources will be done with minimal environmental impact through the careful placement of only those facilities and site furnishings necessary to support the activities desired. The activities supported fit reasonably well into the natural environment of the pond. They include:

- o access to Fish House Cove
- o outdoor lectures on the cove's history and ecology
- o picnicking
- o nature study
- o birding
- o jogging
- o walking for pleasure
- o fishing.

These activities, using the facilities provided, are of an intensity and scale that are compatible with the carrying capacity of the pond and its immediate uplands.

Fish House Cove

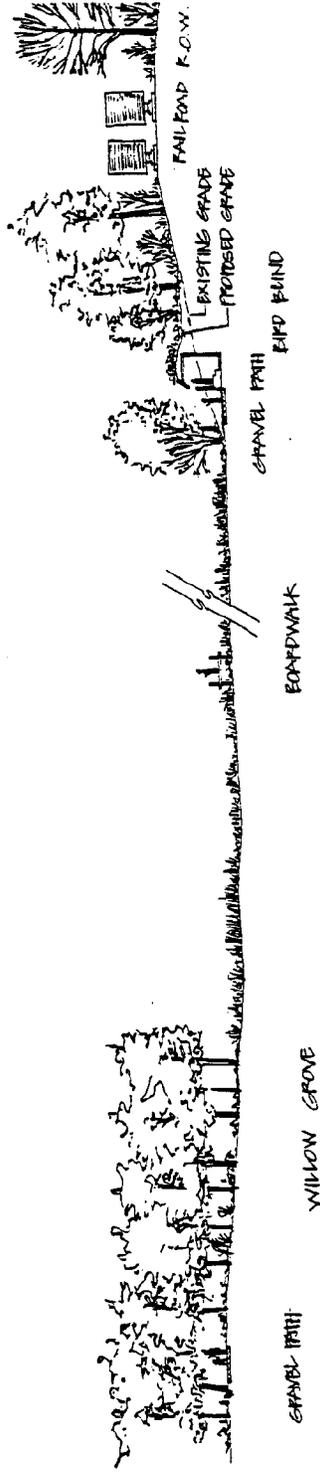
The major objective of the design for Fish House Cove is to preserve and enhance the wildlife habitat while providing select facilities that will allow people to enjoy and study the natural systems of this freshwater tidal marsh, unique along the Delaware River in Camden County. Care must be taken to ensure that the encroachment by man does not interfere with the natural systems being studied and enjoyed. The plan presented below attempts to achieve this by allowing strictly passive nature observation type activities in the type of facilities provided--a boardwalk, paths, and nature observation decks. A sketch of the final concept plan for recreational use of Fish House Cove is presented in Figure 5.

The passive recreational use of the cove is manipulated by different spatial and visual sequences providing varying aesthetic and educational viewpoints. These sequences are created by the changing height of the boardwalk, the placement of the path and/or boardwalk through both wooded areas and the various zones of marsh vegetation, and the change from an at-grade gravel path to elevated boardwalk. Views from land across the water, from water to land, and variations of these two are created through the siting of the boardwalk and path. Spatial enclosure is achieved through vegetation and the topographic relief of the railroad embankment. Observation and teaching platforms provide resting areas as well as places for nature study, especially birding. A covered birding blind is a possibility at the edge of the railroad embankment. The actual location of this feature will depend on field checking of existing conditions. Along the boardwalk and paths and on the platforms, there are various seating areas for visitors to rest or from which to observe the marsh. A cross section of the plan for Fish House Cove is shown in Figure 7.

The path/boardwalk system is "U"-shaped with two termini, thus keeping observers near on the edges of the cove and not in the middle where more disruptions of wildlife would occur. One terminus is an observation and teaching platform near the emergency boat launch with capacity to

FIGURE 7

FISH HOUSE COVE WILDLIFE SANCTUARY
PENNETREN TOWNSHIP, NEW JERSEY



SECTION: ELEVATION B-B'

ROGERS, GOLDEN & HALPERN

accommodate small classes and to provide shelter from rain and sun. The other is a smaller observation deck. While the majority of the cove users are expected to use the path and boardwalk system for nature study and wildlife observation, it is also possible that fishing may take place.

As in Tippin's Pond, a sign graphics program, especially interpretive signs, should be developed to lead users through the park experiences. The signs should enhance visitors' sensory perception (touch, smell, sight, sound) of the natural environment. The placement of an interpretive braille sign system on the trail is recommended.

The following uses are proposed for Fish House Cove:

- o walking for pleasure
- o birding
- o nature study
- o fishing.

C. What project start date is preferred? How flexible is the start date?

The project start date for the land acquisition phase is during the summer of 1982. The construction phase, including detailed designs and specifications can begin during the spring of 1983. These dates are flexible for about 3 months either way based on commitments given by Pennsauken Township officials and members of the Waterfront Management Committee.

D. What is the project duration?

The land acquisition phase is expected to take 7 months; the construction phase, a year, for a total elapsed time of about 19 months.

E. What will be the work products, deliverables, or service resulting from this project? Who will be able to use these deliverables and for what purposes?

The results of this project will be the preservation of a waterfront wildlife sanctuary in a heavily industrialized reach of the Delaware River and public access and support facilities for visitors to the wildlife sanctuary. An additional product of this project is an emergency boat launching ramp for use by township rescue personnel and access to that ramp.

It is intended that the general public visit the wildlife sanctuary in Fish House Cove and make use of the support facilities and newly created access to the Delaware waterfront provided in this project for the purposes of outdoor recreation and nature education.

F. Who will conduct the work for this project? If the work is to be divided among several parties, allocate the tasks in B to each party.

This project will be carried out under the overall administration and supervision of Pennsauken Township. Many of the tasks listed in B above

will be performed for the Township by as yet unselected firms or individuals with special expertise in:

- o title search
- o land survey
- o property appraisal
- o structural engineering
- o landscape architecture
- o planning and permit applications
- o facility construction

	Description	Responsibility
Land Acquisition		
Task 1.1	Do title search on properties to be acquired	contractor, to be selected
Task 1.2	Do outbound survey of properties	contractor, to be selected
Task 1.3	Conduct appraisal of properties	two DOT approved appraisers, to be selected
Task 1.4	Negotiate for control of properties	Township of Pennsauken staff,
Task 1.5	Purchase, lease properties to obtain easements	Township of Pennsauken staff and project lawyer, to be selected
Detailed Design and Construction of Park		
Task 2.1.	Develop detailed construction designs and specifications	contractor, to be selected
Task 2.2.	Obtain permits	Township staff
Task 2.3.	Prepare documents for bidding	Township staff
Task 2.4.	Review proposals	Township staff
Task 2.5.	Select contractors and award contract	Township Committee
Task 2.6.	Construct facilities	Contractor(s), to be selected
Task 2.7.	Supervise and review construction for contract compliance	Township staff

1. If a consultant or university has already been selected for a portion of the work, specify by name, indicate why they are best for this job, and supply samples and citations of the consultant's or university's work in this area.

Not applicable.

2. If a portion of the work is to be performed in-house, provide samples and citations of previous in-house work, on similar topics is possible. Give the names and qualifications of the personnel performing the work.

The two Pennsauken Township staff members who will work in administrative capacity on this project are Kenneth Carruth, Administrative Officer and William R. Buffington, Assessor for the Township. A brief resume of each follows.

Kenneth Carruth

Occupation: Administrative Officer, Planning and Zoning - 2 years

Memberships: Pennsauken Township Planning Board - 4 years
Executive Director, Business, Industry and Government Council for the Township of Pennsauken
New Jersey Licensed Real Estate Broker - Broker of Record
Kenneth Carruth Associates, Inc.
Member of the National Association of Realtors
Member of New Jersey State Association of Realtors
Member of Burlington County Board of Realtors

Education: Associates Degree of Engineering - Spring Garden Institute of Technology

William R. Buffington

Occupation: Assessor of Pennsauken Township - 19 years

Memberships: New Jersey State Association of Assessors
Past President of Camden County Association of Assessors

Education: Real Property I and II - Rutgers University
Real Property Administration I and II - Rutgers University

Mr. Buffington also served as Director of Economical Development for the Township of Pennsauken.

- G. Are any research facilities and equipment, including computers, required for the conduct of the project? If so, what facilities will be used?

Not applicable.

- H. Is industry or government cooperation required or desirable for the success of the project? If so, show evidence that industry or government will cooperate. (Letters of support or cooperation furnish the strongest evidence).

Letters of support for this project, and for the Waterfront Management District with which plans for Fish House Cove are consistent, have been received from the following individuals and agencies:

1. Mayor and Township Committee, Township of Pennsauken
2. Pennsauken Environmental Commission
3. Camden County Board of Chosen Freeholders
4. Camden County Environmental Agency
5. Camden County Municipal and County Services
6. New Jersey Department of Environmental Protection
7. Pennsauken Township Engineer: Richard A. Alaimo Association of Engineers

These letters are reproduced in Appendix A to this application.

Township staff and members of the Waterfront Management Committee have opened communications with Texaco Oil Company over the past several years concerning mutual interest in the Fish House Cove and emergency access to it across Paragon (Texaco)-owned land. These discussions are continuing.

- I. Describe how this project is consistent with the New Jersey Coastal Zone Management Plan.

This project is explicitly consistent with and supported by the New Jersey Coastal Zone Management Plan. Part III of the Coastal Management Program (August 1980) is entitled "Description of the New Jersey Coastal Zone: Affected Environment." In this part of the program, the boundary of New Jersey's Coastal Zone is delineated and visions for the future of specific parts of the coastal zone are suggested based on the eventual implementation of coastal zone policies. In the section that discusses the Camden Region (p. 329), the following statements are made:

The preservation of the few remaining areas (along river waterfronts) still relatively open and undisturbed in the Region will also be a goal of the Coastal Program. These include the lower reaches of Big Timber Creek, the marina area on the Cooper River, and Fisherman's Cove, which could be maintained as natural areas for carefully managed recreational activities.

Representatives from the Bureau of Coastal Planning and Development indicate that the Fisherman's Cove referred to is Fish House Cove. Thus, New Jersey's Coastal Management Program suggests a use for the cove that is identical with the township's own current plans for its preservation and use.

IV. IMPLEMENTATION

- A. How will the study result in mitigation measures? What problems will the mitigation measures address?

This CEIP application has shown the long-term trends that have led to the destruction of natural areas along Pennsauken's Delaware River waterfront and their subsequent use by energy-related and other industrial facilities and to the disappearance of public access to waterfront areas. Recent examples of each of these--a planned sewer interceptor precluding public access to the cove and Texaco's illegal filling of the cove's marsh--were given in Section II.E above.

The Fish House Cove project mitigates the impacts upon public access to the Pennsauken waterfront and the destruction of valuable tidal wetland along the Delaware River waterfront in Pennsauken by preserving the cove as a wildlife sanctuary, and by providing public access to the cove where none currently exists.

- B. Does the applicant have the authority to implement the mitigation measures? If so, cite the authority. If not, who has the authority and how will the applicant assure the implementation of the mitigation measures?

Pennsauken Township has the authority to purchase land and to construct facilities upon it. The mitigation measures planned--creation of public access to the Delaware River waterfront in Pennsauken and preservation of a remnant freshwater tidal marsh are within the authority of Pennsauken Township to implement. The township is empowered to negotiate for purchase of property for public purposes and to apply its power of eminent domain to these purposes. Through its authority to enter into contractual arrangements for planning, design, and construction projects, Pennsauken Township has the legal capacity to implement this project.

V. BUDGET

- A. Show the budget for this study using the following categories: Not applicable. Project cost estimate follows.

Land Acquisition Costs by Parcel (refer to Figure 4)

<u>Parcel Number</u>	<u>Conveyance</u>	<u>Estimated Market Value</u>
1	riparian grant	\$ 51,500
2	fee simple purchase	10,000
3	fee simple purchase	12,500
4	fee simple purchase	1,000
5	fee simple purchase	30,000
6	easement	16,000
7	easement	4,000
8	fee simple purchase	55,000
9	fee simple purchase	35,000
10	fee simple purchase	35,000
	TOTAL	\$250,000

**Preliminary Project Cost Estimate for Fish House Cove Wildlife Sanctuary
and Recreational Area**

Item	Unit	No. of units	Cost/unit	Cost
Site preparation	L.S.	--	--	\$ 5,000
Boardwalks, 6 ft wide	sq ft	21,000	\$ 4.60	96,600
Observation decks/fishing piers	sq ft	6,860	4.60	31,560
Piles, 10 in diameter, 30 ft long	lf	21,000	10.00	210,000
Outdoor furniture				
Picnic tables	ea.	15	600.00	9,000
Litter baskets	ea.	5	300.00	1,500
Amphitheater benches, 8 ft	ea.	40	250.00	10,000
Bollards	ea.	6	50.00	300
Park sign	ea.	2	1,000.00	2,000
Light standards	ea.	2	1,000.00	2,000
Path lights	ea.	6	400.00	2,400
Chain link fence, 6 ft high, 9 gage	lf	700	14.60	10,220
Landscaping				
Shade trees 2-2½ in caliper	ea.	8	275.00	2,200
Flowering trees 8-10 ft	ea.	65	65.00	4,230
Evergreen buffer planting 42-48 in	ea.	30	100.00	3,000
Seeding, fertilizing, mulching	sq ft	37,800	.02	760
Cattail filter planting	sq ft	500	.50	250
Path paving, crushed stone	lf	2,660	3.00	7,980
Path paving, bituminous	lf	1,270	4.60	5,840
Parking area paving, crushed stone	sq yd	3,400	4.50	15,300
Parking area paving, bituminous	sq yd	90	7.00	630
Concrete boat ramp	cu yd	20	320.00	6,400
Restroom facilities and structure	L.S.	--	--	15,000
6-in sanitary sewer	lf	100	5.00	500
Excavation for pedestrian underpass	cu yd	500	.70	350
Bird blind	sq ft	600	15.00	9,000
Shoring and ramp for pedestrian underpass	L.S.	--	--	40,000
Gate	ea.	1	700.00	700
18-in RCP storm sewer	lf	400	16.00	6,400
Site development cost				499,120
Engineering fee (8%)				39,930
SUBTOTAL				<u>539,050</u>
Contingency (10%)				53,900
				<u>592,950</u>
Land acquisition				250,000
TOTAL				<u><u>\$842,950</u></u>

- B. Are there other sources of funding for this project? If so, what are they?

It is anticipated that this project will be funded in part by Green Acres Acquisition and Development Grants from its local Assistance Program. According to the Green Acres fund sharing formula, the following contribution to project costs is anticipated:

	Phase 1 Land Acquisition	Phase 2 Park Development
CEIP grant	40%	40%
Green Acres grant	50%	50%
Local sources	10%	10%
	<u>100%</u>	<u>100%</u>

Pennsauken Township is currently applying to the Green Acres Program for a Land Acquisition Grant. A Preapplication Meeting (Step 2) between Green Acres staff, Pennsauken Township staff, and the township consultant on this project was held on January 4, 1982 at the Green Acres office in Trenton. During this meeting, Green Acres staff encouraged the township to proceed with a formal application. The entire project concept was seen as qualifying for both the Green Acres Land Acquisition and Development Grant Programs.

VI. ADDITIONAL INFORMATION

- A. Please attach responses to any additional questions posed at the pre-application conference.

There were no questions posed at the pre-application conference.

- B. Please attach any additional materials which might assist the Allocation Committee in its consideration of this application.

The following documents are submitted in support of this application:

1. CCEA (Camden County Environmental Agency). 1980. Potential Environmental Impacts of Energy Facilities and Other Development on Fish House Cove, Delaware River, Camden County, New Jersey. Final Report. Prepared for the New Jersey Department of Energy with the assistance of WAPORA, Inc.
2. Environmental Analysis, Inc. 1975. Natural Resource Inventory, Pennsauken Creek and Tippin's Pond. Prepared for the Pennsauken Township Environmental Commission.
3. Rogers, Golden & Halpern, 1981. Planning and Engineering Report for Fish House Cove and Tippin's Pond. Prepared for Pennsauken Township under a coastal Energy Impact Program grant from the New Jersey Department of Energy.

4. Rogers, Golden & Halpern, 1981. Waterfront Usage Design Concept Plan for Tippin's Pond and Fish House Cove. Prepared for Pennsauken Township under a coastal Energy Impact Program grant from the New Jersey Department of Energy.
5. Rogers, Golden & Halpern, 1982. Final Conceptual Plans for the Recreational Use of Tippin's Pond and Fish House Cove. Prepared for Pennsauken Township under a Coastal Energy Impact Program grant from the New Jersey Department of Energy.
6. Pennsauken Township Zoning Regulations defining and controlling land use in the Waterfront Management Area; and a map of this area in and around Fish House Cove.
7. News Release on "Back to the Beaches Day." Public Focus on the Pennsauken Waterfront.
8. Fichter, Jack; October, 1981. Perspective on the Pennsauken Waterfront. Prepared for Rogers, Golden & Halpern.
9. Camden County Municipal Utilities Authority, November, 1981. Excerpts from the plan for the Delaware Basin District II Interceptor System.
10. New Jersey Department of Environmental Protection, July 18, 1978. Letter to Texaco to cease illegal filling of Fish House Cove.

VII. FOR PROJECTS TO FINANCE THE CONSTRUCTION OF PUBLIC FACILITIES AND SERVICES ONLY

Not applicable.

**APPENDIX A. LETTERS IN SUPPORT OF THIS PROJECT
AND THE WATERFRONT MANAGEMENT AREA**

1. Mayor and Township Committee, Township of Pennsauken
2. Pennsauken Environmental Commission
3. Camden County Board of Chosen Freeholders
4. Camden County Environmental Agency
5. Camden County Municipal and County Services
6. New Jersey Department of Environmental Protection
7. Pennsauken Township Engineer: Richard A. Alaimo Association of Engineers

Township of Pennsauken

CAMDEN COUNTY, NEW JERSEY



INCORPORATED 1892

Township Committee

Carl R. Bierbach, *Mayor*
John Philip Maroccia, Esq., *Deputy Mayor*
John E. Jacobs
Hugh G. O'Connell
William Orth

Theresa R. Brown, *Township Clerk*

William H. Brush, *Administrator*

John F. Strazzullo, *Solicitor*

D.S. DiMaio, *Treasurer*

Municipal Building

5605 N. Crescent Boulevard

Pennsauken, New Jersey 08110

(609) 665-1000

January 27, 1982

Mr. John Bolton
Waterfront Management Committee
5605 North Crescent Blvd.
Pennsauken, N.J. 08110

Re: Grant Proposal for Acquisition and Development
of Fish House Cove and Tippons Pond - Pennsauken

Dear John:

This letter will confirm the support of the Township Committee for the above referenced project.

As you are aware, the Township Committee has a strong commitment to preserve and protect, for the good of the public, lands along the Delaware River, Pennsauken Creek and Cooper River. For this reason, a Waterfront Management Ordinance was adopted by the Township of Pennsauken and your Committee was formed. In addition, a Resolution establishing the Official Inventory of Natural Resources for the Township of Pennsauken was approved and we feel that these steps demonstrate our commitment to practical and recreational utilization of our waterfront in an effort to preserve the aesthetic and natural environment.

We commend both you and your Committee on your diligence and efforts in working towards the approval of the Coastal Energy Input Grant to preserve, protect and provide utilization to the benefit of the general public, this most important natural resource in our Community. You may be assured of continued cooperation by the Township Committee in whatever direction deemed necessary to assure this project's success.

We wish you continued success in your efforts.

Very truly yours,

Carl R. Bierbach
Mayor
Pennsauken Township

mdk

Township of Pennsauken

CAMDEN COUNTY, NEW JERSEY



INCORPORATED 1892

Township Committee

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D.S. DiMaio, *Treasurer*

Municipal Building
5605 N. Crescent Boulevard
Pennsauken, New Jersey 08110
(609) 665-1000

ENVIRONMENTAL COMMISSION

January 27, 1982

Mr. Kenneth Carruth
Administrative Officer
Planning & Zoning
Township of Pennsauken
5605 North Crescent Blvd.
Pennsauken, N.J. 08110

RE: Grant Proposal for Acquisition and Development
of Fish House Cove and Tippons Pond - Pennsauken

Dear Mr. Carruth:

This letter will confirm our support of the above referenced proposal to be submitted to the New Jersey Department of Energy and the National Oceanic and Atmospheric Administration, Office of Coastal Zone Management. Your project is a worthy effort in that it encompasses all aspects of practical and recreational utilization of the site, while preserving the aesthetic and natural resources for the future. We would very much like to see funding approved from the State and Federal Government to implement this project.

As you are aware, the Township of Pennsauken has passed a Resolution presented by the Environmental Commission, establishing the Official Inventory of Natural Resources for the Community, of which both Fish House Cove and Tippons Pond are included.

The proposed project is an excellent example of a way to preserve our natural resources and also provide access and utilization of these areas to the benefit of the people of our State. You can continue to count on the support and assistance of the Environmental Commission as needed.

Very truly yours,

Richard Wesley
Chairman
Pennsauken Environmental Commission

mdk

BOARD OF
CHOSEN FREEHOLDERS



Camden County

Court House, Camden, New Jersey 08101

JOSEPH J. ROBERTS, Jr.

Freeholder Director

January 21, 1982

The Honorable Carl Bierbach
Mayor of Pennsauken
Municipal Building
5605 N. Crescent Blvd.
Pennsauken, NJ 08110

Dear Mayor Bierbach:

I would like to take this opportunity to express my ardent support for the awarding of the Coastal Energy Impact Program grant to the Township of Pennsauken. Proper management of Pennsauken's littoral land along the Delaware River is both vital and a necessary measure for serving the community. The development and maintenance of the land will encompass all aspects of practical and recreational utilization of the land while preserving the aesthetic and natural ecological balance. In addition to these goals, the proposed project is a fine example of careful, well-couched planning with vast community and local government support. With such a background, this project is guaranteed to be a major success.

The people of Camden County support the Pennsauken project and would be pleased to see funding support from the State. If I can be of any further assistance in the fruition of this proposal, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in cursive script, appearing to read "J. Roberts".

Joseph J. Roberts, Jr.
Freeholder Director

JJR/MY/mmp

ENVIRONMENTAL AGENCY

JOAN BATORY
Director



Camden County

Administration Building
600 Market Street
Camden, New Jersey 08101
(609) 757-8979

January 25, 1982

Edward J. Linky, Ass't. Director
Division of Planning, Policy and
Resource Application
N.J. Dept. of Energy
101 Commerce St.
Newark, N.J. 07102

Re: Grant proposal for acquisition and development
of open space in the vicinity of Fish House
Cove and Tippen's Pond, Pennsauken, N.J.

Dear Mr. Linky:

This letter will confirm our support of the above-referenced proposal tendered to your office by the officials of Pennsauken Township. Their proposal is in full concert with all existing county plans for the area, and will serve to fulfill those plans in large measure if granted by your Agency.

Our office has offered its services to the Township in a technical and advisory capacity to insure the appropriate application of funds should they be awarded to this project.

Very truly yours,

Joan Batory
JOAN BATORY
Director

JB:co

xc: J. Springle, Municipal and County Services

Joseph E. Benton, Jr.
Director



Camden County

MUNICIPAL AND COUNTY SERVICES
600 Market Street, Camden, New Jersey 08102

January 25, 1982

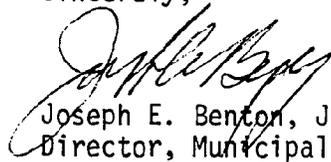
Mr. Kenneth W. Carruth
Administrative Assistant
Planning & Zoning Coordinator
Township of Pennsauken
Municipal Building
5605 N. Crescent Blvd.
Pennsauken, NJ 08110

Dear Mr. Carruth:

My office is pleased to endorse your project providing the restoration of Fish House Cove. As you are aware from our previous meetings and conversations, my staff and myself are quite enthusiastic about your efforts and will continue to provide any assistance that you might require.

I wish you continued success in your efforts.

Sincerely,


Joseph E. Benton, Jr.
Director, Municipal and
County Services

JEB/sa

May 28, 1980

Mr. Herb Kolins
Chairman, Pennsauken Planning Board
3912 Sharon Terrace
Pennsauken, New Jersey 08110

Dear Mr. Kolins:

I have reviewed the proposed addition to the Pennsauken zoning ordinance for a waterfront management district, in response to your request. Let me begin by commending you for your initiative and complementing you on your work on the Waterfront Management District section of your zoning ordinance.

In this letter, I will outline some preliminary comments, reserving additional comments until we receive a map of the area concerned, and a copy of the entire zoning ordinance. Secondary comments will include reference to specific treatment of wetlands and flood plain areas. I must stress that our review is based only on consistency with the Proposed New Jersey Coastal Management Program which will be the policies of the State of New Jersey. Our analysis should not be considered to be advice regarding what is legally permissible or required in your zoning ordinance.

Please note that any reference to Coastal Resource and Development Policies is a discussion of the policies proposed as Administrative Rules in the Proposed New Jersey Coastal Management Program and Draft Environmental Impact Statement, May 1980, and a final drafting of the ordinance and statement of consistency between the ordinance and the N.J. Coastal Management Program should await publication of the final document, expected in September 1980.

In general, the management district should reflect the special nature of the waterfront zone. I am enclosing a copy of Toledo, Ohio's Overlay Zoning District for the waterfront as an example. In Toledo's case, they placed certain additional restrictions upon uses in the waterfront district, applied in addition to the requirements in more traditional zones.

Mr. Herb Kolins
May 28, 1980
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The following comments refer to Paragraphs A-E of Section 708-A of the Zoning Ordinance.

1) A preamble describing the purposes of the district should be inserted before paragraph A, such as:

Purposes

In order that the future development of the Township of Pennsauken waterfront be controlled to ensure the preservation of the environment and to prevent negative impacts on the physical, social and aesthetic elements of the environment, to ensure that a reasonable portion of the waterfront will be used for public open space in order that the public health, safety and general welfare be furthered, to enhance the attractiveness of all of Pennsauken for environmentally sensitive development, and to provide for public access to the Delaware River waterfront, the Township of Pennsauken has created this Waterfront Management District.

The Township desires to ensure management of development of the waterfront while ensuring the conservation and environmental protection of that area and to take full advantage of modern design, construction, technology and planning methods to strengthen and sustain its economic potential, while incorporating a variety of uses which are mutually compatible with each other and the natural environment, with special emphasis on the conservation and protection of the waterfront and its unique physical attributes.

The objectives of the Waterfront Management District are to encourage innovative use of open space, commercial and industrial development to achieve more efficient use of the waterfront under a comprehensive plan rather than as separate unrelated parts. Such comprehensive control should produce well designed development that will have a beneficial effect upon Pennsauken's waterfront, and indirectly on the rest of Pennsauken as well.

A statement of purpose such as this will help to justify the formation of this management district.

2) In paragraph A, use regulations should be divided into permitted and conditionally acceptable uses. Any other uses will be considered prohibited within the district. All uses are subject to the Regulations specified in Paragraphs B and C, as revised. In sections of the waterfront where no filling has occurred to date, all uses should be water dependent. Water dependent is defined as development that must have direct access to the body of water along which it is proposed in order to function. This definition is explained in greater detail on page 79 of the Proposed Coastal Management Program.

You have already listed some examples of water-dependent uses in parts 1, 2 and 3 of Paragraph A. In areas where filling has already occurred, "water-related" development or development that benefits economically from direct access to the water body along which it is proposed is permitted. This definition is explained in further detail on page 79 of the Proposed Coastal Management Program. Once these areas have been defined and mapped, further examples of permissible uses may be included. Certain uses may be permitted in the filled areas which are not appropriate in the natural areas.

Parts 4 and 5 of Paragraph A show examples of water-related uses; which will be permitted in any areas that have been filled in the past, but not in more natural areas.

This differentiation between filled and natural areas is based upon the Filled water's Edge Policy on page 98 of the Proposed Coastal Management Program. The rationale states that development of filled water's edge areas is preferable to development of relatively undisturbed shoreline areas. Therefore, only those uses which are considered water dependent are permitted in natural areas.

3) Paragraphs B and C should be combined as a single regulation section. These regulations will apply to any use within the waterfront management district.

The following is proposed to replace paragraphs B and C:

REGULATIONS

- 1) Any use within the district will be prohibited unless water discharged or returned to the stream has a chemical, physical and bacteriological quality equal to or better than that in the stream at the point of discharge, and further provided that any use or activity which is or may be noxious or offensive by reason of odor, dust, fumes, smoke, gas, vibration, glare, noise or radiation, or which constitutes or may constitute a public hazard by reason of fire, explosion or otherwise, shall not be permitted.
- 2) The maximum height of buildings or other structures in the District shall be a maximum of thirty (30) feet.
- 3) Any building within a Flood Hazard area and the flood fringe as defined by the Flood Hazard Control Act (N.J.S.A. 58:16A-50 et seq.) and by the Federal Emergency Management Agency, as delineated by DEP should meet regulations specified in the State Flood Plain Law (N.J.A.C. 7:13-1.2 et seq.). Where Flood Hazard areas have not been delineated, the inland boundary shall be the ten-foot contour line and the seaward boundary, the high water line. Certain land uses are prohibited under this law. (Also see Coastal Policy 7:7E-8.23)

Mr. Herb Kolins
May 28, 1980
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- 4) All other area and yard coverage requirements shall be applied as in other districts of the township where similar uses are permitted.

4) In paragraph E, rather than specifying a maximum amount of coverage in the regulations, a minimum amount of open space may be required. In addition, all public access, not just pedestrian access, should be discussed.

The following is proposed:

"At least 70 percent of the gross area of each development must provide for public park and other open space or recreational use. Some portion of the open space lands shall be contiguous to the Delaware River, so that all waterfront development must contribute to the creation of a continuous publicly accessible path along the waterfront. Where this is not directly feasible or practical, the developer shall provide an inland route to connect the paths from adjoining properties. This path shall be broad enough to allow a variety of activities such as walking, biking, jogging and viewing the river.

Some additions you may wish to make are:

- 1) A maximum percent of the waterfront land to be devoted to certain types of uses, such as commercial uses, etc.
- 2) A provision that no use with negative impacts on the waterfront will be permitted.
- 3) A legal description of the waterfront District.

For further guidance in refining this portion of the ordinance, you may also want to review the zoning ordinance of West New York, New Jersey in addition to that of Toledo, Ohio. For more information, contact Mr. Joshua Siegel, the Planning Consultant for West New York at (212) 964-8330. As I mentioned earlier, we will be able to make further specific comments and suggest additional restrictions after reviewing the map of the district.

I hope these comments are helpful. After we receive a map and zoning ordinance, we will be happy to meet with you to provide more detailed comments.

Mr. Herb Kolins
May 28, 1980
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Since I will be out of the office for much of the first half of June, please feel free to call Barbara Kauffman (609) 292-9760, the urban planner in the Bureau who prepared most of these comments. I hope to see you at the public hearing on the Coastal Management Program on June 12.

Sincerely,

John R. Weingart

JRW/BR/vp

cc: Mr. John J. Bolton

Mrs. Joan Zane

Ms. Barbara Kauffman

Mr. Allan Campbell

Mr. Neil Yoskin

cc: Mr. Dennis Davidson, with incoming

RICHARD A. ALAIMO ASSOCIATION OF ENGINEERS • *Consulting Engineers*

200 HIGH STREET • MOUNT HOLLY, NEW JERSEY • 08060
TELEPHONE: 609-267-8316

January 25, 1982

State of New Jersey
Department of Energy
101 Commerce Street
Newark, New Jersey 07102

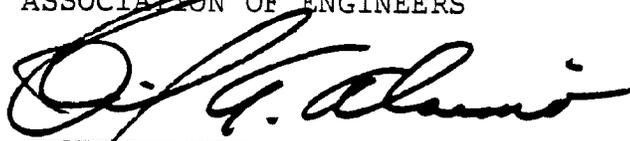
Re: Pennsauken Township
Tippins Pond and Fish House
Cove
C.E.I.P. Project
Our File No. C-38015

To Whom It May Concern:

As Pennsauken Township's Engineer, our office endorses the direction in which the Township is proceeding regarding the improvement and future utilization of the Tippins Pond and Fish House Cove areas within Pennsauken Township. We believe that more of the State's natural resources should be conserved and at the same time allow the residents of the State to enjoy their natural beauty. The Tippins Pond and Fish House Cove project is an example of a positive step in that direction and will benefit not only the people of Pennsauken Township but also all of the residents of the State of New Jersey.

Very truly yours,

RICHARD A. ALAIMO
ASSOCIATION OF ENGINEERS



Richard A. Alaimo, P.E.
President

RAA:JDT:pjn

