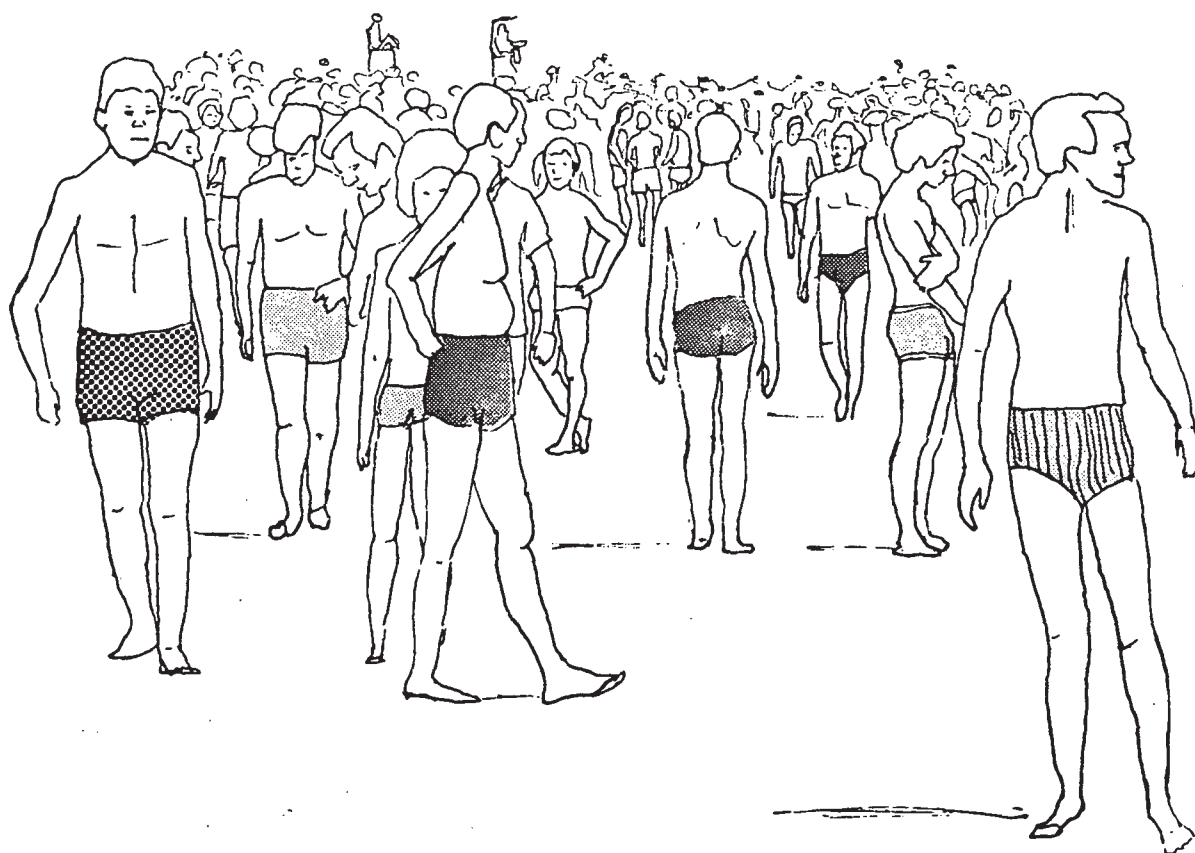


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RIIS PARK A Study of Use & Design

Project for Public Spaces, inc

GATEWAY NATIONAL RECREATION AREA

RIIS PARK STUDY

February 1977

PROJECT FOR PUBLIC SPACES, Inc.

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GATEWAY NATIONAL RECREATION AREA
RIIS PARK STUDY

INTRODUCTION

Riis Park, a New York City beach and park, dates back thirty-five years and has a well established role in the city's recreation spectrum. Through the years it has developed distinct patterns of use by different social and ethnic groups of New York's population.

Riis Park was incorporated into the Gateway National Recreation Area, one of the first National Parks to be established in an urban area, only three years ago. The National Park Service is seeking to understand the role that Riis and other sections of Gateway slated for intensive development are to fill as part of a National Park.

This study of Riis Park was undertaken within the context of developing plans for the entire area of Gateway National Recreation Area. Specifically, the questions posed to us by the National Park Service in terms of Riis Park were:

1. How to accommodate existing use better and encourage and provide for increased levels of use.
2. How to improve pedestrian and vehicular circulation.
3. How to encourage and accommodate off-season and off-peak use.
4. Which of the facilities at Riis are important to the success of the park, and could some of these facilities be removed to other parts of Gateway.
5. What guidelines should NPS follow in developing the 300-acre Fort Tilden parcel adjacent to Riis Park, also slated for intensive recreational development.

Scope and goals of this study.

Our goals in undertaking to study Riis Park were:

1. To understand how Riis is currently used by visitors.
2. To identify what 'works' and what 'doesn't work' at Riis for visitors.
3. To identify those design/behavior features which ought to be

kept, those which need modification, those which should be eliminated, and those which don't exist, but should be added.

4. To apply these design/behavior principles to a schematic, conceptual plan for high density beach and park development in neighboring Fort Tilden.

Methodology of this study.

Our method of study is based on systematic, unobtrusive observation of people's activities in particular spaces. We observed and recorded who used Riis Park, how it was used, and analyzed how this use relates to the present design of the park--is it consistent or inconsistent, frustrated or supported? From this it is possible to determine what needs are and are not being met adequately, what facilities are present but unused, and to develop suggestions for redesign and renovation which will better meet the needs of the users.

We make two basic assumptions in using these methods. The first is that most uses to which people put the park are legitimate expressions of what a beach and park ought to provide. We are extremely cautious about saying that people are wrong to do "thus and such", and that a rule should be made forbidding it. Our bias is to say that if "thus and such" is a legitimate activity and if it conflicts with park design, then how can the park be redesigned to accommodate that use. Secondly, we assume that the needs and desires of future users will be similar to those of present users as long as the basic nature and goals of the park remain the same. In this sense, we observe present users as a sample of future users.

Formal observations were conducted by Project for Public Spaces teams on eight weekend days during the summer of 1976. Weekends were chosen because they are periods of heavy use and most of the

National Park Service concerns were with crowding and peak use times. In addition to the weekend sessions of formal observations, staff members made several site visits during late spring, summer weekdays and cold days in September. These trips were taken to get an overview of park use during off-peak periods. Before formal observations began, team members spent several days wandering throughout the beach and park, becoming familiar and comfortable with the park and with park visitors.

People working at Gateway were informally interviewed to improve our understanding of the social dynamics of the park and its history. We were interested in the special perspectives of different employees as well. Those interviewed included management and planning people, park rangers, city and park police, first aid personnel, the gardener, and people who operate concessions.

Informal discussions with park users were held only when initiated by the users. While these were quite informative, and included a number of long time users who are key members of the unofficial social structure of the beach population, they were not representative of all park users. Under terms of agreement with the National Park Service, Project for Public Spaces did not attempt an interview survey of park visitors.

The findings and recommendations we report can be seen on two levels. First, they are responses to site-specific conditions, problems, and possibilities for solution. They concern such things as exact location of plantings, paths, and fences. Recommendations are also influenced by specific political realities special to Riis Park, such as TBTA control of the parking lots and New York City ownership of roads.

On another level, most of the recommendations are specific examples of general principles which we feel can be applied to the design and management of other high density beach areas within Gateway National Recreation Area. The last part of this report, a schematic plan for development of Fort Tilden based on generalizations of our findings at Riis, illustrates how the findings and recommendations can be applied elsewhere. Project for Public Spaces has toured three other parts of Gateway--Midland and South Beaches, and Miller Field on Staten Island--and is confident that these same principles can be profitably applied to those sites as well, although specific recommendations would require understanding the special attributes of each site.

Summary

The special attributes of the New York population are important determinants of how Riis Park functions. This population is a conglomerate of widely diverse groups, differing in age, income, race, ethnicity, values and activity preferences. Its diversity is reflected in the user groups at Riis, and is quite different from the typical image of users of other National Parks. Not only does Riis serve groups of people with different and sometimes conflicting values and interests, but it does so under conditions of tremendous density, another characteristic typical of urban situations and different from most National Parks.

Provided they can be part of a smaller, similar group of people in an identifiable location, urbanites are remarkably tolerant of the conflicting values being acted out by nearby groups. Over the course of a great many years, sub-areas of Riis Park have evolved as places where people of similar backgrounds and values gather. The

resulting social ecology is every bit as important to the success of a dense urban recreation center as the eco-system is to a natural environment.

The park, taken as a whole, currently 'works' in serving a wide variety of people. However, at many scales, and in many places, it works in spite of the design. For example, the trees, although intended as formal ornamental plantings, are well-used as shady picnic areas. However, in order to use the trees for picnicking, many people must bring their own charcoal grills to cook food, as well as a variety of outdoor furniture. On a much smaller scale, the drinking fountains located along the boardwalk are used as a water supply by people washing sand off their feet before putting on their shoes to leave the park. This is a use the fountains were not intended to serve, and requires a great deal of ingenuity and dexterity on the part of park visitors to adapt them.

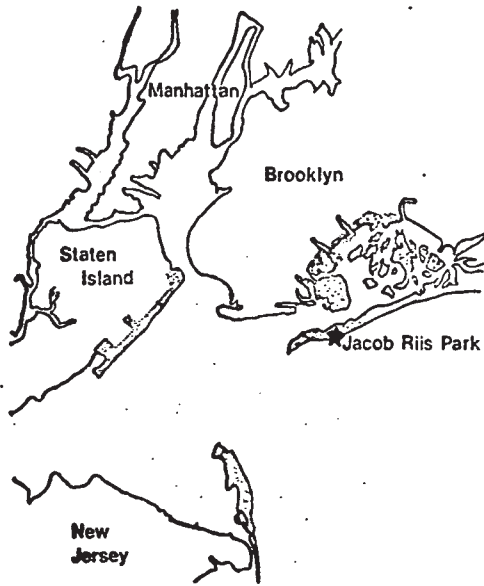
In addition, some segments of the population are less well served by Riis than others. For example, the "tree users" tend to be large extended black and Hispanic families. To the extent that tree users are less well served, so is this population. The elderly population is the most easily identified group whose needs are not well met. They tend to seek out areas which are shady and which, although close to 'the action', are slightly removed. There are few such areas at Riis and one can observe all kinds of improvisations at creating and using those areas that almost work as elderly gathering places.

Most of this report looks at the "fits and misfits" of design and use of Riis on an area-by-area basis: the beach, the boardwalk, active recreation areas, trees and lawn areas, and provisions for arriving

and departing. One section deals with issues which apply to the functioning of Riis as a whole and are not limited to a single geographic area. A final section applies the general lessons we learned from Riis to guidelines for development of Fort Tilden.

The basic philosophy behind our recommendations is that redesign must respect and respond to the existing stable but fluid social system, which 'works' as the park itself 'works', while at the same time better serving the observed needs of users and increasing opportunities for more people.

ACCESS TO RIIS PARK



Jacob Riis Park is located on the western end of the Rockaway Peninsula, south of Jamaica Bay, and about twenty-five driving miles from midtown Manhattan. The major mode of access, used by about 84% of park visitors today, is the automobile.

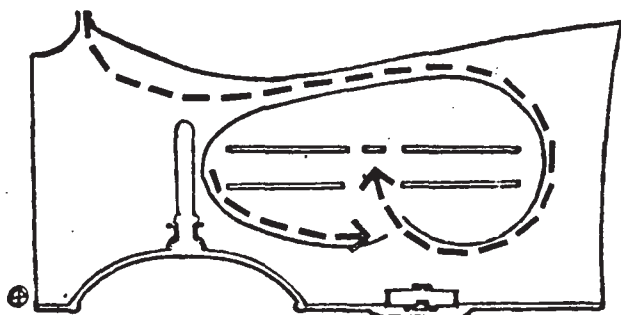
About 16% of current visitors arrive by public transportation. Most of these people travel the metropolitan subway system to its nearest terminus in Brooklyn and then transfer to a bus which stops in Jacob Riis Park. The National Park Service is advocating various means of increasing the availability and use of public transportation, all of which will include arriving at the park by bus. Finally, a small number of users arrive by bicycle, a mode of transportation the NPS would also like to encourage. (Very few people live within walking distance of the park.) Each of the three types of transportation--car, bus and bicycle--has different arrival routes and different needs and problems will be discussed separately.

Automobile Access.

For those members of the metropolitan population with access to an automobile, there are several advantages to driving. One is economic--the out-of-pocket cost per trip is \$2.00 for bridge toll and parking fee. Because Riis is a double fare via public transportation from most city locations, round trip costs are usually \$2.00 per person

on subway and bus. Thus a group of four people could make a trip to Riis for \$2.00 by car which would cost \$8.00 by public transportation most days and \$4.00 on Sundays and holidays. In addition, the car is more convenient. Not only is a car usually faster, it eliminates the need to make transfers between subways and the bus, and makes it much easier to transport the great quantities of equipment many people bring to the beach. This paraphernalia includes charcoal grills, bags of charcoal, chairs, blankets, kettles, bags of food and drink, large coolers, and occasionally, tables.

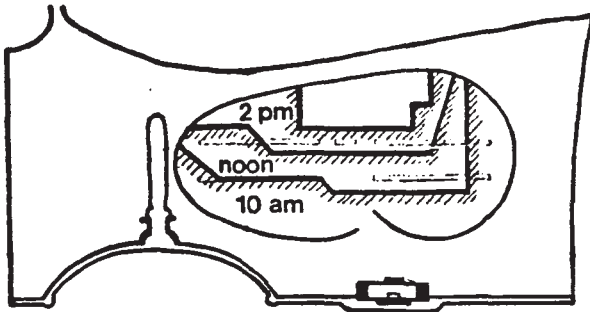
The National Park Service would not like to increase the number of cars arriving at Riis. Its goal is to stabilize or even decrease the number of cars because of the enormous amount of space needed to park cars and because the main access route, the Marine Parkway Bridge, has limited carrying capacity. Our analysis of automobile access patterns was aimed at improving the situation for current levels of use.



The nine thousand car parking lot at Riis stretches across the peninsula from the bathhouse to the roadway from the bridge.* To enter the lot drivers coming from the bridge circle around the eastern end

of the lot and enter on the south, across from the bathhouse. To exit the same procedure is followed in reverse. There is a lack of clear directional signs into the Riis lot. Once inside the lot, cars park in rows running east and west. To reach the automobile exit, all cars are routed to the outside edge of the lot around the western and southern edges.

* The parking lot is under control of The Triborough Bridge and Tunnel Authority and will not be under National Park Service jurisdiction until 1984.



The lot rarely fills up, except on a few peak summer days. The map shows how the lot fills up over the course of a busy, but not really crowded summer Saturday.

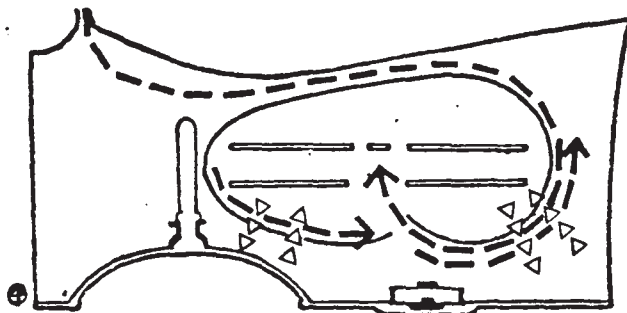


Making the transition from car to park is difficult and hazardous. Those people arriving with a lot of equipment to unload have one designated drop off zone available in front of the

bathhouse. Although the concept is good, the location is not close to where many people settle, and so many people stop inside the parking lot on the southwestern corner, where there is inadequate space, to unload equipment and passengers.

For the person who has parked his car and is making his way to the park there are other problems. Pedestrian exits from the lot are not marked, are not visible from a distance, and are not always related to pedestrian paths within the park. Because of the orientation of parking rows, most pedestrians must cross several aisles of traffic cruising to find a parking place.

Along the southern edge of the lot there are two areas of major conflict where pedestrians must cross a steady stream of traffic. On the southwestern half the conflict is inside the lot, and most intense



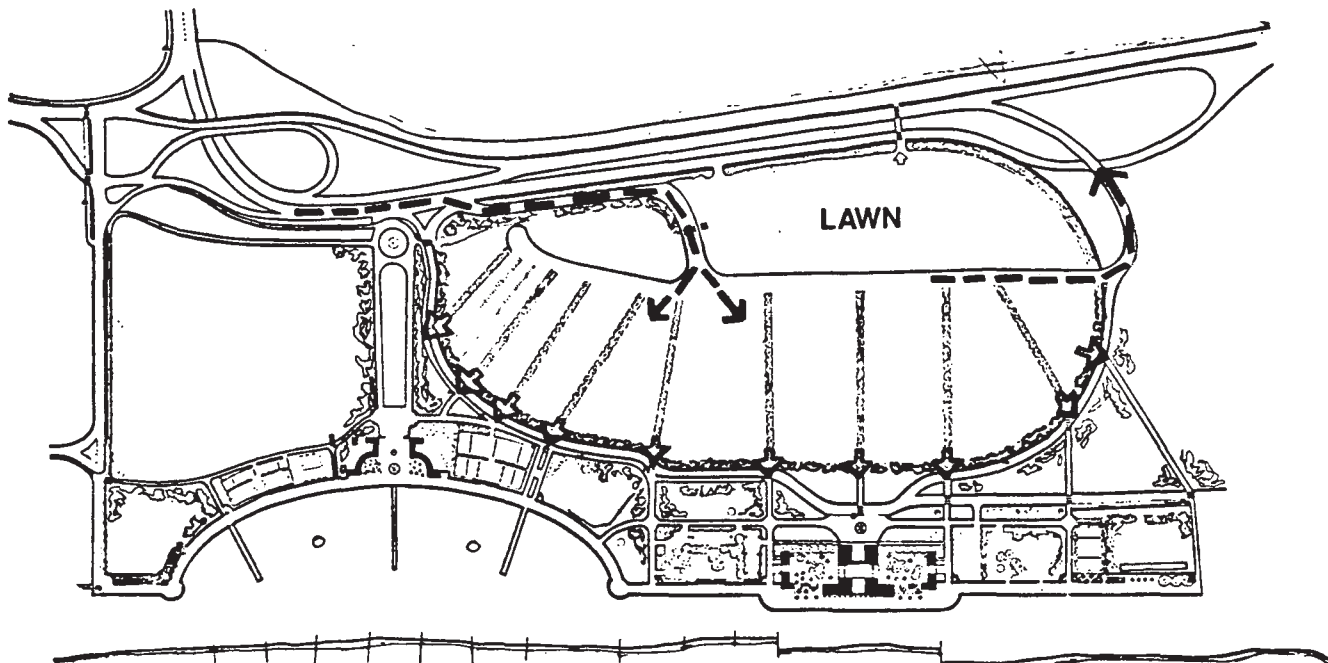
on weekend afternoons, because pedestrians entering or leaving the park must cross all traffic headed toward the automobile exit. On the southeastern half the conflict is outside the lot where pedestrians headed toward the eastern part of Riis must cross all traffic entering and leaving the parking lot. Although there is an underpass on the eastern end of the bathhouse, one Sunday we counted between 500 and 1000 people crossing a steady stream of traffic here.

Recommendations.

We realize that some of these recommendations may be difficult to implement because the TBTA has control of the parking lot through a long term lease until 1984, and because New York City holds title to all the roads. However, it might be possible to explore some kind of arrangement between these different agencies. For example, the NPS might be given design control over the parking lot, while TBTA reserves economic control and, if changes by NPS reduce the number of parking spaces, on those few days when the lot reaches capacity, NPS might reimburse TBTA for the income they could reasonably have anticipated that day.

Of course, the simplest arrangement would be if New York City, through the TBTA, would cooperatively reorganize the parking lot in a coordinated design effort with the National Park Service in an attempt to more effectively utilize both public resources as agreed upon in the 1972 "Memorandum of Understanding" between the Mayor of New York and the Secretary of the Interior.

1. Relocate automobile entrance to and exit from the parking lot to the north of pedestrian exits to reduce pedestrian/vehicle conflicts.
2. Crop off the southwestern edge of the parking lot and use the space for additional park land and car and bus drop off areas that are removed from the traffic flow.
3. Locate pedestrian exits on axis with major pedestrian paths in the park and mark the exits so they are clearly visible from the middle of the parking lot.

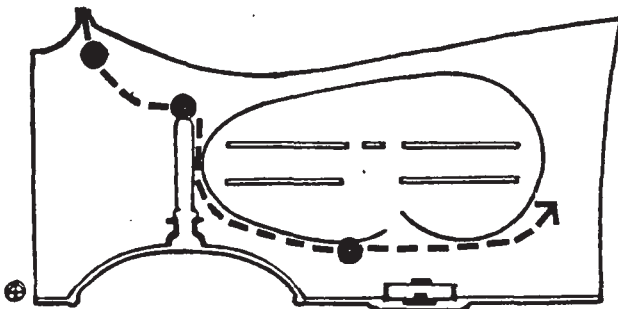


4. Re-align parking rows so that they are on axis with pedestrian exits. Pedestrians will then be walking with the traffic flow in the parking lot and not across it.
5. Once the automobile exits and entrances have been relocated (see 1.), the land between the parking lot and the park, now owned by NYC as roadway, should be used as park land, keeping one lane of roadway for bus access and emergency vehicles.
6. Install a strip of trees and bushes along the park edges of the parking lot so that it doesn't intrude visually into the park.
7. If, after the TBTA relinquishes control of the parking lot in 1985, the lot continues to fill to capacity only a few days of the year, replace blacktop on the northern and eastern section of the lot with grassy fields, ringed by trees. This area can then be used as park land most of the time, and as parking space for the few days of anticipated peak load.
8. Improve signage so that it is clear to automobile drivers when they are in Riis Park, how to get to parking, and where drop-off and pick-up areas are located.

Bus Access.

The National Park Service hopes to increase use of public transportation to Riis Park not only among those who might drive, but especially among the over one million metropolitan households without cars. While part of this increase will come from special outreach busses running directly between pick-up locations throughout the city's boroughs and Riis Park, the greatest increase must be in visitors arriving through the regular public transportation system. Our analysis therefore focused on the experience of the person travelling to Riis on regular, existing public transit and on the park's capacity to handle a much increased visitor load arriving by bus.

Getting to Riis Park by public transportation is a difficult proposition, requiring several changes of subway and bus. For most people in New York City to reach Riis by public transport, they must take the subway to the Flatbush Avenue stop at the end of an IRT line in Brooklyn. This station is relatively easy to reach only from Manhattan. From here people must cross a busy intersection and transfer to a bus going to Riis Park. There are no signs in the subway station informing people how or where to make the transfer and the busstop for the Riis Park bus, one of four or five stops, is not marked.



Although there are three stops used by people arriving at the park, only one of them is obviously within the park. The first stop is immediately after the Marine Parkway Bridge and gives no

indication that it is in any way related to Riis. People who get off

here now tend to be young people headed for the western end of the beach who already know they must cross the highway and walk a half mile down a service road to reach the beach. There are no directional signs available. The second stop is at the end of the mall and is relatively unused. One Sunday we counted a total of about 90 people disembarking during the peak arrival hour between noon and 1 pm. The third stop is centrally located near the bathhouse, is obviously within the park, and is the most heavily used. During the same Sunday hour about 450 people got off busses at this location. There is no stop at the eastern end of the park, although we observed many people walking from the central stop to that part of the park.

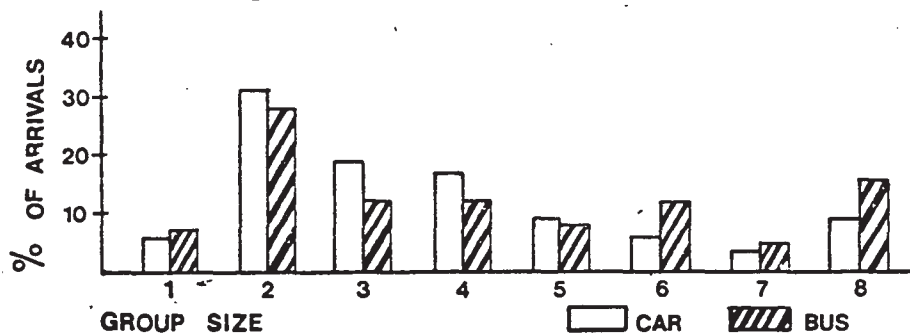
After the visitor gets off the bus, there is no information telling him where he is in the park, what facilities are available, or where to catch a bus to return home.

For the return trip there is only one location where people can board the bus, just west of the bathhouse. This bus stop consists of a maze of steel piping for keeping people in line while they wait. There is no place to sit and no shelter from sun or rain. In recent years bus service has been frequent enough that only one of the five aisles of the maze is ever filled with waiting people. On a Sunday we observed between 60 and 70 people waiting at this bus stop throughout the afternoon.

Characteristics of bus riders do not vary greatly from those who arrive by car. In both cases about half the people arriving come in groups of three or less. Both groups are predominantly white, although in the late afternoon the proportion of black people arriving increases greatly. The greatest noticeable difference is that bus riders do not bring much equipment compared to car riders. They tend to bring

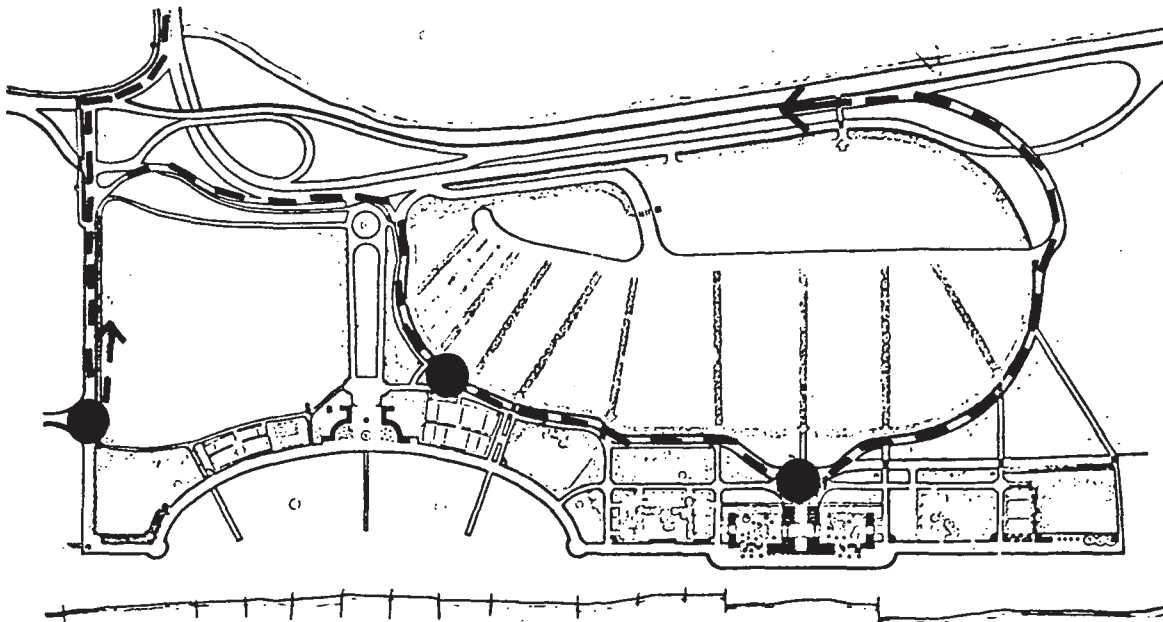
no more than a satchel and towel, although we occasionally saw people bringing folding chairs and beach umbrellas on the bus.

Percentage of People Arriving by Car or Bus



Recommendations.

9. Improve information and signage for public transportation users:
 - a) Improve signage at subway/bus transfer locations.
 - b) Put maps and information about Riis Park and Breezy Point on the busses which travel to the park.
 - c) Erect a sign welcoming people to Riis Park where the busses enter the park.
 - d) Bus stops for Riis should be identifiable as park stops through design and/or signs.

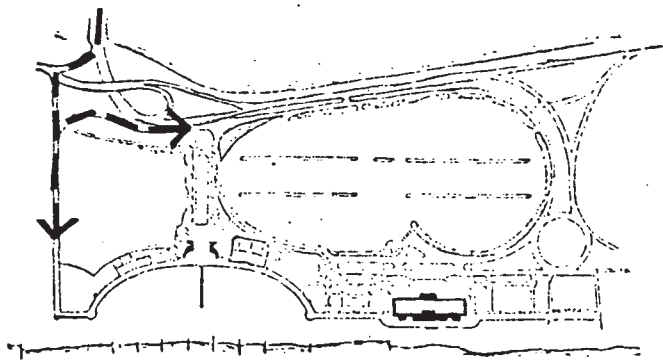


10. Relocate bus stops so they are closer to major use areas at the park (see map), and have each location be used both for dropping off and picking up riders. This will increase convenience for bus riders and by decentralizing pickup locations will ensure that even with greatly increased numbers of bus riders, there will never be enormous crowds waiting to get on busses. This recommendation will require that the busses, which now are stored at Riis, be moved to Fort Tilden, possibly as many as seven to eight busses.
11. Erect shelters at bus stops to provide shelter from sun and rain, to provide seating space for those waiting and to make bus stops clearly visible and distinguishable as park stops. Provide lighting at those stops that will be used at night.
12. Equip busses which go to Riis with interior or exterior storage racks, to facilitate bringing equipment.
13. To allow those who come on public transportation the opportunity to engage in activities normally restricted to those who can bring large amounts of equipment in cars, provide facilities at the park including charcoal grills and picnic tables, and arrange for concessions to sell small bags of charcoal.

Bicycle Access and Circulation.

Bicycles differ from cars and busses in several ways. Where cars and busses are used simply to deposit passengers at the park, bikes can be used either to get someone to the park or for recreational riding in the park. In addition, even if bikes are used only to reach the park, desirable conditions for parking and storing them differ from cars.

The major access for bikes, as for vehicles, is from the Marine Parkway Bridge. The only non-vehicle path on the bridge is a six foot wide walkway about 20 inches above the road surface on one side of the bridge. This is used by pedestrians and cyclists going in both directions although signs instruct people to walk their bicycles.



Once across the bridge, it is not apparent how to get to the park, and there are no signs indicating the way.

This is particularly important because the safest and most direct route is not

the same as the vehicle entrance route. Instead of taking the highway, it is better to take the local road, cross it, and enter the park from the northwest corner along either the western or northern edge of the gold course.

Because bikes are portable and easily stolen, people keep them close by and, as a rule, leave them in bike racks only if the racks are visible from where they are stationed. The only bike rack at Riis which is consistently used is located at the extreme western end of the boardwalk where many young people congregate. Other bike racks are not visible to active use areas and are usually empty. However, we frequently observed bicycles inside sports areas, locked to chain link fencing, or locked to the boardwalk railing. Compared to the standard bike racks at Riis, fences and railings are more secure places to lock bicycles because it is possible to lock the frame itself to a support.

Within the park cyclists may ride on foot paths and service roads, but must walk their bicycles on the boardwalk except during very early morning hours. Riis Park is not very good for recreational riding. The distances are short, the paths are frequently crowded, and they are not connected into any kind of a system. They keep ending without going anywhere.

Recommendations.

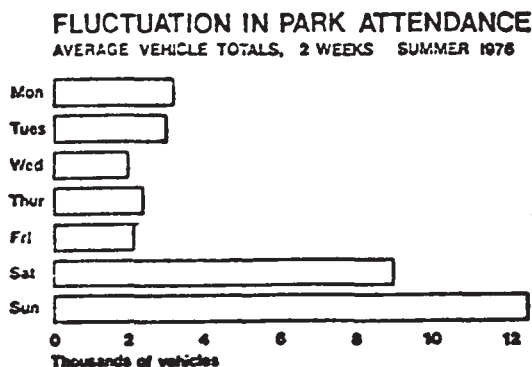
14. Erect a railing at the edge of the bridge walkway to reduce the danger of bicycle/vehicle accidents. If the bridge is ever modified or widened, a walkway should be added to the eastern side of the bridge so that bicycle traffic can be one-way on the correct side of vehicular traffic.
15. Directional signs for cyclists should be installed at the Breezy Point side of the bridge, and a map of the park showing bicycle paths erected on the northwest corner of Riis Park.
16. Those paths intended for bicycle use should be marked.
17. Bicycle racks should be designed to allow locking the bike frame to the rack, and should be located near the boardwalk railing and inside active recreation areas. Determining the best locations for bike racks will probably require experimentation.
18. Riis Park should be included as one node in a large circular system of bicycle paths going out to the tip of Breezy Point and around Jamaica Bay. By itself the park is not large enough for recreational riding. As part of this system, bike paths should be located on the back side of densely developed areas like Riis, although they could be located near the shore in less developed areas.

THE BEACH



The Riis Park beach is a mile long stretch of fine sand sloping gently toward the ocean. For much of its length the beach averages 200 feet in width, although the formal crescent on the western part extends as much as 600 feet from boardwalk to ocean. The beach is protected by low wood pilings extending into the ocean in fifteen places.

Historically, these pilings have served as delineators of social groupings on the beach, forming fourteen bays. Although the signs numbering the bays were removed two years ago, many people still refer to areas on the beach and boardwalk by bay number and distinct social groups still use different bays. Bays 1 and 2 are known as primarily gay areas, Bays 3 and 4 are family areas, Bay 5 is known as the black area, etc. The strict delineation of social groups by bay seems to be lessening, but remains a powerful organizing force for beach users.



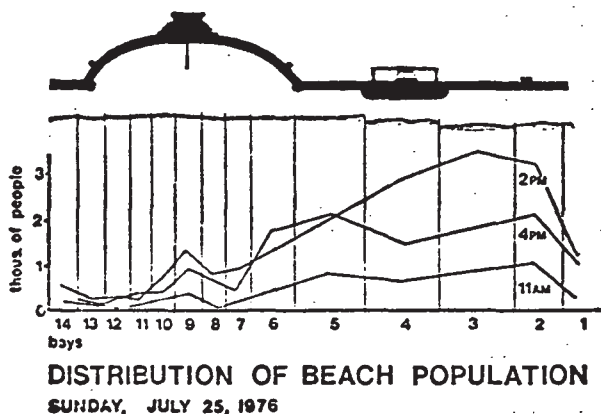
The beach, and the entire park, is characterized by periods of high and low use. The summer season is, of course, the peak use period. The park is 4 to 6 times as crowded on summer weekends as it is on weekdays.

We estimated about 20,000 people on the beach one Sunday afternoon; Park Service estimates are even higher. In the off season, the beach is

nearly deserted. Snow fencing and burlap are erected the full length of the boardwalk railing, leaving only one opening onto the beach. On a cold September weekday we saw no more than 10 or 20 people walking on the beach.

We spent little time observing beach behavior, both because the National Park Service has already conducted several studies on this and because for the most part activities were those one would anticipate--people lying on blankets or sitting on beach chairs under beach umbrellas talking and sunning, kids running around and playing in the sand, people playing in the surf or strolling along the water line.

We were most interested in the distribution of people along the length of the beach and how that changes with an increase in numbers of people, so that we might make recommendations about how to absorb the anticipated larger numbers of people coming to Riis in the future.



We found that the beach population is not evenly distributed throughout the beach area; parts of the beach are crowded and others sparsely settled. As the beach population increases

the distribution remains relatively constant both in terms of relative density and in terms of population characteristics. These patterns seem to relate to the historic use of certain parts of the beach by particular groups, to the configuration of the beach and distance to the ocean, to distances from car and bus access points, and to individual preference regarding crowdedness.

The eastern half of the beach accounts for 60 to 70% of the beach population. The most densely settled area is the extreme eastern end, Bays 1 and 2, where nearly 25% of the entire beach population congregates on about 9% of the beach area. This area is predominantly settled by homosexuals and a few nude bathers, as well as many hip young people. The high density probably reflects the traditional designation of the area as the gay area, increased numbers of people willing to be identified as gay, and the importance this population assigns to being with and among other people. The people scene, the extreme density of people both on show and watching others is an important ingredient of this section of Riis.

The area in front of the bathhouse and most of the concessions is heavily settled by a mixture of people--groups, families, couples--although the density is not nearly as great as the area to the east. This section is convenient to parking lot access as well as concessions.

The section of the beach to the west of the bathhouse and in front of the central playground undergoes an interesting population change during the course of weekend days, particularly Sundays. This section is historically the black area of the beach, and is the area where most black people who use the beach settle. However, on the days we observed, this section was very mixed racially until late afternoon when a combination of white people leaving and more black people arriving changed the population to almost totally black. This phenomenon was not limited to the beach but extended across the boardwalk and into the playground as well.

The large crescent part of the beach, particularly its western half which has traditionally been called "the Desert" by lifeguards,

is fairly sparsely settled by a mixture of families, couples, groups, and old folks. There seem to be several reasons for this. The western part is relatively distant from parking lot and bus access and from concessions. The pattern of settlement, particularly on crowded days, shows the influence of beach access points, particularly the concrete walkway down the middle, and of the great width of the beach in this area. People settle quite densely down towards the water, and about the same distance from the water as on the narrower stretches of beach. They also settle all along the concrete walkway and in a narrow strip along the boardwalk. This leaves two large empty spaces in the middle to rear parts of the crescent which are quite literally deserts, hot sandy areas far from the water.

The westernmost end of the beach is also very sparsely settled; it has about 4% of the beach population on 8% of the beach area. This area is the most distant from access routes, from food concessions, and from restrooms. The population in this area is mostly white and young, ranging from early teens to late twenties. Most of the people settle around the stairs and near the boardwalk, which is the focus of intense activity on weekends.

A few points stand out clearly from this analysis and suggest some possibilities for the future. First, those people who occupy the densest areas do so in large part by choice; there are much less crowded areas that they choose not to settle in. Second, the 3 areas of the beach with distinctive populations--the gay end, the black area, and the young white end--are widely separated. Now that the edges of the bays seem to be less rigidly defined, in part because of the removal of the numbered signs, if any of these three populations

increases significantly in numbers, they will probably extend their boundaries sideways. Thirdly, the entire western part of the beach, including the crescent, seems capable of absorbing many more people.

Recommendations.

Concentrate efforts for increased population in the area of the crescent, particularly the back two sides. Possible changes to encourage this include:

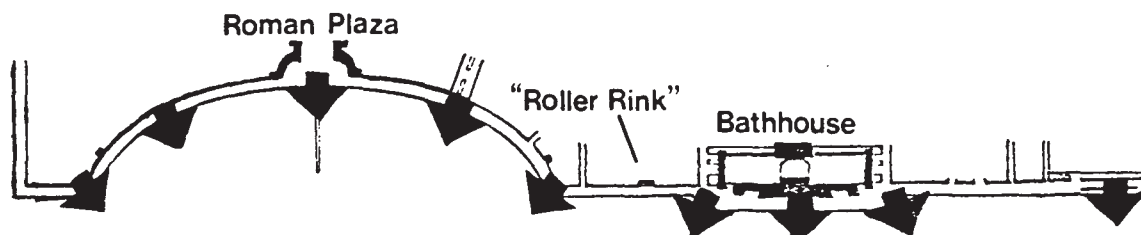
19. Open up two more entrances from the boardwalk to the beach along the arc. (Perhaps including wooden walkways onto the sand.)
20. Develop special focus in the back areas by establishing play areas with water for small children. This would encourage family use and allow kids to play with water and sand without parents fearing for the safety of their kids.
21. Develop special focus and unique environment in back areas by building sand dunes and planting with natural dune vegetation.
22. Put more concessions in the Roman Plaza area and make it more of an activity node. (Perhaps have a portable concession stand located in the middle of the crescent.)
23. Improved access on the extreme western end and development of a major concession and restroom facility there would probably increase use. It might also lead to conflicts with the established groups of beer-drinking young people.

BOARDWALK

The boardwalk at Riis plays several important roles: as a major pedestrian path and circulation route for park management vehicles, as a staging area for people entering and leaving the beach, as the commercial street front of the park, and as a "place" to be in its own right. The boardwalk now serves these functions with varying degrees of success and our recommendations for the most part are intended to enhance and strengthen these last three roles. In particular, the boardwalk has great potential for being a social gathering space, a role which it currently fills in only a few areas for special population subgroups.

The boardwalk is the organizing spine for concessions, sports facilities and playgrounds, as well as being the dividing line between beach and non-beach functions. It is a twenty foot wide concrete walkway with railings on two sides and extends the full length of the park. It is elevated between two and six feet above the beach and varies from on grade to four feet above back park areas. There are stairs descending from either side of the walk at intervals.

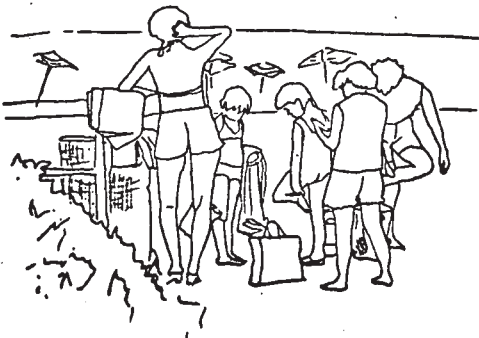
As a pedestrian circulation route the boardwalk is used by all visitors to Riis Park at some point, to reach the beach, to get to or from restrooms and changing facilities, to purchase food or other goods from concessions, and to reach sports facilities or playgrounds.



It is the only path directly connecting these various facilities.

The boardwalk is also used as a circulation route by many kinds of official vehicles including small electric carts, automobiles, and trucks used by concessionaires, park police and rangers, city police, and sanitation crews. We occasionally observed taxis and a police paddy wagon as well. All of the vehicles make a rather jarring impact on what is essentially a pedestrian space. The electric carts are least disruptive, while the heavy presence of police cars is quite intrusive.

Finally, the boardwalk serves a minor function as a bicycle path in early morning hours and other off peak times. However, during the day some people also ride bikes in violation of the rules.



The boardwalk is used as a place to pause and prepare for entering or leaving the beach. On entering, almost everyone pauses to look over the

beach and select a place to settle, sometimes to take off street clothes and shoes, and sometimes to wait for friends to return from a concession or emerge from the bathhouse. At the end of the day people cluster along the railing near entrances to the beach and around drinking fountains on the boardwalk to wash their feet before putting on their shoes, to brush off sand, to put on clothes, and organize their belongings before leaving. There is no place to sit down during this process and, since drinking fountains are the only available source of water, people cluster around them hopping back

back and forth to the railing with paper cups filled with water. Lack of supporting facilities makes the pulling together routine very awkward.

When the park was planned, the bathhouse was intended to serve this organizing, gateway function. People were expected to arrive in street clothes, change into bathing suits, and shower and dress before leaving. From our observation this kind of bathhouse is largely outdated. We estimate that only 3 to 4% of Riis Park visitors use the bathhouse changing facilities. People dress informally and wear bathing suits under street clothes which they take off and put on in public. The boardwalk has taken over many of the original functions of the bathhouse, but is ill-designed to serve them.

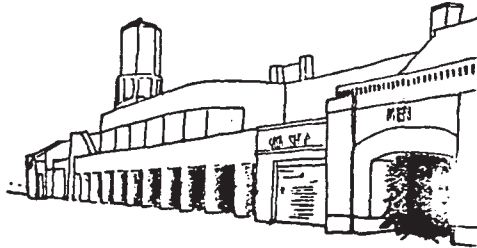


The boardwalk is also the commercial street at Riis. All of the concessions at the park, which sell food, drinks, ice cream, and a few beach supplies and rent

umbrellas, are located on the boardwalk, as are various administrative offices. Most of the food concessions are take-out counters dealing directly with people on the boardwalk so that those walking by can stop, pick up a hamburger and continue.

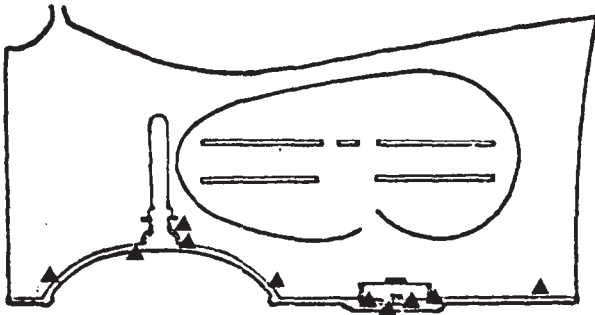
While this kind of direct relationship between boardwalk user and store contributes to the liveliness and atmosphere of the boardwalk, it has several drawbacks. One relates to the great fluctuations in use levels. When the park is very crowded, people lined up waiting

for counter service sometimes stretch all the way across the boardwalk impeding pedestrian traffic flow. During off-peak hours and days most of the concessions are closed and at these times the boardwalk is



lined with a facade of steel roll-down doors. Another problem is that there are no places to sit near the concessions to eat food.

This is a nuisance at all times, but on crowded days the concessions get additionally congested with people standing around eating while others are trying to get close to get served.



There are two major clusters of concessions at the bathhouse and the Roman Plaza, and three small food concessions in spare brick buildings--one at each end of the boardwalk and one in the

center.

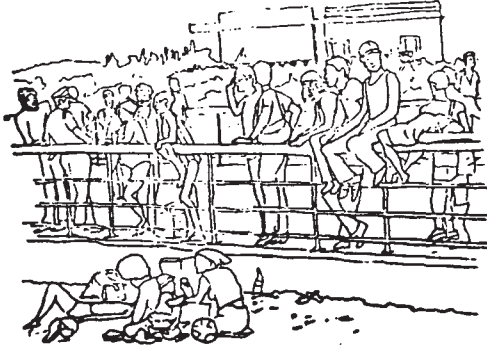
All food concessions are now under one management. Although this may be the most convenient arrangement for the Park Service, the result is that there is very little variety in the kind and quality of food available, and no reason for the visitor to choose one food stand over another.

The concessions are now merely functional on all but peak days, but they are not exciting. With more variety of concessions and food and careful redesign of concession areas to keep the direct

vendor-vendee relationship and also provide areas for sitting and eating, the concessions could become one of the attractions at Riis Park.

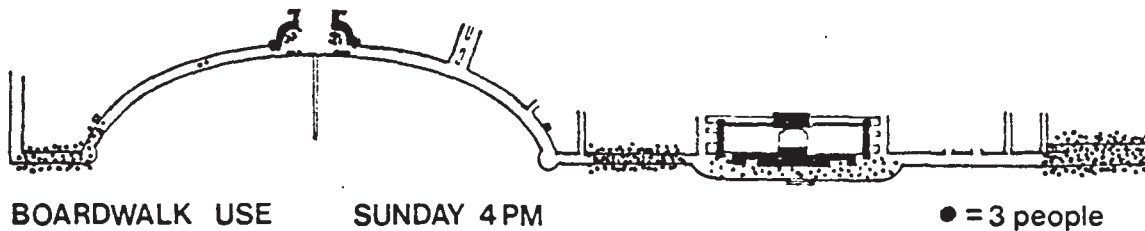
The Boardwalk as a Place.

Besides its functional roles as walking route, staging area, and commercial strip, the boardwalk has great potential for being a social gathering space, for being a "place" in its own right.



Three parts of the boardwalk now serve this function for particular population groups. Each end of the boardwalk is such a place. On weekends the

eastern end of the boardwalk is part of the scene for gay and hip beach users, with a great many people milling around, watching other people, and going back and forth between the beach, boardwalk, and the concession at that end. The western end of the boardwalk is a similar weekend scene for young white heterosexuals. Here mostly young men cluster along the railing and around the steps drinking beer, watching girls, swapping stories, and watching a game of beer-can-frisbee-bowling on the boardwalk. The concession at the western end sells a great deal of beer to this visitor group. We feel there are two reasons why these parts of the boardwalk have become "places". One is that each population group preferred isolation and therefore settled at the ends of the boardwalk. Second is that because of the end locations, the boardwalk is not a through walkway and people can spread out across the full width without impeding traffic.



The third section of the boardwalk which functions as a gathering place is the boardwalk in front of the roller rink area. It becomes a gathering place in later afternoon and early evening hours on weekends, particularly on Sundays. The group which gathers here is mostly young black men who lean and sit on the railing, talking, watching and listening to radios or to a group of drummers who sometimes play. The physical space here adapts less well as a gathering place because it is narrow and a great many people walk back and forth through it, forcing people who gather to the sides. Sometimes the gathering of people spreads across the boardwalk into the roller rink area, especially if musicians are playing there. Because of high bushes and the narrow opening into the rink area the boardwalk and rink are now two distinct locations.

Nowhere along the boardwalk are there similar social gathering places for the park population as a whole, although both the bathhouse boardwalk area and the Roman Plaza could become social nodes with some careful design consideration. Few people now use the two places except small groups of elderly people. Although both of these spaces have a great many people passing through them, they don't have people pausing for any length of time. The reasons for this seem quite simple. There is no visual focus to either area. Although the Roman Plaza has a sense of enclosure which is lacking in front of the bathhouse, it remains just a large open space. There is also no

place to sit in either area. Only that part of the Roman Plaza which has tables as part of the concession is usually filled, and people lean against the dividing railing, but there is really no place or reason to stop. Many people buy food at the concentration of bathhouse concessions and might be expected to stop while eating, but there is no place to sit.

Another way in which the boardwalk can serve as a social space is for people strolling along it, looking at other people, and watching the sights along the way. Most of the sights on the north side of the boardwalk are active recreation areas, but because of bushes planted beside the walkway these areas are not easily visible to the casual boardwalk stroller. People on the beach itself are the other attraction for strollers. It is interesting to note that many fewer people were observed walking on the boardwalk behind the crescent beach where, because of the great width of the beach, relatively few people settle in the back part where they would be visible to strollers. Another feature which would aid strollers, and is lacking on the boardwalk, is frequently placed benches for pausing. Prominent social nodes are also important to strollers because they offer destinations and reasons for taking a walk. It is our hunch that more people take a walk to somewhere and back than just walk a certain distance and return.

Recommendations.

Circulation:

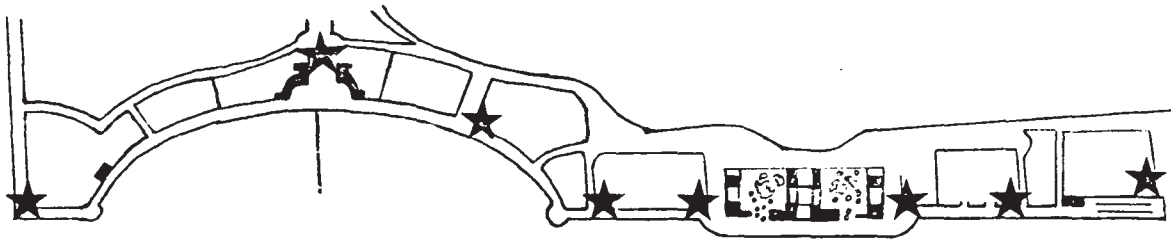
24. Every attempt should be made to remove all vehicles from the boardwalk. Concessions should have enough storage space so that re-stocking of supplies need take place at off-peak times only. There is no

justification for having police vehicles on the boardwalk, except in emergencies. The park is small enough to be covered by foot patrols. All vehicles, and particularly full sized cars and trucks, destroy the park quality of Riis.

25. Because of the fair number of bikes observed we feel a bike path throughout the peninsula should be constructed with an alternate route around Riis Park and any other heavy use developments. Bicyclists wishing to use the developed areas should be obliged to walk their bikes through them.

Staging Area:

26. At each of the major entrances to the beach, provide places set back from the pedestrian flow where people can put down and sort their bundles, brush off sand, rinse their feet, and put on shoes and clothing. These places should include benches and water sources which can be used by several people at the same time, such as spray fountains, or pull chain showers. (Drainage must be able to handle the sand which will wash into it.)



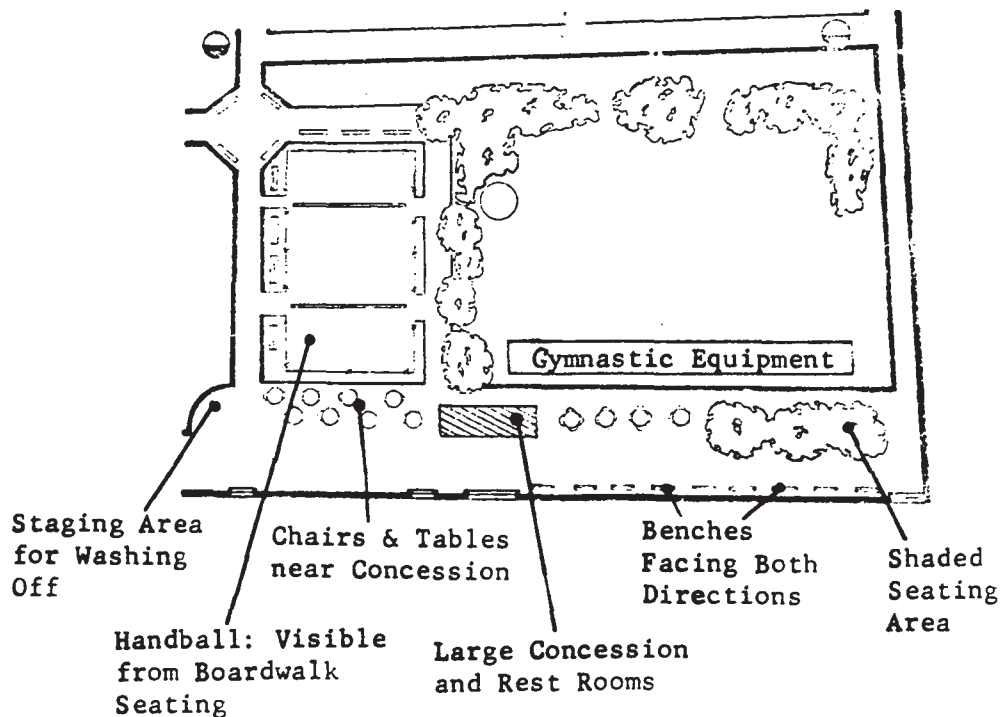
Commercial Street Front:

27. Concessions, particularly food concessions, should carry food and products reflecting the wide variety of the urban population using Riis. If food concessions sold a variety of ethnic foods, natural foods, and junk foods, it would reinforce and celebrate the diversity of the population and make the boardwalk a more interesting experience. Although this kind of policy, where concessions would be leased to individuals, would require more effort on the part of the Park Service than would contracting with one concessioner, we feel the results would be worth while.
28. The small food concessions at the east and west ends of the boardwalk should be expanded, should include enough storage space that they don't need frequent re-stocking, and should include bathroom facilities. The small food concession in the middle of the boardwalk should be eliminated to encourage use of the bathhouse and Roman Plaza buildings.

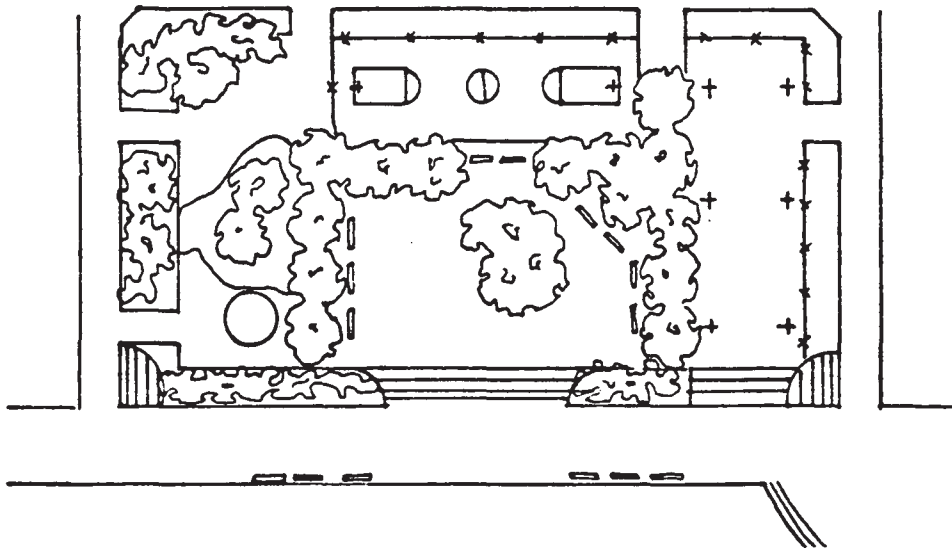
29. Seating areas, some with tables, some with stools and counters, should be located near all food concessions although they need not be officially part of the concessions. These areas should remain as sitting areas even when the concession is closed. Low walls can be used for seating also.
30. Concessions and facilities should have better signage, oriented toward the person walking down the boardwalk.
31. The Park Service should investigate use of mobile concession stands for use on really crowded days, similar in concept to the hot dog or Italian ice carts now being used but offering greater variety of food.
32. Concessions should be designed to look attractive when closed as well as when open. As simple a change as painting murals on the roll down doors would help a great deal.

Boardwalk as a Place: All of these recommendations aim to strengthen existing social nodes, to create new social nodes at the bathhouse and the Roman Plaza, and to improve the boardwalk as a location for strolling.

EASTERN END OF BOARDWALK



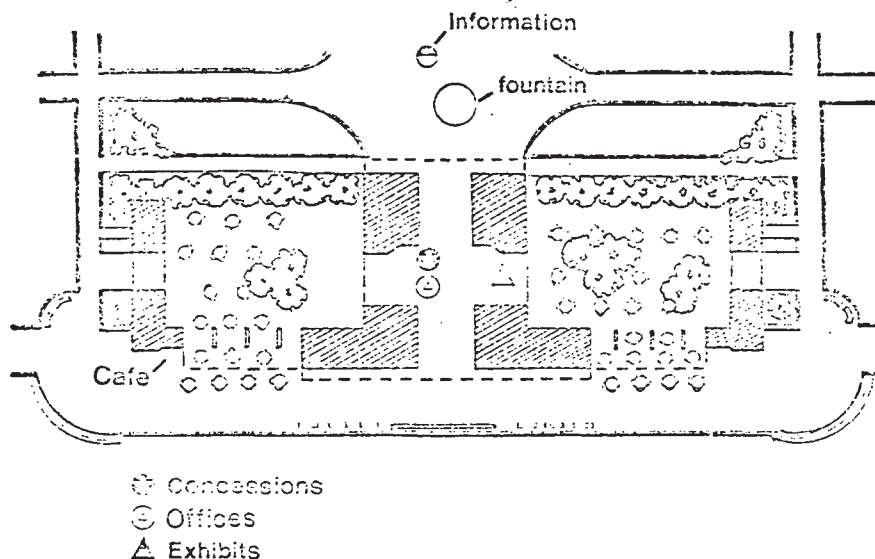
33. At each end of the boardwalk, strengthen the existing social nodes by widening the boardwalk into a plaza, providing areas of shade and seating, increasing the size of the concession and locating it adjacent to seating areas; and install bathrooms at the western end concession.
34. Benches should be located at intervals along the entire length of the boardwalk, some facing the ocean, some facing the boardwalk, some in little clusters. Leaning or sitting on the boardwalk railings are popular stances for many people, but they should not be the only options available to those who want to pause for a moment.
35. At the roller rink location make a wide opening from the boardwalk into the "rink" with wide stairs to create an amphitheatre/bleacher effect. The rink area itself should be remade into a plaza with trees or other shade, seating and grass. This will visually widen the boardwalk into the new area and allow for social gathering to take place either in the new area, on the adjacent boardwalk, or both.



36. The bathhouse should be redeveloped as the major activity node at Riis with a wide variety of concessions, information, exhibits, places to sit, wander, etc. Concessions might include such things as a news and book stand; a small general store selling groceries, charcoal, suntan lotion, etc.; and a salt water taffy and penny candy store. All stores should be designed for browsing and watching as well as for buying. The exhibits might include an aquarium with species of marine life which live off Riis beach; information on tide, temperature

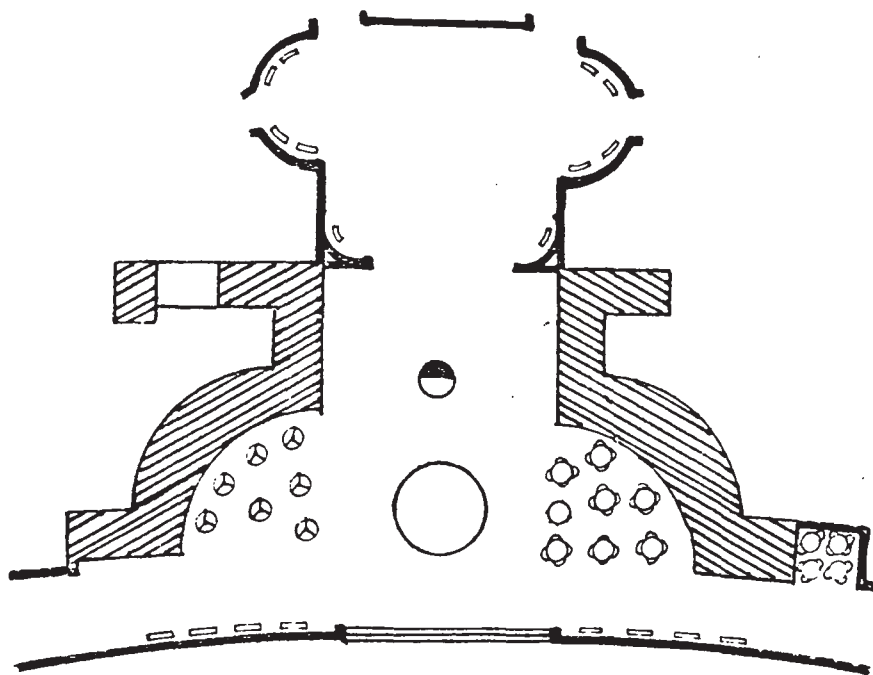
and wind; a working model of a beach showing how the elements affect the growth and change of beaches; and a wave tank.

The bathhouse is really a large enclosed courtyard which should be opened up from both the boardwalk and the parking lot sides. It should be open at night as well as during the day. If the Park Service deals with individual concessioners, it should negotiate what hours the concession is to be open as part of the lease agreement.



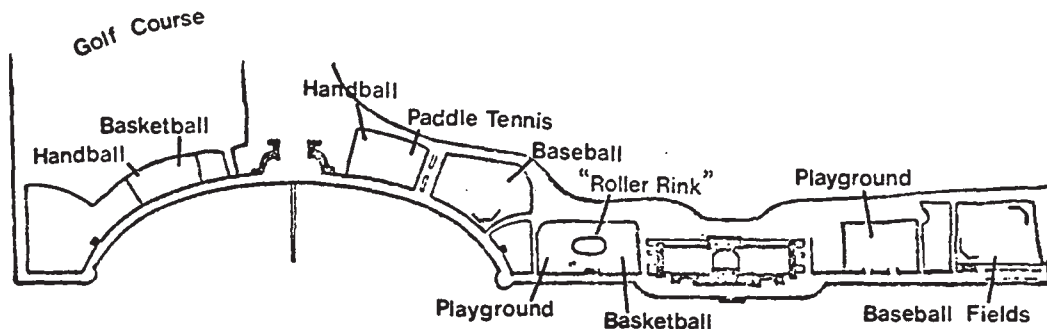
37. The widened boardwalk in front of the bathhouse should become a plaza with central focus on the bathhouse, and should provide shady and sunny sitting areas facing the ocean and facing the bathhouse. These might include canopies or tent-like structures, covered tables for sitting around, etc.
38. The Roman Plaza similarly should be renovated with a new focus, such as a large fountain, lots of seating, shade, and new food concessions. Shaded seating, perhaps as frivolous in design as chaises longues with attached umbrellas, would be especially welcomed by the older people who gather around there.

The Roman Plaza appears to be the natural focus for off-season use of Riis Park. On a cold September day, activity at the park was centered on the handball courts and the golf course, which flank the plaza. Most people entered the park through the plaza as well. If off season use is to be encouraged, concessions should be open here and might include a heated or wind protected eating area.



39. Opening up vistas from the boardwalk to nearby activities in recreation areas, providing sitting for the casual spectator in those areas, and increasing activity in the back part of the crescent beach (see section on the beach) will all increase the attractiveness of the boardwalk as a place to stroll. Unlike other National Park areas, much of the scenery at Riis Park is human.

ACTIVE RECREATION AREAS



Much of the area adjacent to the boardwalk is developed as separate active recreation areas including two areas each of handball (paddleball) courts, basketball courts, playgrounds, and baseball fields, and an eighteen hole pitch and putt golf course. Most of these facilities are separated from the rest of the park visually and physically, enclosed by fencing and dense bushes. The only formal access to each area is directly from the boardwalk.

All of the sports facilities are open and available for use throughout the year except the golf course which is operated as a commercial concession and is open and well used from March through November. One baseball field is lighted for night use.

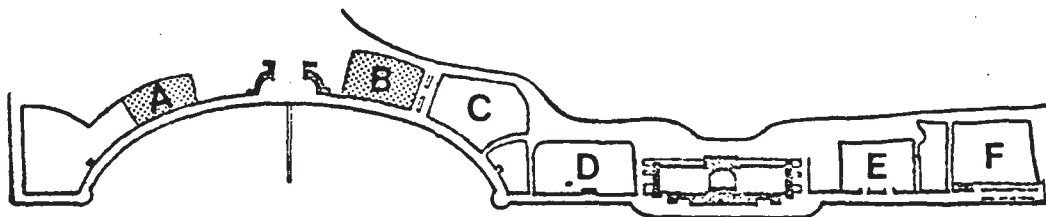
We were surprised to find that sports areas are mostly used by men and boys. Overall 80% of the people, and 90% of the active players, observed in these areas were male. All of the recreation areas, with the exception of the golf course and the eastern baseball fields, are used in conjunction with other areas of the park as one part of a visit to Riis. Most play is informal and spontaneous.

Levels of use of different areas varies considerably, reflecting popularity of the sport provided for or kind of playground equipment, level of maintenance, and general appeal of an area. Those who play golf and the organized teams which use the eastern fields do not use other parts of Riis.

Overall Recommendations. A number of recommendations apply to most of the active recreation areas.

40. Access to recreation areas should be from several sides, in recognition of the fact that people will be coming to them from other back beach areas as well as from the beach. This is particularly important for playgrounds, where proximity to families in nearby tree areas is desirable.
41. Recreation areas should be open to view, especially from the boardwalk, so that they become part of the visual excitement of the park. This would include trimming hedges and making wider entrances.
42. a) Fences should be removed from recreation areas and grass strips planted around the edges except where fences are needed to control active ball games. This would allow spectators and families to settle in the bushes that enclose these areas, and would be particularly desirable around playground areas so that children could play within view of their parents.

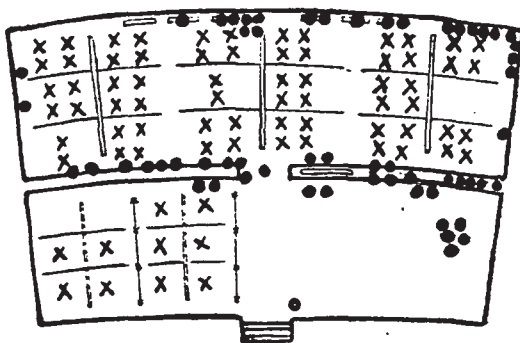
b) In sports areas where fences are required, some kind of provision for casual spectator viewing should be made. This could take the form of wider step entrances or grassy berms around the outside.
43. Informality and spontaneity are important characteristics of sports areas at Riis. One ballfield, which is used exclusively for organized league games, should be relocated away from Riis and the area redeveloped for other uses.
44. Recreation areas in the center of Riis should be lighted to allow for night use.
45. Sports areas which are consistently crowded may need to be enlarged, or duplicated; those which are consistently unused might be eliminated or changed to encourage use.

Handball Courts.

The handball courts are located in two areas of the park. Area A, near the western end of the boardwalk has six courts, and several basketball courts. Area B, near the center of the boardwalk, is a larger and better maintained facility. It has eighteen courts, and is adjacent to paddle tennis courts and shuffleboard courts in the same enclosed area. Both areas have small grassy strips with benches along one side and are surrounded by fences.

The handball courts are extremely popular and receive heavy use until late afternoon on weekends. On the Sunday we observed, all courts in both locations were filled all day long, and many people were waiting to play. The paddle tennis courts in Area B were used only when all the handball courts were busy, suggesting that these players would prefer to use the handball courts. (Since most people actually play paddleball on the handball courts, it is possible to make this substitution.) Almost all players are white, male, and from teens to late fifties.

Spectators are an important feature of the handball areas. The number of people watching games is about half the number of people playing in the central area B. At the busiest time there were 75



people playing and 55 watching; at a less busy time there were 35 players and 20 spectators. Most spectators are friends and relatives of players, or are other players waiting for a chance to play.

These people often sit in rows on the concrete along the fences, on the grass strip, on benches, and on lawn chairs which they bring with them.

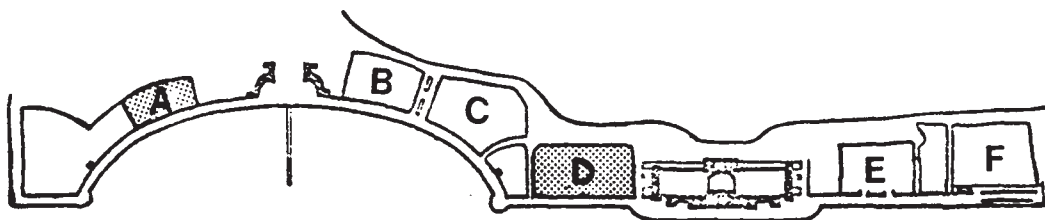
The small set of courts, Area A, is less well fenced in, has fewer spectators, and attracts people whose level of play is frequently lower than at the central courts. One is much more likely to see a father and small son, or a brother and sister playing in Area A, or to find someone using the court as a tennis backboard.

Recommendations.

46. Keep handball courts at Riis Park, because of their great popularity. Increase the number of courts in the central area by replacing paddle tennis courts and also shuffleboard courts. Keep smaller area with fewer courts for those who are less competent or who desire quieter play, and add another such area to the eastern end of the park.
47. To extend use of handball courts, install night lighting in the central area. (Since handball is such a popular sport, consider developing indoor facilities at Floyd Bennett Field.)
48. There should be formal access gates on several sides of the central courts, and in Area A if a path is put in along the golf course, as we suggest elsewhere. This would not only provide more direct access to court areas from other parts of the park, but would also make it easier for players to chase after stray balls.

49. Improve facilities for involved spectators by creating a buffer zone around courts with grass, chairs and tables, water and shade. Allow for movement between spectator and playing areas.
50. Open sight lines for passersby to see what is happening in handball areas, and provide places to sit and watch from a distance. This could be done by widening the stairway entrances from the boardwalk, having gently sloping grassy areas between the boardwalk and the courts, and pruning the bushes along the boardwalk
51. The shuffleboard courts in the central Area B are almost never used, except by one old couple we observed several times. We feel this is due to poor location and to the lack of available shuffleboard equipment, which is both expensive and bulky to carry. Shuffleboard could be an appealing sport, especially for the elderly. In conjunction with recommendations for changes to the golf course, we suggest that shuffleboard courts be established near the entrance to the golf course and that the necessary equipment be available at little or no charge from the concession office.

Basketball Courts.



There are two areas which have basketball courts. At the western end, in the same area as the handball courts, there are four half-court basketball courts in great need of repair. The asphalt has grass growing in cracks; there are no nets on the baskets; and the backboards wobble. In the central location, Area D, there are seven half-courts in the same enclosure with the 'roller rink' and playground, which are more heavily used. Both areas need renovation.

Use of the basketball courts is not consistently heavy. Sunday afternoon all courts in the central area, and three of the four in Area A, were in use. We observed as many as 50 players and 30 spectators in the central area, and about 15 players and no spectators in Area A. On Saturday, the courts at the western end were empty, and in the central location a maximum of four courts were used and there were only two or three spectators. As in handball, play at the western area is poorer and less organized; players in the central area seem more intense and are likely to wear uniforms.

Users of the basketball courts are almost all males, in their teens, twenties, and thirties. Most players in Area A are white and most of those in the central area black, though we observed racially mixed games in both places. Basketball players use other parts of Riis as well. We noted particularly young teenagers whose families were settled in the trees would put on their basketball outfits, go play basketball, return to the trees, take off their uniforms and then go out to the beach or boardwalk.

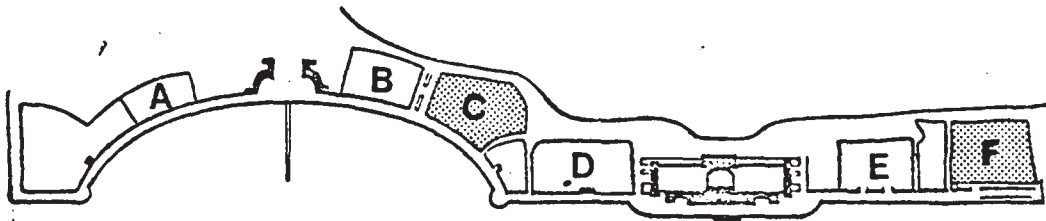
There are relatively few spectators, except during the busy Sunday afternoon time and few people waiting to play. In the central area spectators sit along benches which line the courts or watch from the 'roller rink' area.

Recommendations.

52. Basketball courts should be kept at Riis. No new ones are needed, but existing ones should be upgraded, including installation of new baskets.
53. The central area should be lighted to allow for night play.

54. There should be one full sized court in the center area, not only for informal play, but to allow for exhibition games or tournaments.
55. The general recommendations for spectators and improved access apply to the basketball courts as well.

Baseball Fields.



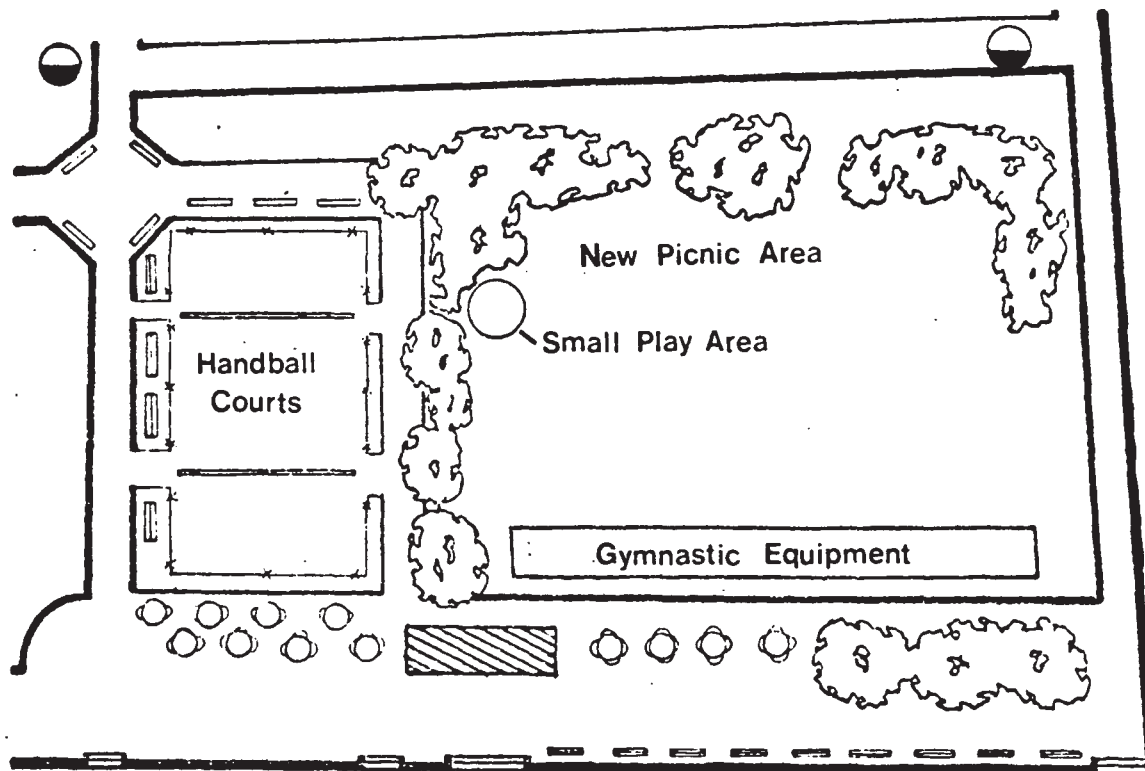
There are two baseball field areas at Riis which differ greatly in physical design and in the way they are used. The more centrally located field (Area C) is on a large, irregularly shaped piece of land, flanked on two sides by trees which are heavily used by picnickers. The field has a low outfield fence and extended backstop fencing, but is directly accessible to people settled in the trees. Although it is never densely populated, families regularly use the field for a number of informal games such as hitting and catching balls, and playing soccer and volleyball. Young children play around the edges near the trees. We observed this informal play continuing on the edges even when a men's softball league was playing a formal game.

The field at the extreme eastern end of the park (Area F) is entirely different. Two baseball diamonds, with concrete bleachers, are located on a rectangular piece of land entirely enclosed by a fifteen foot chain link fence. There are no trees or bushes

anywhere. The fields are deserted except when Little League or other team games are in progress during the weekend. Those who come to Riis for their organized games--players, parents and friends--appear to make no other use of the park or beach and those who are using the park and beach appear to take no notice of the team games.

Recommendations.

56. Keep the central ball field, but plant additional trees all along the outfield edge near the parking lot.
57. Since the organized team games are self-contained activities unrelated to Riis Park, they should be moved elsewhere. Relocating the fields across the street would require little change in behavior patterns for team players and would open up a large area of land for park uses.
58. Extensive redevelopment of the east end back beach area is needed. For this purpose we would consider the existing baseball fields and the barren section of land to the west as one unit, eliminate the path dividing them and widen and improve the path between this area and the playground. Changes we suggest include:
 - a) Widen the boardwalk into a plaza with a large concession, many places for sitting, and planting trees for shade.
 - b) Install a small area of six to eight handball courts and an area of gymnastic equipment such as chinning and parallel bars and rings near the boardwalk.
 - c) Retain a grassy field and surround it with trees and picnic areas. Constructed shelters may be necessary to provide shade until trees can mature. The entire area should be screened from road traffic.



Golf Course.

The golf course is the largest single-purpose piece of land at Riis other than the parking lot and beach proper. Since only 72 people at a time can use the course, it is one of the least densely used parts of the park. It is operated as a commercial concession with playing fee of \$2.50 plus a deposit for clubs; special senior citizen rates are \$1.00 on weekdays. The concession operator estimated that about half of the people using the course are elderly and half are schoolboys. The course is open and used March through November.

Of all the areas in Riis, this is the most difficult to evaluate and make recommendations about. The golf course works well as a golf

course, is popular with those who use it, especially among elderly people, and is a hub of activity in spring and fall when the rest of the park is quite deserted. On the other hand, the course can serve very few people, is a very large parcel of Riis Park land, and appears to be used by many patrons as a self-contained activity.

The question then becomes one of setting priorities. With an increased number of visitors to Riis, and an objective to better meet the needs of all those users, can the National Park Service justify maintaining such a low density, land intensive facility as the golf course? Is it feasible or desirable to move it elsewhere on Breezy Point or to Floyd Bennett Field where space is not at such a premium in order to use the land for more people intensive purposes such as picnicking, which relates more directly to use of other parts of the park?

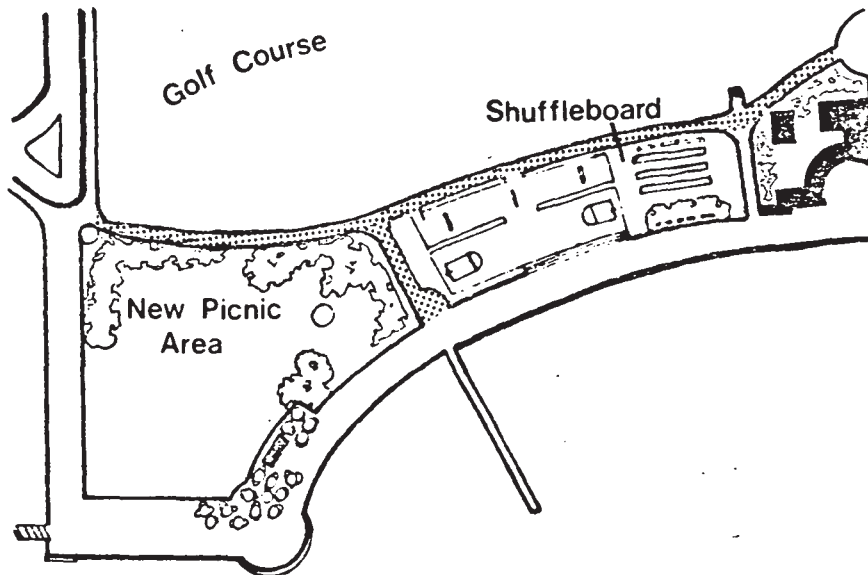
Or is it possible to meet the need for picnicking space by redeveloping smaller available units of land at Riis, and developing new areas on Breezy Point at Fort Tilden and the two beach clubs?

Recommendations.

A cautious approach should be taken to making changes to the golf course at Riis. Minor changes to the course, changes elsewhere in Riis, and development of Fort Tilden should be accomplished first. The results of these preliminary changes should be monitored to determine whether they successfully meet the need for picnicking and other intensive uses. If not, then we recommend more major redevelopment.

Recommendations for Preliminary Change:

59. Develop the field at the extreme western end of Riis into a picnicking and informal play area, planting trees, installing picnic grills and water supply, constructing temporary shelters with tables, all along the edges of the field except the boardwalk side (where we recommend a major concession - see elsewhere).



60. Construct a path which will encroach minimally on the golf course from the southern end of the mall, along the southern edge of the golf course, which will connect with the existing road into Tilden, behind the dune area. This would be a natural extension of an existing path from the parking lot, would provide direct access to the new tree areas and to the golf course, and would open up the area behind the western Roman Plaza building.
61. Open up the section of land between the Roman Plaza building and the handball court (Area A), which now flanks the entrance to the golf course and is totally fenced off and unusable. Building on the fact that the Roman Plaza area in general is currently a central area for the elderly, that many of the golf course patrons are elderly, that the elderly appear to prefer to locate themselves near to but slightly apart from active areas, and that they seek out shade, we suggest that development of this section of land be geared toward elderly people.

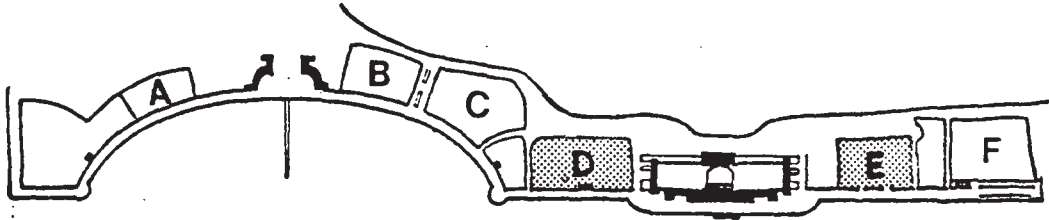
In particular, the parcel of land between the handball courts and the golf course could be developed into a facility for shuffleboard with lots of shaded sitting areas around it, visible from but set back from the boardwalk. Shuffleboard would seem to be a good sport for elderly people: we feel it is unsuccessful now because of poor location and lack of available equipment. The golf course concession should be responsible for storing

and making available shuffleboard equipment at no cost. (With minimal change the present concession building could have a window opening onto the shuffleboard area for dispensing equipment and maintaining surveillance over the area.)

62. Develop tree and picnic areas on the edge of the central ballfield and at the eastern end of Riis Park.
63. Develop Fort Tilden and other areas of Breezy Point.

Recommendations for Major Change: If, upon careful monitoring, the preliminary changes recommended above do not relieve pressures for more picnicking at Riis, and it is felt that some of the low-density golf course land must be developed for more intensive use, we recommend more major changes.

63. The golf course be reduced in size from eighteen holes to nine holes by reclaiming a strip of land along the eastern and southern edges. We do not recommend removing it altogether because it serves uses and special population groups we feel are valuable.
65. At the same time, we recommend that a full-size golf course be developed in a less intensively developed area of Breezy Point or Floyd Bennett. This would provide for two kinds of users. Those for whom the ambience of Riis Park is at least as important as playing golf would still be able to play and would accept the reduced size of the course. Those for whom playing golf is most important would have access to a better, full-size facility, located in a different place but not more difficult to get to. If located at Floyd Bennett, the course would probably be easier to get to for many people.
66. The land which is reclaimed from the Riis golf course could be easily converted to picnicking areas. At that time the path along the southern border of the golf course could be relocated northward so that areas to each side of it would be good areas for picnicking.

Playgrounds.

There are two playgrounds at Riis Park, both of which are large, shadeless expanses of asphalt subdivided into minor areas featuring standard, vandal-proof steel playground equipment. There are large and small swings, slides, and seesaws, with park benches ranged around the edges of the areas.

One playground is located in the same area (D) as the basketball courts and a large concrete oval originally designed as a roller skating rink. The entire area is surrounded by chain link fencing outside of which are strips of trees and grass facing several of the most heavily travelled pedestrian routes in the park. Many people settle in these tree areas.

This playground is used lightly on Saturdays (only once were more than ten people observed), and more heavily on Sundays (the population built to a maximum of 70 on Sunday afternoon). The population is predominantly black, as are the basketball courts and nearby tree areas. Visits to this playground are characteristically brief, about five to fifteen minutes, and intense. Usually parents or older children escort young children to the area where they play mostly on the swings, run around and play on other pieces of equipment and then leave. A few older children come by themselves to play and

occasionally adults sit and talk, play cards, or lie down on the benches in the "skating" area. We observed a great deal of cross traffic between nearby tree areas and the playground, with access frequently through a hole in the fence near the trees.

On late summer Sunday afternoons and early evenings this center area, including playground, 'rink', basketball courts, and the adjacent boardwalk, becomes a social center for a mostly black population. People stand around, talking, watching, and listening to radio music or to live drum performances.

The second playground, located to the east of the bathhouse in Area E, is somewhat different from the center playground. It has a similar set up of asphalt and play equipment and is mostly fenced in. However, people settle in trees only on the side furthest from the entrance, so that there is not the close interaction between tree settling and playground use we found in the center area. On the west side the playground backs on the employee parking lot, so the trees in between are not used. The entire eastern half of this playground is just an empty stretch of asphalt, is not bordered by a fence or bushes and the area beyond is a flat, open and usually deserted piece of land.

This playground also has a low level of Saturday use (we observed between six and ten people), but a steady level of Sunday use always in excess of forty people. In contrast to the center area, this playground has a large proportion of adults, teenagers and older children. The swings are very popular, but so are two chinning bars. The chinning bars are so popular that lines form on busy days of people waiting their turn. Many of these people are men. The chinning

bars spark other adult play of calisthenics and other body building exercises. More adults seem to use this playground to sit and watch, read, or talk, than in the center area.

It is apparent that the two playground areas are inadequate in many ways and were designed in an era when permanence, formality and indestructability were the highest priorities. They provide very limited opportunities for play and suggest a very limited understanding of the nature of play. A quick survey of activities throughout the beach and park shows that most play by young children does not take place in designated playgrounds, but on grassy areas adjacent to trees where families settle and on the beach.

Finally, the playgrounds serve adult clientele as well, sometimes as a quiet retreat and sometimes as a social center. These uses could be better provided for.

Recommendations.

67. Remove fences around playgrounds so that families can settle along the inside edge of bushes and trees, where they exist. Tear up a strip of asphalt and plant with grass to facilitate this.
68. Use a different ground surface, not necessarily flat. In a park where one of the joys for urban people is simply to be able to walk safely barefoot, without stepping on glass, litter and dog excrement, asphalt is a poor choice of paving material because it gets so hot in the summer. Although some of the area needs to be paved, other areas could be grass or sand and there could be hills and valleys as well.
69. Add plantings and shade to the playgrounds for people to sit and watch comfortably.
70. Increase the diversity of play opportunities by replacing much of the unused equipment with a variety of more imaginative things. Add water for play in the form of fountains, sprays and little pools.

71. Provide for uses other than children's play which are compatible and which take place now anyway. This includes redevelopment of the 'rink' area of the center playground area to function as a shady refuge from crowds during most days and also as a place for social gatherings and impromptu music performances on Sunday afternoons and evenings. This also includes redeveloping the eastern playground to include much more adult 'play' equipment for gymnastic use such as chinning bars, parallel bars, rings, etc., and also to make it hospitable for people to sit and watch.
72. Open up access to playgrounds from all sides.
- *73. Distribute seven to eight small scale play areas for small children throughout the park adjacent to tree and picnic areas where families settle. These should include water, a pile of sand and/or a pile of shells and perhaps a small climbing apparatus. No matter how nice the large playgrounds, and even if parents take them for a visit to the playgrounds, small children will spend most of the day near their families.

TREES AND LAWNS

The discrepancy between intended use of the park, on the part of the original designer, and actual use of the park by visitors today is probably nowhere as great as in the trees, bushes and lawns.

Throughout the back beach area, around the long mall and around the playgrounds and sports facilities, clumps and rows of evergreen trees, dense bushes, and small grass areas border most of the sidewalks. In the original design they were intended to be purely ornamental and although they are still visually important, on summer weekends and holidays they are transformed into veritable hives of dense human settlement.

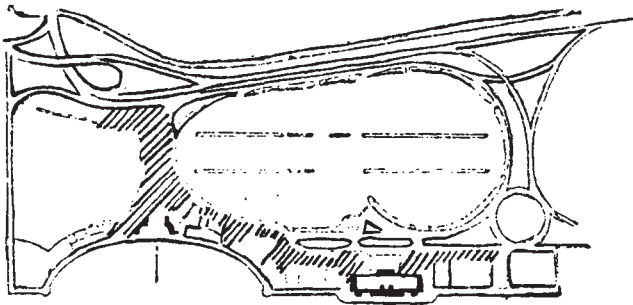


Small groups of people sit in small niches in areas of quite dense growth and larger groups crowd into larger openings on the

edge or underneath more open trees. They set up base camps, spread out belongings, lounge, talk, listen to radios and eat, sometimes very elaborate meals. For some people, generally small groups of older people on the western side of the mall, these 'camps' are where they spend all of their time; for others, large extended families of several generations, these camps are a base from which various members leave to use other parts of the park and return throughout the day. For all of these groups the preparation and eating of meals (with charcoal grills and hibaches, coolers and cases of food) is a major activity.



People use the tree areas as they might use a summer cottage or campsite, with two differences. Instead of spatial isolation, there is an incredible density of people and an overall sense of social comradeship, although each group remains a self-contained unit. The time scale is condensed as well. The variety of activities which others might spread over a two week vacation--trips to the beach, to sports areas, or for walks--are here all condensed into a number of hours.



Heavily Used Tree and Lawn Areas

The grass areas at Riis which are adjacent to trees and bushes are extremely important use areas as well. Continuing the analogy with a summer cottage a bit further, these grass areas are used like front and back yards by people settled in the trees. The grass is where young children play, run around, or toss a ball or frisbee within view of older family members who are sitting and talking in the shade. Sometimes the old people will move their chairs onto the grass to 'sit out' in the afternoon. In this sense the trees and grass together are the space being used and it is important that the trees are located on the edge of a grass area. Even very small adjacent grass areas serve this purpose.

A second role the larger grass areas play is that of a sponge during periods of peak use. After the trees and bushes are filled,

people begin to settle down on the grass itself, spreading out blankets and setting up chairs. On a Sunday we observed, the large mall area was used only by kids running around and playing (whose families were settled in the trees along the side) until early afternoon. Throughout the afternoon, however, more and more people settled on the mall itself--old people playing cards and reading, groups of young people lying down or playing soccer or frisbee, families, couples and others--until it got quite crowded. Several other grass areas, including the edge of the central ballfield and the empty grass area between that field and the playground, underwent similar transformations. The grass areas on each end of the boardwalk, which lack trees and are isolated, did not receive this kind of use.

There are a number of characteristics which make tree areas appealing to different groups of people. Foremost among these is simply that trees provide shade. The urban population includes people for whom maximum exposure to sunlight is not an important part of the beach experience, notably elderly people and dark skinned people. Most of those settled in the trees at Riis were black or Hispanic, and a small number of elderly. Almost no other area of the beach provides shade. Trees also allow setting up little territories in areas that are free from sand, an important characteristic for people who like focusing their day around a picnic. No picnic areas were planned in the original design of Riis Park.

Of the tree areas at Riis, some are more desirable than others. Park rangers informed us that people arrive as early as 5 am to

claim places in the choicest tree areas. Other areas are used only on peak days after the popular areas are filled. Characteristics of desirable tree areas include the following:

- *They are close to the beach and active recreation areas, and they are close to the parking lot.

- *They border heavily used pedestrian sidewalks which give a sense of action and movement.

- *They border also on grass areas which are used for children's play and adult games.

Use of tree areas is characterized by low turnover, long stays, and heavy demand. When people settle into a tree area they spread out belongings which they have brought from home to stake out their claim. This may include hanging clothes on tree branches, arranging lawn chairs, and spreading out a blanket, setting up a charcoal grill and sometimes a table, and laying out food supplies. People who settle in the trees bring vastly more equipment than other park users. This settling in process usually occurs in the morning and lasts all day. Once a territory is established it is respected by other people. When the family goes off to the beach for awhile or some members leave to play basketball or go to a playground, usually somebody remains behind to guard the fort, such as the grandmother and the baby or a few adults. However, at times we observed empty forts which no one disturbed. We feel this displays a remarkable degree of trust and good will among park visitors, which is a special quality at Riis Park.

Recommendations.

74. The park should continue to allow the existing uses of tree and lawn areas at Riis, because they serve an important role for certain segments of the population which is met nowhere else in the park.
75. There are strips of trees in the park which are blocked off on one side by fences, especially around playgrounds. Many of these fences are unnecessary and should be removed. If a strip of grass were planted next to the trees and bushes, a great many linear feet of tree areas in excellent locations would immediately become available.
76. New trees and picnicking areas should be developed to meet existing and future demand. We recommend planting trees along the outfield edge of the central ballfield and around the edge of the empty grass area between that field and the playground. In addition, we recommend major new areas be developed at each end of Riis. These areas should have trees planted along paths and grass fields beyond. The dispersed, strip nature of tree and picnic areas adjacent to fields is important to their success.
77. Where new trees must be planted, man-made shelters may be constructed to provide shade until trees mature. Because the size of groups who now use trees varies greatly, shelters should be constructed of a variety of sizes.
78. Throughout all existing and new tree and picnic areas certain amenities should be provided by the park. Most important of these is charcoal grills, coupled with having one of the concessions sell small bags of charcoal at reasonable prices. This alone would greatly reduce the burden for current users and would allow those who arrive by public transportation the opportunity to cook out. Other amenities which should be near all areas include simple play areas for small children, with water, sand or shell piles, and a climber, and a water tap for use in cooking. At some places tables and benches of various sizes should also be provided. These might best be located in the two new development areas.

SUMMARY ISSUES

Certain themes and issues recur throughout our study which apply to the functioning of Riis overall. This section organizes some of our specific recommendations by general issues.

Fluctuating Levels of Use.

There are great fluctuations in visitor levels at Riis Park between summer seasonal use and non-summer use, between weekday and weekend use, and between day and evening use during the summer. Although the National Park Service can increase use during present off-peak times through provision of facilities, activities and programs, such fluctuations are likely to continue unless the park is designed to accommodate these additions. This will require flexibility in design and management so that certain parts of the park can remain open and lively when visitor levels do not justify opening all facilities. For example, we recommend that summer evening use be centered around the bathhouse area, that bathhouse facilities and concessions be open and lighted, and that sports areas and bus stops in the vicinity be lighted. However, current use patterns suggest that the Roman Plaza area be the center of spring and fall off-season use. Designing for fluctuations in use also requires that as much attention be paid to the appearance of buildings when closed as when open to visitors.

Variety of the Park Experience.

There is a great deal of movement by park visitors between different parts of the park, which is an important aspect of park use. People use many areas of the park during the course of a visit. We found connections between use of trees and active recreation areas, beach and active

recreation areas, trees and beach, beach and concessions and facilities, trees and concessions and facilities, boardwalk and trees, and boardwalk and beach. This suggests that the people visiting Riis may expect to experience a wide variety of activities in addition to swimming and sunbathing. We recommend that all areas be easily accessible from all other areas, particularly that the recreation facilities which are now open only to the boardwalk be open to the back park areas as well.

Special Nodes and Focal Points.

Any large area needs focal points where people can gather--places to walk to, places to pause or to wait, places to be or to hang out. The extreme east and west ends of the boardwalk now serve this function for special population subgroups, and a part of the boardwalk fills this role on Sunday evenings for the black population. These existing nodes could be better designed to meet their needs, and two other places, the Roman Plaza and the Bathhouse Plaza, could be improved to fill this role for the entire park population.

Shade and Shelter.

Although beaches are associated in most people's minds with maximum exposure to sun, there is a need for shade and shelter which is not adequately met at Riis. Shade is important as a temporary respite from the glare of the beach, particularly for the elderly, dark-skinned, or others who enjoy the beach but want relief from the sun. Shade, whether from umbrellas, trellises, canopies, trees or buildings, should be available throughout the park, boardwalk and beach areas. More substantial shelter for protection from brief summer rain storms should also be provided. Perhaps this could be incorporated into the redesign of the main bathhouse.

Water.

Providing water at a beach park might seem unnecessary at first. However, we found that there is great need for water for both functional and playful purposes. We recorded people using the existing drinking fountains not only for drinking, but for washing sand and salt off feet before leaving, filling cooking pots, and cooling off from the heat. We saw people filling dixie cups at drinking fountains and then sprinkling their feet and bodies with the water. These activities could be made a great deal easier by providing alternative sources of water. For example, a faucet added to the sides of drinking fountains and boardwalk showers.

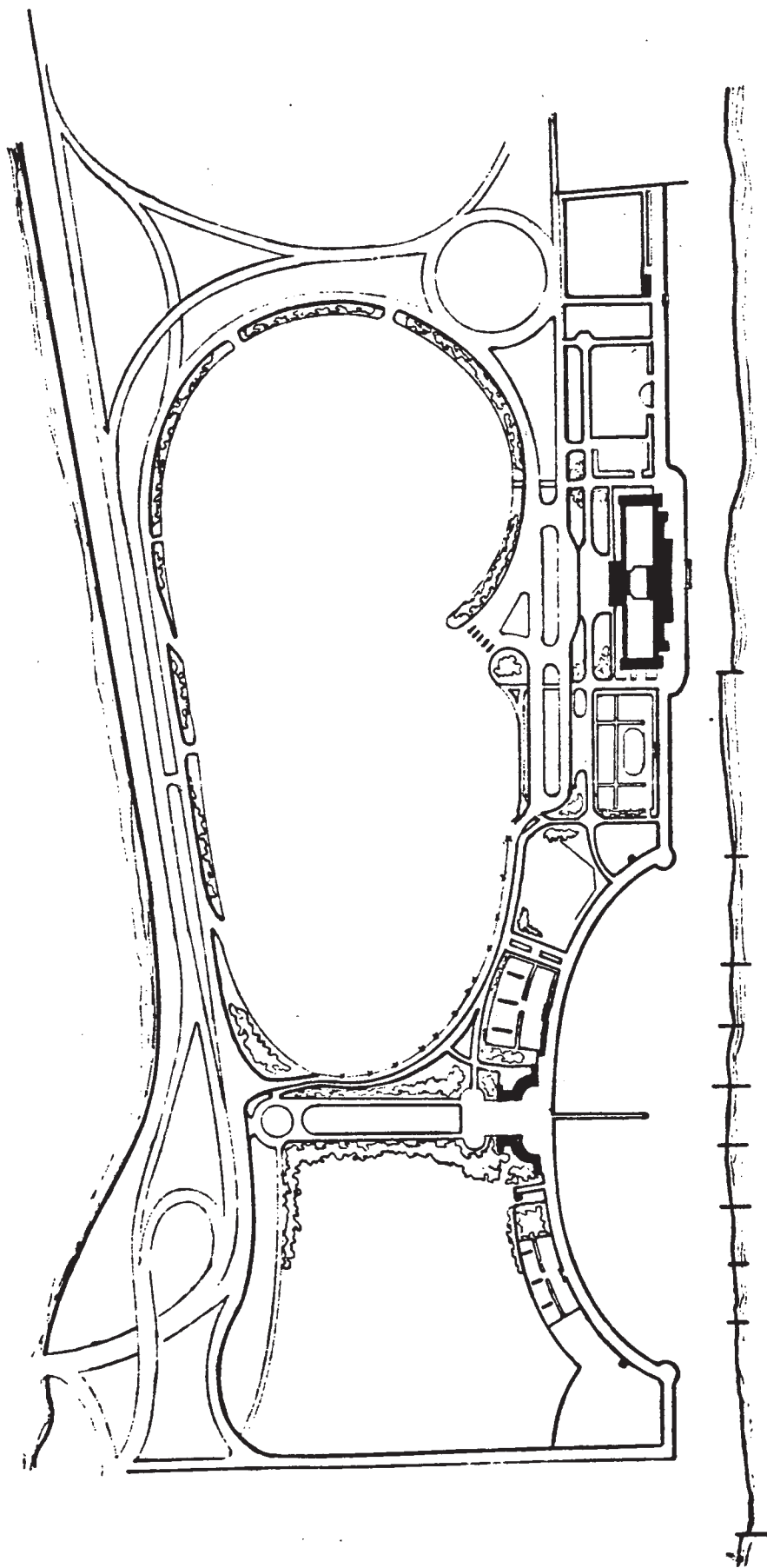
Although the ocean is a prime play area, it has limitations for young children. Families who are picnicking or settled in the back beach or in the tree and lawn areas are unlikely to let the children go the beach by themselves. The scale and power of the ocean make it inaccessible to the younger children. Imaginative water sources such as spray fountains, sprinklers, water sculptures and pools should be added in back beach areas and near the trees and lawns. This will increase the appeal of Riis for families with young children.

Information and Signage.

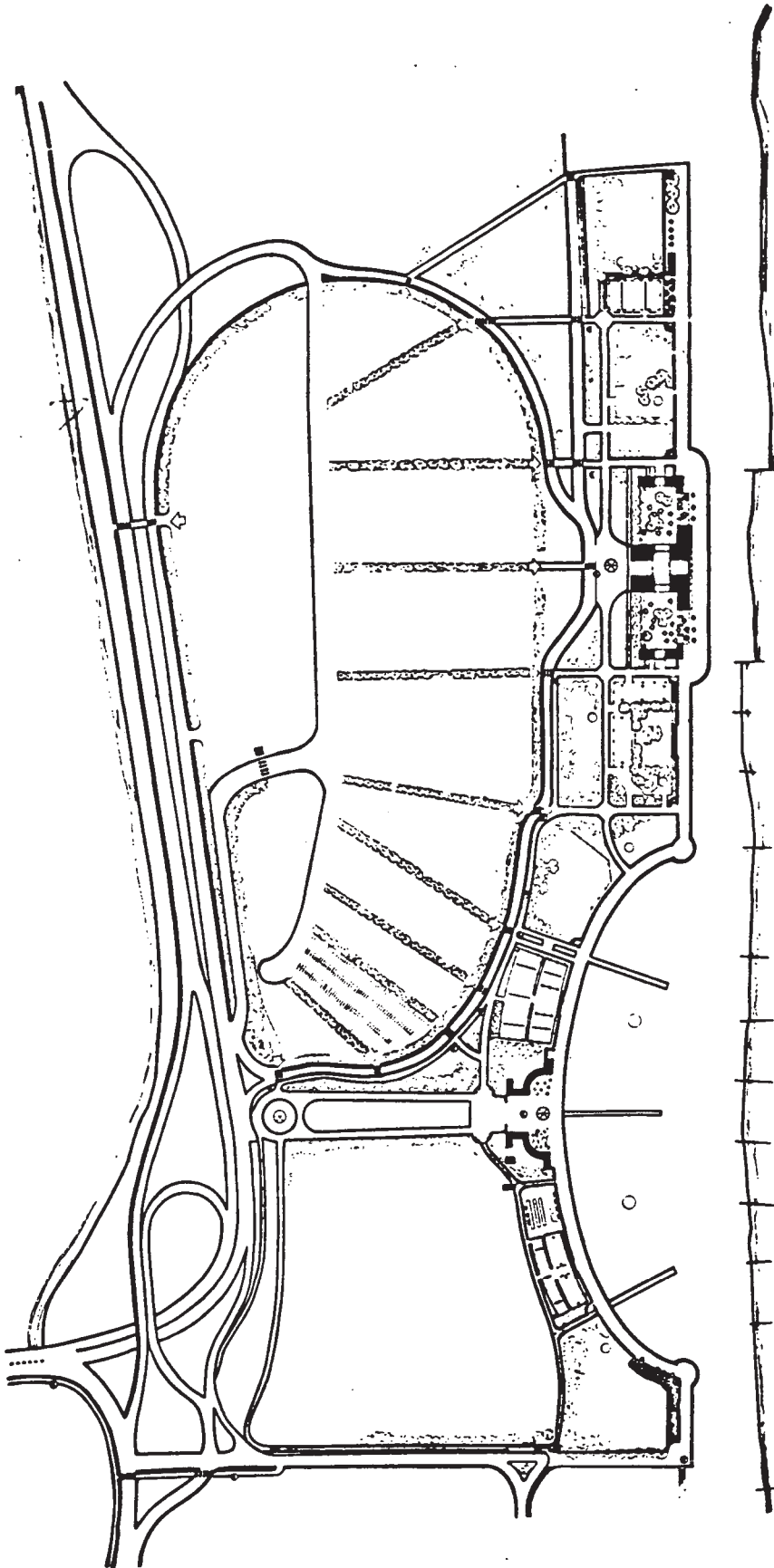
The whole system of providing users with information about Riis, from how to get there to how to find the bathrooms, needs improvement. People need directional signs when arriving by car, bicycle, and by subway and bus; directional signs for car drop-off areas and at entrances to the park from the parking lot; maps showing locations of facilities within the park; identification of facilities and concessions; and information about programs and activities available at Riis and also at other locations in Gateway National Recreation Area.

As long as Riis has remained a self-contained entity patronized by regular users, this lack has been relatively unimportant. However, as the National Park Service succeeds in attracting many new users to Riis and develops the rest of the Breezy Point Peninsula and Floyd Bennett Field as parkland, the need for basic orientation and facilities information will become greater. In addition, as the NPS institutes new programs, special events and workshops, it will need to inform park users of their availability.

In all designs and plans for renovation of Riis Park we feel it is vital to cultivate a sense of playfulness, celebration and festivity. For example, while a simple water faucet might be a functionally adequate provision for foot washing, a fanciful fountain with water spraying out in many directions would be more festive and serve the same purpose. In another example, signs in English and Spanish would probably serve the basic need for acknowledging the ethnic diversity of the New York population, but major signs in many languages and a wide variety of ethnic food concessions would celebrate this diversity.



EXISTING SITE PLAN JACOB RIIS PARK



JACOB RIIS PARK

PROPOSED SITE PLAN

APPENDIX

Details of Methods Used.

The study used several varieties of observation, each intended primarily to capture a different kind of information, although there is also a built-in redundancy which serves as an internal check between methods.

1. Entrance Data. By observing each visitor entrance, information is gathered on numbers of people, size and composition of groups, kinds of equipment brought in, and modes of arrival by car or bus. Comparisons can be made between entrances and over time. Observers were stationed at each entrance to the park from the parking lot and at each bus stop. At four times, (morning, noon, early and late afternoon) during a busy Sunday entrance data was collected for thirty minute periods.

2. Vehicle occupancy counts tell us how many people are in each arriving vehicle. Data on 100 consecutive cars were taken at four times during a weekend day.

3. Tracking Arrivals. By tracking and mapping the route taken by visitors from entering the park until going onto the beach, we get information on the relationship between entrance location and beach use and directness of routes taken. Several team members spent thirty minute periods tracking arriving users from several entrances to the beach on one weekend day.

4. Spot check mapping of the park. By mapping the geographic location and distribution of all people and activities throughout the park periodically, information is gathered on distribution and density

patterns within the whole park and within different parts of the park. At four times, on each of two weekend days, complete mappings were made of all areas of the park except the beach itself: we conducted an approximate count of the number of people on each part of the beach. Comparisons were made between different areas and for the same areas at different times to discover how the park filled up during the day, how people used the park at different levels of crowding, and which areas were consistently crowded or deserted. Comparisons were made for both population characteristics and activity characteristics.

5. Behavioral observation of one area over a long period of time.

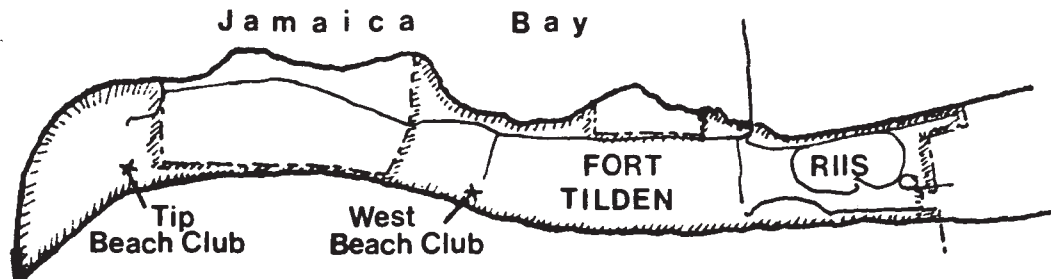
By stationing an observer in one area of the park (e.g. bathhouse, plaza, ball courts, trees) for periods of one-and-a-half to two hours, we were able to get a more in-depth view of how each area was used, and of how particular people used one area in relation to other adjacent areas. In keeping a running narrative of activity patterns during each time period, we noted length of stay in each area, comings and goings to other parts of the park, population changes, etc. This kind of fine grain observation allows us to pay close attention to the interactions of people and spaces, and to look for places where behavior patterns seem at odds with design, where design frustrates attempts to use a space or is inadequate to uses. We spent a total of over 100 hours observing each major area of the park on weekends and weekdays during the summer.

6. Visual inventory. By conducting a detailed inventory and mapping of specific physical elements and environmental features, we are able to later relate observed activities to these references. An inventory and mapping was made of such things as bike racks, location of fences and holes in fences, benches, shaded areas, and sight lines from different strategic places in the park.

7. Pedestrian boardwalk count. By counting numbers and direction of travel of pedestrians at different points along the boardwalk we were able to gauge the relative use of the boardwalk as a pedestrian route.

8. Movie film. Time lapse and documentary movies were taken at Riis to document our findings about current use of the park and beach. A film has been produced to communicate findings and observations.

FORT TILDEN DEVELOPMENT.



Fort Tilden, a World War II army base, is about 320 acres of land abutting Jacob Riis Park on the west. The eastern third of the fort, nearest Riis Park, is built up with barracks and other buildings, parade grounds, paved roads and abandoned structures and foundations. The western two thirds of the fort is scrub, grass, sand dunes and trees in a fairly "wild" (undisturbed) state. Half of the fort is still used and maintained by the army and is scheduled to be incorporated into Gateway management in the future. Abutting the western edge of the fort is a beach club, which the National Park Service plans to recycle as a public beach club.

Current NPS plans for development of Fort Tilden and the rest of the Breezy Point Peninsula are still quite general and a concept for development remains undefined. The western part of the fort is planned to remain "wild". In the September 1976 Draft Discussion Management Plan, plans for Fort Tilden, the West Beach club, and another beach club at the western tip of the peninsula are described as follows:

"The Plan calls for an extension of the existing Riis Park development into part of the area that has been occupied by Fort Tilden and then a development of the rest of the peninsula." (p. 130) ... "The facility at the Tip will be operated primarily as a camping center with overnight camping, and day-camp programs operated cooperatively with recreation agencies and private

groups in the region. The West Beach Center will be operated by the Service (NPS) or by a concessioner as a public beach center with cabanas and lockers for seasonal rental." (p. 133)

Our efforts in looking at Fort Tilden were focused on the eastern third of the fort and concerned with the concept of "extension of the existing Riis Park development". We were particularly concerned with what kind of development would allow for and encourage off-peak use, both during summer weekdays and spring, winter and fall seasons, and expand recreation opportunities during peak periods as well.

Planning Guidelines for Fort Tilden

The concepts presented below are our recommendations for overall guidelines on development of Fort Tilden. They are of necessity general in nature and ignore time schedules of implementation, transfer of control of parts of the fort from the army to the National Park Service, etc.

Informality of Design.

Fort Tilden can be developed for intensive use without mimicking the formality of design and layout in Riis Park. We found in Riis that the informal use of the park was hampered in many cases by the formality of the design. Fort Tilden has the potential for being developed with greater respect for the natural environment, with less massive buildings, natural materials and paths which conform to the contours of the terrain. Although pedestrian links should be provided between Riis Park and Fort Tilden north and south of the golf course, the environment at Fort Tilden can and ought to be different from Riis Park.

Adaptability of Spaces and Shared Use of Facilities.

Fort Tilden presents an opportunity for the National Park Service to design for adaptability in levels and kinds of use. Much of the regular

use of Fort Tilden at non-peak periods is currently by organized community and school groups which use both outdoor areas such as the beach, dunes, fields and sports areas, and also indoor facilities for classrooms, crafts, playrooms, laboratories and offices. During the summer these groups use Fort Tilden only on weekdays and not on weekends. Summer weekday use of Riis Park is quite low, but additional space is badly needed on weekends. The needs of both kinds of users could be met by sharing the use of all but specialized indoor facilities at Fort Tilden, and the parkland at Fort Tilden would be better used. We feel it would be a mistake to remove all regular group uses to a separate area resulting in unnecessary duplication of outdoor facilities and underutilization of Fort Tilden much of the time. Rather, Fort Tilden should be designed so that it can accommodate both weekday and off-season group use and also regular summer weekend visitors.

Another kind of use which Fort Tilden could be designed to accommodate, which is not possible in Riis Park, is large group outings and picnics for families such as might be organized annually by corporations, neighborhoods or fraternal associations, and church groups. Provisions to accommodate this kind of use would include pavillions with rudimentary kitchen facilities, large outdoor cooking grills, perhaps fireplaces for spring and fall use, and tables and benches. These areas should be on the edges of fields and should be flexible to allow for different sizes of groups. Group picnic areas need not be a separate area. Group picnickers can share the use of sports facilities and beach with other users, and individual park users should be able to use group areas which are not reserved. There should also be additional picnic areas always open for use by individuals.

A section of Golden Gate National Recreation Area in California has been set aside for group use by reservation and we are told it is so popular that reservations must be made a year in advance. We suggest that Gateway investigate and evaluate this kind of planning.

Respect for Existing Recreation Uses.

It is our philosophy that existing, established popular recreation uses be respected and, if possible, incorporated into future plans. For example, surf fishing is now popular along the Tilden Beach. Fishermen should be consulted about the location of good fishing areas and those areas should be set aside for their use. They should also be consulted about facilities which would be useful to them such as a small permit parking area close to the beach, a fish cleaning area, toilet facilities, or a warm-up shack for cold weather. Fishing is a legitimate use of the shore, presents an intriguing spectacle for other park users, and extends park use to non-peak periods. We anticipate that supervised swimming areas will be located only in major development areas and less developed areas between will be left for beach-combing, walking and fishing. Any other existing recreation uses should be planned for as well.

Development of Beach Center.

A beach pavillion should be built just behind the dunes which will be the activity hub of the Fort Tilden Beach. The program would be similar to our proposals for the Roman Plaza and bathhouse at Riis and would include bathrooms and a few changing facilities, first aid station, food concessions with outdoor eating areas, staging areas, information center and numerous shady sitting places. It might include a second level sitting area looking out over the beach and ocean. We feel that development of a successful center requires a new building and should not be attempted through renovation of the existing buildings.

Separate Vehicle Access and Parking.

We feel there should be parking accommodations for a sizeable number of vehicles at Fort Tilden, possibly in several parking lots. This should be located between the "wild" area and the developed area, and would serve groups which arrive by special bus, vehicles bringing provisions for organized group picnics, and other people who choose to use Fort Tilden's "wild" areas, beach and facilities. A small permit parking lot near fishing areas should also be maintained. We feel it is unrealistic and unnecessary to expect that all people who want to use Fort Tilden should park in the Riis parking lot.

Circulation.

Although Fort Tilden will be developed somewhat differently than Riis Park, and as a place in itself, there should be connecting paths for pedestrians and bicyclists between the two areas. These paths should continue further west along the peninsula also. Pedestrian paths between Riis and Tilden should be located north of the Riis golf course and at the boardwalk and dune area. We feel the Riis boardwalk should not continue into Tilden as a 20 foot wide concrete sidewalk, but might become a wooden boardwalk reflecting a different character. It could wind through the dunes and further west become a path leading to the end of the peninsula. Bicycle paths should lead through Fort Tilden from the northeast corner, near the Riis golf course, behind the developed beach section, and on down the peninsula to the tip in a large loop, winding through wild areas and along the ocean in undeveloped beach sections.

As well as the long connecting paths, there should be loop paths of various lengths into dunes and wild areas for those wanting to take a stroll.

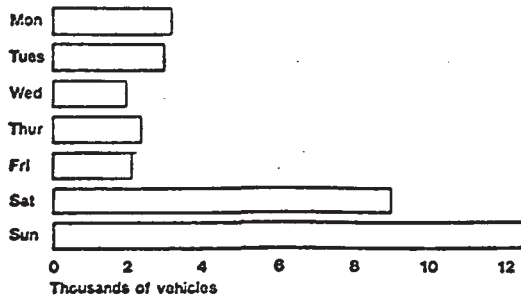
Design and Layout

Details of design and layout will depend on management decisions about the scope of development to occur at Fort Tilden, which has yet to be decided. Many of the design principles which we identified at Riis Park will apply directly. Guidelines on parking and pedestrian access, need for shade and water, staging areas near beach entrances, development of social nodes and small play areas, picnic areas located on the edge of lawns, sports facilities with access from many sides and provisions for spectators; all of these concerns are directly applicable to the development of Tilden.

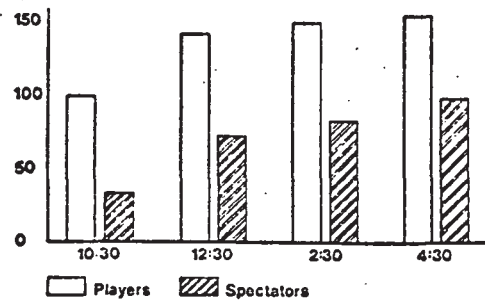
Other major development concepts, particularly the shared use of space and facilities by regularly scheduled groups, individuals and one-time groups are quite different from the uses we observed at Riis Park. We feel that we could make educated predictions on the implications of design and layout for shared use, when plans are developed further.

However, we strongly suggest that the National Park Service develop Fort Tilden in several stages and that it monitor and evaluate the kind of use newly developed areas receive at each stage. The design of succeeding development phases should incorporate information and insights gained from evaluating earlier phases.

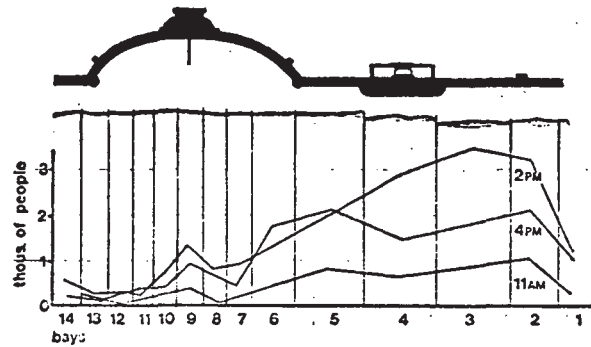
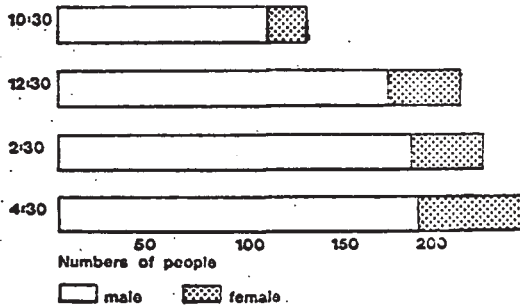
FLUCTUATION IN PARK ATTENDANCE AVERAGE VEHICLE TOTALS, 2 WEEKS SUMMER 1976



PLAYERS/SPECTATORS SUNDAY JULY 25, 1976



MALE/FEMALE IN SPORTS AREAS SUNDAY JULY 25, 1976



DISTRIBUTION OF BEACH POPULATION SUNDAY, JULY 25, 1976

