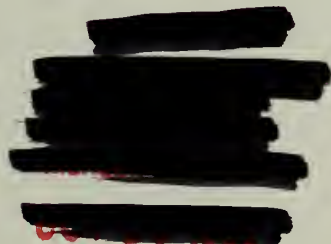


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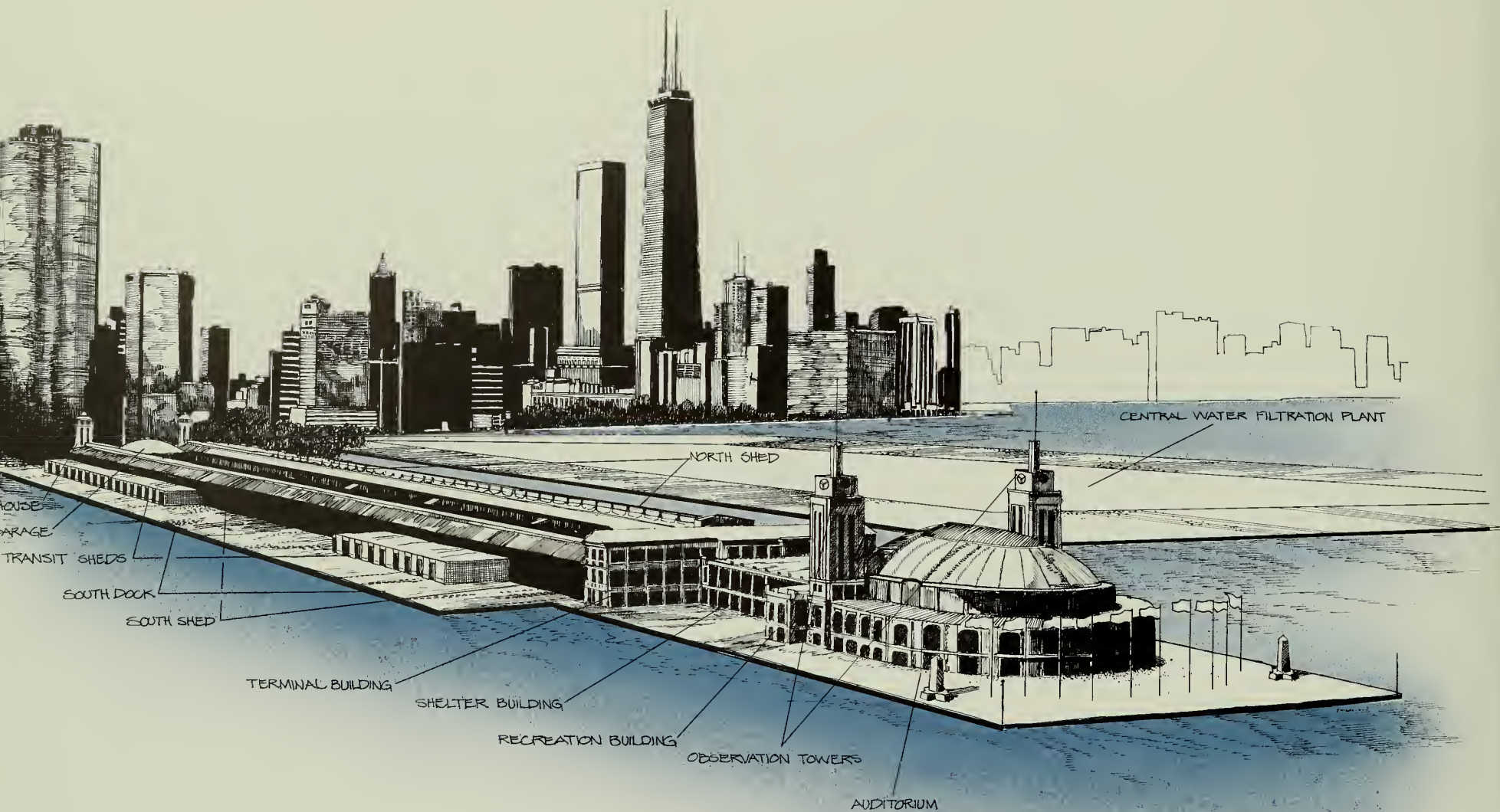
*EXECUTIVE SUMMARY*  
*STUDY OF ALTERNATIVES*



*United States Department of the Interior / National Park Service*



Chicago's  
NAVY PIER



Chicago's  
NAVY PIER

## INTRODUCTION

For nearly 20 years, the question of what to do with the city of Chicago's Navy Pier has been discussed by government agencies, by citizen and business organizations, and in various articles and public forums. The pier's vast size, strategic location, and unique character give it extraordinary potential for a wide variety of uses, as demonstrated by the many imaginative proposals that have been advanced. Past proposals have ranged from private commercial and residential use to public institutional and civic use. Recently, however, there has been a growing consensus that the pier should be managed to enhance its cultural and recreational values for the maximum benefit of the public.

The National Park Service, at the request of Congress, studied the feasibility and desirability of making Navy Pier a unit of the national park system. The initial report for this study, the *Reconnaissance Survey* published in December 1985, analyzed the historical and recreational resource values of Navy Pier and determined that it is a significant regional resource, both historically and recreationally, but does not meet the prescribed criteria for national significance. The final report for the study, titled the *Study of Alternatives*, identified and evaluated various strategies for protection, use, and management of the pier and described a proposal that combined ideas from each of the alternatives. This *Executive Summary* presents the conclusions and recommendations of the final report.

In the course of developing alternatives, the National Park Service consulted with representatives of Chicago Mayor Harold Washington and Illinois Governor James Thompson, and it reviewed a number of examples of interagency cooperation suggested in the congressional report for the study's authorizing legislation and in the October 1985 congressional hearing on Navy Pier. The cooperative efforts with city and state representatives resulted in a better definition of the pier's most important public resource values, agreement on a set of general

revitalization goals, and formulation of several adaptive use and management alternatives. This work sharpened the study participants' understanding of the magnitude of the task involved in revitalizing the pier. It reinforced the general awareness that the capital investment would be large and the uses would be diverse. Clearly, realization of the pier's full potential would require creative planning and design, innovative development financing, imaginative operational programming, and an unusual breadth and depth of management and professional expertise.

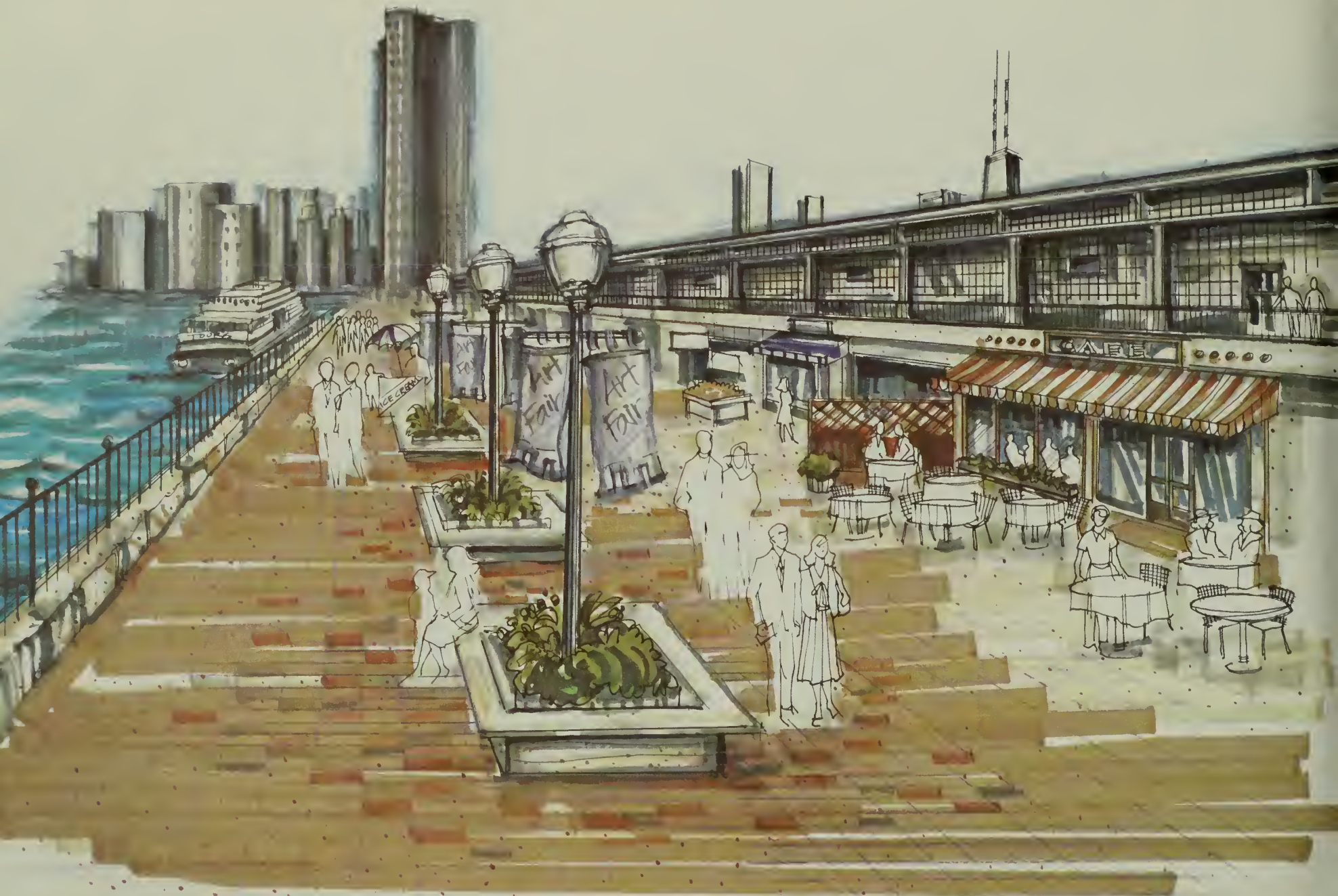
With these factors in mind, the National Park Service identified three development models that offered useful concepts and ideas applicable at Navy Pier. These models were the Lowell National Historic Preservation Commission, a cooperative effort of governments and private organizations to revitalize a historic mill town in Massachusetts; Harbourfront, a public-private waterfront redevelopment project directed by a Canadian crown corporation in Toronto; and the pavilions of EPCOT Center, private theme attractions achieved through corporate sponsorship and innovative use of technology at Walt Disney World near Orlando, Florida. The lessons learned from the development models, along with the knowledge gained through earlier cooperative efforts, were incorporated by the National Park Service into the following proposal for development of Navy Pier as a unique urban park through a partnership of private corporations, civic organizations, and government agencies.

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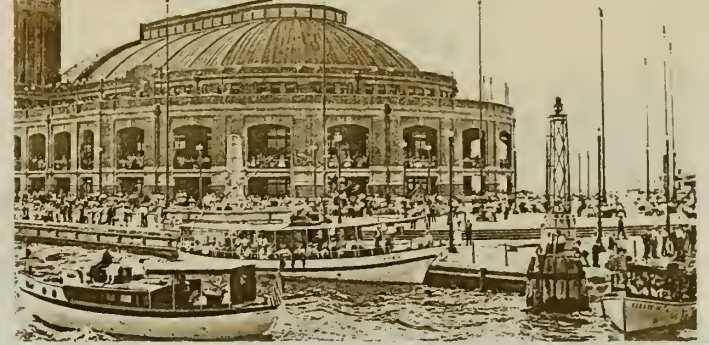
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## ADAPTIVE USE PROPOSAL

### NAVY PIER: CHICAGO'S WINDOW ON THE LAKE



Nowhere in Chicago are the city and lake bound more closely than at Navy Pier. Like a late-afternoon shadow of one of the city's famous skyscrapers, the stately pier structure extends into Lake Michigan for more than half a mile — twice as long as the Sears Tower is high. The pier is a grand passageway for city dwellers seeking to enjoy their greatest natural resource, and it promises to become a landmark urban park and gathering place.

The pier will be a great lakefront playground, and more. Its glass-enclosed interior will be brought back to life as a park with a special view. Through its windows Chicagoans and their visitors will see Lake Michigan — one of the city's principal links with the rest of the world and also a world in itself, still largely unknown to the people living next to it. These same windows will also reflect back on Chicago — the “city of the big shoulders” that has grown to be the prominent commercial and cultural center of the Midwest. People who come to the pier for recreation and entertainment will also learn something, and people who come to learn will have fun doing it. Pavilions interpreting the Great Lakes, the historical development of the Midwest, and Chicago's rich cultural heritage will be interspersed with theme restaurants and shops, a lively marketplace, diverse special events, a winter garden, a carousel — and in summer a chance to get on the lake in anything from a canoe to a shipboard restaurant.

#### Looking Out

The major attraction at the pier will be Lake Michigan. Boats and historic ships will line the north and south docks, giving the pier a lively nautical atmosphere and enticing people onto the water. Boatownership will not be a prerequisite for enjoying the lake. In addition to marina slips for residents and courtesy docks for visiting boaters, the pier will also offer canoes and pedal boats to rent, charter

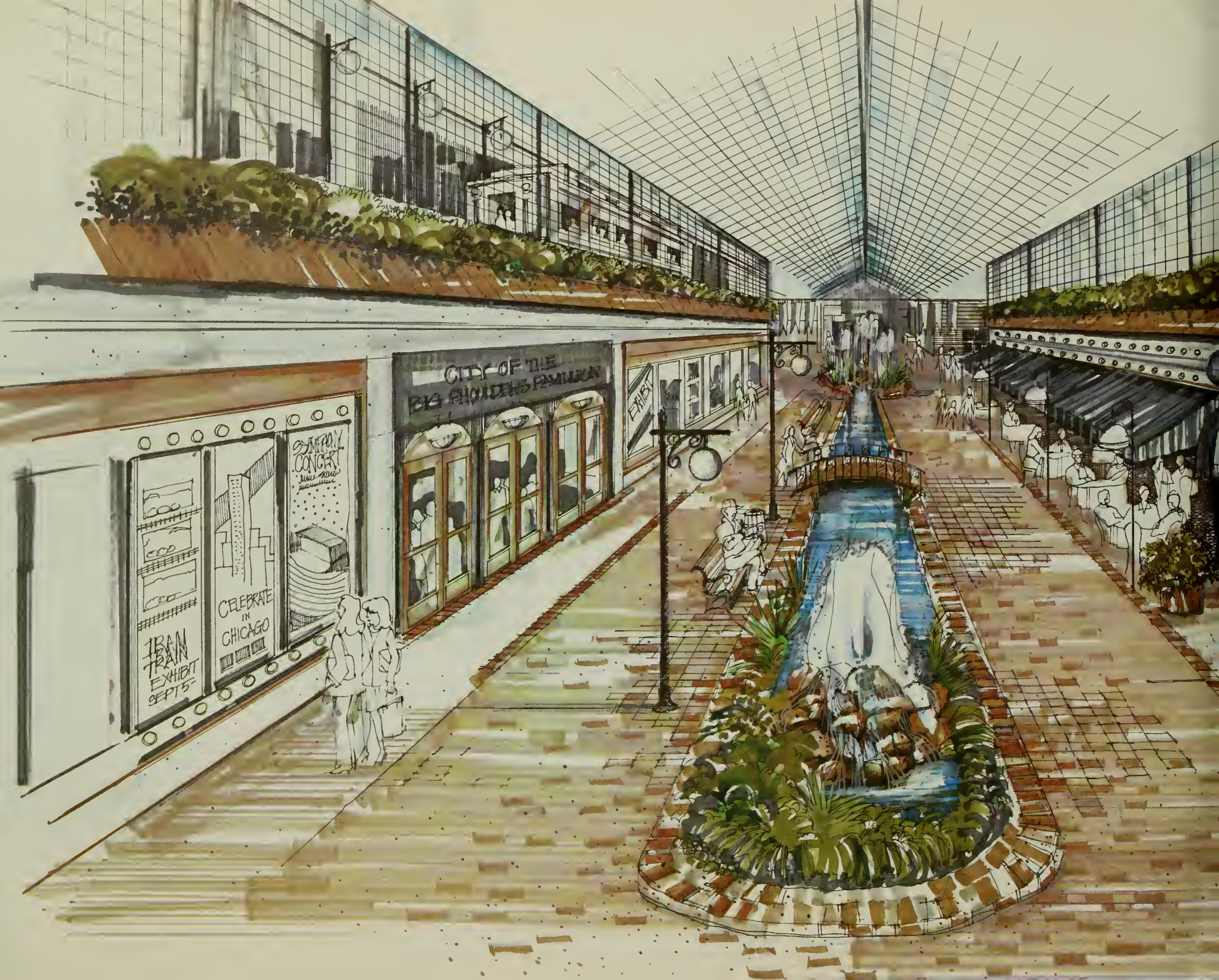
boats for fishing, a boating and sailing school, boat tours along the city lakeshore, and waterborne excursions to Indiana Dunes National Lakeshore and other distant points.

Pedestrians will have access to Lake Michigan along the shoreline, down the south side of Navy Pier, and also on Dime Pier, which will be reconstructed to further increase opportunities for fishing and sightseeing along the water's edge. A causeway will connect the two piers about one-third of the way down Navy Pier. The large excursion boats will dock along this causeway, and the smaller tour boats and fishing charters will dock at the east end of Navy Pier. Historic ships will occupy the remaining berths on the south side of Navy Pier and the north side of Dime Pier.

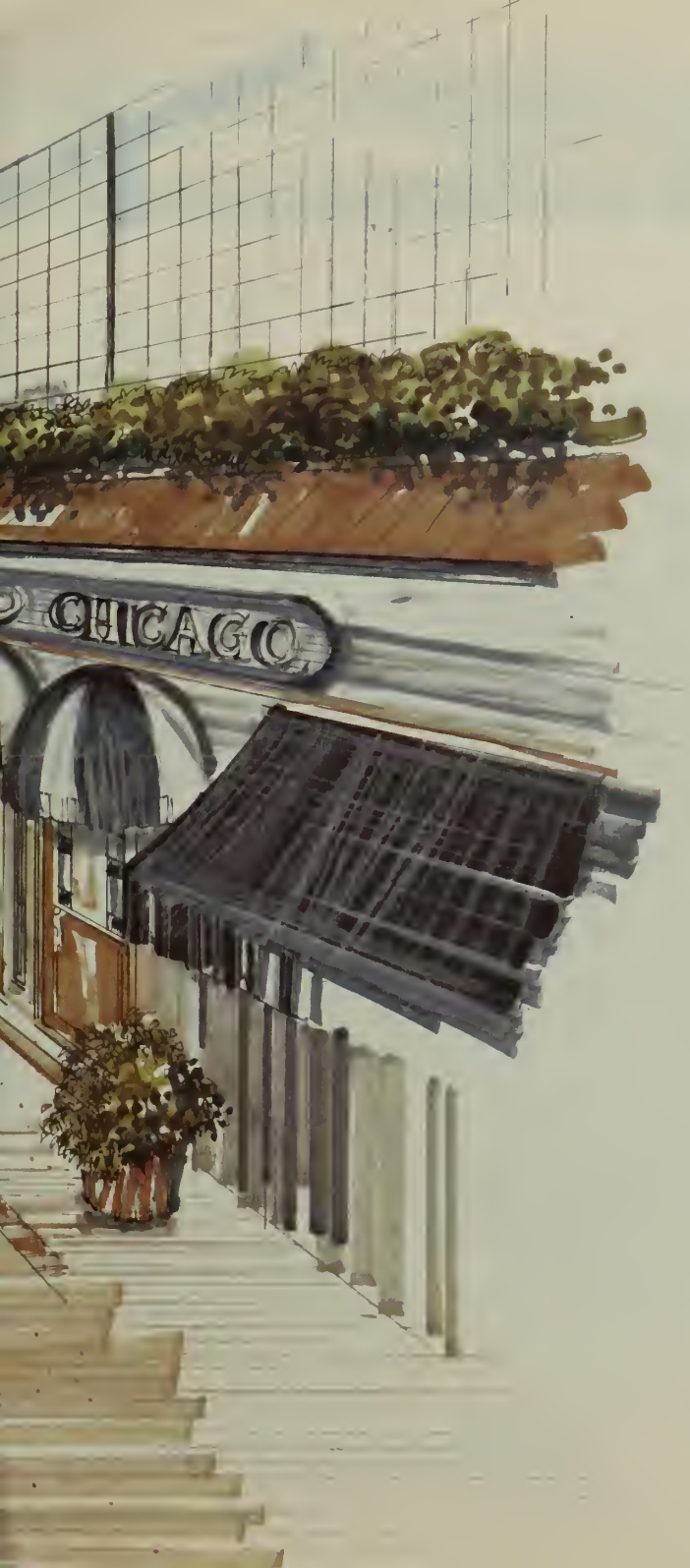
The portion of the lake enclosed by the piers and causeway will be filled to create a shallow lagoon suitable for canoes and pedal boats. This safe environment will be used for children's boating classes and leisurely water recreation in summer and for outdoor ice-skating in winter, when the bait and tackle shop will convert to skate rentals. The shoreline at the head of the lagoon will be curved to create a more natural appearance, and it will be backed by open parkland sloping gently toward the water's edge. The south end of this park will be graded to create a natural amphitheater on the edge of the Chicago River. People will be able to sit on the grass and enjoy summer evening concerts with the city's skyline as the backdrop.

The water along the north side of the pier will accommodate a marina with 350 slips for lease on an annual basis and 50 slips for transient boats on a nightly basis. Courtesy docking for day visitors will be available on the south side of Dime Pier.







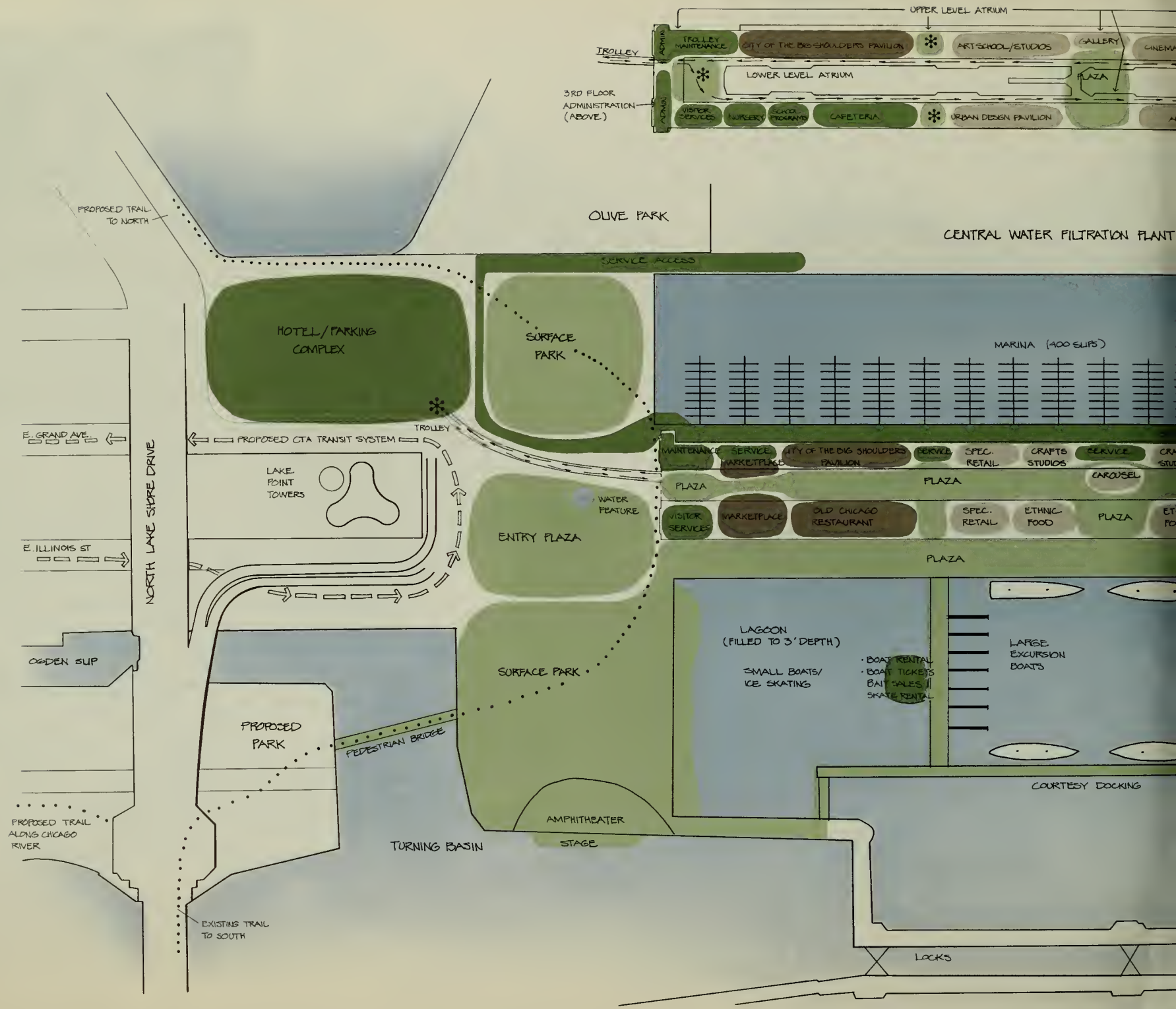


### Looking In

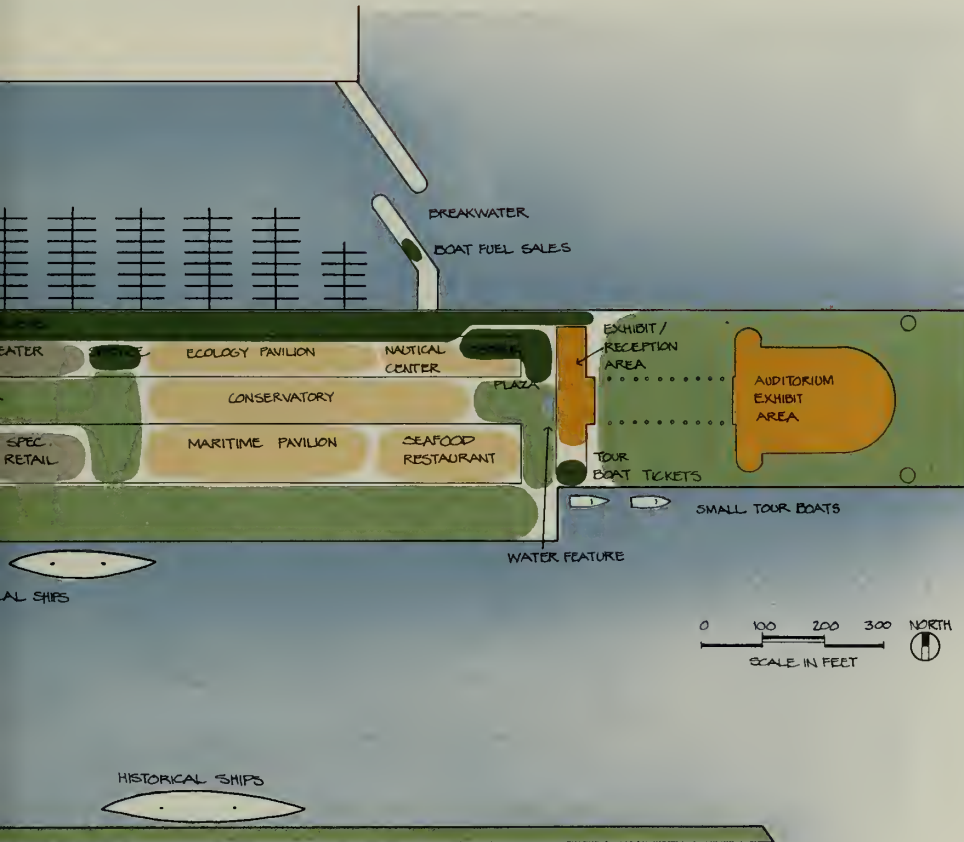
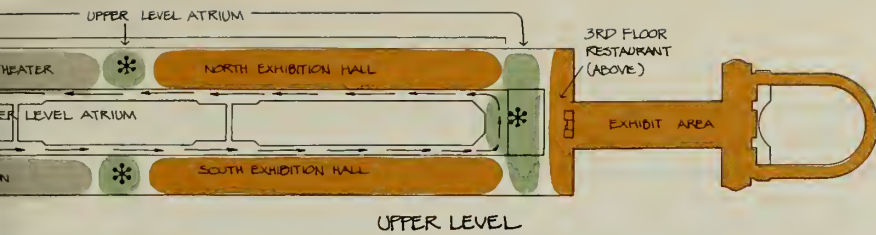
The water theme will carry into the pier structure. The centerpiece of the main entrance plaza in front of the headhouse will be a large water feature. The reverse of a fountain, this feature will flow from the top down, simulating perpetual rainfall. From this source a stream will flow through an enclosed interior courtyard running the length of the pier. The character of the water will change as it flows from one on-pier attraction to another. Near the end of the pier it will build into a second major water feature before emptying into Lake Michigan.

The pier will be a mixture of old and new — an authentic piece of the city's heritage revitalized to serve contemporary society. Entering the rehabilitated headhouse, visitors will immediately get a sense of the structure's past use from large historic photo-murals and other interpretive props that will give a feeling of walking into a busy center of freight handling and passenger service during the 1920s. Information will be available on both levels of the headhouse, along with tour guide services, staging areas for school groups, a nursery, and other visitor services.

Moving through the pier from west to east visitors will pass gradually from historic Chicago, through a modern celebration of Chicago culture, to attractions increasingly oriented to the lake. The pavilions interpreting these themes will be sponsored by private corporations, with innovation and excellence in design promoted through highly publicized competitions. In addition to these pavilions and their attendant restaurants and shops, roughly a third of the building space on the pier, including the entire east-end complex, will be reserved for special events. The programming in this area will cut across all of the pier's themes, offering a great variety of changing contemporary activities.







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SCALE IN FEET

### LEGEND

- CITY OF THE BIG SHOULDERS PAVILION
- ARTS AND URBAN DESIGN PAVILION
- GREAT LAKES PAVILION
- SPECIAL EVENTS
- PARKS AND PLAZAS
- SUPPORT SERVICES
- TRANSIT STOP
- PEDESTRIAN ROUTE
- TROLLEY LINE
- PROPOSED CTA TRANSIT SYSTEM

NA-CNP/20007 SEPTEMBER 1986 U.S. DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

WINDOW ON THE LAKE

Chicago's  
NAVY PIER

*Hog Butcher for the World,  
Tool Maker, Stacker of Wheat,  
Player with Railroads and the Nation's Freight Handler;  
Stormy, husky, brawling,  
City of the Big Shoulders —*

## THE PAVILIONS

*(Carl Sandburg, "Chicago," 1916)*

### City of the Big Shoulders Pavilion and Marketplace

Carl Sandburg's famous poem about Chicago, published the year Navy Pier was opened to the public, will provide the theme for a pavilion that explores the city's preeminent role in the agricultural and industrial development of the Midwest. Chicago was an early competitor for the rich agricultural products coming out of the Midwest, and its rise as the major rail center of North America eventually assured its dominance over the agricultural markets. The Great Lakes, which had made the city a center of water traffic, also contributed to its success as a railroad terminus by forcing all of the northern east-west railroads to converge on this point. As a result Chicago was able to monopolize the trade between the North Atlantic states and the Midwest. The Chicago Board of Trade, organized in 1848, became the greatest speculative grain and provisions market in the world, and its future prices are still the basis of cash prices wherever farmers sell. A closely related enterprise was meat packing and its affiliated trade in livestock and livestock futures on the Chicago Mercantile Exchange. At the turn of the century slaughtering and meat packing were the city's most profitable industries.

Chicago also grew to be a major center for steel production and manufacturing. Iron ore was barged to the steel mills on the lakeshore, and the steel was made into farm machinery, tools, rails, rolling stock, and other products important to the region. Chicago surpassed Pittsburgh in steel production in the 1950s, and today it ranks second only to New York as a manufacturing center.

This theme will be attractive to numerous corporate sponsors that have long associations with Chicago: Swift Independent, the Chicago & North Western, the Burlington Northern, the Union Pacific, and the Santa Fe railroads, U.S. Steel, Inland Steel, International Harvester, Pullman-Standard, General Motors, Dart and Kraft, Beatrice Foods,

Quaker Oats, and innumerable others. The potential range of exhibits and audiovisual programs is great, as indicated by the following list of possibilities:

"The world's largest model railroad" — an authentic representation of the greater Chicago rail yards and passenger terminals, with main lines converging from across the nation (Boston, New York, Philadelphia, and Baltimore to the east; Memphis, Mobile, New Orleans, and Galveston to the south; Omaha, Kansas City, Denver, Los Angeles, and San Francisco to the west; and Minneapolis, Fargo, and Seattle to the north). This system has routinely handled 35,000 freight cars and 550 passenger trains per day.

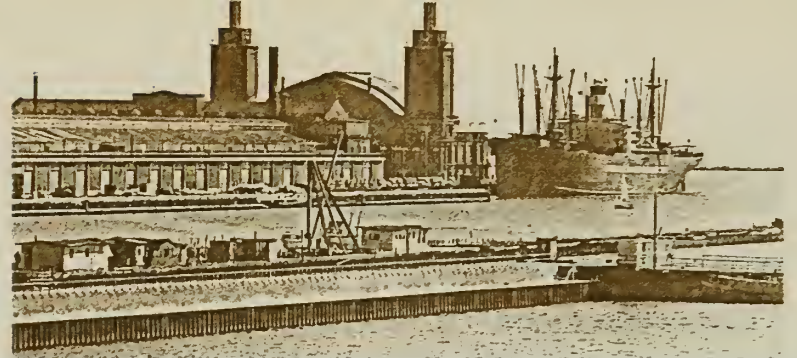
A walk-through exhibit of historic engines and railroad cars, perhaps including some of the early cars built by the Pullman Palace Car Company of Chicago.

A live video program from the Chicago Board of Trade and Mercantile Exchange, showing the day's activities in the pits. This could be accompanied by an interpretive program about how the commodity markets work, perhaps including an interactive computer simulation that allows visitors to play the market for fun.

A theater-in-the-round where visitors could experience the activities of a steel mill, the old Chicago stockyards, and other impressive places. These and similar adventures could be woven into rotating feature films about the steel industry, the livestock industry, the mechanization of agriculture, and related topics.

A rotating exhibit, sponsored by a group such as the Chicago Association of Commerce and Industry, where corporations





could showcase their achievements and amaze visitors with previews of the future.

The story of “What Americans Eat” and how we have changed, using computer technology to help people analyze their own diets.

The City of the Big Shoulders theme will be complemented by a large city marketplace containing a farmers’ market, ethnic food vendors, and booths for sales of antiques and other goods. The marketplace will be located just east of the headhouse, where it will impart the feeling of a bustling waterfront commercial center at the point where visitors first enter the pier. In this location the market will be easily accessible, and it will attract sellers and buyers from across the city. More traditional retail space will be clustered near the transit stop. The shops and restaurants in this part of the pier will feel like old Chicago. For example, a Roaring Twenties restaurant with a speakeasy lounge could occupy a portion of the second level of the south shed, overlooking the south promenade and lagoon.

*Make no little plans, they have no magic to stir men's  
blood and probably themselves will not be realized.  
Make big plans; aim high in hope and work,  
remembering that a noble logical diagram once  
recorded will never die but long after we are gone  
will be a living thing, asserting with growing intensity.*

*(attributed to Daniel Burnham, author of the 1909 Plan of Chicago)*



## Urban Design Pavilion

No other city in America represents the tradition of urban design better than Chicago. The brilliant plans of Daniel Burnham created the foundation for a city “both practical and beautiful.” Burnham’s greatest gift to Chicago was the vision to reserve the lakeshore as public park space for enjoyment by all the city’s residents. Chicagoans paid him the great tribute of teaching the basic principles of his 1909 *Plan of Chicago* in the city’s public schools. Many of the features of this plan were implemented after Burnham’s death, including the construction of Navy Pier in 1916.

The city’s intense interest in its architectural fabric and design was partly an outgrowth of the lesson learned from the great fire that destroyed Chicago in 1871. The need to rebuild much of the city attracted and inspired many outstanding architects and designers, including John Root, Augustus Saint-Gaudens, Louis Sullivan, Frederick Law Olmsted, William Jenney, and Frank Lloyd Wright. The first skyscraper — a term synonymous with Chicago — was built in 1885. In 1893 the city hosted the World’s Columbian Exposition with such style that it marked a major turning point in American architecture and city planning.

Throughout the 20th century Chicago has continued to be a pacesetter in urban design. It is the home of the American Planning Association, the Urban Land Institute, and numerous major planning, architectural, and engineering firms. These organizations and businesses could support a series of exhibits and audiovisual programs that might include the following:

A feature film on the history of American architecture, illustrating and describing how our taste in architecture has changed with our changing life-styles.

Scale models of famous buildings representing major architectural styles. Visitors could be invited to “play with blocks” to recreate classic styles and to invent their own creations.

The exhibit “150 Years of Chicago Architecture,” which uses photographs, models, and historic fabric to provide an overview of the rich architectural heritage of the city.

An exhibit about urban planning, highlighting Burnham’s *Plan of Chicago*.

Rotating exhibits featuring the works of Chicago’s landmark architects and North America’s best contemporary architects.

An exhibit about the city of tomorrow, interpreting trends in housing, workplaces, and transportation through artists’ drawings and models.

The urban design pavilion will be a natural transition between the themes of Chicago commercial history and Chicago arts.



*Art comes to you proposing frankly to give nothing  
but the highest quality to your moments as they pass.*

*(Walter Pater, "The Renaissance")*

## Arts Pavilion

The arts pavilion will celebrate Chicago's cultural vitality. It will combine spaces for the performing and visual arts into a lively center where sculptors, dancers, painters, actors, musicians, artisans, and other artists can work together, exposing visitors to all facets of the creative process. Chicago institutions such as the Art Institute and the Museum of Contemporary Art could work with Chicago's major communications, broadcasting, and publishing corporations to develop the following attractions:

An art school, such as the School of the Art Institute, which will provide instructional programs. Studios will be available for classwork, and students will display and sell their works in the pavilion's gallery, perform in the pavilion's theater, and present their films and videos in an on-pier cinema.

A theater for audiences up to 450 people, adaptable for a variety of plays, recitals, concerts, and lectures. Emphasis will be on the special and the unique and on providing a learning ground for aspiring actors, musicians, and other performers.

A cinema for educational and foreign films, slide shows, and other programs requiring audiovisual equipment. The cinema and the theater will be adjacent to the special events space, and their programming could be coordinated with particular ethnic festivals or other special events.

A large museum, such as the Museum of Contemporary Art, containing a significant permanent collection along with constantly changing exhibits devoted to all aspects of art.

The central courtyard in this portion of the pier will open into a large two-story plaza graced by an old-fashioned carousel, reminiscent of the one that historically was on the east end of the pier. The carousel will carry the themes of color, rhythm, and music from one side of the pavilion to the other. Visitors will watch artisans at work in a series of craft studios on the plaza. Shops and galleries will feature the works of artists and craftspersons. A large food court will feature a variety of ethnic restaurants representing the rich cultural heritage of the city.

*Lake Huron rolls   Superior sings  
in the rooms of her ice water mansions  
Old Michigan steams like a young man's dreams  
the islands and bays are for sportsmen  
and further below Lake Ontario  
takes in what Lake Erie can send her  
and the iron boats go as the mariners all know  
with the gales of November remembered —*

*(Gordon Lightfoot, "The Wreck of the Edmund Fitzgerald")*

## Great Lakes Pavilions

The five Great Lakes, together making up the largest body of freshwater in the world, are one of the major natural features of the earth. Yet most people's knowledge of them is quite limited. Two independent but closely related pavilions will explore the ecology and maritime history of the lakes, promoting the wise use and conservation of these outstanding natural resources.

**Ecology Pavilion:** The ecology pavilion will describe how natural resources have influenced people's activities and how people in turn have changed their environment. The glaciation that gouged out the lake basins some 18,000 years ago also developed the soils that made the area just south of the lakes the world's most productive agricultural region. Iron deposits on the upper lakes supported industrial development to the south. The lakes and rivers provided the transportation routes for raw and finished materials. Thus, the geologic past set the stage for the economic future.

Because of differences in depth, temperature, and water-cycling times, each lake has its own distinctive ecology. The fish inhabitants vary, and so do the lakes' sensitivities to pollution. Shallow Lake Erie has historically had the worst pollution problems, but deteriorating water quality has been a widespread concern that has led to concerted — and largely successful — efforts to clean up all the lakes over the past several decades. The Great Lakes fisheries have changed considerably over the past century. Commercial fishing, once a major industry, was destroyed by the invasion of the sea lamprey in the 1930s. This predatory eel decimated the lake trout populations in Lakes Huron and Michigan before it was finally controlled in the 1960s. Since then, trout restocking programs and the successful introduction of coho and Chinook salmon have reestablished valuable sport fisheries in the lakes.

The terrestrial ecosystems surrounding the lakes have adapted to particular soil and climatic conditions. The lake region is an ecotone between the dense forests to the north and the fertile prairies to the

south and west. The lakes have a considerable influence on the weather over large parts of the United States and Canada. They generally moderate air temperatures, but they also cause substantially greater precipitation in some locations. Storms blowing across the lakes can be a deadly hazard to large as well as small craft.

Chicago institutions such as the Field Museum and the Shedd Aquarium could develop this pavilion with sponsorship by sporting goods manufacturers and distributors. Government agencies involved in Great Lakes research and conservation could also participate in this pavilion. Possibilities for exhibits and media programs include the following:

An animated time-lapse view of geologic activity in the Great Lakes region, showing mineralization, the advances and retreats of the glaciers, the deposition of soils, and river and lake formation.

A large three-dimensional hydrologic model of the St. Lawrence River, the Great Lakes, and the Mississippi River systems. Water flowing through this model could demonstrate the relationships between the lakes, the need for locks, and how pollutants and exotic species move through the system. The model could also show the relative depths of the lakes.

An aquarium of Great Lakes fishes, identifying which species are threatened by pollution or competition with exotics and which are the most desirable sport fish. A video screen incorporated into this exhibit could provide additional information about the changing Great Lakes fisheries.

A conservatory of native regional plants. Planned for a large two-story space between the sheds, the conservatory could be an attractive year-round garden. It might also contain an aviary of native birds.





A weather theater, where visitors could learn how the lakes affect the weather and how predictions are made. Time-lapse photography could illustrate different weather patterns, including an impending storm. A sound-and-light show could add thunder and lightning, and the wind might even blow.

**Maritime Pavilion.** When most people think of maritime history they think of the New England merchants and whalers or the Pacific or Gulf Coast fishermen. Few people are aware of the deeds and the lore of the Great Lakes mariners. The maritime history of the Great Lakes region began with the French explorers, who by 1682 had sailed from the St. Lawrence River across the Great Lakes to the southern tip of Lake Michigan, found the headwaters of the Illinois River, and followed it by canoe to the Mississippi River and the Gulf of Mexico. For the next 150 years frontier trappers and traders regularly traversed the "Chicago Portage" between the two major waterways. In 1848 the Illinois and Michigan Canal was completed, and Chicago was soon firmly established as the chief grain-shipping center for the United States. The canal traffic peaked after the Civil War, when roads and railroads began to compete heavily with the shipping industry. Nevertheless, shipping remained strong, and Great Lakes tonnage tripled between 1870 and 1900. The sailing ship era peaked in the 1860s and 70s, although steamers had entered Lake Michigan by the 1840s. The *Christopher Columbus*, a steamer that entered service from Chicago, was said to have carried more passengers during her career (1892-1936) than any other ship afloat.

During the second half of the 19th century the Lake Superior region was developed as the country's major source of iron ore. Giant ore boats, designed specially to meet the conditions on the Great Lakes, were developed to carry ore to the steel plants in Chicago and Gary. Shipping on the Great Lakes has always been hazardous, and not even modern technology has made it safe, as evidenced by the sinking of the *Edmund Fitzgerald*, the largest ore boat in the American fleet, in 1975 in Lake Superior.

Development of a pavilion to recount this history would realize the goal shared by the Great Lakes Naval and Maritime Museum and the Chicago Maritime Society to provide a regional museum devoted to the interpretation of Great Lakes maritime history. Chicago corporate sponsors interested in underwriting this pavilion might include iron-ore shippers, steel companies, and marine equipment manufacturers. This pavilion could be a multimedia attraction with possibilities including the following:

Historic sailing ships and steamers docked along the pier.

A simulated boat ride from Quebec to New Orleans. Similar to the attractions at Disney's EPCOT Center, this ride would physically transport visitors into another time and place, allowing them to experience an epic journey along the country's two greatest waterways. The passengers would board boats that would carry them, by way of audiovisual impressions, along the St. Lawrence River into Lake Ontario, through the locks around Niagara Falls into Lake Erie, through the South Passage into Lake Huron, through the Straits of Mackinac into Lake Michigan, and through the Chicago Sanitary and Ship Canal into the Des Plaines, Illinois, and Mississippi rivers.

A canoe-building or ship-building exhibit.

Stories by mariners, also the songs they sing.

A memorial to the ships that have wrecked on the Great Lakes.

The Great Lakes themes will be complemented by a seafood restaurant featuring lake fish and by a nautical center associated with the marina. The center will include a chandlery, where visitors can purchase marine supplies, and a boating and sailing school, where they can learn the skills needed to pilot their own craft on Lake Michigan.

*In our contemporary society, and for the future, we must take into consideration why people live in cities, and why we come together, and how the city can encourage this right of assembly in a meaningful way. We must bring to bear the creative, imaginative spark . . . and recognize the Pier . . . as a symbol that is capable of enriching our urban way of life and the culture of the country.*

*(John David Mooney, Chicago Artist and Urban Designer)*

## STRUCTURE AND SETTING

### Special Events

The pier has become famous for the scale and lavish display of the special events it accommodates. The attractive lake-oriented rooms in the east-end complex, the expansive upper sheds, and the large open-air promenades attract the promoters of fairs and exhibitions and inspire them to excel in their production. Among the pier's most notable events were the Pageants of Progress staged in 1921 and 1922. The second pageant was as ambitious in scope as a small world's fair and attracted two million visitors over a period of 17 days. Today this tradition continues with events such as the International Art Expo, which attracted more than 40,000 visitors over a long weekend, and five other major events held during the summer of 1986. The pier is expected to become increasingly popular for special events and to support a year-round schedule once it is rehabilitated with an all-weather courtyard, covered parking, public transit connections, an on-pier transportation system, and food service. Special events will complement all the themes presented on the pier by providing a lively, ever-changing, and contemporary perspective on the city by the lake and the people who live here.

The landward setting for the pier, once the weak link in the city's lakefront park system, will be transformed from parking lots into an inviting green space with new trails connecting to parklands on the north and south. On the south a landscaped park will provide views of the city skyline, the peninsula containing the Adler Planetarium and Shedd Aquarium, and the lagoon and historic ships between Navy and Dime piers. To the north, directly in front of the headhouse, the parkland will give way to a formal entry plaza for the pier. North and west of this plaza a new structure housing a parking garage and hotel will step down from Lake Shore Drive, overlooking the lake to the east and the city to the north. A pedestrian promenade and greenbelt will be retained between the hotel structure and the lakeshore to ensure public access on the shoreline overlooking the marina to the east and the Gold Coast skyline to the north.

The historic trolley system will be revived to provide public transportation on the pier. The trolleys will pick up visitors at the parking garage and entry plaza, then ascend up a ramp to the second level of the headhouse as they did historically, travel around the trolley decks above the courtyard between the sheds, and descend back to the street level. The trolleys will stop at several places along the pier where elevators and escalators will take visitors from one level to the other. As the Chicago Transit Authority plans are implemented, the trolleys could also be linked with a light-rail transit system in the North Loop area, thus providing direct transit access from other parts of the city.

The most appropriate architectural treatment for this historic structure will be to preserve its overall exterior configuration and unique ornamental/industrial character, while completely rehabilitating the interior. The headhouse and the buildings that make up the old east-end recreation complex, the pier's most notable features, will be altered as little as possible; however, the sheds will have to be torn down to the steel skeletons and rebuilt, taking care to perpetuate the pier's general profile and exterior appearance. Year-round use of the pier will be supported by enclosing the long courtyard between the sheds with a glass dome.





A badly deteriorated garage constructed near the headhouse during World War II and the transit sheds added to the south dock in the late 1950s will be removed. Cleared of these miscellaneous structures, the south dock will become an expansive outdoor promenade, taking full advantage of its sunny location, excellent views of the lake and the Chicago skyline, and shelter from the north winds. The south promenade will connect with the courtyard between the sheds by way of a large central plaza near the center of the pier and two smaller plazas immediately below the second-story transit stops. Also, some of

the cafes and shops in the south shed will spill onto the outdoor promenade, encouraging people to move freely from one part of the pier to another. The north dock will be reserved for service vehicles and access to the marina.

The keys to the success of this venture will be the quality of its design and programming. The excellent models studied for this project share a common vitality based in part on the attractiveness and functionality of their public spaces and in part on the broad appeal of their activities.



## DEVELOPMENT AND OPERATION

Development and operation of the revitalized Navy Pier will be accomplished by a partnership of public agencies and the private sector. The first step will be selection of the public manager, which could be an intergovernmental commission. Government agencies could participate under any one of the four management alternatives described in the next section of this document.

The public manager will be responsible for preparing a detailed action plan that describes a use concept, defines the physical and functional areas of responsibility for development, funding, and operation by the public and private participants, and specifies the development process and phasing for the project. Gradual development will be required to keep pace with utility, street, and transit improvements in the surrounding area.

The total capital cost of implementing the proposal will be approximately \$337.6 million (see table B-1 in appendix B). This is an order-of-magnitude estimate based on the square footage costs of work performed on similar projects. The estimate includes the costs of stabilizing the pier to prevent further deterioration and repairing the infrastructure (sewage system, pier substructure, building structural systems, etc.).

It is assumed that all costs for stabilization and most costs for infrastructure repairs will be financed by government sources. The parklands surrounding the pier, the marina and other docking facilities, the entrance plaza, and the outdoor promenades on Navy and Dime piers have also been identified as government-financed facilities to provide for public park and recreational use. Figured this way, the public costs will total approximately \$115.9 million.

The entire hotel/parking complex and the infrastructure repairs most closely related to private adaptive use of the on-pier structures

(mechanical and electrical systems, replacement of walls and glazing, interior renovation, etc.) will be borne by the private developer. The estimate in table B-1 includes the costs of most private uses and the basic interior renovation and utility connections for the pavilions, but the interior finishes and specific attractions of the pavilions have not been estimated. The trolley system has also been included as a private cost because of its function as a link between the hotel/parking complex and the pier, and because of the need to integrate the on-pier transportation system into the design, construction, and operation of the pier attractions and private uses. The private costs will total approximately \$221.7 million.

The magnitude of the project will require an incremental development process. The logical next step following completion of the plan will be repair of the pier infrastructure and development of the public park spaces and water-related facilities. These improvements, to be accomplished by the public manager, will encourage immediate public use of the pier and allow for some revenue-generating activities (marina operation, special events) in the earliest years of development.

Concurrently with the initial public investments, the public manager will initiate a call for proposals from the private sector for the on-pier pavilions. A two-stage process will be used: The first stage will focus on the identification of serious, viable, and appropriate proposals. Proponents will then be selected for the second stage, which will be primarily a design competition, but with a specific financial component, to select the most imaginative and feasible proposal for each pavilion.

As soon as the pavilion developers are selected, the public manager will initiate a separate, similar call for proposals to select a master developer for the on-pier structures, the hotel/parking complex, and the trolley system. The call for proposals will specify the public manager's





commitments to repair the infrastructure and develop the site and the surrounding water areas. The selected pavilion proposals will also be described, thus allowing proponents for the master developer's role sufficient information to evaluate the attractiveness of the investment. As with the pavilion proposals, an important criterion for selection of a master developer will be the quality of design. The public manager will retain control over design and construction to ensure the completion and overall quality of the project.

To help fund the public development costs, a tax-increment financing district will be formed to return all sales, hotel room, soft drink, and other taxes collected from pier activities to the public manager. The estimated annual sales and net revenues from pier activities are listed in table B-2 in appendix B. Based on these figures, approximately \$5 million in annual sales and hotel room tax revenues could be returned to the pier capital improvement fund. The fund will be used first to pay back public development costs, and the estimated revenue could service over \$50 million in 20-year revenue bonds. The next priority for this fund will be cyclical maintenance and eventual replacement of capital facilities. Finally, any surplus funds will be used for annual operations and maintenance. The remaining public costs not retired by pier revenues will need to be funded from direct appropriations, general obligation bonds, or other sources.

Based on the estimates shown in table B-2, the developer's annual net revenue of approximately \$19.1 million will result in a before-tax return of 8.6 percent on an investment of \$221.7 million. These are preliminary estimates based on industry standards and Chicago-area averages for the business activities included in the proposal; actual revenues could differ significantly. The estimates do indicate a potential need, however, for tax incentives or special financing techniques to improve the attractiveness of the pier as a private investment. Special-issue tax-exempt bonds could be used to lower the

developer's cost of capital. The developer could also benefit from the federal tax incentives currently available for the rehabilitation of historic structures on the National Register of Historic Places if the lease term is 15 years or longer and if the rehabilitation work is certified by the secretary of the interior. The plan for revitalization of Navy Pier should explore all available means of packaging the private development for the project to ensure that the investment opportunity is attractive enough to interest qualified, experienced developers.

# *PUBLIC MANAGEMENT ALTERNATIVES*



Development and operation of Navy Pier could be managed under any one of the four public management alternatives described below. A management proposal is not presented because the appropriate roles and cost-sharing for the various governments must be set forth in legislation. As mentioned previously, the critical first step toward revitalization of Navy Pier will be the identification of the public manager so that planning and funding decisions can proceed.

A number of interests and concerns will be important considerations in the selection of the public manager. First is the city of Chicago's strong interest in the pier. The city built Navy Pier, has owned it continuously, and has managed it throughout most of its 70-year history. The city has already begun the task of rehabilitating the pier through bond financing, and it has recently addressed the future use of the pier for the benefit of Chicago's citizens through the work of the Mayor's Navy Pier Task Force.

Additional public interest in Navy Pier exists outside Chicago, in the state of Illinois and beyond. The National Park Service analysis of Navy Pier determined that it is historically and recreationally significant to a multistate region. Furthermore, a revitalized pier will be used extensively by visitors from outside the greater Chicago area, making its probable service area the Midwest region.

The successful revitalization of Navy Pier will be a major project involving a large capital investment and diverse uses. No single government considered in this study possesses all the resources necessary to fully implement the proposal; thus, intergovernmental cooperation appears to be the best approach for realization of Navy Pier's full potential. The National Park Service review of successful similar developments (see appendix A) supported this conclusion and identified the value of expanding such a partnership to include significant private participation.

The proposal's emphasis on enhancement of Navy Pier's cultural and recreational values for public enjoyment will require strong public management. The public manager will be responsible for the initial planning, pier stabilization, and infrastructure repairs; for development of publicly managed parks and facilities; for quality control and coordination during design and construction of the pavilions and other privately managed facilities; and for the oversight of pier operations. The capability of the public manager will be a critical factor as potential private sponsors and developers decide whether to participate in the project.



## CITY MANAGEMENT

In this alternative, Navy Pier would be planned, funded, developed, and managed by the city of Chicago with the assistance of other local governments and an advisory committee made up of representatives of the participating agencies and community leaders from the private sector. Additional local government participants might include the Chicago Park District, the Chicago Public Buildings Commission, the Chicago Transit Authority, Cook County, and others. Private sector representation would be designed to generate broad community support for pier revitalization.

The advisory committee would oversee the preparation of an action plan that would be approved by the mayor and the city council. The committee would oversee the plan's implementation and advise the city on matters of public priorities and private development proposals. However, final decision-making authority would be retained by the city. Based on the approved plan, legal agreements would be developed between the city and the other local governments.

The success of this city management alternative would definitely require broad community support (generated in part through an active advisory committee), responsive city management, a high level of cooperation among the participating local governments, and qualified and experienced private participants. A gradual, incremental development approach would be necessary to spread public investments over a period of years. Even with phasing, however, funding of the full range of public development and operations costs would probably be beyond the resources of the city of Chicago without additional funding from other public sources.

## STATE-LEVEL MANAGEMENT

In this alternative, a new state park would be created at Navy Pier. Navy Pier State Park would be jointly planned, funded, developed, and managed by the city of Chicago and the Illinois Department of Conservation (DOC) under the direction of a state-level commission made up of members appointed by the mayor of Chicago and the governor of Illinois. The commission would prepare an action plan that would be recommended by the mayor of Chicago and the governor of Illinois and approved by the Chicago City Council and the Illinois General Assembly.

A suggested breakdown of responsibilities would be as follows: The city would be responsible for basic rehabilitation of the pier structures and for necessary infrastructure improvements such as utility connections, street improvements, and transit linkages. The DOC would be responsible for the public lands at the head of the pier, including parks and trails; for the adjacent water areas, including marina facilities, Dime Pier, and other boat operations; for visitor information and interpretation facilities and services near the entrance to the pier; and for outdoor passive recreational areas on the east end and south dock of the pier. In addition, the state of Illinois could provide supplemental funding and technical assistance to the city for some of the basic improvements.

The commission would oversee the plan's implementation and would have the authority to establish public priorities and approve private development proposals.

The feasibility of this alternative would depend on the transfer of either actual ownership or management authority from the city of Chicago to the state of Illinois. The city's ability to relinquish ownership is limited by legal requirements concerning amortization of improvements funded by general obligation bond revenues. At a minimum, the state would have to assume the city's obligation for

## FEDERAL INVOLVEMENT

the outstanding bonds, and additional compensation for the value of the facility might be necessary.

The involvement of the DOC would reflect the significance of Navy Pier and the regional interest in this midwestern landmark. Joint city and state management would create a broad base of capabilities and expertise to cover a wide range of uses and activities. This management structure would also significantly expand the funding for Navy Pier by drawing on the broader revenue base of the state of Illinois and allow full revitalization within a shorter time period. A united, cooperative effort between the city of Chicago and the state of Illinois would be essential to the success of this alternative.

In keeping with the National Park Service finding that Navy Pier does not meet the prescribed criteria for national significance, the option of designating the pier as a unit of the national park system, with a central management role for the National Park Service, was dropped from further consideration in this study. However, a more modest level of federal participation might be appropriate, based on Navy Pier's regional significance, its value as an important recreational resource for one of the nation's largest urban areas, and its potential to attract national visitation.

Two management alternatives for intergovernmental commissions involving the federal government are presented in accordance with the specific language of the legislative report directing this study. A Navy Pier commission with federal involvement would be most important during the initial planning, funding, and development phases, and it should be established with a sunset provision that would eventually phase it out of existence. Part of the commission's mandate for planning would be to carefully define the roles and functions of participants in long-term management and operation of the pier, and to outline any ordinances, legislation, or agreements necessary for implementation and ongoing operations.

### City/Federal Management

In this alternative, Navy Pier would be jointly planned, funded, and developed by the city of Chicago and the federal government under the direction of a new intergovernmental commission made up of members appointed by the mayor of Chicago and the secretary of the interior, with additional representatives from several other federal agencies. The commission's role would be limited to the initial redevelopment of Navy Pier, and the city of Chicago would be responsible for long-term management and operation. This management alternative would be





implemented through legislation enacted by the U.S. Congress and signed by the president. While the Department of the Interior would have federal lead-agency responsibility for the commission, broad federal assistance would be provided by other appropriate agencies, such as the Departments of Commerce, Housing and Urban Development, and Transportation; the National Endowment for the Arts; and the Army Corps of Engineers.

The commission would prepare an action plan that would be approved by the mayor of Chicago and the secretary of the interior. The Chicago City Council and the U.S. Congress would enact any ordinances or legislation necessary to implement the plan. The commission would oversee the plan's implementation and would have the authority to establish public priorities and approve private development proposals.

The city/federal management structure would involve the highest level of federal funding and assistance of any alternative considered in this study. It would significantly expand the funding and development capability for Navy Pier by drawing on the broader revenue base of the federal government and the expertise available in a number of federal agencies. The city of Chicago's management and operational capability might need to be further augmented using some of the strategies discussed under the city management alternative.

To be successful this approach would require a united, cooperative effort between the city of Chicago and the federal government, active participation by several federal agencies, and ultimately the support of elected representatives within and outside the Midwest region for federal participation in Navy Pier revitalization.

**City/State/Federal Management**

In this alternative, Navy Pier would be jointly planned and developed by the city of Chicago, the state of Illinois, and the federal government under the direction of a new intergovernmental commission made up of members appointed by the mayor of Chicago, the governor of Illinois, and the secretary of the interior. The commission's role would be limited to the initial development of the pier, and the city of Chicago and the Illinois Department of Conservation would be primarily responsible for management and operation of the completed facility. The National Park Service would provide planning and technical assistance to the commission and could have other limited support roles in development and operation of the pier. The Smithsonian Institution could also provide technical assistance to the commission.

This management option would be implemented through legislation enacted by the U.S. Congress and signed by the president. The commission would prepare an action plan that would be approved by the mayor of Chicago, the governor of Illinois, and the secretary of the interior. The Chicago City Council, the Illinois General Assembly, and the U.S. Congress would enact the ordinances and legislation necessary to implement the plan.

The commission would oversee the plan's implementation and would have the authority to establish public priorities and approve private development proposals.

The responsibilities of the city and the DOC would be similar to those outlined for the state-level management alternative described previously. In addition to providing planning and technical assistance to the commission, the National Park Service could promote preservation and interpretation of the pier's significant historical and recreational values, seek supplemental funding for rehabilitation and



improvement of the pier, and operate visitor information and interpretation facilities and services related to the national park system, with particular emphasis on midwestern parks. The Smithsonian Institution could provide technical assistance to the commission, loan selected objects from its collections for rotating exhibits in a pavilion facility operated by a Chicago museum, and help define the scope of any permanent museum collections.

The involvement of the National Park Service and the Smithsonian Institution would reflect the pier's significance to a multistate region and its potential to attract national visitors. It would also encourage more extensive interpretive programs and additional emphasis on historic preservation and museum facilities. Joint city and state involvement would create a broad base of management capabilities and expertise similar to the base under the state-level management alternative.

This management structure would further expand the funding for Navy Pier by incorporating contributions from the city, state, and federal governments. It would eventually allow for full revitalization of the pier. However, the time required for initial development could be longer than under the other options because of the need for legislative action at three levels of government. As with the previous alternative, the success of this approach would require a cooperative effort among and active participation by the various governments, and support for federal participation in Navy Pier revitalization from elected representatives within and outside the Midwest.



## APPENDIX A: DEVELOPMENT MODELS

### Harbourfront

Harbourfront began in 1972 with completion of a waterfront development plan sponsored by the Canadian federal government, the city of Toronto, and a regional council of governments known as Metropolitan Toronto. Originally the city's industrial and shipping center on Lake Ontario, this 92-acre area had become obsolete because of shifts in shipping patterns. The lakefront lands and derelict structures were bought by the federal government and transferred from the control of the Toronto Harbour Commission to a federal crown corporation managed by an independent board of directors representing business and education, the city of Toronto, Metropolitan Toronto, the province of Ontario, and the federal Ministry of Public Works.

The Harbourfront plan calls for development of a new neighborhood and extension of downtown Toronto along Lake Ontario. The development will house a local population of residents and workers, but its unusually rich collection of parks and public activities will serve a wider population as well. Private residences will range from luxury urban town houses and moderately priced condominiums to rental apartments and subsidized housing for the elderly and low-income families. Commercial uses will include offices, retail stores, restaurants, and hotels.


This place for living, working, and shopping will also be an urban gathering place for public cultural and recreational use. The entire lakefront and more than 40 percent of the total land area will be landscaped parks and public open space, including the Water's Edge Promenade, a shallow pond for summer canoeing and winter ice-skating, a sculpture garden, an outdoor stage for performing arts, and abundant space for festivals and special events. In addition, Harbourfront will feature marinas and a nautical center, a dance theater and art gallery, a festival hall for recitals, concerts, and literary readings, and the York Quay Centre with information and programming offices,

facilities for school groups, craft studios, a theater/multipurpose auditorium, and food service. Many of these facilities are now in operation, and more than two million visitors attended over 4,000 events in 1985.

While the Harbourfront plan proposes an exciting mix of commercial and public uses, its true genius is the innovative combination of private and public development and financing. The capital investment required to complete Harbourfront is projected to total \$750 million (Canadian), but only \$150 million will come from government sources. Implementation of the plan began primarily with government financing, but that has been followed by incremental increases in private development and corporate contributions. The development is currently about 60 percent completed and on schedule, and the original goal of financial self-sufficiency by 1987 should be achieved.

In 1985 Harbourfront's extensive program of festivals and events included more than 2,000 that were free to the public. This pattern will continue with an annual operating program of cultural and educational activities and extensive public recreational use, all financed by user fees, income generated by private development, and corporate contributions.

Another factor in Harbourfront's success is the quality of its design and programming. The corporation has encouraged excellent design by making it an important criteria in the selection of developers. After choosing a use concept for a particular parcel, a two-stage proposal-call is initiated. The first stage of the call is advertised nationally, and submission requirements are intended to identify serious, viable, and appropriate proposals. Proponents are then selected for the second stage, which is primarily a design competition with an additional financial component. Harbourfront then selects a proposal and begins final negotiations, maintaining strict control over the final designs for new structures. The success of this approach is evident in



the excellent architectural design of the completed structures, including the inspired work of Vancouver architect Arthur Erickson, one of Canada's finest.

The emphasis on quality is also evident in Harbourfront's festivals and other programming. The Reading Series and the International Festival of Authors have drawn writers from around the world. The Premiere Dance Theatre has won acclaim for its diverse program including the best classical and modern dance companies from Canada, the United States, Great Britain, and France.

The broad community and governmental support for Harbourfront has been critical in creating an environment for success, attracting the participation of many talented individuals in business, the design professions, and the arts.

### **Lowell Historic Preservation Commission**

Lowell, Massachusetts, founded in 1826, was this nation's most significant planned industrial city. While most of the developments associated with the advent of the American Industrial Revolution originated elsewhere, these new forms of technology, power generation, finance, labor, and industrial organization were first combined at Lowell on a scale that portended today's industrialized and urbanized society. Beyond its pioneering history Lowell also offers a unique opportunity to interpret the full socioeconomic, technological, and environmental implications of the Industrial Revolution — from the city's bright beginnings, through decades of decline, to the present revitalization.

The rebirth of Lowell was envisioned in the early 1960s by a community group proposing that revitalization could be accomplished through the rediscovery of the city's heritage. In 1972 the city council adopted a historical park concept as the focus for future urban development, and city and state officials began channeling funds to support the proposal. In 1975 Congress established the Lowell Canal District Commission, comprised of federal, state, and city officials, and asked it to prepare a plan for the preservation, interpretation, development, and use of the district. Based on the commission's 1977 report, Congress in 1978 established Lowell National Historical Park under the jurisdiction of the National Park Service, and a surrounding historic preservation district under the supervision of the Lowell Historic Preservation Commission. The commission, a new agency of the U.S. Department of the Interior with federal, state, and city representatives, was given a 10-year term to complete its role in the preservation and rehabilitation of the historic district. The state of Massachusetts subsequently established Lowell Heritage State Park, centered on the city's 5.6-mile power canal system. The transformation that followed is one of the great success stories of the revitalization of





America's decayed industrial cities in the 20th century, accomplished through a unique partnership of federal, state, and local agencies and the private sector.

The collapse of the cotton textile industry in the 1920s and 1930s had left Lowell with millions of square feet of empty mills and some 70 buildings on the city's rolls for nonpayment of taxes. Chronic high unemployment had reached nearly 13 percent by 1975, driving away many of the city's brightest young people. That year the Lowell Canal District Commission was created. In the ensuing 10 years, \$200 million of public and private funds were invested in Lowell's revitalization, with each public dollar generating an additional private investment of \$14. New construction in Lowell increased by an astounding 1,600 percent in 1983, the largest reported increase in the nation for a city of its size. By 1985 unemployment in Lowell had shrunk to less than 4 percent, and the city's biggest problems — parking, traffic congestion, and a labor shortage — were the problems of prosperity.

The reasons for this dramatic turnaround are many, but all of the ingredients relate to the central themes of cooperation and unity of purpose. Community leaders and local, state, and national officials all shared a new determination, born of desperation, to work together, in partnership with the private sector, to effect the necessary changes. Public roads, transportation systems, and infrastructure had to be readied for growth. State and local policies that worked against older urban areas had to be eliminated. And, most importantly, the community had to change its self-image, embrace its past, and turn its industrial heritage into an asset for future growth. As with the pioneering industrial developments, many of the methods used to rehabilitate the city's infrastructure and finance its redevelopment were first used elsewhere, but at Lowell they were combined in a unique public/private sector cooperative formula that achieved unprecedented success, becoming a classic model for urban revitalization projects.

## EPCOT Center

EPCOT Center, the Experimental Prototype Community of Tomorrow, was one of the last major projects conceived by Walt Disney, the creative genius of the entertainment industry whose credits range from pioneering work in animation and other video technology to the development of the theme park as an American institution. At EPCOT Center, Disney envisioned a theme park that would use the hugely successful technologies and management formulas of Disneyland's Magic Kingdom to create an enjoyable educational experience for visitors.

EPCOT's central theme of a world made smaller by technological advances and increasing interdependency is carried out in two parks within a park — Future World and World Showcase. The Future World pavilions allow visitors to explore the lands and seas and new ideas and innovations in communications, energy, transportation, and imagination. The World Showcase pavilions share the accomplishments and cultures of nations from around the world.

True to Walt Disney's vision, the pavilions use a variety of high-technology media to make learning an interesting and entertaining experience. Audiovisual programs include CircleVision films and slide shows presented on 360-degree theater screens; Audio-Animatronics, which involves computer-controlled mechanical characters and stereophonic sound; holograms; fiber-optic displays; and laser light shows. These media are combined with elaborate architectural settings and sophisticated rides and transportation systems to create a complete illusion. The EPCOT pavilions are successful because the quality of the illusion is excellent, absorbing the visitor totally in the experience of the attraction. The mastery of technology and the stagecraft required to create such an experience have become synonymous with the Disney name, along with the management skills required to conceive, design, build, and operate a facility of the scale and complexity of EPCOT.

APPENDIX B: PRELIMINARY COST AND REVENUE ESTIMATES



Corporate sponsors finance many of the individual pavilions at EPCOT and other Disney theme parks. The quality associated with Disney's "imagineering" has enabled them to secure the backing of major corporations such as AT&T, Kraft, Exxon, General Motors, General Electric, Kodak, Sperry, and United Technologies for the pavilions at Future World. The World Showcase pavilions are sponsored jointly by the involved governments and various international corporations such as American Express, Coca-Cola, Mitsukoshi Department Stores, Barton & Guestier, Bass Export Ltd., R. Twining and Co., Telecom Canada, Beck's Beer, and Goebel. The sponsors generally finance the construction of the pavilions and pay an annual fee during the 5- to 10-year life of the attraction in return for prominent exposure of the corporate name or the right to market their products at EPCOT. The Disney designers present a concept and budget to potential pavilion sponsors prior to securing an agreement, and they retain complete artistic, design, and operational control over the attraction. This arrangement has provided Disney with the financial backing to produce its imaginative attractions, and it has apparently served the sponsors well, as evidenced by the number of corporations that have offered to sponsor future pavilions.

The tables in this appendix itemize the estimated costs and revenues of the National Park Service proposal for adaptive use of Navy Pier. Table B-1 lists the total capital costs of adapting the pier for use, including capital costs of stabilization, infrastructure repair, the trolley system, and new development. These are order-of-magnitude estimates based on the square footage costs of work performed on other similar projects. Table B-2 lists the sources and estimates of annual revenue that would be available to finance public and private development. Private revenue estimates are based on industry standards and Chicago-area averages for the business activities included in the proposal; actual revenues could differ significantly.



**TABLE B-1: TOTAL ADAPTIVE USE COSTS**

<b>Public Costs</b>		<b>Private Costs (cont.)</b>	
Stabilization	\$ 2,597,000	Entrance ramp, 6,000 sq ft @ \$300	1,800,000
Infrastructure repairs	51,882,000	Elevators/escalators, 22 @ \$75,000	1,650,000
Dime Pier and causeways, 45,000 sq ft @ \$150	6,750,000	Landscaping, lump sum	1,000,000
Site development with lagoon, lump sum	3,500,000	Food service	
Marina, 400 slips @ \$7,500	3,000,000	Restaurants, 63,500 sq ft @ \$140	8,890,000
Breakwater, 855 lin ft @ \$3,000	2,565,000	Food Court, 26,000 sq ft @ \$100	2,600,000
Amphitheater, lump sum	1,500,000	Cafeteria, 15,600 sq ft @ \$35	546,000
Pedestrian bridge, 7,000 sq ft @ \$150	1,050,000	Pavilion spaces, 215,000 sq ft @ \$25	5,375,000
Conservatory, 52,800 sq ft @ \$150	7,920,000	Exhibition halls, 100,000 sq ft @ \$25	2,500,000
Visitor services/information, 27,500 sq ft @ \$45	1,238,000	Marketplace, 57,000 sq ft @ \$35	1,995,000
Administrative space, 8,800 sq ft @ \$50	440,000	Maintenance/service areas, 47,000 sq ft @ \$35	1,645,000
School program area, 8,200 sq ft @ \$45	369,000	Retail space, 50,000 sq ft @ \$30	1,500,000
		Art school/studios, 23,700 sq ft @ \$40	948,000
<b>Subtotal, public net costs</b>	<b>\$ 82,811,000</b>	Nautical center, 18,000 sq ft @ \$30	540,000
<b>Subtotal, public gross costs</b>	<b>\$115,935,000*</b>	Craft studios, 20,000 sq ft @ \$25	500,000
		Administrative space, 10,000 sq ft @ \$50	500,000
<b>Private Costs</b>		Nursery/day care area, 8,200 sq ft @ \$42	369,000
Hotel, 350,000 sq ft @ \$120	\$ 42,000,000	Gallery, 6,400 sq ft @ \$25	160,000
Parking structure, 3,000 spaces @ \$12,000	36,000,000		
Trolley system, lump sum	8,200,000	<b>Subtotal, private net costs</b>	<b>\$184,729,000</b>
Infrastructure repairs	31,159,000	<b>Subtotal, private gross costs</b>	<b>\$221,675,000**</b>
Covered atriums, 219,100 sq ft @ \$150	32,852,000		
Mechanical/electrical, lump sum	2,000,000	<b>Total net costs</b>	<b>\$267,540,000</b>
		<b>Total gross costs</b>	<b>\$337,610,000</b>

\*Public gross costs include an additional 40% of net construction costs for project planning and design, contract administration and project supervision, and contingencies.

\*\*Private gross costs include an additional 20% of net construction costs for project planning and design, project supervision, and contingencies.

TABLE B-2: ANNUAL REVENUES

Source of Revenue	Sales	Net Revenue	Source of Revenue	Sales	Net Revenue
Private Sources			Private Sources (cont.)		
Hotel			Retail sales		
72% of 500 rooms @ \$134	\$17,608,000		Rental = 50,000 sq ft @ \$20		1,000,000
Plus food, beverage, banquets/ meetings, etc.	11,022,000		Craft studios/chandlery		
Hotel subtotal	28,630,000	\$ 6,614,000	Rental = 30,000 sq ft @ \$10		300,000
Parking garage, 40% of 13 million visitors, assuming 2.5 visitors/ car @ \$5/car			Marketplace		
Revenue = 15% of sales	10,400,000	1,560,000	Rental = 57,000 sq ft @ \$5		285,000
Food service			Art school/gallery/boating school		
Food court, 60% of 13 million visitors @ \$3.50			Rental = 38,000 sq ft @ \$5		190,000
Revenue = 10% of sales	27,300,000	2,730,000	Subtotal, annual private revenue		\$19,137,000
Seafood restaurant, 925 seats @ \$5,500			Public Sources		
Revenue = 12% of sales	5,088,000	611,000	Sales tax, \$50,935,000 sales @ 7%		\$ 3,565,000
Old Chicago restaurant, 800 seats @ \$4,500			Hotel room tax, \$17,607,600 sales @ 8%		1,409,000
Revenue = 12% of sales	3,600,000	432,000	Marina, 90% of 350 slips with avg 36-ft boats @ \$5/ft/mo, plus 50% of 50 slips @ \$10/night x 180 days		
Terminal restaurant, 430 seats @ \$5,500			Rental = 12% of sales	\$ 725,000	87,000
Revenue = 12% of sales	2,365,000	284,000	Marina fuel sales		2,000
Special events			Dock fees for tour and excursion boats, 8 berths @ \$500/mo for 4 mos		16,000
Rental = 340,000 sq ft @ \$0.40/event for 12 major events, plus 170,000 sq ft @ \$0.40/event for 24 smaller events		3,264,000	Subtotal, annual public revenue		\$ 5,079,000
Pavilions			Grand Total, annual revenue		\$24,216,000
Rental = 248,900 sq ft @ \$7.50		1,867,000			



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As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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