AN URBAN AXIS MEETS THE WATERFRONT: PLEASUREPIER AS TERMINATION

by

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Thesis submitted to the Faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

MASTER OF ARCHITECTURE

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April 1986

Blacksburg, Virginia
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ABSTRACT

It is the intention of this thesis to present not only a visual exploration of a design problem, but also an explanation of a particular design process.

It is fashionable these days for a designer to make statements about his design philosophy as a way of legitimizing his architectural intentions. My aim is to avoid this kind of justification by instead presenting the project as a process description. This description will make my beliefs and intentions both evident and understandable to those unfamiliar with my work as well as provide a personal record of the project's development.

To date my architecture education has been shaped in different countries, through different educational systems, and with different teachers and students. This thesis stands as a record of my accumulated experiences and as a description of a personal approach to working with architectural problems. I believe the most important part of an architecture education is the development of one's own design process.

This exposition represents a beginning.
Dedication:

to my father for his inspiration

to my mother for her love

to [blank] for his loyalty and friendship

to [blank] for friendship and criticism

to [blank] for his help and insight

to [blank] for her kisses
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The three preceding pages explore images I have encountered during my travels in the United States which eventually became important sources for the pier project.

After choosing a site and analyzing its needs the starting point in my process involves recalling certain images from experiences which emphasized similar ideas and concerns. Visual memories are stirred and I surround myself with these images whether via sketches, photographs or slides, to help stimulate and generate ideas. As an architect it is both important and unavoidable to draw from images that fill one's experiences and perceptions. These influences in turn manifest themselves in my designs, and it is with reverence for these sources that I gain strength in my architectural vocabulary and integrity in my design intentions.

Hotel and Fishing Pier / La Jolla, California

The pier penetrates the shoreline, vertically cutting across the beach and the water. It is a man-made object which stands in sharp contrast to the natural shore condition. The structural repetition of the pier itself, combined with the echoed repetition of the cottage-like bungalows above, further emphasizes this captivating architectural rhythm.

Salk Institute / La Jolla California

At Salk, Kahn has allowed this powerful architectural axis to be terminated in a view. It is an unusual termination since the path of water runs into the horizon and is not terminated by anything physical, but instead by an ethereal convergence with the sky.

Riversteamer on the Potomac / Alexandria, Virginia

Docked at the end of a wooden pier in front of the Torpedo Factory in Old Town, Alexandria, this river cruiser reinforces the importance of terminating an axis with a wall, a wall that can be entered, a wall with different layers and transparencies, a freestanding wall in the water.

In 1823 Captain Samuel Brown built Chain Pier. This was Britain’s first pier built as a place of pleasure and attraction for Britain’s summer visitors. The pier’s secondary function was to serve as a sea promenade and landing stage for packet boats.

These piers built at various seaside resorts around the British coast are among the most original architectural inventions of the 19th century. Originally planned as landing stages for boats and ships, they developed into a specific architectural form. They appeared like ship’s decks firmly linked to the land on which people could walk above the sea. Pavilions provided pleasant distractions in sunshine or rainy weather, or even during a storm with waves thundering below.

These promenades above the water would be as useful and sensible today as they were during the heyday of the great seaside resorts had they not been allowed to decay or been ruthlessly modernized without sensitivity to their pleasurable architectural character. Palace Pier in Brighton is one of the most delightfully extravagant in Great Britain. Here you can wander out above the sea, sit in the sun, eat, dream and watch the tides and skies.
The City of Alexandria is located in Northern Virginia on the Potomac River, south of Washington, D.C. The site was settled in 1695, and a community known as Belhaven was founded in 1731. Organized in 1749, it was renamed for John Alexander who had originally been granted the land, and was incorporated as a town in 1779. It has the unique distinction of being an independent city, designated by an act of Congress in 1852. George Washington helped to survey its streets and drilled troops here during the French and Indian War. From 1791 to 1847, Alexandria was part of the District of Columbia. At the outbreak of the U.S. Civil War, it became a Federal operational base and served as the seat of the wartime government of Virginia.

Its development as a political and social center and as a river port for shipping flour and tobacco was overshadowed by the growth of Washington and Baltimore. The city is now a commercial center for Northern Virginia and it remains primarily residential with some light manufacturing and warehousing. Many colonial buildings survive, some associated with George Washington, General Edward Braddock and Robert E. Lee. Washington, who maintained a house in Alexandria, served on the town council.

The George Washington Masonic Memorial built in 1922 houses momentous of his tenure as the master of the Masonic Lodge.
The Site—An Urban Axis

This project proposes to give King Street an appropriate ending at the place where land meets water.

The major concerns of the project are as follows:

- The need for a visual terminus at the waterfront to balance the visual prominence of the Masonic Temple to the West.
- King Street is the major commercial and geographical axis in Old Town. It is prominently terminated at one end by the George Washington Masonic Temple, a ziggurat-like tower looming over the city. This procession is then anticlimactically ended next to the walled property of the Old Town Yacht Club at the foot of the Potomac river.
- An integration of the waterfront into the existing and well-established city fabric.
- The present lack of visual and pedestrian access to the waterfront.

The program for the project evolved out of these issues. The lack of public accessibility is the key factor and it is therefore the key to the program of the project. Given the implicit needs of the site, any good solution must become a solution of the larger urban scale.
Exploration

Analyzing the site and its present urban situation it is clear that any solution must evolve from its most powerful architectural and Urban Force—King Street, Alexandria’s urban axis. By studying examples of other similar situations I arrived at three basic approaches to dealing with the problem.

Physical Termination of an Axis:
This concept implies an attempt to counter-balance the physical presence of the Masonic Temple at the west end of the King Street axis by developing a building that could stand as an equally strong termination at the east end of the axis. The strong point of this solution is the possibility of another urban symbol which could become an equally formal and significant landmark at the presently vacant end of the axis.

Embracing the Axis:
Rather than terminating the axis with a building, the possibility of embracing the axis in a harbor-like situation presented another alternative. This solution focused on accessibility to the waterfront and its potential pleasures. At the same time it was a solution that described a kind of interaction with and reweaving of the existing city fabric.

Continuation of the Axis
Rather than ending the axis at the shore of the Potomac, a continuation of the axis over the water was the next possibility. This solution added the sensation of terminating the axis beyond the shoreline and over the river, a situation similar to the view at the Salk Institute where the axis terminates by continuing on into the horizon without apparent end. This approach combined the need for both urban symbol and an integration of the waterfront with its surroundings.

Birds Eye View/Va State Library, 1926
Conceptual Development

The possibility of terminating a street by continuing its axis onto the water provided many architectural challenges and seemed to promise a greater richness in design. Rather than focusing on either a strong visual solution or a strong integration of King Street's fabric this idea could make possible the merging of both solutions.

Any building erected along Alexandria's waterfront must take the 100 year floodmark into consideration. Erecting a building here demands that the first floor slab be raised twelve feet above the normal waterline or include otherwise appropriate precautions such as floodgates. The existing foot of King Street is itself five feet above this line and any continuation of the street must deal with this important height requirement.

The idea of axis as continuation also introduced the physical and visual extension. Continuing the street at its full width through the middle of the axis posed a problem since it would take both the view and experience of the waterline away from the pedestrian. Stepping back the axis and realigning the edges of the street rather than extending its present width seemed a more pleasing and accommodating solution. The street then becomes a pier bridging the two elements. The pier would have the following effects on the shoreline:

- The place where land meets water would remain unaltered and both the experience and perception of the natural waterline would be retained.
- The existing axis would be further strengthened by placing new buildings along either side of the pier thereby carrying the present rhythm of King Street out onto the water itself.
- The stepping back of the street and the continuation of pedestrian circulation along its edges would allow the actual terminus to become the powerful focal point of the continuing axis.
Basic Design Concept

By summarizing these considerations and conclusions the basic design scheme defined itself.

- Stepping back the street to the borderline of the original gridiron city structure and carrying these given rules beyond the waterline and out over the river itself.
- Leaving a street of water at the point where the actual termination is to take place.
- Placing buildings along the edges of the axis gives the designer the opportunity to emphasize desired vistas, thereby further enhancing the understanding and experience of the axis before it reaches its focal point.

The two primary design principles took shape:

- A street of buildings carrying the city fabric and urban axis onto the water.
- A termination of this street by the creation of an appropriate ending to the axis, which will not only be a clearly identifiable urban symbol, but also an interesting and enjoyable urban space.
Design Development

The original idea was that while carrying a row of buildings out over the water, a number of rules stemming from the existing urban context could be maintained.

Designing this street of buildings included using the existing rooflines and the width and depth of the houses in the immediate environment to determine an appropriate scale. While the typical Old Town buildings are brick structures in a colonial setting, the buildings next to the water reflect a different style. Historically wharves and warehouses dominated the scene and even today continue to add a more industrial character to the immediate area.

Presently the waterfront's most dominant building is the Torpedo Factory, recently restored as an arts center. This building marks the break between Old Town and this industrial zone in a dramatically visible way. To acknowledge this became an important factor in determining the character for a project to be developed in this setting.

Testing a number of different compositions within the frame of these well established design criteria lead to a more clear definition of the final design.

Phase 1:
By establishing a single loaded street with a walkway passing in front of it I made an effort to erect a screen between Founders Park, the Torpedo Factory and it's adjacent harbor zone. With that measure I hoped to distinguish between a public zone and a more private zone while still preventing the total separation of the two. The termination itself was to take place through a platform fitted into the established rhythm of the buildings. This platform cutting across the axis would enable pedestrians to enjoy views into the city and out over the river. A small light house sitting in the center of the axis would call attention back to the center of the axis and become a symbolic ending to the King Street waterfront, counteracting the Masonic Temple.

Phase 2:
Trying to heighten the significance of the ending, two towers were established on either side of the axis. The walkway first swings away from and then back across the axis trying to create a more dramatic end to the composition. After finding both schemes unsatisfactory in some ways, further exploration helped pinpoint the necessary improvements. Working with the study model was helpful since it allowed quick tests of numerous spatial compositions and a better understanding of the requirements of the final solution.
Final Design Solution

While acknowledging the decisions made for the basic design, a series of refinements were necessary in order to adapt the final solution to the existing context in a more satisfactory way.

The most identifiable flaws were:
- A densely single loaded street while mimicking the existing environment and city fabric seemed difficult to balance as a focal point.
- By maintaining equal spaces between the buildings a screen was created between Founder's Park and the Torpedo Factory. This was an obstacle that made a comfortable continuation of the waterfront impossible.
- The termination of the central axis needed an idea that would more clearly lend itself to the task of being an identifiable urban symbol. A clear and visible difference between the street leading to the terminus and the terminus itself seemed a more effective solution.

Refinements of the concept:
- Giving the buildings increasingly larger spaces between them, built a perception of increasing openness. The first two buildings still sitting on land, are very closely spaced and thereby resemble the density of Alexandria's existing fabric.
- The farther pedestrians continue along the pier the more water and views are revealed. This creates a mood that changes from the enclosed feeling of being on land to the openness of being on and over the river itself. Several objectives are achieved by breaking up the single loaded street and double loading it in certain places. The pedestrian's view while walking down King Street towards the pier is focused on the platform which represents the ending of the street. Upon reaching the foot of the street the view opens to the left towards the harbored bay and its waterside plaza in front of the Torpedo Factory building. While continuing towards the pier the view of the harbor is blocked by the three buildings planned to replace the Yacht Club. The pedestrian's attention is then refocused on the axis and as one begins to climb up the ramp, another view opens and reaches south towards Founder's Park.

The moment the top of the ramp is reached the view is once again revealed. This is the only point along the pier where two buildings face each other on opposite sides of the axis, creating a gateway for both the river and the axis.

Once one has passed through this perceptual gate the central axis is no longer the primary visual directive. The vista then fans to the north creating an immediate link to Washington across the river.

The key to resolving the design became the realization that a clearly identifiable architectural element was needed to firmly terminate this axis. A freestanding wall that would embrace the axis in its termination was the most intriguing solution. The wall would be hollowed to allow circulation within it and perforated with openings that would create views out onto the river. The curved wall also recalls the image of a large ship docked at the end of a pier, still a reoccurring scene in Old Town because of the number of large shipping freighters that frequently journey to its waterfront warehouses. By layering the wall, giving it staircases, balconies, platforms, etc. these resemblances are reinforced. A cantilevering platform rests in the largest opening in the wall and offers both a ceremonial end to King Street and a place that welcomes various potential uses and experiences. Furthermore, this opening itself becomes a symbolic entrance gate to the City of Alexandria as well as the new termination of the axis.
The Architectural Language

As has already been discussed, the architectural language along the waterfront is not merely that of the colonial style, but a language equally defined by its industrial character. The dominant building on the site is the Torpedo Factory, a typical concrete frame structure of its time. No references are visible in this building to the colonial fabric of Old Town.

I felt therefore that the architectural language of this project could be of a very industrial and rational character. After choosing a steel frame structure for both the building and the pier I began to differentiate the individual buildings. A certain differentiation was achieved through varying spatial intervals between the buildings. Further individualization was accomplished through subtle variations adapting to the specific functions of the buildings involved. For example, the rules of the existing city would be incorporated in these buildings which work to create the transitions between both land and water and between the existing and the new. Beyond the museum, all buildings stand over the water.

Their functions are in turn, with the exception of the yacht club, reserved for commercial use such as shops, galleries and small restaurants or bars. The facades of these buildings would be stepped back, exposing their structure so as to emphasize the sense of transparency and the relationship between the inside and the outside. This structural emphasis works to enhance the industrial character of the project and allows strolling pedestrians to look beyond the facades and to be enticed inside. The shadows thrown by the structure onto the stepped back facades accentuate these ideas of layering and revealing. A row of pavilions located in the center of the spaces between the buildings adds a more private and pedestrian scale to the procession. This linking of a pedestrian scale to the urban scale makes both the rhythm of the buildings and the spaces between more understandable to those walking along the pier.

The tower building docked to the platform at the end of the pier is intended to merge open and enclosed spaces. By shifting the top level of the structure, it gains in complexity and calls greater attention to its position. Its importance is amplified by the fact that it is the only element to exceed the height of the other buildings along the pier.

The wall itself is the most important single element in the project. It recalls the image of the oceanliner and its majestic beauty. Staircases within the wall link various observation decks and the phenomenon of enjoying views from different places helps to determine the distinct character of this place.

Different means of circulation also differentiate the other parts of the project. This approach adds a specific character that relates to the individual components and it’s special significance in the design.
- The exhibition facility is accessed from the gap between its two parts.
- The three buildings reserved for the yacht club are entered through a series of walls parallel to the pier.
- The commercial buildings alongside the pier are accessed via the bridge which runs adjacent to them.

At night the industrial and repetitive nature of the project is magnified by the reflections of the pier, its buildings and wall mirrored in the river below. At this point the experience of termination is subtly implied to be one of continuation in all directions, to the sky, to the shoreline beyond and into the water below.
FIRST FLOOR: Exhibition Facility
SECOND FLOOR: Yacht Club
SECOND FLOOR: Three Stores and One Art Gallerie
FIRST FLOOR: Wall and Restaurant
FIRST, SECOND AND THIRD FLOOR: Restaurant/Bar
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The vita has been removed from the scanned document
EVERYTHING UNDER THIS HUGE
WEATHER GOMIE IS CONTROLLED
BY THE WEATHER DEC!1
I can't afford to build all these marvelous inventions myself, but there are the plans—my gift to Duckburg! Duckburg will be like a dream city! Duckburg will be the most!