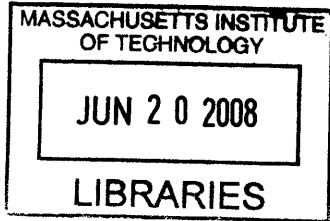


# **Pulling Back the Curtain: Revealing the Production of Performance in the Hawaiian Islands**

by  
**Stephanie Hsu**

BSAD, Architecture  
Massachusetts Institute of Technology, 2004

Submitted to the Department of Architecture in partial fulfillment of the requirement for the degree of  
Master of Architecture at the Massachusetts Institute of Technology, June 2008



**ARCHIVES**

Signature of Author: \_\_\_\_\_

A handwritten signature in black ink, appearing to read "Stephanie Hsu", written over a horizontal line.

Stephanie Hsu  
Department of Architecture  
May 23, 2008

Certified by: \_\_\_\_\_

A handwritten signature in black ink, appearing to read "Shun Kanda", written over a horizontal line.

Shun Kanda  
Senior Lecturer  
Thesis Supervisor

Certified by: \_\_\_\_\_

A handwritten signature in black ink, appearing to read "J. Meejin Yoon", written over a horizontal line.

J. Meejin Yoon  
Associate Professor of Architecture  
Thesis Supervisor

Accepted by: \_\_\_\_\_

A handwritten signature in black ink, appearing to read "Julian Beinart", written over a horizontal line.

Julian Beinart  
Professor of Architecture  
Chair of the Department Committee on Graduate Students

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## COMMITTEE

### THESIS SUPERVISORS

**Shun Kanda**  
Senior Lecturer

**J. Meejin Yoon**  
Associate Professor of Architecture

### THESIS READERS

**Mark Jarzombek**  
Professor of History and Architecture

**John Fernandez**  
Associate Professor of Architecture and Building Technology



# **Pulling Back the Curtain: Revealing the Production of Performance in the Hawaiian Islands**

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## **ABSTRACT**

Harbors throughout the Hawaiian Islands serve as the primary infrastructure for the state, accommodating a growing commercial cruise ship industry, foreign and domestic shipping, and commercial fishing activity. They are also increasingly sites of controversy—as demands for the addition of new piers and structures restrict local access and use of harbor areas, and do not recognize harbor activity at the human scale.

This thesis proposes a platform for performance that situates itself within these industrial harbors, floating and traveling between the four major Hawaiian Islands. It is an autonomous object that functions within multiple sites, accommodating public access and existing use of the sites. The venue frames industrial harbor activity rather than staging nostalgic rituals for the tourist gaze that perpetuate Hawaii's (neo)-colonial grand narrative as a sexualized, romanticized landscape. Here, theatrics serve as an instrument to reflect the relationship between production and consumption—the typically hidden mechanics of calculated and market-oriented production and the outward appearance of contrived reality. Relationships between audience, stage, and performer shift to reveal the production of the performance, and reinsert the audience as a part of the theatrical experience. The architecture is a stage set for performance that is not limited to a fixed stage, but happens throughout the venue as localized spectacle.



## **ACKNOWLEDGEMENTS**

Many thanks:

To my family, for their love and support—especially my brother, Eric, my best friend and idol.

My committee, for their patience and guidance.

Fellow thesis students, for their encouragement.

My “army” in the last week of production—Reilly, Justin, Laura, Matt, Tad, Colin, Eliot, Garrett, Nat-suko, Erica, Viktorija, Najiyah, Mio, Wenjun, Yuchen, Diana, Prabhakar, Junaid, and Bryce.

THANK YOU

Friends at MIT, both old and new.



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# BACKGROUND

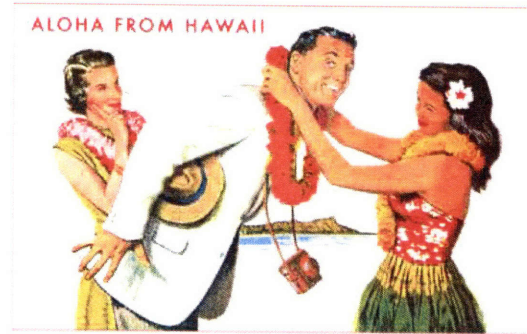
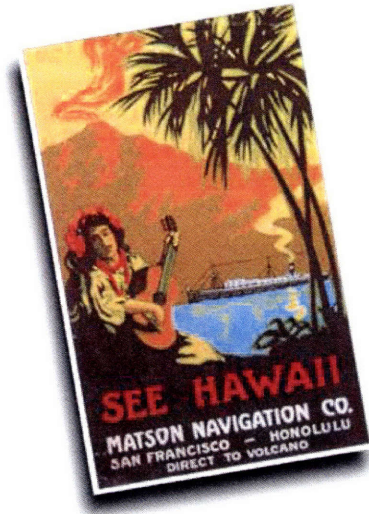


Fig. 1-2

## TOURISM & NOSTALGIA

12 | Tourism thrives by marketing an image that creates an expected reality. It becomes the production of destinations, where the product is a certain “experience.” Especially in our virtual age, where the former static film viewer becomes a mobile pedestrian or traveler, continuity between the actual and the simulated suggests a “larger cultural source,” or “tutoring” of the tourist gaze that takes place in other cultural forms and “may long precede any actual immersion within a foreign landscape” (Strain 15). Thus, tourism-based conservation or cultural tourism confronts the challenge of maintaining the “natural,” expected environment it sells, and in turn, creates a “Disneyesque” version of an environment by preserving, recreating, and enhancing a supposedly authentic environment.

Since the eighteenth century, images of the Pacific Islands as mythical landscapes have been reinforced in the travel writings, paintings,

and speeches by Captain Cook, Gaugin, and Mark Twain among others. As popular culture and mass media propagate these images, tropical islands such as the Hawaiian Islands continue to be depicted as sexualized, romanticized landscapes.

While tourism and nostalgia contribute to reinforcing and repeating the (neo)-colonial paradigm’s persistence in the grand narrative on Hawai’i, (Mollegaard 1), Hawaii’s tourism-based economy leaves little room for social change because it is in the interest of the tourist industry to maintain the image of Hawai’i as a welcoming and politically uncomplicated holiday destination. Conjoined, tourism and nostalgia favor the tourist gaze and continue the dominating processes that colonize the minds of tourists and locals alike.



Fig. 3

While tourism places act as a stage for tourist activities, the tourist “experience” is largely detached from the infrastructure of the tourist destination (i.e. the front and back of house dichotomy of hotel and resort architecture.) Often, attempts to stitch the local community with visitor results in tour-led excursions of the “tourist gaze.” Tourism is typically a major source of income for local economies, however by selling an expected experience the local culture is limited in how it grows and develops. The architecture of such places often suffers from the same repercussions of expected experience. Once a place is marketed with a specific image, kitschy design and caricatures of a culture propagate. The “timelessness” or character of a place is dependent on the very lack of progress and transformation it is allowed to undertake.

In the book “Performing Tourist Places” (Jorgen Ole Baerenholdt, Michael Haldrup, Jonas Larsen, John Urry; 2004) the authors argue that “tourism is not so much about going places as it is about particular modes of relating to the world in contemporary cultures” (2). This in mind, tourism does not need to depend on the conventional images of leisure to market itself, and is not limited to remote and exotic locations. Anywhere and everywhere has the potential to be a “performing tourist place.” Perhaps with this understanding of tourism the ideas of tourist destination may be redefined. The intersection of performance and people (local and visiting) will produce a “performing tourist” place, and this reinterpretation of a tourist place will be allowed to grow as a whole, not stifled by the artificial concept of “conservation” of culture.





Fig. 4-5

## HARBORS

14 | Hawaii's harbors exemplify the state's duality of "business asset and playground to create fantasy arrival" (Mollegaard 4). Historically, the harbors have played an important role as convenient port-of-calls for foreign fur traders and whaling ships seeking protected anchorage for their deep-draft vessels. Eventually, ancient Hawaiian populations shifted around these naturally deep and protected harbors. Harbors in Hawaii were, and continue to be, situated places of exchange between the exotic and familiar.

This is particularly noticeable with the resurgence of cruise lines in recent decades. Referencing the 1870s weekly rituals when swimmers and lei bearing women greeted steamers from Los Angeles and San Francisco, the tourism bureau is now creating staged versions of the original spontaneous rejoicing of Boat Day celebrations for the benefit of debarking cruise ship passengers. The welcoming

rituals at the harbor create a site that is an ideologically charged space, in which the colonial dominion is visualized in signs, and has sought authentication in various touristic representation" (Mollegaard 11).

While harbors throughout the Hawaiian Islands continue to serve as the primary infrastructure for Hawaii, accommodating the growing commercial cruise ship industry, along with foreign and domestic shipping, and commercial fishing activity, they are also sites of controversy—as demands for the addition of new piers and structures along the shoreline restrict local access and use of harbor areas. Amongst barges, cargo containers, cruise ships, oil refineries and sugar mills, the human scale is lost within the harbors.



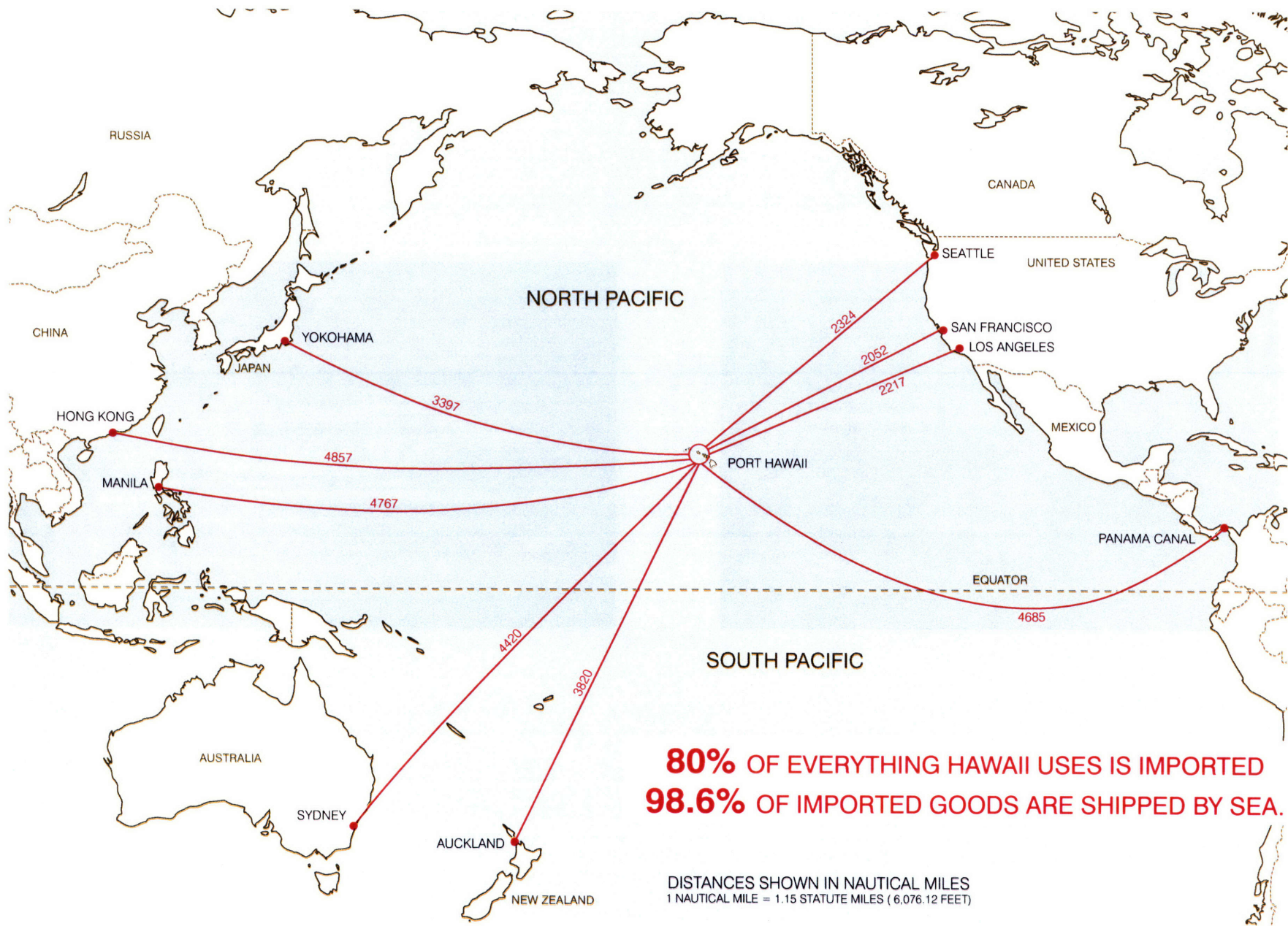
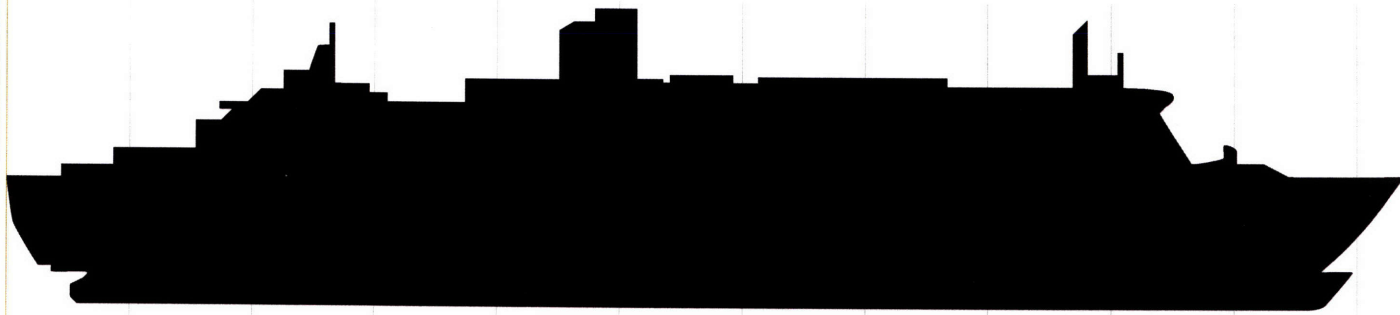




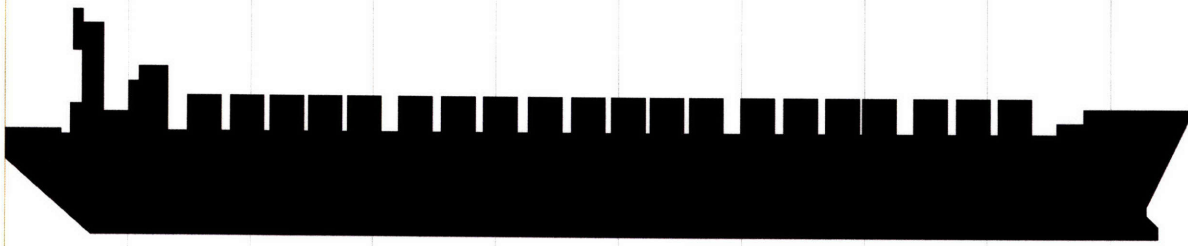
Fig. 6-7



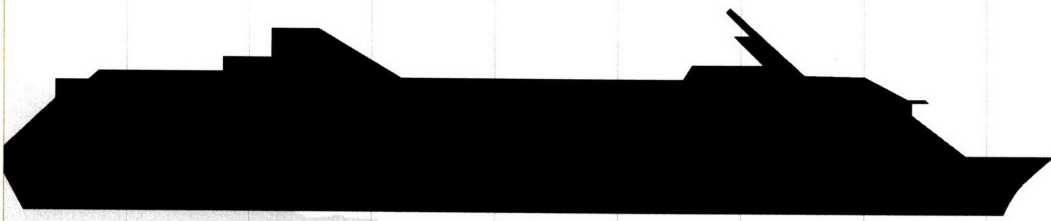
QUEEN MARY 2



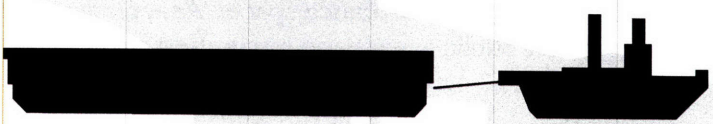
CONTAINER VESSEL



PRIDE OF ALBA



TUG TOW



AIRBUS A380



OUTRIGGER CANOE



PUBLIC BUS



AUTOMOBILE



PERSON



100' 200' 300' 400' 500' 600' 700' 800' 900' 1000' 1100'

EIFFEL TOWER



Fig. 8

## PERFORMANCE SPACE

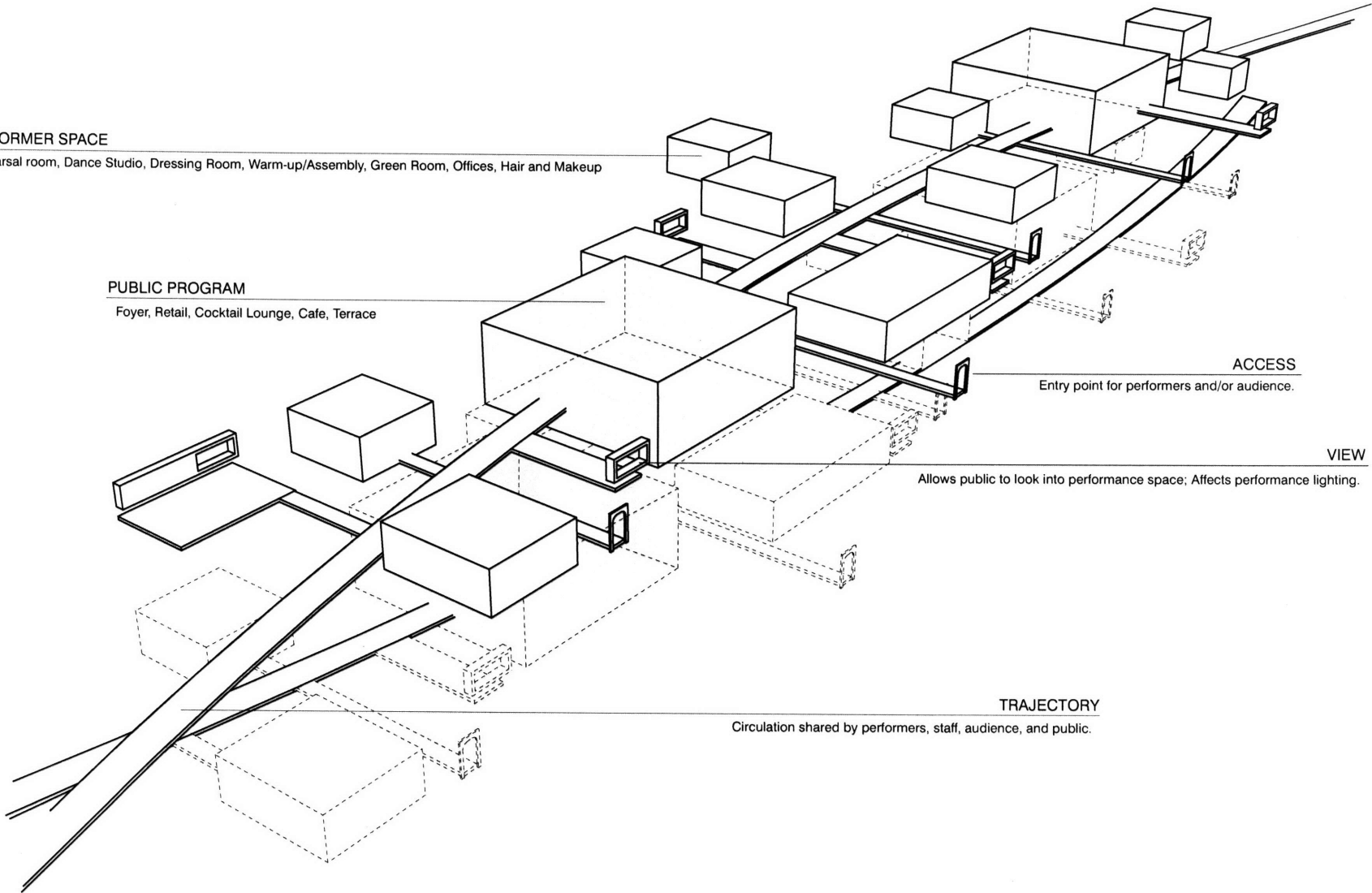
18 |

This thesis project proposes to create a platform for performance that situates itself within the industrial harbors of Hawaii, recognizing the localized activities that take place in its surroundings at the scale of the individual. It provides public access and accommodates existing local use of the site, framing existing harbor activity rather than staging nostalgic rituals for the tourist gaze.

Here, theatrics serve as an appropriate instrument to reflect the relationship between production and consumption—the typically hidden mechanics of calculated and market-oriented production and the outward appearance of contrived reality. Relationships between audience, stage, and performer fluctuate and reorganized in order to reveal the production of the performance, and reinsert the audience as part of the performance experience. The backstage programs are integrated with public program, and a single trajectory

of circulation shared by performers, staff, the audience, and public. The trajectory links public programs, while serving as the crossover space for the performers and providing a physical and visual connection with the performance space. As a public corridor, it maintains constant public access and integration of users throughout the structure.





**PERFORMER SPACE**

Rehearsal room, Dance Studio, Dressing Room, Warm-up/Assembly, Green Room, Offices, Hair and Makeup

**PUBLIC PROGRAM**

Foyer, Retail, Cocktail Lounge, Cafe, Terrace

**ACCESS**

Entry point for performers and/or audience.

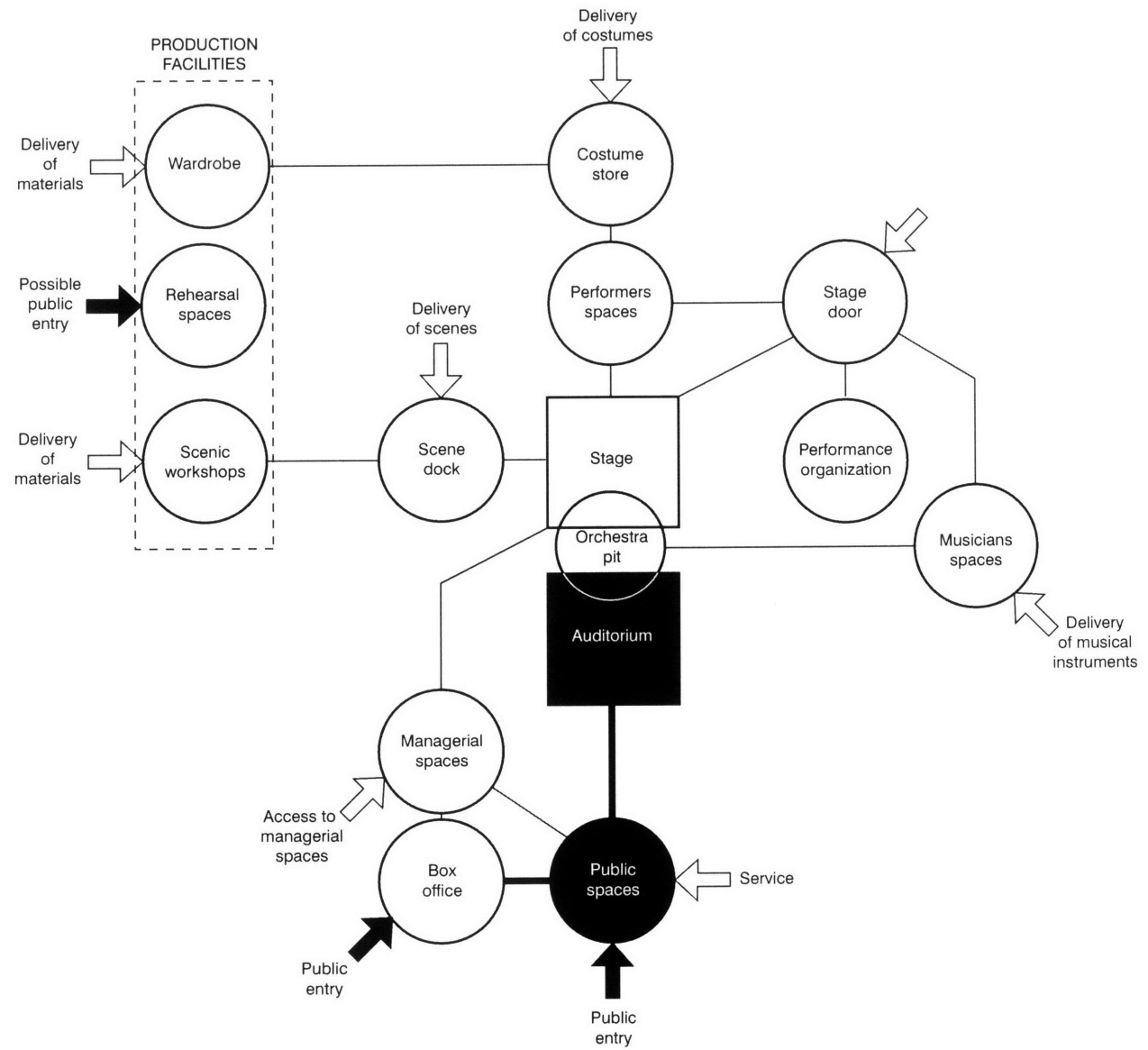
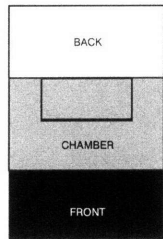
**VIEW**

Allows public to look into performance space; Affects performance lighting.

**TRAJECTORY**

Circulation shared by performers, staff, audience, and public.

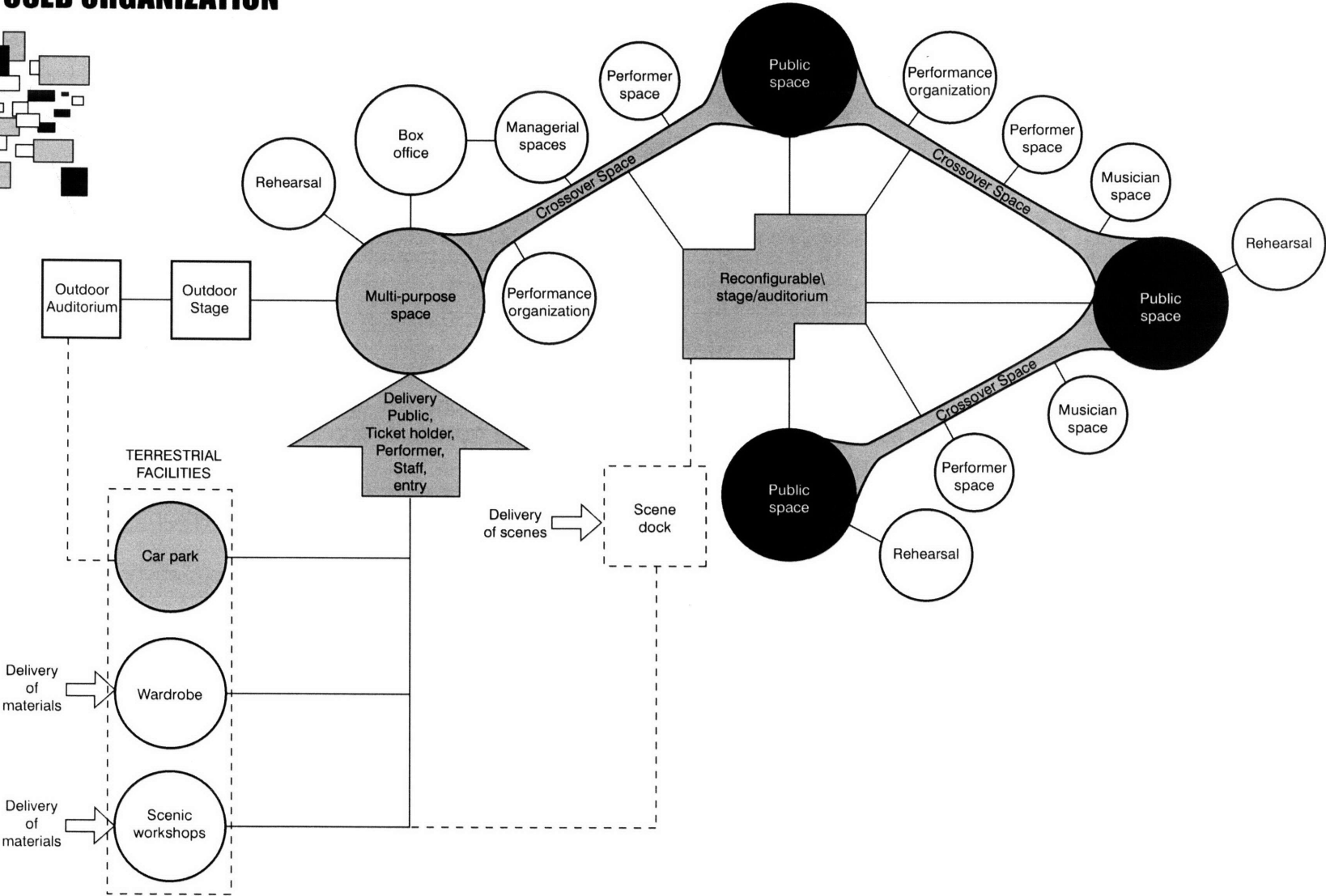
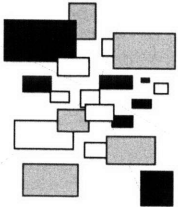
# EXISTING TYPOLOGY



20 |

Fig. 9

# PROPOSED ORGANIZATION



Random focus is like driving a car. “What you see while driving depends upon what you see through the windshield coming towards and going away from you; what you see through the windshield coming towards and going away from you; what you see in the rear-view mirror going away and coming towards you; whatever fill-ins you get from the side-view mirror; occasional glances at the dashboard; and the sound from the radio...” (Hardy 121)

FIXED FOCUS	Frontal, Thrust, Arena.	Audience and performer have a fixed relationship in clearly defined spaces; Audience is fixed.
MULTIPLE FOCUS	Diffuse; Multiple actions compose an event.	“ ”
RANDOM FOCUS	Ambiguous; Discontinuous collision; In motion.	No distinction between audience and performer.

The separation of audience and performance is of modern origin. “Social and physical restrictions and darkness left the audience only the stage to focus on... the sumptuous spectacle, a celebration of materiality and an advertisement for consumption...” (Butsch 15).

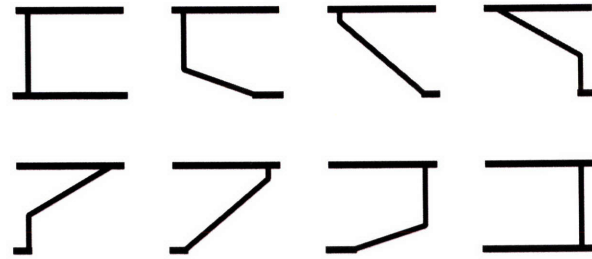
22 |

HISTORICALLY	Stage extended into audience.	“Rhetorical” style; Audience participation.
18TH CENTURY	Invisible fourth “wall” in front of proscenium.	“Realism” on stage; Audience silenced.
19TH CENTURY	Forum --> Market Place	Public participation --> Private consumption/shopping; Collective --> Individual; Privatized audience.
20TH CENTURY	Media: Live --> Recorded	Audience severed.



Fig. 10

## PROFILE

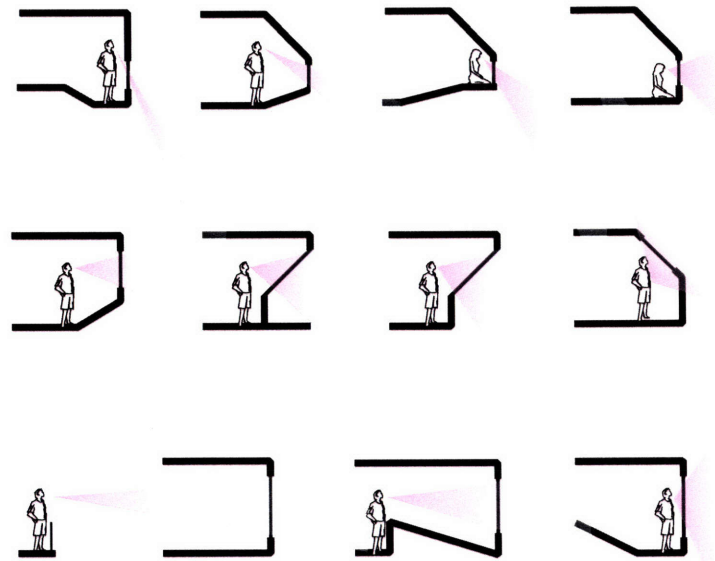


Spacious



Confined

## SIGHT LINES



Narrow



Wide



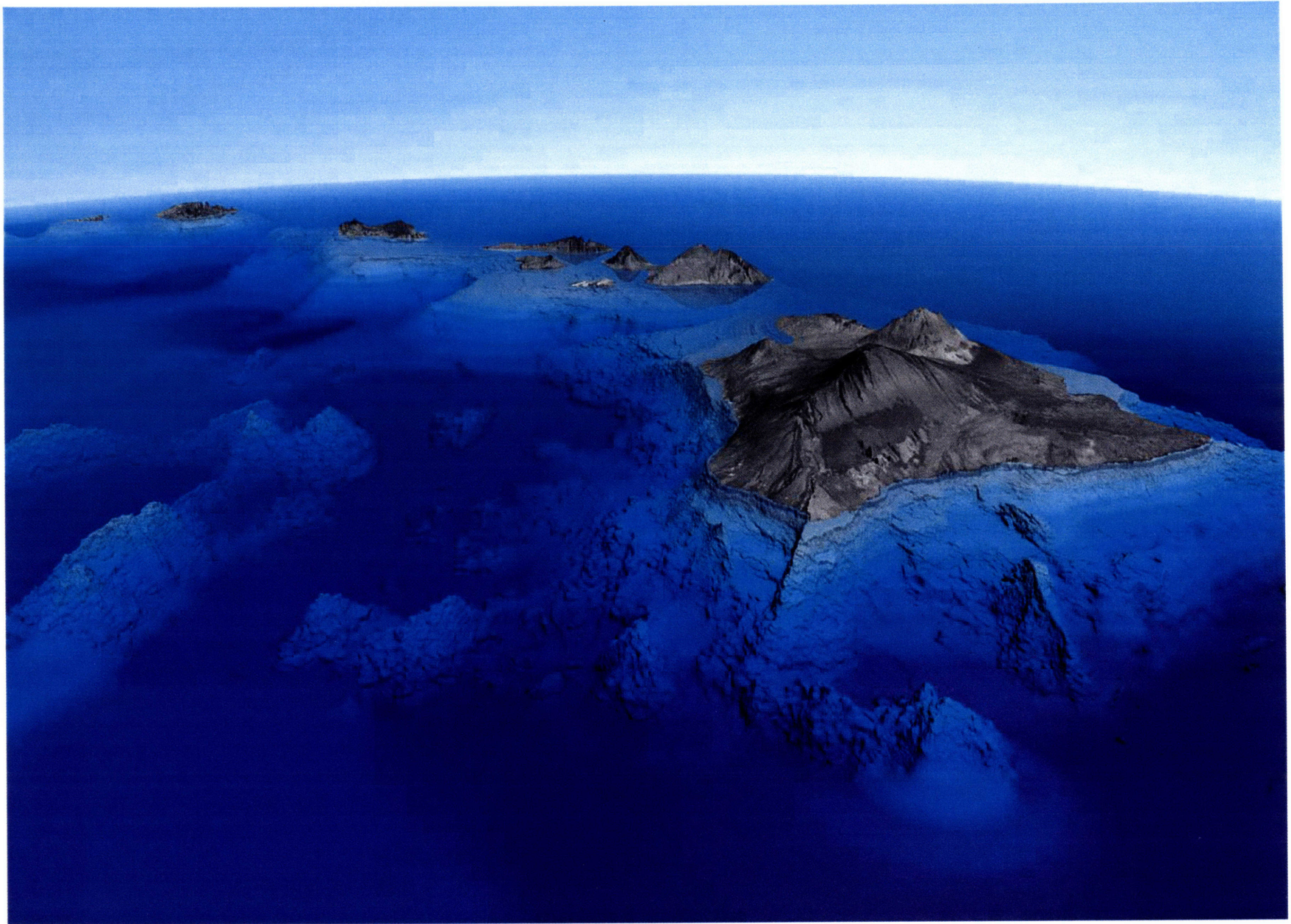
# CONTEXT

## ARCHIPELAGO

This project is meant to serve all of Hawaii—a state comprised of a constellation of land masses emerging above the surface of the Pacific—each of its islands a part of a whole, yet possessing their own unique characteristics. Thus, the thesis design is for a floating, mobile venue. It resides in Honolulu harbor for most of the year, and travels to the outer islands during the summer months following a schedule formed around annual harbor events specific to each island. It is an autonomous object that functions within multiple sites.

Opposite: Fig. 11





## SOUTH SHORE, OAHU

Hawaii recognizes the inalienable right of its people to access and use the coastal areas throughout the State. This recognition respects the traditional importance of the coastal resource for provision of food, commerce, recreation and cultural fulfillment. Nowhere in the State is the need for public access and use more evident than along the south shore of Oahu, an area which exhibits some of the highest population densities compared in the State. The current trend in building, commercial development and growth in both the visiting and resident population is moving toward a total urbanization of south shore of Oahu.

Over a period of one hundred years, Honolulu has undergone a typical pattern of port development which has effectively isolated the coastal area (makai) from the inland (mauka) areas. In effect, the city has turned its back to the waterfront. A critical planning

challenge is to open up the deteriorated mauka-makai linkages and re-instill the vision of the waterfront as the gateway to Honolulu. As construction on Oahu continues to grow at an exponential rate, a radial pattern of new growth in Honolulu is distorted by the natural boundaries set by the mountains and ocean. As a result, expansion spreads along the coast in an east and west direction and overdeveloping occurs along the island's limited perimeter shoreline.

Between Waikiki and Ala Moana, the coastline of Oahu is dense with shopping malls, hotels, resorts and restaurants. Along the shore Waikiki beach and Ala Moana beach park preserve public access between the land and water, however this access ends in front of the heart of the city in downtown Honolulu. As the city of Honolulu continues to grow, the pressure to continue public access along the waterfront of downtown Honolulu increases.



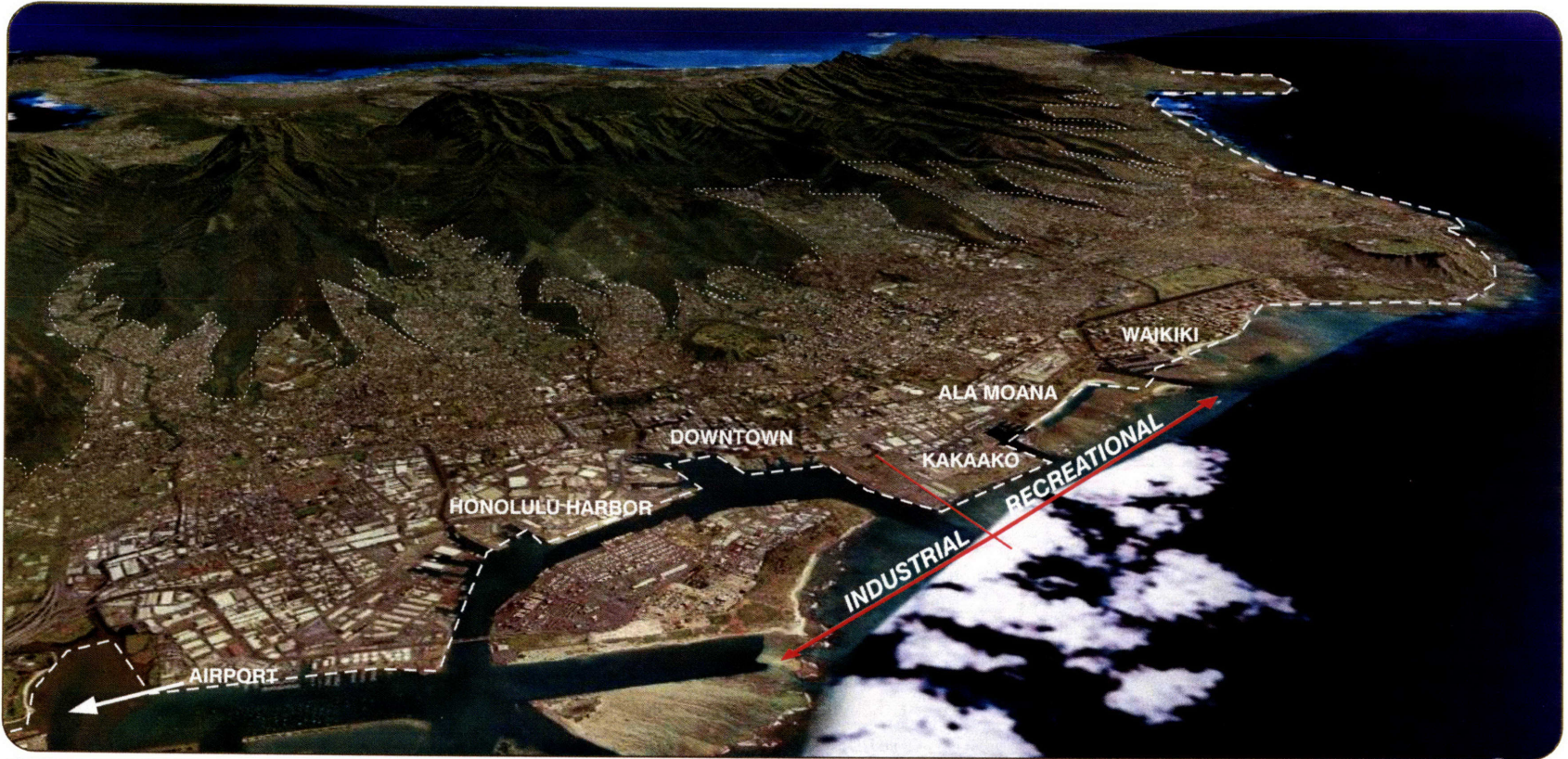


Fig. 12-13

## HONOLULU HARBOR

When the Aloha Tower Marketplace opened in 1994, it turned Honolulu into the only harbor in the nation that combined a visitor attraction, retail and restaurant outlets, and working commercial harbor facilities at a single location. Since then however, support for non-maritime development of the lands surrounding Honolulu Harbor has declined. Spatial, facility and support requirements of the ocean cargo carriers has increased. Shift in trends necessitates the return to a focus on the needs and projected growth of the maritime community to integrate commercial activity for cargo and fishing operations with retail and recreational activity along the waterfront (Murray).

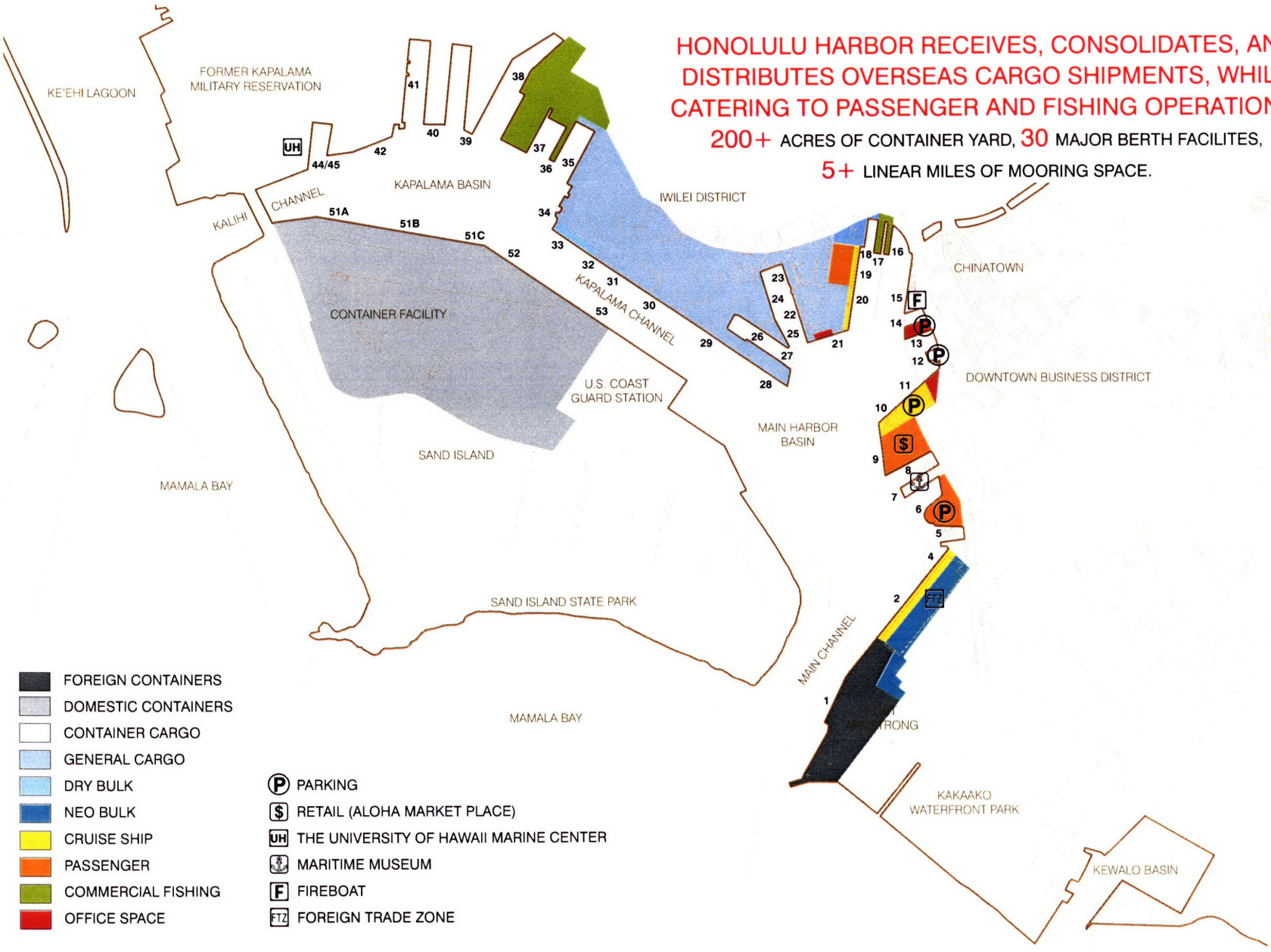
This thesis proposes an architecture that allows public access to the waterfront at Honolulu Harbor. It respects the harbor as the hub of Hawaii's industrial ports—a function of the optimization of efficient

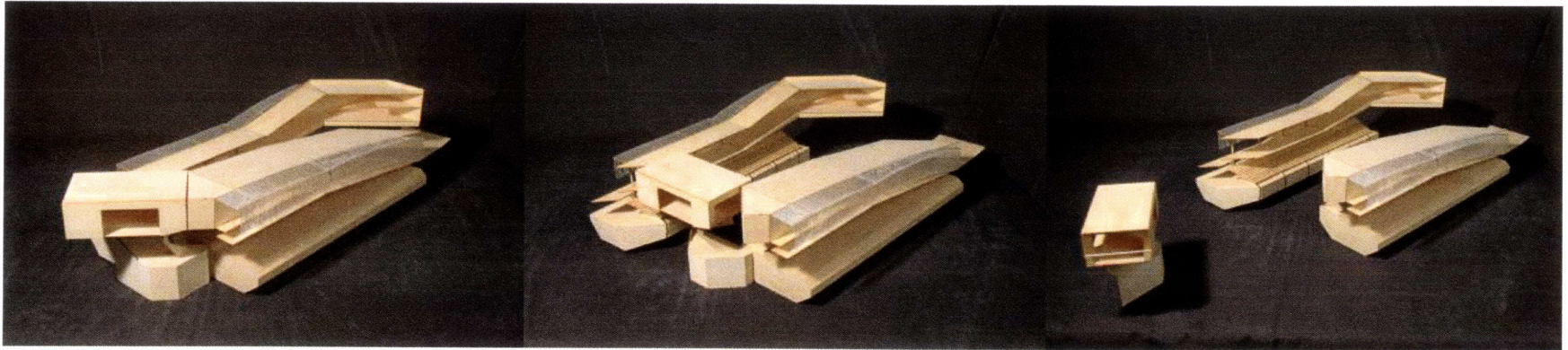
maritime commercial utilization of port and adjacent resources for the receiving, consolidating and distributing of all overseas cargo shipments, while pursuing solutions to commercial harbor problems through the identification and development of additional harbor facility designs.



**HONOLULU HARBOR RECEIVES, CONSOLIDATES, AND  
DISTRIBUTES OVERSEAS CARGO SHIPMENTS, WHILE  
CATERING TO PASSENGER AND FISHING OPERATIONS.**

**200+ ACRES OF CONTAINER YARD, 30 MAJOR BERTH FACILITIES,  
5+ LINEAR MILES OF MOORING SPACE.**





## ITINERARY

32 |

HONOLULU HARBOR

OAHU

AUGUST - APRIL

HILO HARBOR

HAWAII

EASTER WEEKEND - MAY

NAWILIWILI HARBOR

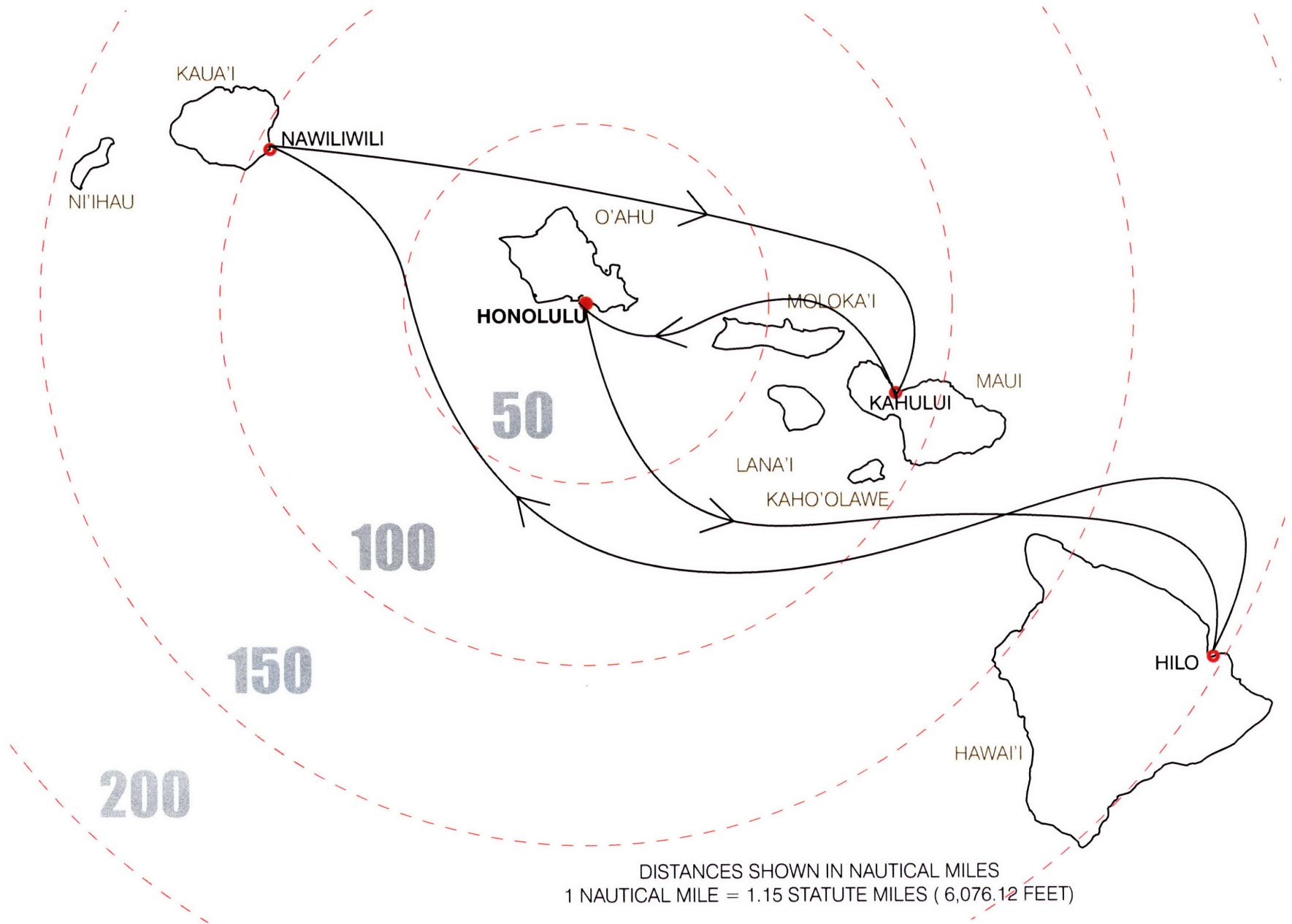
KAUAI

LATE MAY - JUNE

KAHULUI HARBOR

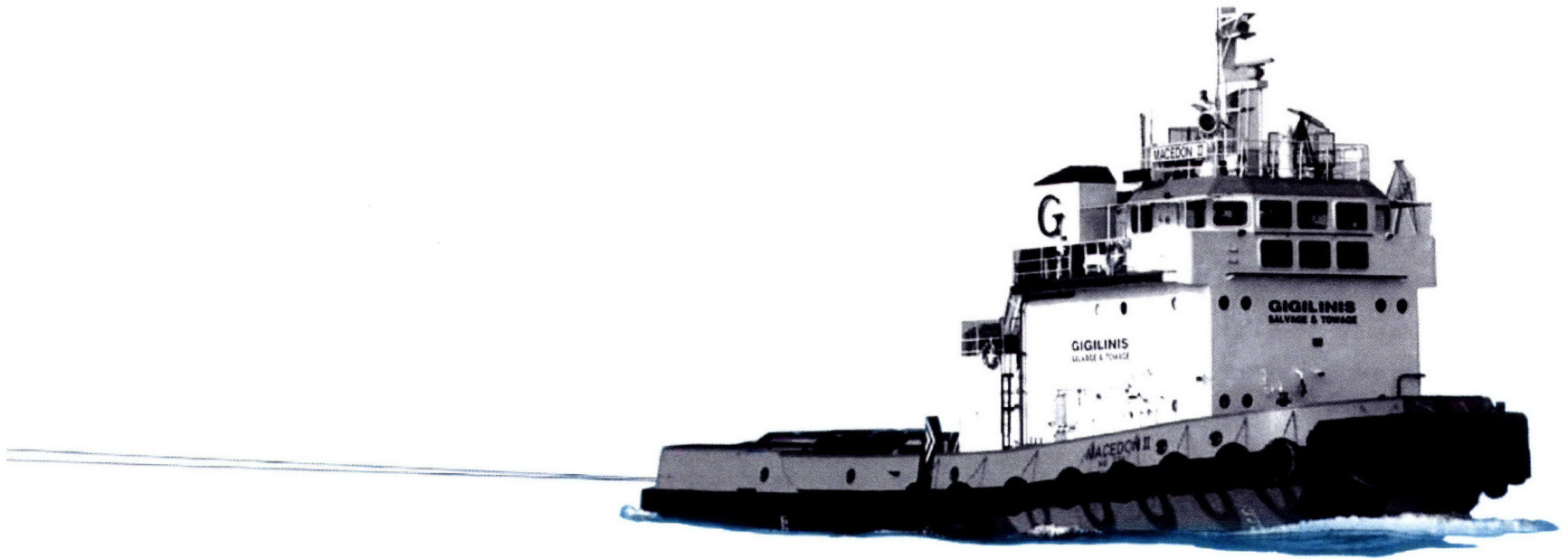
MAUI

JULY

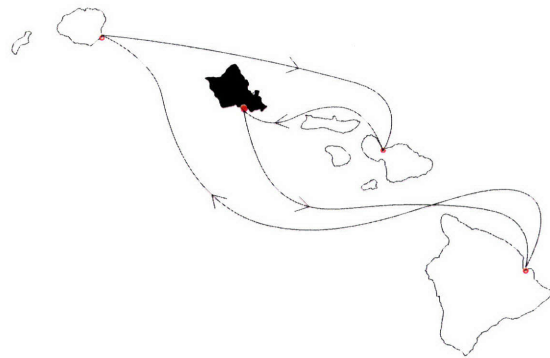












HONOLULU, OAHU



## OAHU

### HONOLULU HARBOR | AUGUST - APRIL

38 |

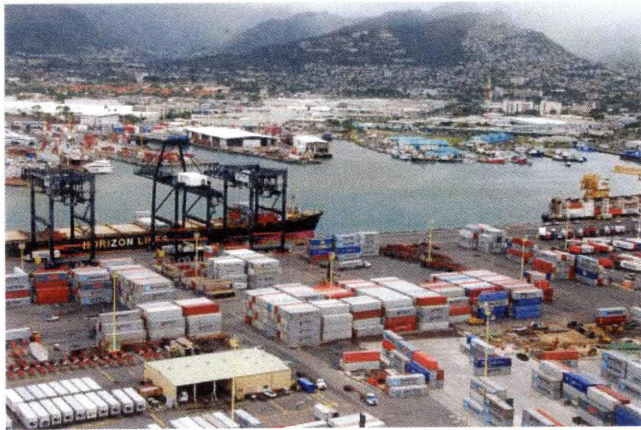
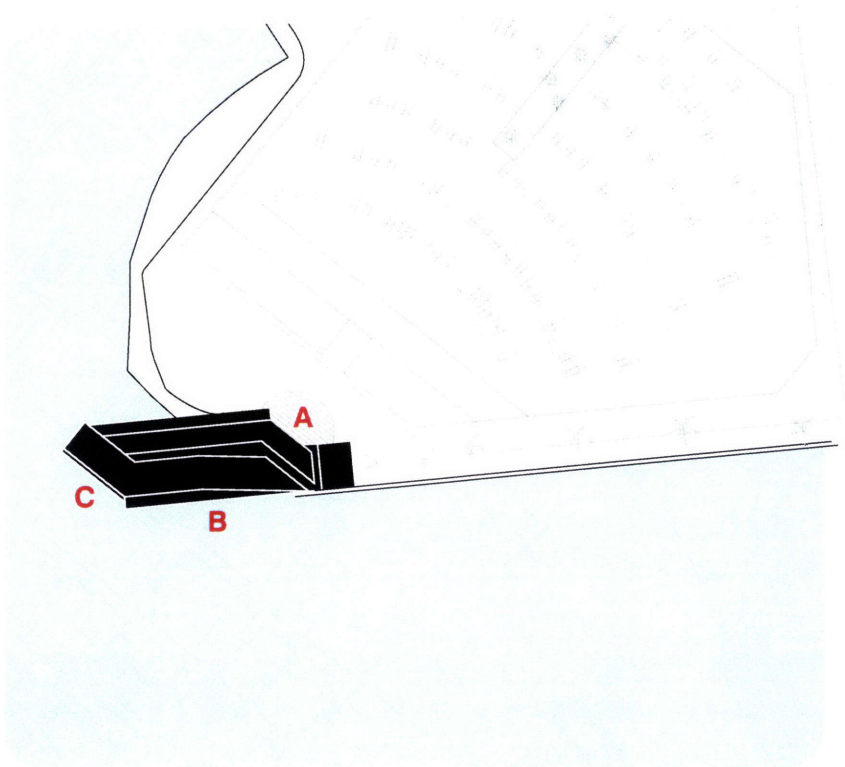
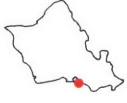


Fig. 14-15





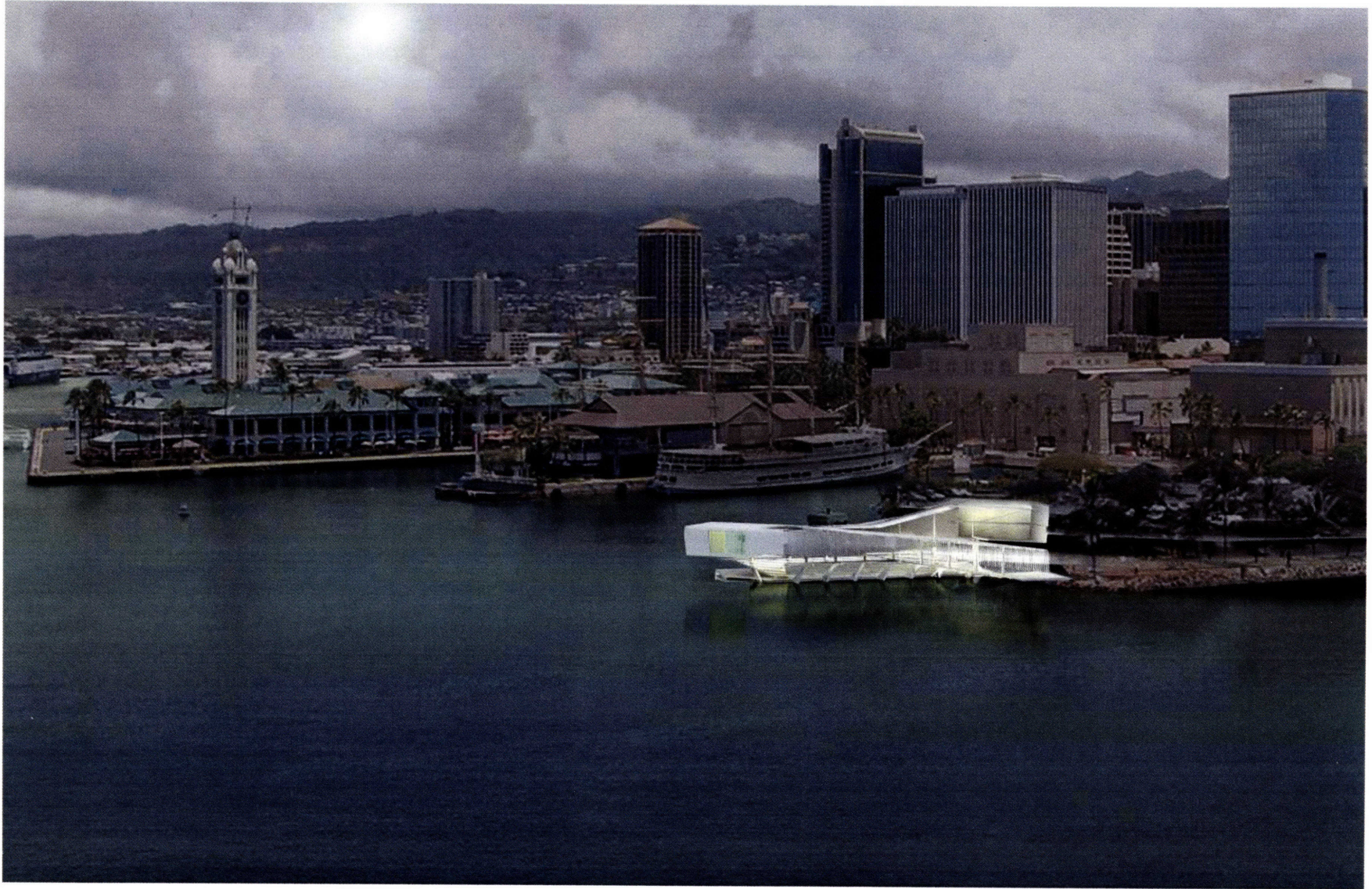
## “DRIVE-IN PIER”

HONOLULU HARBOR, OAHU (August - April)

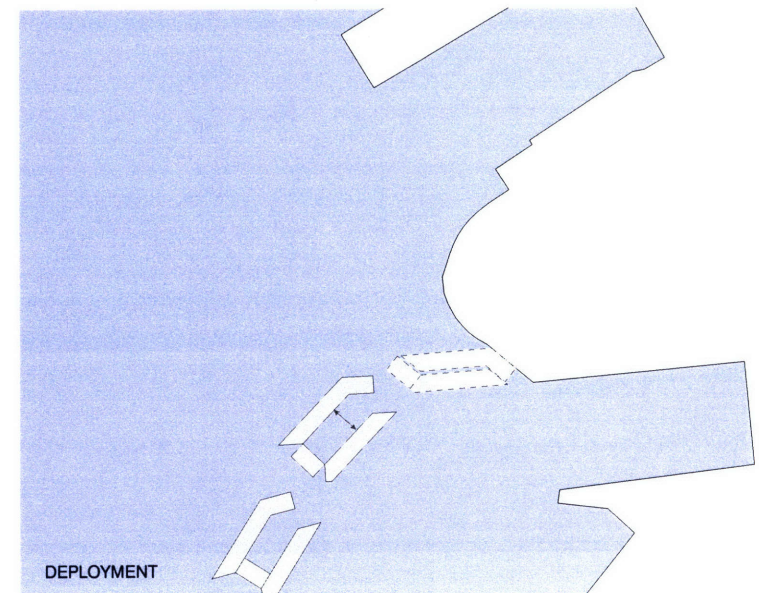
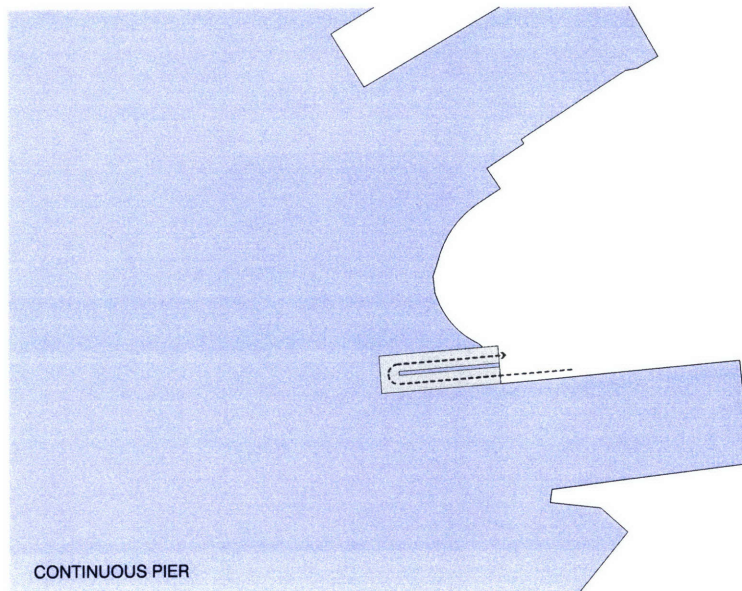
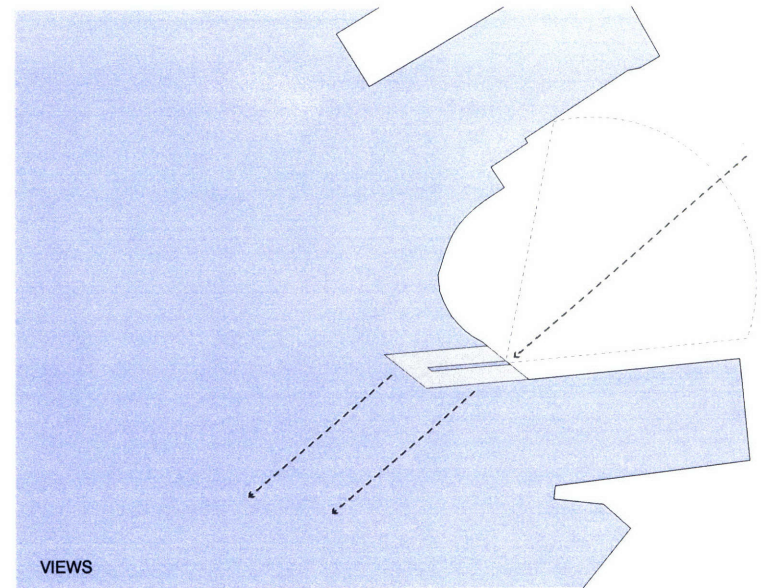
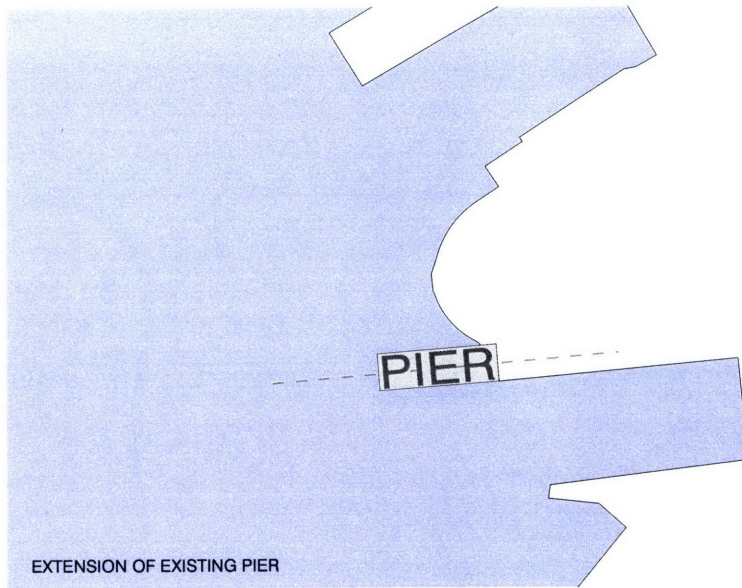
- (A) Outdoor Amphitheater (Large Rock Concerts, Movies, etc.)
- (B) Traverse or Thrust Stage
- (C) Indoor “Black Box” Theater



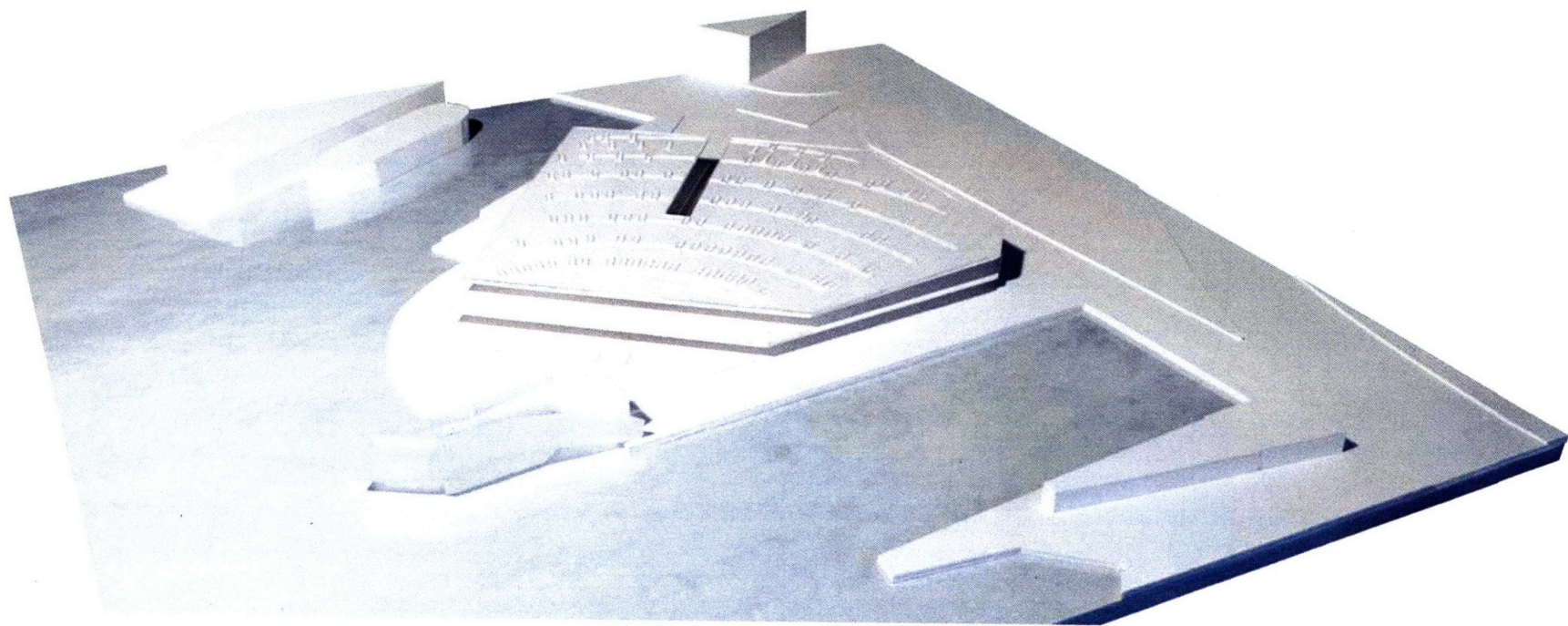


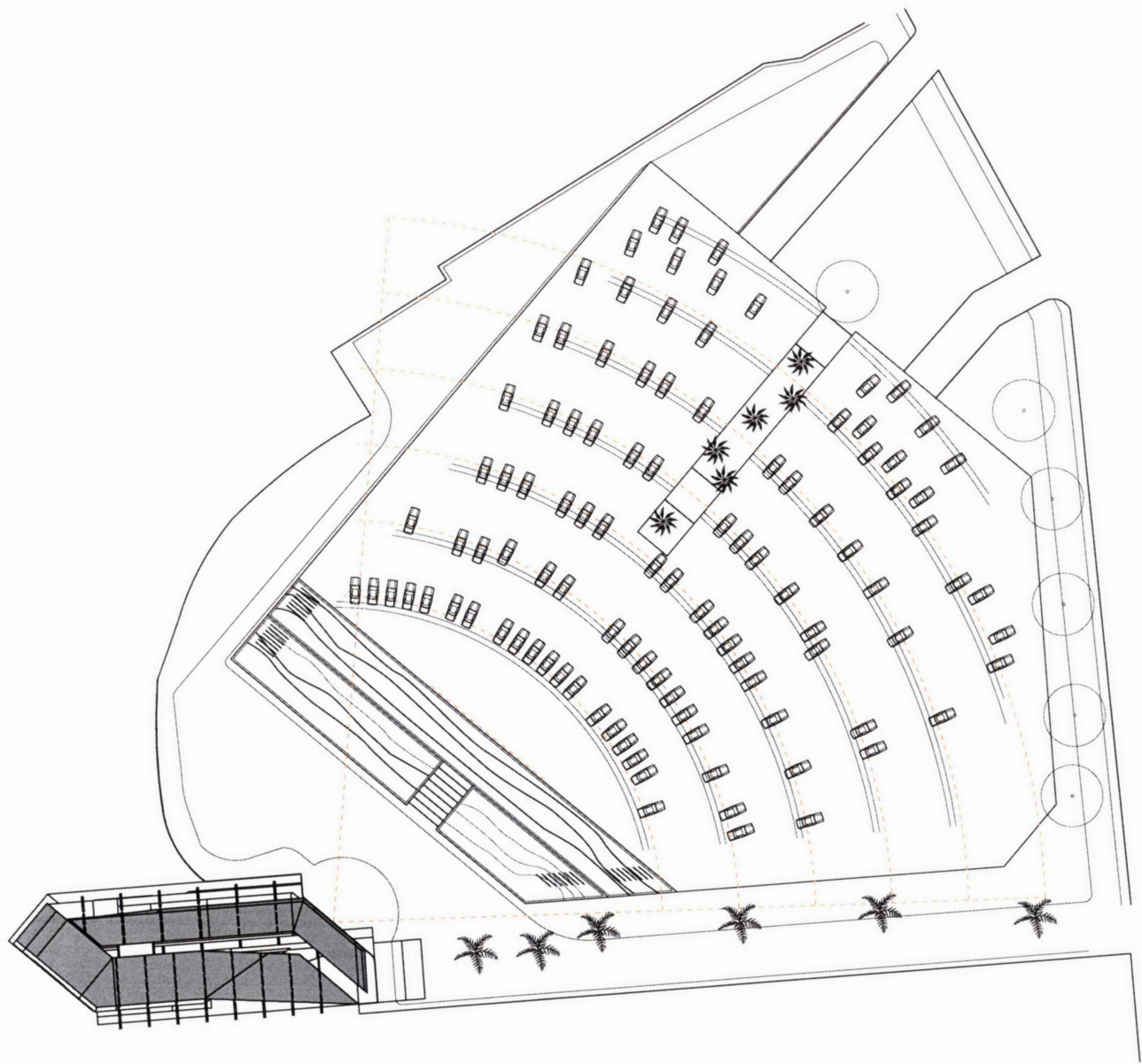


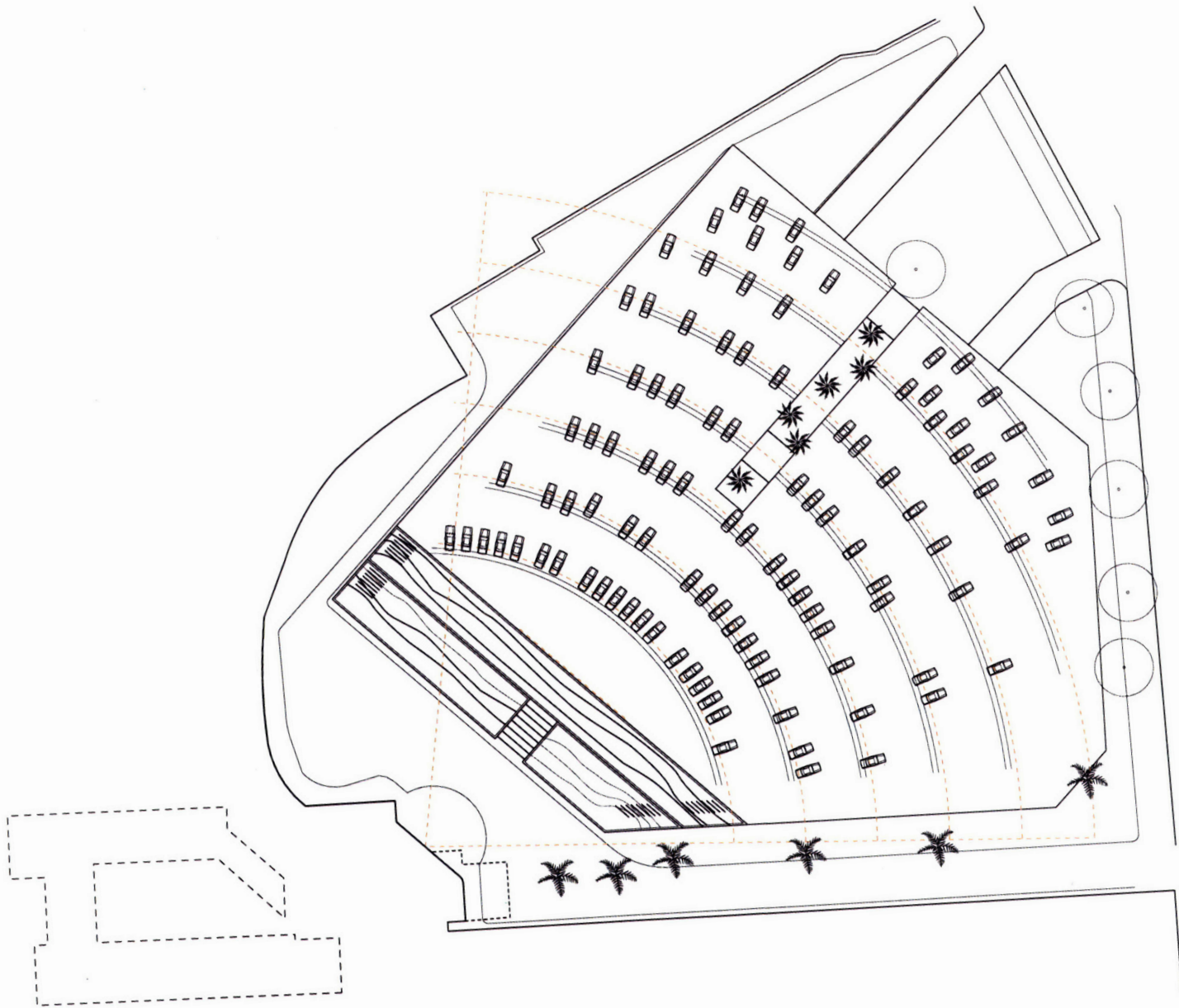








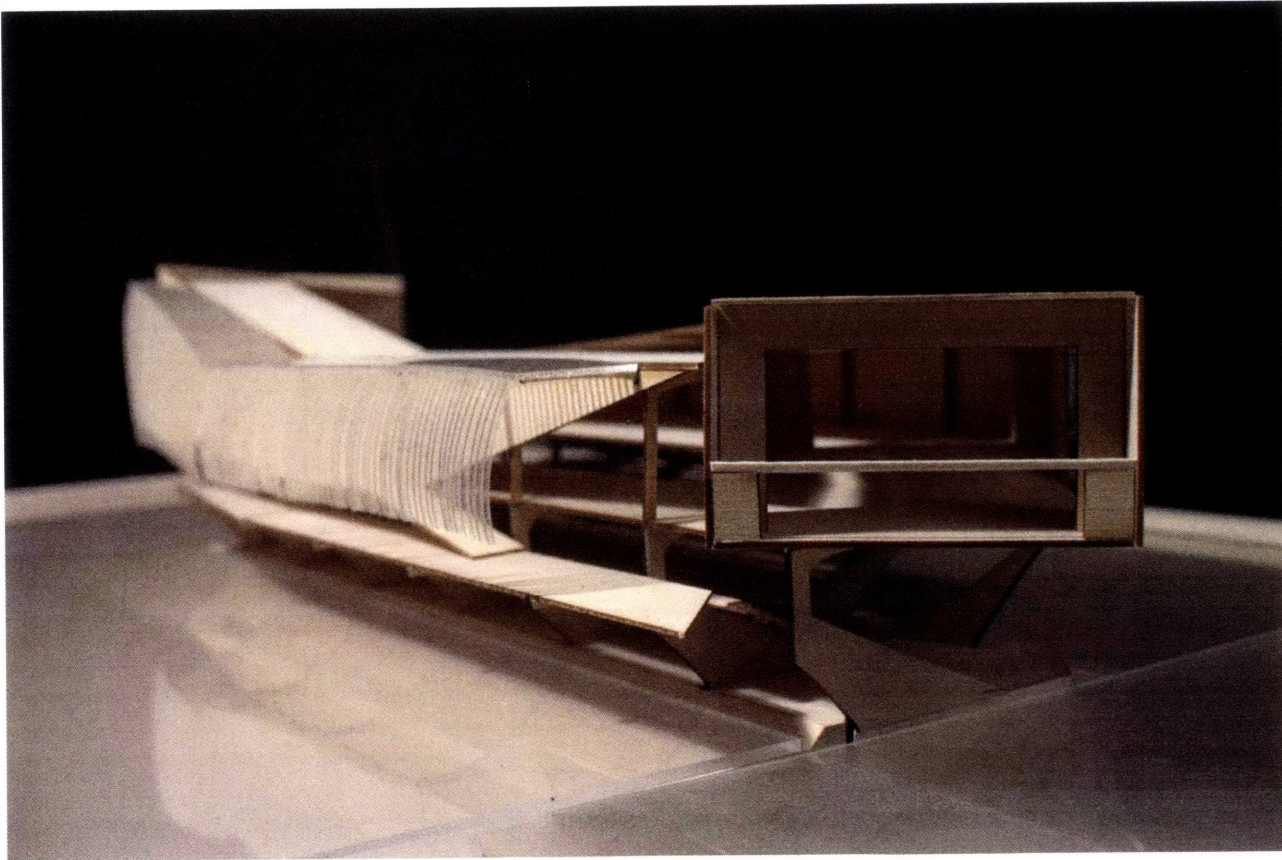




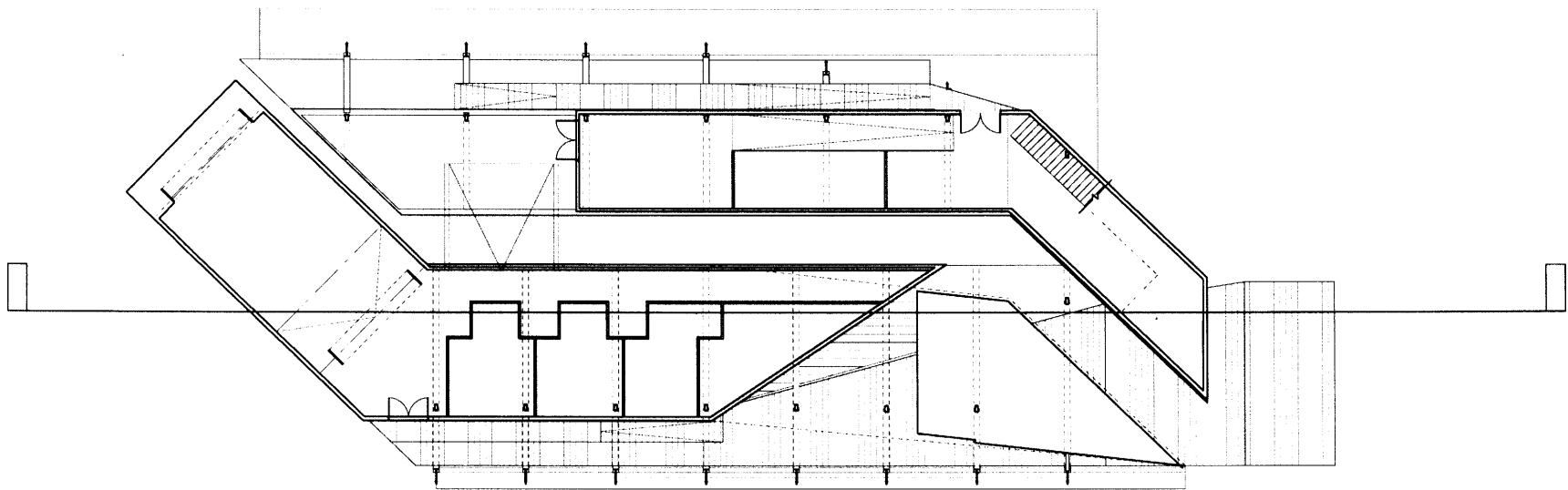




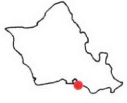
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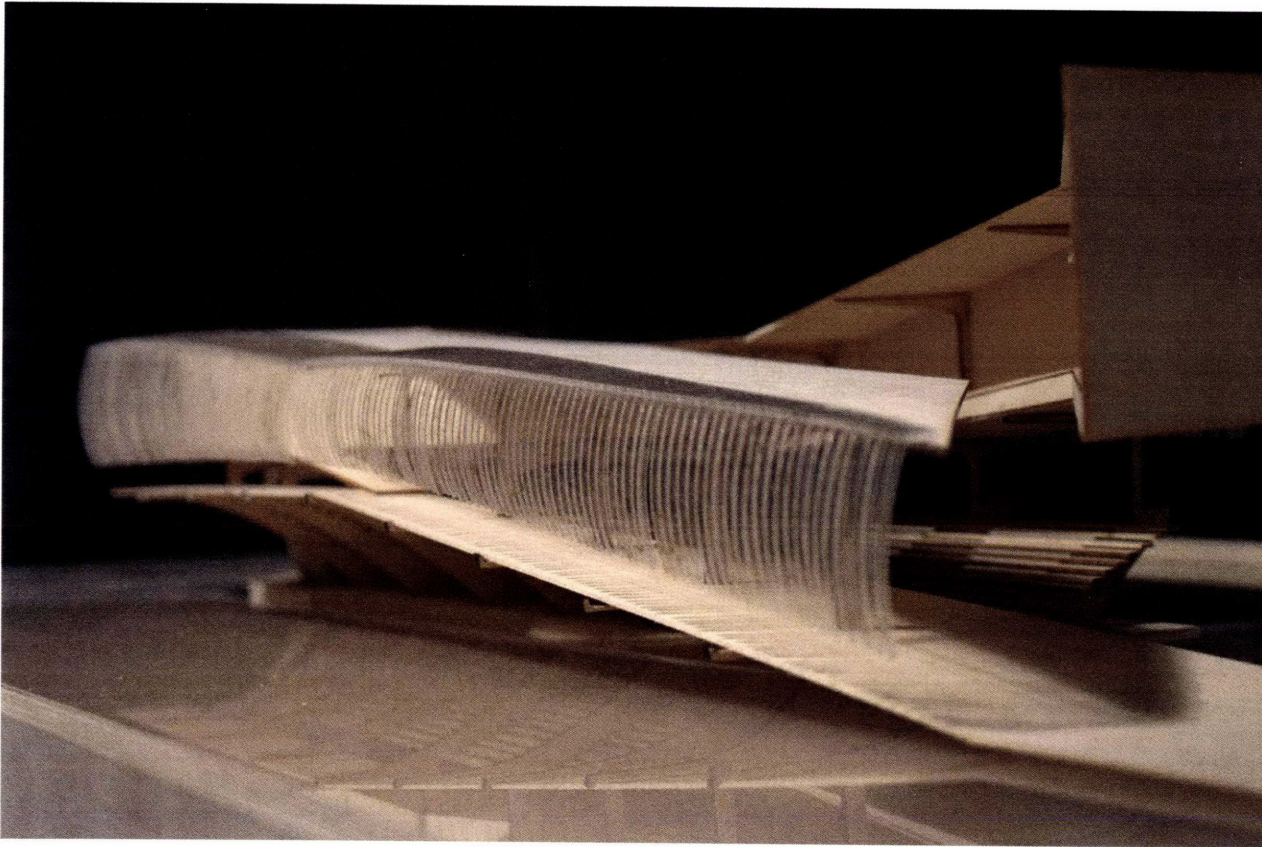
Pulling Back the Curtain: Revealing the Production of Performance in the Hawaiian Islands



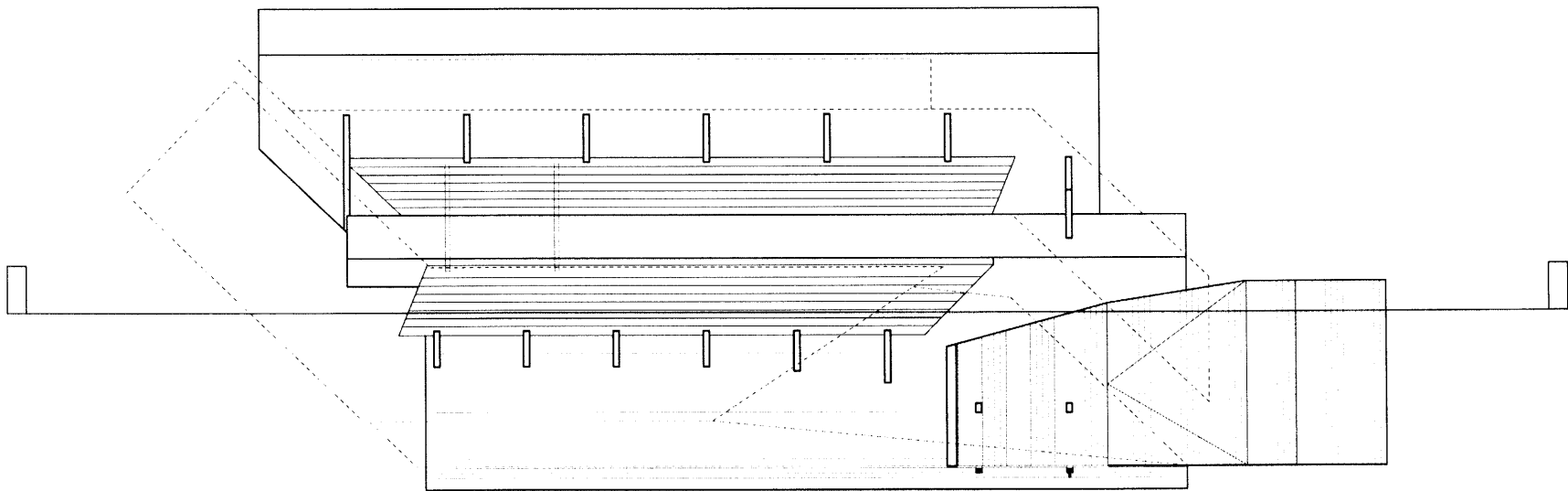
FIRST LEVEL



48 |



Pulling Back the Curtain: Revealing the Production of Performance in the Hawaiian Islands

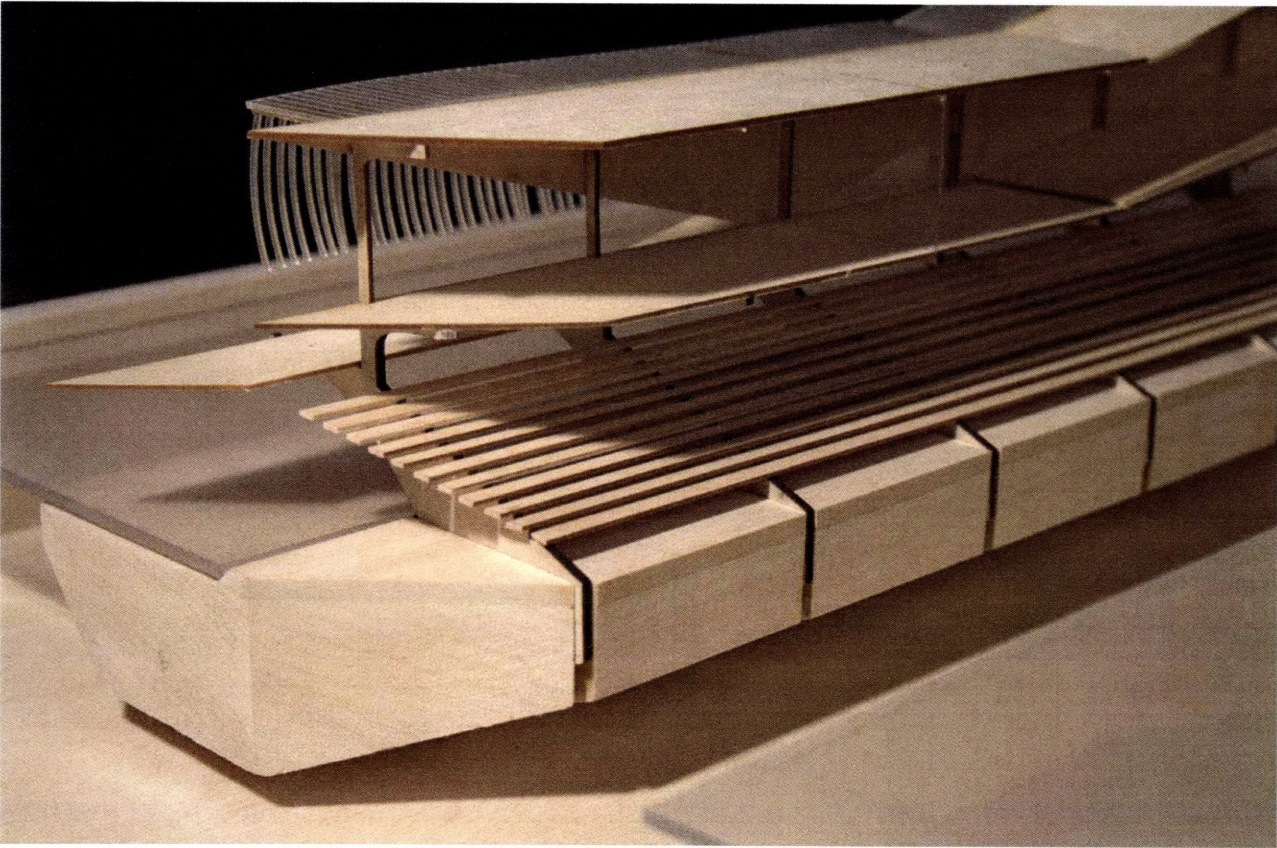


WATER LEVEL



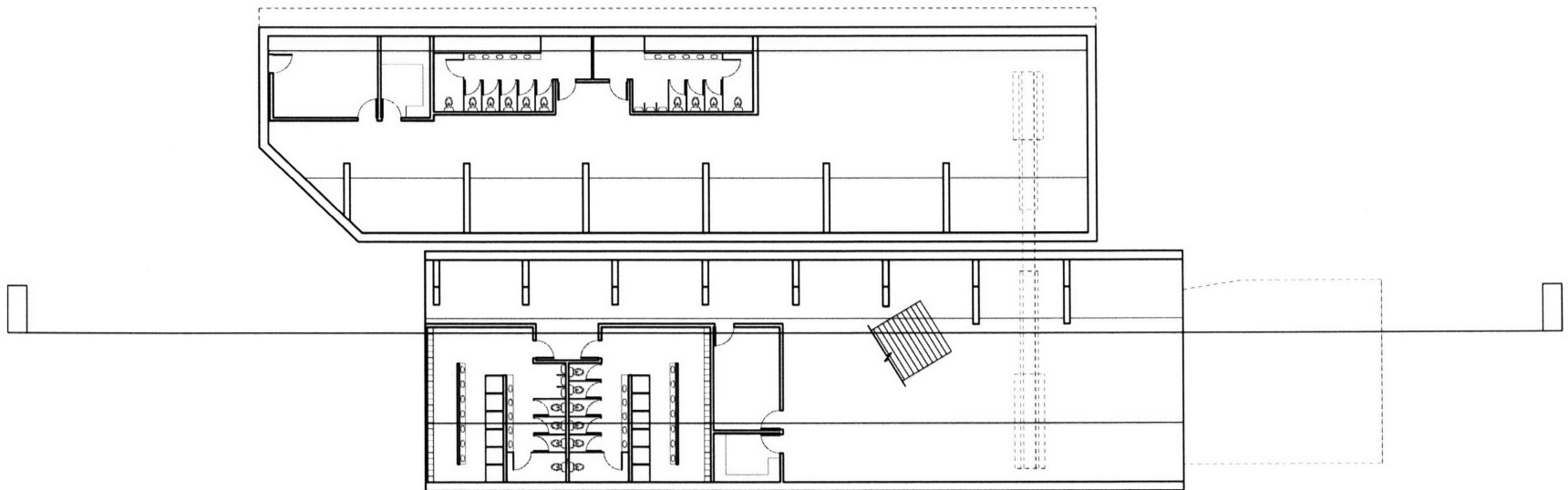


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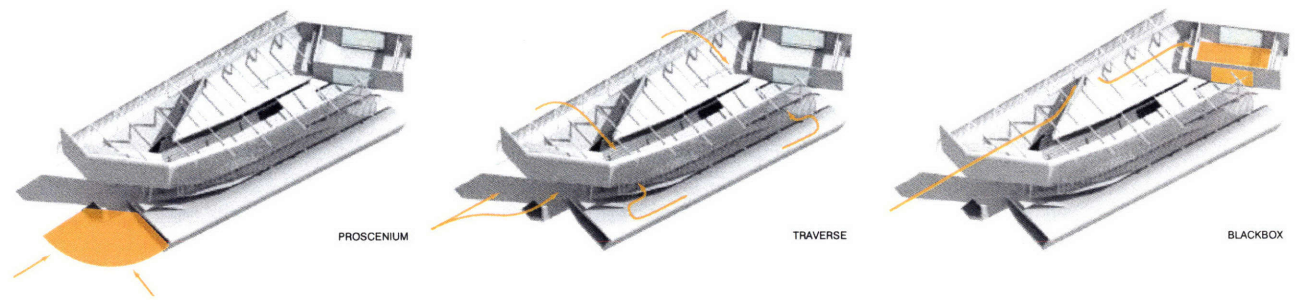


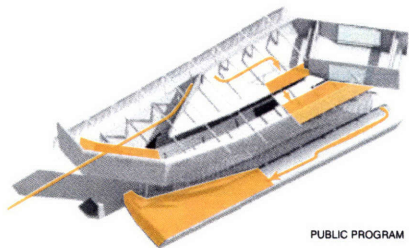
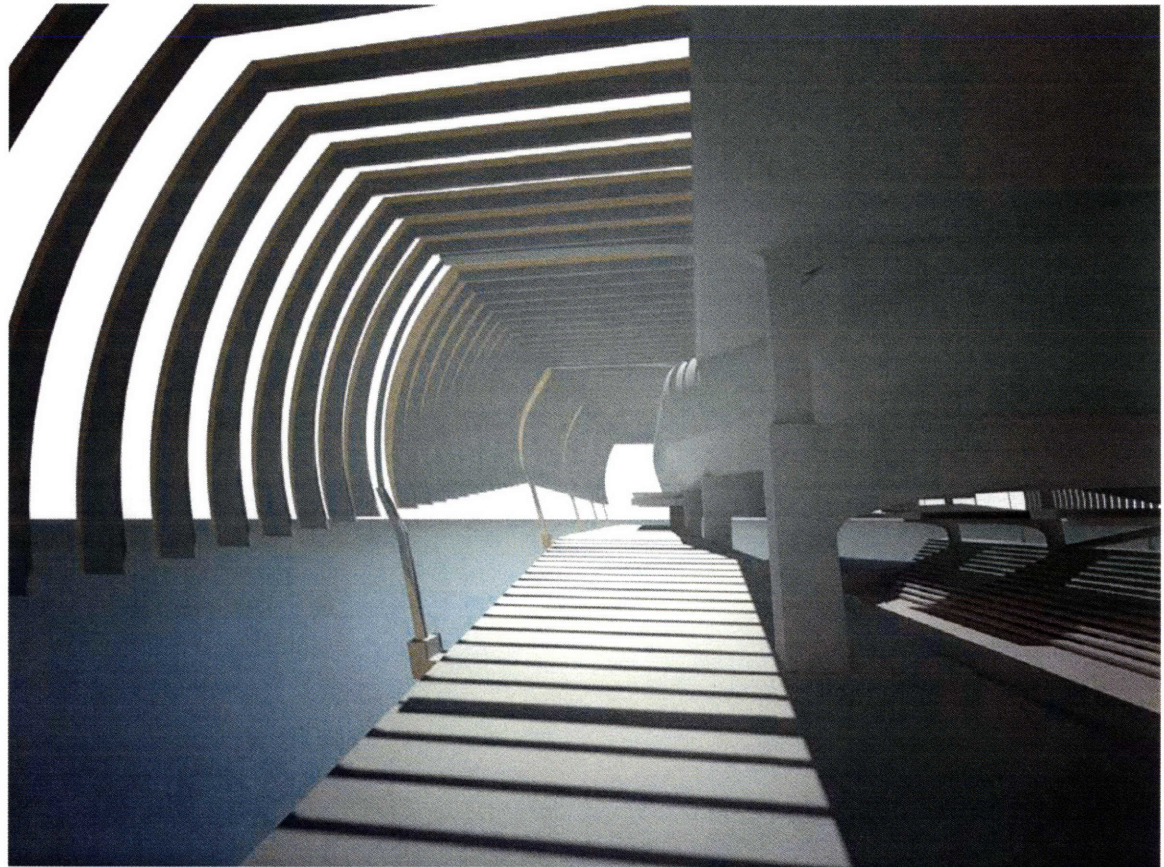
Pulling Back the Curtain: Revealing the Production of Performance in the Hawaiian Islands



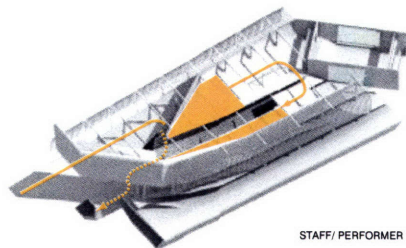


PONTOON LEVEL

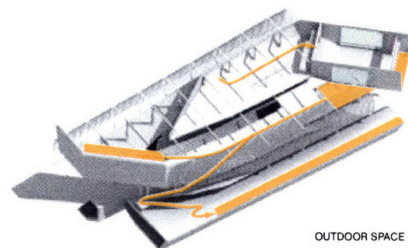




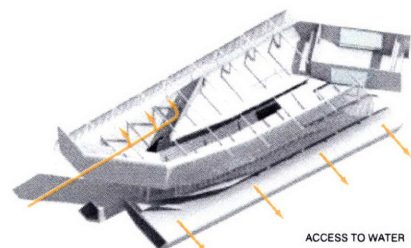
PUBLIC PROGRAM



STAFF/ PERFORMER



OUTDOOR SPACE



ACCESS TO WATER



TYPICALLY **FRONT CHAMBER BACK**

NEW PUBLIC SPACE

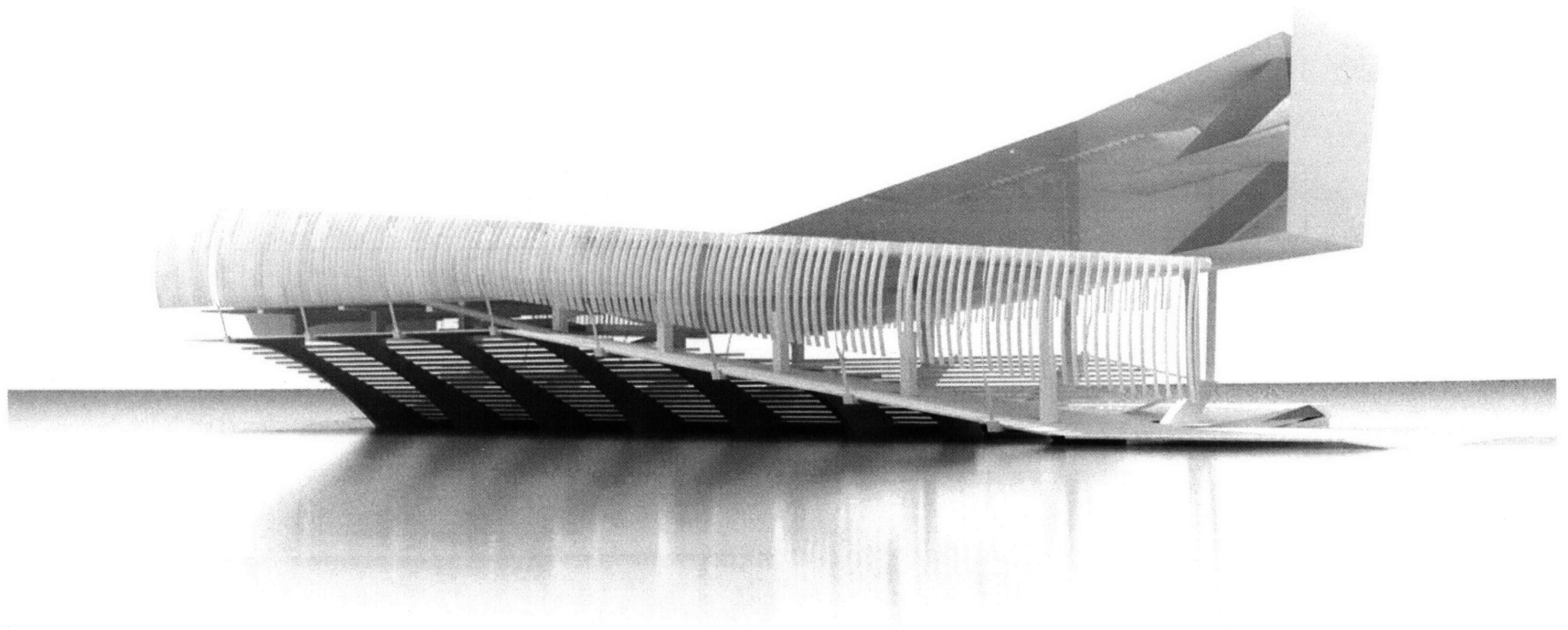
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**PUBLIC**  
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54 |

VISUAL AND PHYSICAL CONNECTION

**FRONT BACK FRONT BACK FRONT**  
**PUBLIC**  
**FRONT BACK FRONT BACK FRONT**









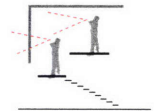
INTERIOR ELEVATION

**SHADOWS**  
**LEGS LEGS LEGS**  
**AUDIENCE**



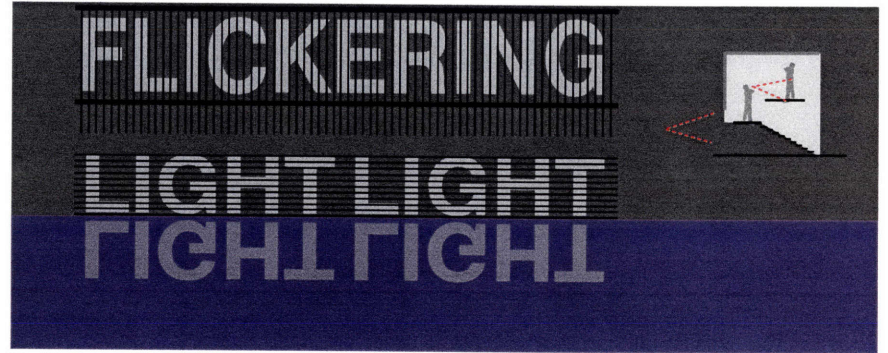
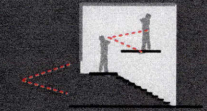
EXTERIOR ELEVATION  
(DAY)

**OPAQUE**  
**TRANSPARENT**



EXTERIOR ELEVATION  
(NIGHT)

**FLICKERING**  
**LIGHT LIGHT**  
**FIGHT FIGHT**



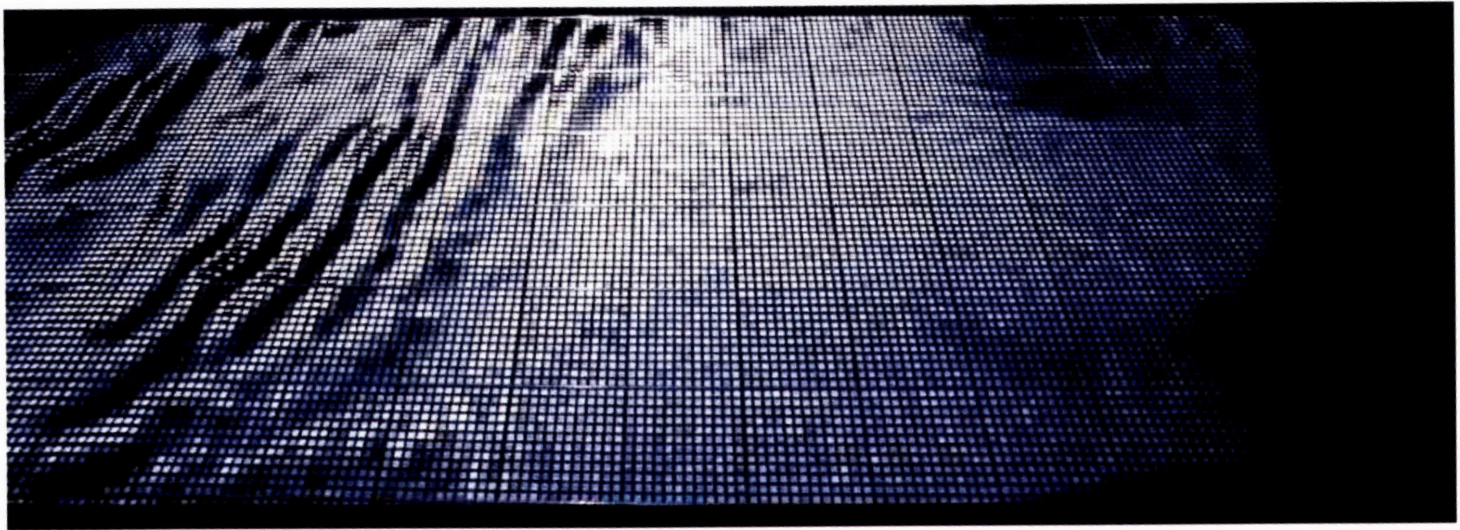
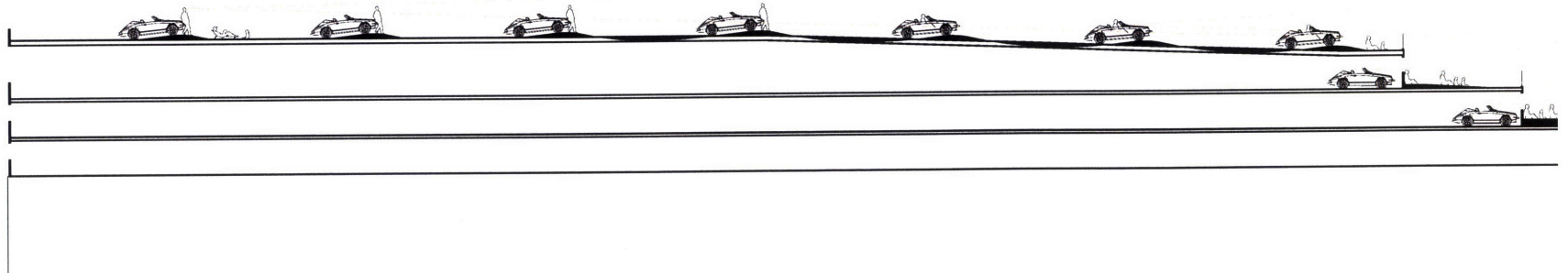


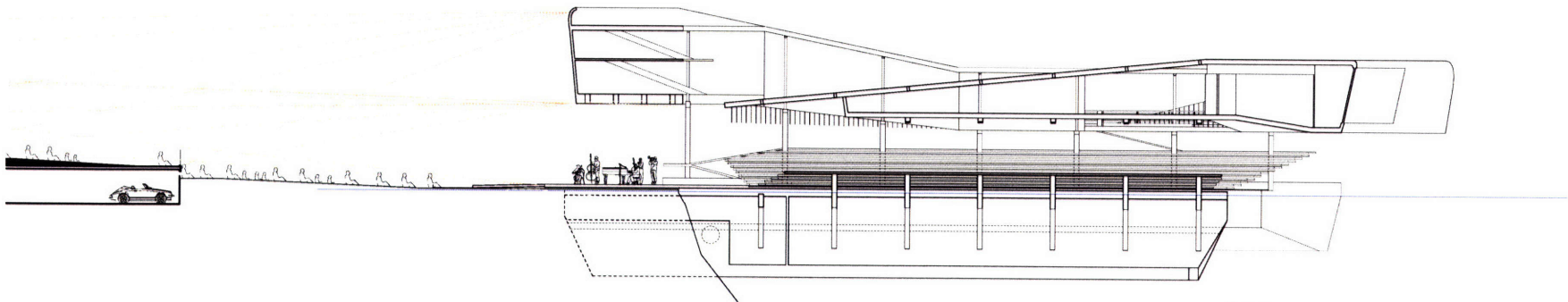
Fig. 16-17



58 |



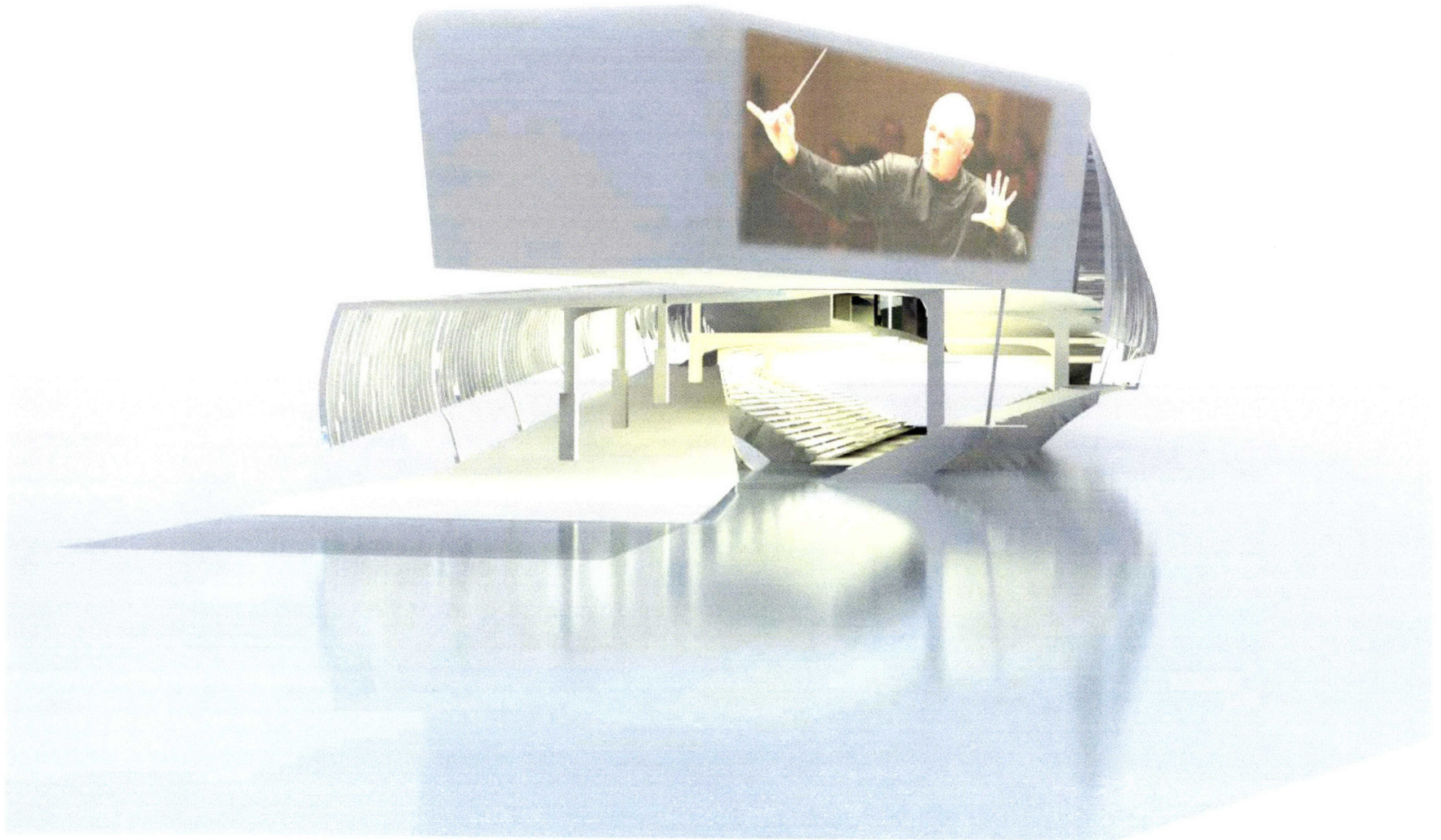




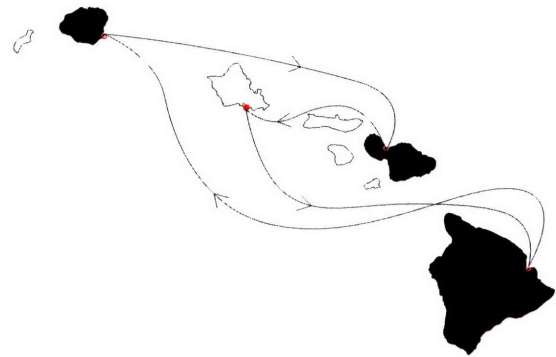
SECTION



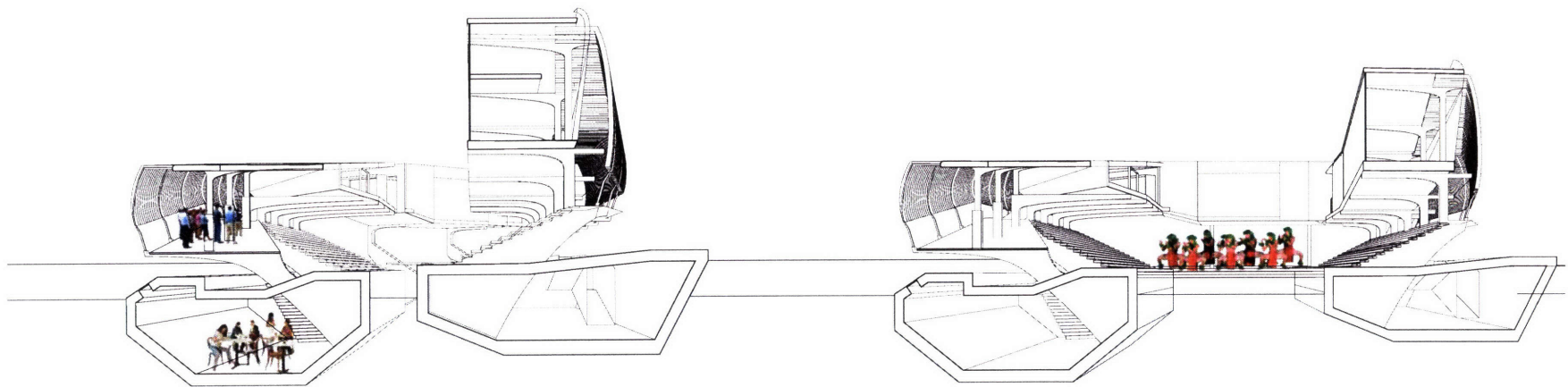








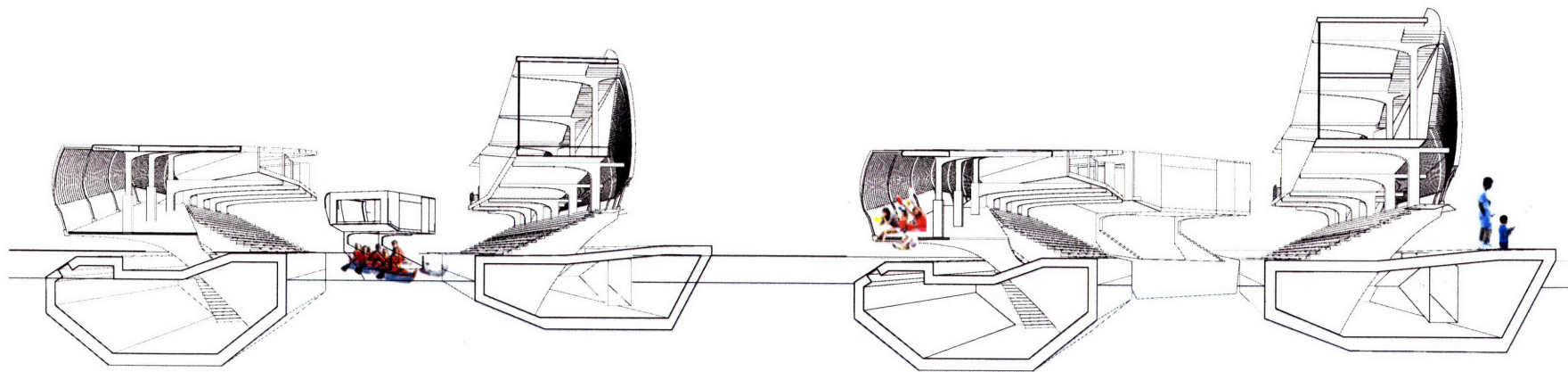
OUTER ISLANDS



SECTION: HONOLULU

SECTION: HILO





SECTION: NAWILIWILI

SECTION: KAHULUI



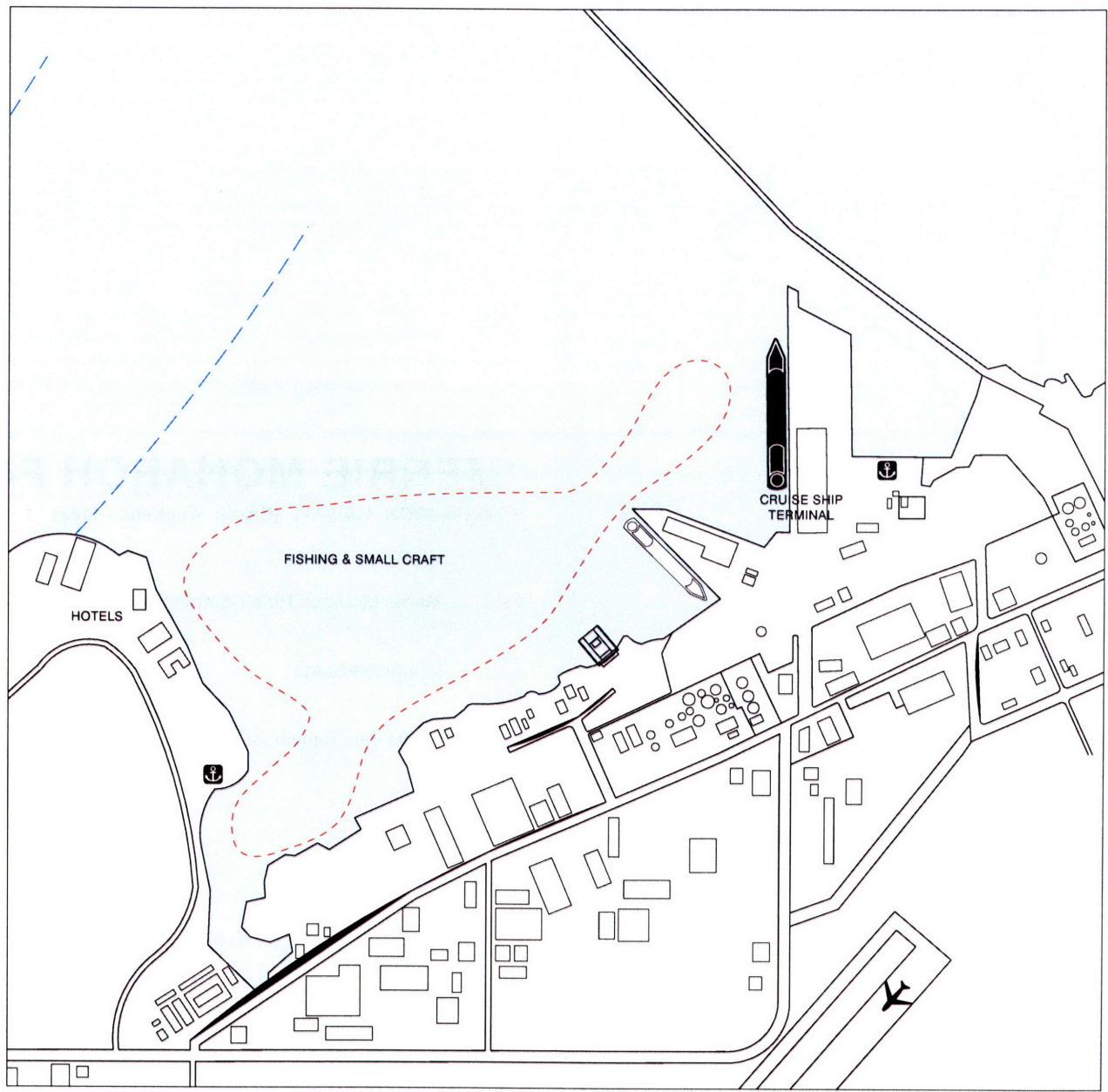
HAWAII

**HILO HARBOR | EASTER WEEKEND - MAY**

66 |



Fig. 18-19





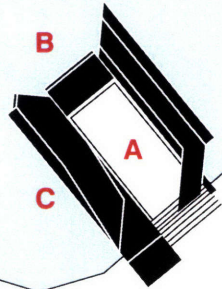
## “MERRIE MONARCH FISHING PAVILION”

HILO HARBOR, HAWAI’I (Easter Weekend - May)

**(A)** Merrie Monarch Hula Competition (3000 seats max.)

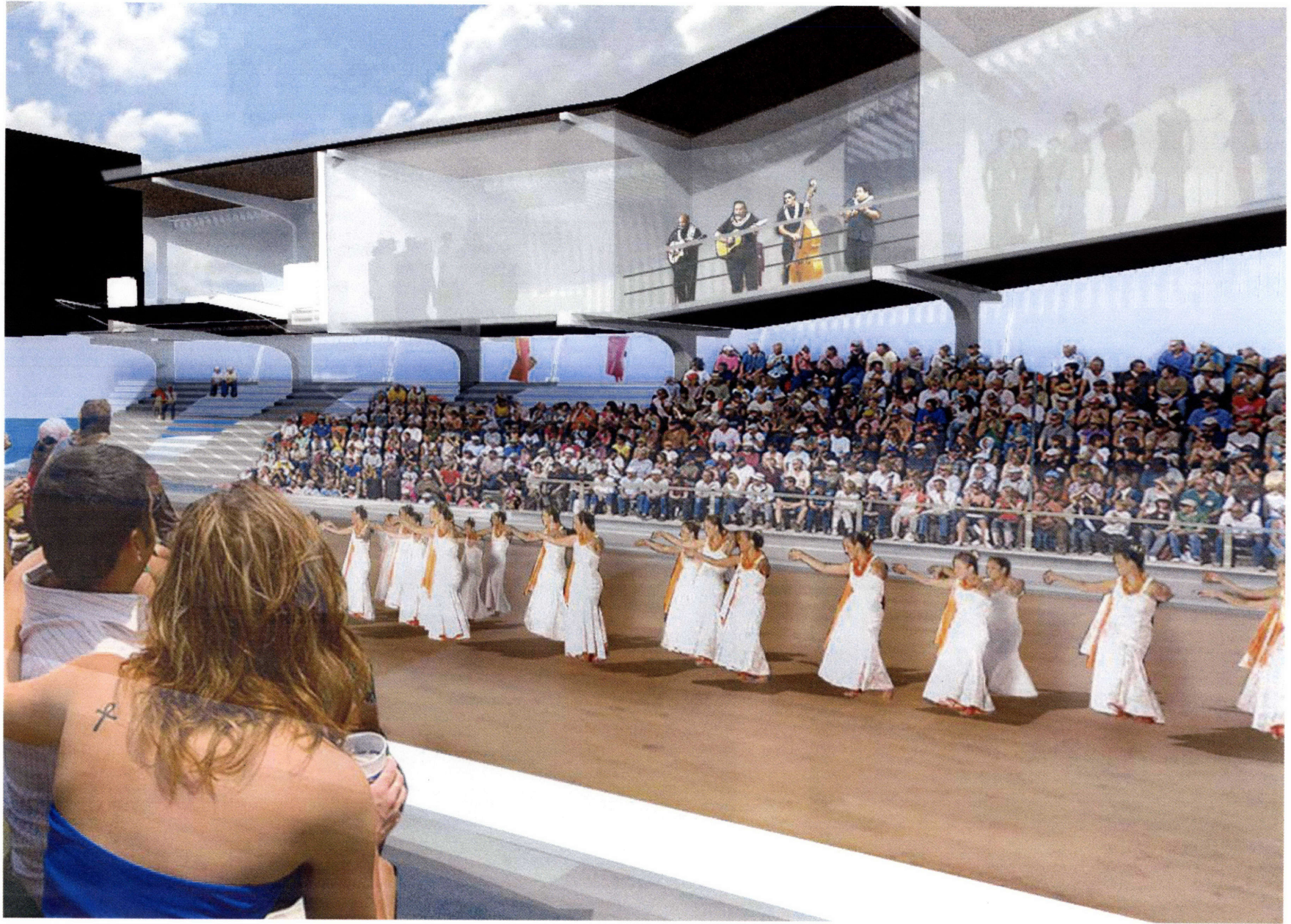
**(B)** Exhibition Stage

**(C)** Crafts Fair, Rehearsal Rooms

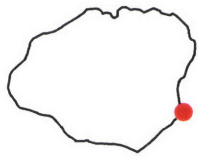


IN THE ROUND









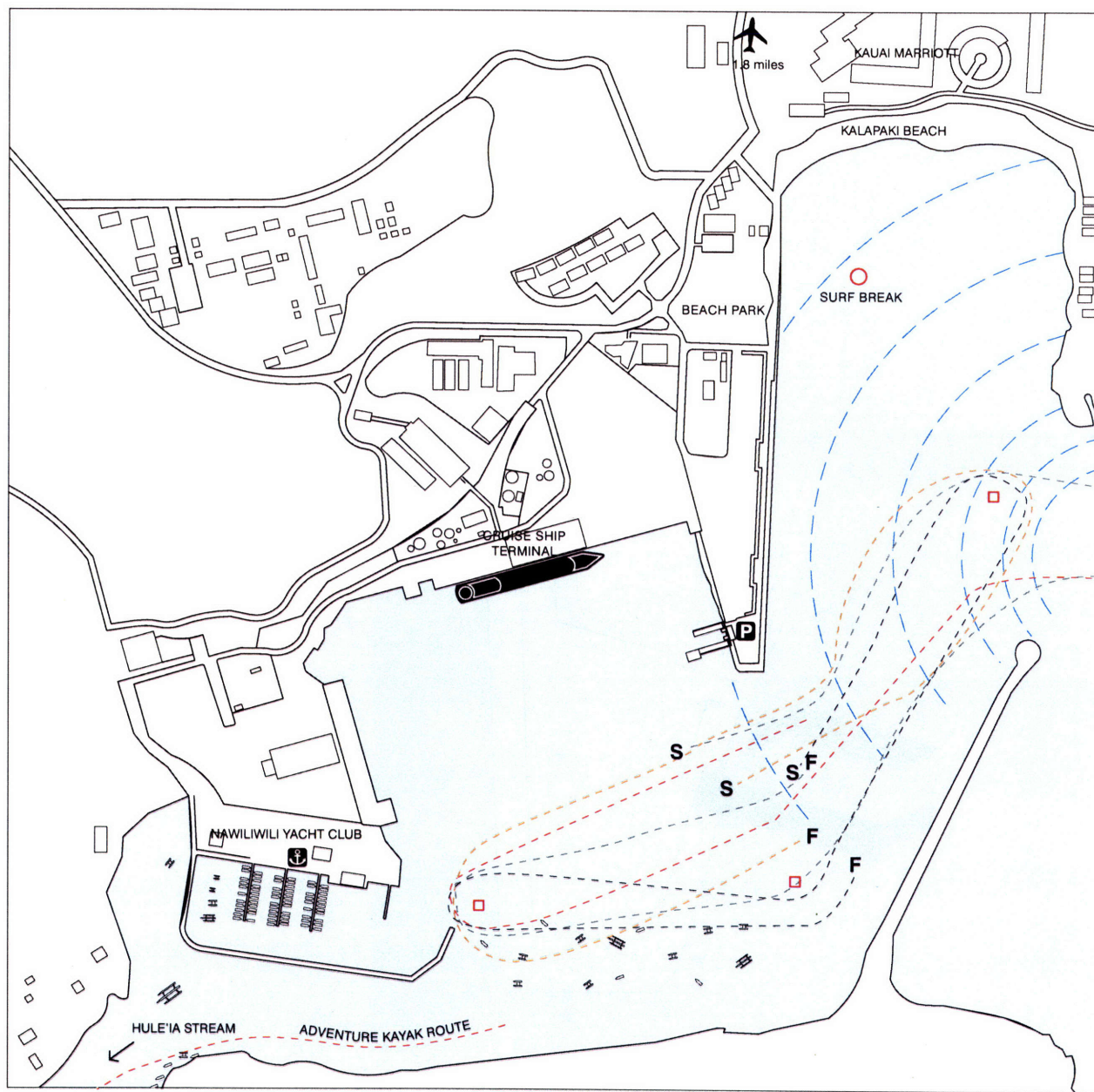
## KAUAI

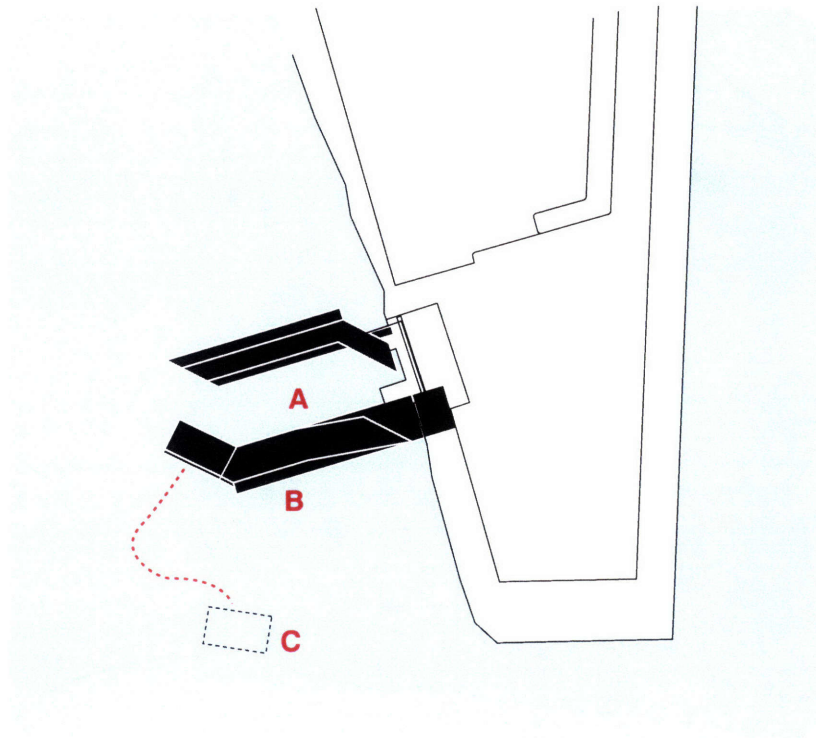
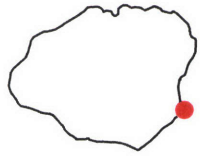
### NAWILIWILI HARBOR | LATE MAY - JUNE

70 |



Fig. 20-21





## “BOAT LAUNCH”

NAWILWILI HARBOR, KAUAI (End of May - June)

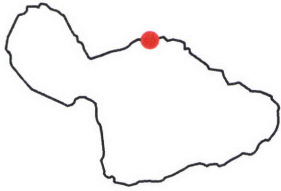
- (A) Boat Launch
- (B) Yacht Race Viewing Stands
- (C) Floating Stage for Harbor Craft











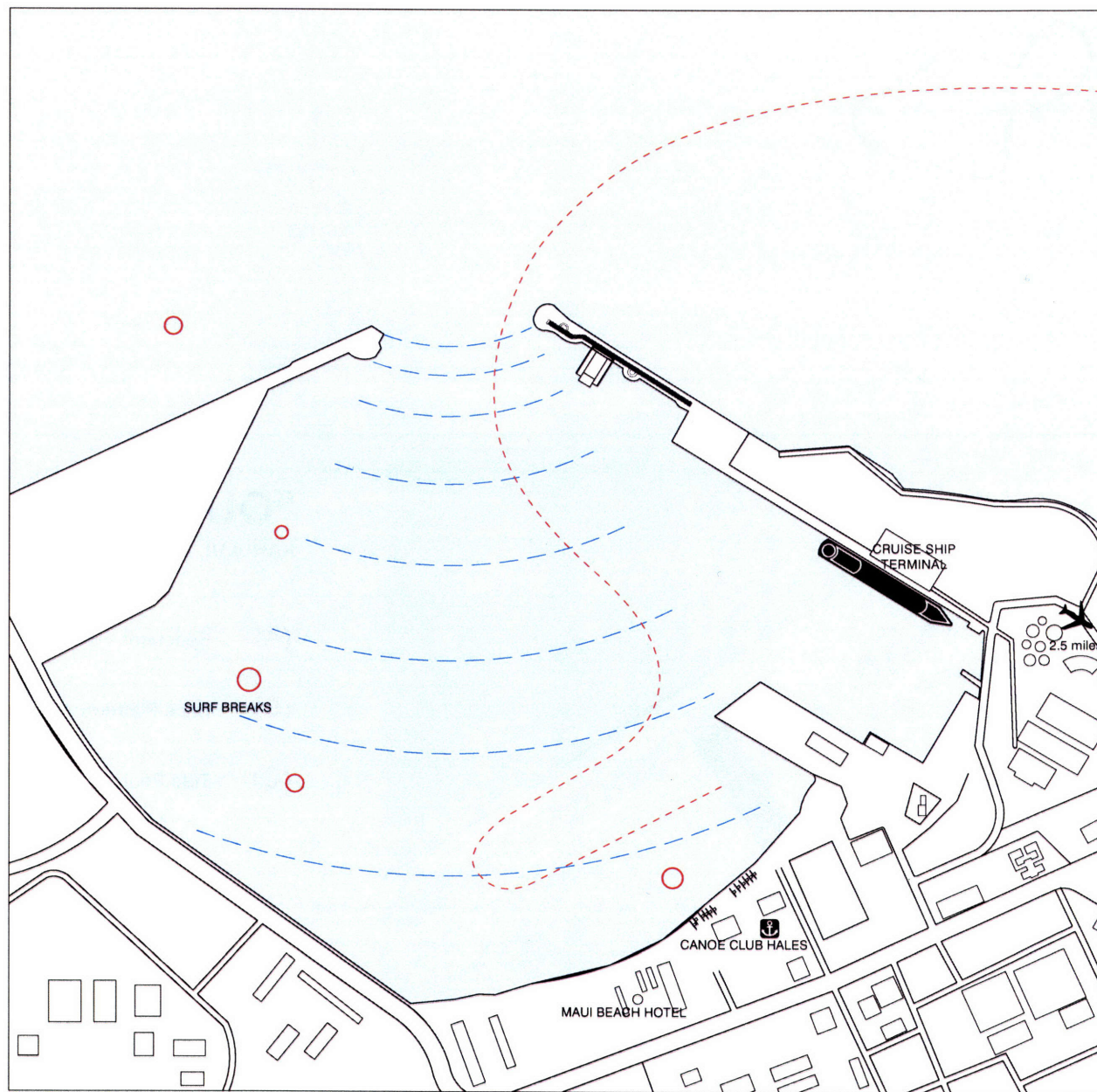
# MAUI

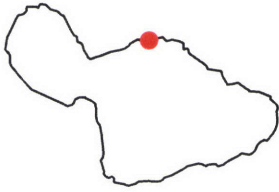
## KAHULUI HARBOR | JULY

74 |

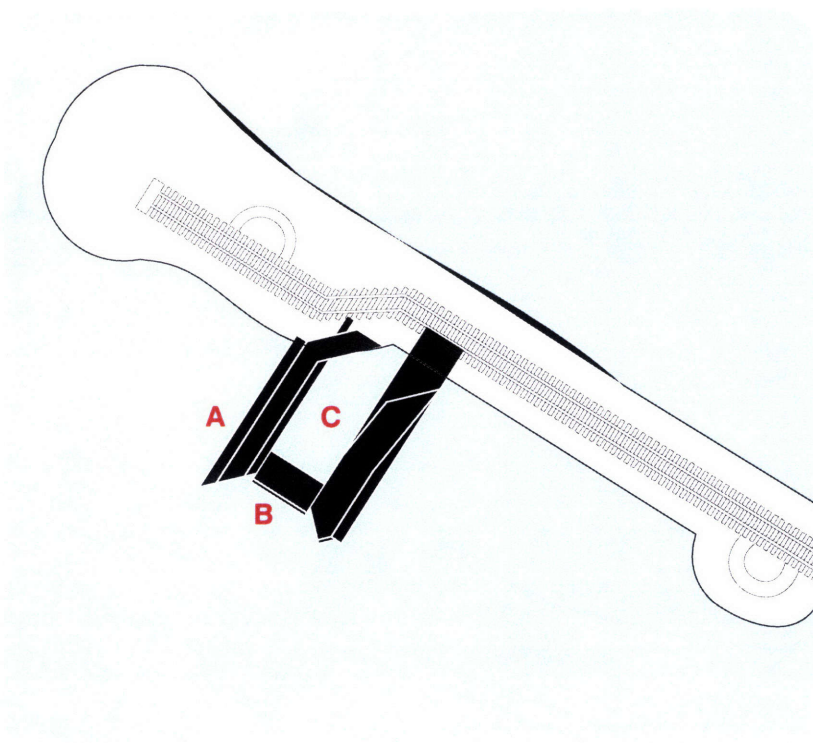


Fig. 22-23





76 |



## “OUTRIGGER FINISH LINE”

KAHULUI, MAUI (July)

- (A) Spectator Viewing Stands
- (B) Race Platform; Visiting Team Hale
- (C) Tide Pool



EXTROVERT







# APPENDIX



### Archipelago

- Constellation of Land Masses Surrounded by Water
- Waterways as the Lifeline of the Islands

### Port

- Historical and Modern Significance as the Site of Production and Consumption and Point of Contact between Locals and Foreigner/Visitors
- Deteriorating Linkage between Port and City

### Shoreline

- Overdeveloped Waterfront
- Pressure to Continue Public Access along Waterfront from Growing Port Cities
- Limited Real Estate

### Tourism

- Production and Consumption of the Tourist Experience
- Expected Reality of a Romanticized, Sexualized Landscape Based on Nostalgic Myth

### Performing Arts Venue Theater as a Metaphor for Hawaii

- Hermetic Container for the Production and Consumption of a Crafted Illusion
- Strict Delineation between Actors and Performers
- Fixed Relationship between Auditorium, Stage, and Backstage
- Masked Mechanisms of Production

Create a Venue for the State of Hawaii that Provides Access to the Waterfront within a Working Harbor for both the Visiting and Local Public

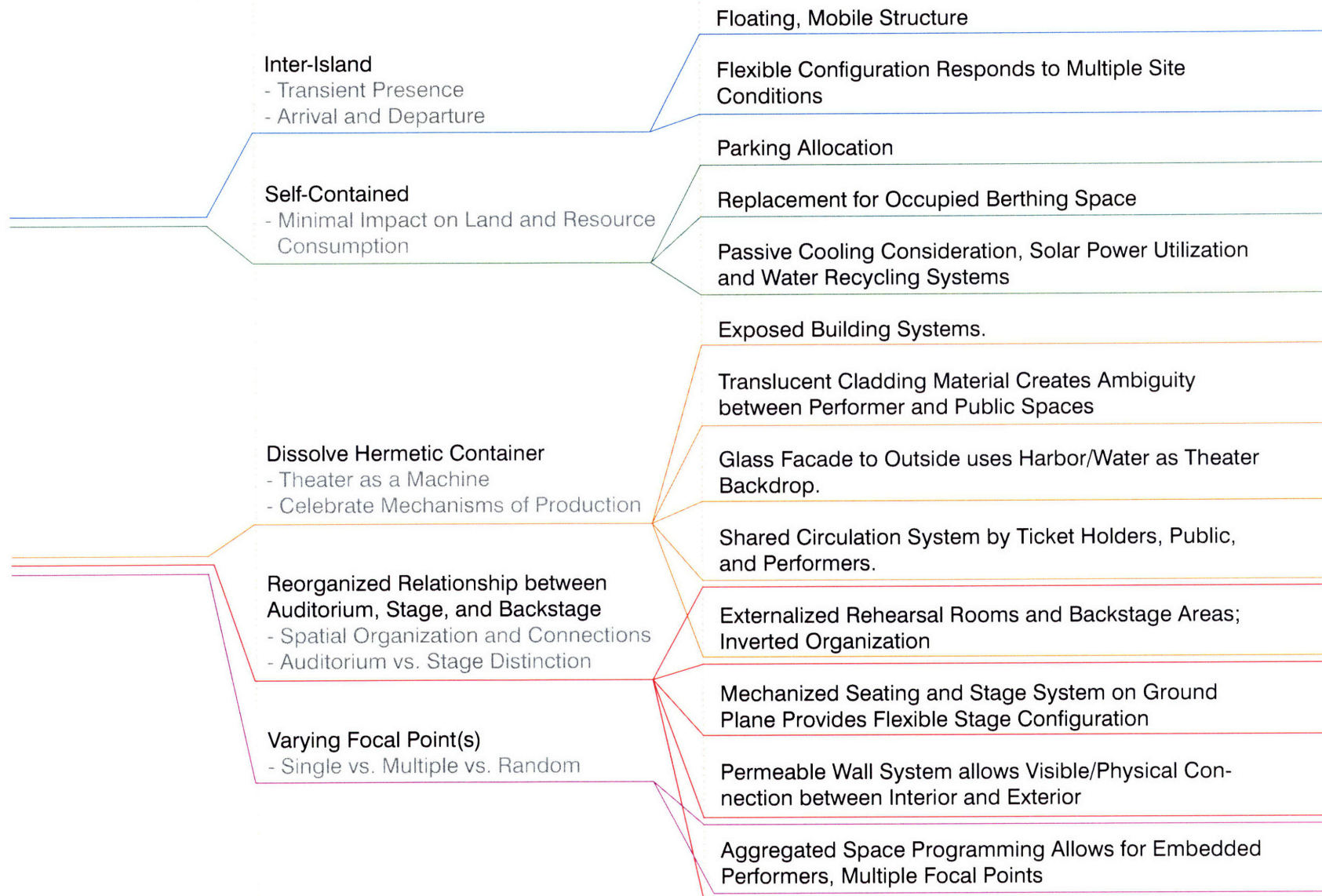
Reintroduce the Audience as a Part of the Performance Experience

80 |

BACKGROUND

AGENDA





CONCEPT

STRATEGY



Honolulu harbor was created by freshwater flows from Nuuanu Valley which inhibited coral growth within a small, reefed basin and cut several channels through the surrounding reef. The main channel, which was the deepest, was flanked by the west by shallower outlets. **Between these freshwater outflows rose occasional spots of earth and coral -- the beginnings of Sand Island.** Initially known as Quarantine Island and used to isolate ships with cases of contagious diseases on-board, Sand Island now houses the State's major container terminals.



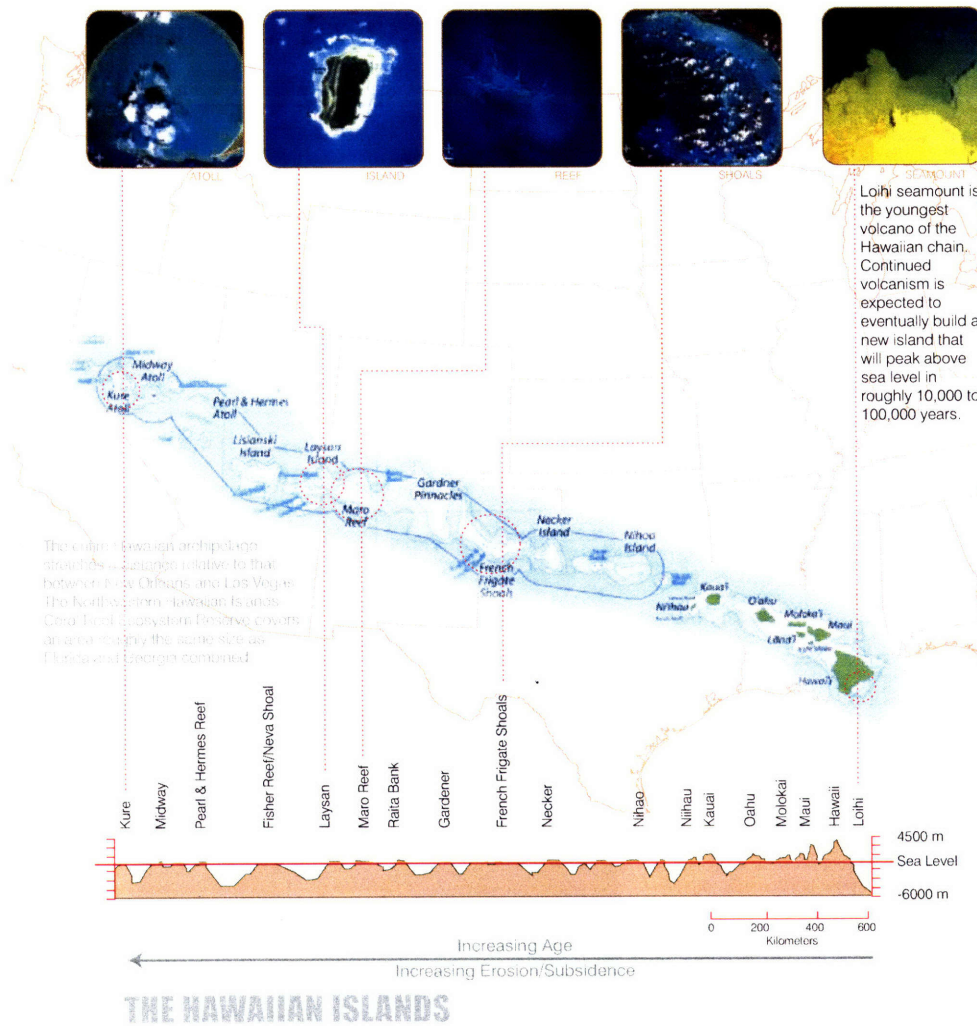
Foreigners, with their deep-draft vessels and trading ships, started using Honolulu harbor in 1794. **Deep and protected, they called the port "Fair Haven," which was later translated into Hawaiian as "Honolulu."** Population and growth around the port came with the rise of fur and wood trading, whaling, and sugar, and pineapple industries. **Honolulu harbor is the State's port-of-entry for nearly all imported goods, and is the primary shipping link between Hawaii and the US Mainland, Far East and the entire Pacific Rim.**<sup>1</sup>

<sup>1</sup> Source: Harbors Division Department of Transportation, "History of Oahu's Harbors," State of Hawaii Department of Transportation, <http://www.hawaii.gov/dot/harbors/oahu/history.htm> (accessed December 16, 2007).

# HISTORICAL FORMATION



# Archipelago Formation



A "hotspot" is a location on the Earth's surface that has experienced active volcanism for a long period of time.

Volcanic chains like the Hawaiian Islands result from the slow movement of a tectonic plate across a "fixed" hot spot deep beneath the surface of the planet.

Over the past 70 million years, eruptions from the Hawaii hotspot have left a vast underwater mountain region of islands and intervening seamounts, atolls, shallows, banks and reefs along a line beneath the northern Pacific Ocean.

A sharp bend in the chain indicates that the motion of the Pacific Plate abruptly changed about 43 million years ago. The main Hawaiian islands formed around 5 million years ago.

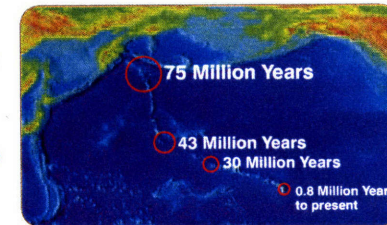
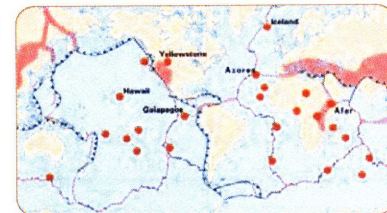
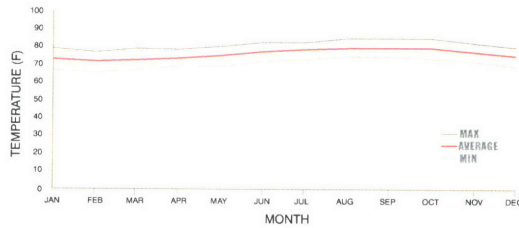


Fig. 24

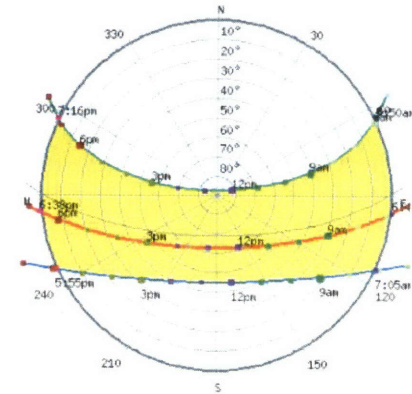
### AVERAGE TEMPERATURE

An outstanding climatic feature of Hawaii is the small annual temperature range. In downtown Honolulu, the warmest average temperature is 78 degrees Fahrenheit, while the coldest average temperature is 72 degrees Fahrenheit.



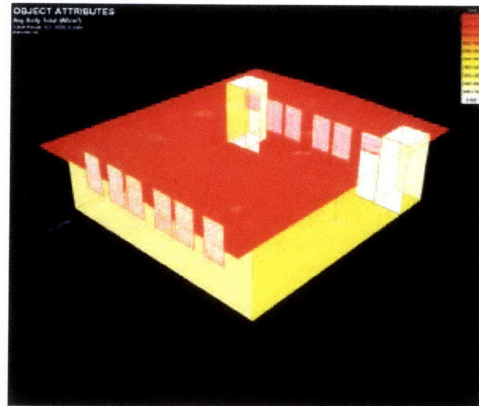
### SUN ANGLE CHART

In contrast to other states, Hawaii experiences relatively small variations in the amount of incoming solar energy from one time of the year to another. Because of its latitudinal location, there are relatively slight variations in the length of the daylight period and smaller annual variations in the altitude of the sun above the horizon in Hawaii.



### INCIDENT RADIATION SIMULATION

Solar radiation simulation under the Hawaiian latitudes suggest that on an annual basis, the flat roof of a structure receives 39% of the total incident radiations, due to the high altitude of the sun in the sky throughout most of the year. Next, the eastern elevation of a structure receives 20% of the total insolation, followed by the southern elevation with 17%, western elevation with 16%, and northern elevation with 9% of the total incident radiations. The 4% difference between the eastern and western insolation is due to the increase cloud cover during the afternoons.



Data calculated using meteorological data for Honolulu, HI (21° N Lat.)

### OPTIMUM BUILDING ORIENTATION

Under a climate like Honolulu, the southern and northern facade of a structure receives a combined 25% of the total incident radiation on an annual basis -- 10% less than what is received on the combined eastern and western elevations. It is thus important to orient the longer side of the structure on an east-west axis. The optimum building orientation to reduce solar radiation for Honolulu is 17.5 degrees west of south.

During the winter months however, the southern elevation receives up to 28% of the overall incident radiations, while temperatures are only slightly lower than during the summer time. Consequently, it is important to protect the southern walls from solar radiations as practically as possible.

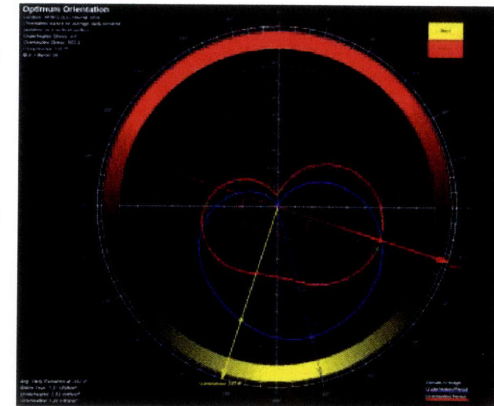
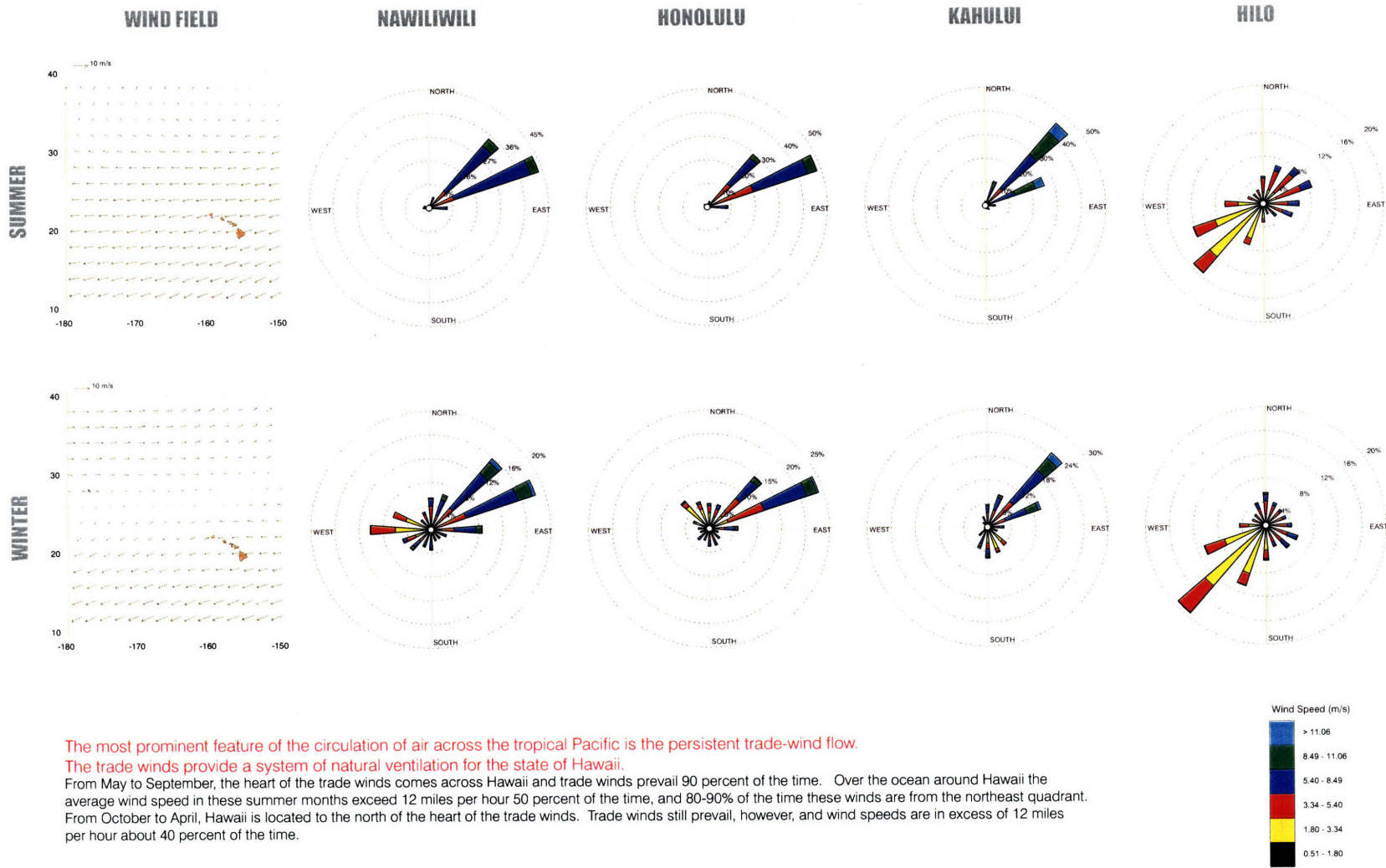


Fig. 25-28





The most prominent feature of the circulation of air across the tropical Pacific is the persistent trade-wind flow.

The trade winds provide a system of natural ventilation for the state of Hawaii.

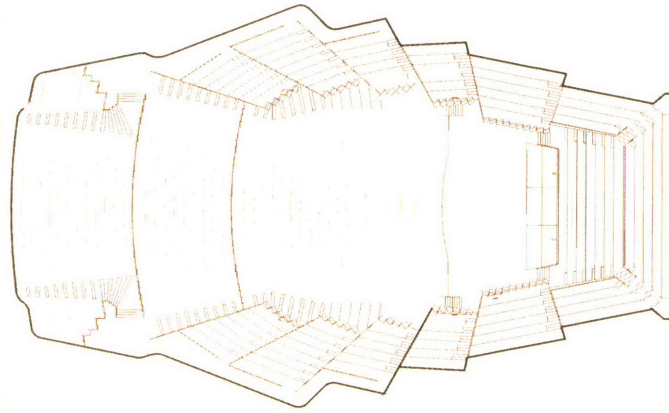
From May to September, the heart of the trade winds comes across Hawaii and trade winds prevail 90 percent of the time. Over the ocean around Hawaii the average wind speed in these summer months exceed 12 miles per hour 50 percent of the time, and 80-90% of the time these winds are from the northeast quadrant.

From October to April, Hawaii is located to the north of the heart of the trade winds. Trade winds still prevail, however, and wind speeds are in excess of 12 miles per hour about 40 percent of the time.

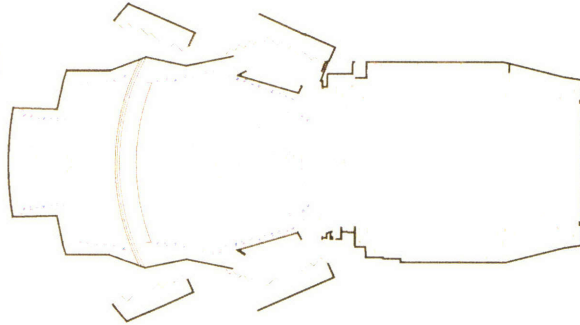
# Trade Winds

Fig. 29

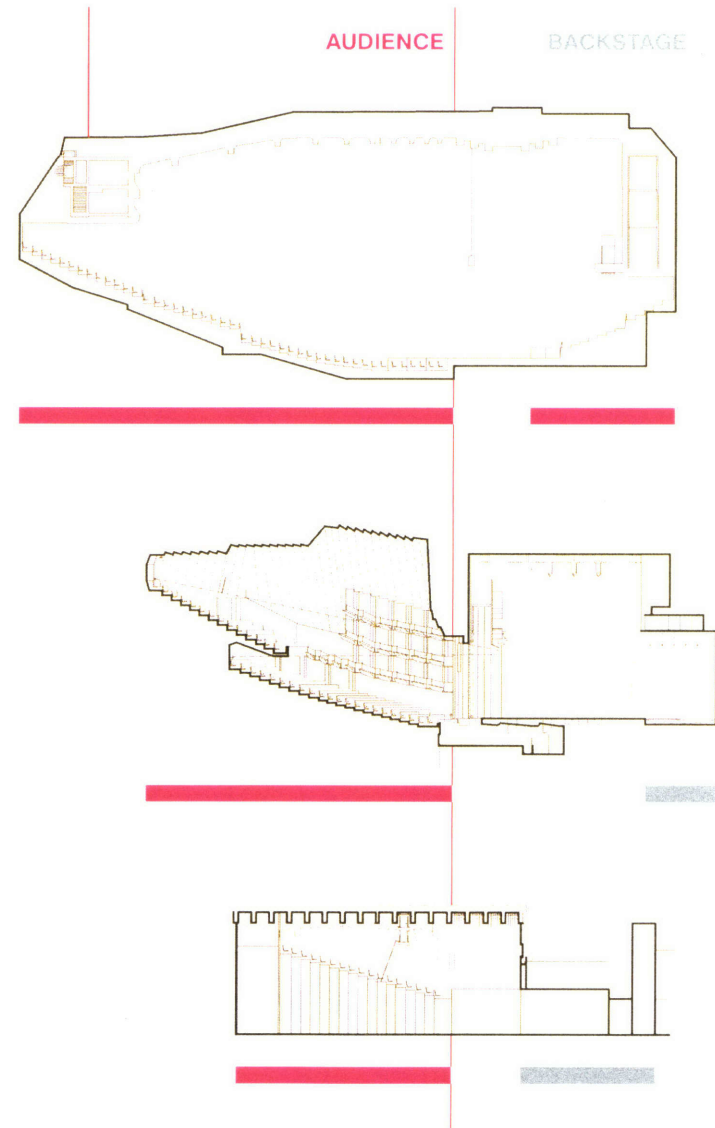
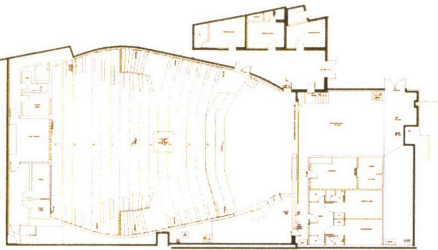
CONCERT HALL  
Seating Capacity: 2,679



THEATRE HOUSE  
Seating Capacity: 1,507

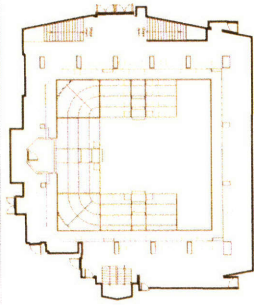


PLAYHOUSE  
Seating Capacity: 398



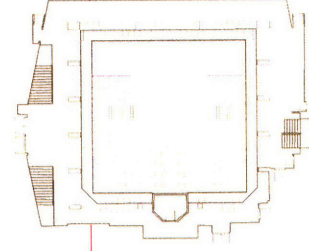
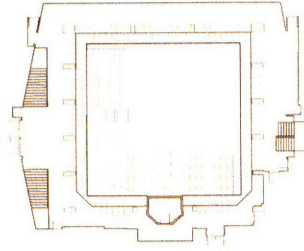
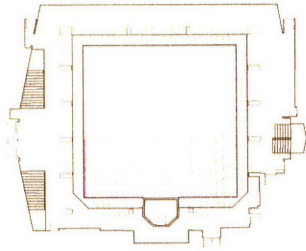
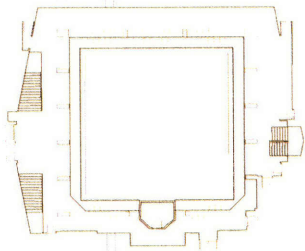
# Performance Space Comparison

**BLACK BOX THEATER**  
Seating Capacity: 220-350

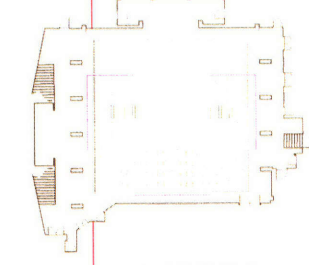
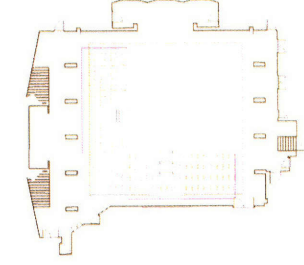
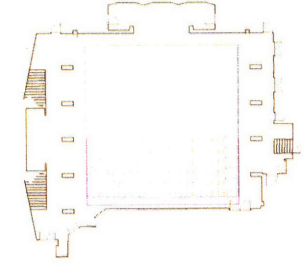
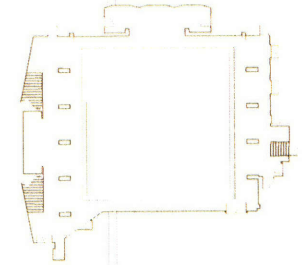


**Flexible Seating**

MEZZANINE LEVEL



STAGE LEVEL



NO SEATING

END SEATING

L' SHAPED SEATING

U' SHAPED SEATING

**Not To Scale**  
SYDNEY OPERA HOUSE



# Black-Box Theater

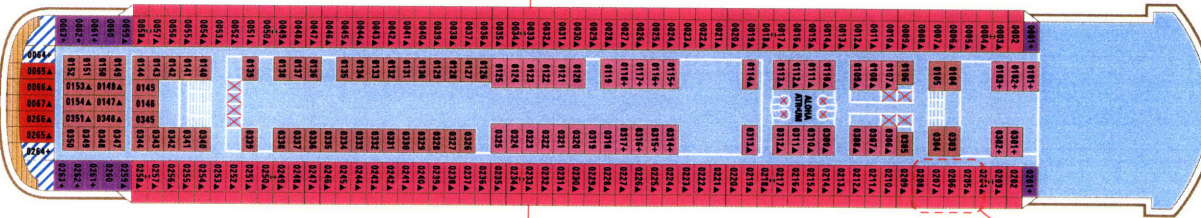
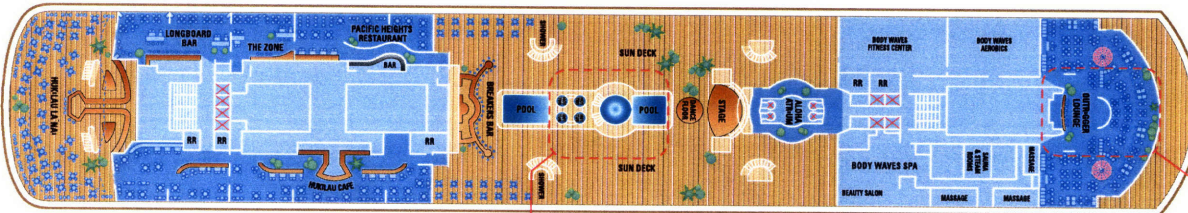
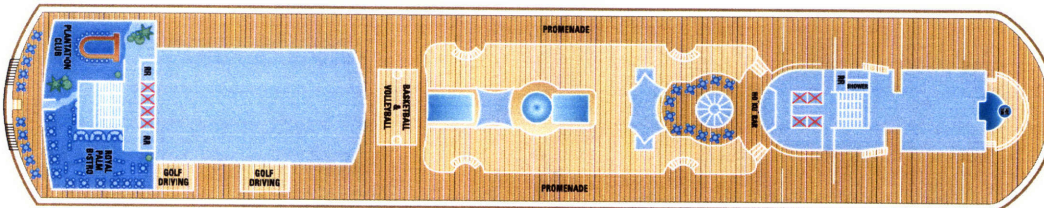
Fig. 30





NORWEGIAN CRUISE LINE  
**PRIDE OF ALOHA**

GROSS TONNAGE .....77,104  
 LENGTH .....853.0 ft  
 BEAM .....105.6 ft  
 SERVICE SPEED .....23.0 kn  
 PASSENGERS (MAX) .....2,450  
 CREW .....750



SPORTS DECK

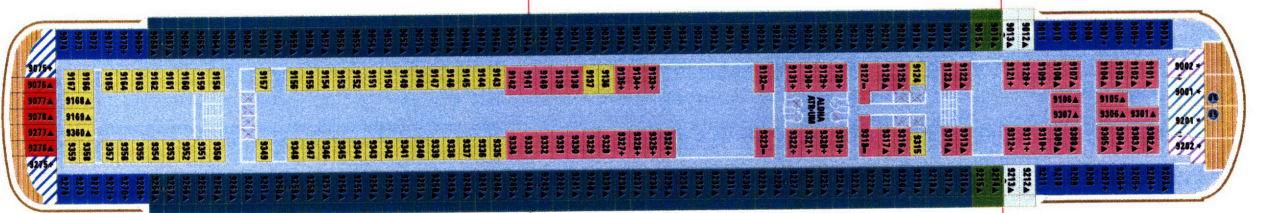
POOL DECK

NORWAY DECK

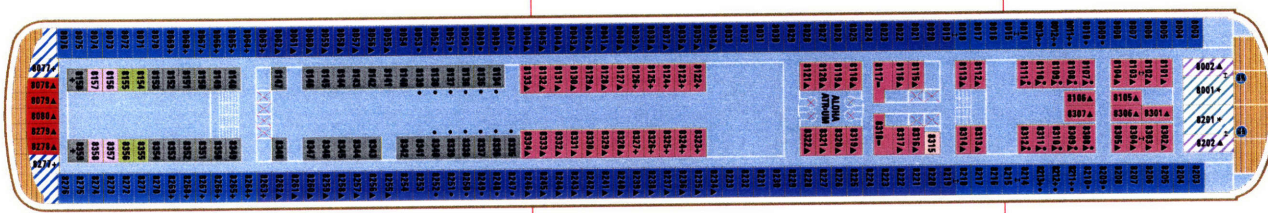
**Cruise Ship Deck Plans**



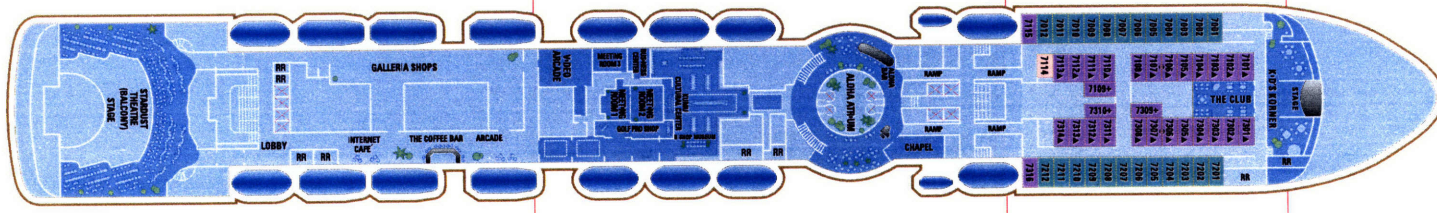
# Cruise Ship Deck Plans



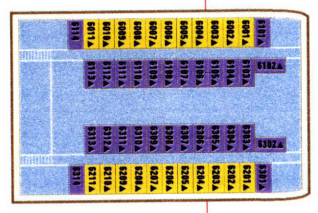
FJORD DECK



VIKING DECK



INTERNATIONAL DECK



OSLO DECK

Fig. 31





## BIBLIOGRAPHY

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## IMAGE CREDITS

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- Fig. 1-2 Matson Lines “See Hawaii” vintage poster. <<http://www.hawaiianluauparty.com/section.cfm?sectionid=1>>
- Fig. 3 View of Port of Honolulu, 181601817. Louis Choris, artist. <<http://hawaii.gov/dags/archives/centennial/kunina-nui>>
- Fig. 4 Boat Day. <<http://www.flickr.com/photos/66314628@N00/30132221/in/set-697621/>>
- Fig. 5 Protestors against the interisland Superferry in Nawiliwili Harbor. <[http://www.usatoday.com/news/nation/2007-08-27-hawaii-ferry\\_N.htm](http://www.usatoday.com/news/nation/2007-08-27-hawaii-ferry_N.htm)>
- Fig. 6 Fisherman on west breakwater, Kahului Harbor, Maui. <<http://flickr.com/photos/21400600@N03/2076915009/>>
- Fig. 7 Canoes at Nawiliwili Harbor. <<http://www.hawaiieasy.com/kauai.htm>>
- Fig. 8 Backstage. <<http://www.orpheusnyc.com/Blog/?m=200610>>
- 92 | Fig. 9 Relationship of public spaces. Adapted from: Ian Appleton, “Buildings for the Performing Arts.” Boston: Butterworth Architecture, 1996, p.170.
- Fig. 10 Stage types (left to right): End Stage, Proscenium, In-the-Round, Thrust. <<http://www.barlowandassociates.com/STAGE%20TYPES.htm>>
- Fig. 11 Hawaiian Islands rendering. <[http://www.hawaii-guide.com/index.php/content/posts/hawaii\\_geology\\_and\\_geography/](http://www.hawaii-guide.com/index.php/content/posts/hawaii_geology_and_geography/)>
- Fig. 12 Google Earth perspective of the South shore of Oahu. <<http://maps.google.com/>>
- Fig. 13 Honolulu skyline panoramic. <<http://www.skyscrapercity.com/showthread.php?p=20660817>>
- Fig. 14-15 Honolulu Harbor. <<http://www.flickr.com/>>



- Fig. 16 "Fragmented Sea," art installation by Ned Kahn. Wind-animated shade screen composed of thousands of blue-anodized aluminum flaps that move in the wind. <<http://nedkahn.com/wind.html>>
- Fig. 17 Wind sculpture by Ned Kahn. <<http://flickr.com/photos/springmaiden/490881279/in/photostream/>>
- Fig. 18-19 Edith Kanakaole Stadium, host of the Merrie Monarch Festival Hula competition in Hilo, Hawaii every year. <<http://www.hbjock.org/?p=207>>
- Fig. 20 Kalapaki Bay and Nawiliwili Harbor seen from a helicopter. <<http://www.flickr.com/photos/kumasawa/35522382/>>
- Fig. 21 The Gene Wells Wooden Boat Regatta, Nawiliwili Yacht Club. <<http://www.nawiliwiliyachtclub.org/images/genewells/genewellsregatta/index.htm>>
- Fig. 22 NCL's "Pride of Aloha" docked in Kahului harbor. <<http://flickr.com/photos/mbarooah/337952951/>>
- Fig. 23 Outrigger Canoe racing in Kahului harbor. Unknown source.
- Fig. 24 Hawaiian Island archipelago formation. <<http://www.hawaiianatolls.org/>>
- Fig. 25-26 Honolulu Solar Data. <<http://www.gaisma.com/en/location/honolulu-hawaii.html>>
- Fig. 27-28 "Hawaii's K-12 Portable Classrooms: Bioclimatic Monitoring, Assessment & Design Recommendations." University of Hawaii, School of Architecture, Environmental Systems Laboratory. May 2004.
- Fig. 29 Hawaii wind patterns. <<http://apdl.kcc.hawaii.edu/~earth/high.htm>>
- Fig. 30 Sydney Opera House. Adapted from: <<http://www.sydneyoperahouse.com/>>
- Fig. 31 Norwegian Cruise Line's Pride of Aloha. Adapted from: <<http://www.ncl.com/nclweb/fleet/shipInformation.html>>

