Ship Archipelago
Revitalization of Zhoushan Islands by Ship-Architecture Touring Network

奥山研究室　18M58041 方晗茜（FANG Hanxi）

1. Introduction

1.1 Project Background

Zhoushan, a city composed of islands in eastern China, has to face a challenge to accelerate its upgrade of industry structure, as its primary fishery industry has been decreasing these years. With rich islands tourism resources and great geographical advantages near Shanghai and Ningbo(fig.1), Zhoushan has great potential to develop into a healing and restored city to attract people with city-life stress. However, these tourism resources have not been organized well by existing transportation and formed any influencial attraction. So this project aims to provide a proposal of Ship-Architecture Touring Network within islands, which connect people and sea with new pleasure ways by ship-architecture, as well as organize islands tourism resources to realize the revitalization of Zhoushan.

1.2 Ship-Architecture

Usually ship is a kind of vehicles used in water to transport people or cargo. When a ship is given extra function to play roles more than just a means of transportation, it can be called as **Ship-Architecture**.

2. Research of Water Transport Network

There are many water transport routes within famous waterfront cities, which can be defined as water transport network. A well-organized water transport network can not only improve the accessibility of area, but also can provide people impressive experience on the way. Fig.2 shows the organization of water transport network from 14 cities around the world. Regarding the arrangement of routes from their different forms and hierarchy, 6 types of water transport network are divided: Divergent, Interlaced, Multiple Rings, Serial Rings, Branch, and Mixed.

3.Research o Buildings

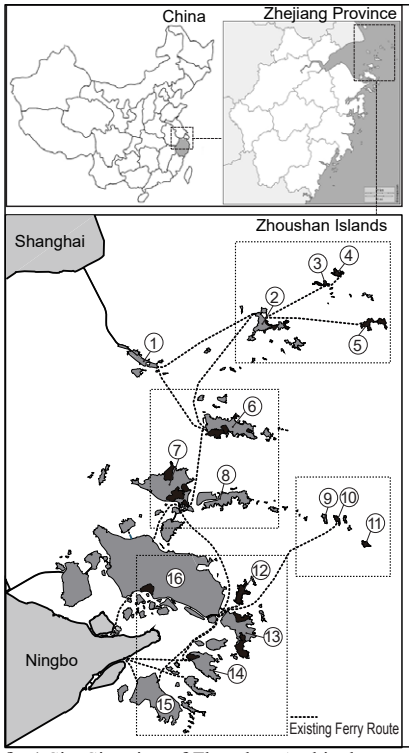
This chapter pays attention to Ship Station Buildings, like cruise terminal, ferry station and boat house, whose main characteristic is to connect land and ship. 29 cases are collected and analysed.(fig.3&fig.4)

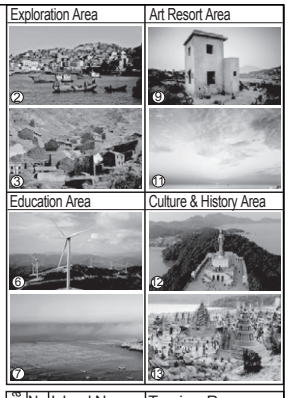
3.1 Relation between building and land

Ship Station Buildings are always around the boundary of water, with various relation with land. Regarding the location of building, its relation with land can be classified into four types: Inland, Across, Attached, and Away(vertical line of fig.5).

3.2 Connection between building and ship

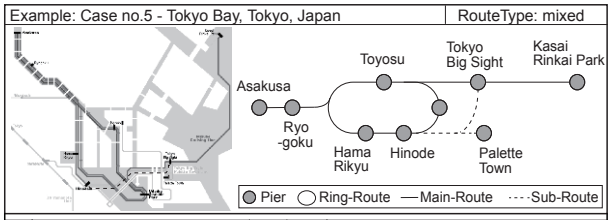
Regarding the connection extent between building and ship, from close to distant, the transition spaces are classified into five types: Storage, Balcony, Corridor, Open space, and Deck(horizontal line of fig.5).





Area	No.	Island Name	Tourism Resource
Transition	1	Xiaoyangshan	Container Port
	8	Changtu	Ship Yard
Exploration	2	Shengsi	Village/ Roundabout
	3	Lvehua	Green Village
	4	Huaniao	Surfing/Camping
	5	Gouqi	Diving Area
Education	6	Qushan	Windmill/Salt land
	7	Daishan	Sea Ranch
Art Resort	9	Miaozihu	Art Movie Location
	10	Qingbang	Art Village
	11	Dongfu	First Sunrise
Culture & History	12	Putuo	Buddism Culture
	13	Zhujiajian	Sand Sculpture
	14	Taohua	Gongfu Movie
	15	Liuheng	Ship-making History
	16	Zhoushan	Museum/ Harbour

fig.1 Site Situation of Zhoushan Archipelago



Index	Name of Route	No. of Route	No. of kinds	Types of Network
11	Seto Naikai Route -Setouchi Region, Japan	13	1	Divergent 11.Seto Naikai Route
13	Newyork Waterway -NYC, US	11	1	
14	Saint-Petersburg Water Transport -Saint-Petersburg, Russia	14	1	
1	Venezia Unica Waterbus, -Venice, Italy	5	1	Interlaced 1.Venezia Unica Waterbus
2	London River Tours -London, UK	3	1	
8	Yokohama Route -Kanagawa,Japan	4	1	Multiple Ring 8.Yokohama Route
9	Seine Route -Paris, France	2	1	
4	Baltimore Route -Maryland, US	5	2	Serial Ring 4.Baltimore Route
7	Oosaka Waterbus -Oosaka, Japan	2	2	
12	HIPPO River Cruise -Singapore	3	2	
3	London River Bus -London, UK	5	2	Branch 3.London River Bus
6	Rotterdam Waterbus -Rotterdam,Netherlands	8	2	
10	Guangzhou Aquatic Bus, -Guangzhou, China	14	3	Mixed 5.Tokyo Bay
5	Tokyo Bay -Tokyo, Japan	5	3	

fig.2 Types of Water Transport Network

3.3 Types of Ship Station Building

Combining the two aspects above, 6 types of Ship Station Buildings are extracted: Aisle, Gate, Pavilion, Pier, Peninsula, Island(fig.5). Each type has its own characteristic to accomodate ships with different benefit. For example, type A(Aisle) is along the coastline with open space or corridor to board, available for all size of ships.

4. Proposal

4.1 Proposal of Ship-Architecture Touring Network within Zhoushan Islands

According to the tourism resource and characteristic of tourism activities, Zhoushan islands are mainly divided into 4 areas: Exploration, Nature Education, Art Resort, Island Culture. Each area has its own unique ship-architectures with specific routes(fig.6). For example, in Exploration Area, there are ship-architectures of fishing, slide and diving, which can be combined with each other and also with ship station buildings. There are also ship-architectures crossing these areas, such as theater, restaurant and hotel. All these routes consist this new touring network.

4.2 Design of Ship Station Buildings

According to the scale and types of ships, ship station buildings in the network can be divided into 2 groups: A- Terminal, B-Ship-Architecture Station with designed route between them. (fig.7)

Three sites are selected for the design of Ship Station Buildings, including a terminal(A-1) and two stations(B-1,B-2). Site A-1 locates in the largest harbour of Zhoushan, and the terminal is designed as the replacement of existing old terminal. It has expanded function space for ship-architectures, marks the symbol for harbour and creates a public park for people. Two parts are extended from the harbour to get closer with water, traffic one for ferry and waterbus, touring one for ship-architectures. Sea court enclosed by coastal seafood stalls and terminal can hold festival activity with ship-architectures.

Site B-1 locates in the center island of art resort area and works as a public art hall for this area. To respond the natural coastline, it adopted curved roof to create an outdoor plaza and a sea pavillion. Site B-2 locates in the most eastern small island of art resort area and works as an art corridor to accomodate gallery ship-architectures. Its fan-like shape maximizes the openness toward sea and the connection between people and nature.Different combination strategies are used for different kind of ships in above proposals, which can also provide reference for other ship station buildings.

5. Conclusion

This project proposed a ship-architecture touring network including ship station buildings, which aims to show a new pleasure archipelago composed of ship-architectures and ship station buildings. The variation of ship-architectures enriches the tourism activities and highlight the specificity of islands. Ship station buildings are designed to connect ship and land activity together to make tourism resource fully used. These make Zhoushan Islands effective to attract tourists with life-pressure in surrounding cities to develop its tourism, so as to realize the upgrade of industry structure and the revitalization of Zhoushan City.

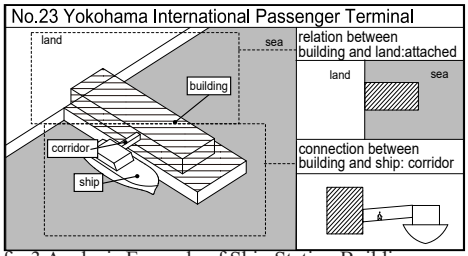


fig.3 Analysis Example of Ship Station Building

index	Ship-accomodated Building Project (Terminal)		index	Ship-accomodated Building Project (Not Terminal)	
1	Salerno Maritime Terminal	ITA	3	Ineno Funaya	JP
2	Montreal Port Terminal	CAN	7	Minsheng Ferry Station	CHN
4	West Terminal 2	FIN	9	Boathouse	CAN
5	Lisbon Cruise Terminal	POR	10	Pier Hotel	USA
6	Qingdao Cruise Terminal	CHN	12	Development of Cruise Terminal Extension Project	SPA
8	Floating Manta Ray-shaped Ferry Terminal	KOR			
11	Leixões Cruise Terminal	POR	15	Boat house at millstätter	AUS
13	Helix Cruise Terminal	SPA	18	Pier Mangrove Museum	USA
14	Kaohsiung Port Terminal	CHN	19	A Gathering Place for Tulsa	USA
16	Yeoui-Naru Ferry Terminal	KOR	21	Värtaterminalen	SWE
17	Brisbane Ferry Terminal	AUS	24	Lake House	USA
20	East 34th St Ferry Terminal	USA	25	Floating Home	CAN
22	Sydney Cruise Terminal	AUT	26	Chicago Riverwalk	USA
23	Yokohama International Passenger Terminal	JP	27	Kaohsiung Port Service Center	CHN
29	Riga Passenger Terminal	LAT	28	Sydney Fish Market	AUT

fig.4 List of Ship Station Buildings

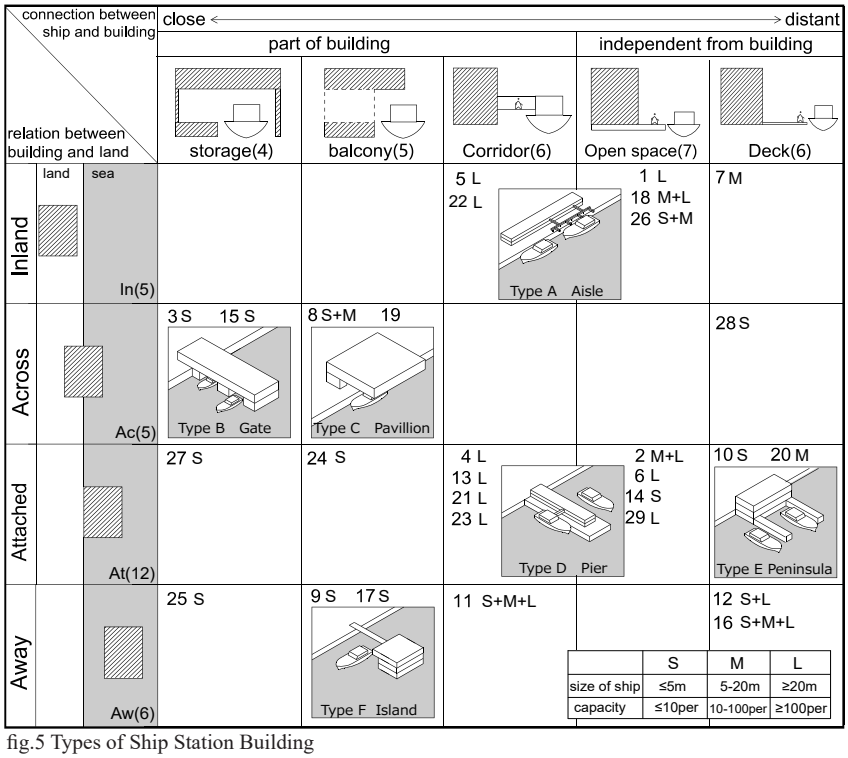


fig.5 Types of Ship Station Building

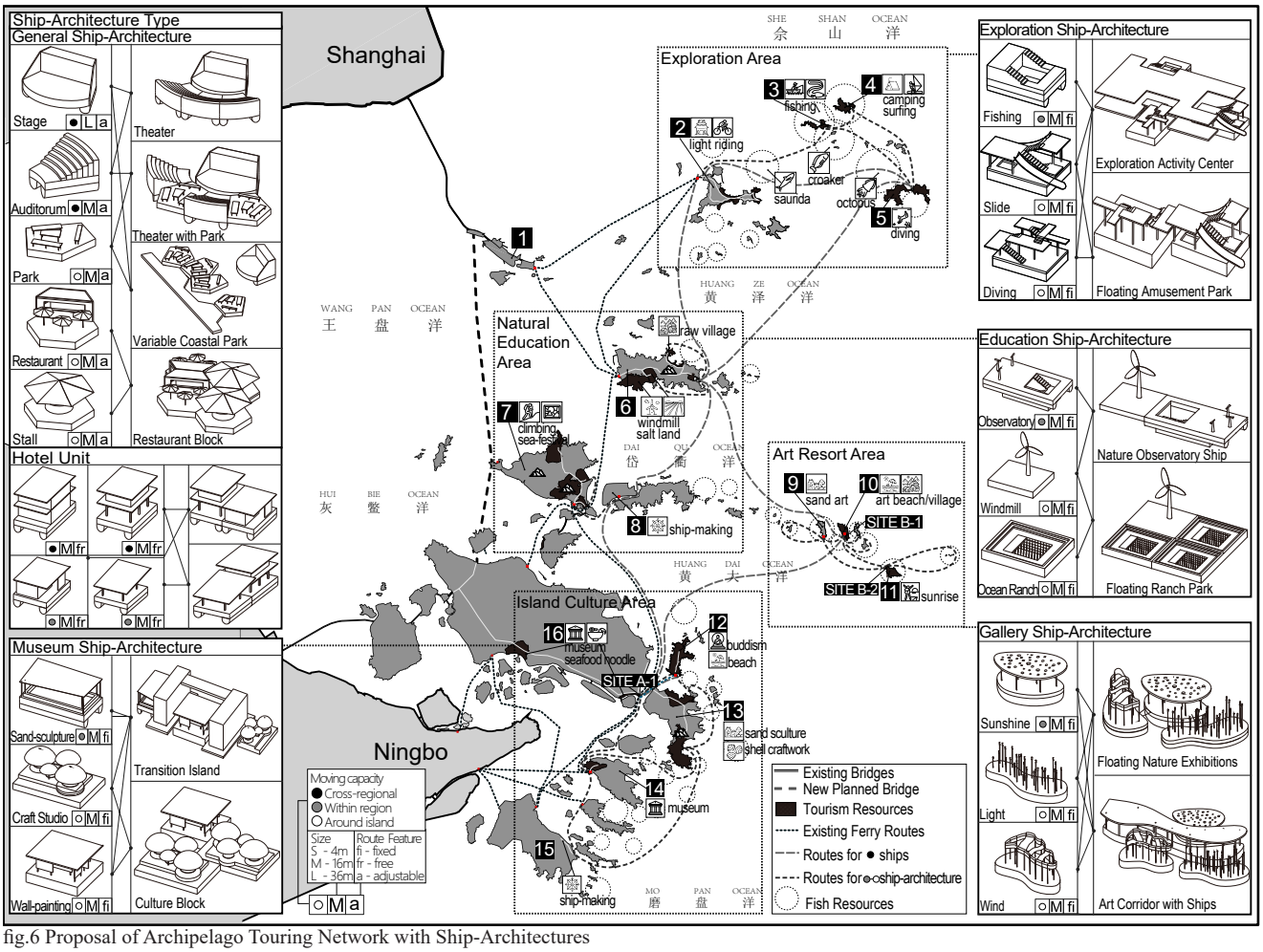


fig.6 Proposal of Archipelago Touring Network with Ship-Architectures

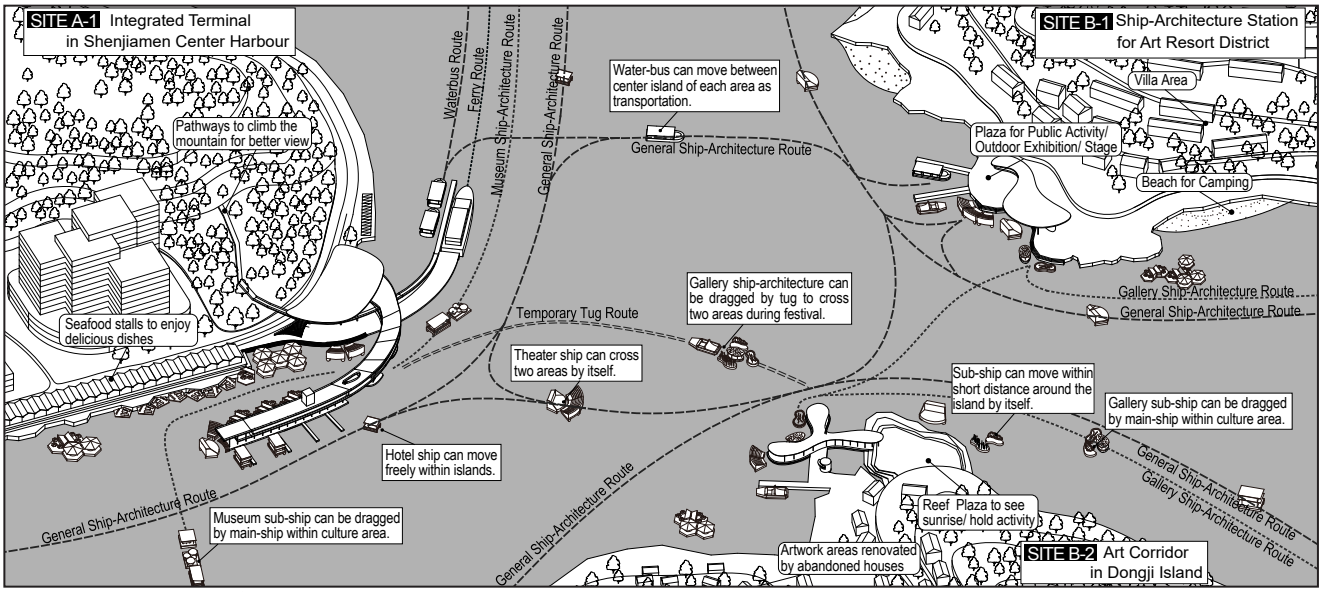
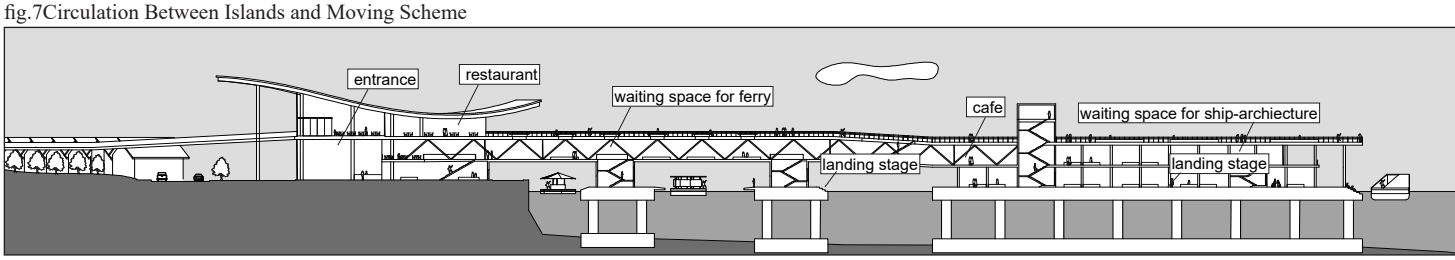
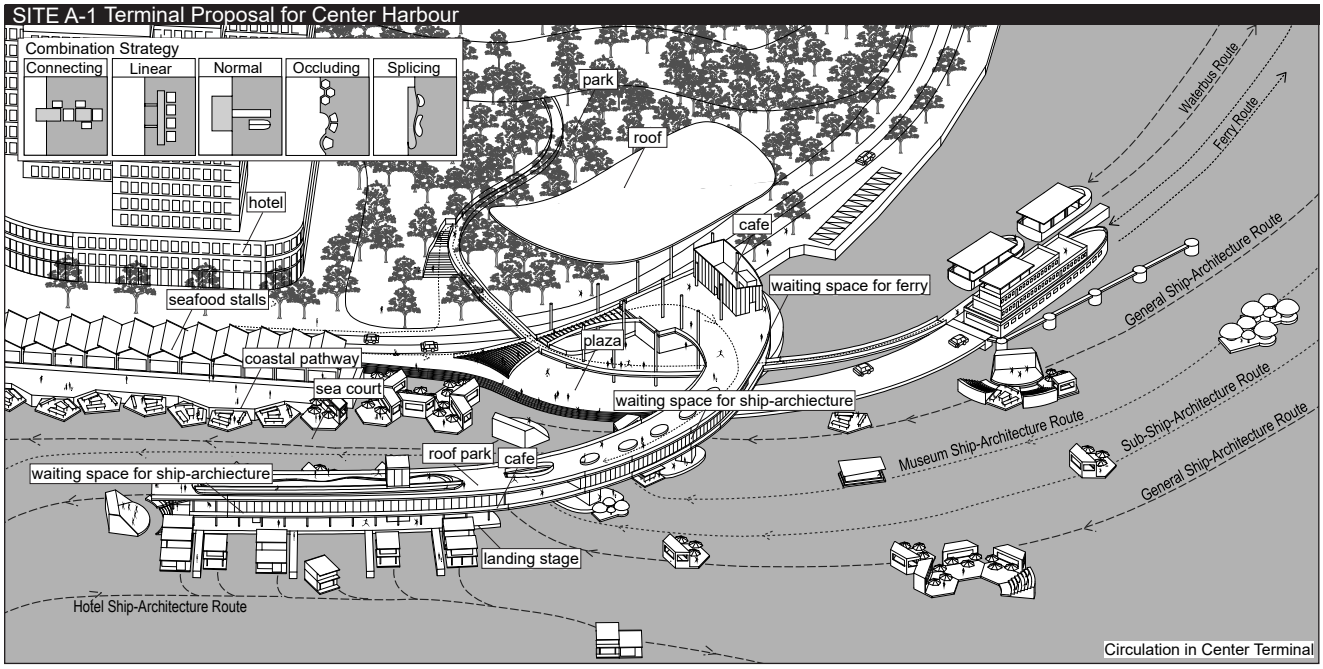
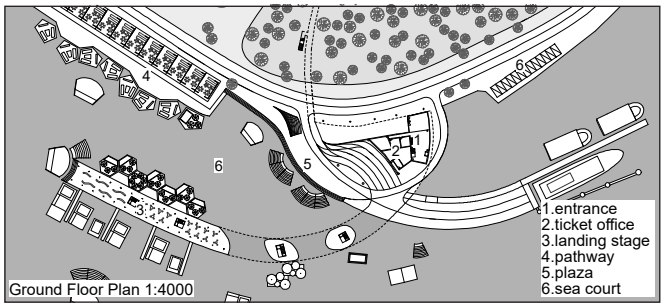
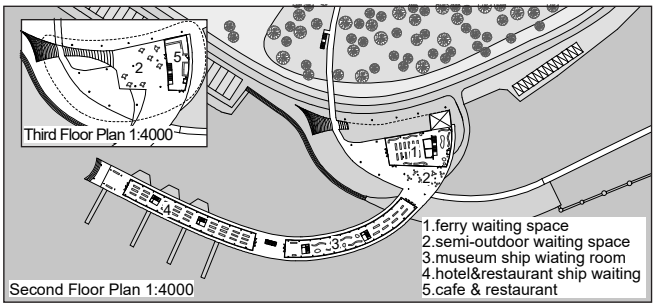


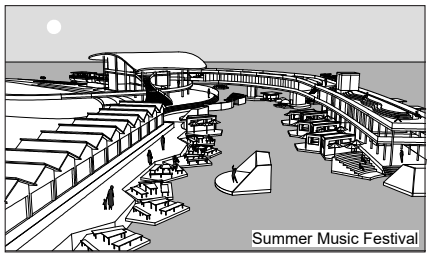
fig.7Circulation Between Islands and Moving Scheme

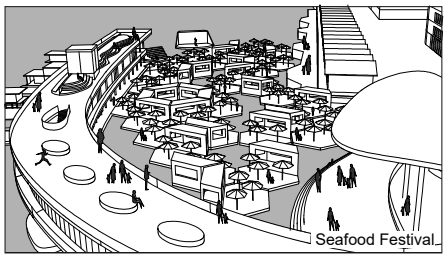


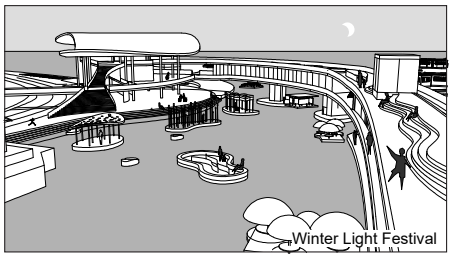

SITE A-1 Terminal Proposal for Center Harbour
Combination Strategy
Connecting
Linear
Normal
Occluding
Splicing
park
roof
hotel
cafe
waiting space for ferry
seafood stalls
plaza
coastal pathway
sea court
waiting space for ship-archiecture
roof park
cafe
waiting space for ship-archiecture
landing stage
Hotel Ship-Architecture Route
Waterbus Route
Ferry Route
General Ship-Architecture Route
Sub-Ship-Architecture Route
Museum Ship-Architecture Route
General Ship-Architecture Route
Circulation in Center Terminal

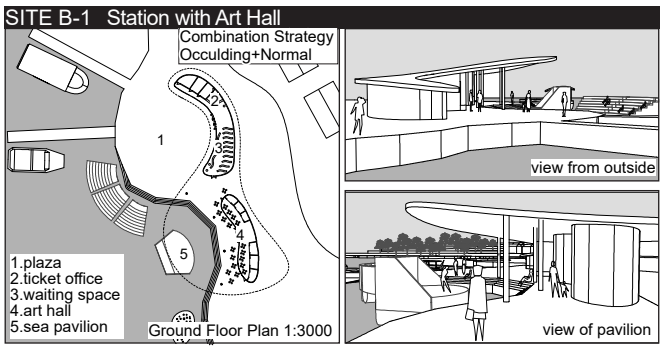

1.entrance
2.ticket office
3.landing stage
4.pathway
5.plaza
6.sea court
Ground Floor Plan 1:4000

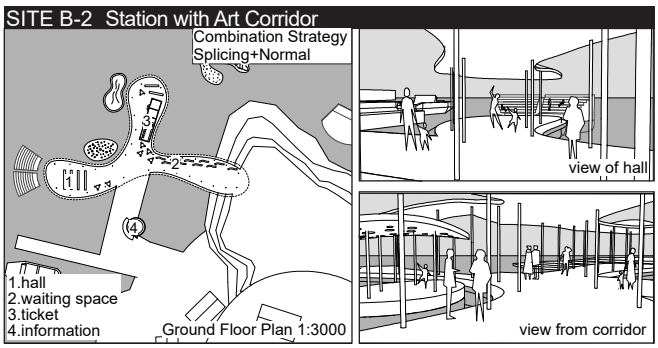

Third Floor Plan 1:4000
1.ferry waiting space
2.semi-outdoor waiting space
3.museum ship wiating room
4.hotel&restaurant ship waiting
5.cafe & restaurant
Second Floor Plan 1:4000

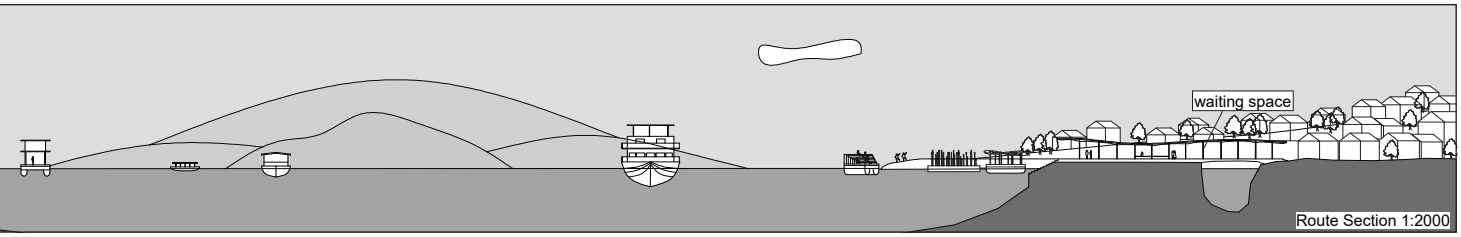

Summer Music Festival


Seafood Festival


Winter Light Festival


SITE B-1 Station with Art Hall
Combination Strategy
Occulding+Normal
1.plaza
2.ticket office
3.waiting space
4.art hall
5.sea pavilion
Ground Floor Plan 1:3000
view from outside
view of pavilion


SITE B-2 Station with Art Corridor
Combination Strategy
Splicing+Normal
1.hall
2.waiting space
3.ticket
4.information
Ground Floor Plan 1:3000
view of hall
view from corridor


waiting space
Route Section 1:2000