

**SYMBIOSIS OF NATURE AND CULTURE :
QIANWAN RIVER CORRIDOR PARK**

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Baoan district, Shenzhen, Guangdong province, China

Project Statement

The site is located in Qianhai area, covering 32.4 hectares. The Qianwan River takes over the drainage of the Dananshan mountain's watersheds and flows into Qianhai Bay, which is the only water corridor accessing to the mountain and the sea in Qianhai. Since 2009, Qianhai has been in a high-speed urbanization process. With successive completion of the National Museum, international schools, and residential buildings, the river becomes an important urban spine related to nature and public life in the high-density urban area. However, it still faces many challenges. The ecological fragility of the intertidal zone, the accessibility to the surrounding areas, the direction of differentiated development, and the integration with the National Museum should be considered in this project.

The project aims to create a "natural and cultural corridor". It focuses on strengthening the overall design and layout of the Qianwan River, guiding the restoration of habitats through micro-transformation of riverbanks. It promotes the integration of water and the city by improving accessibility and implanting activity scenes. It activates the cultural vitality inspired by the National Museum. It will display a vibrant ecosystem, unforgettable art exhibition space, and lively park scenes, making it the most popular corridor park in Qianhai.

PROJECT NARRATIVE

Background

The Qianwan River is an urbanized river located in Baoan District, Shenzhen, China, and also in Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone. Qianhai has been in a high-speed urbanization process since 2009, which is one of the important economic development centers in the Pearl River Delta (PRD) Greater Bay Area, a densely populated and highly developed area. There are five water corridors in the Qianhai area, which are distributed in the shape of a finger. The upstream of the Qianwan River receives the drainage from the Dananshan Mountain watershed, and the downstream of the river merges into the Qianhai Bay, which is the only water corridor in the Qianhai area that passes through the mountains and reaches the sea. With the successive completion of the National Museum, the International Science and Education Center, international schools, and commercial and residential buildings on both sides of the river, the Qianwan River has also become an important urban spine linking ecological nature and public life in a high-density urban area.

Problems and Challenges

The Qianwan River is a tidal river, the water level changes significantly every day. At the same time, it receives rainwater from surrounding area during the rainy season, and assumes the function of rainwater and flood storage. Therefore, the intertidal zone is the most important but also the most fragile area of the Qianwan River. Currently It is partly narrower with single vegetation structure. There is an urgent need to strengthen the ecological resilience of the intertidal zone.

There are a large number of residential areas and public service facilities around the Qianwan River. It lacks a slow walkway connecting the two sides of the river and the connection with the surrounding public transportation. At the same time, the wet and slippery soil in the intertidal zone is not conducive for the public to walk and play.

There are five water corridors in Qianhai area. These water

corridors have more commonalities. There is an urgent need to explore the characteristics of Qianwan River, gaining insights into the needs of the crowd, and seeking for differentiated development to enhance the attractiveness.

Several large-scale public cultural venues have been built around the Qianwan River, such as the Shenzhen Branch of the National Museum and the Fangzhi International Cultural Center, etc. It is necessary to create a relationship with them and integrate them into the planning and design of the Qianwan River.

Advantages

The Qianwan River has become popular. The large lawn space and the intertidal zone brought great freedom, where the public has spontaneously developed a wealth of recreational activities. This phenomenon revealed that resilient lawn space and the ecological space with low human interference can bring more possibilities.

Strategy

1 NATURE

In the most ecologically sensitive intertidal zone of the river bank, we balance the relationship between human and nature, setting up ecological zones and exploration zones. The ecological zone, which is far away from human beings, is a paradise for marine creatures. The tides make the park form intermittent wetlands in different areas at different time of the day. The intertidal zone is widened locally to form a tidal pool, so that the water surface can be retained at low tides. Combined with the tidal level, the mangrove forests are planted in accordance with the local conditions. The existing barge is retained and micro-modified targeted to different sectors. Exploration zones is a space for children to recognize nature, distributing mangroves, sandy beach, mudflat, rocky beach and other different patches. At high tide level, people can observe marine life in the trestle and platform quietly. When the tide is receding, people can also go down to the beach to walk along the blocks of stone path to understand the mysteries of the tides.

2 CULTURE

Inspired by the elements of traditional lantern origami from the National Museum, we design 2 bridges & 6 stations by adopting different forms of paper-cutting, paper sculpture and other paper arts as the prototype of the roof and integrating the beauty of the architectural rhythm presented by different constructions of eaves, beams, pillars and foundations of traditional architecture. They are scattered in the form of small volumes to harmonize with the landscape space.

3 VITALITY

Building ped & bike system to connect public transportation, parking lots and activity grounds. On the periphery of the park, a 5-kilometer cycling and jogging loop is built, linking several sports and fitness venues. Because of Shenzhen's hot climate, trees are planted in response to the city's wind corridors, bringing in natural breezes and increasing the shade of the trees to create a cool runway suitable for City Walk.

Emphasis on operation and management, we analyze the popular venues in each public space in Qianhai. Establishing a scene thesaurus to pick up and analyze spatial, behavioral and emotional information in social media. Using big data algorithms to generate six park themes, which are museum and art exhibition, sea viewing and Camping, children's recreation, creative market, trend sports, and pet interaction.

Conclusion

The project hopes to lead the the public return to nature and the new trend of qianhai life between the natural mountain and sea, inheriting the long lasting traditional culture of the National Museum.

It reduces the construction cost by about 30% on the principle of less artificial, near nature, low cost and focusing on operation. The park employs a large amount of resilient lawn space to accommodate the spontaneous activities of the public, increasing the freedom of activities while reducing costs and disturbance to the natural environment. It will display a vibrant ecosystem, unforgettable art exhibition space, and lively park scenes, making it the most popular corridor park in Qianhai.

BACKGROUND

River, the Only Water Corridor Connecting Mountains and Sea in Qianhai Area



River, an Important City Spine Related to Nature and Life in High-density Urban Area

LAND RECLAMATION

At that time, Qianhai was still a small fishing village. People's lives mainly depended on fisheries and small-scale agriculture. Through land reclamation, Shenzhen's development space was gradually expanded.

RAPID URBANIZATION

Qianhai began to integrate into Shenzhen's urbanization process and became an important area in Shenzhen. At this stage, Qianhai's development mainly relied on logistics and manufacturing.

REGIONAL ECONOMIC CENTER

The establishment of Qianhai Free Trade Zone has made Qianhai an important economic development zone in the Greater Bay Area (GBA) of the Pearl River Delta. During this period, Qianhai began to attract a large amount of domestic and foreign investment and became a brand-new economic

GLOBAL ECONOMIC CENTER

Qianhai's vision further expanded and began to position itself as a global economic development center. During this stage, Qianhai began to attract global attention and became an international commercial and financial center.

RETURN TO LIFE?

After achieving the leap from a fishing village to a global economic center, Qianhai began to refocus on its own development, seeking to maintain its unique cultural characteristics and quality of life while developing rapidly and to create a livable, comfortable and vibrant environment.

1980s-1990s

2000-2009

2009-2012

2013-NOW

FUTURE

History of Qianhai



Xixiang River
Culture & Consumption

Xinshen River
Lifestyle & Leisure

Shuangjie River
Public & Recreation

Guiwan River
Business & Consumption

Qianwan River
Ecology & Recreation & Culture

Danan Mountain

National Museum

International School

Qianhai International Cultural Center

Technology Cloud Innovation Center

Baozhong Performing Arts Center

Qianhai International Financial Communication Center

Berkeley Music Center

Technology Cloud Innovation Center

National Museum

International School

Qianhai International Cultural Center

CHALLENGES

How to address the fragmentation of rapid urban development and lack of vibrant city life?

RAPID URBAN DEVELOPMENT

LACK OF VITALITY



ADVANTAGES

Current riverside space has begun to gain popularity, accommodate the spontaneous activities of the public

LAWN PARK



Dog Walking



Outdoor Party



Camping



Frisbee



Outdoor Movie Viewing



Outdoor BBQ

BEACH- COMBING PARADISE



Fiddler Crab



Sesarma



Mudskipper



Beachcombing



Fishing

OVERALL STRATEGY

1 NATURE



2 CULTURE



3 VITALITY



Natural & Cultural Corridor

1 NATURE DESIGN SEAWATER WETLAND

In the intertidal zone, we balance the relationship between human and nature. The intertidal zone is partially widened to form a tidal pool, which can retain water even at low tide. Some stone paths for sightseeing are added so that people can go to the sea more safely when low tide.



Daily average minimum tidal level
-0.67m



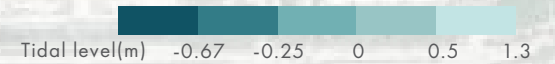
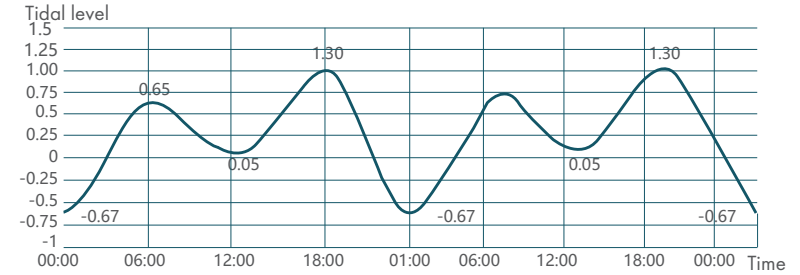
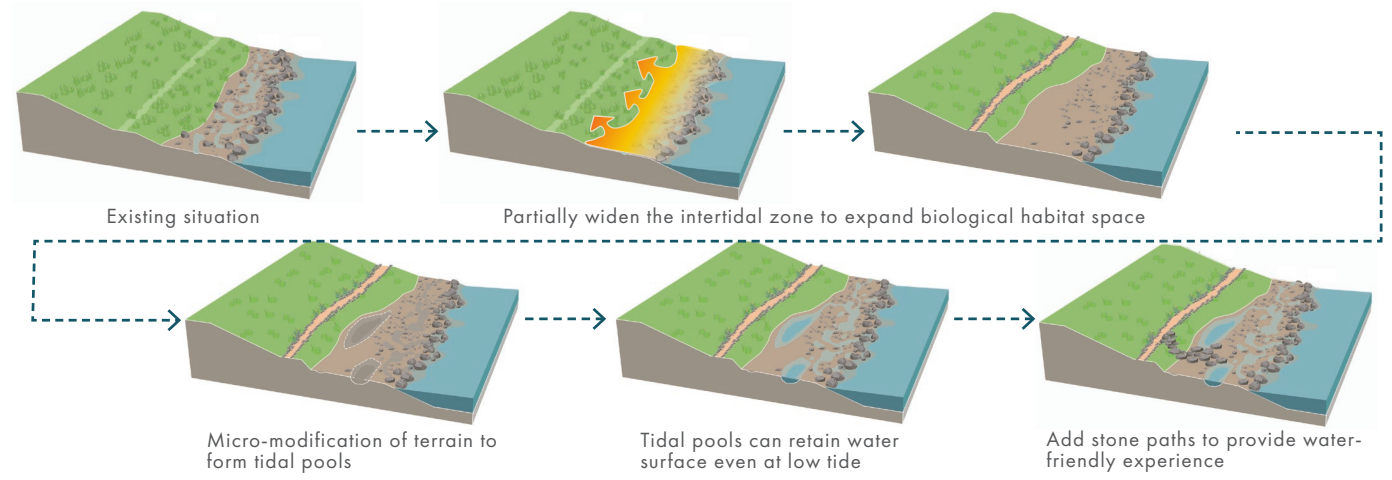
High tidal level
0.65m



Low tidal level
0.05m



Daily average maximum tidal level
1.30m

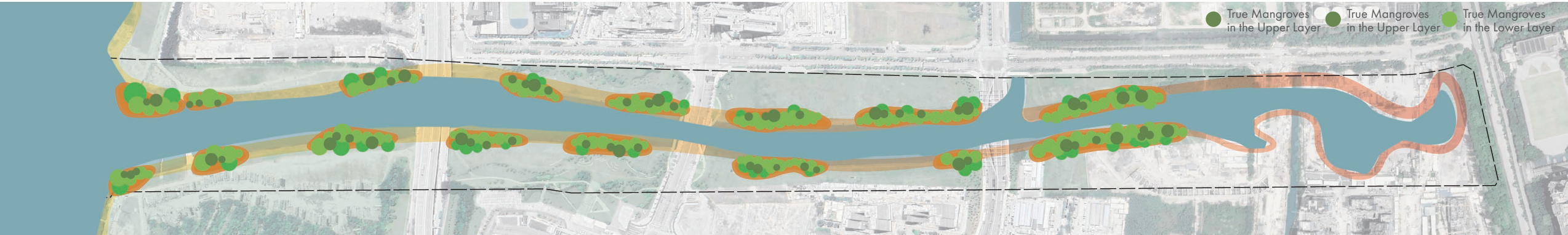
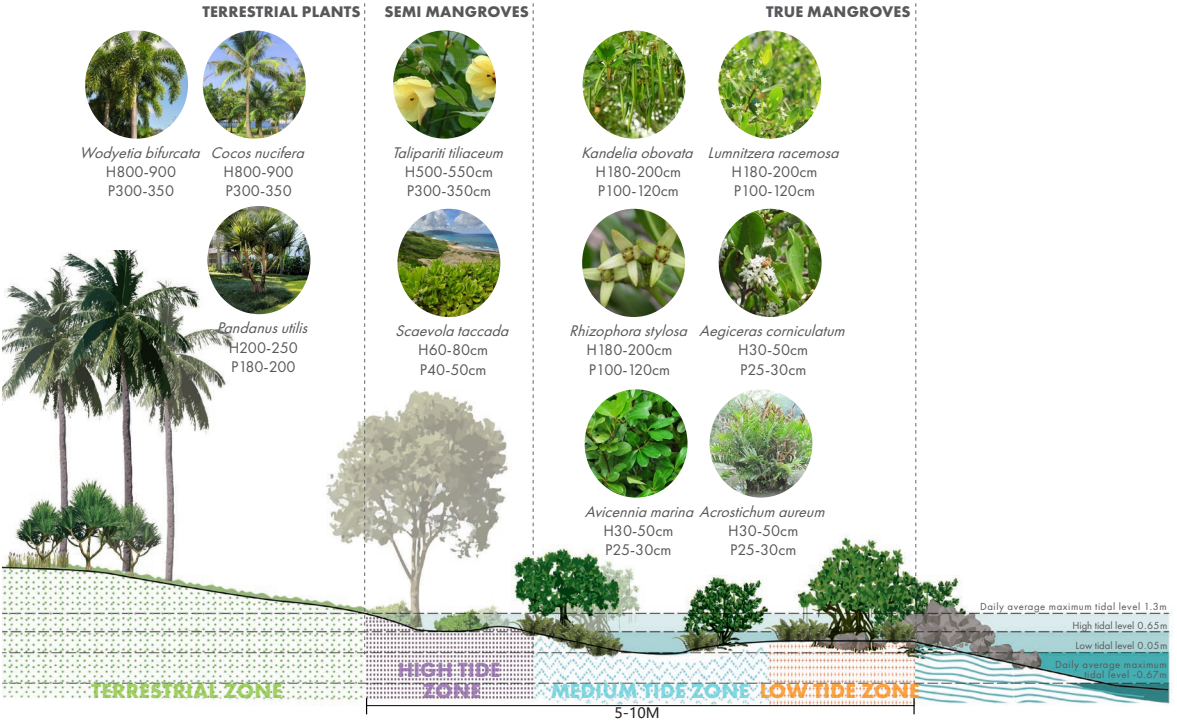


1 NATURE

PLANT MANGROVES ACCORDING TO CURRENT CONDITIONS

The tide is the characteristic of the Qianwan River. The planting of the mangroves can expose more green instead of the bare beach when mangroves are planted. We did a lot of research and chose to focus on the low true mangroves such as *Avicennia marina*, *Aegiceras corniculatum*. They won't be planted on a large scale, but rather planted as needed according to current condition. Mangroves will be planted in the method of slices and dots. Preserve some mudflats, sandy areas, and rocky beaches, and leave diverse habitats for marine creatures.

Selection of mangroves species under different sediment types and beach elevation				
Climate zone	Sediment Type	Main Species		
		High Tide Zone	Medium Tide Zone	Low Tide Zone
Tropical-South Asian Tropical Transition Zone	Sandy soil	<i>Talipariti tiliaceum</i> , <i>Pongamia pinnata</i> , <i>Scaevola taccada</i>	<i>Lumnitzera racemosa</i> , <i>Excoecaria agallocha</i> , <i>Acrostichum aureum</i> , <i>Avicennia marina</i> , <i>Rhizophora stylosa</i>	<i>Avicennia marina</i> , <i>Rhizophora stylosa</i>
	Muddy soil	<i>Talipariti tiliaceum</i> , <i>Pongamia pinnata</i> , <i>Scaevola taccada</i>	<i>Lumnitzera racemosa</i> , <i>Excoecaria agallocha</i> , <i>Acrostichum aureum</i> , <i>Avicennia marina</i> , <i>Rhizophora stylosa</i> , <i>Aegiceras corniculatum</i> , <i>Kandelia obovata</i> , <i>Sonneratia caseolaris</i>	<i>Avicennia marina</i> , <i>Rhizophora stylosa</i> , <i>Aegiceras corniculatum</i> , <i>Kandelia obovata</i>





1 NATURE MICRO TRANSFORMATION OF INTERTIDAL ZONE

Ecological Block Revetment + Mudflat

Increase stone paths to create a diverse seacombing experience. At low tide, People can go down to the beach and follow the rocky trail to learn about the mysteries of the tides.

1 NATURE

MICRO RENOVATION OF REVETMENT

Stepped/Riprap Revetment + Rocky Beach

Plant mangroves to create mangrove habitats and install trestles and viewing platforms. Even At high tide, people can recognize mangroves and observe the marine life quietly from the platform of the trestle.



1 NATURE MICRO RENOVATION OF REVEMENT

Gravel Revetment + Mudflat

Form small and large depressions and create mudflats habitats and add a stepped walkway to enhance hydrophilicity. At low tide, People can go beachcombing and learn more about marine life.

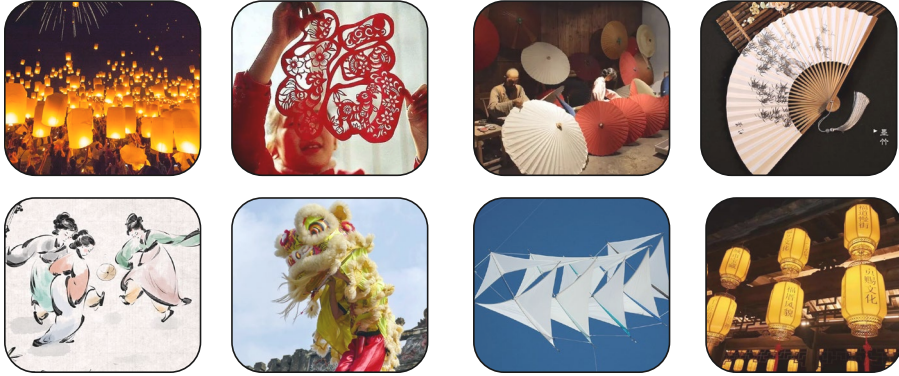


2 CULTURE

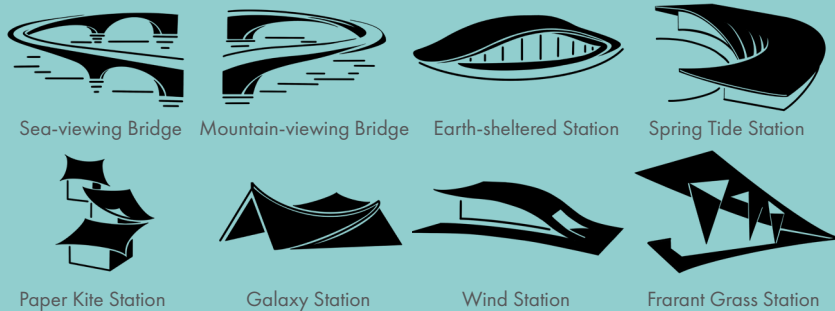
2 BRIDGES + 6 STATIONS, REVEAL THE FUSION OF TRADITIONAL CULTURE AND MORDEN TREND

Following the overall tone of the National Museum, the structure uses traditional cultural elements as the inspiration. It ultimately form Two Bridges and Six Stations, which depicts the axle of the Lingnan culture intertwined with the modern trend.

Traditional Cultural Elements

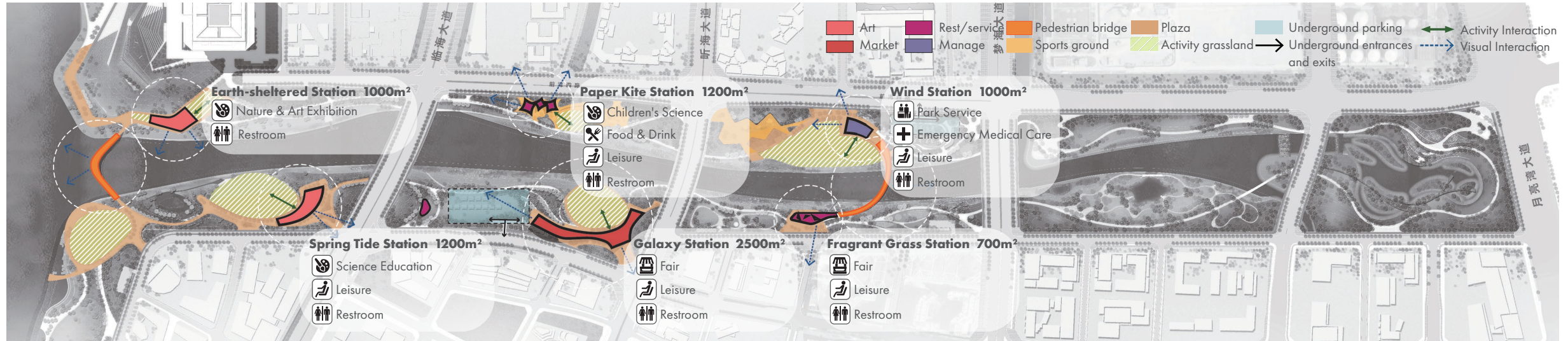


2 Bridges + 6 Stations

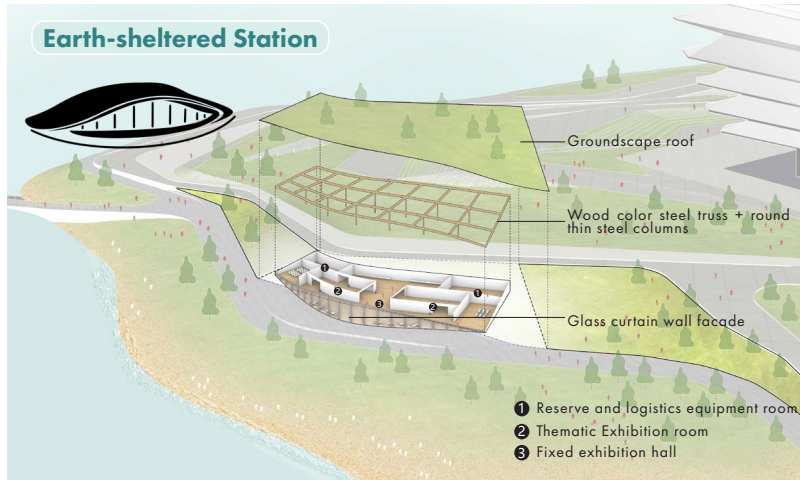


2 CULTURE

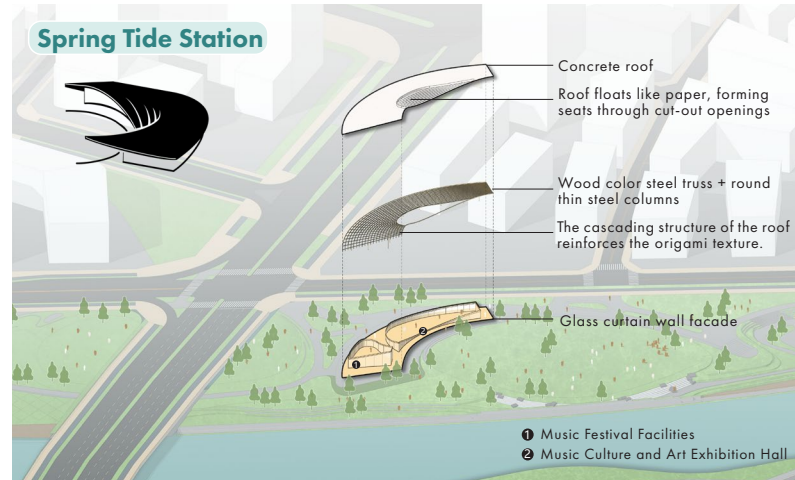
ADOPT DECENTRALIZED LAYOUT, INTEGRATE WITH LANDSCAPE ENVIRONMENT IN SMALL VOLUME



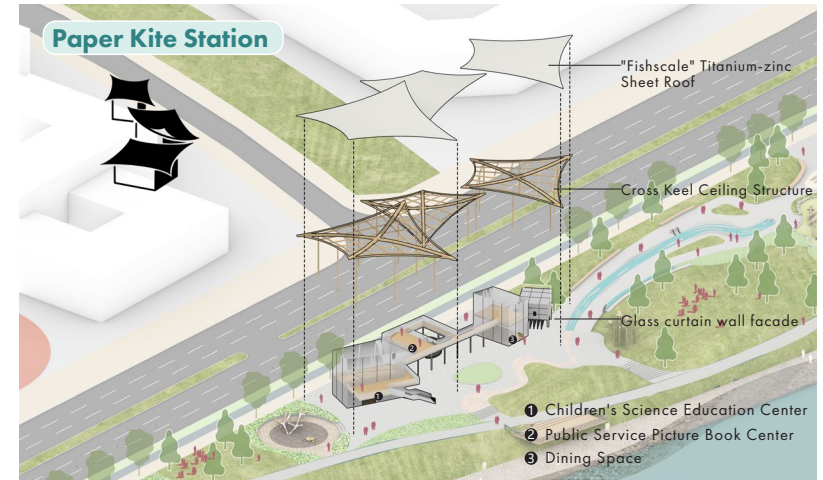
Earth-sheltered Station



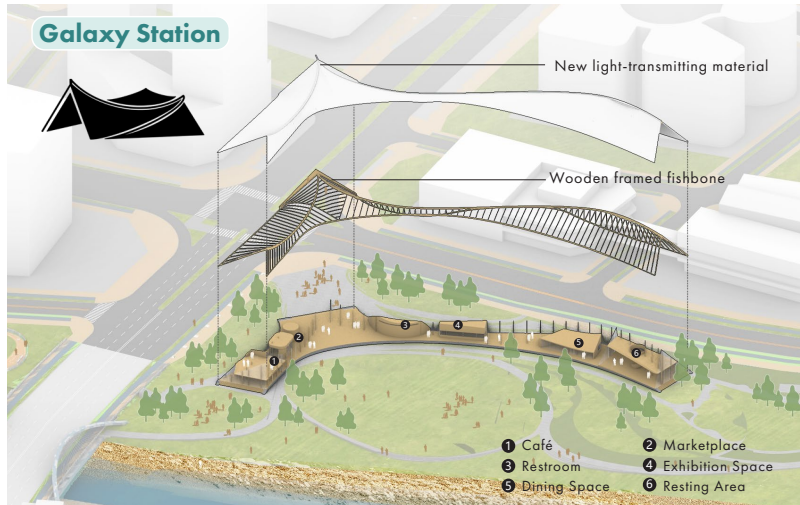
Spring Tide Station



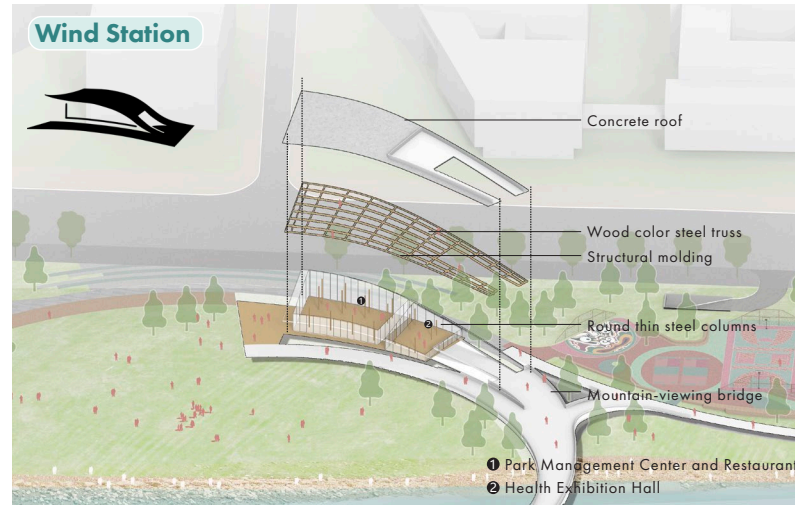
Paper Kite Station



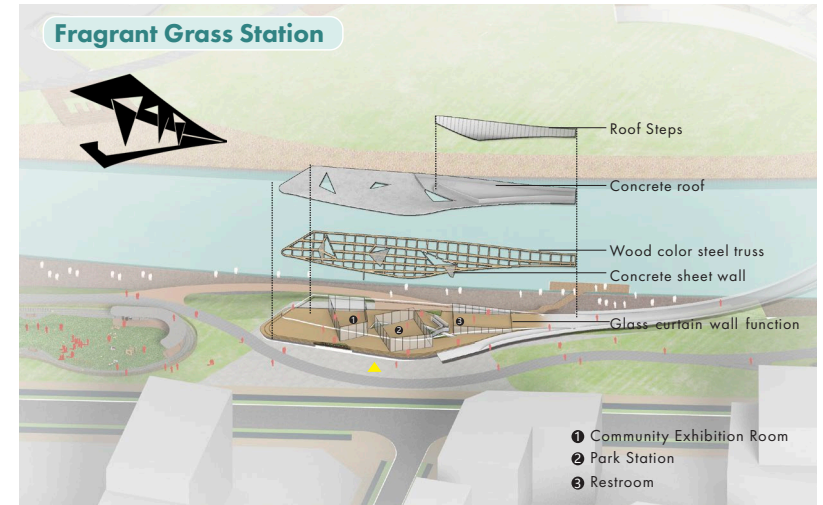
Galaxy Station



Wind Station



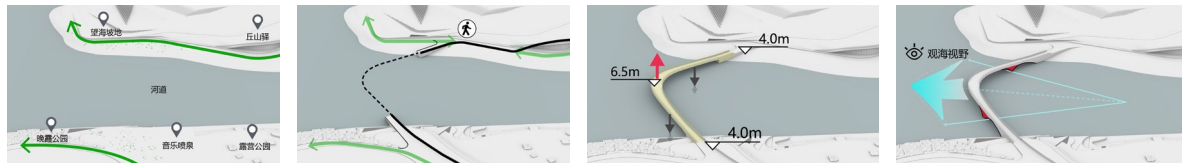
Fragrant Grass Station



BUILD TWO PEDESTRAIN BRIDGES TO STRENGTHEN CONNECTION BETWEEN TWO SIDES OF THE RIVER

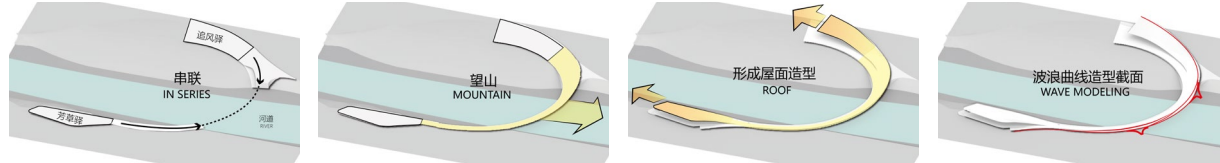
Sea-viewing Bridge

The bridge connects the two sides of the river on the continuation of the relationship between surrounding landscape trails. The appearance of the bridge is handled in a low-profile manner, with no canopy or complex structures to avoid interfering with the view corridor from the river to the sea.



Mountain-viewing Bridge

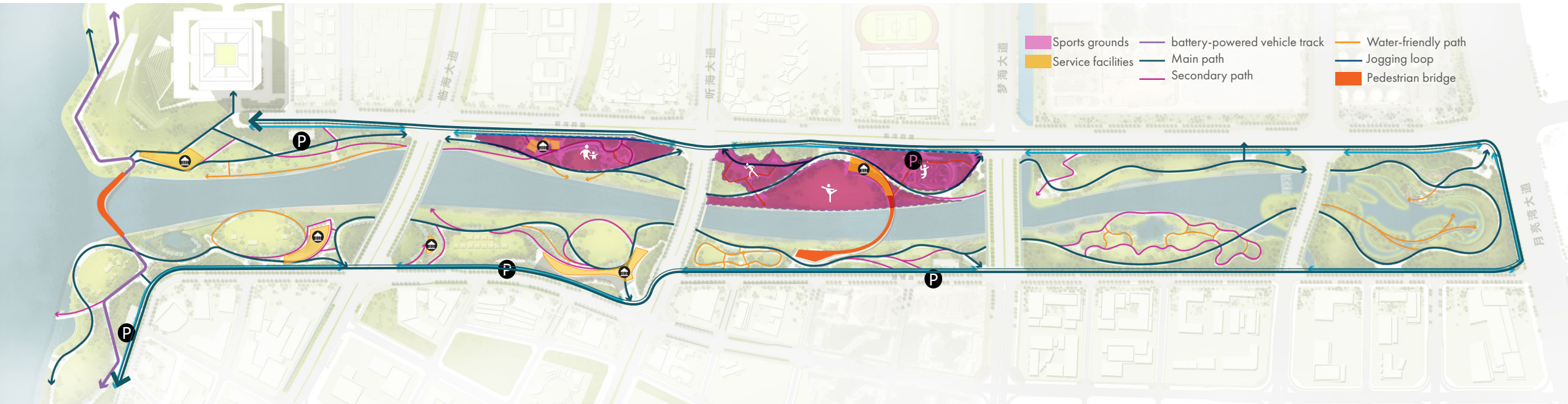
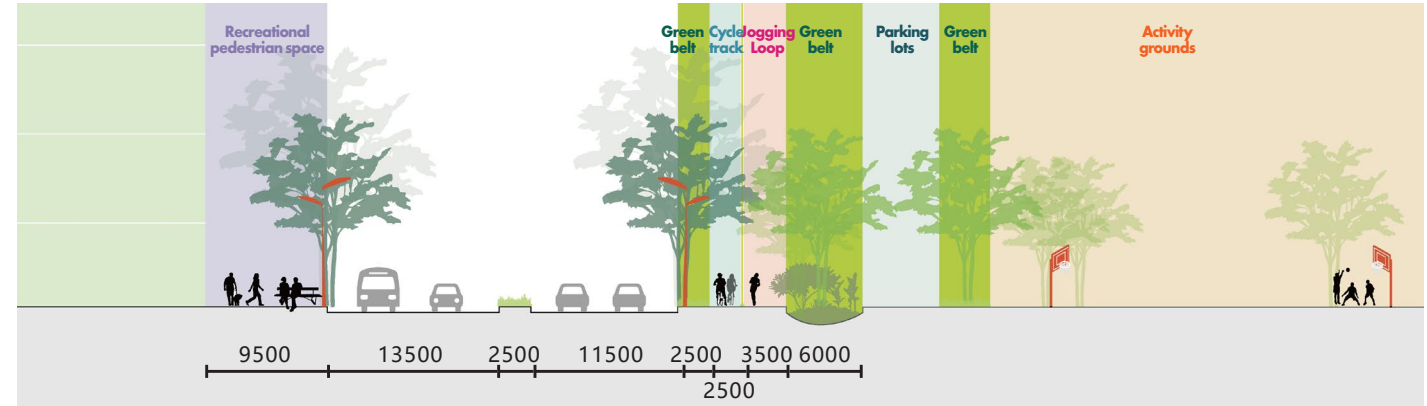
To strengthen the pathway connection between architectural space and waterfront public space. The two sides of the river are connected to form a bridge looking at the mountain. The concept of the ebb and flow of the tide is used to evolve the form of the bridge, providing more possibilities for people to meet and watch the mountains.



3 VITALITY

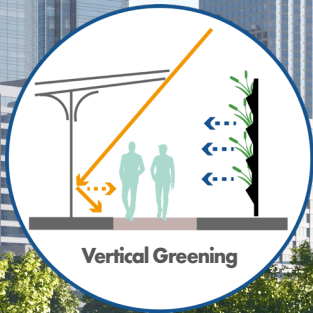
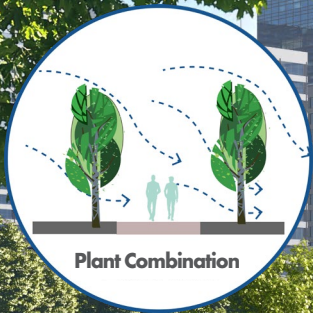
BUILD PED & BIKE SYSTEM TO CONNECT PUBLIC TRANSPORTATION, PARKING LOTS AND ACTIVITY GROUNDS

On the periphery of the park, a 5-kilometer cycling and jogging loop will be created, linking a number of sports and fitness venues, and smoothly connecting with public transportation, surface and underground parking lots, and service facilities. Inside the park, two levels of garden paths are set up to connect the park landscape nodes.



3 VITALITY

FOLLOW THE URBAN WIND CORRIDOR TO CREATE A COOL RUNNING TRACK



3 VITALITY

CREATE 6 TYPES OF DISTINCTIVE SPORTS SCENES TO MEET DIVERSIFIED SPORTS NEEDS



Extreme sports



Multi-functional sports



Lawn sports



Children's sports



Outdoor fitness

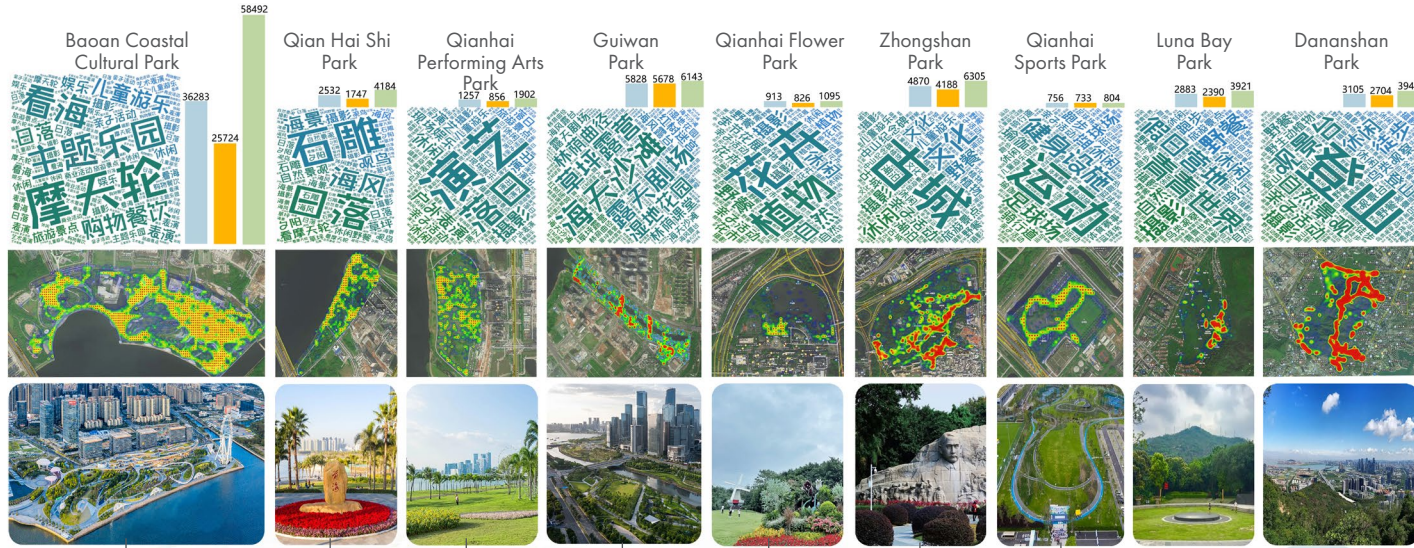


Healthy jogging



3 VITALITY

INSIGHT INTO HOT TRENDS

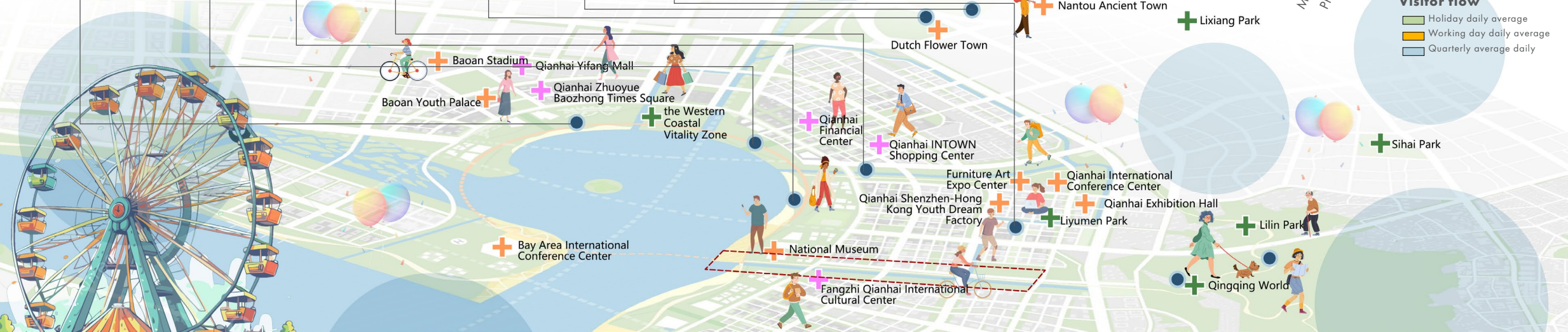


Number of social media notes (in hundreds)



Visitor flow

- Holiday daily average
- Working day daily average
- Quarterly average daily



3 VITALITY

CREATE 6 TRENDY THEMES BASED ON PEOPLE'S NEED



6 Trend Sports

Extreme Sports Park+Chinoiserie Court+Kites Lawn



5 Pets Interaction

Pets park+Pets workshop



4 Creative Market

Exhibition Park+Market Park



3 Children's Recreation

Fiddler's Crab Paradise+Airplane sound-activated fountain+Beachcombing Paradise



2 Sea Viewing and Camping

Camping Park+Musical Fountain



1 Museum and Art Exhibition

Outdoor Art Exhibition

3

VITALITY

TRANSFORM THE GRAY SPACE UNDER THE BRIDGE TO A CULTURAL DISPLAY SPACE

Museum and Art Exhibition Zone

The shady gray space under the bridge is not only a continuation of the National Museum, but also a stopping point of the waterfront cultural belt. The natural climbing of vines can soften the interface. The addition of light and outdoor furniture helps to form a new leisure space.



3 VITALITY

PROVIDE A COASTAL CAMPSITE FOR THE PUBLIC TO WATCH THE SUNSET OVER THE SEA

Sea Viewing and Camping Zone

The river inlet has an excellent sightline and is the closest place to Tencent Penguin Island on the inner side of Qianhai Bay, as well as the best location to watch the sunset to the west. A soothing lawn with a view of the sea is opened up to provide a coastal micro-vacation camp for the public.



3

VITALITY

CREATE OUTDOOR CLASSROOM FOR CHILDREN'S NATURE EDUCATION

Children's Recreation Zone

The location of the site is close to the Harrow International School. It is an outdoor classroom for students to have natural education. With the theme of the ocean, the site simulates the natural landforms of the intertidal zone, such as sand and mud, allowing children to experience the joy of drilling and jumping in the holes as sea creatures such as fiddler crabs and mudskippers.



3

VITALITY

ARRANGE COMMERCIAL SPACE FOR TECHNOLOGY PRACTITIONERS

Creative Market Zone

Fangzhi Cultural Center, which gathers diversified emerging technology industries such as digital economy, drones, e-sports, etc. The commercial facility is equipped with rich and interesting commercial service space for technology practitioners. Creative youths looked up at the starry sky and talked about technological ideals in the lawn theater outside.



3

VITALITY

CREATE A PET-FRIENDLY ACTIVITY SPACE

Pets Interaction Zone

The enclosed pets park creates a pet-friendly activity space, popularizes civilized dog-keeping knowledge, and increases neighborhood fun. The park has a pet training area, a pet climbing area, an owner communication area, and a large dog safety activity area, in which dogs can run happily off the leash, and pet parents can enjoy the quiet idyllic pasture.



“ The project hopes to lead the public to the nature and the new trend of qianhai life between the natural mountain and sea, inheriting the long lasting traditional culture of the National Museum. ”

