

Message from Organizing Committee

With the collaborations by Hong Kong Observatory, Civil Engineering and Development Department (CEDD), Architectural Services Department of HKSARG and The Hong Kong Institute of Architects, we have great pleasure to organize this design competition to invite innovative ideas for the re-construction of Hong Kong Observatory Tide Gauge Station at Tai Po Kau, New Territories.

Judging by the response and the quality of the entries, the attempt is definitely a great success. We have received more than 45 entries, all of which are of very high standard. The participants have shown their thorough understanding in meeting the design objectives, including a functional, buildable, cost-effective and innovative design; educate the public about the tidal measurement and enhance public awareness of the effect of storm surge due to extreme weather; meet the spatial, functional, structural and building services requirements and satisfy all relevant statutory requirements; and environmentally friendly and incorporating sustainable development, etc. We are especially impressed by the participants' interests and concerns in arousing public's awareness on combating climate change. We are confident that these valuable ideas and proposals will be considered and examined in project implementation.

We would like to extend our gratitude to members of the Jury Panel, Technical Committee and Professional Adviser for their time and efforts spent on the preparation and adjudication work. Their support and contribution are indispensable to the success of the competition.

Finally, we wish to take this opportunity to congratulate the winners and thank all participants for making this competition a fulfilling experience.

Organizing Committee

Design Competition for Hong Kong Observatory Tide Gauge Station at Tai Po Kau, New Territories

Award Announcement

Award	Confidential Registration Number	Title	Team Leader	Team Member(s)
First Prize	584158	Revealing the Tip of Iceberg	SO Yeung Piu	CHAN Ka Lai
Second Prize	428820	ShoreTubes	WU Hon Kit	CHAN Chi Fung
Third Prize	970813	The Recorder	LEE Chung Tat	CK GAN Hinki KWONG Julia LEE Pannie NIE
Commendation Entries <i>(in order of Confidential Registration Number)</i>				
	251682	The Rhythm by the Sea	LUK Pui Ling	MAK Chi Hong
	890146	Moonlight Cabin	CHOI Kit Wang	OR Hoi Ling
	976989	One Step Back, Feel and See	LUI Kwun Yuen	LEE Chun Ki ZHANG Qing Wu

First Prize Revealing the Tip of Iceberg

REVEALING THE TIP OF ICEBERG

Background
When there is a large temperature difference, there is an increase in water evaporation. Because of this, the evaporation rate is higher in the summer than in the winter. In the summer, the evaporation rate is higher than in the winter, so the water level in the sea is higher than in the winter. In the winter, the evaporation rate is lower than in the summer, so the water level in the sea is lower than in the summer. This is the reason why the water level in the sea is higher in the summer than in the winter.

The Form
Water will evaporate from the surface of the water. The evaporation rate is higher in the summer than in the winter. In the summer, the evaporation rate is higher than in the winter, so the water level in the sea is higher than in the winter. In the winter, the evaporation rate is lower than in the summer, so the water level in the sea is lower than in the summer. This is the reason why the water level in the sea is higher in the summer than in the winter.


Section 1-1 - South East - E130
Section 2-2 - South East - E130
Section 3-3 - North East - E130
Section 4-4 - North East - E130
Section 5-5 - E130
Section 6-6 - E130

Site Plan
The site is located in the area of the old railway station. The site is bounded by the old railway station to the north, the old railway station to the south, the old railway station to the east, and the old railway station to the west. The site is bounded by the old railway station to the north, the old railway station to the south, the old railway station to the east, and the old railway station to the west.

Details 1-20
Typical Section of Pier
Railway Station
Site Plan
Section 1-1 - South East - E130
Section 2-2 - South East - E130
Section 3-3 - North East - E130
Section 4-4 - North East - E130
Section 5-5 - E130
Section 6-6 - E130

The drawings show a detailed view of the structure, including the canopy, the frame, and the pier. The 3D rendering shows the structure in its context, with a boat and people on the pier. The drawings are labeled with dimensions and levels.

Second Prize ShoreTubes



ShoreTubes

海岸筒

A Tubular Concept

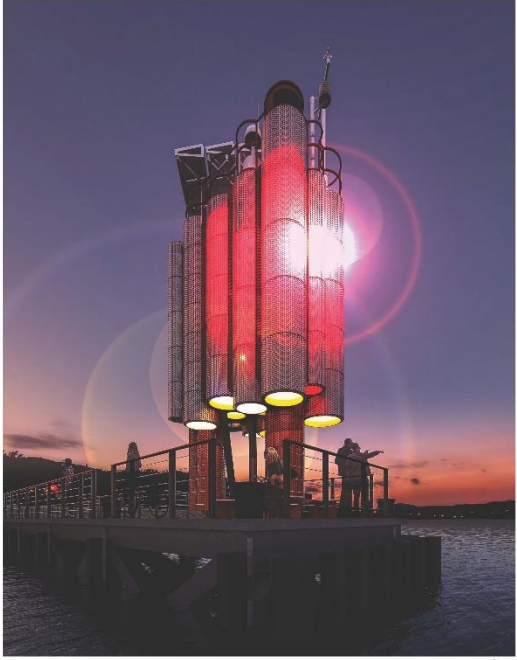
The ShoreTubes comprises three 12' diameter tubular structures. They are located horizontally by the water side of the pier to provide a 100% of the pier's length. The structures are designed to be modular and can be assembled on-site. The structures are designed to be flexible and can be adapted to different uses. The structures are designed to be flexible and can be adapted to different uses.


A Pierhead Lighthouse

The Pierhead Lighthouse is a 12' diameter tubular structure. It is designed to be a lighthouse for the pier. The structure is designed to be flexible and can be adapted to different uses. The structure is designed to be flexible and can be adapted to different uses.

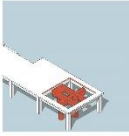
Config Flexibility

The ShoreTubes is designed to be flexible and can be adapted to different uses. The structure is designed to be flexible and can be adapted to different uses. The structure is designed to be flexible and can be adapted to different uses.

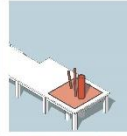




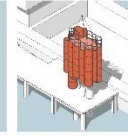
Master Layout Plan



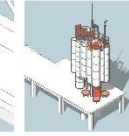
1. Foundation for TTS rebuilt



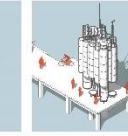
2. Stilling wall & posts installed



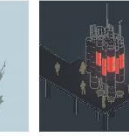
3. Station cabinet, pre-fabricated offsite and installed at site



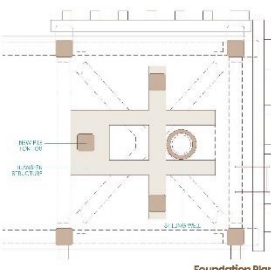
4. Equipment and outdoor furniture installed



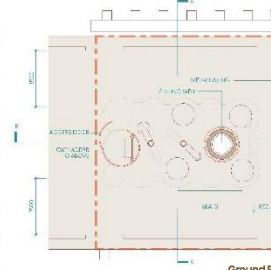
5. The public invited to the pierhead



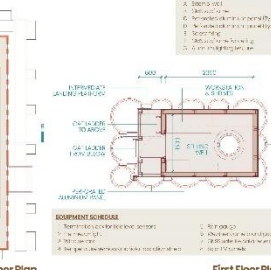
6. Lighted up at night for occasional event



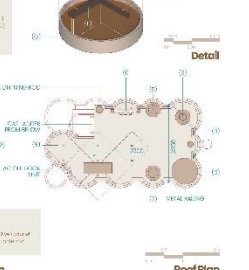
Foundation Plan



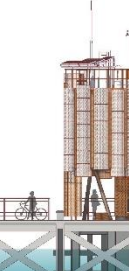
Ground Floor Plan




First Floor Plan



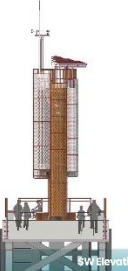
Roof Plan



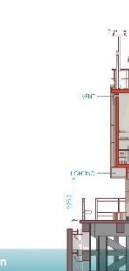
SE Elevation




SW Elevation



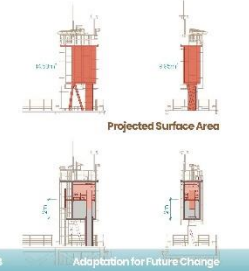
Section A-A



Section B-B



Adaptation for Future Change



Projected Surface Area

Third Prize The Recorder

THE RECORDER

HONG KONG OBSERVATORY TIDE GAUGE STATION AT TAI PO KAI

The Concept
The concept "Recorder" of this new TGS directly explains and defines the primary function of recording changes in the physical environment. However, on another note, this concept can also be referred to as wind pipe instruments, "recorder" or "mushu" (笛子) which can be translated as an oral musical instrument and excellent in the Latin language. By borrowing the essence of an instrument design, the TGS will no longer just be a functional "appliance" structure but a carefully put together piece of architecture that reflects its purpose in a timeless, honest and soulful form.

The Design
Theology of a simple geometric form with curvilinear corner elements replicates the aesthetic (analogies) of the music instrument. And openings at different heights and directions enable natural ventilation within its hollow (diaphanous) body, much like the air movement that flows within the body of the "recorder", providing natural thermal comfort to the occupant.
The use of infra-concrete allows seamless joint between the body and its curved shaped footing, forming an elegant sculptural building form that "floats" on the water front. Blending in at the site of the building, a porous flying staircase wall performs as a primary structure to withstand lateral forces while allowing wind penetration and view framing purpose at the site.

Plan 1:50 (+3.0)

Plan 1:50 (+4.8)

Plan 1:50 (+7.0)

Ground (0.00) & Foundation Plan 1:75

Substrate Detail 1:20

Section 1:100

Elevation 1:100

Task Group

- 1. Main Structure
- 2. Secondary Equipment
- 3. External Vertical Access
- 4. Internal Vertical Access

Site Plan 1:250

Legend

- 1. Lighting Rod
- 2. Wind Senses
- 3. Support Mast (300mm dia. x 1.5m tall)
- 4. Weather Camera or Precision Gauge
- 5. Termination Box with our attention to local sensor components
- 6. Temperature Sensor and Solar Radiation Shield
- 7. GNSS Satellite Data Reception Antenna
- 8. Rain Gauge with Parallel to water cylindrical case - 1m dia x 0.5m tall
- 9. Vertical Metal Ladder with Photocentric Metal Mesh Casing (Cura Substrate)
 - 1. Flat Head Light (1.5m from JCB)
 - 2. Adjustable Supporting Base for Solar PV Panels
 - 3. Solar PV Panels (1.5m x 0.5m) with adjustable angle (30-60 Degree)
 - 4. Hydraulic or Manual Metal Cover Floor at Bottom of Public Access
 - 5. 2m opening with Flat Supporting Louver
 - 6. Adjustable Metal Mesh
 - 7. Maintenance Floor (2.0m dia) at 4.5m from Deck
 - 8. Tidal Gauge (600mm dia)
 - 9. Internal Photocentric Ladder (1.5m tall)
 - 10. Extra Concrete Walls with Water Proof Coating
 - 11. Existing Structure To be retained

Tide Gauge Station with Sea-Net (North West Corner)

Creating a Memorable, Scenic Space for day

Maintenance Roof

Tide Gauge Station in South West Sun

Sectional Perspective: Natural Ventilation and Equipment Layout Storage

Legend

1. Lighting Rod
2. Wind Senses
3. Support Mast (300mm dia. x 1.5m tall)
4. Weather Camera or Precision Gauge
5. Termination Box with our attention to local sensor components
6. Temperature Sensor and Solar Radiation Shield
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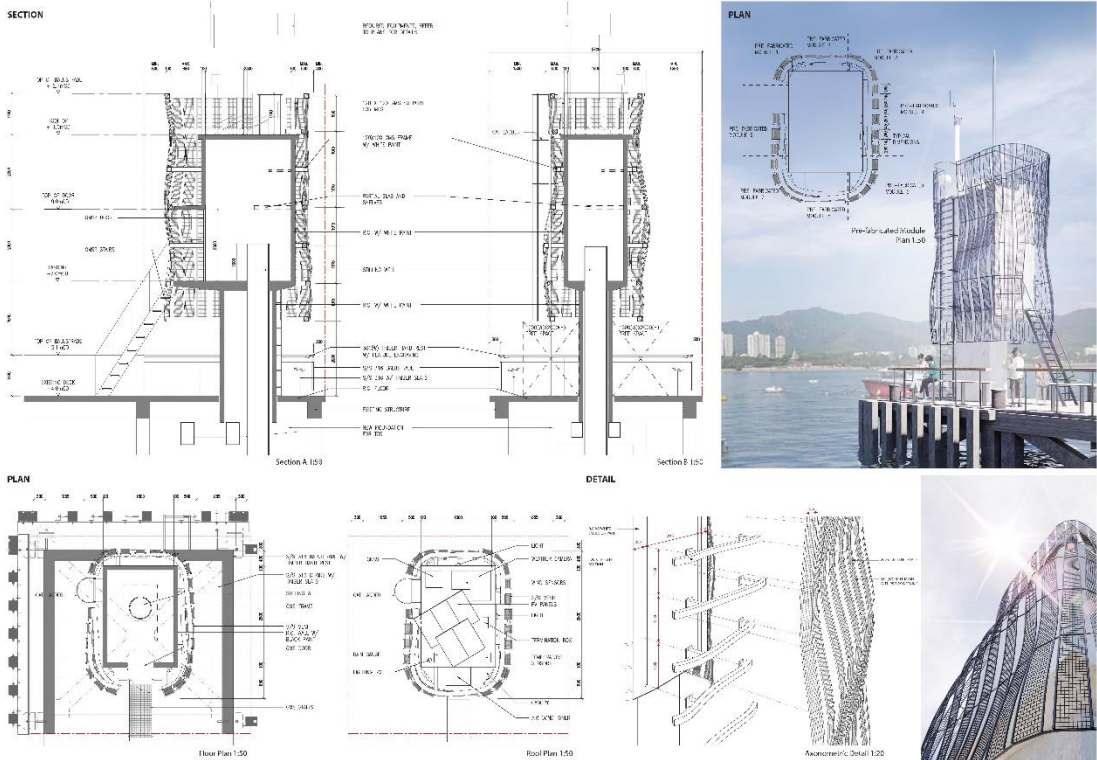
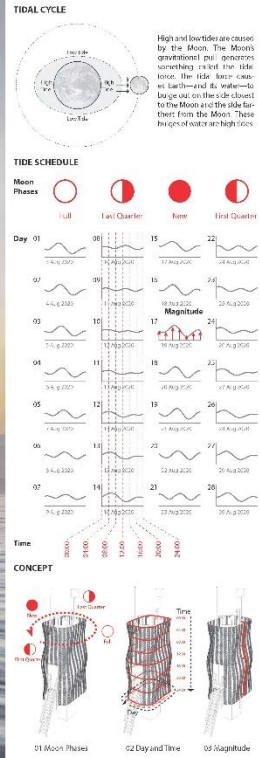
Tide Gauge Station in South-East Meeting Sun

"Mouth Piece" Detail 1:20

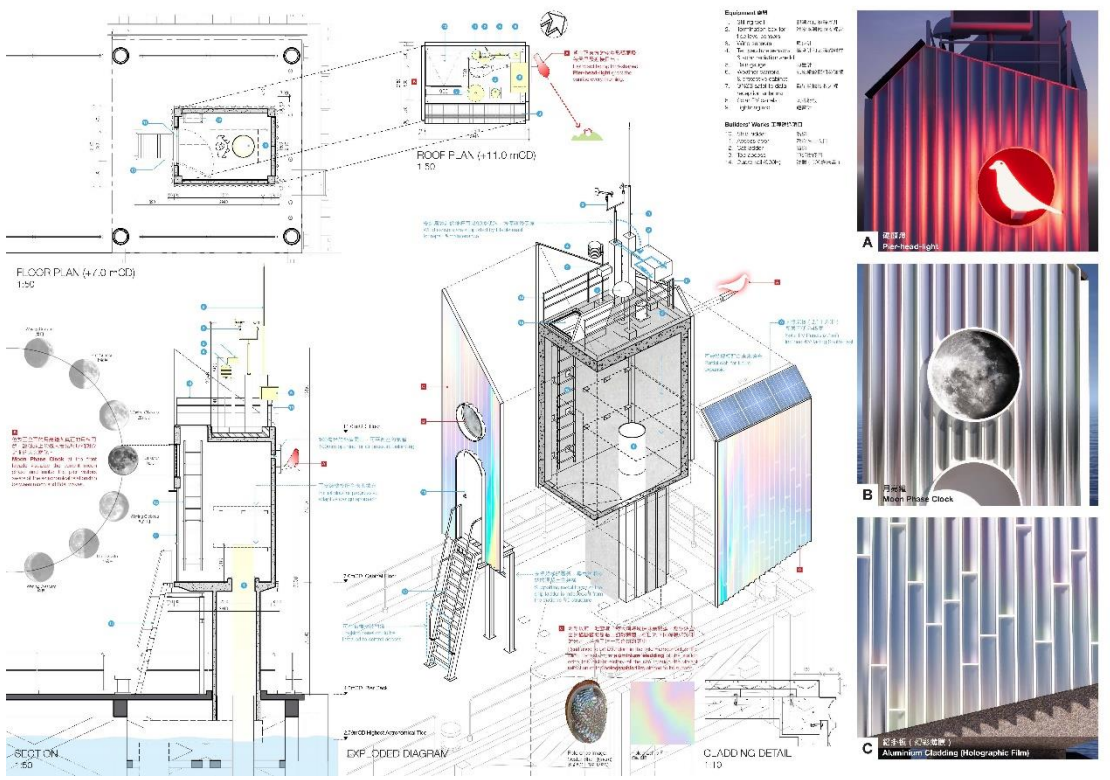
Section 1:100

Elevation 1:100

Commendation Entry The Rhythm by the Sea



Commendation Entry Moonlight Cabin



Commendation Entry One Step Back, Feel and See

