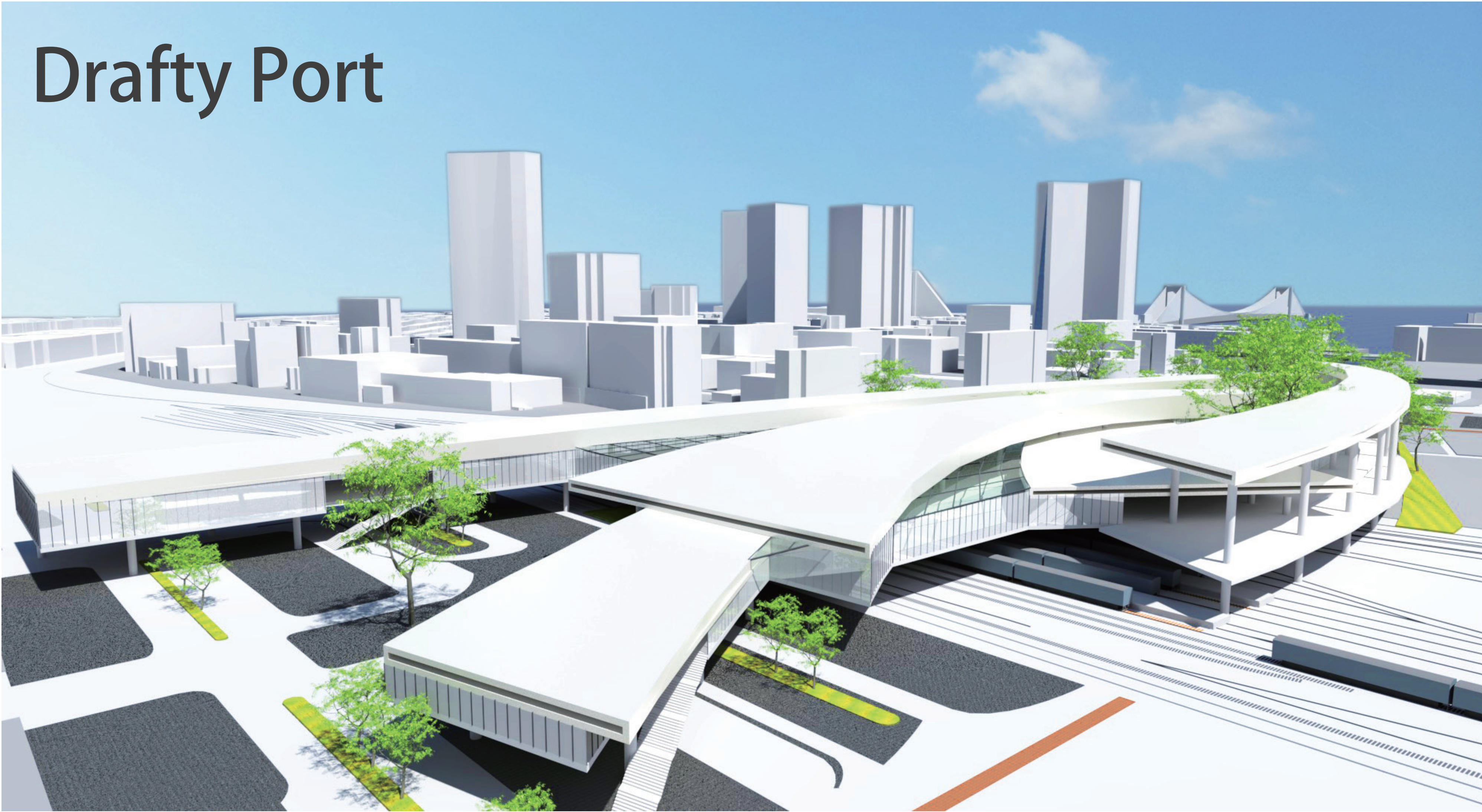


Drafty Port



■Site and surrounding analyses

• Urban Development Projects

The construction of an office street and the city residence area is planned on this site due to the development of the Urban Redevelopment projects. For that workers and residents will increase this site

• City resources

There are a lot of attractive city resources around a site, Sengakuji, Shinagawa-juku on the old Tokai-do Road, and Shinagawa berth.

• Wind Flow

Sea breeze blows from the east coast direction. Prevailing Wind blows from the south-southeast. However, sea breeze blows while hit a high temperature zone of ground surface. Wind speed is reduced near ground surface.

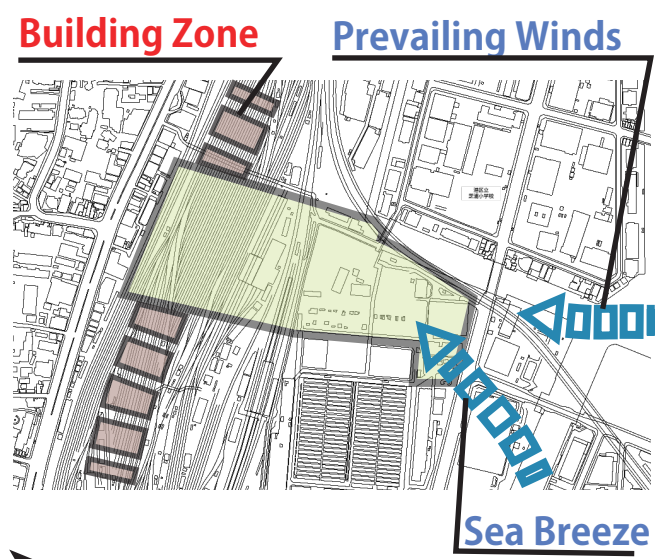
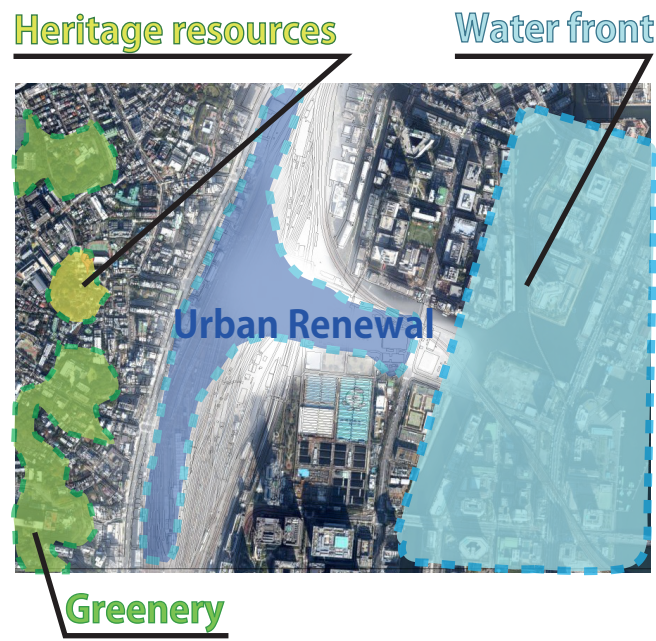
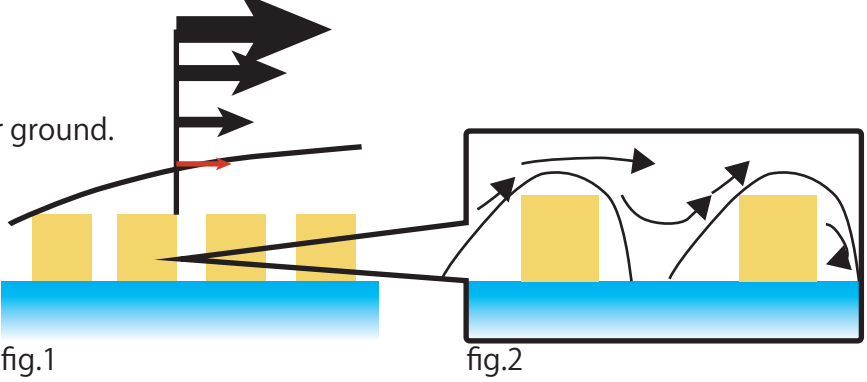


fig.1 speed of the cooling air lowered near ground.
fig.2 mixed wind lowered power.



■Concept

“Drafty Port”’s form handling crowd orderly as a station. And the form is send wind to city area to improve their wind environment. Such a sustainable development gives new value to users and environment.

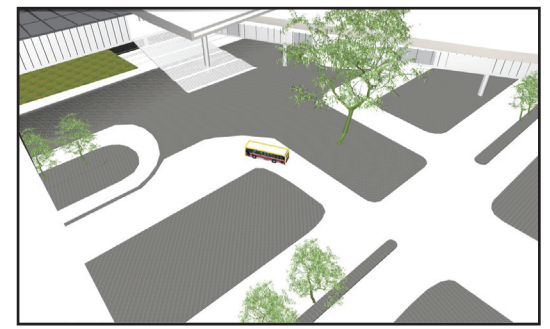
The city park collect people from ease and west side not only guide to station. User realize city’ s attractions such as historical and rich natural environment.

The upper tube improves the wind environment of the city by sending the cool sea breeze and prevailing wind from the canal at a level close to the ground.

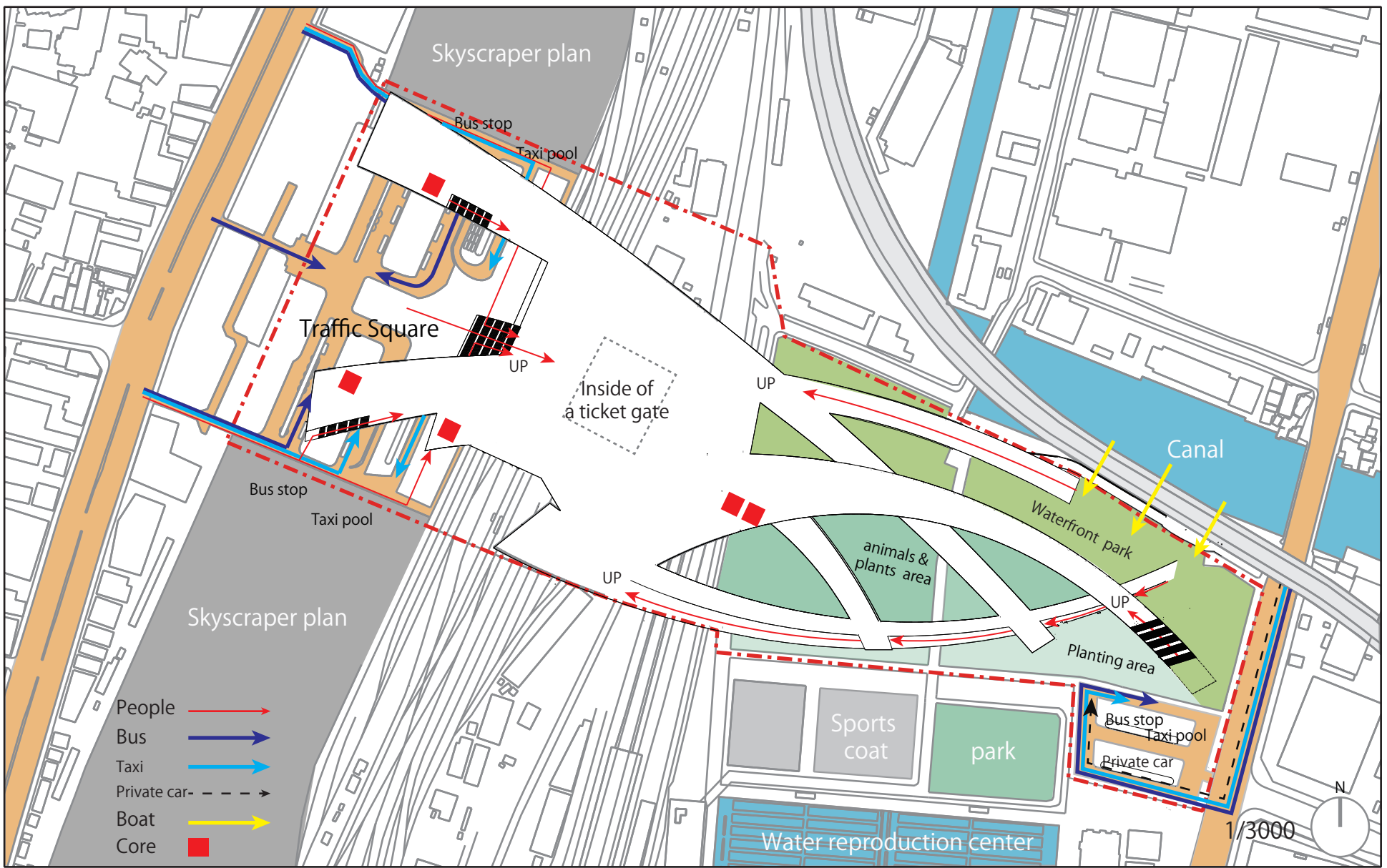
■Area Zoning

Station building connects the east and west site as a day-to-day way. It functions as a base for evacuation during tsunami.

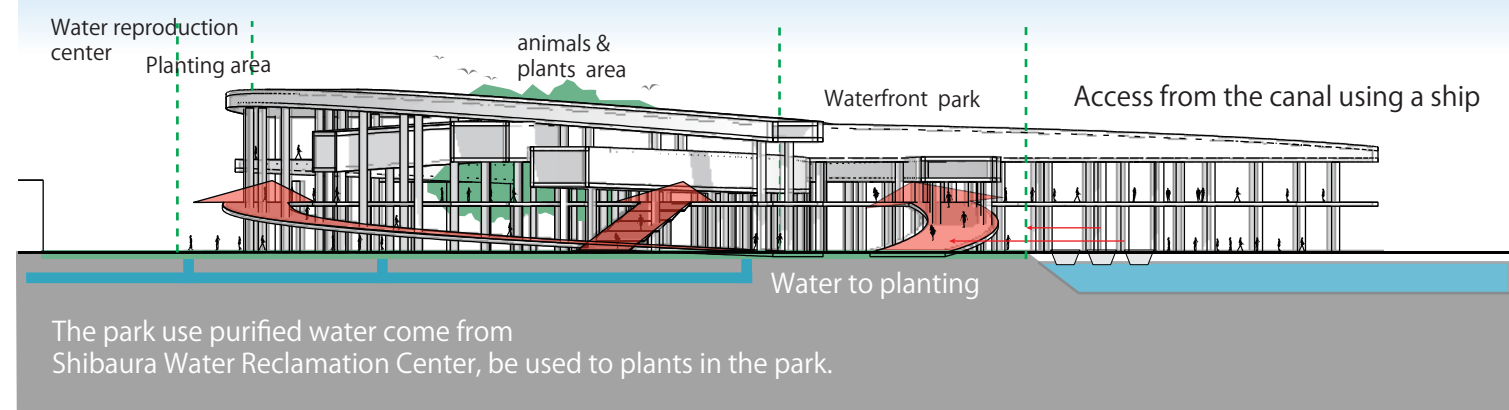
The port of destination across the station building, is provided open space that can not be to experience the city densely area. There has a sports area and water park to be used for people who come from the resident area and the other side of the canal. The station shows clear way to user to traffic square and Water Front Park.



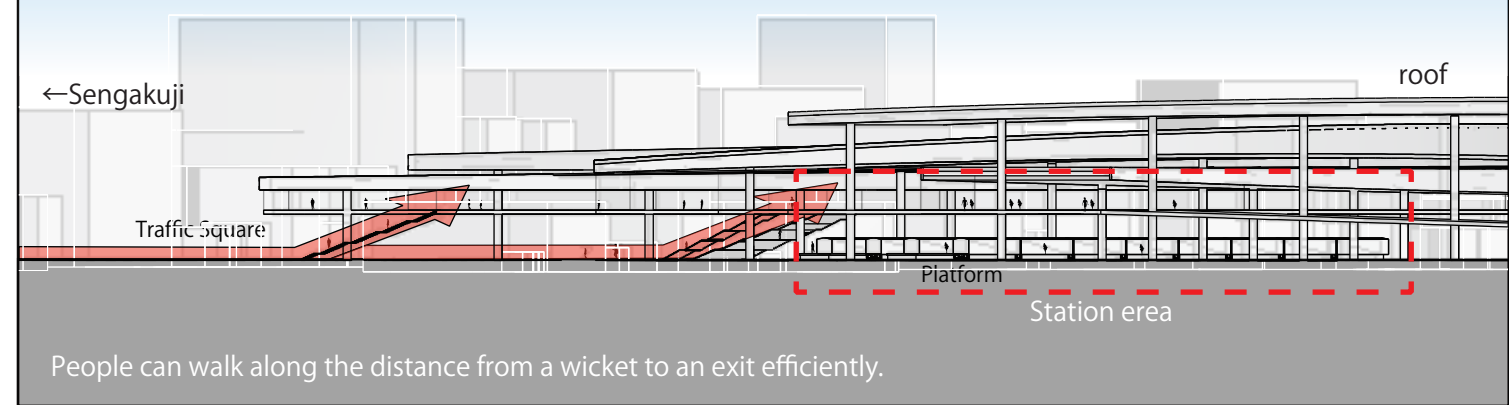
Revolution of the bus was checked.



Walking Route From Water Front Park



Walking Route From West Traffic Square

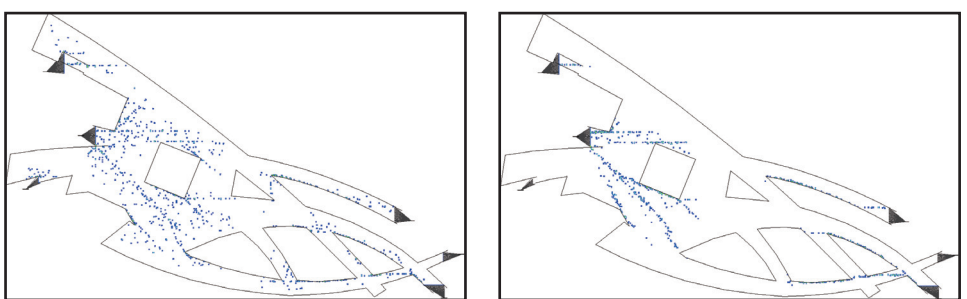


■Land Scape Design

Sun lighting comes, In the space between the building, large variety used. There. Landscape is planned for each location, habitat of plants, habitat of Yrikamome, and the water park. On the ground under the tube, there are basketball court and futsal court.

■Walk simulation

From verification of building EXODUS, it turned out that people can go back and forth smoothly.



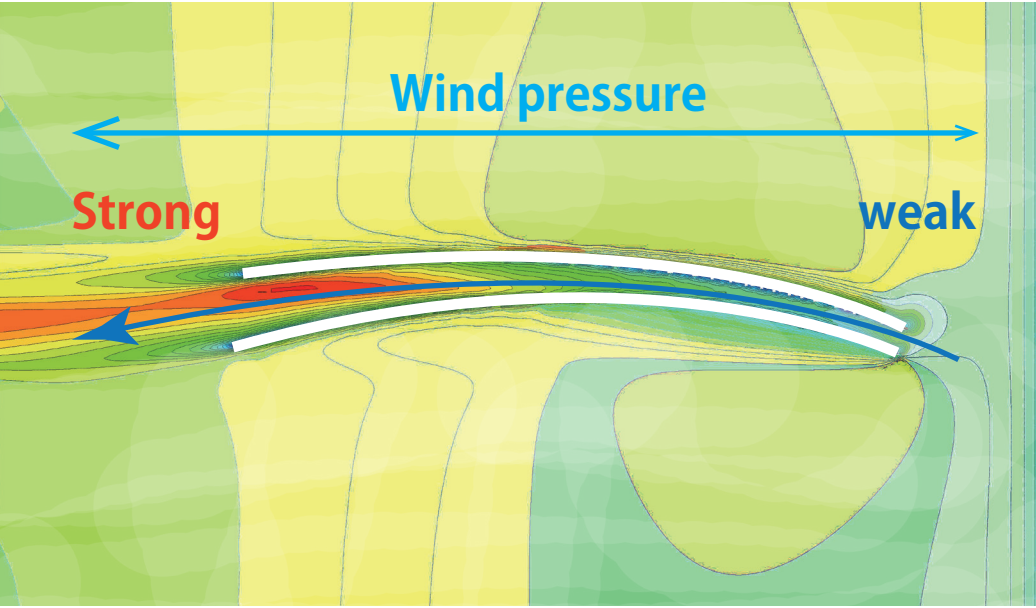
■Shaping Factor

• Shaping Factor 1

Wind inland from canal and Sea

This tube has wind intake opening, So it is taken in sea and prevailing winds, and send off to west side city area.

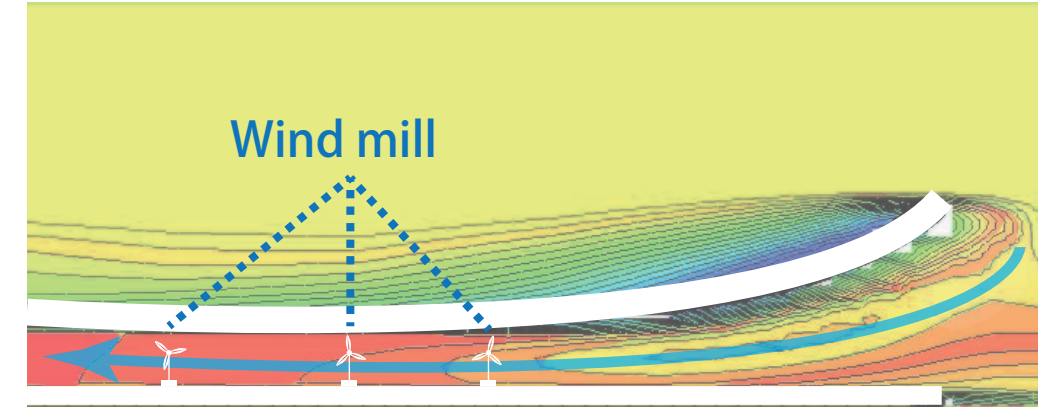
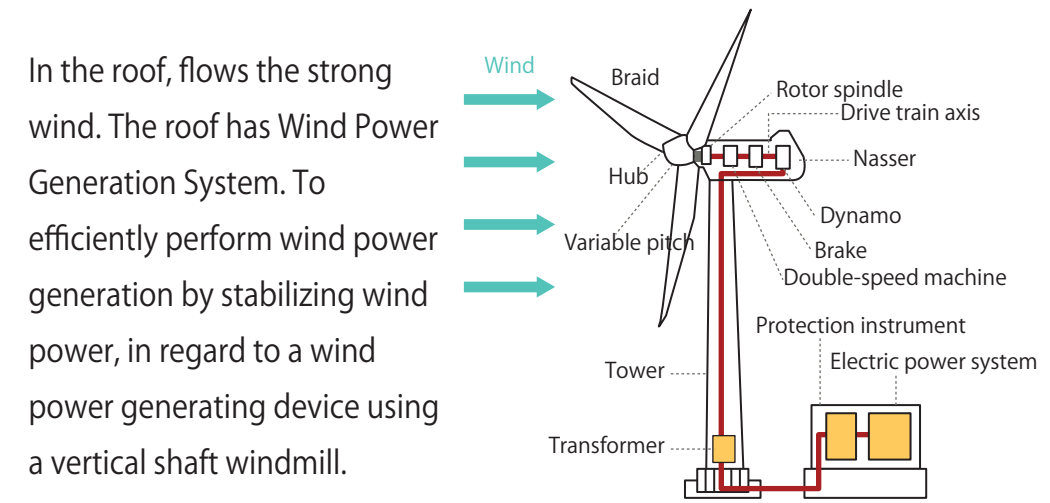
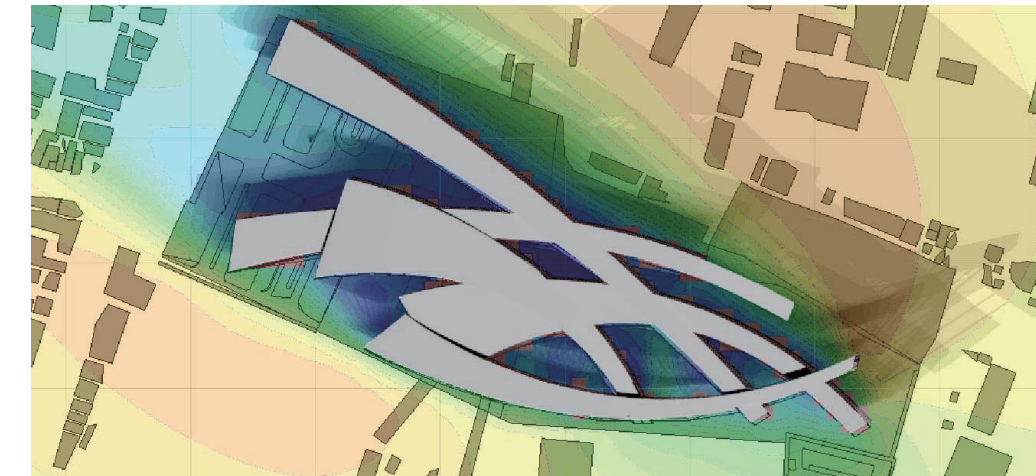
The tube’ s suction port is wide size for take a large amount of wind. West side is air jet port, it sends a cool wind to the city. The wind will cooling a ground level.



• Shaping Factor 2

The animals and plants inhabit variously

Migratory birds, such as “Yurikamome” are inhabit in canal east of site. The site has forests which bringing variety of climate environment from sun shadows and the wind environment. Many insects and nut which a bird eats grows in the site. So the site becomes the habitat for the birds.



Preservation living thing [Yurikamome]	Food	Feeding Area
Grasshopper	Butterfly	Great plantain
Drone Beetle	Grass lizard	Rape blossoms
crab		Japanese oak
		Dokudami
		Tidal flat

• Shaping Factor 3

Heritage resources

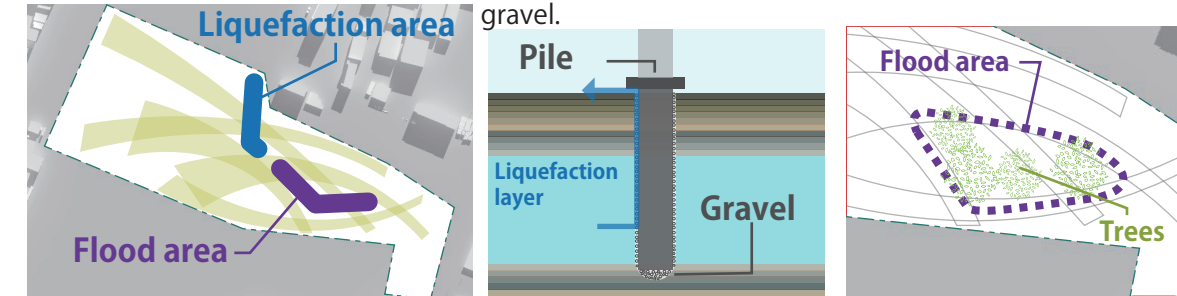
In the west side area has valuable resources like Sengakuji and green of nature along the hills. This temple is known as tourist heritage spots. So the tip of buildings position becomes to set toward the heritage zone. This building present city attraction



• Shaping Factor 4

Anti-inundation measure

The site has high probability of the occurrence of flooded and liquefaction area.



• Shaping Factor 5

Passing large Tsunami flow

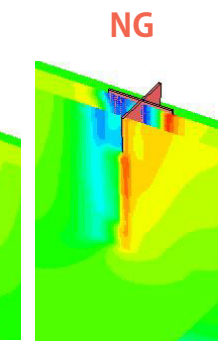
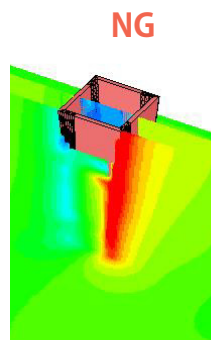
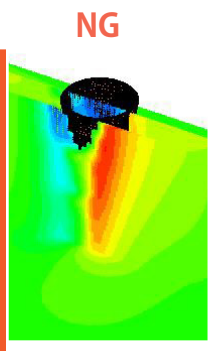
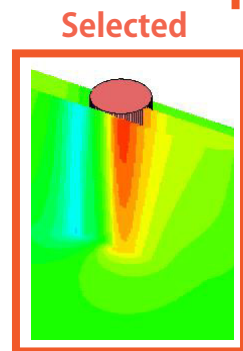
When tsunamis are generated and approaching Tokyo, the height of a wave is over 1.5m. If tsunami approaching high tide, height is over 3.0m in forecast. So the building have to design to thorough the tsunami. And we studied shape of column. Then the building will safety protect station user from tsunami.

Selection of the Column

Round Type

The draft of these, the wave of pressure is applied only the part of the Column. Juded don’ t have the strength to through the Tsunami.

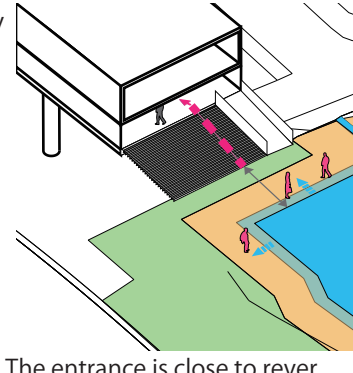
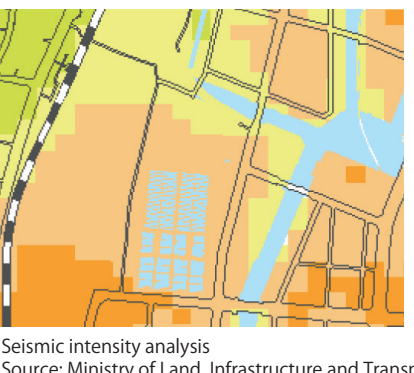
Receive pressure of the waves in well balance.



• Shaping Factor 6

Easy to escape from water front flood damage

Northern of Tokyo Bay Earthquakes (M7.3) will hit the site measured a lower 6 to upper 6. So the stairs were established close by water front, when the things happened, bay side users have to be easily to escape safety zone in the building from park.



Tsunami Simulation approaching high tide

