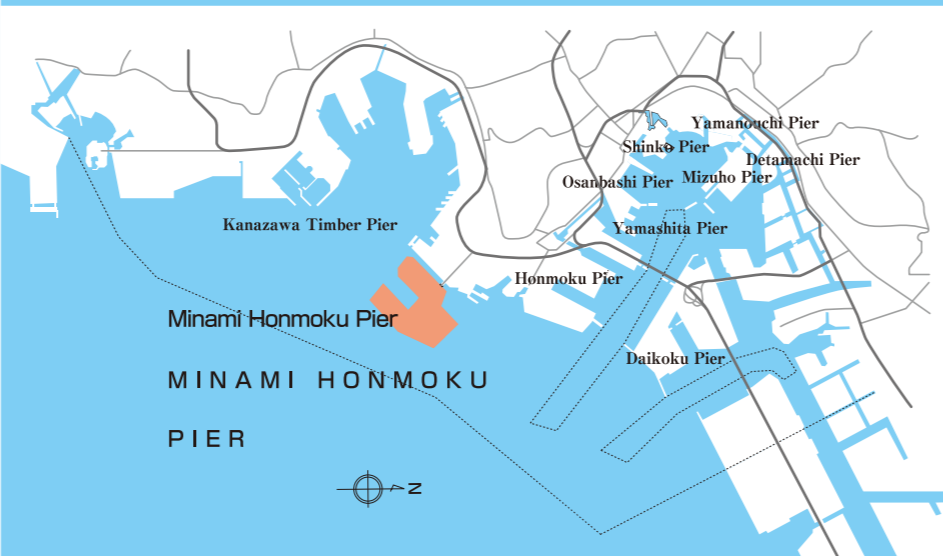




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# Port of Yokohama Minami Honmoku Pier

Published by Minami Honmoku Project Promotion Division,  
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Issued in June 2009 (Reprinted in April 2015)  
Occasionally revised.  
The Port and Harbor Bureau Website: <http://www.city.yokohama.lg.jp/kowan/>  
The Minami Honmoku Pier Website:  
<http://www.city.yokohama.lg.jp/kowan/basicinfo/torikumi/mhonmoku-index.html>

## Development of the Integrated Logistics Base

By promoting state-of-the-art logistics terminals which have various functions capable of accommodating new logistics systems, the Port aims to build an integrated logistics base accommodating diversification of port logistics.

A part of reclaimed land has been offered for public sale since FY2003. As of 2014, the land was already sold to five companies and they began operating in 2014.

## Minami Honmoku Ohashi Bridge

The bridge access to Minami Honmoku Pier will become a symbol gate of the Pier.

Structure : Three-span continuous cable-stayed bridge  
Length : 300 m  
Width : 26.3 m -28.3 m  
Width allocation : 4 car lanes, Sidewalks on both sides



「紙へリサイクル可」



Port and Harbor Bureau, City of Yokohama

# Port of YOKOHAMA Minami Honmoku Pier

With Asia's remarkable economic development, international seaborne container trade has grown within Asian region. In the meantime, the size of container ships and concentration of vessel calls continue to grow on major international routes to North America and Europe to improve transport capability and efficiency.

The Port of Yokohama is strengthening its global competitiveness as a strategic international container port to facilitate its role in supporting Japan's economy in the logistics field. Under such circumstances, the Port of Yokohama is developing deepwater high-standard container terminals at Minami Honmoku Pier and MC-1 and MC-2 container terminals began operating in FY2001.

MC-3, a new container terminal with a depth of 18 meters\*, is one of the deepest in the world, started construction in FY2007 and has begun operation in FY2015. MC-4 terminal with the same depth of 18 meters\* also started construction in FY2013.

Furthermore, in order to enable the deepwater high-standard container terminals to fulfill their full function, the "Road Construction Project for the Portside Access Road to Minami Honmoku Pier" which will connect the Bayshore Route of Shuto Expressway to Minami Honmoku Pier via an elevated road started in FY2009 and it is scheduled to complete in FY2016.

The Minami Honmoku Pier also plays a role to support comfortable civic life. In addition to Block 2, an environmentally friendly final disposal site is currently under development in Block 5.

\* Structurally possible up to 20 meters

## Overview of the Project

### Purposes of the Project

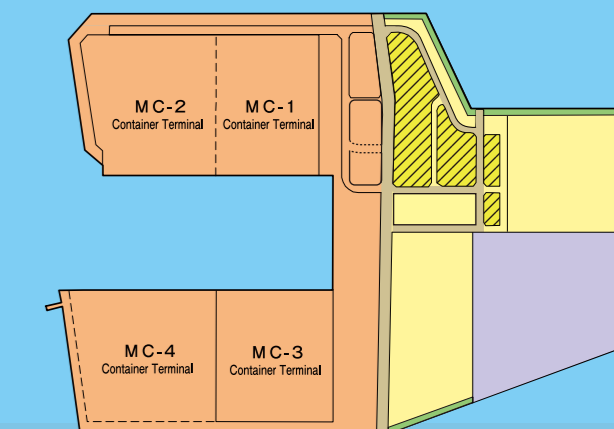
- (1) Developing deepwater high-standard container terminals capable of accommodating the increasing volume of container cargo and growing size of containerships
- (2) Creating an integrated logistics base capable of accommodating diversification of port logistics
- (3) Providing long-term and stable facilities for construction surplus soil and municipal waste

### Land Use of the Pier

(Master Plan of the Port of Yokohama)

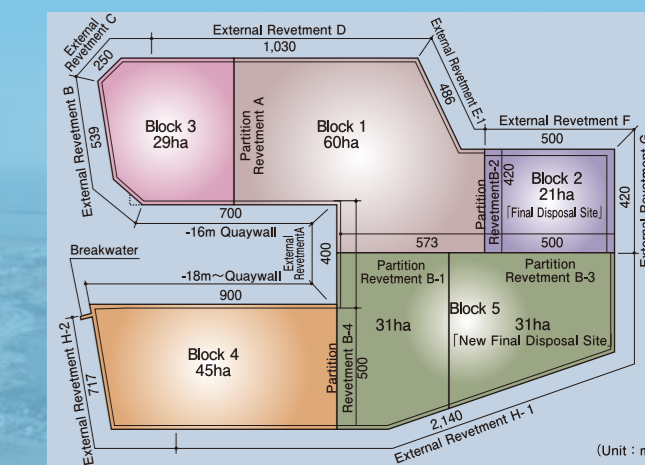
Terminal Site	120.8ha
Port Facilities Site	51.7ha
(Site Already Sold)	11.4ha
Green Space	4.2ha
Traffic Site	9.4ha
Offshore Disposal Site (※)	31.1ha
<b>Total</b>	<b>217.2ha</b>

※Future plan : The offshore disposal site is planned to be used for port facilities (7.7 ha) and green space (23.4 ha).



### Reclamation Plan

- (1) Reclamation area: About 217 ha
- (2) Amount of reclamation: About 69 million m<sup>3</sup> (including waste)
- (3) Reclamation method : The reclamation is divided into five blocks.



(Unit : m)

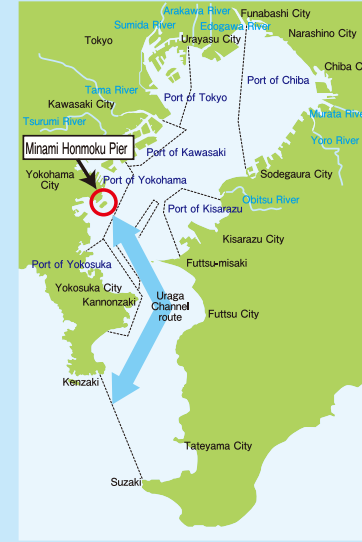
# Minami Honmoku Pier High-Standard Container Terminal Development Project

## 1 Features of Minami Honmoku Pier

① The Minami Honmoku Pier is the first and last port on the trade routes with North America (the first port for East Asia from North America and the last port for North America from East Asia).



② The container terminals in Minami Honmoku are located nearest to the mouth of Tokyo Bay, which reduces the navigation time for ships.



③ Since the pier is located in the deep sea, it is possible to develop deep-water berths to accommodate large container ships.



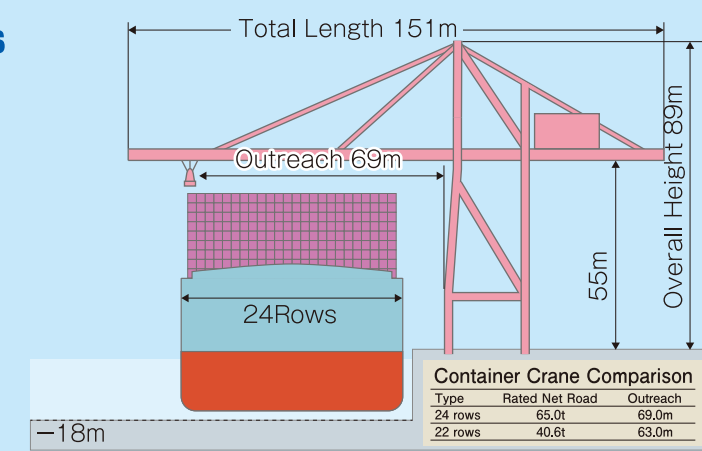
④ The hinterland of the Port of Yokohama extends from the Tokyo metropolitan area to eastern Japan and its extensive road network including expressways connects the Port and the hinterland. Further access is expected in the future when the Portside Access Road to Minami Honmoku Pier is completed, or when the beltway such as the Metropolitan Inter-City Expressway is built.

## 2 Overview of the Minami Honmoku Pier Container Terminals

- Equipped with one of the world's largest mega gantry cranes (MC-1 and MC-2 terminals...22 rows outreach, MC-3...24 rows outreach)
- MC-1 and MC-2 with a depth of 16m began operations in FY2001.
- MC-3 is Japan's first berth with a depth of 18 m began operations in FY2015.

Berth Name	Quay Length (m)	Quayside Depth (m)	Gantry Crane Units	Terminal Area (m <sup>2</sup> )	No. of Reefer Plugs	Container Storage Capacity (TEU)	Handling Equipment
MC-1	350	16	3	175,000	420	9,100	RTG cranes
MC-2	350*1	16	3	229,000	852	12,200	RTG cranes
MC-3	400	18*2	4	225,000	666	13,300	RTG cranes
MC-4	500	18*2	—	—	—	—	—

\*1 350m of the planned 400m began operation.  
\*2 Structurally possible up to 20 meters



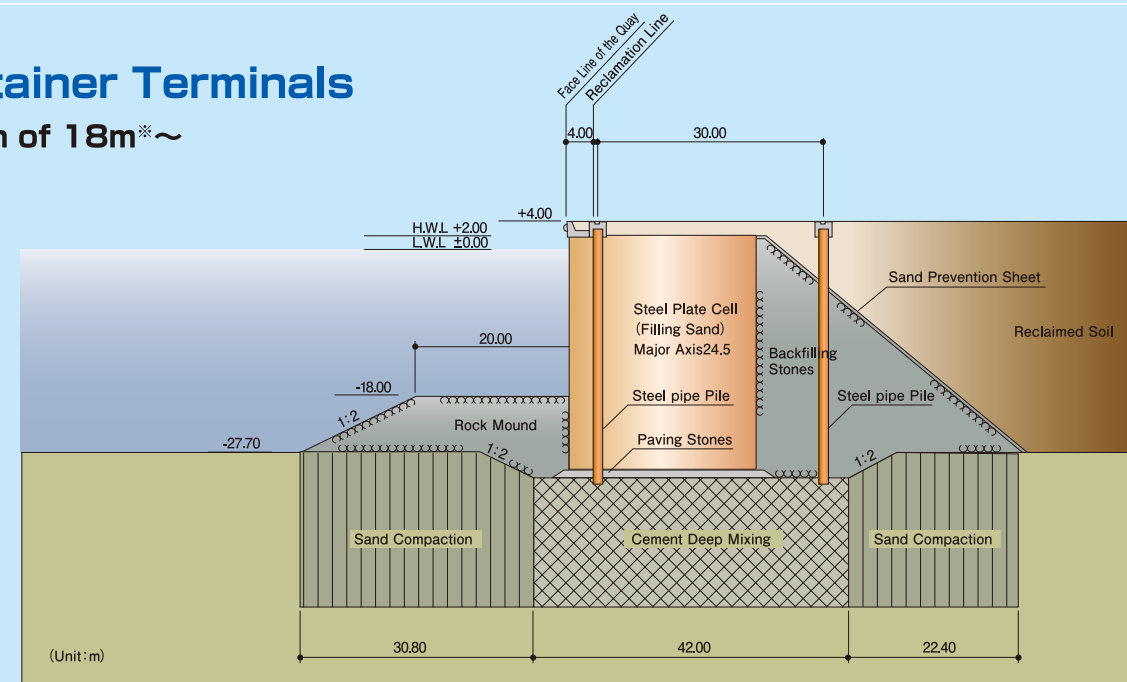
## 3 State-of-the-Art MC-3 and MC-4 Container Terminals

~ Development of Japan's first berths with a depth of 18m ~

The Port of Yokohama is now developing deepwater earthquake-resistant berths at MC-3 and MC-4 container terminals to accommodate the rapidly increasing size of container vessels on major shipping routes, as well as to strengthen the international competitiveness of the Port. The construction of the MC-3 container terminal began in FY2007 and it has begun operating in FY2015. As for the MC-4 container terminal, the construction started in FY2013.

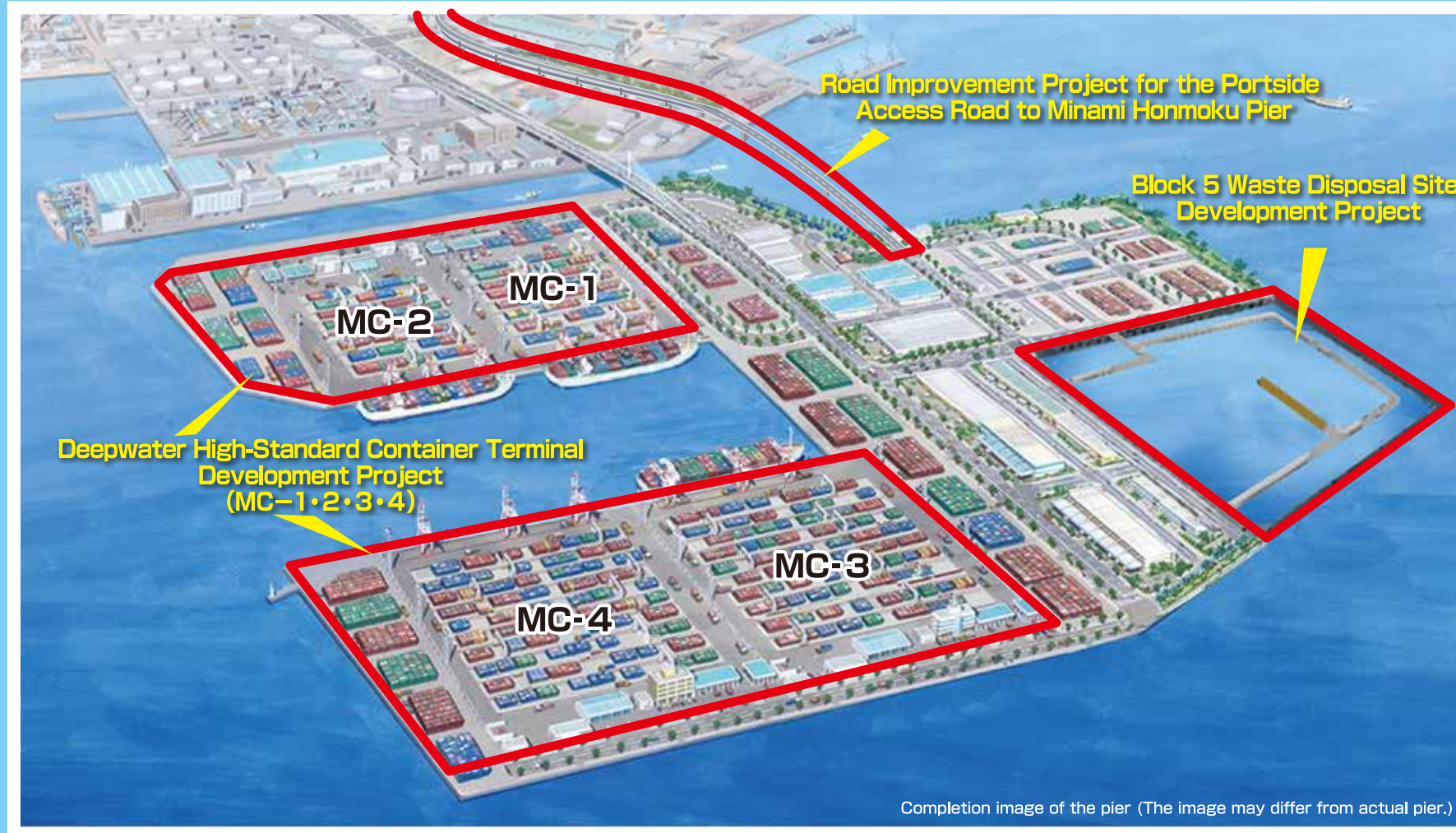
### <Description of the Quay Wall>

- Development Style : The quay is constructed as a public works project directly carried out by the national government.
- Structure : Steel Sheet Cell Installation (earthquake-resistant quay)
- Alongside depth : 18 m\*(accommodating ultra large container vessels)
- Quay length : (MC-3)400 m, (MC-4)500 m
- \*Structurally possible up to 20 meters.



(Approval Request of Public Water Body Reclamation: By the Ministry of Land, Infrastructure, Transport and Tourism, Kanto Regional Development Bureau)

# Part of YOKOHAMA Minami Honmoku Pier



Completion image of the pier (The image may differ from actual pier.)

## Reception of Construction Surplus Soil

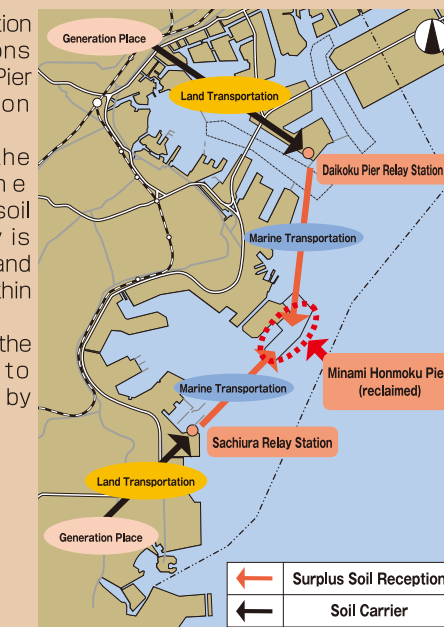
### Overview of Surplus Soil Reception

The port receives surplus soil generated by public construction in the City of Yokohama. The surplus soil is used for reclamation such as MC-4 high-standard container terminal by stably and continuously receiving the soil.



▲Reclamation underway

The basic transportation routes to relay stations and Minami Honmoku Pier from a soil generation place are as follows: In consideration of the environment, the construction surplus soil generated in the city is transported to South and North relay stations within the port. From the relay station, the soil is transported to Minami Honmoku Pier by ship.



## Road Construction Project for the Portside Access Road to Minami Honmoku Pier

### 1 Purposes of the Project

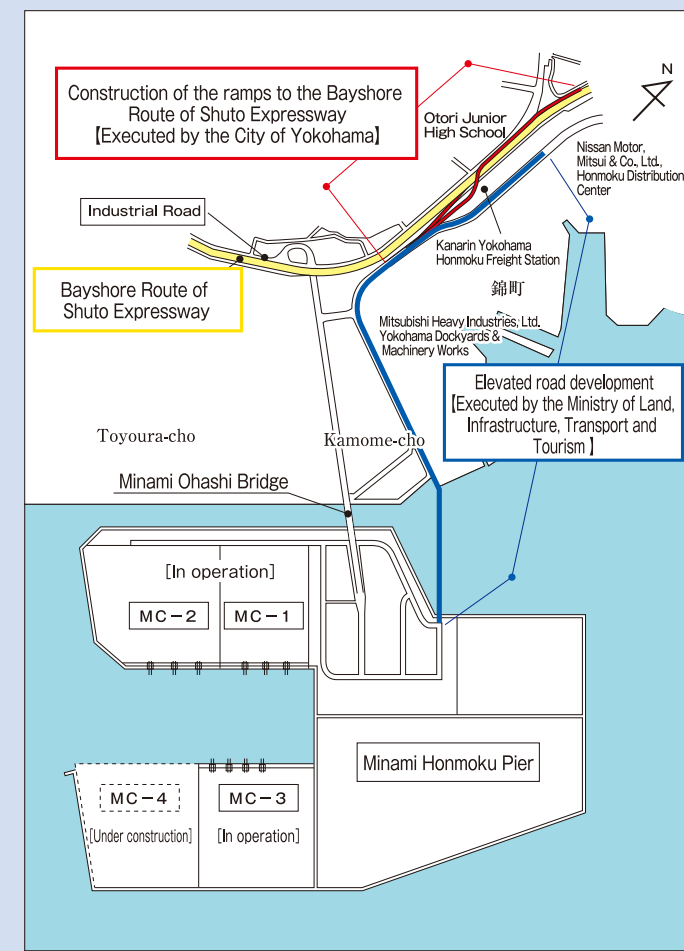
- (1) To cope with the increase in road traffic and accumulation of logistics-related facilities generated by MC-3 and MC-4 container terminals, the Portside Access Road is being developed to improve traffic capacity besides the existing Minami Honmoku Ohashi Bridge.
- (2) By connecting Minami Honmoku Pier to the Bayshore Route of Shuto Expressway which comprises wide-area highway network, function of MC-3 and other deepwater high-standard container terminals in Minami Honmoku Pier will be sufficiently exercised and the international competitiveness as the international container strategic port will be strengthened.
- (3) The Minami Honmoku is an island pier and by developing another route besides the existing Minami Honmoku Ohashi Bridge, it will improve the access as well as ensure traffic stability.
- (4) The road improvement also contributes to the reduction of environmental impact of container trailers on the existing industrial road close to the pier.

### 2 Summary of Project

- (1) Project entity
  - A City of Yokohama (Government-subsidized project) : Construction of ramps to the Bayshore Route of Shuto Expressway
  - B Ministry of Land, Infrastructure, Transport and Tourism (Public works project directly carried out by the national government): Elevated road development
- (2) Project period From FY2009 to FY2016
- (3) Project scale
  - A City of Yokohama (Government subsidized project) : Length about 1.2km, Two-way two-lane highway
  - B Ministry of Land, Infrastructure, Transport and Tourism (Public works project directly carried out by the national government) : Length about 2.5 km, Two-way two-lane highway



▲Ramps to the Bayshore Route of Shuto Expressway Completion image (The City of Yokohama)



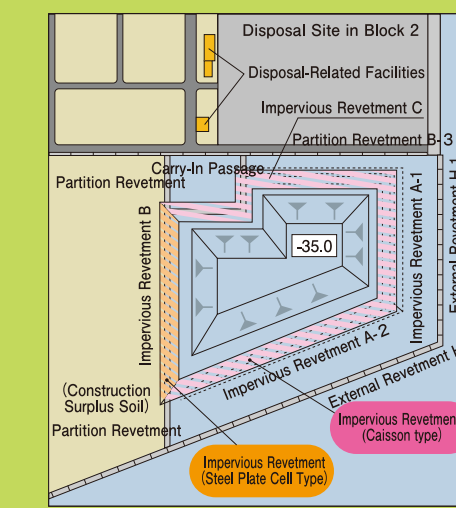
## Block 5 Waste Disposal Site Development Project

### Purpose of the Project

In order to provide long-term and stable facilities for municipal waste reception, the new disposal site will be developed.

### Overview of the Disposal Site

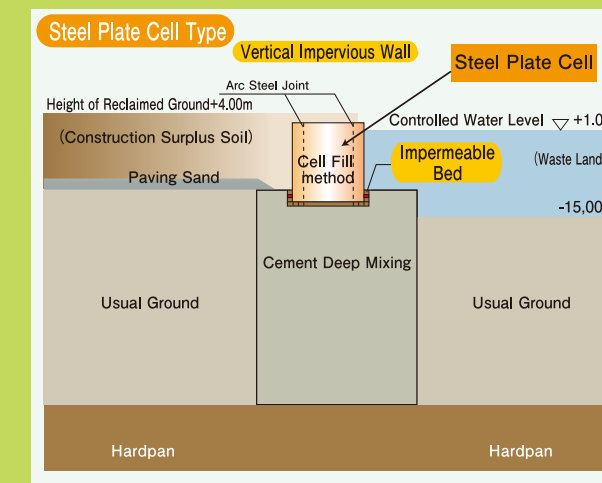
- Type of the Disposal Site : Controlled final landfill site
- Area of the Site : About 16.4 ha (Inside the impervious revetment)
- Waste to be received : General waste, industrial waste
- Reception capacity : 4 million m<sup>3</sup>
- Length of the impervious revetment : About 1,700 m
- Scheduled to Open : In FY2017



### Summary of the Development Plan

- In order to prevent water from leaking from the disposal section, a revetment (Impervious revetment) with water-blocking properties is to be developed within Block 5.
- Once the facilities required to manage and operate the disposal site (vehicle passage, office building, wastewater treatment facility, etc.) are developed, the city then implements waste reception.

### Cross section of Impervious Revetment

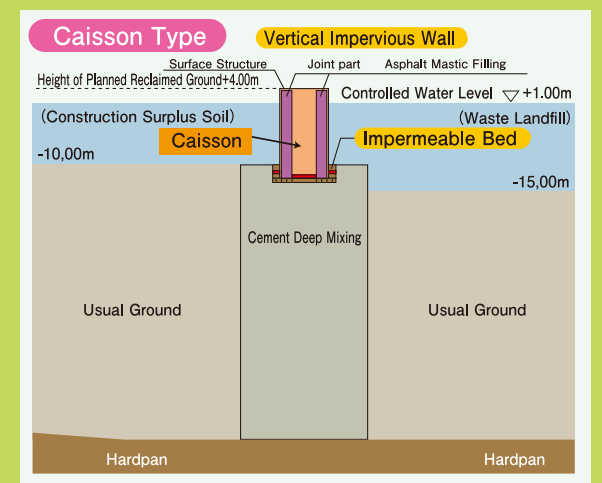


#### \* Base Part

The soil is improved by CDM Method. (\*An abbreviation of Cement Deep Mixing) By mixing the soft sediment underneath the water (cohesive soil layer), reclaiming earth layer, the CDM method increases the foundation support force and secures water shielding to prevent slipping of the seawall.

### Impervious Revetment

The structure of the impervious revetment comprises a "body part" that separates between the waste disposal water area and the surrounding area, and a "base part" that supports the body part. In designing, every effort is made to reduce the construction cost by devising the landfill method of waste such as uniform landfilling.



#### \* Body Part

Two different types of structures – a steel plate cell type and a caisson type – will be used for the development.