

We are reborn to connect world

HIGASHISHINAGAWA · SAMEZU RENEWAL PROJECT

PROJECT STORY

After five decades of supporting lives and the economy, now proceeding to the next era

THE BIRTH OF SHUTOKO

History of Metropolitan Expressway and Higashi Shinagawa pier and Samezu reclamation area

While motorization in Japan advanced rapidly since the 1950s, road improvement kept getting delayed, causing chronic traffic jams in central Tokyo. Construction of the Metropolitan Expressway route was started with the aim of easing these traffic jams. A 4.5 km-long Metropolitan Expressway from Kyobashi to Shibaura was built in December 1962.



Higashi Shinagawa pier and Samezu reclamation area section on the **1** Haneda Line were opened in December 1963 before the Tokyo Olympics by quick construction work in the Keihin Canal, which is a public space, in order to avoid densely populated residential areas.



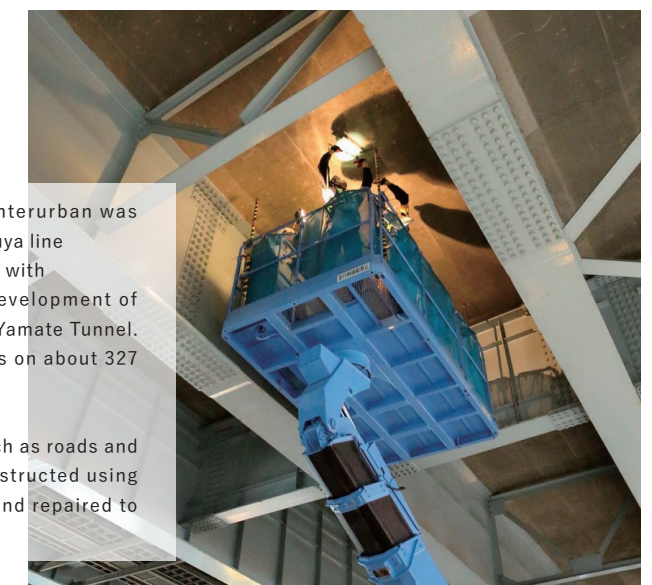
Metropolitan Expressway of approximately 33 km in length was opened by the time the Tokyo Olympics games were to be held in October 1964. We responded to great social demands including improvement of access routes from Haneda Airport to central Tokyo.

AGING OF OVERUSED SHUTOKO

Aging of Metropolitan Expressway routes due to overuse

As the traffic volume increased, networking of suburbs and the interurban was enhanced with the development of radial routes, including the **3** Shibuya line heading to the suburbs from the **1** inner circular route, the connection with interurban expressways, including Tomei Expressway, and the development of networks, including **2** central circular route also represented by the Yamate Tunnel. As a result, the daily traffic volume became about 1 million vehicles on about 327 km-long Metropolitan Expressway. (As of March 2020)

The Metropolitan Expressway is constructed using public spaces such as roads and rivers in an already developed city. Most parts of the route are constructed using viaducts and tunnels. These structures are constantly inspected and repaired to provide safe, secure, and smooth traffic flow.



The Metropolitan Expressway sustains the logistics in the Tokyo Metropolitan area and is used heavily. Compared to other routes, the sheer traffic volume of large size vehicles puts a heavier burden on the structures of this route. More than 50 years of use since its opening has resulted in the aging of routes, and inspections and repairs carried out so far have brought forth the areas that have been difficult to deal with.



1 Haneda Line (Higashi Shinagawa · Samezu) Renewal



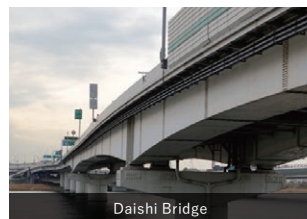
THE ACTIVATION OF SHUTOKO RENEWAL PROJECT

Initiation of Shutoko Renewal Project

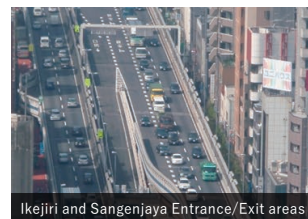
"Major Renovations" to rebuild route structures such as restoring the bridges or replacing floor slabs and "Major Repairs" to intensively repair entire structures were considered from a technical and economic viewpoint, to continue to provide safe and secure routes to our customers while maintaining the longevity of the route against a backdrop of severe use conditions of the Metropolitan Expressway and its aging.

As a result of this consideration, experts in Major Renovations and Major Repairs of the Metropolitan Expressway came up with a proposal in January 2013. Based on the proposal, the plan of the Metropolitan Expressway project including "Sections between Higashi Shinagawa pier and Samezu reclamation area Renovation Program" was formed in June 2014, and the Shutoko Renewal Project was initiated.

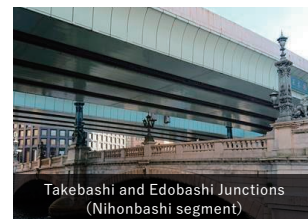
Higashi Shinagawa pier and Samezu reclamation area



Daishi Bridge



Ikejiri and Sangenjaya Entrance/Exit areas



Takebashi and Edobashi Junctions (Nihonbashi segment)



Ginza and Kyobashi Entrance/Exit areas (Tsukiji segment)

FOR THE FUTURE

Transformation of Higashi Shinagawa pier and Samezu reclamation area

① Haneda Line (Higashi Shinagawa · Samezu) Renewal was undertaken from May 2016, as the first step of the Shutoko Renewal Project.

The Higashi Shinagawa pier and Samezu reclamation area had opened just before the 1964 Tokyo Olympics. A 1.9-km long road structure, which had been severely damaged due to heavy use for over 50 years since its opening and severely corroded by seawater, will be rebuilt into a structure with excellent durability and maintainability to ensure long-term safety.

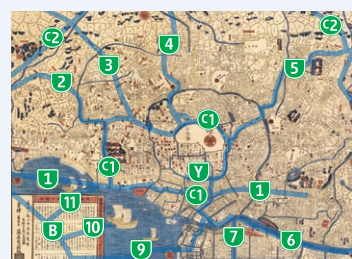
We will proceed with the plan to complete construction by 2028. Detours will secure the traffic of approximately 70,000 vehicles per day so that travelers will not face any inconvenience due to long-term road closures resulting from construction work without impacting daily life, logistics, and economy in the Tokyo Metropolitan area.

We will go ahead with the Metropolitan Expressway Renewal project to maintain the route as a highly resilient and important road network in Tokyo metropolis, with safety as its core foundation even in the next 100 years.



ROOTS OF SHUTOKO

Waterways in Edo and the Metropolitan Expressway



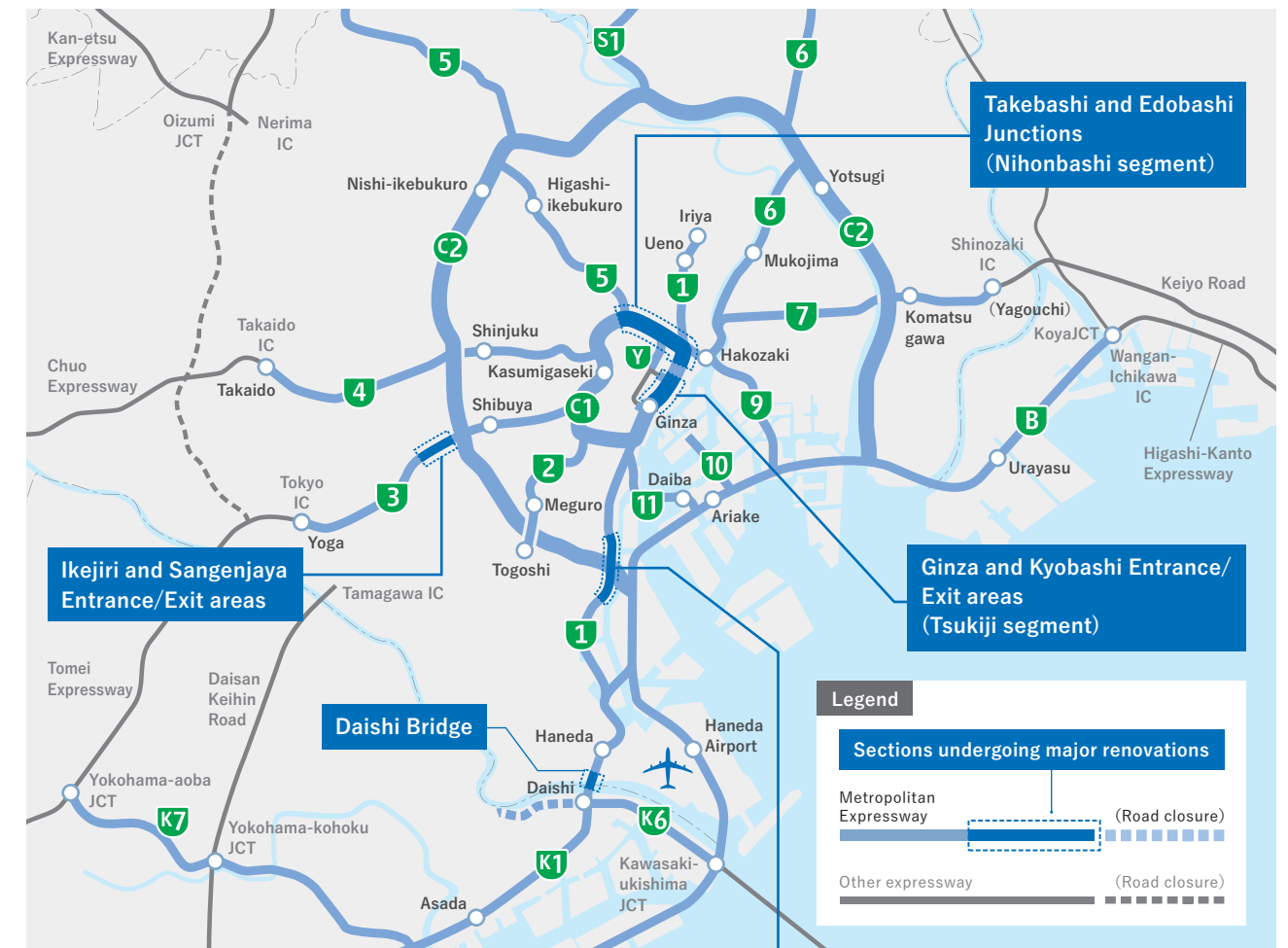
Tokyo, which has been the capital of Japan since the beginning of the 17th Century, had been referred to as Edo until the middle of the 19th Century. In 1603 the first Shogun, Tokugawa Ieyasu, established a feudal government, or Bakufu, in Edo. During the Edo Era (1603-1867), five major roads and a total of 2,000 kilometers of waterway networks were developed by the government, and these networks surrounded Edo Castle which served as the city's focal point. In those days, roads were used for passenger transport, and waterways were used for freight transport and the delivery of commodities such as rice.

After Edo was renamed Tokyo in 1868, this city boasted the flourishing of water transportation, and prior to the end of World War II, Tokyo had been known as a "capital of abundant waterways" comparable to Venice in Italy. After the war, some parts of the waterways that had been used for water transport since the Edo Era were transformed into the Metropolitan Expressway. Today, road transport has become the primary means for both passenger and freight transport.



"Major Renovations" and "Major Repairs" to Ensure Long Term Safety of the Metropolitan Expressway

We are moving forward with renovation and repair work on the Metropolitan Expressway to ensure that the road structures remain sound over a long period of time, and to continue providing customers with safe and secure roads. At the same time, we also conduct meticulous checks on structural, maintenance management issues and damages.



① Haneda Line (Higashi Shinagawa · Samezu) Renewal

Project Procedures

Route1(Haneda Line) (this section) Opening	: December 21st, 1963
Business License by the Minister of Land, Infrastructure, Transport and Tourism	: November 20th, 2014
Urban Planning(change) Decision	: December 18st, 2014
Urban Planning Project Approval	: February 18th, 2015

Project Outline

Route Name	: Route1(Haneda Line)
Project Section	: Between 2-chome, Higashi-shinagawa, Shinagawa-ku and 1-chome, Higashi-oi, Shinagawa-ku, Tokyo
Length	: Approximately 1.9km
Number of lanes	: 4
Road Classification	: Type2, Class2(Government Order of Road Design Standards)
Scheduled Time of Completion	: FY 2028

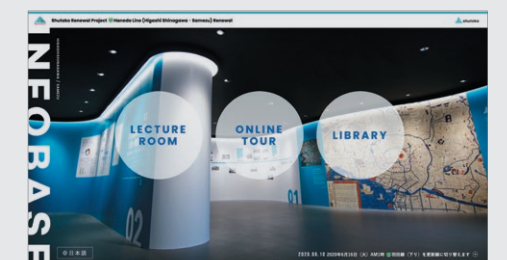
※In addition, 55 km has been designated for major repairs

Please refer to the "INFOBASE" homepage.

- To know the basic information.
- To view the routes that comes under this project.
- To find out more about technical information.

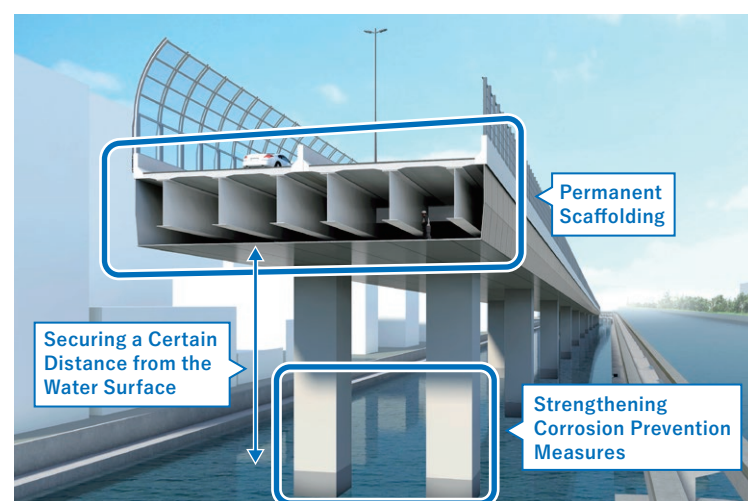
This is a platform for communicating and summarizing the information regarding this project.

<https://www.shutoko.jp/ss/higashishinagawa/english/>



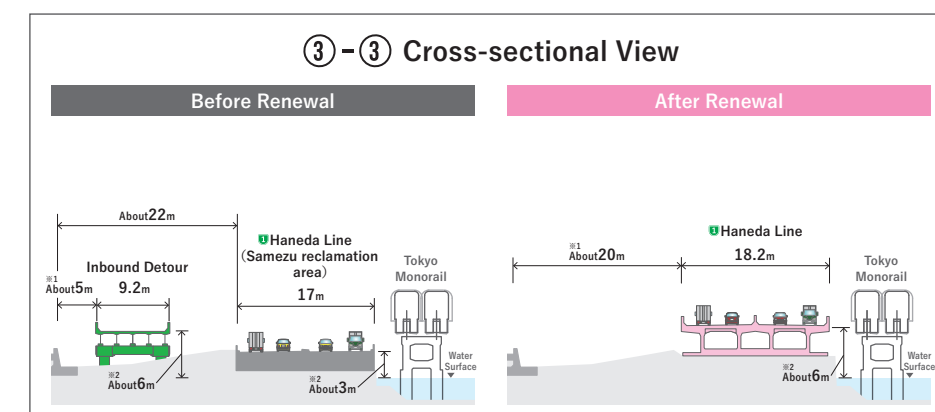
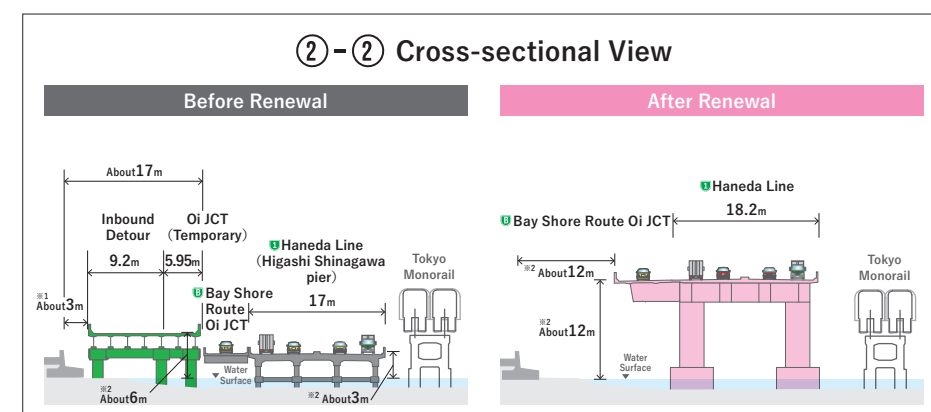
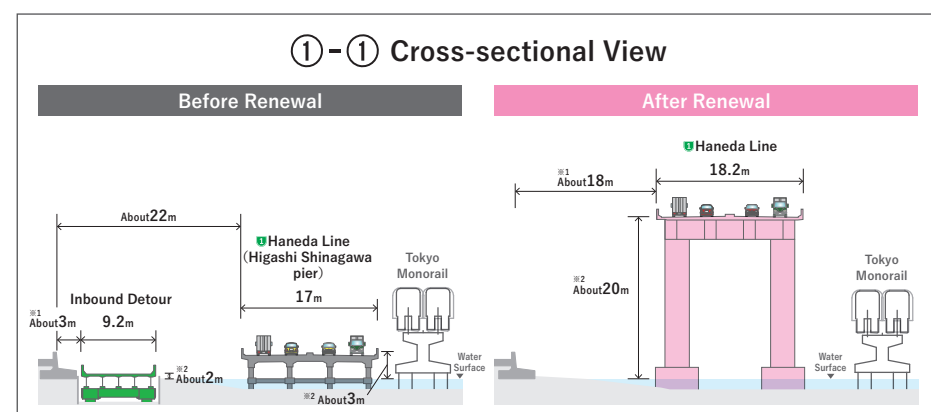
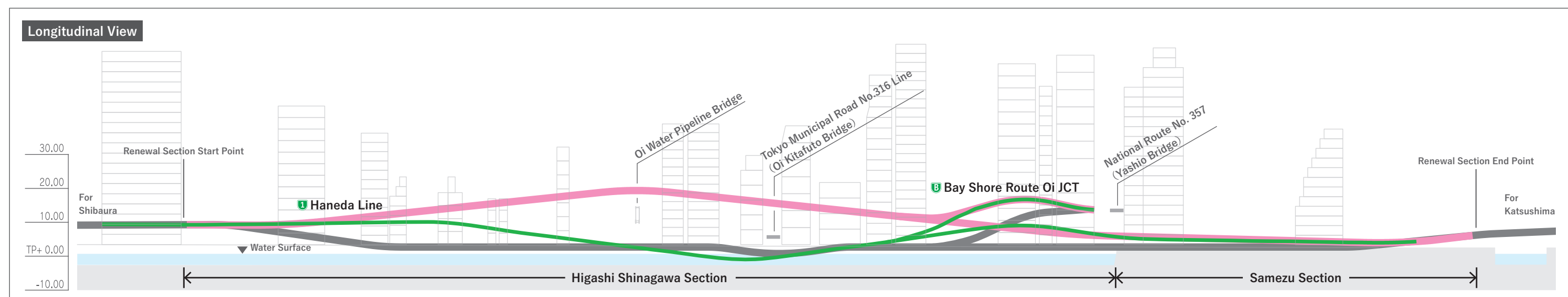
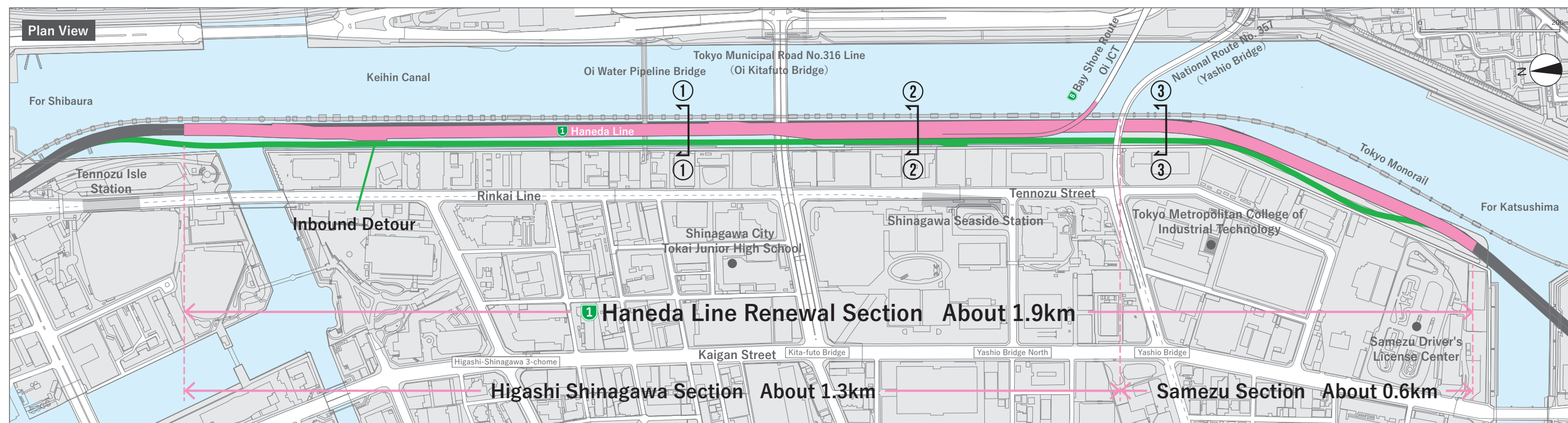
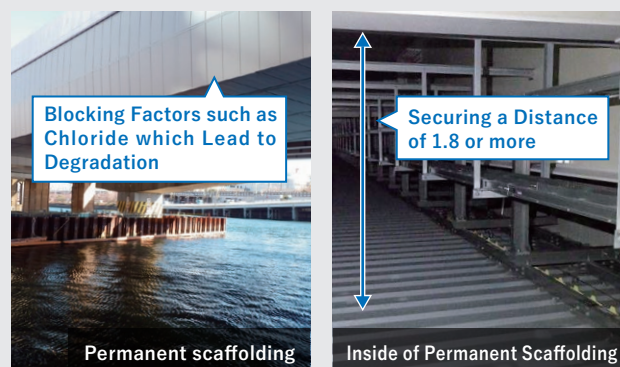
RENEWAL AREA

Construction of Higashi Shinagawa pier Section



! Renewal points

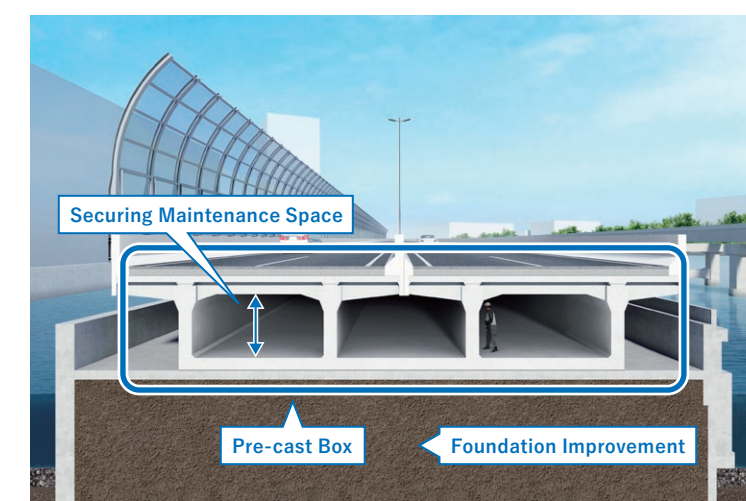
- Renewal to a viaduct that is at a certain distance from the water surface
- Securing separation from parallel monorails
- Installing permanent maintenance control scaffolding (permanent scaffolding) by taking landscape in consideration
- Strengthening corrosion preventive measures for bridge piers (metal thermal spraying, stainless steel lining)



※1 Distance from roadside to revetment ※2 Height from the average sea level of Tokyo Bay (TP + 0.0 m) to the road surface

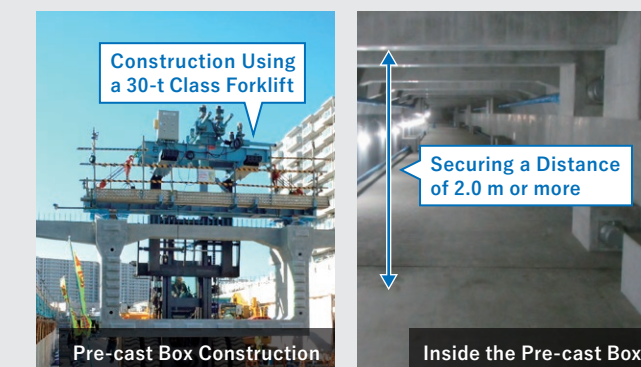
■ Before Renewal ■ After Renewal ■ Inbound Detour

Construction of Samezu Section



! Renewal points

- Improving durability and maintainability by adopting a hollow pre-cast box structure
- Further improving the durability by adopting epoxy resin coated reinforcing bars
- Improvement of foundation under the pre-cast box (securing foundation strength and liquefaction measures)



PROCESS Construction steps & driving guide during the process

- To secure traffic on the main Haneda Line, a detour has been set up and the main line will be renewed part by part while switching the direction of traffic.
- As the road to use will be switched depending on the construction step, please be careful when driving.

