

安全で安心なまちづくり臨海副都心

Tokyo Waterfront Subcenter – Creating a Safe and Secure Town

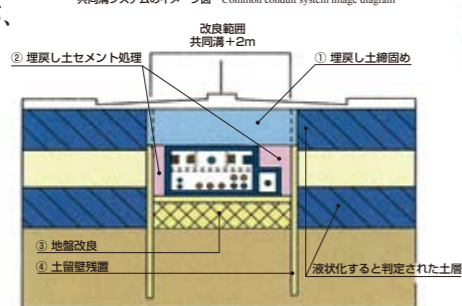
臨海副都心は「災害に強いまち」をまちづくりのコンセプトとして、必要な防災対策が施されています。

一般の東北地方太平洋沖地震においても、臨海副都心内の建物や施設に大きな損傷をもたらす液状化被害等は無く、これまでの防災対策の効果が実証されました。

■都市インフラの耐震対策と共同溝

ゆりかもめの橋脚や公共施設などの建造物は、関東大震災級の地震にも耐えられるように造られています。

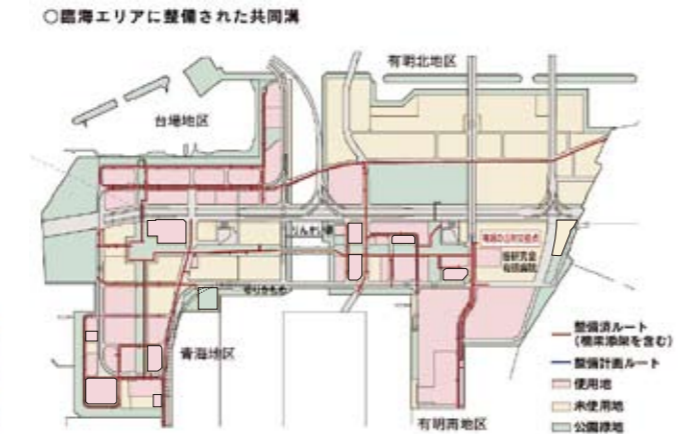
また、上下水道・電気・ガス・情報通信などのライフラインを収容する共同溝が、地中壁の打設や地盤改良による液状化対策を行った上、道路、公園などの地下に整備されており、地震時のライフラインの安全性が確保されています。



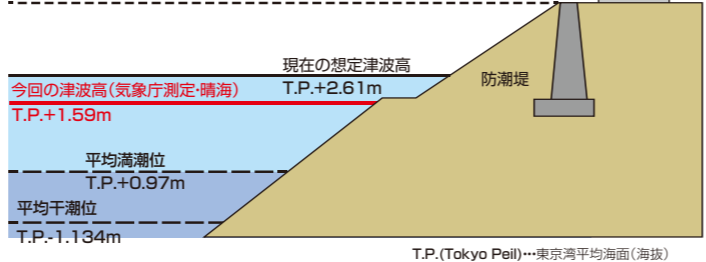
・埋戻し土を擁固めや固化により改良し、液状化抵抗を増大(①、②、③)
・共同溝両側の地中壁により、振動・変位を抑制し、液状化を防止(④)
・Increased resistance to ground liquefaction through ground backfilling and reinforcement (①, ②, ③)
・Underground wall on both sides of common conduit reduce vibration and deformation to prevent liquefaction(④)

The Tokyo Waterfront Subcenter has embraced an urban planning concept of “strong against disasters” and has established necessary disaster prevention countermeasures.

The buildings and facilities within the Waterfront Subcenter were largely undamaged by the liquefaction brought on by the Great Tohoku Earthquake, which served to validate the efficacy of disaster prevention measures implemented thus far.



想定津波高と東日本大震災による津波高の比較
地盤高 T.P.+5.37~6.87m



■津波・高潮への対応

東京港における最大の想定津波の高さは、元禄型関東地震において最大 T.P.+2.61m と予測されていますが、臨海副都心では伊勢湾台風級に備えた高さ T.P.+5.37~6.87m の高潮防潮施設が整備されており、十分な安全性が確保されています。

■ゆとりある土地利用計画

臨海副都心ではゆとりある土地利用計画を推進しており、公園・緑地等の多くのオープンスペースは災害発生時には一時的な避難地、仮設住宅の建設場所、物資の集積地となります。



Urban infrastructure earthquake resistance measures and common duct

Buildings and structures such as the Yurikamome support structure and other public facilities are designed to withstand earthquakes equivalent to the size of the Great Tohoku Earthquake.

Furthermore, a common duct containing waterworks lines, electricity, gas, and communications lines has been constructed below roads and parks. The duct has been designed with concrete casts and subterranean reinforcements to ensure stability to city lifelines in the event of an earthquake.

Response to tsunami and high tides

The estimated maximum height of a tsunami in the Port of Tokyo is estimated at a maximum T.P. + 2.61m in the event of a Genroku earthquake. However, the Tokyo Seaside includes high tide prevention walls designed for a height of T.P. +5.37 ~6.37m, which could withstand a typhoon in the class of Typhoon Vera, and ensures sufficient safety.

Relaxed land use planning

The Tokyo Waterfront Subcenter promotes a land usage plan that stresses reasonable land usages and calls for the construction of many parks, greenery, and open spaces, which in the event of a disaster can be used as temporary evacuation sites, construction sites for temporary housing, and as collection sites for relief supplies.

大地震に備える港湾施設

Port facilities in preparation for a large earthquake

阪神・淡路大震災の被災経験を踏まえ、東京港では災害時における人や緊急物資の安全な輸送を確保し、また、首都圏の経済活動を支える物流機能を確保するために、内貿ふ頭や国際コンテナターミナルなど、港湾施設の耐震強化を進めています。

また、運河筋においても護岸の整備等に合わせ、緊急時に小型船舶が利用できる船着場（水上輸送基地）を整備していきます。

海上輸送基地と耐震強化岸壁

震災時において、他県等からの緊急物資の受入や帰宅困難者の広域輸送の拠点となる海上輸送基地として、東京都地域防災計画において、13箇所のふ頭を位置づけています。この海上輸送基地としての役割を果たすと同時に、復旧までの間にも一定の物流機能を確保し、経済活動の維持と復興の迅速化を図れるよう、港内のふ頭に耐震強化岸壁を位置づけています。耐震強化岸壁は、東京港第8次改訂港湾計画において、48バースが計画されています。

水上輸送基地

海上輸送基地や河川船着場と連携し、帰宅困難者の水上輸送や小型船舶等による緊急物資の受入の拠点となる水上輸送基地として、東京都地域防災計画において、海上バス発着所など11箇所の水上輸送基地が位置づけられています。

東京港臨海部における基幹的広域防災拠点

平成22年7月に、東京臨海広域防災公園（基幹的広域防災拠点有明の丘地区）が開園しました。本公園は首都圏で大規模な地震災害等が発生したときに、公園全体が広域的な指令機能を受け持つヘッドクォーターとなるとともに、平常時には、東京臨海部の緑の拠点として臨海副都心におけるにぎわいと交流の空間を提供しています。

「有明の丘地区」は、被災時に、国・地方公共団体等の合同現地対策本部を設置し、広域支援のコア部隊等のベースキャンプ、災害時医療の支援基地として機能します。



We are proceeding with the reinforcement of domestic trade terminals, international trade container terminals and other port facilities to improve their earthquake resistance with the aim of assuring the safe transport of people and emergency relief supplies during a disaster and assuring the continuation of the distribution functions that support the economic activities of metropolitan Tokyo taking into account the experiences of disaster damage resulting from the Great Hanshin-Awaji Island Earthquake in the recent past.

In addition, together with development to protect banks along canals, boat slips (water transport bases) allowing the use of small boats during disasters are also being constructed.

Maritime transportation bases and earthquake-proof reinforced quays

The Tokyo Metropolitan Area Disaster Prevention Plan designates 13 port terminals to serve as marine transport bases for the acceptance of emergency supplies from other prefectures and as large-scale evacuation centers in the event of a disaster. In addition to serving as marine transport bases, to ensure these terminals also serve to provide a certain level of distribution functionality during disaster recovery, thus supporting economic activity and speeding up the recovery process, the plan calls for the construction of earthquake resistant walls at these terminals. The plan for earthquake resistant walls is included in the 8th Edition of the Port of Tokyo Port and Harbors Plan, which plans for the construction of 48 berths.

Water transport bases

Eleven water transport bases including water bus stations are positioned in the Tokyo Prefecture Regional Disaster Prevention Plan as facilities for transporting people who experience difficulties in returning home and for receiving emergency relief supplies by small vessels in cooperation with the maritime transportation bases and river ferry terminals.

Backbone Wide-Area Disaster Prevention Facilities along the Tokyo Waterfront Area

In July 2010, the Tokyo Rinkai Disaster Prevention Park (backbone wide-area disaster prevention base, Ariake district) was opened. This park is designed so that, in the event of a large-scale disaster, the entire park can serve as a disaster management headquarters while during normal conditions functioning as a center of lush greenery, providing a space for fun and interaction for the Tokyo waterfront subcenter.

During a disaster, the Ariake area will be the location where national and local government can establish a local disaster response headquarters and serve as a base camp for core personnel providing wide-area support. The area will also function as a support base for disaster medical relief.