City Building Maintenance Guidelines for Minato City Disaster Prevention Pamphlet

Basis: Formulated based on Article 9, Paragraph 2 of the “Minato City Disaster Prevention Measures Basic Ordinance”
Background of formulation: These guidelines were formulated first in 1998 in the wake of the Great Hanshin Earthquake, and then in 2013 in light of the aftermath of the 2011 Tohoku earthquake and tsunami.

Chapter 1: Basic matters of city building maintenance guidelines for disaster prevention

Main text (draft): p. 7-9

Overview of guidelines	Guidelines for comprehensively promoting disaster-resistant city building In order to build a city that is resilient to disasters, this document presents the basic philosophy, direction of policies, etc., and measures (including by region of the city).
Target period	10 years from 2024 to 2033
Target of guidelines	I: Disaster-resistant city building mainly from the hardware side II: Disaster-resistant city building at the preventive stage before a disaster occurs

Chapter 2: Current status and issues related to disaster prevention city building

Main text (draft): pages 10-55

Changes in social conditions

Main text (draft): p. 10-21

1) Population (night and daytime population continue to increase)
2) Natural disasters becoming more frequent and severe
3) A movement towards realizing zero carbon cities
4) Progress in city building and changes in needs for city building
5) Post COVID-19 pandemic city building and lifestyle diversification
6) Response to SDGs (Sustainable Development Goals)
7) Utilization of cutting-edge technology
8) Amendments to disaster-related laws and regulations, etc.
9) Revision of Minato City hazard map, etc.

Disaster Risks

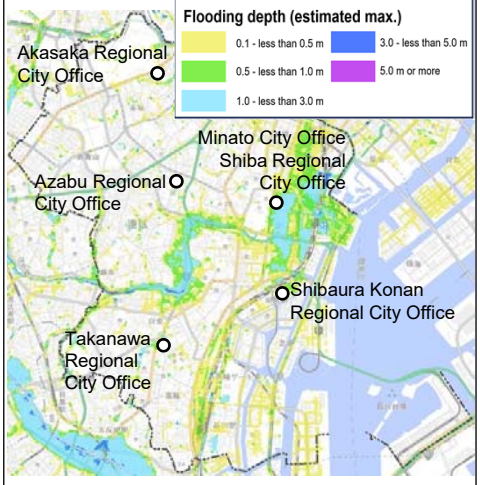
Main text (draft): p. 22-33

*Background map source: Geospatial Information Authority of Japan

*The following six types of disasters expected in Minato City are covered by these guidelines. Year in () is the year each map was published.

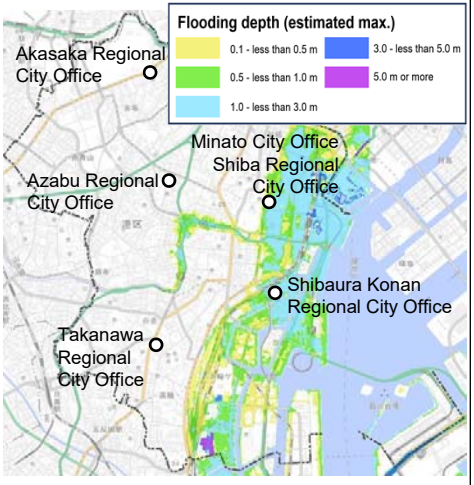
Floods (River/inland water) (2023)
*Estimated maximum scale

・Floods are expected in a wide area of Minato City, mainly around Hamamatsucho Station and along Furukawa River banks.



Storm Surge (2020)
*Estimated maximum scale

・A wide area on the coast of Hibiya-dori Avenue. Which is expected to be flooded under 1 meter of water or more.



Landslide Disaster (2019)

・208 landslide warning areas and 141 landslide special warning areas have been designated, the largest in the 23 wards.

Disaster risks continue on the next page.

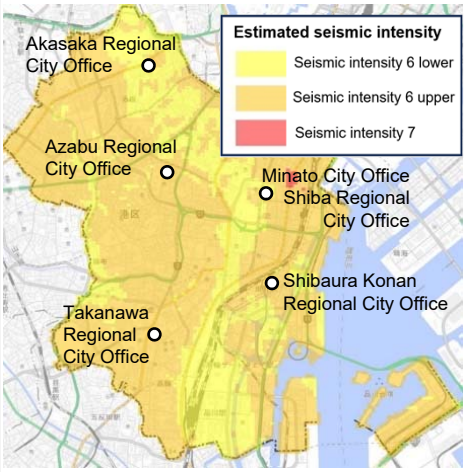
Disaster Risks (continued)

Forecast independently by Minato City

Forecast independently by Minato City

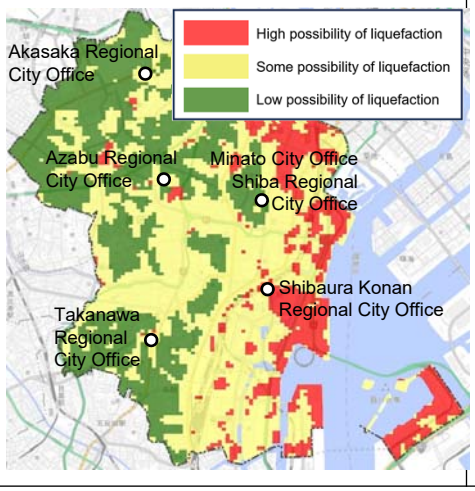
Shaking (2024)
*Earthquake directly below southern Tokyo

・In the event of an earthquake (M 7.3) hitting southern Tokyo, Minato City is expected to experience a seismic intensity of 6 lower to 6 upper (in some areas, intensity 7).



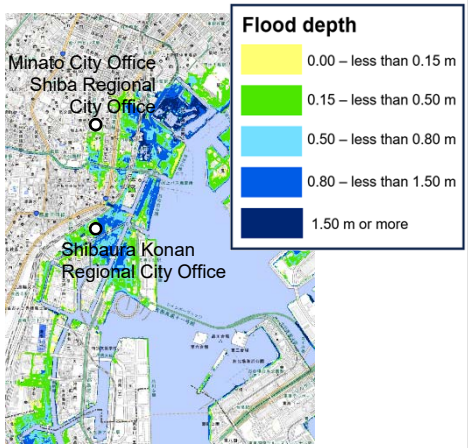
Liquefaction (2024)
*Earthquake directly below southern Tokyo

・In the event of an earthquake (M7.3) hitting southern Tokyo, there are areas with a high possibility of liquefaction, especially the coastal areas and Shinbashi.



Tsunami (2024)
*1703 Genroku Earthquake, etc.

・If the Genroku Kanto Earthquake (M8.5) hit, under the worst conditions, it is expected that in addition to the low-lying coastal areas, the tsunami that would travel up the Furukawa River would flood the area around Shōgen Bridge.



Main Weaknesses (Challenges) & Strengths in disaster prevention city building

Main text (draft): p. 44-55

- Buildings, concrete block walls, and narrow streets with low earthquake resistance remain.
- Although a wide region of the city is expected to be flooded, and there are many underground spaces, the implementation rate of flood prevention measures is low. In addition, the region has the highest number of designated landslide disaster areas within the 23 special wards.
- When a major earthquake occurs, there is a risk that many people will be unable to return home, causing chaos. Additionally, in high-rise buildings, there is a risk of certain damage such as elevators stopping.

Weakness 1 Risk of road blockages, building collapses, landslides, etc. due to earthquakes.

Weakness 2 Risk of flooding and landslides due to increasingly severe floods.

Weakness 3 Increased damage due to the concentration of many people and objects.

- Building of city infrastructure (road maintenance, removal of utility poles, etc.) is progressing in Minato City. Additionally, many residents of the city live in condominiums thought to have little risk of collapse.
- The regional risk level for earthquakes is «1», the lowest of the 5 levels, in many districts of Minato City. There are many mid-to-high-rise buildings in the expected flooding area, so vertical evacuation is possible.
- In addition to specific urban regeneration emergency development areas, the private sector is also securing evacuation spaces, stockpiles, and private power generation, etc., working to maintain and continue urban functions even in the event of a disaster.

Strength 1 Maintenance of infrastructure and buildings resistant to disasters.

Strength 2 Among the 23 special wards of Tokyo, Minato is disaster resistant.

Strength 3 We can expect to strengthen disaster prevention capabilities in collaboration with various facilities and companies.

Chapter 3: A new perspective on disaster prevention city building

Main Text (draft): pages 56-53

In addition to “reducing weakness”, we are also moving to “leveraging strength”

Main text (draft) p. 56

- In addition to “bringing minuses closer to zero,” we will develop a disaster prevention city using the unique positive resources (strengths).

City building that reduces weaknesses by strengthening hardware

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City building that uses our strengths

New social needs that accelerate disaster prevention city building

Main text (draft) p. 58

- In addition to disaster prevention, we incorporate new social needs such as decarbonization and sustainability, and we will expand the scope of disaster prevention and accelerate disaster prevention city building.

Sustainable city building

Creating a carbon-free city

City building using DX

Area Management

New lifestyles

Enhancing disaster prevention resources and contributing to local communities that lead to a new and safer lifestyle

Main text (draft): p. 56-57

- It is important to have as many disaster prevention resources as possible to ensure safety during daily life and when updating buildings.
- Furthermore, by contributing these disaster prevention resources to the local community, we aim to create a city that is self-reliant and highly resilient in the event of a disaster.

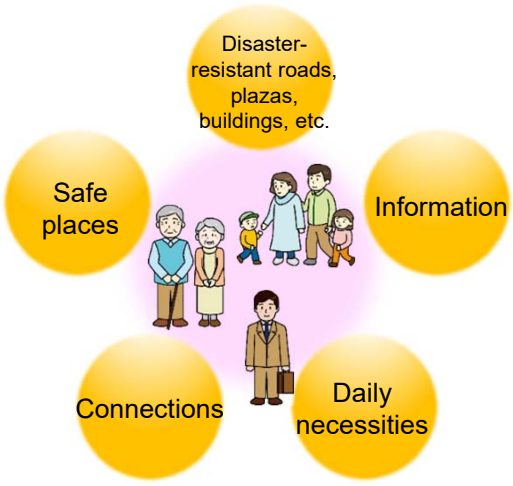


Image of disaster prevention resources

Examples: Reducing the risk of surrounding areas by updating buildings

Providing electricity

Providing supplies

Providing free space

Chapter 4: Basic principles of disaster prevention city building

Main text (draft): p. 59

Let's make it together! Minato City, a city that can overcome disasters

- Minato City is not only a living place for many of its residents, but also plays a role in the central functions of the capital, Tokyo.
- To this end, while steadily implementing disaster prevention measures to protect the lives and property of residents, we will create buildings, communities, and towns where everyone can continue living and doing business independently while supporting each other even in the event of a disaster.

Chapter 5: Basic policies and measures for disaster prevention city building

Main text (draft): p. 60-75

Basic policy for disaster prevention city building

Main text (draft): p. 60

Basic Policy 1: Make a strong city where people can live, by reducing damage and protecting the lives and property residents

Basic Policy 2: Making resilient cities that can continue urban activities and recover quickly after disasters

Basic Policy 3: Building a city with high disaster prevention capabilities by renewing the city and buildings

Measures to build a disaster-resistant city

Main text (draft): p. 61-75

	Classification of Measures				Main New Specific Measures
Earthquake Measures	1) Ensuring road functionality	Policy 1	Policy 2	Policy 3	・Expansion of earthquake resistance subsidy targets *Since before the 1981 standard, expanded to before 2000 standards ・Creating a system to confirm information on temporary accommodation facilities
	2) Building fire spread barriers & open spaces	Policy 1	Policy 2	Policy 3	
	3) Making buildings seismic resistant & fireproof	Policy 1	Policy 2	Policy 3	
	4) Disaster prevention measures for high rises	Policy 1	Policy 2	Policy 3	
	5) Promotion of home evacuation	Policy 1	Policy 2	Policy 3	
	6) Measures for people who cannot go home		Policy 2	Policy 3	
Wind and Flood Damage Measures	1) Maintenance of levees, sea walls, sewerage facilities	Policy 1			・Promotion of green infrastructure development
	2) Promote installation of equipment to stop the Infiltration and catch leftover rain water, etc.	Policy 1	Policy 2	Policy 3	
	3) Flooding countermeasures	Policy 1	Policy 2	Policy 3	
Common	1) Ensuring safety of cliffs, retaining walls, and concrete block walls	Policy 1		Policy 3	・Use of EV (electric vehicles) during disasters ・Promotion of collaborative efforts among businesses
	2) Maintaining the functionality of facilities and areas	Policy 1	Policy 2	Policy 3	
	3) Ensuring safety and maintaining functionality of evacuation-related facilities	Policy 1	Policy 2	Policy 3	
	4) Promotion of mutual assistance		Policy 2	Policy 3	
	5) Collecting and providing information during disasters	Policy 1	Policy 2	Policy 3	

Chapter 6: District-specific plans for disaster prevention city building

Main text (draft): p. 76-120

- After identifying the issues and strengths of each of the 10 surrounding regions, we present goals and measures.

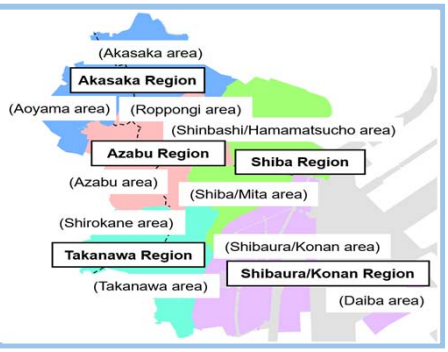
Four types of maps for regional planning

1) Overview of surrounding area (Land use/population + strengths of disaster prevention town development)

2) Issues related to earthquakes and tsunamis (Danger of disasters (earthquakes) + Weaknesses of the city (narrow streets, etc.))

3) Issues related to flood damage (Disaster risk (flood damage) + city weaknesses (underground, etc.))

4) Regional goals and measures (Measures + Strengths of disaster prevention community development + Disaster risks (overview))



Chapter 7: How to proceed with disaster prevention city building

Main text (draft): p. 121-124

- Based on these guidelines, in order to realize a city that is disaster resistant, Minatp City, its residents, and business operators are required to cooperate and cooperate with each other to play their roles and advance initiatives.

Chapter 8: Tsunami/liquefaction simulation results

Main text (draft): p. 125-130

- Based on the movements of the Central Disaster Prevention Council and the Tokyo Metropolitan Government and new knowledge since the previous simulation in March 2013, Minato City conducted its own new tsunami and liquefaction simulations in order to envision conditions that would bring about the worst situation for the ward.