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# NATIONAL STANDARD OF THE

# PEOPLE'S REPUBLIC OF CHINA

# GB 55022-2021

## (General Code for Building Security and Renovation)

既有建筑维护与改造通用规范

**(English Translation)**

**Issued by: Ministry of Housing and Urban-Rural Development of the People's Republic of China;**
**State Administration for Market Regulation**

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## 1 General

**1.0.1**
In order to protect personal health, life and property safety, public safety, and ecological environment safety in the maintenance and renovation of existing buildings, and meet the basic needs of economic and social management, this specification is formulated in accordance with relevant laws and regulations.

**1.0.2 The maintenance and renovation of existing buildings must implement this specification.**

1.0.3 Whether the technical methods and measures adopted in the project construction meet the requirements of this specification shall be judged by the relevant responsible parties. Among them, innovative technical methods and measures should be demonstrated and meet the performance requirements in this specification.

## 2 Basic regulations



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**2.0.1**
Existing buildings are not allowed to modify the main structure of the building and change the use function without approval.

**2.0.3 The maintenance of existing buildings shall comply with the following basic regulations.**

1 The use function of the building shall be guaranteed;

2 The building should be maintained to reach the design working life;

## 3 The safety and disaster resistance performance of the building shall not be reduced.

2.0.4 The renovation of existing buildings shall comply with the following basic regulations.

1 It should meet the safety requirements of the building after renovation;

2 The disaster resistance performance of the building shall not be reduced;

3 The durability of the building shall not be reduced.

2.0.5 Site survey should be carried out before the maintenance and renovation of existing buildings, and a maintenance plan or repair and renovation design should be made according to the specific characteristics of the building. Before construction, the construction organization design should be compiled, targeted safety protection measures should be formulated, and emergency plans should be prepared.

2.0.6 During the construction of existing building maintenance and renovation projects, the safety and health of relevant personnel shall be guaranteed.

2.0.7 During the construction of existing building maintenance and renovation projects, the operating area, dangerous area and adjacent affected area of the project should be distinguished, safety warnings and guiding signs should be set up, and corresponding safety protection measures should be taken.

2.0.8 Fire safety shall be ensured at the construction site, temporary electricity management shall be done according to the current system, and the hot fire approval system shall be strictly implemented.

2.0.9 During the maintenance and renovation of existing buildings, termite damage shall be checked; when termite damage is found, termite damage assessment and control shall be carried out on the house.

2.0.10 During the construction of existing building maintenance and renovation projects, effective measures shall be taken to control the impacts caused by dust, waste gas, waste, noise and vibration on the construction site.



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2.0.11 Quality control should be carried out for existing building maintenance and renovation projects. After the project is completed, it should be checked and accepted.

2.0.12 For existing building maintenance and renovation projects, the data of each link of the project should be collected and sorted out in time, and project files should be established and improved. Relevant archives should be kept properly; when the management right of an existing building is handed over, relevant archives of the building should be handed over at the same time.

3 checks

## 3.1 General provisions

**3.1.1**
The inspection of existing buildings shall be carried out separately for buildings, structures and facilities and equipment. Inspections are divided into routine inspections and specific inspections.

**3.1.2**
In the process of daily use and maintenance, regular daily inspections should be carried out on the use environment, damage and operation conditions of existing buildings, and the inspection cycle should not be less than once a year.

**3.1.3**
Before and after the rainy season, heating season, and special environments such as typhoon, heavy rain, heavy snow and strong wind, specific inspections should be carried out on existing buildings.

**3.1.4**
Existing buildings should be evaluated according to the inspection results after inspection, and inspection and appraisal should be carried out when the following situations exist.

1.Defects, deformations and damages that endanger the safety of use are found;

2 It is intended to continue to use after reaching the design working life;

3 Before rectification and transformation;

4 Before changing the purpose or use environment;

5 is greatly affected by natural disasters, man-made disasters, environmental changes or accidents;

6 The safety, usability and system performance of the equipment system do not meet the relevant regulations and requirements;

7 The change of use function leads to the improvement of the building's anti-seismic



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fortification category.

**3.1.5**
For the inspection of different professions, categories or types in existing buildings, appropriate methods should be selected, the content should be clarified, and reasonable plans should be formulated.

**3.1.6**
Before the inspection of existing buildings, relevant data such as survey and design, construction, monitoring, acceptance, previous inspections and assessments, maintenance and renovation of buildings, structures and facilities and equipment should be collected.

**3.1.7**
The assessment of existing buildings should be based on true and reliable inspection results, testing data, information and analysis.

**3.1.8**
For the damage found in the inspection and evaluation of existing buildings, treatment measures such as repair, renovation, replacement or abandonment should be taken according to the degree of damage; before the above measures are taken, measures to stop use or temporarily relieve danger should be taken in time.

**3.2.1 The daily building inspection shall include the following main contents.**

1 Leakage and damage of the roof;

2 Deformation and damage of parapet, roof chimney, auxiliary structures, etc.;

3 Cracking, leakage, hollowing and falling off of the exterior wall finish;

4 Sealing and damage of external walls, doors, windows, curtain walls and other enclosure structures, as well as defects, deformations and damages connected with the main structure;

5 Damage to additional facilities on building facades such as awnings, awnings, air-conditioning racks, clothes racks, window sill flower racks, and lightning protection devices, as well as defects, deformations, and damages connected to the main structure;

6 The defect, deformation and damage of the connection between interior decoration and main structure.

**3.2.2 The building-specific inspection shall include the following main contents.**

1 Waterproof and drainage conditions when the rainy season is approaching;

2 When the heating season is approaching, the sealing of external doors, windows and curtain walls;



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