



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 55003-2021

Code for design of building foundation

建筑与市政地基基础通用规范

(English Translation)

Issued on: April 9, 2021

Implemented on: January 1, 2022

Issued by: Ministry of Housing and Urban-Rural Development of PRC;

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1 General

1.0.1 In order to implement the building policy in the construction of foundation

1 General

1.0.1

In order to implement the building policy in the construction of foundation projects, ensure the safety of foundations and superstructures, meet the needs of normal use of construction projects, protect the ecological environment, promote green development, this Code is hereby formulated.

1.0.2

This Code must be implemented for foundation engineering.

1.0.3

Whether the technical methods and measures, which are adopted in the engineering construction, meet the requirements of this Code, shall be determined by the relevant responsible entities. Among them, innovative technical methods and measures shall be demonstrated AND meet the relevant performance requirements in this Code.

2.1 Basic requirements

2.1.4

The design service life of the foundation shall meet the following requirements.

2.1.6

The construction of foundation works shall adopt materials, components, equipment, that have passed quality inspections. The construction plan shall be formulated, according to the design requirements and engineering needs. The construction quality control and engineering monitoring shall be carried out.

Engineering monitoring shall ensure the integrity, authenticity, reliability of the data.

2.2.1 Foundation engineering shall be designed, according to the design

service life, the environmental category of the proposed site, the overall geology of the site and the survey results, the action and action combination of the foundation. It shall propose the construction and acceptance requirements, engineering monitoring requirements, maintenance requirements during normal use.

3.1 General requirements

3.1.1

The geotechnical survey results of the proposed site shall include the following contents.

3.2 Specific requirements

3.2.1

When there are special rocks and soils on the site and foundation, the geotechnical engineering survey results shall not only meet the requirements of clause 3.1 of this Code, but also include the following contents.

3.2.2

When there are unfavorable geological effects and geological disasters in the proposed site and its vicinity, the geotechnical engineering survey results shall not only meet the requirements of clause 3.1 of this Code, but also include the following contents.

4.1 General provisions

4.1.1

The foundation design shall meet the following requirements.

4.1.2 After excavation of the foundation trench (pit) to the design elevation, it shall carry out the inspection of foundation trench (pit).

4.2 Foundation design

4.2.1

When the axial load actions, the pressure on the bottom surface of the foundation shall meet the requirements of the following formula.

4.2.2

When the eccentric load actions, the pressure on the bottom surface of the foundation shall not only meet the requirements of formula (4.2.1), but also meet the requirements of the following formula.

4.2.3

The characteristic value of the bearing capacity of the natural foundation shall be comprehensively determined, through load tests or other in-situ tests, formula calculations, combined with engineering practical experience.

4.3 Special rock foundation design

4.3.1

The buried depth of the foundation of the building (structure), in the expansive soil area, shall not be less than 1 m. The action of horizontal expansion force shall be considered, when checking the stability of expansive soil foundation. Buildings (structures), in expansive soil areas, shall adopt foundation measures, construction measures, structural measures, to prevent expansion and contraction deformation.

4.4.1 Before foundation construction, it shall prepare the foundation

engineering construction program or foundation engineering construction plan, which shall include. foundation construction technical parameters, foundation construction process, foundation construction methods, technical measures of foundation construction safety, emergency plans, engineering monitoring requirements, etc.

5.1 General provisions

5.1.1

The design calculation or check calculation of the pile foundation shall include the following contents.

5.1.2

The materials used for the pile foundation, the connection between the pile segments, the pile foundation structure shall meet the durability requirements, in the environment category of the site, where it is located.

5.1.3

Engineering piles shall be inspected for bearing capacity and pile quality.

5.3 Pile foundation design for special rock and soil

5.3.1

For the pile foundation in the site of self-weight collapsible loess, the pile end shall penetrate the collapsible loess layer, OR it shall take measures to eliminate the influence of the collapsibility of the soil layer on the pile foundation.

5.3.2

When soil squeezing piles or partial soil squeezing piles are used, in saturated soft soil foundation, it shall take treatment measures to reduce the soil squeezing effect.