

Notice from Guangzhou Municipal Housing and Urban-Rural Development Bureau on Enhancing Graded Quality Risk Management for Construction Projects

To all parties concerned:

In order to implement the *Notice on Issuing the Trial Implementation Plan for the Reform of the Construction Project Review and Approval System in Guangzhou* (Sui Fu [2018] No. 12), further deepen reforms that delegate power, improve regulation and upgrade services, continue to improve the business environment, strengthen interim and post-works supervision over the quality of construction projects, standardize quality risk management for construction projects within the municipality, enhance the capacity for and standard of pre-control of construction quality, the following notices regarding further strengthening graded quality risk management for construction projects are hereby issued based on laws, regulations and technical standards such as the *Quality Management Regulations for Construction Projects*, the *Construction Quality and Safety Manual (Trial)* and the *Notice from the Ministry of Housing and Urban-Rural Development on the Issuance of Key Points Regarding the Control of Technical Risks in Major Projects* (Jian Zhi Han [2018] No. 28):

1. Definition and Scope of Application

1.1. Construction quality risk refers to a combination of the possibilities of quality defects occurring in the construction process with regards to such aspects as structural safety and key functions and the consequences thereof. Risks are rated as significant risks, major risks, general risks, and minor risks based on the likelihood of causing construction quality risk events, the severity of the consequences and the scope of impact. These risks are respectively labelled red, orange, yellow and blue.

1.2. Graded risk management refers to the dynamic process of identification, analysis, evaluation and management of risks, and the continuous mitigation thereof. Construction quality risk management shall follow the principles of being comprehensive, systematic, science-based, professional, economical, dynamic and effective.

1.2.1. Risk identification is the process of discovering, recognizing and describing risks.

1.2.2. Risk analysis is the process of understanding the nature of the risk and determining the probability of occurrence as well as the degree of severity

of the consequences thereof.

1.2.3. Risk evaluation is the process of judging the magnitude of the risk and determining the grade thereof.

1.2.4. Risk management is the management process of defining countermeasures and adopting corresponding control measures based on the differently graded risks.

1.3. Graded quality risk management for various types of construction projects, including new buildings, extensions and renovations, shall be executed in accordance with the provisions contained in this notice. Insurance companies may also refer to this notice when conducting construction quality risk management.

2. Construction Quality Risk Identification

All participating companies shall identify the various major dangers and hazards that may arise during construction work and identify the type of risks leading to quality incidents in accordance with such documents as the *Key Points Regarding the Control of Technical Risks in Major Projects* (Jian Zhi Han [2018] No. 28), the *Construction Quality and Safety Manual* (Jian Zhi [2018] No. 95), the *Unified Standards for Constructional Quality Acceptance of Building Engineering* (GB 50300), *Code for Quality Acceptance of Concrete Structure Construction* (GB 50204) and *Standard for Acceptance of Construction Quality of Building Foundation* (GB 50202).

3. Construction Quality Risk Management

Parties involved in project development, surveying, design, construction, supervision (hereinafter referred to as participating companies) are the main bodies responsible for risk management. Participating companies shall establish and improve the system and mechanisms for construction quality risk management, formulate work mechanisms, define responsibility of parties and adopt effective measures to comprehensively and systematically identify risks as well as conduct science-based analysis and evaluation of these risks, so as to effectively manage the construction quality risks that may arise during construction. Participating companies shall identify the leading department for construction quality risk management and persons in charge of the various aspects involved, and clarify the duties, objectives and tasks of relevant functional departments with regard to construction quality risk management. The highest-ranking principal officer of the enterprise is the person bearing primary responsibility for construction quality risk management in the enterprise, while the project leader is the person bearing primary responsibility for construction quality risk management for a particular project, as authorized by the highest-ranking principal officer of the enterprise.

3.1. Construction Quality Risk Management by Project Developers

3.1.1. The project developer is the entity bearing primary responsibility for construction quality risk management, and shall fully know and understand all quality risks of the project. The project developer shall take the lead in coordinating the implementation of construction quality risk management by the various participating parties to ensure construction quality and safety. This shall be done by selecting appropriate parties to participate in project development, reasonably determining the construction schedule and construction costs, and defining, in the contract, the standards, requirements, responsibilities and obligations for risk management for every party involved in the construction project.

3.1.2. The project developer shall oversee and inspect the implementation of construction quality risk management measures taken by all participating parties throughout the entire process, including:

- (1) the construction quality risk management accountability system, risk management systems, and the formulation, approval and expert review of specific construction plans before commencement of construction;
- (2) technical clarifications for construction personnel;
- (3) preparation of on-site materials, equipment and machinery;
- (4) organizing of project management personnel, technicians and laborers.

3.1.3. The project developer may entrust third-party professional audit agencies to conduct scientific and systematic assessment of construction quality risk for the entire course of construction, regularly evaluate the implementation of project risk management, quality management systems, physical quality defects and existing quality risks, and propose quality risk analyses, prevention and control measures, as well as relevant countermeasures, in order to timely adjust the grading and list of risk sources as well as measures for the management thereof.

3.2. Quality Risk Management by Construction Contractors

3.2.1. The construction contractor is the main entity implementing construction quality risk management. The general contractor shall take charge of construction quality risk management for the overall project, while specialized contractors and subcontractors shall be responsible for construction quality risk

management of their contracted works.

3.2.2. The construction contractor shall establish sound systems to prevent and control construction quality risks, establish a construction quality risk management accountability system and other necessary management systems to define the various responsibilities for construction quality risk of functional departments overseeing quality, technology, production, materials and costs , and establish various work mechanisms, including performance evaluations, incentives and training for all staff. The construction contractor shall also establish a register of identified construction quality risk sources, prepare lists of identified construction quality risk sources, and implement construction quality risk management involving all links of construction throughout the entire course of the project. These parties shall adopt technological, management and emergency response measures, among others, to effectively manage construction quality risks.

3.2.3. The project department shall implement the enterprise's various systems for construction quality risk management, and define the duties and scopes of work of all divisions, construction teams, managers and operators under their purview. The project department shall organize the implementation of risk identification, risk analysis and risk evaluation, make management and control measures, and prepare the list of construction quality risks identified by the department. The project department shall also come up with targeted designs for specific construction (including pre-emptive risk management measures and emergency plans), duly organize technical clarifications in construction quality risk management, and implement quality risk management measures throughout the construction process.

3.2.4. The construction contractor shall set up, at the entrances to the construction site, prominent bulletin boards to remind personnel of the main quality risks, types of accidents that may arise as a result, consequences of accidents, means for management and control, emergency measures, reporting channels, responsible enterprises and persons, contact information, etc.

3.3. Quality Risk Management by Construction Supervision Companies

3.3.1. The construction supervision company is responsible for supervising construction quality risk management. Such firms shall establish risk-based management supervision systems, include supervision of risk management in supervision plans, specify corresponding detailed rules for the implementation of such supervision, and regularly inspect the on-site implementation of these systems.

3.3.2. The construction supervision company shall review the relevant

documents made by the construction contractor on risk identification, risk analysis, risk evaluation, formulation of measures and other similar aspects, and inspect the implementation of construction quality risk management measures through on-site inspection and supervision, audit and examination. During the course of construction projects with sources for major or significant risks, project management personnel from the construction supervision company must perform their supervision duties at the construction site.

3.3.3. Where any construction contractor is found to have failed to identify risks, made erroneous risk evaluations, adopted improper management measures or inadequately implemented management measures and systems, the construction supervision company shall require the construction contractor to make timely corrections. In serious cases, the construction supervision company shall require the construction contractor to cease construction and rectify them, as well as report such incidents to the project developer. Where the construction contractor refuses to make the necessary rectifications, the case shall be timely reported to relevant agencies overseeing construction quality.

3.4. Duties of Project Surveying Companies and Project Design Companies

3.4.1. The project surveying company and project design company shall conduct proper risk identification during the project surveying and project design stages, identify the project quality risks, and indicate the key parts and processes that may involve project quality risks in survey and design documents. In these documents, such firms shall put forward suggestions and specific measures to guarantee construction quality, which shall serve as the basis for construction quality risk management in the construction stage after being reviewed and signed by their project leaders. Such firms shall also formulate indexes for project quality risk warning and management, define monitoring and testing requirements, and track the implementation thereof.

3.4.2. The project surveying company and project design company shall participate in project quality risk management organized by the project developer, guide and review project quality risk management measures formulated by the construction contractor, inspect the implementation of such measures, and put forward targeted recommendations.

4. Oversight and Management

4.1. The Municipal Housing and Urban-Rural Development Bureau shall coordinate the oversight of construction project quality risk management throughout the municipality. Authorities at all levels overseeing construction quality shall place greater emphasis on significant risks and major risks during oversight and inspection, strengthen oversight and inspection of the management of significant risks, eliminate,

reduce and control significant risks by various means, and effectively prevent the occurrence of quality incidents. For general risks and minor risks, differentiated dynamic oversight may be implemented by taking into account the real work of routine oversight..

4.2. Participating companies that fail to implement the provisions of this notice shall be ordered to make corrections within a certain period in accordance with the law. Such companies will be urged to rectify their work and listed as targets for enhanced oversight and inspection. Further administrative measures, such as arranging talks and recording of non-standard practices, shall be taken against any company refusing to make rectifications.

Guangzhou Municipal Housing and Urban-Rural Development Bureau
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