

Sound Practice No. 4

The co-responsibility as an important element for preventing disasters caused by seismic activity

To understand natural hazards and their possible effects, and to better comprehend the impact of human activity on the environment and risk creation are important matters that we need to keep in mind if we want to reduce future human, material, and economic loss. It is clear that Mexico needs to look into realistic mechanisms and, particularly, increase consciousness at different levels of society to make our urban environment safer and increase capabilities to respond to a larger event that could impact our cities. Therefore, it is required that the community, the different levels of government, and the academic and private sectors share the responsibilities for reducing risk through prevention and mitigation options. For this reason, the incorporation of the concept “co-responsibility” in those policies relates to disaster reduction and mitigation is very important.



The National Development Plan (2001-2006), and the Special Program for Disaster Prevention and Mitigation (2001-2006), look for improving the co-responsibility, coordination, and communication of the three levels of governments, the social and private sectors, and the general population in order to implement and develop the politics and the culture of self-protection, since the new civil protection law and

strategies emphasize the preventive character of the measures and strategies implemented, and not the corrective one.

In the particular case of dealing with seismic activity, in the new building regulation the notion of “co-responsibility” appears clearly defined. According with this regulation, the directors responsible for the construction are obligated to guarantee the complete implementation of this regulation.

I. Responsibilities of the Directors of the construction

a. Requirements

For the Ministry of Urban Development and Housing, the directors responsible of the construction have the following requirements:

1. Validate his/her studies in architecture, engineering, civil engineer, military building engineer. or military engineer
2. Have 5 years of experience
3. Know the building regulations and its norms



4. Be recognized as an active member of the following Schools of Professionals: The School of Architects in Mexico City; the School of Civil Engineers in México; the School of Military Engineers; the School of Municipal Engineers from Mexico; or being associate to the National Chamber of Engineers and Architects from Mexico, the School of Electric-Mechanical Engineers, and the Construction National Chamber.

b. Obligations

Those directors responsible for the construction are in charge of the supervision, implementation, and execution of the building regulation in order to preserve the security and operation of the new construction. For this reason, they have the following obligations:

1. To verify that the construction fulfills the building regulation because they are considered responsible of any violation of this disposition
2. To approve and supervise the complete execution of the security measures in the construction
3. To register by dates all the advances in the building process
4. To deliver to the proprietary, once the construction is concluded, the architectural and structural plane of the complete project, the book where he/she registers the advances in the building process and the calculus memories
5. To elaborate and give to the proprietary the operation and installation manuals

II. Responsibilities of the Co-responsible of the construction

a. Co-responsible Participation

It is important to mention that the directors responsible for the construction have to have co-responsible persons, who assist and support them in the exercises of their obligations. The co-responsible persons need an appropriate technical knowledge for answering with (or without) the directors technical aspects related to the structure of the construction, its structural security, its urban and architectural design, and its facilities. However, not all constructions need a co-responsible person, even if would be desirable. The cases in which the participation of a co-responsible in the building process is required are as follows:



1. It is required a co-responsible in Structural Security for:

- a. The project is considered as a type A. These constructions involve structures that could constitute a significant danger for containing toxic or explosive substances, as well as those ones whose operation is essential after an emergency, like hospitals, schools, transport centrals, firemen stations, electric centrals, telecommunications, stadiums, deposits of substances that can cause fire, or that are toxic, among others.
- b. The project is considered as type B1. These constructions have more than 30 m of height or more than 6,000 m² of area built, are located in the Historical Center, or that are considered as a Human Patrimony.

2. It requires a co-responsible in Urban and Architectural Design, for:

- a. The building of residential units of more than 50 houses, hospitals, public bathrooms, health centers, buildings for exhibitions, stations and terminals of terrestrial transport, airports, cinemas, film studios, fuel service stations and pedestrian bridges or roads
- b. The constructions located in areas considered as Historical, Artistic or for the Human Patrimony
- c. Constructions that have more than 20 m of height or more than 2,000 m² of built area, edifications with a capacity more than 250 attendees in a closed areas or more than 1,000 attendees in an open area
- d. Constructions that have cellular stations or wireless communication, chimneys and/or any other installation that surpasses the height of 15 m

3. It is required a co-responsible in facilities, for:

- a. The building of residential units of more than 50 houses, public bathrooms, laundries, dry cleaners, laundry and lubrication of vehicles, hospitals, health centers, buildings for exhibitions, crematories, airports, telegraphic offices, phone, and other communications facilities, radio station, cellular and/or wireless stations, film studios, heavy and medium industry, electric stations, pumping infrastructure, fuel service stations, and stations for transferring the garbage
- b. Constructions that have more than 20 m of height or more than 2,000 m² of built area, edifications with a capacity more than 250 attendees in a closed areas
- c. Construction that have elevators, and stairs or electromechanical ramps.

b. Requirements

For a person be legally recognized as a co-responsible according with the requirements of the Ministry of Urban Development and Housing, it is necessary that:

- a. The co-responsible in Structural Security need to validate his/her studies in Civil Engineering, Architecture or Military Building Engineering

- b. The co-responsible in Urban and Architectural Design need to validate his/her studies in credit Architecture, Engineer-Architecture, or Municipal Engineering
- c. The co-responsible in Facilities need to validate his/her studies in Electrical or Mechanical Engineering
- d. Also, they need to have minimum five years of experience, know the dispositions of this regulation and its norms, and be a member of some of the Schools of Professional mentioned

c. Obligations

On the other hand, the co-responsibles, together with the director of the construction, have as obligations the following:

0. The co-responsible in Structural Security should:

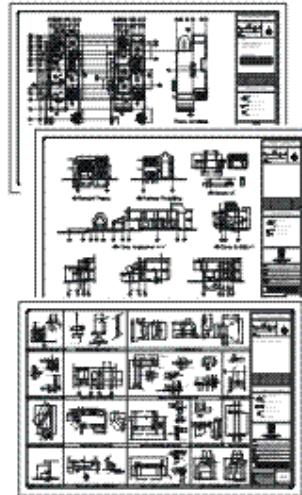
- a. Request the building license
- b. Verify, approve, and subscribe the plans of the structural project and the design memory of the foundation and the structures
- c. Verify that the project fulfills the characteristics, which are established in the building regulation, for the structural security
- d. Check that the construction completely follows the structural project, the procedures and the materials defined in it and in the building regulation, which regulate the quality of the construction
- e. Verify the building procedures
- f. Test the quality of the materials used in the construction
- g. Carry out technical verdicts of the stability and the structural



- h. Verify that in the project the building of the foundation and the structure incorporate the information related to the characteristics of the floor in order to preserve the structural security
- i. Notify to the Director responsible for the construction of any irregularity during the process of building that can affect the structural security
- j. He/she is responsible for any violation of the dispositions related to the building regulation.

2. The co-responsible in Urban and Architectural Design should:

- a. Request the building license
- b. Verify, approve, and subscribe the plans of the urban and architectural project
- c. Verify that the project fulfills the characteristics, established in the building regulation, for the urban and architectural design
- d. Verify that the project fulfills the dispositions related to the urban development established in the Delegation General Programs and in the Delegation Partial Programs, such as: the zoning plans, land use, and all the norms that define the requirements of accessibility, operation, hygiene, services, environment, communication, and disaster prevention that allow a successful integration with the urban image
- e. Verify that the project fulfills the dispositions related to the preservation of the patrimony, monuments, and the patrimonial conservation areas
- f. Check that the construction completely follows the building regulations
- g. Notify the responsible Director for the construction of any irregularity related to the urban and architectural design



3. The co-responsible in Facilities should:



- a. Request the building license
- b. Verify, approve, and subscribe the design memory and the plans of the facilities
- c. Approve and guarantee the security and operation of the construction
- d. Verify the availability of the public services and that the dispositions of the building regulation related to this aspect are fulfilled
- e. Verify that the legislations related to the security, fire control, and facility

operations have been completely followed

- f. Check that the construction completely follows the procedures and materials established for the quality norms for the facilities building and installation
- g. Notify to the responsible Director for the construction of any irregularity during the process of building that can affect the security due to problems in the facilities



III. Sanctions for violating the building regulation and other norms related

It is important to mention, that in the new building regulation and norms related, the responsibility of the director of the construction and his/her co-responsible does not finish when they complete the project. According to article 41 of the building regulation, the administrative responsibility finishes ten years after the building process is concluded. Therefore, if seismic phenomena occurs, those constructors that completely fulfilled the building regulation will not have any problem or loss. On the other hand, if the director of the construction or the co-responsible violated some buildings regulations, their sanctions will be:

- d. They will receive a written warning when they infringe the building regulation, but their actions do not cause any situation that puts in danger the life of people or the security of the construction; independently of the repairs required, as well as of the civil or penal responsibility
- e. They will receive a suspension for two years when they infringe the building regulation without causing situations that put in danger the life of people or the security of the construction; independently of the repairs required, as well as of the civil or penal responsibility, for:
 1. Without the approval of the Delegation or of the Ministry of Urban Development and Housing, once they have obtained the building license, they modify the construction, but they do not follow the requirements established in the building regulation
 2. They accumulate two administrative written warnings in a period of one year
- f. They will be removed of their duties, and their registration in the Ministry of the Urban Development and Housing will be cancelled, independently of the repairs required, as well as of the civil or penal responsibility, for:

- g. Not fulfill the dispositions of the building regulation, causing situations that put in danger the life of people or the security of the construction
- h. Submitting with false data their registration in the Ministry of Urban Development and Housing



It is important to mention that in these cases, the Ministry of Urban Development and Housing will not again give the registration they need for initiating any construction. Also, when the responsible director for the construction and their co-responsibilities have been sanctioned, the appropriated authorities will inform the Delegations and to the School of Professionals.

Evidently, with this notion of “co-responsibility,” the responsibility and the implementation of strategies and actions that mitigate and prevent the human, material, and economical losses due to the occurrences of hazardous events is not just an obligation of the authorities, but is a duty of all sectors including the population. For this reason, it is fundamental to promote the participation and the consciousness of all people for their important participation in disaster prevention, which will make Mexico a more secure country, based on the preventive actions and not on the corrective ones. This participation starts by fulfilling of the regulations and norms focused in increasing people’s security, but this is not the only one way.

References

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Knowledge Base Coding Reference:

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