

Republic of the Philippines
Quezon City
21st City Council

Ordinance No. _____, Series of 2018

"AN ORDINANCE MANDATING THE INTEGRATION OF ALL EARTHQUAKE RECORDING INSTRUMENTS (ERI) INSTALLED IN PRIVATE AND PUBLIC BUILDINGS TO THE QUEZON CITY MONITORING PORTAL, FOR THE PURPOSE OF POST EARTHQUAKE EVALUATION AND ASSESSMENT OF BUILDINGS AFFECTED."

Introduced by:
Hon **MARVIN C RILLO**

WHEREAS, the Quezon City Government is mandated to protect its constituents against possible risks of Earthquake disasters in line with Section 16, of RA 7160 as amended;

WHEREAS, the Department of Public Works and Highways (DPWH) issued NBCDO Memorandum Circular No. 1, Series of 2015, providing guidelines and implementing rules in the installation of Earthquake Recording Instruments for buildings pursuant to Section 102 and Section 203 of PD 1096 or otherwise known as the National Building Code of the Philippines;

WHEREAS, all building structures in Quezon City needs to be inspected by the City Building Official after the occurrence of a major earthquake to determine its fitness for continuous occupancy, in line with its responsibility in disaster mitigation;

WHEREAS, with the proliferation of High Rise and critical building structures in Quezon City, there is a need for the Department of the Building Official to prioritize **Post Earthquake Inspections** due to personnel limitation;

WHEREAS, an improved technology on Building Instrumentation or **Earthquake Recording Instrument (ERI)** is already available in the market capable of recording ground and building accelerations during earthquakes;

WHEREAS, the Data recorded by the ERI can be used for Post Earthquake structural engineering evaluation of building structures affected by the ground movement;

WHEREAS, there is a need to connect all ERI's installed in Private and Public Buildings to the Department of the Building Official to aid them in the prioritization of inspection limiting the list of buildings to be inspected only on those that have breached their design capacity to avoid unnecessary evacuation and minimize costly downtime of operation and business interruption;

NOW, THEREFORE,

BE IT ORDAINED BY THE CITY COUNCIL OF QUEZON CITY IN REGULAR SESSION ASSEMBLED:

SECTION 1. DEFINITION OF TERMS:

1.1 BASELINE DATA - The data of which a structure has been subjected to theoretical/controlled seismic forces as initial parameters for determination of safety.

1.2 BUILDING ACCELERATION - Acceleration of a structure as a response to the acceleration due to earthquake/ground movement

1.3 CERTIFICATE OF INSTALLATION - A document issued by the Department of the Building Official for the installed accelerograph/Earthquake Recording Instrumentation (ERI), certifying the instrument's conformity and compliance to the requirements and specifications set forth by the City Building Official relative to the provisions of NBCDO Memorandum Circular No. 1, Series of 2015.

1.4 COMMUNICATION PORTAL - A gateway or network connecting and accepting data from all Earthquake Recording Instrumentation linked to the Quezon City Government System.

1.5 CRITICAL BUILDING - All structures that serve a function during and after an earthquake, such as evacuation areas, hospitals and municipal halls, and structures that are occupied by many people.

1.5 DESIGN CAPACITY - The ability of the structure to carry/resist loads that are subjected to it, that was considered during the design phase.

1.7 ERI - Earthquake Recording Instrumentation. Instruments which record building response during major seismic events and provide immediate alarm annunciation to building occupants.

1.8 GROUND ACCELERATION - Acceleration due to sudden movement of the ground due to seismic/earthquake forces.

1.9 HIGH RISE BUILDING - A building with at least 50 meters or 15 storeys in height.

1.10 INSTALLATION PERMIT - Document being issued by the Department of the Building Official for the installation of the accelerograph / Earthquake Recording Instrumentation (ERI) on a building / structure.

1.11 IP - Internet Protocol is a communications protocol of digital message formats and rules for exchanging messages between computers across a network.

1.12 RADIO NETWORK - A network system that connects individual devices to other parts of the network through radio connections or transmissions.

SECTION 2. All Owners of High Rise and Critical Buildings are required to install Earthquake Recording Instruments (ERI) in accordance to *NBCDO Memorandum Circular No. 1, Series of 2015*, and in accordance to the schedule provided hereunder:

SEISMIC INSTRUMENTATION REQUIREMENTS

1. FOR GOVERNMENT BUILDINGS

TYPE / HEIGHT OF BUILDING	LOCATION	REQUIREMENTS
a. Hospitals, schools and other buildings above fifty meters in height	At least 3 accelerograph located at: 1. Ground Floor/Lowest Basement. 2. Middle Floor, and 3. Floor below Roof	ERI must be compliant with NBCDO Circular No. 1, which provides for the Guidelines and Implementing Rules on Earthquake Recording Instrumentation (ERI) for Buildings and as part of the Implementing Rules and Regulation of the National Building Code and pertinent provisions of National Structural Code of the Philippines
b. Hospitals with fifty (50) - bed capacity or more and schools with twenty (20) classrooms or more but not less than three (3) storeys.	One Accelerograph installed at Ground Floor/Lowest Basement and one on the top at the Center of Rigidity of the building.	ERI must be compliant with NBCDO Circular No. 1
c. Provincial/City/Municipal Halls and Buildings	One Accelerograph installed at Ground Floor/Lowest Basement and one on the top at the Center of Rigidity of the building.	ERI must be compliant with NBCDO Circular No. 1

2. FOR PRIVATE BUILDINGS

a. Buildings above (50) meters in height	<u>At least 3 accelerograph located at:</u> 1. Ground Floor/Lowest Basement. 2. Middle Floor, and 3. Floor below Roof	ERI must be compliant with NBCDO Circular No. 1
b. Hospitals with fifty (50) - bed capacity or more and schools with twenty (20) classrooms or more but not less than three (3) storeys.	One Accelerograph installed at Ground Floor/Lowest Basement and one on the top at the Center of Rigidity of the building.***	ERI must be compliant with NBCDO Circular No. 1
c. Commercial buildings with occupancy of at least 1,000 persons and gross floor area of at least 10,000 square meters.	One Accelerograph installed at Ground Floor/Lowest Basement and one on the top at the Center of Rigidity of the building. ***	ERI must be compliant with NBCDO Circular No. 1
d. Industrial buildings with occupancy of at least 1,000 persons and gross floor area of at least 10,000 square meters	One Accelerograph installed at Ground Floor/Lowest Basement and one on the top at the Center of Rigidity of the building. ***	ERI must be compliant with NBCDO Circular No. 1

*** *Installation of 2 Accelerograph is recommended and necessary to determine and monitor the health of the building post disaster occurrence.*

SECTION 3. All ERI installations are required to have *Installation Permits* and *Certificates of installation* from the Department of the Building Official, indicating therein

the Baseline Data on the structural characteristic of the building supplied by a competent Structural Engineer and Certified Correct as to its installation by the Professional in charge of installation. It must also be capable of real time Data Transmission thru Internet Protocol and must be Operational on a 24/7 basis.

SECTION 4. For the purpose of monitoring the structural health of the buildings installed with ERI's, the Department of the Building Official shall provide a Communication Portal where all the installed ERI's in Private and Public Buildings are mandated to connect electronically thru Internet Protocol and shall be upgradable to a Radio Network.

SECTION 5. PENALTY CLAUSE. Fines and Penalties. The following *fin*es and *penalties* shall be imposed to the owners/operators of the buildings:

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| 5.1 | First Offense | - | Fine of Three Thousand Pesos (Php3,000.00); |
| 5.2 | Second Offense | - | Fine of Five Thousand Pesos (Php5,000.00); and |
| 5.3 | Third Offense | - | Revocation and/or cancellation of Business Permits/Building Permits upon recommendation by the Monitoring/Inspection Team subject to the approval of the City Mayor. |

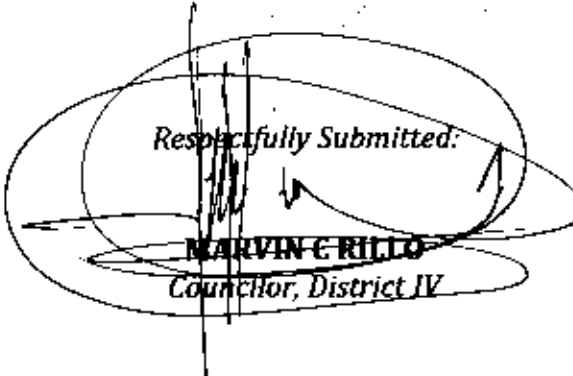
FINAL PROVISIONS

SECTION 6. REPEALING CLAUSE. All Ordinances, Resolutions, Executive Orders, Memorandum Circulars and Administrative Regulations, or parts thereof which are inconsistent with any of the provisions of this Ordinance are hereby repealed or modified accordingly.

SECTION 7. SEPARABILITY CLAUSE. If for any reason or reasons, any part or provision of the Ordinance shall be held unconstitutional or invalid, or other parts or provision hereof which are not affected, thereby shall continue to be in full force and effect.

SECTION 8. EFFECTIVITY CLAUSE. This Ordinance shall take effect after *Fifteen (15)* days after its complete publication in at least one (1) newspaper of general circulation.

Adopted:

Respectfully Submitted:

MARVIN C. RILLO
Counchor, District IV