

“Stability Certificate “: most sought-after document

1.0 Introduction :

Stability certificate is a most sought-after document by many agencies. Structural Engineer has the authority to issue such certificate. This is provided for various type of structures like buildings, industrial plants etc.

There are many agencies asking for stability certificate from the structural engineers. Most of the times, our structural engineer friends provide all sorts of certificates demanded by architects, clients, authorities as per wordings demanded. Structural engineers must understand that the content of the certificate is very important and must be carefully worded. **Engineers must provide a certificate only related to their scope of work.**

2.0 Major areas where stability certificate is demanded:

1. **Design of new building or industrial plant** : Approving authorities like local municipal authorities generally demand stability certificate from the structural engineer in the format specified by them. This format may contain reference to design codes, words like supervision at site and quality of materials which is not in the scope of structural engineer.
2. **Industrial Development Corporations**: Industrial owner demands stability certificate as per “DISH” authority (Director of Industrial Safety & Health) with the prescribed format, Form No. 1A (Rule 3A). As per requirement, the structure is required to be certified for various loads including that of machinery. The certificate further requires foundation checking and their condition.
3. **Financial Institutions**: Companies providing loans to buy residential or commercial premises insist to inspect a particular premise and provide stability certificate stating that the structure is good will be stable. The building will have a life till the end of loan period as they have to complete the loan processing document.
4. **Educational Institutions**: Based on the requirements of AICTE or Education department, a certificate is asked from structural engineer stating that the building is safe for the students. Sometimes a mention about fire safety, FSI regulations, approved plans is imposed in the certificate which engineers are signing blindly which is really not in the scope of a structural engineer. A sample certificate is enclosed for reference. Engineers must refrain from giving such certificates.

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ASSOCIATE ARCHITECTS

* Structural Consultant * Valuer * Interior Designer * Surveyors

No.:

Date :

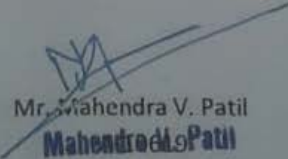
NO.: -MVP/ Cert /395/2018

Date:12/11/2018

STABILITY-CERTIFICATE

THIS IS TO CERTIFY THAT THE 'J.K.PATIL ENGLISH MEDIUM SCHOOL, BHOPAR', RUN BY 'DHARMA CHARITABLE TRUST, BHOPAR' IS PERSONALLY VISITED BY US ON DT.10TH NOVEMBER 2018. THE SCHOOL BUILDING IS R.C.C. G+3 STRUCTURE CONSTRUCTED ON STRONG FOUNDATION. THE SCHOOL BUILDING WAS FOUND TO BE SPACIOUS AND STRUCTURALLY SOUND AND STABLE. THE REQUIRED MARGIN IS PROVIDED ON ALL SIDES AND IT IS WELL CONNECTED BY ROAD.

THE SCHOOL BUILDING IS DESIGNED AND CONSTRUCTED AS PER NATIONAL BUILDING CODE. THE FIRE EXTINGUISHER IS PROVIDED IN THE SCHOOL BUILDING. THE FIRE BRIGADE HALL MOVE ALL AROUND THE BUILDING FREELY. THIS STABILITY CERTIFICATE IS ISSUED AS PER OUR PERSONAL VISIT AND INSPECTION DATED 10TH NOVEMBER 2018.


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5. **Public Works Department:** PWD demands Stability certificate for lift shaft and lift machine room slab alongwith two hours fire resistance.
6. **Structural audit and Stability certificate:** For buildings more than 15 years old, it is mandatory to conduct structural audit. This is related to age of building and for the purpose of any repair that is required to be undertaken. This is demanded by local municipal bodies

from the registered structural engineers. This structural audit is generally related to condition survey, testing and providing report on overall condition of building and suggestions for repairs as required. This must be correctly termed as condition survey or inspection report indicating the condition of structure on the date of inspection and suggestions for any repairs and upkeep of the structure. There is no question of providing stability certificate. But local authorities are demanding it and engineers are providing under pressure which is wrong.

3.0 Who can issue a stability certificate?

Only a qualified and experienced structural engineer registered with the local authority can issue a stability certificate for a structure designed by him. This means stability certificate can be issued only by the original designer only once.

Now, the latest National Building Code 2016 provides certification formats for structural engineers, supervising agencies which must be followed by all departments. NBC2016 Part II, Section 3 under Annex A provides Guide for qualification and competence of building professionals like Architect, Engineer, Structural Engineer, Geotechnical Engineer, Services Engineer etc. along with certification formats. Annex C provides form for certificate for Structural Design Sufficiency and Annex E provides Form of Supervision. There is no mention of "Stability certificate" any more. All the formats must be followed from the national standard.

4.0 What should be the content of so called Stability certificate?

Format provided in NBC2016 must be followed with the following information

Description of the structure and building permission letter number

Reference to design codes

Name of Arch

Name of supervisor and his certificate reference

Disclaimer like

This certificate is issued on the clear understanding that my/ our overall responsibility for the structural stability of the building and its proper structural performance will cease the moment any additions or alterations to the structure by accident or due to tampering by the users/ occupants for any reasons whatsoever. My/ our responsibility will also cease in the event of overloading or lack of proper maintenance of structure or any such act, which is detrimental to the structure.

ISSE Pune team has worked out the formats and suggested it for Unified DCR2017 to be made applicable to entire Maharashtra.

5.0 What should be the content of structural audit report which is related to condition survey?

Many municipal corporations demand the structural audit in their prescribed format. Engineers must provide distress marking plans, photographs, observation on the existing building, previous repair data, their own observations and suggestions in the report. One must clearly mention the limitations of the

audit and exclusions like data that is not available architectural / structural drawings, past history of repairs / addition alteration, certain area could not be inspected as access was not provided or structural members were covered under false ceiling or interior work, foundations could not be inspected etc.

It must be clearly mentioned in the report that this report should not be treated as a stability certificate and it is the responsibility of the owner to carry out necessary repairs under the guidance of structural engineer. Engineer who supervises the repair can provide repair completion certificate.

6.0 Market condition

We have come across numerous complaints that many engineers are providing structural audit and or stability certificate without even inspecting the structure for a meagre fee. Similarly, many NDT (Non-destructive Testing) agencies have opened their shops to provide NDT report as demanded by MCGM (along with structural audit) with as low fees as Rs.5000/-. This is ridiculous and dangerous. The intent of structural audit is not merely to produce a report for submitting against the notice issued by the local authority. It is for the safety of the occupants and to initiate necessary repair process.

Owners must be careful in selecting the competent person for structural audit and testing agency and not only on lowest quotation.

ISSE in co-ordination with various concerned authorities can prepare certification formats to suit the requirement. We expect support from our members.

7.0 Conclusion :

In medical field, the doctor takes an undertaking from the patient before operation. Lawyer fights the case with an undertaking from his client. Whereas, we structural engineers, take the responsibility of all wrong doings of others for meagre amount of fees. This is really strange! We must change this.

In our present system, for any structural collapse or accident, engineers connected with the project are called for investigation or arrested even after many years of existence of the structure which is shameful. Engineers can not take perpetual responsibility of the structure. Engineers are acting as consultants who can provide the expert advise based on the scope of services. We need to define our role and responsibility very clearly and must provide certificate only related to our exact scope of work.

Technical Committee ISSE

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