Structural Engineer’s Logo (if applicable)

**<Structural Engineer’s Name / Firm Name>**

**Periodic Structural Inspection Report**

**Notice Reference No.: <SM YYYY/MM/XXXX>**

**< Name of Building>**

**<Address of building>**

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## **Standard Declaration by Structural Engineer**

**Standard Certification by the Structural Engineer**

**for Periodic Inspection of Buildings**

In accordance with Section 28(6) of the Building Control Act 1989 (the “Act”) and Regulations 6 and 7 of The Building Control (Periodic Inspection of Buildings and Building Façade) Regulations 2021 (the “Regulations”), I, **<Name of Structural Engineer>**, the Structural Engineer appointed by the building owner under section 28(3) of the Act have personally conducted a structural inspection of the building located at <Address> (“**Building**”), including a visual survey carried out personally, and hereby submit the report of my inspection of the Building. I certify and declare that the inspection of the Building was carried out and the report was prepared by me in accordance with the Act and the Regulations.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Structural Engineer

For Periodic Inspection of Buildings Date

(Signature and Stamp)

## **Foreword**

The visual inspection report contains observations and technical opinions by structural engineer appointed by the building owner. The structural engineer has carried out a comprehensive visual inspection that relies largely on his/her professional engineering assessment and judgement. He/She has exercised reasonable diligence and take active interest in the planning and carrying out of the inspection of the building.

Under Section 28(4) of the Building Control Act, where a building comprising 2 or more flats is not subdivided and there are subsisting leases for those flats registered under the Registration of Deeds Act 1988 or the Land Titles Act 1993, all the owners of those have jointly appointed the same structural engineer to carry out a structural inspection. The structural engineer has commenced the structural inspection after he/she has been jointly appointed by all owners of the building

For the purposes of Section 28(6)(a) of the Building Control Act, the appointed structural engineer must carry out the inspection in the manner prescribed in the Building Control (Periodic Inspection of Buildings and Building Facades) Regulations 2021.

This report consists of a visual survey carried out personally by the appointed structural engineer with reasonable diligence, which, broadly includes all the following:

1. the condition of the building;
2. the loading on the structure of the building;
3. whether there is evidence of any structural works that are or were carried out without any prior approval of the plans of those works where prior approval is required by Part 2 of the Building Control Act.

Next, if an appointed structural engineer, after carrying out a visual inspection of the building, reasonably suspects or is of the opinion that there is any defect, deformation or deterioration in the structure of the building that will or will be likely to:

1. endanger or reduce the structural stability or integrity of any part of the building; and
2. is of the opinion that it is necessary to carry out a full structural investigation of the building in order —
3. to ascertain the cause of the defect, deformation or deterioration; and
4. to recommend appropriate measures or other building works to ensure the structural stability or integrity of the building.

The appointed structural engineer will, and only with the prior approval of the Commissioner of Building Control, with reasonable diligence carry out a full structural investigation of the building.

## **Acronyms, Abbreviations and Definitions**

**List of Definitions**

|  |  |
| --- | --- |
| Structures without redundancies | Example of structures without redundancies are cantilever structures, cantilever structures without back span, cantilever balconies exposed to elements, tension columns, hanging/suspended structures, nibs and corbels, etc. |
| Special and critical structures | Examples of special and critical structures are transfer girders/ beams/trusses, small / slender columns, long span structures, cable structures, inclined columns, etc |
| Additional inspection coverage | Additional inspection coverage that are required due to age, defects observed and maintenance history |
| Concealed columns | Columns concealed behind architectural finishes with air gaps between the column face and the finishes. It excludes those columns concealed with materials adhered fully to the column face, i.e. tiles, plaster, wallpaper |
| Structural materials | Structural materials such as reinforced concrete, pre-stressed concrete, steel, etc. |
| Unauthorised works | Any structural works that are or were carried out without any prior approval by the Commissioner of Building Control of the plans of those works where prior approval is required under Part 2 of the Building Control Act 1989 |
| <others> | <to insert as required> |
| <others> | <to insert as required> |
| <others> | <to insert as required> |
| <others> | <to insert as required> |

**List of Acronyms and Abbreviations**

|  |  |
| --- | --- |
| ***BCA*** | Building and Construction Authority |
| ***ST Plans*** | Structural Plans |
| ***BP Plans*** | Building Plans |
| ***TOP*** | Temporary Occupancy Permit |
| ***CSC*** | Certificate of Statutory Completion |
| ***RC*** | Reinforced Concrete |

# **Section 1 – Structural System of the Building**

## **1.1 General Information of the Building**

* Name and address of the building
* Number of storeys in each block of building
* Describe the usage of the building (e.g. commercial, residential, mix-use development consist of commercial and residential, industrial, etc.)
* Maintenance history of the building, if known
* Know defects from past PSI report provided by the owner, if any.
* Any resurfacing of past defects.

## **1.2 Description of foundation and structural system**

The inspection was conducted with reference to the following BP Plans / ST plans:

Axxxx-xxxx-xxxx-STxx, Axxxx-xxxx-xxxx-BPx.

The building was constructed of conventional RC system, with RC beams and slab supported on piled foundation system. (Please provide attachments, e.g. structural plans)

The pitch roof is constructed of timber rafter supporting the tiled finishes.

The building was completed in YYYY according to the information obtained from legal search. The building is xx years old.

There are no special and critical structural systems identified in the building.

Or

Critical structural systems in the building consist of RC transfer beams located at … (Please provide attachments, e.g. structural plans)

## **1.3 Usage of building**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S/N** | **Location** | **Usage** | **Photograph no.** |  |
| 1 | Level 1 | Retail shops | No. xx |  |
| X | Level 2 | Residential |  |  |

# **Section 2 – Observations**

## **2.1 Diary and Scope of Visual Inspection**

The visual inspection was conducted on DD/MMM/YYYY in the presence of the building owner / owner’s tenant.

High-resolution digital camera with long distance zoom was used in the visual inspection. Other items and equipment used during the inspection includes:

* Borescope
* Tapping rod

The visual inspection has covered all structural elements within the buildings.

Or

*Residential Developments*

All special and critical structures and structures without redundancieswithin the residential building have been visually inspected. Where such structures are concealed by architectural finishes, access has been made to inspect the concealed structure.

All structural elements in the common area (e.g. corridor, stairway, lift lobby, clubhouse) have been inspected.

The building is xx years old. The building is not more than 30 years old. More than 20% of the residential units has been accessed for inspection. The units selected are well-distributed and representative of the building’s structural condition. The principal in selecting the units is as follows:

* + All rooftop units have been accessed and inspected.
  + At least 1 unit per storey on all other storeys have been accessed and inspected
  + The units selected for inspection are well distributed (i.e. units inspected are situated at different wings in the tower/block)

*Non-residential Developments (e.g. Commercial/Industrial)*

All special and critical structures and structures without redundancieshave been visually inspected. If such structures are concealed by architectural finishes, access have been made to inspect the concealed structures. No deterioration been observed.

All areas with unconcealed structural elements have been visually inspected. No deterioration been observed.

For indoor areas not exposed to weather and covered by suspended ceilings, at least 1 suspended ceiling has been accessed at every 500m2 interval. No deterioration been observed.

For outdoor areas exposed to weather (e.g. outdoor shelter, pickup/drop off point) and covered by suspended ceiling, at least 1 suspended ceiling has been accessed at every 250m2 interval. No deterioration been observed. The photos of the accessed ceiling can be found as appended justifying the required coverage.

For cladded columns, at least 30% of the cladded columns has been inspection by using a borescope/accessing via the ceiling panel to determine the condition of the structure. No deterioration been observed. The photos of the inspected cladded columns can be found as appended justifying the required coverage.

Notwithstanding the minimum requirements for inspection coverage indicated above, professional judgement has been made if higher inspection coverage is required. A list of factors that will warrant higher inspection coverage should include, but are not limited to:

1. Age
2. Areas of high humidity/Wet area (e.g. toilet)
3. Cause(s) and extent of defect(s) observed
4. Exposure condition of the building (e.g. heat, proximity to aggressive environment
5. Maintenance history of past defects and past strengthening works
6. Complex structural layout (e.g. long span, transfer structure, different structural systems)
7. Visibility of concealed structural elements based on line of sight from inspection point of suspended ceiling

As no defects has been identified, there is no need for additional coverage beyond the minimum requirements.

## **2.2 Other observation of visual inspection**

Presence of heavy suspended fixtures (e.g. large ceiling fan, heavy air-con ducts, heavy false-ceiling, suspended decorations, etc.) has been observed in crowded locations, at food courts/ atrium/ waiting/seating areas.

According to the managing agent, there has been no known maintenance problems.

There no previous rectification carried out on the building structure.

<Useful plans, sketches, photographs and tabulations could also be included to illustrate the findings of the inspection.>

# **Section 3 – Key Findings from Inspection of the Building**

## **3.1 Survey of concealed key structural elements (such as Connection Systems Of Prefabricated Prefinished Volumetric Construction – PPVC constructed Buildings)**

Description by SE …………………………………………………………….

…………………………………………………………….

Key findings for 3.1:

Choose an item.

Choose an item.

## **3.2 Survey of timber structures (including Mass Engineered Timber)**

Description by SE …………………………………………………………….

…………………………………………………………….

Key findings for 3.2

Choose an item.

## **3.3 Survey of loading on the building Structure.**

Description by SE …………………………………………………………….

…………………………………………………………….

Key findings for 3.3:

Choose an item.

## **3.4 Survey of any unauthorised works to the building structure**

Description by SE …………………………………………………………….

…………………………………………………………….

Key findings for 3.4:

Choose an item.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S/N** | **Name of Structure** | **Location** | **Size and Condition of the structure** | **Photograph no.** |
| 1 | E.g. mezzanine floor | Roof /  Workshop /  Refer to sketch / plan  … | XX m2.  The structure is in good condition. No distress has been observed on its supporting structure. | No. xx |
| X | XXX |  |  |  |
| X | XXX |  |  |  |

## **3.5 Survey of signs of structural defect, deformation, or deterioration**

Description by SE …………………………………………………………….

…………………………………………………………….

Key findings for 3.5

Choose an item.

## **3.6 Survey of exposure to aggressive environment.**

Description by SE …………………………………………………………….

…………………………………………………………….

Key findings for 3.6

Choose an item.

Choose an item.

## **3.7 Survey of slope, retaining walls and slope protection structures**

Description by SE …………………………………………………………….

…………………………………………………………….

Key findings for 3.7

Choose an item.

## **3.8 Survey of safety barriers (e.g. parapets and railings)**

Description by SE …………………………………………………………….

…………………………………………………………….

Key findings for 3.8

Choose an item.

## **3.9 Other survey or checks carried out**

Description by SE …………………………………………………………….

…………………………………………………………….

Key findings 3.9

Choose an item.

## **3.10 Recommended remedial actions for all defects detected.**

|  |  |  |
| --- | --- | --- |
| **Defect Type** | **Non-structural defect /Minor structural defects / Structural defects** | **Repair Method** |
| **EXAMPLES**  Plaster cracks | Non-structural defect | List … |
| **EXAMPLES**   * Minor RC Cracks < 2mm width AND < 30mm deep * Localised and minor Concrete Spalling (Extent of spalling < 300mm in longest direction) * Termite infestation/ Timber Rotting (not on key structural element. E.g. timber runner beam or purlin etc.) * Surface rust/ pitting of steel members (with no reduction in member thickness) * Settlement of non-suspended slabs | Minor structural defect | List … |
| **EXAMPLES**   * Structural Cracks * Extensive Concrete Spalling (Extent of spalling > 300mm in longest direction) * Termite infestation/ Timber Decay * Corrosion of steel members (with reduction in thickness) * Excessive deformation/ deflection/ settlement/ bulging of structural elements | Structural defect | List … (and indicate the specific location) |

# **Section 4 – Inspection Coverage and Conclusion**

## **4.1 Inspection Coverage**

Total no. of blocks in the vicinity**: xxx**  **(entry box added)**

Age of building: **xxx** years old **(entry box)**

## **4.2 Summary List of inspected units**

Residential

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Block 1   |  |  |  |  | | --- | --- | --- | --- | | S/n | Unit no. | Observation | Photo no.: | | 1 | #10-101 | No defect observed |  | | 2 |  |  |  |   Total units inspected: **xx**  Total no. of units in the tower/block: **xx**  Percentage of overall units surveyed: **xx%** |

The summary list of residential units inspected and the observation from each unit have been tabulated in the following table. All units at the top floor has been inspected. At least 1 unit from every floor at different location has been inspected.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Block 2   |  |  |  |  | | --- | --- | --- | --- | | S/n | Unit no. | Observation | Photo no.: | | 1 | #10-201 | No defect observed |  | | 2 |  |  |  |   Total units inspected: **xx**  Total no. of units in the tower/block: **xx**  Percentage of overall units surveyed: **xx%** |

Commercial, Industrial, Institutional,

The summary list of \*commercial/industrial/institutional units inspected and the observation from each unit have been tabulated in the following table.

### **4.3 Conclusion**

Description by SE …………………………………………………………….

…………………………………………………………….

The inspected building structure is found to be structurally safe and sound.

Key findings

Choose an item.

Choose an item.

### **4.4 Recommendation**

Description by SE …………………………………………………………….

…………………………………………………………….

It is recommended that the building owner shall continue to properly maintain the building and conduct their own regular checks before the next cycle of inspection which will be conducted again in 5-years.

For the durability of the timber structures, it is recommended that a pest control specialist to be engaged periodically to check for any presence of termite affecting the timber elements.

This will ensure that any newly developed defect could be discovered and rectified in time.

Key findings {drop-down list}

Choose an item.

# **Section 5 – Plans, Sketches and Photographs of Defects**

## **5.1 Sketches and plans with defects locations indicated**

Description by SE …………………………………………………………….

…………………………………………………………….

**<Insert sketches and ST plans>**

## **5.2 Defect Photographs**

*Note: Please submit all other inspection Photos as a separate document.*

|  |  |
| --- | --- |
| <Photograph, clearly showing the usage or condition of the structural elements > | |
| **Photograph 1** | **General view of building exterior** |
| **Observation** | Defect has been observed |
| **Nature of defect:** | Non-Structural / Minor-Structural/ Structural |
| **Recommended Actions** | Reference to Summary List from 3.10 |

|  |  |
| --- | --- |
| <Photograph, clearly showing the usage or condition of the structural elements > | |
| **Photograph 2** | **General view of building exterior** |
| **Observation** | Defect has been observed |
| **Nature of defect:** | Non-Structural / Minor-Structural/ Structural |
| **Recommended Actions** | Reference to Summary List from 3.10 |

|  |  |
| --- | --- |
| <Photograph, clearly showing the usage or condition of the structural elements > | |
| **Photograph 3** | **General view of building exterior** |
| **Observation** | Defect has been observed |
| **Nature of defect:** | Non-Structural / Minor-Structural/ Structural |
| **Recommended Actions** | Reference to Summary List from 3.10 |

|  |  |
| --- | --- |
| <Photograph, clearly showing the usage or condition of the structural elements > | |
| **Photograph 4** | **General view of building exterior** |
| **Observation** | Defect has been observed |
| **Nature of defect:** | Non-Structural / Minor-Structural/ Structural |
| **Recommended Actions** | Reference to Summary List from 3.10 |

|  |  |
| --- | --- |
| <Photograph, clearly showing the usage or condition of the structural elements > | |
| **Photograph 5** | **General view of building exterior** |
| **Observation** | Defect has been observed |
| **Nature of defect:** | Non-Structural / Minor-Structural/ Structural |
| **Recommended Actions** | Reference to Summary List from 3.10 |

|  |  |
| --- | --- |
| <Photograph, clearly showing the usage or condition of the structural elements > | |
| **Photograph 6** | **General view of building exterior** |
| **Observation** | Defect has been observed |
| **Nature of defect:** | Non-Structural / Minor-Structural/ Structural |
| **Recommended Actions** | Reference to Summary List from 3.10 |

|  |  |
| --- | --- |
| <Photograph, clearly showing the usage or condition of the structural elements > | |
| **Photograph 7** | **General view of building exterior** |
| **Observation** | Defect has been observed |
| **Nature of defect:** | Non-Structural / Minor-Structural/ Structural |
| **Recommended Actions** | Reference to Summary List from 3.10 |

|  |  |
| --- | --- |
| <Photograph, clearly showing the usage or condition of the structural elements > | |
| **Photograph 8** | **General view of building exterior** |
| **Observation** | Defect has been observed |
| **Nature of defect:** | Non-Structural / Minor-Structural/ Structural |
| **Recommended Actions** | Reference to Summary List from 3.10 |

|  |  |
| --- | --- |
| <Photograph, clearly showing the usage or condition of the structural elements > | |
| **Photograph 9** | **General view of building exterior** |
| **Observation** | Defect has been observed |
| **Nature of defect:** | Non-Structural / Minor-Structural/ Structural |
| **Recommended Actions** | Reference to Summary List from 3.10 |

# **ANNEX A – CHECKLISTA FOR PERIODIC STRUCTURAL INSPECTION OF EXISTING BUILDING(S) AT: <*Building Address*>**

Please tick Y or N/A, which are defined below, accordingly for all checklist items:

**Y** – Yes, I declare that I have checked and addressed the item in my report

**N/A** **–** Not applicable, I declare that I have checked and found the item to be not applicable (i.e. does not exist)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **Y** | **NA** | | |
|  | **Structural System of the Building:** |  |  |
|  | Reference to structural layout plans and details | Checkmark with solid fill |  | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Description of foundation system |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Description of structural system (including storey height) |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Location of critical floor systems (e.g. flat slab, flat plate or pre-stressed slab etc.), if any |  |  | | | |
|  |  |  |  | |
|  | **Special and Critical StructuresB:** | | | | |
|  | Signs of distress, cracks, deformation or corrosion |  |  | | | |
|  |  |  |  | |
|  | **Structures without RedundanciesC:** | | |
|  | Signs of distress, cracks, deformation or corrosion |  |  | | | |
|  |  |  |  | |
|  | **Concealed Key Structural Elements And Connection Systems Of Prefabricated Prefinished Volumetric Construction (PPVC) Constructed Buildings:** | | | | |
|  | Reference to approved structural plans for location and detail of inspection access points |  |  | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Signs of distress, deformation or corrosion on concealed structural elements and connection systems |  |  | |
|  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Y** | | **NA** | | | |
|  | **Timber structures (including Mass Engineered Timber):** | | | | |
|  | Signs of biological damage or decay (e.g. termite attack or fungus growth, etc.) | |  | |  | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Signs of deterioration (e.g. creep deformation, delamination, cracks, etc.) |  |  | | |
|  | Areas prone to water leakage, accumulation of water that can result in ingress of water (e.g. end cap protection remain intact and water tight, waterproofing is still effective) |  |  | | |
|  |  | | |
|  |  | | |
|  | Increase in moisture content beyond code and specialist recommendations checked using devices such as moisture meters and scanners. |  |  | | |
|  |  | | |
|  |  | | |
|  | Need for inspection and testing by a specialist (e.g. anti-termite, timber specialist, etc.) |  |  | | |
|  |  |  |  |
|  | **Survey of Loading:** | | | |
|  | Compatibility of existing usage with the design loading |  |  | | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Deviation from intended use or supporting higher imposed load as recommended in the design codes (e.g. CP3, BS 6399 or SS EN 1991 and the relevant national annexes) |  |  |
|  |  |
|  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Signs of distress or deformation due to overloading (to show affected location(s) on plan) |  |  | | |
|  |  |  |  |
|  | **Unauthorised WorksD:** | | | |
|  | Presence of unauthorised works (to show locations on plan) |  |  | | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Impact of unauthorised works on the building structure |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Record of previous strengthening works without Approved Plans. |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Additional unauthorised floor within a high volume/headroom space |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Signs of structural defects and deterioration:** | | |
|  | Building tilt/ settlement |  |  | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Structural deformation |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Major structural defects (e.g. structural cracks, decayed timber member, etc.) |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Minor structural defects (e.g. minor corrosion and minor spalling, etc.) |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Non-structural defects |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Y** | | **NA** | | | |
|  | **Exposure to aggressive environment:** | | | | |
|  | Column immersed in water (e.g. ground floor water tank, seawater, lakes, etc.) | |  | |  | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Aggressive chemicals or other similar substances which may accelerate the deterioration of structural elements, particularly in industrial buildings |  |  | | |
|  |  |  |  |
|  | **Slope, Retaining Walls And Slope Protection StructuresE:** | | | |
|  | Signs of slope erosion |  |  | | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Defects of retaining wall and other slope protection structures (e.g. cracks, tilt, displacement, etc.) |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Signs of undesirable condition surrounding retaining wall (e.g. tension cracks in soil, choked weephole(s), presence of big trees nearby, inadequate surface drainage etc.) |  |  | | |
|  |  | | |
|  |  | | |
|  |  |  |  |
|  | **Safety Barriers (i.e. parapets & railings):** | | | |
|  | Any signs of structural defect, deformation or deterioration |  |  | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Any continuous handrail for full glass barriers |  |  | | |
|  |  |  |  |
|  | **Other Surveys Or Checks Carried Out** | | | |
|  | Presence of heavy suspended fixtures (e.g. thick cement plaster, large cement-based or gypsum board over) in crowded locations, such as food courts, atrium, waiting/seating areas |  |  | | |
|  |  | | |
|  |  | | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Records of and comments on any known maintenance problems and previous rectification carried out on the building structure. |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Inspection Coverage** | | |
|  | Summarised list of units inspected   * Percentage of units inspected: % |  |  | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | At least 30% of cladded columnsF are exposed for inspection   * Percentage of cladded columnsF exposed: % |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Suspended ceiling accessed points are indicated on a structural/building layout plan |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Justification of inspection coverage |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | **Y** | | **NA** | | |
|  | **Recommended remedial actions for all defects detected** | |  | |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Standard Certification on first and last page of report** |  |  |

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Structural Engineer

For Periodic Inspection of Buildings Date

(Signature and Stamp)

**ANNEX B – SUPPLEMENTARY CHECKLISTG FOR CRITICAL COLUMNS IN RESIDENTIAL BUILDINGS(S) BUILT BEFORE 1 JAN 1989**

Please tick Y or N/A, which are defined below, accordingly for all checklist items:

**Y** – Yes, I declare that I have checked and addressed the item in my report

**N/A** **–** Not applicable, I declare that I have checked and found the item to be not applicable (i.e. does not exist)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Y** | | **NA** | | | |
|  | **Presence of Critical Columns:** | | | | |
|  | Design concrete grade 20 | |  | |  | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Small-size, narrow, or slender columnsH |  |  |
|  | Columns subjected to bi-axial bending or bending about minor axis |  |  |
|  |  |
|  |  |
|  | Columns unbraced along minor axis. |  |  |
|  |  |
|  |  |
|  | Void deck used as carpark |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Signs of structural defects and deterioration:** | | |
|  | Spalling, cracks or deformation |  |  | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Signs of damage by external force (e.g. vehicular impact) |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Signs of differential settlement |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Recommendations:** | | |
|  | Need for full structural investigation |  |  | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Need for crash barrier around void deck columns |  | |  | |
|  | | |  | |  | |  |
|  | | |  | |  | |  |

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Structural Engineer

For Periodic Inspection of Buildings Date

(Signature and Stamp)

## **Standard Declaration by Structural Engineer**

**Standard Certification by the Structural Engineer**

**for Periodic Inspection of Buildings**

In accordance with Section 28(6) of the Building Control Act 1989 (the “Act”) and Regulations 6 and 7 of The Building Control (Periodic Inspection of Buildings and Building Façade) Regulations 2021 (the “Regulations”), I, **<Name of Structural Engineer>**, the Structural Engineer appointed by the building owner under section 28(3) of the Act have personally conducted a structural inspection of the building located at <Address> (“**Building**”), including a visual survey carried out personally, and hereby submit the report of my inspection of the Building. I certify and declare that the inspection of the Building was carried out and the report was prepared by me in accordance with the Act and the Regulations.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Structural Engineer

For Periodic Inspection of Buildings Date

(Signature and Stamp)