STRUCTURAL STABILITY REPORT

By

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For

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Beliatta Road, Muduna,
Walasmulla

CONTENTS:

1) INTRODUCTION, BACKGROUND AND OUTSET SITUATION

It had been observed that three storeyed building situated at Beliatta Road, Muduna, Walasmulla is proposed to use as hospital.

It was brought to our notice that no structural drawings available at this moment, hence this report is based on certain assumptions

The author of this report was entrusted by Dakshina Hospital and was requested to carry out a "Structural Stability Report" and further this investigation to report possible methods of rectification.

2) PURPOSE AND SCOPE

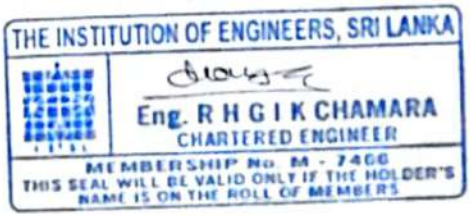
The endeavours reported herein was performed to investigate the structural stability and integrity of the existing building in general and further this investigation to check whether this building is structurally capable enough to assess the durability and stability of existing building and to recommend possible rectification methods if required.

3) DATA COLLECTED AND INFORMATION GIVEN BY THE CLIENT

- Architectural drawing
- No structural or as-built drawings were available of this building, few informations were collected from client.
- Since this building is currently in operation, any function inside the building should not be disturbed during investigations

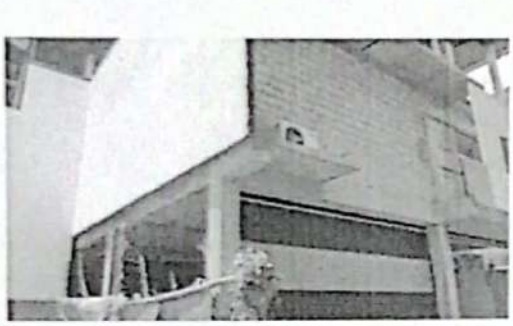
4) METHODOLOGY

The work involved visual condition surveys only. The provided architectural drawing is used to carry out the load evaluation.

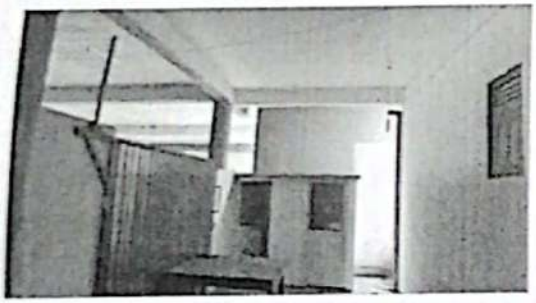


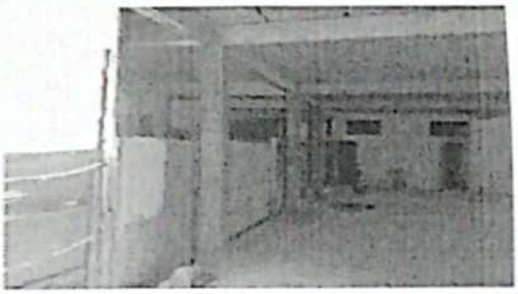
5) VISUAL EXAMINATIONS – PHOTOGRAPHIC SURVEY WITH COMMENTS

DAKSHINA HOSPITAL AT WALASMULLA



(Fig. - External View)





(Fig. - Internal View)

6) CALCULATIONS

Column Design

Load Evaluation

Imposed Loads = 5 kN/m^2

Dead Load

Slab thickness for floors = 125 mm
First Floor = 5.1 kN/m^2
Second Floor = 5.1 kN/m^2

For Middle Column (C1)
Tributary Area = 27 m^2
Ultimate design load = 820 kN

As per client's information
Provided r/f for columns = 4T16 + 4T12
These are satisfied with column design.

7) CONCLUSIONS AND RECOMMENDATIONS.

a) Wall cracks – Proper way to rectify masonry wall cracks is to carry out method of rectification once the crack has reached its near static stage. Professional advices shall be sought in this regard. When crack is no longer in the dynamic region then, following procedure shall be adopted.

1. Open up the crack to V-grove shape; open from both sides if crack appeared from both sides
2. Clean the crack
3. Use an "Acrylic Sealant" (**NOT** acrylic filler) to fill the crack. This has to be done for 3-days continuously as there can be sealant settlements inside the crack. If cracks appear from both sides, then this procedure shall be repeated on each side.
4. Prepare the surface for painting
5. Use "Crackgone" reinforcing mesh of approved equivalent during painting

b) It was observed that there is no building tilt and settlement.

c) There was no major or minor structural cracks.

d) As per column design, columns are strength enough to bear the loads.

e) As per visual observation and considering sample calculations of column, the building is strength enough to cater the loads of hospital usage.

ANNEX

Architectural Drawing