1. General
1.1. No dimensions are to be obtained from scaling
1.2. Unless otherwise noted, all dimensions are in millimeters.
1.3. All angles are in degrees (°) unless otherwise stated.
1.4. Abbreviations:
   - A.S.: As shown
   - N.T.S.: Not to scale
   - C.L.: Road arrangement center line
   - L.C.L.: Lane marking center line
   - S.C.L.: Structure center line
   - G.L.: Geotechnical Investigation

2. FOUNDATION:
2.1. Foundations have been designed on bearing pressure of 200 KN/m² at 1.5m as appoiste in the GI report
2.2. All foundation shall be placed at a minimum depth of 2000mm below ground level but not exceeding 3000mm.

3. BRICK WORK:
3.1. All load bearing block walls are to be constructed from solid bricks
3.2. All brickwork shall be in accordance with BS 5628 Part 1, 1978; Structural Use of unreinforced masonry.
3.3. Provide masonry anchors every 2 courses using mild steel hoop iron ties to comply with BS5628 Part 1, 1978; Structural Use of unreinforced masonry.

4. Falsework and formwork
4.1. Falsework and formwork shall not be removed before the concrete has attained sufficient strength to support its own weight and any loads which may be imposed on it.
4.2. Minimum period required for the formworks to remain in place after the concrete has been placed is given in the General Specification.
4.3. All construction joints shall be located as shown on the drawings or modified with no objection of the Engineer.

5. Concrete
5.1. Unless otherwise indicated, concrete shall be of the following grades:

<table>
<thead>
<tr>
<th>Proposed use</th>
<th>Grade</th>
<th>Permitted Aggregate type</th>
<th>Max. Agg. size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforced Concrete</td>
<td>C 25</td>
<td>BS 882</td>
<td>20mm</td>
</tr>
<tr>
<td>Concrete containing no embedded metal</td>
<td>C 25</td>
<td>BS 882</td>
<td>20mm</td>
</tr>
<tr>
<td>Sleeping Concrete</td>
<td>C 15</td>
<td>BS 882</td>
<td>20mm</td>
</tr>
<tr>
<td>Foundation</td>
<td>C 25</td>
<td>BS 882</td>
<td>20mm</td>
</tr>
</tbody>
</table>

5.2. Unless otherwise shown on the drawings, surface finishes shall be as follows.

<table>
<thead>
<tr>
<th>Location</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formed surfaces</td>
<td>F1</td>
</tr>
<tr>
<td>Internal</td>
<td>F2</td>
</tr>
<tr>
<td>Uniformed surfaces</td>
<td>U1</td>
</tr>
<tr>
<td>Tones of abutment bearing shelves</td>
<td>U2</td>
</tr>
<tr>
<td>Permanently exposed</td>
<td>U3</td>
</tr>
</tbody>
</table>

5.3. Falsework and formwork
1) Falsework and formwork shall not be removed before the concrete has attained sufficient strength to support its own weight and any loads which may be imposed on it.
2) Minimum period required for the formworks to remain in place after the concrete has been placed is given in the General Specification.

5.4. All construction joints shall be located as shown on the drawings or modified with no objection of the Engineer.

5.5. Unless otherwise indicated on the drawings all corners shall have 25mm x 25mm chamfers.

5.6. Unless otherwise indicated on the drawings the concrete cover for any reinforcement shall be as listed below or shall be the reinforcement diameter in millimeters whichever is the greater. The cover shall be maintained at grooves and architectural features to the concrete surface.

<table>
<thead>
<tr>
<th>Structural member</th>
<th>Minimum concrete cover for reinforcement (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>To mesh in slabs</td>
<td>25mm</td>
</tr>
<tr>
<td>Column (cover to link)</td>
<td>35mm</td>
</tr>
<tr>
<td>Slab (cover to main bars)</td>
<td>35mm</td>
</tr>
<tr>
<td>Foundation</td>
<td>50mm</td>
</tr>
<tr>
<td>Beam (Cover to main bars)</td>
<td>25mm</td>
</tr>
</tbody>
</table>

5.7. All concrete surfaces in contact with earthen fill shall be protected with two coats of bituminous paint in accordance with the Specifications.

6. Concrete Reinforcement
6.1. Concrete reinforcement shall comply with BS 4448:2005, cutting and bending of reinforcement bars shall comply with BS 8666:2005

6.2. Unless otherwise indicated, steel reinforcement bars shall be of the following grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>500N/mm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield strength</td>
<td>500 MPa</td>
</tr>
<tr>
<td>Modulus of elasticity</td>
<td>200 GPa</td>
</tr>
</tbody>
</table>

6.3. Notation for reinforcement bars.

33 T20: FF29 – 150 T1

Arrangement: AB=Alternate bars reversed.
Layer: ALT=Alternate bars.
Location: STG=Staggered.
Spacing: T1=Highest layer.
Bar Mark: T2=2nd layer down.
Bar Location: (First Floor) = B1=Lowest layer.
Dia of Bar: SF=Second Floor.
Steels Type: TF=Third Floor.
NO. of Bars

6.4. Where possible laps in a member should be staggered and not located in areas of high stress.

6.5. Laps other than those indicated on the drawings shall be made after no objection by the Engineer.

6.6. Where reinforcement bars are indicated as random length, lap in adjacent bars shall be staggered.

7. Structural Steel
7.1. Structural steel to be grade 43 steel to BS 4360.
7.2. All welds to be 6mm fillet weld of electrode E 43
7.3. All steel surfaces to be thoroughly wire brushed and cleaned with approved solvent and coated with 5 coats of red oxide primer type ‘A’ to BS2523 and all scratches to be repainted.
7.4. All hollow section ends to be capped with a 3mm thick MS plates

8.0. Fixings

- Bolts and screws are to have bore holes of no more than 2mm larger than the diameter of the bolts/screws being installed.
- When fixing timber to concrete or blockwork, suitable connection detailing and spacing are to be followed and inspected by the Engineer on site. Hoop irons, wall plates and other methods are to be carried out in accordance with BS 8000-5 and checked and signed off by the Engineer.

8.5. Workmanship

- All carpentry and joinery on site is to be carried out by suitably competent operators at a level so as to conform to the standards as described in BS 8000-5.
- Materials are to be handled with care and to prevent any undue warping, bowing or damage during movement between store and site.
STEEL STAIRCASE
Scale 1:20

TYPICAL SECTION X-X
(20 RISERS @ 175mm = 3500mm)
(20 GOING 2275mm + 1 GOING 8700mm)
Scale 1:20