Annexure - III

SCOPE OF WORK AND RATES

BOQ for Geo-Technical Investigation at Bihar Police Academy Site, Rajgir

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of Items</th>
<th>Unit</th>
<th>Qnty</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Drilling upto 150 mm nominal diameter boreholes at the locations of Overhead Tank to any depth below ground level in all kinds of soil (including rock, if presents) using suitable approved method of boring, including cleaning, providing casing pipe as required, performing standard penetration test at every specified interval and at change of strata, collection of water sample, disturbed soil sample, various observations such as ground water table etc collection of undisturbed soil sample, at specified intervals and at change of strata, transportation of all the collected samples to the laboratory and back filling of boreholes on completion of same including preparation and submission of bore log as per standard proforma and also including charges towards tools, plants etc as required to complete the work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>From natural G.L to 30 m depth or refusal</td>
<td>M</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>More than 30 m depth</td>
<td>M</td>
<td>20</td>
<td></td>
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<td></td>
<td>(Note : Rate for item no. 1, to be quoted in totality considering item 1,2,3,4 &amp; 5 as specified, and no separate payment shall be made for item no. 2,3,4 &amp; 5)</td>
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</table>

2 Conducting laboratory tests on the samples collected at different levels of the following and any other relevant tests required to ascertain soil characteristics, bearing

a) Bulk density, dry density and void ratio

b) Natural moisture content (NMC)
c) Sieve Analysis & Hydrometer test for grain size analysis

d) Liquid Limit & Plastic Limit, Shrinkage Limit

e) Specific Gravity

f) UC test on undisturbed sample & other shear parameters

g) Determination of Sub grade modulus

h) Tri-axial / Direct shear test under different condition (combination of un-consolidated, consolidated, un-drained, drained condition)

3a) Chemical analysis of soil and water sample to determine the carbonate, sulphate, chloride, nitrate contents, pH value, turbidity, organic matter and any other chemical harmful to foundation material all complete

3b) Laboratory permeability test

4 Electrical resistivity test

5 Submitting draft report in three copies and final report in eight copies after the approval of the draft report including all bore logs, field records, laboratory test results, graphs / tables and recommendation of type of foundation etc showing bore hole locations etc all complete

The sub soil investigation should be carried out as per latest revisions of IS 1892 - 1962, IS 2151 - 1963 and all other relevant IS codes

The Geo-technical Consultants is required to get associated with the design team during finalisation of foundation system and require to be necessary endorsement during submission of building proposal to Bihar Police Building Construction Corporation Ltd. 10% of the total fees payable will be released on completion of the above.