Standard Quotation Format of Geotechnical Investigation for MSPSDC

Sl. No	Work Description				
1	**Mobilization & Demobilization:**				
1.a	Mobilization expenses towards cost of transportation personnel and equipment to the boring site and their withdrawal on completion of work including vehicle halting charge during field work.	Unit	Rate (Rs.)	Quantity	Amount
1.a.i	For manual and augur boring	Job			
1.a.ii	For Rotary drilling and rock coring	Job			

Sl. No	Work Description				
2	**Drilling exploratory boreholes** Including conducting SPT at depths of 1.5 m intervals up to depth of 15.0 m, and including collection of Undisturbed Samples (using thin walled sampler of internal diameter of 50 mm and length of 300 mm) in soft to stiff cohesive soils at 2.0 m, 4.0 m, 6.0 m for normal locations and collection of Disturbed but Representative soil samples of 1.0 kg weight in air tight jars at interval of 1.5 m starting from 1.5 m depth below ground level. Note: SPT shall be considered a refusal and the test shall be discontinued if the blowcount reaches 100 or the penetration is less than 25 mm for 50 to 100 numbers of blows				
2.a	Drilling exploratory boreholes of by Manual Percussion Boring in soils only (except dense coarse sand, gravelly deposits, unsaturated hard clay, weathered rock, rock etc.) using the in-situ pulverized soil-water muddy mix or Bentonite slurry as the drilling fluid, as may be the condition in- situ. Note: This method cannot be effectively applied for drilling in dense coarse sand, gravelly deposits, unsaturated hard clay, weathered rock, rock etc. If such soil layer is encountered in-situ the drilling technique has to be changed, and adapted based on the actual in-situ conditions.				
2.a.i	Up to 15.0 m depth or up to SPT–N >50 whichever comes earlier	Unit	Rate (Rs.)	Quantity	Amount
		Per bore hole			

Sl. No	Work Description				
2.b	Wash boring (100mm) where the drilling is done by process of jetting by two jets of drilling fluid through two orifices at the end of the drilling tube and slow rotation of the drill tube; while the circulation of the drilling fluid is done by a 10 HP Diesel Engine powered Water Pump. The mix of the pulverized soil and water is forced out through the space between the drill tube and casing and is collected at the sump. Casing of 100 mm internal diameter is used to stop the collapse of borehole wall during the drilling. **The method can be used to drill in all types of soils (except gravelly deposits, unsaturated hard clay, weathered rock, rock etc.).** **Note: This method cannot be effectively applied for drilling in gravelly deposits, unsaturated hard clay, weathered rock, rock etc. If such soil layer is encountered in-situ the drilling technique has to be changed,** **and adapted based on the actual in-situ conditions.**				
2.b.i	Up to 15.0 m depth or up to Refusal as given in Sl. No. 2 whichever comes earlier	Unit	Rate (Rs.)	Quantity	Amount
		Per bore hole			

Sl. No	Work Description				
2.c	Rotary Drilling where the drilling is carried out by swift rotation of a drilling bit fixed at the end of the drill tube. The drilling fluid may be the in-situ pulverized soil-water muddy mix or Bentonite slurry as per requirement. Casing of 75 mm internal diameter as per requirement is used to stop the collapse of borehole wall during the drilling. Note: This method cannot be effectively applied for drilling in gravel – cobble deposits, rock etc. If such soil layer is encountered in-situ the drilling technique has to be changed, and adapted based on the actual in-situ conditions.				
2.c.i	For Soil Only	Unit	Qty. (M)	Rate (Rs)	Amount (Rs)
		R/M	1.0		
2.c.ii	For Sand, Weathered Rock, SoftRock etc.	R/M	1.0		
2.c.iii	For all type of Hard Rock	R/M	1.0		

Sl. No	Work Description				
3	**Laboratory test on collected soil samples as per relevant IS Code:**	Unit	Qty.	Rate(Rs)	Amount (Rs)
3.a	Determination of Natural Moister Content (NMC)	Per Bore Hole	1		
3.b	Grain Size Distribution (Dry Sieve Analysis)				
3.c	Atterberg's Limits				
3.d	Specific gravity of Soil Solids				
3.e	Unconfined Compressive Strength (UCS) test along with determination of Bulk Density and Moisture Content for Soil Sample				
3.f	Unconfined Compressive Strength (UCS) test along with determination of Bulk Density and Moisture Content for Rock Sample				
3.g	Unconsolidated Undrained (UU) Triaxial Test along with determination of Bulk Density and Moisture Content for Rock & Soil Sample				
3.h	Direct Shear (Box Shear) Test on Saturated (Soaked) Soil sample (Consolidated Drained Shear Test)				
3.i	Water absorption for Rock samples				
3.j	Porosity for Rock samples				
3.k	Free Swell Index determination for soil				
3.l	Sub-soil water samples from Boreholes				

Sl. No	Work Description				
4	**Erection & Demobilization of Drilling Rings and platform at locations of Terrain**	Unit	Qty	Rate	Amount
4.a	Plain Terrain	Per shift	1		
4.b	Hilly Terrain	Per shift	1		

Note:

1. Rates provided are exclusive of GST only. All additional terms and conditions align with the specifications outlined in the TOR for Geotechnical Investigation.
2. Only one type of mobilization/demobilization (out of 1.a.i & 1.a.ii) shall be considered for the site.

3. The rates should be quoted only against Sl. Nos 1,2,3,4. No other rates should be quoted except these four. Evaluation and payments will be made against these rates only. Other expenditure, if any, should be rationally included in the above four rates only; and the same should be justifiable. If rates other than above four are quoted the quotations will not be considered for evaluation.
4. The exact quantum of work at the site will be intimated progressively, during execution of the work order.
5. A draft Geotech Investigation report shall be submitted by the agency within 10 days after completion of field work of the site for review. Further, a final Geotech Investigation report shall be submitted by the Agency after incorporating the comments within next 3 days or earlier.