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Resistivity profiling survey as guide in preparation estimation geotechnical pile capacity calculation

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Abstract: The development of critical infrastructure in the quaternary marine deposit requires detailed preliminary information to design a plan for construction. Soil data collection of the physical and mechanical properties of the soil collected, recorded, and analysed to investigate the soil condition in the proposed development area. Usually, soil drilling techniques are a priority for contractors and civil engineering practice to get early information on the condition of the site to be developed. However, in this research, the resistivity profiling used to initial relationship using soil resistance value with SPT-N value. This research aims to obtain parameters that used in estimation early design, especially in determining geotechnical pile capacity.

Keywords: Critical infrastructure, resistivity, pile capacity, laboratory test, Mackintosh probe