BI DIRECTIONAL

PILE LOAD TEST

ACTION-REACTION THEORY

Bi-Directional Pile Load Test

Bi-Directional Pile Load Test is a static pile load test method. It is equivalent to conventional top-loaded test methods using kentledge blocks or anchor piles. The data acquisition to measure bi-directional applied load (Q) vs pile displacement (D) is using Static Compressive Pile Load Tester (SCPLT).

ASTM/D8169 (2018)
Standard Test Methods for Deep Foundations Under Static Axial Bi-Directional Load

A sacrificial hydraulic jack is cast within the pile body. Upon application of load, the pile is separated into two sections and load is applied to both sections simultaneously and reacting against each other in two directions; upward against upper skin friction and downward against base bearing and lower friction.

Test Procedure

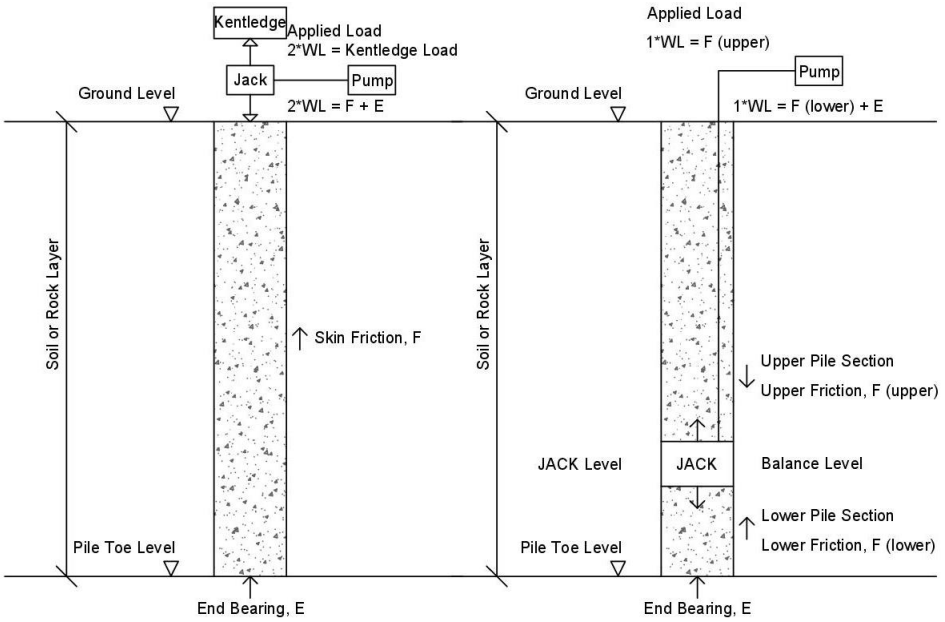
Procedure A: Static Quick Load Test (QLT), maintain < 24hrs.

Procedure B: Static Maintain Load Test (MLT), maintain ≥ 24hrs.

Procedure E: Constant Rate of Penetration (CRP), rate 1 mm/min.

Procedure C, D, F, G: Optional Tests.

MRGEO 34 ROCKET SHAFT



Static Compressive (Top-Loaded)

Bi-Directional

Bi-directional Static Load Test is a reliable Maintain Load Test that is widely used worldwide. The key difference between a conventional top-loaded maintained load test and a bi-directional is the location of the jack.

*Pictures are from Internet