

SECTION 2.15 SOIL LOADING TEST

2.15.01--Description: Work under this item shall consist of furnishing and loading a soil loading test device to determine the bearing value of the compacted granular foundations for structures or other purposes where shown on the plans or directed by the Engineer.

2.15.03--Construction Methods: Test Device: The Contractor shall construct a device for the performance of this work in accordance with the following:

The base of the loading device shall be 2 m², and shall be inflexible and amply strong to support the load as indicated below. This base may be constructed of steel shapes or concrete and shall be at least 300 mm high between the ground and the load-carrying bin or platform. The bin or platform shall be constructed sufficiently strong to safely contain the specified loads and shall not overhang the base by more than 1.5 m on each side.

The Contractor shall submit a detailed sketch of the loading device for approval before proceeding with the work. The net mass of the entire device shall be determined either by determining the mass of the component parts previous to assembly, determining the mass after assembly, or by calculations from measurements.

Material for the loads may be earth, sand, crushed stone, gravel, concrete blocks, pig iron, steel or other approved materials.

Testing Conditions: The soil loading test shall not be performed when the compacted granular fill is frozen or likely to become frozen while the test is in progress.

Application of Loads: The material used for loading shall be placed in the bin or on the platform by adequate machinery. It shall be evenly distributed at all times. Each loading increment, as indicated hereinbelow, shall remain in place at least twenty-four (24) hours. The final gross load shall remain in place for at least forty-eight (48) hours. Longer periods for the increments or the final gross load, or both, may be ordered by the Engineer if he deems it necessary. No material used for loading shall be removed until after the total load has remained for the required interval of time.

The final gross load in kN shall be equal to 50 times the maximum design load, in kPa, for Group I loading, at the location to be tested.

Incremental loads, including the mass of the device, shall be approximately as follows:

Initial incremental load = 15% of final gross load
Second incremental load = 20% of final gross load
Third incremental load = 30% of final gross load
Fourth incremental load = 35% of final gross load

The Contractor shall provide a rod or pipe extending from the top of the base to a height of 600 mm above the top of the load for the purpose of observing settlements. He shall construct a temporary, rigid platform if necessary on which a man can stand with a surveyor's level and read the elevation of the rod described above.

Test loadings may be performed at more than one (1) location but need not be made simultaneously. Only one (1) loading device will be required. After the first test has been completed, the load shall be removed; and if other such tests are required by the Engineer, the device may be taken to the other locations and the foregoing procedure repeated.

2.15.04--Method of Measurement: Each soil loading test will be measured for payment as a unit. A unit will consist of one complete soil loading test and shall consist of furnishing, loading, unloading and removing the device and necessary accessories at each required location.

2.15.05--Basis of Payment: This work will be paid for at the contract unit price each for "Soil Loading Test," which price shall include all materials, equipment, tools and labor incidental thereto.

The load device and accessories shall remain the property of the Contractor and shall be removed by him from the project site upon completion of soil loading tests shown on the plans or ordered by the Engineer.

Pay Item
Soil Loading Test

Pay Unit
EA.