



NAGADI CONSULTANTS PRIVATE LIMITED

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NCD/G/NDMMPL/006./2023

30 May 2023

New Delhi Metro Mall Pvt. Ltd.,
Ground Floor, MGF City, Khyberpass,
Mall Road, Near Khyber pass Petrol Pump,
New Delhi - 110054

Kind Attn : Mr. Shobhit Srivastava

Sub : Conducting Dynamic Cone Penetration Test for the Proposed Fencing, Barricading
at Plot - B of the Proposed Shopping Mall of NDMMPL at MGF City, Khyber
Pass Mall Road, Near Khyber Pass Petrol Pump, New Delhi - 110054

Dear Sir,

This has reference to the above-mentioned job for which dynamic cone penetration tests had been conducted at the four designated location as shown in the attached layout plan, down to the depths of refusal/ rock strata.

The termination depth or the depths at which refusal/ rock strata had been encountered in the four dynamic cone penetration tests DC1 to DC4, have been given hereunder :

DCPT No.	Termination Depth (m) below EGL
DC1	3.6
DC2	7.5
DC3	4.5
DC4	7.5

The results of these tests have been presented in the form of plot of number of blows per 30cm penetration vs depth and are attached herewith as fig. 2.

The number of blows for 30cm penetration in the dynamic cone penetratoin tests have been observed to be varying between 6 and 66 down to the depths of refusal/ rock strata.

As the tests have been conducted on the filled-up strata, large variations in the number of blows can be observed down to the depths of refusal/ rock strata, indicating the non-uniform compaction of the filled-up strata down to the depths of refusal/ rock strata.

RECOMMENDATION

Considering the above, the following recommendations regarding the foundations to be adopted are being given hereunder.

1. *Net allowable bearing pressure of 40 t/m² can be adopted for Isolated/ Strip footings resting at a depth of minimum 0.5m in virgin rock strata, for foundations widths greater than 1.5m.*

(As the substrata consists of filled-up soils with non-uniform compaction down to the depths of refusal/ rock strata, placing shallow foundations on such filled-up strata is not advisable. Hence, the shallow foundations shall have to be placed on virgin rock strata.)

2. *As an alternate, proposed structures can be supported over MICRO PILES*

MICRO PILES :

- a) To ensure similarity of settlements of all the pile foundations under the proposed structures, the pile foundations should be founded in the virgin rock strata.
- b) As the pile foundations will be founded in rock strata, to achieve economy as well as maximum efficacy, the pile foundations should preferably be loaded to the safe structural capacity.
- c) To ensure the mobilisation of the full safe structural capacity of the Bored Cast In-Situ piles, the piles should be adequately embedded or socketed into the rock strata. Accordingly, the Bored Cast In-Situ piles should be embedded in the virgin rock strata to a minimum depth of 5 times the diameter of the pile in weathered rock strata for 200mm diameter of pile and 3 times the diameter of pile for 300mm diameter piles.
- d) The c/c distance between the two piles should be maintained at 5 times the diameter of the piles.

Pile Capacities

The safe structural capacity of the pile shaft can be considered as the safe load carrying capacity of the pile. The following pile capacities can be adopted for design purpose.

<i>Pile Dia (mm)</i>	<i>Pile Capacity (tons)</i>
200	20
300	50

We hope you find this in order.

Thanking you,
Yours sincerely,

Y.S. Rana
Executive Consultant

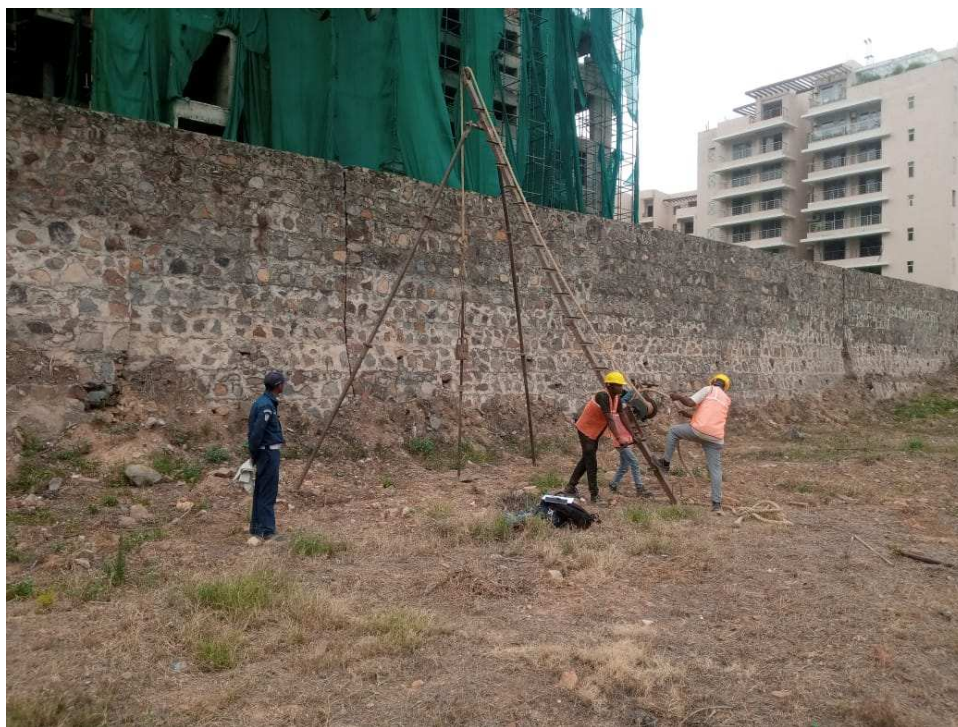
***Encls :: Layout Plan
DCPT Curves***



Legend
▼ DC Test

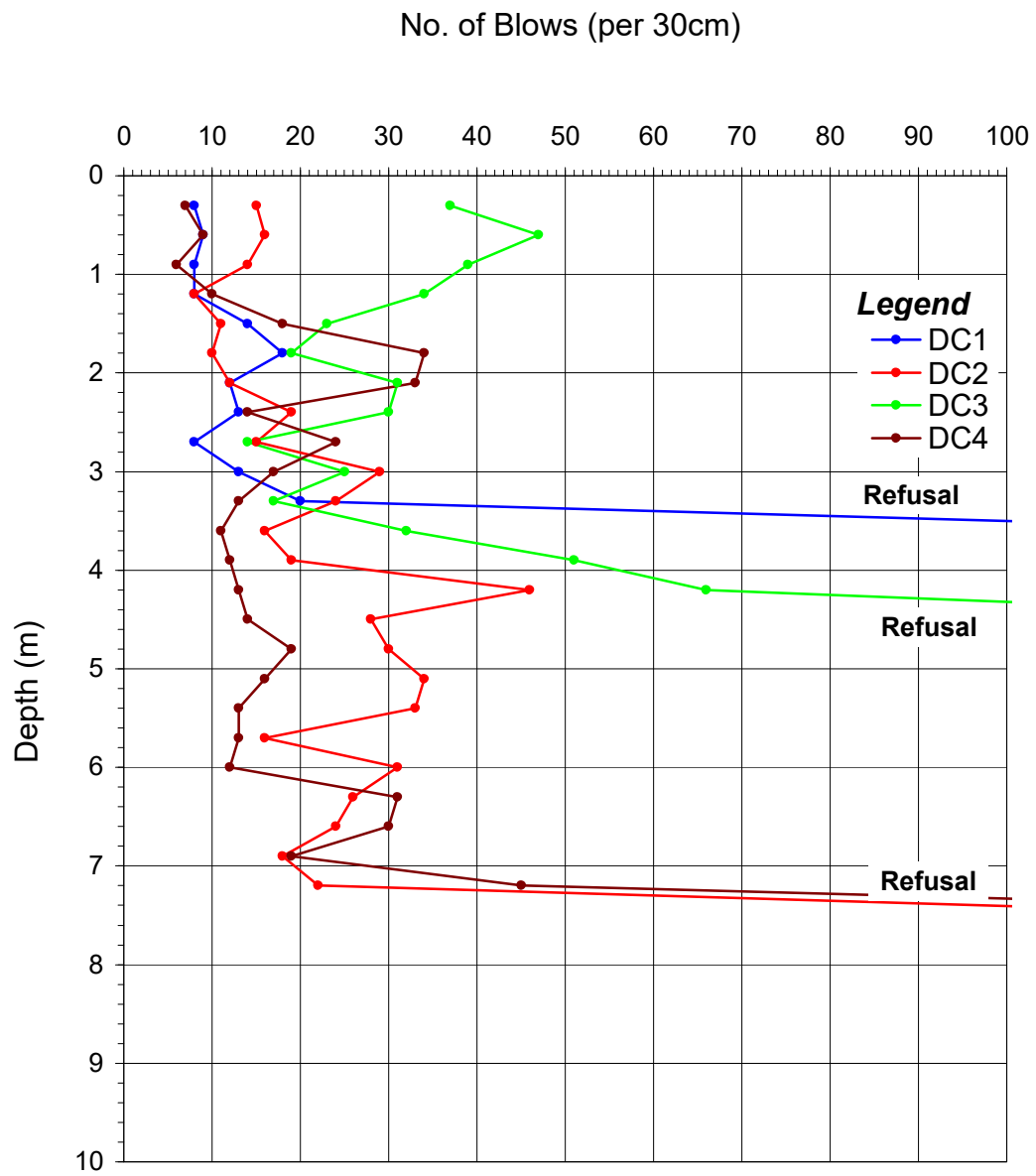
GOOGLE IMAGE SHOWING SHOWING TESTING LOCATIONS

G(D)4558



**PHOTOGRAPH SHOWING
VIEW OF THE SITE & BOREHOLE UNDER PROGRESS**

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Dynamic Cone Penetration Test Curves