CMC provides Geopier Rammed Aggregate Pier® Solution to support 4-story residential building

Challenges on site due to poor ground conditions meant that a project specific solution was needed. CMC Poland and Geopier, a division of CMC, were able to evaluate the wide range of constructions systems within the CMC offering, before identifying Geopier as the optimal solution for the client.

CLIENT'S CHALLENGE

The first geological investigations showed relatively good soil conditions, with medium dense sand. However, following excavation it was clear that the soil on site was worse than originally found. The set of CPTs, performed from the deepest areas of excavation showed the qc values between 1.0 up to 4.5 [MPa].

The challenge was therefore to bring the parameters of the loose, fine sand layer to the minimum modulus of 46 MPa.

SUBSURFACE CONDITIONS

Soil conditions consisted of a layer of loose, clean, fine sand, followed by medium dense to dense sand at different depths.

GEOPIER® SOLUTION

To achieve the required 46 MPa average modulus of the improved soil, the composite approach was used. The composite's modulus was calculated as the average modulus of the Geopier Impact® piers and soil matrix with the post installation improvement factor.

A proposal was given to include the Geopier Impact® piers with a spacing of 2.4m on center, and a shaft length from 1.2m to 5.5m.

The collaboration across the CMC businesses ensured that the best solution for the client was provided. This was accepted and will now move to construction.

Ostródzka Street Residences

Warsaw, Poland

NOWA OSTRÓDZKA HOLDING WAWEL DEVELOPMENT
Owner

Malbud1
General Contractor

Izabela Nitka
Geotechnical Engineer

Joanna Figura
Structural Engineer

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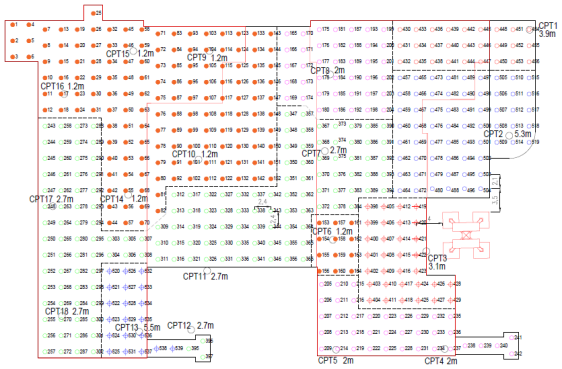

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