



House of Imports - Mercedes Benz Service Center

Buena Park, California

Obtaining the necessary city permits can be time-consuming, delaying what would otherwise be a short-duration project. Keller's many decades of experience can be instrumental in expediting the process to provide a complete permitting/design/execution package quickly and efficiently.



The project

The owner of a Mercedes Benz dealership in the City of Buena Park, CA, undertook construction of a 120,000 SF service center and 3-story parking structure adjacent to the existing dealership building. Site soils comprised 15 ft of moist, fine, sandy silt overlying 10 ft of wet, sandy clay. Beneath this, wet, fine sand to sandy silt extended to 51 ft below surface grade.

The challenge

To establish Keller's ability to deliver the optimum technical and cost-effective solution to a new client in a highly competitive local marketplace.

The solution

The structure had been designed to bear on shallow foundations. Given the soil profile, the geotechnical engineer had originally recommended over-excavation and recompaction of the 120,000 sq. ft site to improve the bearing capacity of the soil and mitigate settlement potential. However, when the project was put out to bid some time later, ground improvement using aggregate piers was specified as a viable option. Keller submitted a proposal using its proprietary Vibro Pier technique that was accepted over other similar proposals based on: lower price, shorter installation schedule, and a proven history of success. Keller's positive working relationship with the city proved beneficial in obtaining the permits in good time.

Before production work, Keller performed a modulus test on one pier to confirm design parameters. Keller elected to use its bottom-feed system to place the aggregate to mitigate caving potential of the upper fine sandy silts. A total of 468 30-in. diameter vibro piers were installed to depths ranging from 13-20 ft beneath column footings, strip footings, and grade beams. The project was completed in seven working days and well below the client's originally anticipated budget.

Project facts

Owner(s)

AutoNation -Mercedes Benz of Buena Park

Keller business unit(s)

Keller

Main contractor(s)

Lusardi Construction

Solutions

Ground improvement

Markets

Commercial

Techniques

Vibro (aggregate) piers®

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