



MICROPILES

DULLES AIRPORT MAIN TERMINAL - DULLES, VIRGINIA

The original portion of the landmark main terminal at Dulles Airport in Dulles, Virginia required a new baggage handling system to keep up with increasing passenger volumes. The new baggage handling system was installed below the existing slab on grade. It consisted primarily of conveyor belts and baggage cart roads that snaked between existing column footings and bearing walls.

As excavation proceeded, Schnabel installed permanent micropiles to support all footings that were undermined by the excavation. Column loads up to 560 kips were distributed to four micropiles per footing. Load tests up to 250% of the design load verified the capacity of micropiles installed through fill and residual soils into rock.

The successful completion of this job performed beneath an operating airport terminal depended on several key factors. First, the work followed a coordinated team approach that was agreed to in advance by the excavator, baggage handlers, and owner. Second, a custom-made drill fabricated by Schnabel's equipment division and a miniature track drill were used to drill the micropiles in low overhead spaces that would have been difficult to impossible to access otherwise. Finally, daily site visits by Schnabel's engineer and careful monitoring verified that the work performed as intended. This project was a successful addition to Schnabel's extensive experience in underpinning critical structures.

Owner: Dulles Metropolitan Airport Authority
General Contractor: Centex Construction Company
Design/Build Specialty Contractor:
Schnabel Geotechnical Design & Construction



For more information on this project or any other of our projects please contact Schnabel at:

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