



Dulles Airport Chantilly, VA

The original portion of the landmark main terminal at Dulles Airport in Chantilly, 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 Foundation Company installed permanent micropiles to support all footings that were undermined by the excavation. Column loads up to 560 kips were distributed to 4 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 approach that was agreed on with the excavator, baggage handlers, and the owner. Second, a custom-made drill fabricated by Schnabel's equipment yard and a miniature track drill were used to drill the micropiles in low overhead spaces that were difficult or otherwise impossible to access. 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 more than 45 years of experience underpinning critical structures.

Owner: Metropolitan Washington Airport Authority, Alexandria, VA
 Micropile Contractor: Schnabel Foundation Company, Bethesda, MD

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