



## TIEBACKS

### LAKE PARKWAY - MILWAUKEE, WISCONSIN

Schnabel designed and constructed a groundwater cutoff, tiedback earth retention system which enabled the Lake Parkway to be depressed beneath the Union Pacific Railroad and St. Francis Avenue where it passes through a dense residential neighborhood.

Schnabel installed over 700 hollow-stem-auger (HSA) tiebacks, with capacities in the 125 kip design range, to provide the horizontal restraint for the up to 33 ft deep excavation. The project is over a half mile in length, at grade on both ends and dipping to allow highway clearance under the railroad and St. Francis Ave. bridge.

Wisconsin DOT performed coordination and engineering inspection on this successful 'partnering' project. Excavation sequencing over a two year period allowed the job to be built without shutting down rail traffic or local city traffic for the job duration.

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Owner: **Wisconsin DOT**  
General Contractor: **Zenith Tech, Inc**  
Design/Build Specialty Contractor:  
**Schnabel Geotechnical Design & Construction**



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

**(703) 742-0020 or visit our website at [www.schnabel.com](http://www.schnabel.com)**

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GEOSTRUCTURAL DESIGN & CONSTRUCTION

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