



## 2nd & Delaware Apartments Kansas City, MO

**The Geopier SRT® system was used for temporary slope support and helped expedite construction**

**Description:** Sitework associated with construction for this multi-family residential development required up to 20 feet of cut, which would result in slopes as steep as 0.4H:1V with an insufficient factor of safety.

**Subsurface Conditions:** Soil conditions consist of 29 to 42 feet of stiff to very stiff silty lean clay underlain by limestone extending to the depth explored. Groundwater was encountered at depths ranging from 43 to 50 feet.

**Geopier Solution:** After considering traditional shoring methods, the project team realized that the cost of an auger-cast pile secant wall was prohibitive, and that vibrations from driving a sheet pile wall would be unacceptable. To provide a quick, low-impact, and cost-effective solution, the Geotechnical engineer contacted Geopier®, who was already on-site installing a Geopier GP3® system for the 6-story housing structures. The solution included 33 six-foot long Plate Piles™ that were installed 14-feet deep in a staggered array, which improved the factor of safety to 1.4. The SRT system was installed in two days, helped keep construction on schedule and was less than half the cost of traditional shoring methods.



### PROJECT TEAM

**Owner:**

Arnold Development Group

**Geotechnical Engineer:**

Cook, Flatt & Strobel (CFS) Engineers

**Structural Engineer:**

CEO Structural Engineers