



# All-Weather Helical Installation Saves Sinking Apartments



Derby, Kansas

COMMERCIAL PROJECT OF THE YEAR FINALIST

The Brookridge Plaza Apartment complex in Derby, Kansas, had significant foundation issues that needed addressed. The problems were caused by poor soil compaction during the pre-foundation phase of construction, which lead to settlement over time.



To stabilize the foundation, the team at IWP installed a total of 59 piers, including 27 helical piers, 10 new construction helical piers, and 32 push piers. This comprehensive approach ensured the long-term stability and integrity of the building, effectively mitigating the effects of the initial soil compaction problems. Working at the site off and on, the team was able to complete the installation in just over a month.



Challenges: The project faced several significant challenges, starting with the extreme cold weather, which caused the soil to harden and become difficult to dig through, especially on the sloped terrain. The team also had to hand dig 32 interior access holes, a labor-intensive process that filled entire rooms with dirt, making it difficult to maneuver and requiring meticulous work to ensure the rooms were not damaged. Additionally, the difficult conditions and complex nature of the project extended the installation timeline from 2/20 to 4/1, longer than initially anticipated splitting the project into two different phases.



Solution: Despite the challenges, the team successfully installed 27 exterior helical piers, which require 9-foot dig outs, and hand-dug 32 interior pier holes in rooms and closets where machinery couldn't be used. This approach, although labor-intensive, ensured that the piers were placed accurately and effectively stabilized the foundation.



By carefully managing the hand-digging process and adjusting to the tough soil conditions, the team was able to complete the installation while maintaining the integrity of the building's interior spaces, ultimately ensuring the project's success.