



CASE HISTORY

SAFEBASE™ PUSH PIERS & POLYURETHANE

SLAB PIERS – VOLGA, SD



SafeBasements of Minnesota was contacted regarding several issues with sloping floors and cracking masonry walls in the CBS Bio Platforms building in Volga, SD. One corner of the slab was found to be



down approximately 3 inches. There was an interior masonry wall built on top of the slab inside of a second exterior wall. A plan was made to lift the slab and interior masonry wall back into place using a system of slab piers and polyurethane foam. First a series of 10" holes were core drilled along the area to be lifted approximately 6' on center. Then a pocket beneath the slab is to be excavated approximately 2' around to accept the slab 'T' bracket.



Upon removal of the floor it was found that an abandoned transit heat system was directedly beneath the slab in the location of the piers. The old heat ducts were constructed from 12" cardboard tubes encased in concrete. It was found that portions of the heat ducts were compromised, causing the soil to fill the void space where the ducts were, in turn causing settlement of the slab and walls. Once the brackets were installed a drive adapter was mounted to the top of the bracket connected with threaded rod and the a-frame could be attached to hydraulically drive the push piers. After driving each pier a series of hydraulic lift cylinders were attached to the top of the brackets. While lifting with the hydraulic cylinders polyurethane foam was injected beneath the slab filling any voids created during the lift. The holes for the brackets and the abandoned transit heat ducts also were filled. During the lift cracks in the mortar joints of the masonry wall closed up, and the floor was brought back to level. A total of 9 slab piers and approximately 300 lbs of polyurethane were used. This project was completed in November of 2022.



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