

"USELESS WATER STORAGE TANK RESTORED TO SERVICE QUICKLY AND AT LOW COST!"

An 880,000-gallon water storage tank supplying a small town in eastern Utah was rendered useless due to settlement of the foundation. The concrete foundation for the tank was of good design with a 16-inch-thick stem wall situated 7 feet into the soil.

The location for the tank required cutting and filling the site. The material on the fill side of the site was compacted to specifications, but the soil still failed largely due to drainage problems around the perimeter of the foundation.

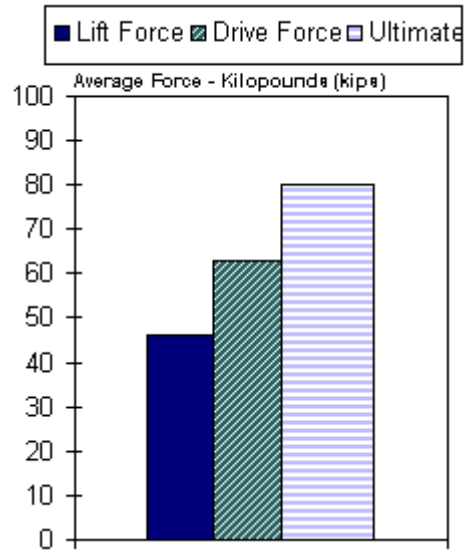


Atlas Piers of Utah, Inc. installed 16 ATLAS RESISTANCE PIERS on the perimeter of the tank foundation. The ATLAS RESISTANCE PIERS raised the foundation as much as 10-1/2 inches to restore the water storage tank. After the voids under the foundation were filled with grout and drainage corrections accomplished, the tank was returned to service.

**THE SOLUTION: ATLAS RESISTANCE PIERS!
STABILIZED AND RESTORED THE WATER TANK!**

PROJECT SUMMARY	
Installed By:	Atlas Piers of Utah, Inc.
Number of Piers:	16
Part Number:	AP3S-3500
Avg. Pier Depth:	27 ft.
Avg. Load per Pier:	46,350
Avg. Drive Force:	62,175 lbs.
Ultimate Capacity:	80,000 lbs.
Amount of Lift:	Up to 10-1/2 inches
Factor of Safety:	1.34 : 1 (Drive to Lift)
(Averages)	1.73 : 1 (Ultimate to Lift)

Atlas Resistance Piers Lift Force vs. Drive Force & Ultimate



The chart above shows the ultimate pier capacity is **nearly two times** the average pier load. The average driving force is **over 34 percent** above the average pier load.

A hillside location was selected for the water storage tank to provide adequate hydraulic head for the needs of the community below. The site required cut and fill to provide a level construction site. Although the soil was compacted to engineering specification, more compaction occurred after the tank was in service. The settlement was caused by improper drainage around the structure.

Atlas Piers of Utah, Inc. installed **ATLAS RESISTANCE PIERS** around the perimeter in the area of distress in order to restore and stabilize the structure. The restoration process removed up to 10-1/2 inches of settlement quickly at low cost.



This photo shows two of the ATLAS RESISTANCE PIERS attached to the stem wall after the foundation was restored.

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