

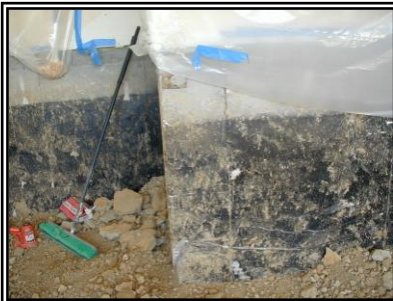
ROCKY MOUNTAIN STEEL PIERING INCORPORATED

CASE STUDY

Project: Martin Residence, Aurora, Colorado

Underpinning Contractor: Rocky Mountain Steel Piering, Inc.

Structural Engineer: Hessek Engineering, L.L.C.



Project Description:

The home consists of a one-story structure with partial basement and partial crawlspace, supported on a drilled concrete pier foundation system. The majority of the home experienced differential vertical foundation movement, which has caused foundation wall cracks, door operation problems and drywall distress to the home.

Repair Description:

The repair to the affected foundation system consisted of installing helix piers along the foundation walls, clipping and detaching the existing concrete piers from the foundation, re-leveling the foundation, re-voiding the foundation walls, installing an interior perimeter drain system and repairing the foundation wall cracks. The helix piers were installed by Rocky Mountain Steel Piering, Inc., utilizing a portable torque head to advance the piers into the ground. The helix piers were 1-1/2-inch rounded corner square steel shafts with a single 8-inch helix near the base of the lead section. The tops of the piers were attached to standard underpinning brackets, which were fastened to the base of the foundation walls, and to new construction brackets, which were embedded in reinforced concrete beams at each column location. After the piers were installed and fastened to the foundation walls, the tops of the existing concrete piers were clipped, the foundation was re-leveled as much as possible, and the base of the foundation walls were re-voided. An interior drain system was installed to prevent water accumulation below the foundation system.