

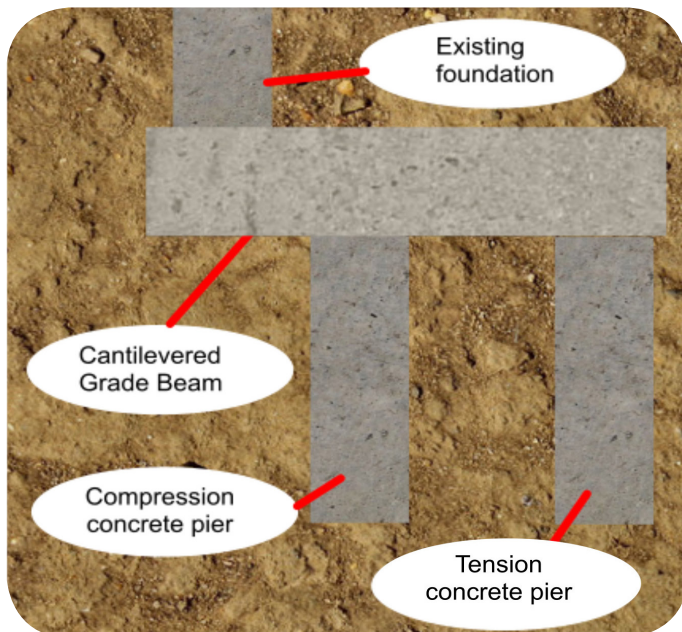
Failing Retaining Wall Endangered Residence

The Challenge

A large exterior retaining wall was starting to fail and endanger a Presidio Heights home. Because the house was built above and close to the retaining wall, a failure would have meant severe settlement and structural damage or partial collapse of the house.



Closeup of underpinned foundation showing ends of earth-cast cantilevered beams projecting through foundation.



Underpinned house with top of old retaining wall removed

Action:

Since the wall could not be removed without first supporting the house, a system of drilled piers with grade beams was installed under the house and extended beneath the exterior foundation and fireplace. These cantilevered beams supported the house while the retaining wall was demolished and replaced with a new shotcrete wall. After the structural work was complete, the wall was stuccoed and painted and the landscaping was replaced.



Removing failed retaining wall





Shotcrete wall ready for finish work



Finished wall with house secured

Results:

The house sits on the corner of Walnut St. doubly supported by the cantilevered shoring system left in place and the new retaining wall. Safety and property values have been fully restored and the residence is an enhancement to the neighborhood.



The final result

