RJT COMMERCIAL, INC.
DBA Ram Jack of Texas
2765 W. Kingsley Rd. Garland, TX 75041
Phone: 972.494.3800

Causes of Foundation Failure/General Maintenance

Your foundation may move due to moisture, weather, shifting soil, location on a slope, improper placement of landscaping, poor drainage, inadequate ground preparation, and faulty construction.

Conditions Causing Foundation Failure. The following conditions may cause failure in an area(s) or the entire foundation. The list below is not exhaustive, and some conditions occur more frequently than others. Your soil type may cause additional issues.

- High temperatures and hot, dry winds cause moisture in the soil to evaporate more rapidly, causing expansive clay soil to shrink beneath a foundation resulting in settlement.
- Trees and large shrubbery near the structure may cause the foundation to settle as roots seek moisture. Perimeter piles will not prevent interior settlement when soil shrinks due to lack of moisture. Ask us about the soil in your area.
- Expansive clay soils will shrink when dry and may cause the foundation to settle where it lacks support. When these soils accumulate excessive moisture, they can swell and cause the foundation to heave upwards.
- Underground springs and fluctuating water tables may interact with expansive soil, resulting in heaving. A total collapse of the ground may also occur, whether or not clay, resulting in a sinkhole.
- Moisture content such as saturation from rains and floods, combined with loose/compressible soil and/or seismic activity, may result in settlement.
- Organic materials such as peat, wood, or other fill materials will decompose over time, causing foundation settlement.
- Plumbing leaks may cause the foundation to heave, creating problems for the foundation and plumbing lines.
- The amount of steel reinforcement or rebar in a foundation affects structural strength. Poor quality concrete weakens a foundation, making it more susceptible to soil movement, causing cracks and concrete failure. With crawlspace foundations, look for rotting wood in the joists, beams, and other components.
- Soft compressible soils cause foundation failure. Adequately prepared and compacted soil reduces potential foundation problems.
- **Water is a significant factor in foundation issues. We are not responsible for maintaining your property. The lack of drainage or keeping consistent moisture in the soil can cause substantial problems even after our work, for which you are responsible.**

Your Responsibility is to Maintain and Repair Your Property. Ram Jack recommends the following actions as part of your responsibilities:

- Eliminate standing water near the foundation and provide positive surface drainage away from the foundation, even flowerbeds.
- Inspect and replace damaged wood, prevent water intrusion, remediate mold/fungus and reduce moisture and humidity in crawlspace areas.
- Look for and correct plumbing leaks when discovered and call a plumber for repairs. Inspect your property for drainage issues. Review your past and current water bills for evidence of leaks.
- Install guttering and downspouts that lead water away from the foundation or sub-surface drainage systems as needed and replace any soil that has suffered erosion. Erosion may cause voids, or empty spaces, between the foundation and the ground.
- Maintain moist soil around the foundation during dry periods, generally, but especially where *expansive* clay soils exist.
- Remove large trees and shrubs from areas close to the foundation if trees and shrubs remove moisture underneath the structure.

Heaving. Foundations supported on clay soils may heave (lift) from too much moisture, whether or not supported by Ram Jack® piles. For example, plumbing leaks, flooding, over-watering and ponding, etc., cause heaving. Improvements that stop leaks and drain water away from the foundation lessen the probability of heaving.

Piles Support a Limited Area to Prevent Downward Movement. Look for foundation movement in all areas. For example, piles installed at the perimeter of a structure will not support the related interior without piles. Ram Jack piles are designed to prevent downward movement of a load bearing structural beam in a limited area above each pile. Any area, including those with piles, can move upwards and/or laterally depending on your soil type, slope, and sites near water. Any area without piles may also move downwards. Ram Jack piles are designed to prevent downward movement. If you suspect heaving, lateral or downward movement, call us.

Monitor Your Foundation. It is your responsibility to inspect for changes and movement along the perimeter and interior of the foundation. Drainage issues may cause voids at the exterior and interior of the foundation to develop as soil runs off. Separations between bricks, cracking or separation of wood and walls, uneven flooring, cracked tiles and decks, and stuck doors and windows, etc., are evidence of movement.

You May Want Additional Work. You may have declined work based on evidence of insufficient/no movement or other reasons. A structure has a tendency to move over time, and you may want additional work. We recommend you observe the structure for signs of foundation movement quarterly. Maintaining and repairing your property may help lessen but not eliminate foundation failure. If you notice evidence of foundation movement, call us to prevent more extensive (and expensive) damage to your structure. We will inspect and discuss our observations with you.

Thank you from your Ram Jack Team.