

TELLA FIRMA BASICS FOR HOME BUYERS**Q: What is the Tella Firma System?**

A: The Tella Firma system is an innovative and patented foundation design system, which combines the construction ease of a slab-on-ground foundation, with the performance of an elevated slab such as pier-and-beam. This is accomplished by constructing the foundation on ground, then raising it above the ground, resulting in a void between the foundation and soil thereby protecting the concrete slab from soil movement. Tella Firma utilizes profiled post-tensioned cables, eliminating the need for interior beams thereby reducing the amount of concrete required for the foundation. This profiled cable design has traditionally been utilized in commercial structures such as multistory office buildings, apartment building podiums and parking garages.

Q: What are the benefits of Tella Firma?

A: An important benefit of Tella Firma is reduced risk of foundation movement that can result in damage to the foundation and house. Since the slab portion of the foundation is not supported by or in contact with the soil, it is not affected by soil shrinkage or swelling resulting from seasonal moisture changes or when the homeowner forgets to water their foundation. Isolation from active soils can also be accomplished by installation of an elevated/structural foundation system. However, Tella Firma offers risk reduction without the cost or hassle of a pier-and-beam or void cartons. A Tella Firma foundation is more economical than other types of elevated slab foundations; the cost is comparable to a post-tension/rebar slab-on-grade foundation with piers.

Q: How far should you raise the Tella Firma foundation?

A: The Tella Firma system recommends that the foundation be raised per specification of a licensed Geotechnical Engineer in the Geotechnical Soils Report. The soils report will provide the Potential Vertical Rise (PVR) of the soil on the building site. Tella Firma recommends that the slab be elevated a minimum of 1" greater than the PVR or preferably 1.5X the PVR. For example, if the PVR is determined to be 6 inches, Tella Firma recommends the foundation be raised no less than 7 inches but preferably 9 inches or more. The PVR is the amount of movement the soil is expected to expand when the soils goes from a dry to a wet condition as defined by the Geotechnical Engineer.

Q: Do I still have to have good drainage?

A: Yes. The Tella Firma system is designed to eliminate seasonal movement and to resist soil movement up to the amount that the foundation has been elevated. As in all cases with a foundation, the grading around the house should slope away from the house to allow for proper drainage away from the house.

Q: Will animals invade the void under the foundation?

A: Certain animals are known for burrowing under foundation and the Tella Firma system is no different. But there is no more likelihood of animals burrowing under a Tella Firma because of the void. This is because the air under the foundation is not vented and there is no free oxygen available. This condition is not habitable to most animals.

Q: Does The Tella Firma system provide any value in energy savings?

A: Yes, The Tella Firma system is elevated above the ground. The air between the ground and the concrete foundation acts as an insulator. Therefore, in the cold winters, the ground will not transfer heat away from the slab into the ground.

Q: Will the Tella Firma lifting mechanism rust or corrode over time?

A: All metal objects will corrode over time. The more important question is will the lifting mechanism function per specification over time even if it corrodes. Components in the lifting mechanism are zinc plated and/or galvanized. Either process is one of the best methods for resisting corrosion over time. In addition, the bolts are coated with special grease that provides additional corrosion resistance. Based upon a third-party analysis conducted by CTL Group, Tella Firma estimates that the lifting mechanism operating under normal non-corrosive environment should work per specification for at least 100 years.

Q: How far down should my piers be drilled?

A: The pier drilling depth is calculated by the Geo-Tech engineer based on the properties of the PVR and the structure's loads. Typically, most piers are drilled at a minimum of 20' below grade. NOTE: See HELICAL PIER FAQ for more specifics on Helical Piers.

Q: How long has the Tella Firma Foundation System been around?

A: The Tella Firma system has implemented more than 1,000 structures and longevity of successful projects that are 12 years old.

Q: Is the Tella Firma Foundation System based on new principles?

A: The Tella Firma System is based on proven engineering principles that have been proven out over the past 50 years. The Tella Firma system is similar to foundation and floor systems that have been designed and built into commercial buildings since the 1960s and implemented in many iconic buildings throughout the world including the new Freedom Tower in New York. Tella Firma's brought innovation to this tried-and-true system by applying widely used commercial foundation in a residential application.

Q: Can repairs or adjustments be made to the Tella Firma system in the event there is unexpected movement of the piers?

A: Yes. The Tella Firma system is unique vs. any other suspended foundation system in that the lifting bolts remain as a permanent part of the installation. Great care is taken by the foundation engineer during the design and layout process to not place the mechanism under the location of a yet-to-be-installed wall. This placement allows for future adjustment of the foundation should the need arise. For example, if a pier should unexpectedly move causing movement in the foundation, the carpeting can be rolled back allowing access to the mechanism for adjustment either up or down depending on the situation.

Q: Is the Tella Firma foundation system patented?

A: Yes. Tella Firma has 6 issued U.S. patents and 1 issued Canadian patent.