



RENATUS VENTURES

Geotechnical Engineering

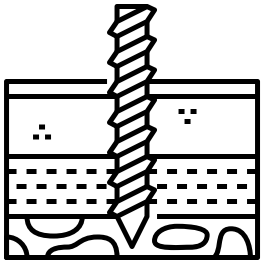
Thoughts Beforehand...

We delve deep into the technical aspects of the commercial real estate and construction industries as the subject matter experts to educate and add value to better the industry as a whole.

One of the **single largest exposures of risk during due diligence** is the geotechnical engineering exploration and assignment of that report and findings.

When hiring a geotechnical engineer inquire:

1.) Does the geotechnical engineer have experience in this part of the country? The engineering is heavily impacted by soil, rock, and weather and varies widely across the country, state and even within a local municipality.



2.) Does the geotechnical engineer have the experience in making the necessary recommendations for the building loads, foundation types, concrete slab-on-grade, rigid pavements, flexible pavement, slopes, retaining walls, rock suitability for fills, rock removal ability, optimizing moisture content for highly expansive soils. **The last thing anyone wants is a building to crack or a floor to heave after the building is occupied. YES, both of these scenarios DO happen.**

3.) Does the geotechnical engineer have experience with the state and local codes? These vary across states and could result in time lost having to start over on a geotechnical engineering report.

4.) **SIMPLE, obtain 3 proposals from reputable firms and compare the scope of work between the 3 firms.**



Distilling complex technical aspects into an actionable toolkit from decades of experience, research, and theoretical education.

Joint Venture Partners, Limited Partners, Owners

When evaluating deals from real estate developers and general partners inquire:

1.) Has a geotechnical engineering report been performed including soil borings across the entire site? Surprising how often the answer is no. Does this include soil profiles, soil bearing capacity, pavement designs, groundwater level identified?

2.) Have rock cores been performed? We would know this is required based on the geographic region or if the initial report indicated a "refusal".

3.) If there is rock onsite, perform a rock topography study so the sitework contractor can quantify the cuts and fills of material.

This will help minimize those nasty equity calls for "unforeseen sitework" issues that drive rising project costs and drive out the schedule so rent commencement is delayed. If the above have not been performed REQUIRE THAT.



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Real Estate Developers & General Partners

We delve deep into the technical aspects of the commercial real estate and construction industries as the subject matter experts to educate and add value to better the industry as a whole.

Once the geotechnical engineering report is complete with soil profiles, borings under the building and pavement, infiltration testing for retention basins, rock borings, and rock profiles we can go to bid with our **three** desired sitework contractors or design-bid construction managers.

Provide all of the geotechnical findings during the bidding process to competitively bid the mass excavation to control costs.

State geotechnical findings will be part of the contract upon execution along with the other early due diligence items. **NON-NEGOTIABLE**

Ask the contractors to provide an "unclassified site" add alternate during the bidding process. This add alternate should be reasonable with all of the proper due diligence performed. Use an add alternate to isolate this cost.

If the deal still penciled out for the proforma **with** the add alternate included for an unclassified site, shift the risk to the construction manager and **cap upside hardcost risk**. If the deal does not pencil out for the proforma, then another strategy using allowances or contingencies must be utilized (discussed at another time).

The fine mechanics when contracting "Construction Manager has assumed the time and cost in their bid for the findings outlined in the geotechnical report prepared by..."

Construction Managers

ASK, ASK, ASK for the geotechnical engineering report, rock surveys, topographic survey. So many times these items are complete and just not provided by developers or simply forgotten.

Provide a voluntary add alternate for an unclassified site. This will immensely help a developer responding to a RFP for a project that has a hard date and time for a response. Very few firms provide this without being requested and will **result in more wins. Developers dance with those who bring you.**

Final Thoughts...

<https://www.lawinsider.com/dictionary/unclassified-excavation>

If in doubt of the geotechnical engineering report or recommendations, have a third party peer review of the report. Reputable geotechnical engineering firms welcome a peer review. Prepare to learn much more than you ever wanted to know regarding soils and rock.

Renatus Ventures is ready to operate as your unbiased concierge navigating the complexities of early due diligence on any project.

