

# THE GEOTECHNICAL RFP

Are you getting apples to apples?



You're in need of geotechnical services and it's time to write the RFP – where do you start? If you're like many of us these days, you may be pressed for time and everything on your list needed to be done yesterday. So that RFP you have to write, with the fast-approaching deadline, may not get the full attention it needs – a copy-paste here, a few details there, and it's out the door to your potential Bidders. But wait, is that RFP the best representation of the services you need? Does it set you up for selecting the most qualified firm? Often what we think are the minute details within an RFP, can play a big role in how we perceive and select the most qualified Bidder.

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As Geotechnical Engineers, on the other side of the table, RFPs are constantly run across our desk – we have seen the good, the not-so-good, and on occasion the very bad. Using this insider knowledge, we would like to discuss how the development of an RFP can make or break the quality of responses you will receive in turn. In an ideal scenario, the RFP should ensure your Bidders' responses are on a level playing field, giving you the opportunity to make a more accurate and informed decision when selecting the best-fit firm for your geotechnical needs. Think “apples to apples,” not “apples to oranges.”

Throughout this series, we'll discuss five ways you can boost your RFP to ensure you are getting responses that are in fact “apples to apples.”

- 1. Understand site parameters.** Understand and describe the project site parameters from a geotechnical perspective.
- 2. Clearly define your scope.** Explain the geotechnical services being requested in as much detail and specificity as possible.
- 3. Request detailed deliverables.** Include exactly what you expect in terms of geotechnical deliverables and ask for examples in the Bidders' submissions.
- 4. Be transparent in budget and schedule.** Be transparent about your budget and schedule, even if you don't have one.
- 5. Communicate selection factors and compare responses.** Communicate your selection-factors and dissect your Bidders' responses. Be wary of any short-cuts presented.

You may be thinking, “Well, of course I consider these items in my RFPs.” But, we'd like to challenge you to dig a bit deeper. As we go further into each of these topics, think about how you could improve your current M.O. for writing RFPs.

## UNDERSTAND SITE PARAMETERS

When developing your RFP, it's important to do your homework and describe the site from a geotechnical perspective. Describing the building program or type is more helpful to an Architect or Mechanical Engineer. However, it is not a huge help in developing a geotechnical response. Remember, we're more focused on the ground and what's in the ground.

### Existing Site Conditions

When describing the conditions of your site, it's important to consider items like the following:

- Is the site steep and/or hilly?
- Are there low-lying areas?
- Does a stream run through the site? If so, can you identify how deep the stream is?
- Is the site paved? If so, is it asphalt or concrete pavement?
- What is the vegetative state of the site? Farmland, Open Field, Dense Forest, Swamp, etc.
- What is the history of the site? Previous farm land, industrial use, graded, etc.
- Are there any structures or ponds on the site? If not, were there previously?

If you don't have answers to these questions, a simple Google Earth – Aerial and Street View search can help you identify many of the topographic elements of your site and any unforeseen parameters that may affect the scope of the project. The county in which your project site resides may also have a GIS website to help you gain more intel. It's important to note which season the aerial and/or street view images were taken, as each season can affect the geotechnical schedule, budget, and investigative findings in different ways. If possible, include a topographic survey and clearly marked images of your site in the RFP.

Yes, the bidder should be doing much of this research themselves, but it is not something that should be assumed or relied upon. Including as much detail as you can ensures each Bidder is aware of the site parameters, avoiding any oversights and/or overly conservative “contingencies” due to unknowns when developing a lump sum estimate.



## Site Accessibility and Mobility

Moving beyond the conditions of the site, accessibility and mobility should also be considered. Getting a drill crew on an easily accessible site with few restrictive parameters is a win-win for all, but it does not happen as often as we'd like. It's important that the items listed below are answered in the RFP, as they can affect the schedule, and therefore the Bidder's proposed cost.

- Is there easy access to the site, or should the Bidder expect restrictions such as a dense forest or access-controlled fences or gates?
- Is it an active site? Will traffic control be needed?
- Are there constraints due to on-site operations?
- Are there traversable access roads or trails on site?
- Is the site an active roadway or pedestrian walkway?
- Will clearing be needed to navigate through and do our work in a highly wooded area?

## Utilities

By far, the most important (and safety-sensitive) factor to be taken into consideration is the possibility of privately-owned utilities on the site. If on-site utilities are not shown in the plans, private utility location services can be contracted for a small additional fee. This should be considered in the proposed cost and is something Bidders should not overlook given the severity and potential hazards associated with negligent utility coordination.

## Client Expectations

In addition to site specific costs, also consider *your* expectations on how the site should be managed.

- Does each boring site need to be thoroughly cleaned-up after our work is complete? If so, take note that site restoration efforts may be an added cost.
- If applicable, what should we know about coordinating with facilities and/or grounds management? Do they have a particular schedule we should work around? Is it advised to meet with specific individuals prior to beginning field work? All of these factors affect the schedule and budget.

These questions may seem like insignificant details this early in the process, but remember more details in the RFP will result in a level playing field among all the Bidders, leading to a higher rate of success in the long-run.

## CLEARLY DEFINE YOUR SCOPE

As discussed earlier, details are important. The more detailed you are in your RFP, the higher chances of getting responses that are comparable in cost, schedule, and delivery. In contrast, when you provide little detail about the scope,

you are giving the Bidder lee-way to insert their own scope. This leads to skewed responses regarding price, schedule and services. In turn, skewed responses could lead to potential masking of the most qualified Bidder. Remember, “apples to apples” not “apples to oranges.”

You may think, “I often don't have all of the details of a project, so I can't include them in the RFP.” We understand not every project has every aspect of scope in place at the time of releasing the RFP. If this is the case, we suggest tackling geotechnical investigations in a phased approach and/or hiring a Geotechnical Consultant to help you develop the RFP to its fullest potential.

Also, keep in mind that once you have made a selection, there are still opportunities to adjust scope and fee, if design elements change prior to mobilizing your geotechnical consultant.

## Consider the phased approach.

A phased approach involves two investigations:

- A preliminary investigation to characterize the site, and;
- The final design-level investigation geared toward investigating project specific elements such as structures, retaining walls, deep cuts, deep utilities, deep fills, etc.

Preliminary investigations can be performed during the due diligence phase of property acquisition or during the beginning stages of plan development. A final-design level investigation should probably occur after 60 percent plans have been developed. The phased approach has the potential to save you time and money up front, and as you proceed throughout the timeline of the project.

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## Hire a Geotechnical Consultant.

Geotechnical Consultants are seen by many as “the folks who can do borings,” but there are many other services and methods of investigation available beyond traditional SPT borings. If you are less apt to the ins-and-outs of geotechnical services and all the details that should be included, it may be beneficial to hire a Geotechnical Consultant to assist you in writing an RFP. If you would like, tell your consultant that their firm will not be asked to bid to keep the RFP honest. This would ensure that your RFP is developed with a geotechnical perspective and contains all pertinent details that would support an informed decision.



## Be firm.

The last suggestion regarding scope, is to be firm. All too often, we see RFP's that include a generalized phrase like the following:

*“Geotechnical Engineer to advise how many borings are needed to adequately represent soil conditions on site.”*

This is not a thoughtful approach when you're looking for consistency among your responses. Instead, clearly state how many borings you want, where you want them, how deep they should go and whether it is necessary to core rock to achieve those depths. Again, this can change later, but you need to commit to a clearly defined scope for the purposes of the RFP – leave no room for assumptions. If you're unsure about what should be included in the investigation, we advise hiring a Geotechnical Consultant as mentioned above. If this information is open to opinions and revision, it will be hard to accurately compare scope between competing firms.

## REQUEST DETAILED DELIVERABLES

As the age-old saying goes, “Ask 10 Engineers for a solution to a problem and you'll get 10 different answers.” However, increasing the amount of data and detail available for analysis will often guide evaluations from different people to similar conclusions. The takeaways here are data collection and data reporting. You want to ensure your geotechnical data is collected and reported to the same (high) standard by each of your Bidders, so that you get clear reliable, usable data in the end.

### Weed out mediocrity by communicating clear and high standards.

Weed out mediocrity by communicating clear and high standards. Field data collection and reporting is not standard in the industry nor is it standard between competing firms, thus you want to minimize assumptions made by Bidders. By communicating what specific information must be included in the geotechnical report, you are effectively leveling the playing field.

For example, let's consider Firm A, B, and C in regard to the following request within your RFP:

*“Engineer must obtain coordinates for each boring drilled.”*

- Firm A's standard practice is to approximate boring coordinates from field measurements.
  - A Mediocre Practice
- Firm B's standard practice is to use a GPS enabled phone to obtain boring coordinates.
  - A Good Practice

- Firm C's standard practice is to always use GPS capable of sub-meter accuracy to obtain boring coordinates.
  - An Excellent Practice

Because this requirement is so broad in its wording, all firms can fulfill this request without going into much detail about *how* they will fulfill the request. Because Firms A and B may not own an accurate GPS, they could potentially come in with a lower cost than Firm C. However, Firm C is providing the highest quality of service.

Let's take a look at the same request with more specific details included:

*“Engineer must obtain coordinates for each boring drilled using GPS capable of sub-meter accuracy.”*

With this request, Firm C is the only one who performs this service as standard practice. Firms A and B need to include time and fees to specifically comply with this request.

In the first instance, Firm C could have potentially been priced out of the bid simply because of its capabilities, while in the second instance, Firm C was the only firm standing *because of* its capabilities. This is an example of how the detail and wording of your RFP can play a significant role in your Bidders' responses. Generalizing requests, with little to no detail, can lead to an “apples to oranges” comparison.

### Ask for sample test reports, boring logs, and/or other data.

Not all work is created equal. Unlike other disciplines within civil engineering, a geotechnical engineering deliverable typically comes in the form of a report, not drawings. In simple terms, a geotechnical report consists of data and interpretations of data.

If you're not already doing so, we suggest that you request samples of the following within your RFP:

- Legend
- Laboratory test reports
- A completed boring location plan and boring logs

Specify that these samples come from a project completed within the last 3 months. Information that may be sensitive like the project name or Client may be redacted.

Once you receive these samples, it's important to look for the following, among many other elements:

- Who is reporting most of the data?
- Are the axes of any graphs labeled?



- Are the soil descriptions on a boring log clear and concise?
- Are the origins of the strata (fill, residual, PWR, etc.) labeled on a boring log?

These items are important determinants in identifying quality geotechnical services. Without seeing samples of your Bidders' boring logs and reports up front, you could be signing yourself up for mediocre geotechnical work after the contract has already been signed.

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#### **Require routine progress updates.**

This should be standard practice, but it would not hurt to include verbiage in your RFP laying out your expectations in relation to communication and project progress. Your geotechnical firm should be providing updates weekly and/or after specific milestones, which may include:

- Drilling start date.
- Drilling completion date.
- Completion of laboratory testing.
- One week prior to the report due date.

Don't keep yourself in the dark!

#### **BE TRANSPARENT IN BUDGET AND SCHEDULE.**

Your budget and schedule go hand-in-hand – be transparent with both when developing your RFP.

***Do not leave it up to the Bidder to develop the budget based on the services requested.***

#### **Budget or no budget, communication is key.**

It's important for some form of budget information or cost limitations to be included in the RFP. If a set budget is not in place, be transparent about the situation and provide a brief explanation about the available funds. This information should be communicated clearly within RFP. Do not leave it up to the Bidder to develop the budget based on the services requested. This leads to a "blind bidding" situation, resulting in skewed responses based on the Bidders' opinions and not hard parameters.

#### **Be clear and specific about your scheduling requirements.**

A clear understanding of the schedule is important to define our overall scope and proposed cost. Recently we've seen some very aggressive schedules for large scopes of work.

To help you understand the constraints within a geotechnical job, consider the following typical four-week (30 day) schedule:

- **Week 1:** Notice-to-proceed, call in utilities, collect any publicly available data, and coordinate field work.  
*Note:* As mandated by law, there is a 4-day period from calling subscriber location services to the date you can start work.
- **Week 2:** Complete field investigation and return samples to the lab.  
*Note:* We typically consider 100 feet of drilling per day as a benchmark for estimating the duration of field work. This number varies based on weather, breakdown, spacing of the borings, shallow termination, surface and subsurface conditions, an/or if rock coring is needed.
- **Week 3:** Begin a rough draft of the report and wait for lab to wrap up.  
*Note:* Some advanced lab tests have two to three week turnaround times.
- **Week 4:** Incorporate lab results into the report, senior review of the report, and issue the report.

When trying to meet a hard, 30-day schedule, you're likely to incur additional costs. In addition to the scheduling notes stated above, drilling late days or on weekends to meet your schedule will impact the budget. It should also be noted that in the summer you should factor in a week or two of lead time due to the increased workload for drillers.

It's also important to be cognizant and respectful of time for all parties involved - There's nothing like burning the midnight oil to meet a deadline only to follow up a week later and hear "Oh yea, I haven't had a chance to look at it yet."

***If you're acting on behalf of a project Owner, let them know that narrowing the window could result in a higher fee than originally budgeted.***

To eliminate some of this pressure and incurred cost, we suggest sending out your RFP several weeks in advance of your required start date, and include a 45-day schedule instead of the typical 30-day schedule. If you're acting on behalf of a project Owner, let them know that narrowing the window could result in a higher fee than originally budgeted.

If there is a hard date to meet based on a transactional requirement or planned delivery milestone, share it with the Bidders. Otherwise, make sure your window is reasonable for the scope you have requested. Including the arbitrary 30-day schedule in the RFP because the last RFP said the same, is not a good measure of practice.





In addition, consider the following questions when developing the schedule requirements in the RFP:

- Does the site need clearing in order to drill?
- Does the drill crew need to go through a form of safety training, drug testing, background checks, or site orientation before they can start work on-site?
- Does the project have any time constraints outside of 7am to 6pm, Monday through Friday?
- Does the project have any site access issues like locked gates or secure areas where the crew's access is contingent on other people?

All of these items should be considered when writing the RFP as they directly affect the schedule of geotechnical services and will likely incur additional costs. Remember, the more specific we are in our RFPs, the better chances of getting responses that are on a level playing field – “apples to apples” not “apples to oranges.”

## COMMUNICATE SELECTION FACTORS AND COMPARE RESPONSES

### What are your selection factors?

Be honest and transparent in your selection process. Within your RFP, describe what factors will be most important in making your selection. It may be beneficial to include a scoring rubric outlining the factors that will be weighed most (and least) heavily. If your selection will be based primarily on price, make that known to the Bidders. If your selection is based on a technical score (i.e. the most data for the lowest cost), let them know. Knowing what factors are most important to the Client allows the Bidder's response to be catered specifically to your needs and priorities.

Additionally, if you are only sending the RFP to your favorite “go-to” firm, make them aware. Let them know you would like a fair price for a thorough scope, requesting all possible services needed to do the job well. Chances are they value your business and will respect your request, providing quality services without hitting you over the head for change orders later.

After a selection has been made, we also suggest sharing feedback with your Bidders, along with all the Bidders' rubric scores. (If preferred, firm names could be omitted from the rubric scores before shared with the competing firms.) Being transparent in your scoring and decision-making process, builds trust and respect with the Bidders while also giving insight on how the Bidder can improve for future opportunities. The Bidder can only improve, if they have something to improve upon.

### Compare the RFP to the proposals.

When you receive your Bidders' responses, it's important to not only compare the submissions among one another, but also compare them to the RFP that you provided. This may seem obvious, but it's important that you back check what the Bidder has submitted is congruent with the scope outlined in the RFP.

Let's use the example of private utilities mentioned back in the first topic of this series – Understanding Site Parameters.

In the RFP, you state that private utilities exist on the site. Looking at the responses, one Bidder's cost estimate is \$500 lower than the others. Unbeknownst to you, this is because they did not acknowledge the statement regarding existence of private utilities on site. Fast forward. You decide to hire this particular Bidder based on their reasonable cost and begin contract agreements. Within the Bidder's contract, a provision is included stating that if private utilities are not located before they are on site, this will be an additional cost of \$1,000 for locating and will affect the proposed schedule by X, Y, and Z. So, in retrospect, the Bidder you believed had the best services for the most reasonable cost really didn't – resulting in an increased budget and a compromised schedule.

***Make sure no loop holes or short cuts are being made by the Bidder to get their cost down or make the schedule more appealing to the Owner.***

The lesson here is to read your submissions from left to right and top to bottom. Make sure no loop holes or short cuts are being made by the Bidder to get their cost down or make the schedule more appealing to the Owner. If you're unsure of a response, it doesn't hurt to clarify with the Bidder. Checking all the boxes during the RFP process will set you up for success throughout the remainder of the project.

### Conclusion

We hope you were able to gain a few insights and tips to improving your geotechnical RFPs throughout this series. If you're in need of geotechnical services, would like us to review and comment on one of your RFP's, or simply would like more information regarding this topic, we would be happy to work with you.

**We want to hear from you. Take our short [SURVEY](#).**



## ABOUT FALCON ENGINEERING

Falcon Engineering, Inc. (Falcon) is a Woman-Owned business founded by President and CEO Margaret Robertson, PG. Formerly Tierra of NC, the company began its operation in 1993 offering geotechnical engineering, materials testing, and special inspections as its core services. In 2008, Tierra was rebranded and renamed Falcon. Services were also expanded to include environmental consulting.

With over 20 years of dedication, we continue to pledge professionalism, quality, and responsiveness to our clientele throughout the southern and eastern portions of the United States. Utilizing innovative approaches and pioneering technologies, the diversity and experience of our leadership team has enabled us to compile an extensive project portfolio encompassing very large complex projects in the commercial, industrial, private/public sector, and transportation markets.

### Our Service Lines:

- Geotechnical Engineering
- Testing and Inspections
- Environmental Services
- Laboratory Services

### Designations:

- WDBE
- HUB
- SPSF

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