

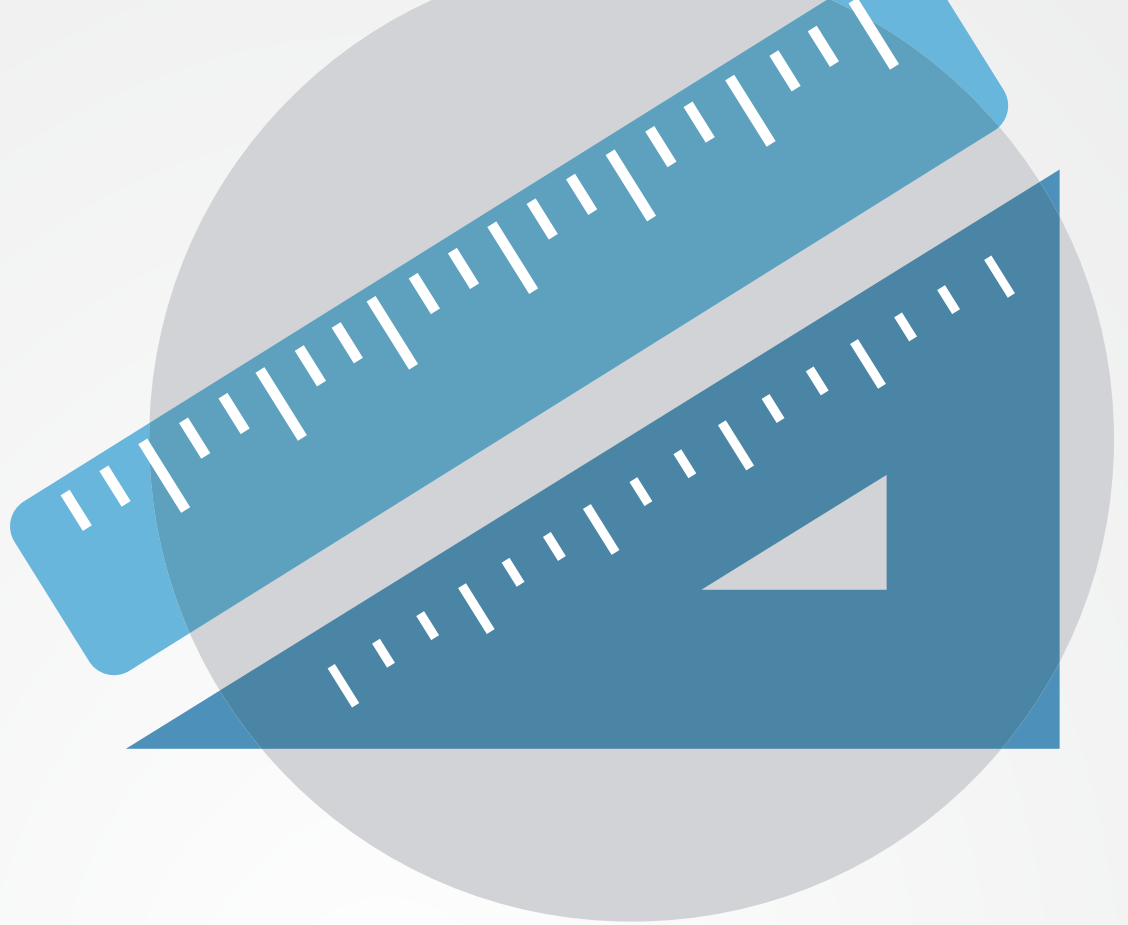


**SUMMIT**  
ENGINEERING

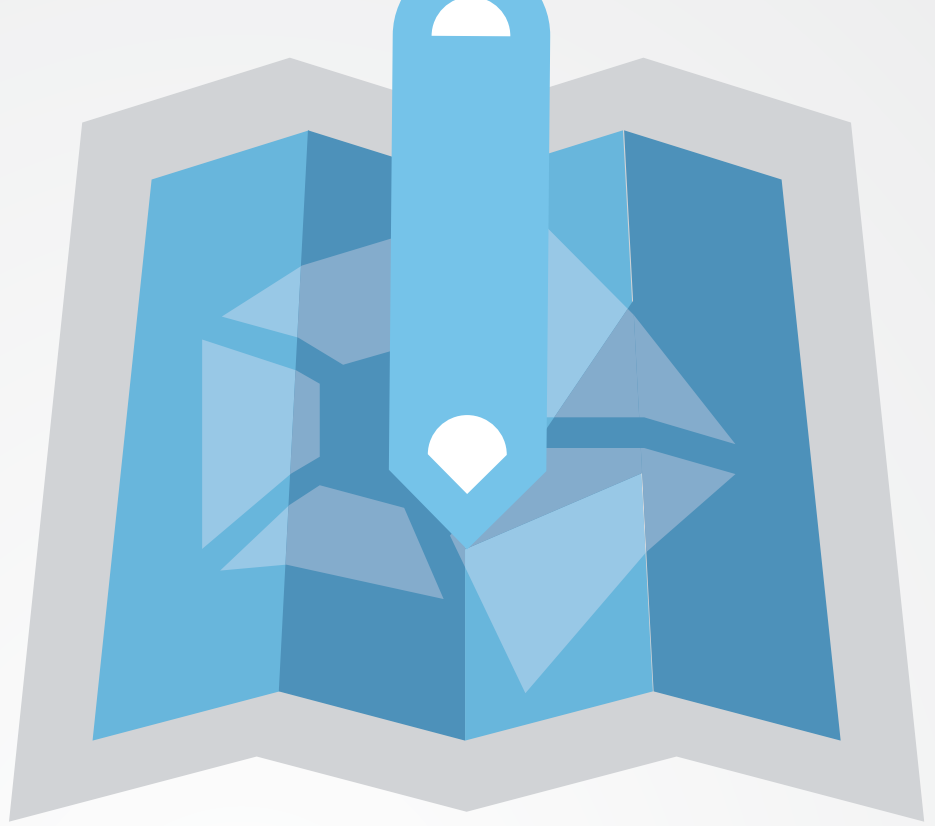
# 5 QUESTIONS

you should ask before hiring a structural engineer





The selection of a structural engineer is a critical component to the construction, efficiency, and overall cost of a structure. An experienced structural engineer will help you construct a building that is structurally sound and meets code while adding value to the overall project. Not all structural engineers are created equal. This ebook outlines five questions you should ask a structural engineer when considering your next project.



1

## **Have the structural engineer completed a project of this type before? If so, how many times?**

Most structural engineers can design most structures. However, just because an engineer can do the job, this does not make them the BEST engineer for the job. Different types of projects require a certain knowledge base, and this knowledge only comes from experience. A specific construction type will have its own design methods, vocabulary and standard products, protocols, or materials to choose from. Lack of experience with these can lead to cost overruns and delays in construction. Having qualified team members at every level results in a project that is designed correctly, built correctly, and leaves everyone feeling like the project was a success.

# 2



## **Does the structural engineer have familiarity with your proposed project delivery method – Design-Bid-Build or Design-Build?**

The two most common project delivery methods are Design-Bid-Build and Design-Build, and each is quite different. Design-Bid-Build puts a lot of pressure on the design team to produce a complete set of construction documents that are well coordinated. Book Specifications should be provided to ensure a thorough contract with the builder. Some of the advantages to this method are that the owner gets a competitively priced project when awarded to the lowest qualified bidder, and the team is only looking out for the best interests of the owner. Some of the disadvantages are that there is pressure on the contractor to hire the cheapest sub-contractors, versus the most qualified, and the design team must be familiar and current with construction costs. If project bids come in higher than expected, delays and extra costs can ensue in order to reduce the scope down to the necessary price.

Meanwhile, the Design-Build process puts the designers and the contractor on the same team. The advantages are that the contractor is keeping the cost in-check during the design, and the project can usually be delivered faster, as a lot of the steps are reduced or removed from the traditional process of Design-Bid-Build. Some of the disadvantages are that the process does not have the competitive bidding benefits to drive the price down and there can be a pressure to reduce the 'aesthetic' to save costs.

There are many further differences between these project delivery methods, but regardless of the method chosen, the Structural Engineer should be familiar and comfortable with the process you choose.

# 3



## **Does the structural engineer have the staff on hand to complete the project by the deadline?**

A well-qualified structural engineer will be of limited use to you if he/she can't complete your project on schedule. Ask about the size of the staff. Are there others available to step in and help out if needed? What has been their history of turnover? Who will be the lead engineer on the project?

# 4

## **Does the structural engineer use REVIT® or another BIM software package to complete the construction documents?**

The use of Building Information Modeling (BIM) has grown dramatically over the last five years. This software is allowing for better coordination between trades (Mechanical, Structural, Electrical, Architectural, etc.) and can avoid conflicts in the field. Equally as important, if the owner negotiates it as part of the contract, they can be provided with a 3-D model of their building – this can help them maintain that building and its systems for the future.

This is of great importance in large institutional structures, such as Hospitals or Universities.

# 5



## **What type of service will you get after the construction documents are completed?**

A lot of this will depend on what type of service you are looking for. At the very least, your structural engineer should offer you services to come and inspect the construction progress at key milestones. They should recommend, or you should ask, about special inspection coordination.

A good structural engineer will provide a schedule of special inspections that are to be performed by an independent third-party inspector. The structural engineer may be capable of performing some of these inspections himself/herself, but in any case, the cost for such should be clarified ahead of time. You can always ask if these costs were included in the original fee or ask if they will be billed as an extra charge.

While there are many questions to ask when hiring a professional structural engineer, the above five represent some of the pivotal questions to help get you started. Also, note that though you cannot always ask everything in advance, it is integral that a good structural engineer have strong capacities for teamwork and good communication skills – this can be invaluable to your project's overall successful completion and your peace of mind. So, use the first communication you have with any structural engineer to gage his/her personality, too.

## About Summit Engineering

Located in Portsmouth, NH, Summit Engineering provides structural design, construction administration and inspection services on a variety of project types throughout New England and beyond. Our project experience ranges from new to historic structures and from single to multi-story buildings as well as other specialized structures.

Licensed to work in NH, MA, ME, CT, NY, RI, VT, NJ, FL, PA, and the US Virgin Islands, Summit Engineering's highly trained staff holds advanced degrees in structural engineering and has been nationally recognized for their abilities. Summit's approach is simple. To give clients a single point of contact who is accountable for total project design.

Have an upcoming construction project? Contact Summit Engineering Today.



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