

# The Perils of Substitutions

By James B. Atkins, FAIA

Many people have had their identity stolen these days, and the results can be devastating. What would you do if your architect's identity was stolen? What would you do if someone manipulated your professional design services and added scope that you did not agree with to your project? Get ready, because it is happening every day, and it may have already happened to you.

## THE SETUP

Here's how it goes. An architect spends twenty years or more developing a reliable specification based on research and product performance to play it safe when it comes to water intrusion or exterior cladding – because we don't want to take a chance on some new, unproven product.

The project starts and all appears to be going well until the Value Engineering (VE) begins – which is used these days for cost-cutting. The proposed VE substitutions are purported to “save” the owner a lot of money if accepted according to the owner and contractor.

The AIA General Conditions require in Section 3.4.2, “...the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect...” This allows the owner to accept substitutions without the architect's consent; however, if non-consent is not documented, the architect can be viewed as accepting the substitution by its failure to object.

### **AIA 201-2017, General Conditions of the Contract for Construction**

**§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect..., the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.**

You are given twenty-four hours to review proposed product substitutions for the ones you have spent years researching and developing in your specifications. The condition often put forth is that the project will be delayed if you do not respond immediately. You may have never seen or heard of these products, or you may be aware but consider them inferior.

The VE review meeting is held, and you will come off as the bad guy if you object to the owner's savings. Pressure is applied, and you are told that the project may not go forward unless you accept the proposed substitutions. They're all staring at you across the table. What's your decision?

Many times, the architect will acquiesce and agree to use a new, untested product. It can be especially difficult to deny a repeat client. The architect may explain to the owner the product's unproven characteristics and its apparent lower quality. But the money argument usually wins. The items accepted on the VE list are added to the owner-contractor agreement by exhibit with no supporting specifications or product data, just the cryptic handwritten list. The contractor's price is conditioned upon the VE substitutions.

Fast forward to the sound of the owner's voice screaming at you over your cell phone. The product failed and there is water in the building. Deep water. And you are now in it over your head. The product representative asserts that the product was not properly installed. Meetings are held and tempers flare. The inquisition begins.

Let's stop and take measure of what just happened. You are the only architect on the project. You have the sole authority to specify the products and systems to be used on the project, and that authority is intended to be sustained and preserved by your required approval of changes to the project scope. Yet through the VE process that is in widespread use in the industry, an unlicensed person can change the scope of the project and later claim no responsibility because they are not the architect. This is a chilling example of an architect's stolen identity.

## THE INQUISITION

The product is examined under a microscope and compared to what was originally specified. It turns out that other projects have had similar problems with this product. The manufacturer maintains that the product was not stored on site properly and not installed correctly, thus voiding the warranty. The contractor says that the only reason it was used is because the architect approved it. The contractor states that since he is not an architect, how would he know if the product was acceptable.

The contract documents should require that substitutions have the approval of the architect. This is to allow the architect to remain in control of the project scope defined by the contract documents, for which he or she is responsible under state licensing statutes. But now the owner is stating that he accepted it only because the architect approved it. The owner files a lawsuit against the contractor and the architect for selecting, approving and installing a faulty product.

This scenario plays out day after day in claims and legal actions across the country. It will continue to prevail unless and until actions are taken to protect the architect's authority. Actions can be taken to help prevent such travesties, but they may not always be successful. However, building your firewall up front is much better than no protection at all.

NOTE: The Value Engineering process originated at General Electric in the 1950's because of the limited availability of building products following World War II. It was originally a structured, disciplined process that was vetted by engineers; thus, the name. It began to gain popularity in construction in the 1980's as a cost reduction measure. It remains a legitimate process, but only when managed and administered properly. It is sometimes referred to as value analysis or value management.

## BUILDING YOUR FIREWALL

There is no sure-fire way to eliminate risks associated with VE substitutions, but much can be done to manage the VE process to your advantage. Consider the following suggestions.

### **1. Talk it up**

The more everyone understands the advantages and disadvantages of VE substitutions, the more likely there will be a better outcome. A frank discussion with the owner regarding the value that is received for the

investment is always in order. Moreover, the topic should always be included in the preconstruction conference agenda. It may not alter events during construction, but keeping it as a primary agenda item emphasizes its importance. In addition, if you are maintaining strict enforcement of the requirements in the specifications, it is good to establish your position early.

## 2. Use a Substitution Request Form

One way to help control the substitution process is available from the Construction Specifications Institute (CSI). When VE initially gained popularity in the 1980's, lump sum contracts prevailed and it was used prior to contract award. The CSI published the Substitution Request Form 1.5C for use during the bid period. But with the proliferation of VE initiated by contractors after contract award, the CSI responded by publishing Substitution Request Form 13.1A for use after the bidding/negotiation stage.

Form 13.1A goes into detail regarding the documentation required of the contractor when requesting a substitution. If all information required is submitted, the architect is better assisted in its evaluation of the proposed substitution. The form also contains an encompassing certification by the submitting party which includes payment for A/E redesign and detailing if required for its use.

The image shows the top portion of the CSI Form 1.5C, titled 'SUBSTITUTION REQUEST'. It includes fields for 'Project Name', 'Substitution Request Number', 'To:' (Name, Title, Address, City, State, Zip, Phone, Fax), and 'From:' (Name, Title, Address, City, State, Zip, Phone, Fax). Below these are sections for 'Proposed Substitution' and 'A/E REVIEW AND ACTION'.

**CSI Form 1.5C**

The image shows the top portion of the CSI Form 13.1A, titled 'SUBSTITUTION REQUEST FOR CHANGE'. It includes fields for 'Project Name', 'Substitution Request Number', 'To:' (Name, Title, Address, City, State, Zip, Phone, Fax), and 'From:' (Name, Title, Address, City, State, Zip, Phone, Fax). Below these are sections for 'Proposed Substitution' and 'A/E REVIEW AND ACTION'.

**CSI Form 13.1A**

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The form consists of two pages, and more information is required since its first publication. If information required of the contractor by the form is fully enforced, it can provide some protection against the use of products of lower quality and unproven performance.

While the CSI Substitution Request Form gathers useful information for substitution review, the risks that can arise from the use of unfamiliar or unproven products reviewed and approved in very short timeframe remain, especially if a change order is executed to add the substitution to the work scope. While lower cost substitutions are worthy of a deductive change order, if the original products are replaced by a change order, the design professional can assume increased risks. It is therefore worth consideration to not change the contract documents. This is addressed in more detail below.

*The Architect's Handbook of Professional Practice, 14<sup>th</sup> Edition, "Chapter 14.2, Maintaining Design Quality,"* contains a sample Substitution Request Form. This form contains a "Manufacturer's Certification of Equal Quality," and although it is limited compared to the CSI form, it can be useful as a template for developing your own version of the form.

The Handbook chapter also suggests helpful steps to follow in the sections, "Controlling Substitutions," and, "When the Owner Overrides Recommendations," which suggests an indemnity from the owner should the architect not agree with the owner's acceptance.

### 3. Consider not revising the contract documents

State licensing statutes require you to be responsible for construction documents issued under your seal and signature. If you change your documents to include the VE/Substitutions, you will be responsible as if you originally specified and detailed them. If it is an unfamiliar product that has a weak performance history, the risk you assume is far beyond that which you would otherwise have. Therefore, you should consider not changing your documents to incorporate the VE/Substitutions.

This can be done by approaching substitutions for what they are, a product substituted for that originally specified. The contractor is given conditional approval to use the product as long as it performs equal to or better than that originally specified. This way the substituted work remains as a contractor performance requirement, and since it is not incorporated into the drawings, it becomes “accepted nonconforming work.” Both the architect and the owner are allowed to accept nonconforming work if it meets the intent of the contract documents. These conditions must be established in Division 1 and the Supplementary General Conditions, and discussion with the owner up front is required to help understand the risk involved and the best way to manage it.

#### BUILDING YOUR VE/SUBSTITUTION MANAGEMENT PROCESS

Following is a list of suggested elements to include in your VE/Substitution management process:

- Use MasterSpec Division 1 substitution requirements
- Use a Substitution Request Form
- Require sufficient data for adequate review
- Fully enforce all project substitution requirements
- Track substitution requests in a log the same as submittals
- Conduct a Substitution Review Conference with relevant parties
- Maintain a list of known unacceptable products
- Effectively document your objections and disapprovals
- Require replacement by the contractor if the substituted product fails
- Require an owner indemnity if the owner accepts and you disapprove
- Require an additional services fee for review or if overly time consuming
- Require an additional services fee if drawing modification or coordination is required
- Do not revise your documents if you disapprove or if the project cost does not change

#### CONCLUSION

Substitutions are ingrained into the project delivery process, and with the lure of cost savings without stringent proof of product equality up front, the risk of others stealing the architect’s identity and changing the project scope will remain. While total resistance is an option, it is not going to endear you to your clients and preserve your brand. The continuing volume of new products on the market along with healthy competition for cost and availability reinforces and sustains this post bid/negotiation phenomena. Design professionals should assume that the VE/Substitution process will continue to be used in the industry.

The best recourse is to prepare and manage appropriately. You have the best excuse of all the parties. You are complying with state licensing statutes and preserving your ability to practice. You may alienate some with your intelligent preemptive management, but you will always have at least one good friend when the smoke clears: your insurance agent.

Meanwhile, as you ponder that cryptic handwritten list of proposed VE/Substitutions, don't forget to be careful out there.

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### **For More Information:**

*The Architect's Handbook of Professional Practice, 15<sup>th</sup> Edition*, Article 10.8, Bidding and Negotiation, Bill Schmalz, AIA, RK Stewart, FAIA, Bruce Toman, AIA

*The Architect's Handbook of Professional Practice, 15<sup>th</sup> Edition*, Article 14.2, Construction Phase Services, James B. Atkins, FAIA

*The Architect's Handbook of Professional Practice, 14<sup>th</sup> Edition*, Article 12.5, Construction Contract Administration, James B. Atkins, FAIA

*The Architect's Handbook of Professional Practice, 14<sup>th</sup> Edition*, Article 14.2, Maintaining Design Quality, James B. Atkins, FAIA

*The Project Resource Manual: CSI Manual of Practice, 5<sup>th</sup> Edition*, Page 4.39, Article 4.7.7, Value Analysis, Page 4.41, Article 4.7.7.3, Documenting Value Analysis Decisions, Page 5.11, Article 5.2.3.2, Instructions for Procurement, Par. D, *Substitution of Products*, Page 6.6, Article 6.2.3, Value Analysis of Proposed Substitutions, Page 6.14, Article 6.4.1.7, Substitution Requests, Page 7.119, Article 7.8.3, Substitutions, Page 7.120, Figure 7.8-J, SUBSTITUTION REQUEST (After the Bidding/Negotiation Stage) 2 pages,

The Perils of Substitutions, Part 1, Jim Atkins, FAIA and Grant A. Simpson, FAIA, *Texas Architect Magazine*, May-June 2010

The Perils of Substitutions, Part 2, Jim Atkins, FAIA and Grant A. Simpson, FAIA, *Texas Architect Magazine*, September-October 2010

*MASTERSPEC – TECHNICAL SPECIFICATIONS – DIVISION 01 – GENERAL REQUIREMENTS, SECTION 016000 – PRODUCT REQUIREMENTS, PART 1 – GENERAL, Section 1.2 DEFINITIONS, Par. B, Substitutions, and Section 1.3 SUBMITTALS, Par. A, Substitution Requests*

Product Substitutions, Bill Schmalz, AIA, *White Paper, AIA Construction Contract Knowledge Community*, June 8, 2010

*The American Institute of Architects, Official Guide to the 2007 AIA Contract Documents*, Page 167, Substitutions.