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*The Visual Thinker's Guide to Understanding and  
Communicating Construction Contract Essentials*

or,

*How To Visually Understand, Flawlessly Recall and Graphically  
Communicate Lots of Boring Legal Stuff Effortlessly – More or Less*

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This document is the current collection of a running series of articles that will demonstrate for design, engineering and construction professionals how to better understand and communicate the substance of construction contracts and other text-heavy documents by using their existing abilities as visual thinkers to transform them into unique and memorable three-dimensional mental images.

This “*Visual Thinker's Guide . . .*” compendium is periodically updated and published by Chicago-based attorney and architect Gary L. Cole AIA, Esq. at <http://www.garylcolelaw.com/>. Readers who would like to receive updated copies of this evolving series may simply send an email to [garycole@garylcolelaw.com](mailto:garycole@garylcolelaw.com) and put “**Receive Visual Thinker Updates**” in the **email Subject line**.

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## The Visual Thinker's Guide to Understanding Construction Contracts: *Brief Overview*

Published: October 1, 2012

***By Gary L. Cole AIA, Esq. / Attorney & Architect***

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On September 28, 2012, I posted a query on select LinkedIn groups regarding possible interest in a series of articles I'm developing under the title *The Visual Thinker's Guide to Understanding Construction Contracts*. The response was surprisingly enthusiastic.

Therefore, I'll post the first article of the series shortly on my website here at <http://www.garylcolelaw.com>, and will announce it on my LinkedIn groups and direct contracts, Twitter, etc. Thereafter, the articles will be posted on a regular basis and in reading lengths that make them conducive to online publishing – like short chapters of a larger publication.

But in response to some of the comments I received on LinkedIn, a little more about these articles:

These articles teach design and construction professionals visual thinking techniques for quickly organizing, absorbing and comprehending legal documents, using as a first example the *AIA B101 - 2007 Standard Form of Agreement Between Owner and Architect*. But learning these techniques isn't simply a matter of reading a few pages of instruction – it's about developing core cognitive skills by leveraging existing ones. And it will take some practice, though I always enjoy using them because they require a vigorous visual imagination.

For the motivated who learn these techniques and become proficient, I think you'll be surprised at what you can do in a short time – I certainly was the first time I learned them.

These techniques involve the higher development of several core cognitive skills involving organization, visualization, focus and memory, to commit the substance of legal documents not merely to paper as graphics – which I don't believe would be particularly useful - but to working memory and actual knowledge. Information stored only on disc or on paper is just information – but if it's also stored and can be readily accessed from the mind, it becomes working knowledge. Developing proficiency with these techniques will make your mind your hard drive, which, of course, you carry with you and can access anytime – though I admit there's always the danger in our businesses of losing it. That's a law joke.

Individually, these techniques are simple – even fun - but may at first seem a little awkward, which is why I'll break them down to their individual skill components and then build up slowly with examples and exercises, with time in between the articles for readers to develop comfort and proficiency before advancing to the next step. Anyone can learn these techniques – including lawyers, who tend not to be visual thinkers, but who do excel in

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organization and focus. But because design and construction professionals already visualize well, it may be particularly suited for them.

These techniques also work very well for test preparation - I used them for the LEED exam study recently. I developed them during six years of architecture school, three years of law school, used them to prepare for the *Architects Registration Exam* – and credit them heavily for allowing me to score in the 98<sup>th</sup> percentile of the Structures portion and pass the 12-hour Design portion of that exam the first time - two state Bar exams, and more mid-and final exams that I can count. I modified them for my legal practice and continue to use them regularly.

Architects and contractors are knowledge workers – their market value is strongly related to what they know and produce from their knowledge base, and what their competition doesn't. Practical creativity springs, in part, from raw accumulated knowledge. And the more you know, the more you *can* know.

However - and I say this from personal experience - the thinking skills that work well in design and construction do not always lend themselves to absorbing and understanding the law. That requires a different way of thinking - hence, *The Visual Thinker's Guide to Understanding Construction Contracts*.

And if you're concerned that your focus and memory may not be what it once was, mastering these techniques may actually alleviate those concerns. If you enjoy developing your memory and cognitive skills for personal and professional reasons, then these techniques may be for you. But if you don't, you probably won't enjoy reading these articles.

Though there's a very good chance your competition will.

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## Introduction: The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials

Published: October 10, 2012

**By Gary L. Cole AIA, Esq. / Attorney & Architect**

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**[Update October 12, 2012:** Some readers have requested that I notify them by email upon my next posting of a “Visual Thinker’s Guide” installment. I’m more than happy to do so for anyone who emails me directly at [garycole@garylcolelaw.com](mailto:garycole@garylcolelaw.com) and simply puts “**Receive Visual Thinker Updates**” in the **email Subject line**. Thanks.]

**[Author’s Note:** The following is an introduction to a series of articles that will instruct design, engineering and construction professionals how to better understand and communicate the substance of construction contracts and other text-heavy documents, by using their existing abilities as visual thinkers.]

### ***Preface & Summary***

For design and construction professionals who are *visual thinkers* - those who best comprehend text and words by transforming them into still or animated pictures in their minds – closely reading, deeply understanding and clearly communicating the essential details of construction contracts can be a joyless and intimidating ordeal. The ape-men of *2001: A Space Odyssey* huddled and gibbered at the mysterious black monolith with less trepidation than some architects I’ve known when faced with reading, or worse, being solely responsible for negotiating an *American Institute of Architects* form agreement.

But it’s not their fault – construction contracts just aren’t written to be understood *visually*.

Construction contracts are written by lawyers - who mostly think, speak and write in the rarefied, priestly vernacular of the law, not in the fleshy, three-dimensional visual world of design and construction. So if architects, engineers and contractors aren’t trained to communicate in the language of the law, and if the law doesn’t communicate visually, can they ever learn to embrace construction contracts as a *necessary* – but not *necessarily evil* part of their professions?

Absolutely. They just have to keep reading.

This is the introduction to a series of articles titled *The Visual Thinker’s Guide to Understanding and Communicating Construction Contract Essentials* that demonstrates for design and construction professionals, visualization techniques for organizing, understanding and communicating the essential details of seemingly impenetrable two-dimensional, text-driven construction contracts by transforming them into unique three-dimensional mental images.

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And once construction contracts are understood as interrelated mental images, they can be communicated visually to clients, peers or opposing parties as sketched or even PowerPointed graphics.

Though *The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials* is written with design and construction industry professionals in mind, anyone can learn its lessons - even contract-writing, text-loving lawyers. All they need is a little willingness to think *visually*.

## ***Introduction***

Speaking as one, there are few things that *transactional lawyers* love more than settling down to read a plump, juicy contract: page after page after page of dense, finely-fonted text crammed with archaic phrasing and obscure terminology; Byzantine cross-referencing, sectioning, sub-sectioning, sub-sub-sectioning; whole pages of single paragraph run-on sentences; and crafted with a kind of visual symmetry, proportion and organization that makes Pollack look like Palladio.

Also speaking as one, there are few things that architects and other construction professionals loathe more than the things lawyers love – like reading lengthy construction contracts. Vampires will sip holy water while sunning themselves in the Vatican's piazza before many architects I've known will force themselves to read the *AIA B101 Standard Form of Agreement Between Owner and Architect* – word-for-word, from start-to-finish.

Of course, I exaggerate. *A little*. I also generalize. *A little*. And I vigorously agree that exceptions to most generalizations exist. *So stipulated*. I stand by them anyway. *A lot*.

But why should architects, engineers and contractors fear and loathe the well-vetted industry standard contracts of the *American Institute of Architects*, or the *Associated General Contractors of America*, or the *Engineers Joint Contract Documents Committee*, the very documents they depend on as business plans when projects go well - and as battle plans when they don't?

Having survived the professional metamorphosis from *architect* to *attorney & architect* – I think I understand the issue.

Most design and construction professionals think, understand and communicate better in three-dimensional visuals than they do purely in words and text. Lawyers, generally, do the opposite. It's simply the nature of the two professions and the communication media of their services. But construction contracts are more often written by lawyers, not by design and construction professionals, and are therefore the products of word-loving legal minds, not the image-loving brains of design and construction professionals.

Separating these two types of thinking and communicating is a very wide and very deep cognitive chasm that denies a visual thinker full access to a deeper and richer understanding of construction contracts. And it is the intent of *The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials* to change that.

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## ***Differences in Thinking and Visualization***

Because this is an introduction to a new way of understanding and communicating the substance of construction contracts that will unfold over several articles, and because it will probably be read by both my fellow architects and my fellow attorneys, it's worth taking a couple minutes to dissect the differences in the ways the two professions think and communicate.

The differences are profound.

On the whole, architects, engineers and contractors think and communicate in both two-dimensional and three-dimensional *visual* worlds. During a construction project's planning stages, ideas morph back and forth from three-dimensional imagery in their designers' minds to two-dimensional sketches: plans, elevations and section drawings, or perhaps two-dimensional axonometric and perspective drawings with a little visual trickery to make them appear three-dimensional.

But the interesting part of this process – and the part most relevant to *The Visual Thinker's Guide to Understanding and Communicating Construction Contracts Essentials* - is that even when architects are designing and detailing buildings with two-dimensional drawings, they're actually thinking – *visualizing* - in all three dimensions at once, like a 3D movie running in their heads. This is the gift of the designer – the ability to mentally visualize in three-dimensions; to build their ideas layer by layer, to subtract add and replace; to rotate on any x, y, and z-axis as freely in their minds as they might rotate CAD drawings on their monitors. Eventually, through a sort of Darwinian process of elimination, the designer's ideas coalesce and are finally represented by two-dimensional drawings bursting with graphic conventions and symbols that can be read and understood by like-trained professionals.

Contractors, those charged with transforming two-dimensional drawings into three-dimensional realities, do so by transforming them mentally into three-dimensional images while adding in considerations of cost, logistics, trade coordination, material availability and tolerances, weather, errors and endless other factors required for a design to achieve reality. Or, as I like to call them – *buildings*. This is not to suggest that the interface between architects and contractors is seamless despite the similarities in their thinking processes – the banter between the design, engineering and construction professionals and their respective priorities predates Giza.

While design and construction details are expressed two-dimensionally with industry-accepted graphic symbols, words and text operate in a supporting role when graphic conventions alone are insufficient. A section drawing of a masonry wall, for example, will provide symbolic and graphic information about the wall's constituent materials, but visual symbols alone cannot convey all the information needed to construct it. For that, alphanumeric text supplements the drawings with dimensions, material descriptions, relevant context information and miscellaneous notes and specifications. But the text is still written in the vernacular of the design and construction industries – and not of the law - and so is comfortable and familiar to design and construction professionals.



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It is written – somewhere - that when humanity’s ancestors first crawled onto land, most of them veered one direction while the future lawyers of the species went the other, and, for reasons unknown to paleobiology, evolved mysterious nodules in their brains that today allow them to focus for hours, days even, with the precision of an excimer laser on immense piles of text-laden documents mostly devoid of visual images – contracts, leases, real estate documents, loan agreements, etc., and not only absorb the information - *but enjoy the experience.*

Attorneys dwell in a very different cognitive world than design and construction professionals; one more verbal and largely devoid of the rich and complex visual language of three-dimensional references and graphic symbols found in design and construction drawings. Instead, lawyers generally communicate their ideas through a highly organized linear and logical thinking process that is reflected in their primary form of communication – the spoken and written word.

Like visual symbols used in the design and construction industries to communicate meaning, the words attorneys use are carefully chosen and may have their own accepted industry-standard or commonly understood meanings. Legal significance may come from the words individually, or, from their assemblages to form *legal terms* that have gained legal or common acceptance in specific contexts.

And perhaps unknown to many design and construction professionals, attorneys will ponder, draft, revise, edit, re-draft and ponder some more, the precise assembling of words into sentences into paragraphs into documents with every bit the zeal for exactness that any architect ever put into, say - parapet flashing details. And the reason is, metaphorically anyway, the same for both professions: a sloppy product makes for a leaky one.

For example, the legal term “*standard of care*” in a construction contract, is not simply the sum of the separate words “*standard + of + care*” in a vacuum, but when read together form a legal term whose meaning depends on the nature of the parties and the specific context of the contract. When supplemented by other qualifiers, the term has precise meaning regarding the type of professional diligence design and construction professionals must exercise when performing their work, and the liabilities that attach if they don’t.

And yet, without an attorney’s understanding of the express, implied and multiple meanings of the words comprising a *Standard of Care* provision in a specific context, design and construction professionals may not understand the term’s full meaning from a simple *plain reading*.

In the same way, attorneys looking at the masonry sectional wall drawing above may just see vertical and horizontal lines, material delineations, words with arrows, maybe a few numbers. But the full meaning of the text and drawing’s graphic conventions and symbolism may be nuanced and depend much on their context; something that may be lost on attorneys – though completely comprehensible to architects and contractors at a glance.

To sum it up: design and construction professionals think in three-dimensional images, while often communicating with two-dimensional drawings and graphic symbols supported by text to represent their ideas and which gives rise to real-world, three-dimensional construction – *buildings*. Attorneys think and communicate

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largely in a non-visual world of words and text. Construction contracts are the product of textual legal thought, not of visual design and construction thinking. Most architects and contractors don't speak *fluent* lawyer, and most lawyers don't speak *fluent* architect and contractor. The commonality of both languages, however, is that their expression must be *precise*, or the final product suffers.

Yet, even accepting that these linguistic differences are fully and reasonably explainable, does that mean that this *status quo* is the best the design, construction and legal professions – different as they are from each other - can achieve? Doesn't understanding and working with *Contract Documents* – the beating heart of any construction project that includes text-laden written agreements, instructions and specifications, as well as drawings composed of graphic conventions and symbols - require a certain fluency in both languages?

*The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials* proposes that the answer is "yes," and further suggests it can be done without trying to change the way design, construction and legal professionals think by exploring a proper translation matrix for their respective languages. Or, at the very least, demonstrate a way that design and construction professionals can better understand construction contracts by leveraging their existing powers of visualization.

## ***What Comes Next: Understanding and Communicating Construction Contracts Essentials***

So how will *The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials* accomplish all this?

The first part of the answer is in the words of the title, specifically: "*Understanding*" and "*Communicating*."

It is necessary to fully *understand* something to *communicate* it clearly. Generally, the greater the understanding of something, the more fluid the grasp of the details and the easier it is to clearly communicate it. Anyone who speaks publicly knows that the better they understand their subject, the fewer notes they need to talk about it. Every exam is about as hard as the extent of a taker's preparation.

So the first part of *The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials* is about developing certain mental visualization and memory techniques for creating a deep understanding, original awareness and flawless recall of both the organization and essential content of construction contracts.

Those techniques are developed by mastering two key cognitive skills everyone has in varying degrees: *concentration and memory*. You cannot communicate knowledge if you don't understand it; and you cannot understand something if you cannot remember it.

The problem for many visual thinkers like design and construction professionals, is that while they have well-developed abilities for concentrating on and recalling visual information, even visual information accompanied by supporting text, most have never really been forced professionally to develop the high levels of concentration and



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memory necessary for absorbing information *primarily* represented by text and words *without* accompanying visuals – like construction contracts.

Concentration and focus are needed to visualize and absorb text-only information, and then a technique is needed to transform that information into unique mental images that will be remembered forever. A key element to the technique is that the mental images that cement the recall and understanding must be unique to each person. Borrowing another person's visual images are no good – they have to be entirely the invention of the person absorbing the information or the focus and original awareness won't be triggered and the images and the information they represent won't be understood and will not stick.

Odd as this sounds the first time, these techniques are based on a very simple principle of concentration and memory:

*“You never forget what you bothered to remember in the first place.”*

And these techniques are not mere “tricks” – unless they're “tricks” in the same way Usain Bolt uses mere “tricks” to run 100 meters in less than 9.6 seconds. These are techniques for greatly improving core cognitive skills. But they have utility for anyone far beyond simply understanding and communicating the essentials of construction contracts and other legal documents. I personally used them to prosper during six years of architecture school and to survive the *Architects Registration Exam* - the old version designed and administered by *Tomás de Torquemada* - in which they helped me score in the 98<sup>th</sup> percentile of the Structures portion and pass the 12-hour Design portion the first time. I also used them during law school and the Illinois and Florida Bar exams; and to prepare for more mid- and final exams over the years than I can count. More recently I used these techniques to study for the LEED exam, which cut its study time drastically.

Discovering these visualization techniques at an early age was simply one of the best things that ever happened to me, and I intend to share them through these articles.

The second part of *The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials* is about how to visually communicate a deep understanding of construction contracts, drawing on the techniques learned in the first part.

Many people, even non-visual thinkers, respond well to complex information transformed to its essentials through visual representations and graphics. And it just so happens that construction contracts are well suited for doing just that.

*The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials* will teach those techniques too, but, without giving much away at the beginning – readers will have to learn how to convert pure textual information into visuals for a deep understanding of the content before you can learn how to communicate it visually.

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## *Denouement*

All this might seem a little overwhelming – I promise future articles will be much shorter than this introduction.

And if, as a reader, you're concerned that your focus and memory may not be what they once were, mastering the techniques taught in these articles may actually alleviate some of those concerns. I personally reject one of the popular beliefs about human memory, which is that it's like the sands of a beach relentlessly pounded by waves over the years, and which once washed away can never be reclaimed. Whether that notion has any physiological – or metaphorical - basis in fact is outside the scope of these articles. But I know this from personal experience: most people can greatly improve their focus and memory by learning a few simple – and enjoyable - techniques that rely on *visualization*.

And like anything initially intimidating, visually understanding and communicating the essentials of construction contracts starts with properly organizing the effort into manageable, smaller parts before launching a full ground assault. It's *divide and conquer*, not *be crushed and surrender*. Nobody – not even lawyers – reads construction contracts the way they read novels; from start to finish, front to back. Construction contracts have to be sliced apart – *deconstructed*, if you will – and reorganized into smaller, bite-sized parts.

Or, as Doug, one of *2001: A Space Odyssey's* ape-men later said: "I wouldn't have been so overwhelmed by that big black monolith if I'd just remembered what I learned in grad school:

*"You eat a woolly mammoth one bite at a time."*

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## Chapter 1: The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials

Published: October 24, 2012

**By Gary L. Cole AIA, Esq. / Attorney & Architect**

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*[Author's Note: This is the first part of a series of articles that will demonstrate for design, engineering and construction professionals how to better understand and communicate the substance of construction contracts and other text-heavy documents by using their existing abilities as visual thinkers.*

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The goal of *The Visual Thinker’s Guide to Understanding and Communicating Construction Contract Essentials* is to allow visual thinkers – in this case design and construction professionals – to be *smarter* in their practices.

Of course, “*smarter*” is a loaded term and its use always carries the risk of sounding hubristically smug. But as used here, it has nothing to do with hubris, smugness or even “IQ,” a controversial term that I’ve always understood to be a measure of *potential*, not of performance.

For these articles, I define “*smarter*” as follows: “*the ability to process and retain more useful information in less time and to produce something of value for a professional market.*” Certainly, the term is broad and there are many ways to define and apply it; but these articles are about working smarter and more productively, not harder with less to show.

The key words are “*process and retain more useful information in less time.*” Call it a solid Midwestern upbringing, but I’m interested in practical results. It’s not that I have anything against implausible thought experiments with no remote possibility of leading to anything useful – they can be excellent diversions. But to paraphrase Mick Jagger: “*Too much intellectual posturing in the bath is not a good thing.*” It’s also not a very *useful* thing in professional markets. More on point, and to quote someone who was *not* the leader of the greatest R & R band ever: “*The business of business is business.*”

Therefore, on to business.

Boiled down, the logic underlying *The Visual Thinker’s Guide to Understanding and Communicating Construction Contract Essentials* can be expressed almost algebraically:

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*“To be able to communicate knowledge of something, that thing must be deeply understood. To deeply understand something, it must be fully remembered. For visual thinkers, the best way to recall something is visually.”*

Or, further reduced:

Communication (knowledge) = Understanding = Recall = Visual Memory (visual thinkers).

Architects, engineers and contractors are *knowledge workers*. Their market value . . . . . is strongly related to their useful knowledge base, what they understand and know – and what their competition doesn’t. Knowledge builds on itself; the more you know, the more you *can know*. Practical creativity and business success in the design, construction – and legal - professions are also based in no small part on accumulated knowledge.

If *The Visual Thinker’s Guide to Understanding and Communicating Construction Contract Essentials*’ goal is to make design and construction professionals *smarter* in their practices by demonstrating techniques for accumulating more useful knowledge in less time, it will do so in three steps:

**First:** *Organizing the construction contract.*

This is a pre-visualization exercise. To be committed to visual memory, a construction contract must first be properly organized, starting from the general and working to the specific.

**Second:** *Committing the construction contract to visual memory.*

Once properly organized, the visual framework of a construction contract – the parties, setting, project, and its articles, sections and subsections – is committed to visual memory. This is the structure that supports the whole exercise.

When the visual framework is in place, the next step is to fill in the space between the supporting members with the contract’s essential details using some of the same visual memory techniques as were used to create the organizational structure. This infill includes the entire contract - not just the front-end business terms that deal with scope of work and getting paid; but the back-end of the contract including the *general conditions*, provisions that some dismissively, and foolishly, refer to as “boilerplate.” That term is henceforth banned for reasons that will become obvious later.

For the more literal readers, my structural metaphors above are just that – *metaphors*. We won’t be picturing building structures – columns, beams, floors - in our minds; though, now that I think about it – that could be useful with another visual memory technique that I may demonstrate later. But because these articles are about visual thinking, it helps to communicate with visual thinkers using visual metaphors.

**Third:** *Visually communicating the construction contract’s essentials.*

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With the entire construction contract now absorbed into fluid working memory, it can easily be discussed and even graphically communicated using sketches, *PowerPoint* – or even some of the next-generation of visual presentation programs like *Prezi*. Visually understood construction contracts lend themselves to graphic communication particularly well, especially when understood as *story*, which will be discussed later in this series.

The demonstrator construction contract for these articles will be the *AIA B101 Standard Form of Agreement Between Owner and Architect (2007)*. I chose this contract because it's about the right length and complexity for my purposes – but any construction contract with a similar structure will serve.

Developing these visual memorization skills will take place over several installments of *The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials* with four different techniques being taught – all which take advantage of a visual thinker's existing visualization skills.

Those who carefully follow the exercises set out in these articles will acquire a deep understanding and the ability to communicate the content and meaning of every article, section and subsection of a construction contract, including all legal terms and concepts and citations to cross-referenced content. If a contract is amended over time, the same visual memory techniques will allow the mental construct to be easily modified. And because the technique requires visual thinkers to use their visual thinking abilities and visual memories, the information lasts as long as wanted, with minimal upkeep.

For those who negotiate construction contracts I pose these questions: how many times have you negotiated a contract using a dog-eared, heavily tabbed paper copy as a reference because the details weren't completely committed to memory? Or, how many times have you appeared at a contract negotiation with just a clean, or lightly noted reference copy in hand because the working knowledge was stored in your mind? Now, which scenario would you conclude gives you a practical, competitive advantage in your market?

The techniques demonstrated in "*The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials*" will require a little practice to master. At the end of each article will be a homework assignment to allow readers to master the techniques of that installment and to prepare for the next.

*The following is this week's assignment for next week's article:*

1. *Obtain a construction contract.* Following along with the *AIA B101 Standard Form of Agreement Between Owner and Architect (2007)* might make the lessons easier to understand since I'll be demonstrating the visual memory techniques directly from it. It's available for purchase on the American Institute of Architect's website.
2. *Reality check you current memory.* Try the following memory exercise to create a baseline for your present memory skills and to prepare for the next article. For readers who have developed other techniques not taught in these articles, please put them aside for now – they might interfere with the visual techniques taught here.

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*Try this:* look around wherever you are and make a list of five objects around you. Now, memorize all five things. When you can recall the list frontwards and backwards without error, add another five for a total of ten, and memorize them in the same way. When you can recall that list of ten things frontwards and backwards, add five more to your list. Repeat this process until you have thirty objects on your list that you can recall frontwards and backwards without error. Keep track of how long this all took.

If you're like most people, you tagged out somewhere between 10-15 items. Very few people can memorize a list of twenty or thirty objects and be able to recall them frontwards and backwards without training or a system for doing so.

By learning the visual memory techniques taught in these articles, everyone should be able to easily memorize thirty, fifty or even a hundred items - or more. There really is no limit to the number of things you can remember using these techniques – a longer list just takes a little more time. The technique taught in the next few articles is the simplest of the techniques, but it lays the foundation for the others. And that list of thirty items? With just a little practice, it should take about 5-10 minutes to commit all thirty items to lasting visual memory that can be recalled indefinitely.

So, what does memorizing a list of objects have to do with committing an entire construction contract to visual memory? All will be revealed as we progress through these articles, but a long time ago I learned something about learning: when I was a short order cook in high school I had to learn how to crack and drop an egg with one hand before I could make an omelet; when I was an avionics communications tech in the Air Force I had to learn how to turn on a radio before I could learn how to fix an aircraft; and when I was a visiting associate professor at the University of Illinois, I learned that teaching graduate architecture students how to build a masonry wall started with teaching them how to mix mortar.

In all cases, master the fundamentals and build up. That's what memorizing a list of objects has to do with committing an entire construction contract to visual memory. Fundamentals first, practice and master, move to the next step.

Fortunately, we're just committing *construction contracts* to visual memory, not the *Iliad*, so we don't need to develop Homeric mnemonic skills - though I suspect *Mr. Wine-Dark Sea* used a number of visualization techniques to commit the epic to memory that are not all that different from the techniques readers will learn in these articles. However, any reader who manages to memorize the entire *Iliad* using the techniques taught in these articles will receive – free of charge - a bound, autographed copy of *The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials*.

Finally, online publications have fairly short practical lengths, which, depending on the subject, is somewhere between 500 - 1500 words. Because *The Visual Thinker's Guide to Understanding and Communicating Construction Contract Essentials* is long, it will be serialized and published in regular – weekly, my law practice permitting - installments of around 1,000 words for quick and easy digestion.



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Next: *Chapter 2: Organizing Construction Contracts For Visualization*

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