

HOW TO STUDY LIKE AN EXPERT: THE PRO-SUM METHOD

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FOREWORD

"The race is not always to the swift, nor the battle to the strong...but that's the way to bet."

- Damon Runyon

Like many of you who are reading this, I began my college career full of self-confidence about my academic – not to mention other – abilities.

After all, I was an honor student in high school and, despite using an unstructured hit-or-miss style of studying, I saw no reason why I wouldn't do as well or better in college. The only difference in my mind was that I had more freedom. No one told you what you had to do or when you had to do it. You were on your own as far as how much you did or didn't study.

Naturally, I thought this was the ideal situation; I would still get good grades, only now there was no one to nag me about it!

This college thing was going to be a breeze, right? As you can guess, I was to have my eyes opened in that regard in an unpleasant and ego-deflating manner.

In my first semester, using the same study methods I used in high school (i.e. none), I managed to obtain four B's and two C's. Hardly the stuff of which honor rolls are made and by far the worst grades ever for me.

I was puzzled at this, because in the high school world of weekly open book, true/false, and multiple-choice tests, simply reading the text books was good enough. But in the college world of far more complex exams, where one or two tests could determine your entire grade, it became painfully obvious that a different method of studying was required.

But what?

I made it a point to ask some students in my classes who I knew consistently achieved high grades how they studied. The one common thread with all the people I spoke with was that they developed a method of studying, that they used consistently. That seemed to be the key.

I decided to do some research, combined it with some trial and error, and developed a method that worked very well for several others and me. That method is what I call the “Progressive Summarization” or “PRO-SUM” method.

Of course, the real question you want answered is this: was it effective? Did it really result in better grades? Judge for yourself.

I started using and refining my method during the last half of my first year in college. The result: one A, four B’s, and one C. Better than my first semester but certainly nothing to brag about – yet.

Over the next couple of semesters, I continued refining my study method until it was second nature. For my last two years of college, I maintained a 3.8 grade point average and was on the Dean’s honor roll continuously.

There is no doubt in my mind that this improvement in grades was a result of developing and consistently using an effective study method.

Using this method, one of my best friends achieved a combined four-year grade point average of 3.7 and this was after a mediocre performance in high school. Again, the consistent application of an effective study method made the difference. This difference is what I will give you by the time you finish this report.

SPECIAL NOTE: Throughout this report, you see that it is primarily based on using printed textbooks, not electronic ones. While everything can be done online, it would be extremely awkward and in the end likely more time-consuming.

Plus, a study done by Direct Textbook a couple of years ago showed that 62% of college students prefer print textbooks to e-textbooks.

To quote them on the reasons why: “Students who prefer print textbooks say they are easier to read and that they have trouble concentrating on e-textbooks. They also like that no internet is required. And 25% say they end up printing e-textbook pages anyway. Even those who have no preference say printed textbooks are easier to read and annotate, and are easier to learn from.

INTRODUCTION

"It's what you learn after you know it all that counts."
- June Henderson

While PRO-SUM is written with the college student in mind, it can

also help the high school student, though some modification to the basic method is necessary. Please see chapter 9 for instructions. Chapter 9 will also explain how PRO-SUM can be used in the business world to improve your professional development.

If you visit any large bookstore or library you will find dozens of books on the subject of studying and the entire college experience in general. Literally every topic related to academic achievement is addressed in one form or another.

Indeed, many books are written like an encyclopedia and attempt to offer advice on everything from where to park on campus to where to sit in class.

Much of the advice is good; some of it is very good. However, it can be difficult to absorb a book that covers too broad a range of topics. If you try to read, comprehend, and master all skills related to success in college, you may find yourself a living example of the old adage "jack of all trades, master of none."

You'll find no argument with the statement that many skills are necessary for high academic success, least of all from me. However, I'll not attempt to make you an expert in all of them.

My goal is to make you an expert in only one of them: how to read and study your textbooks for maximum retention and performance on exams.

While many other skills contribute to good grades, none are as important as the ability to absorb textbook material in an organized and efficient manner. You'll spend more time reading and studying your textbooks than any other single academic activity.

Doesn't it make sense to master this skill first and most thoroughly?

The ability to do this is like having a fifty-yard head start in the hundred-yard dash of college exams.

Yes, I do offer advice on a few other topics, such as scheduling your classes and planning your time, but only because they are directly related to your ability to study effectively and perform well on exams.

The choice is yours. You can stumble through the maze of material in your textbooks, forgetting next week what you read last week, and wondering how you'll be able to retain anything by exam time.

Or, you can give the PRO-SUM method an honest try and learn how to truly "Study Like An Expert."

CHAPTER 1

WHY USE A SYSTEM AT ALL?

"We need elucidation of the obvious more than investigation of the obscure."

- Oliver Wendell Holmes

Think about the following situations. Do any of them sound familiar?

- It's one week before a big exam and you find yourself with over a hundred pages of textbook material to read. You stay up late every night and extra late the night before the exam to review what you've just read.
- You've read all the material before an exam. But when you begin your review, you find that you remember very little about what you read several weeks ago.
- You're unable to accurately estimate how much time you should spend studying. You find yourself either finishing your reading much too early before exams or at the last minute and having to pull "all-nighters."

If you've ever been frustrated by these or similar situations, it's almost a certainty that some sort of consistently used study system will help you.

Unfortunately, study skills are not typically taught in high school. The high school curriculum is so focused on what you need to learn that it seldom spends any time teaching you how to learn it.

What little attention is given to how to study usually concentrates on how to research and write reports. Very little, if anything, is taught about how to read and get the most out of your textbooks. Yet, the amount of textbook reading required in college is vastly greater than in high school.

This means that the typical college freshman is faced with a challenge for which high school gave little preparation.

Many students figure out after a semester or quarter or two how to adjust to the greater reading workload, but the lack of a consistent way to condense and keep track of what they have studied leads to the problems mentioned above.

If the high schools would simply teach some basic study methods much of this anxiety could be avoided. Absent this, the next best thing is to learn from other people's experience those methods that can make you a more effective student.

One thing should be made very clear right up front: *there is no magical, shortcut method*. No system will allow you to study and learn effectively with little or no effort on your part. That system simply does not exist and any book that tries to claim it does is not worth reading.

Just as getting into shape physically requires you to work out, getting better grades requires you to study. Good grades are for the most part a matter of organized, consistent, and effective studying.

Certainly, there are exceptions.

We've all heard about or know someone who gets straight A's without studying. But these people are rare (and probably study more than you think!). Most good grade point averages are due to either outstanding effort or outstanding effectiveness.

While you do have to put in a reasonable amount of effort, it's *effectiveness* you'll learn from this report. At the same time, you must want to learn and be willing to put in sufficient time to learn.

The key, of course, is to use that time most productively.

Studies have shown that about 70% of your total study time is spent reading, comprehending, and memorizing. With the average college course containing five to seven hundred pages of textbook reading, having an organized method of studying can save you hundreds of hours in the long run.

Actually, almost any study method, if used consistently, is better than no method at all.

Imagine, for example, reading the newspaper every day if you had to decide from scratch how you would read it each time. Think about what it would be like having to agonize over whether to read the front page first or the sports page. Maybe you should read the business section first and then the editorial page. Wait – maybe it's better to read the comics first so the rest of the news will not look so bad.

The time spent making these decisions each time you pick up the newspaper is time that could have been spent actually reading the paper if you read it the same way every day.

Reading your textbooks and study material is no different. If you don't have a structured way of approaching your printed study materials, you'll always be changing your approach and will end up having wasted much time trying to decide how to study.

Plus, since you'll be constantly using different approaches, you'll be unable to accurately estimate how much time you should devote to your textbooks. This is the primary reason why so many students have to burn the midnight oil before exams to make up for falling behind on their reading.

ADVANTAGES OF USING A STUDY METHOD

If you adopt and consistently use a study method, over time you will:

1. Develop a good feel for exactly how much time you should devote to reading each of your course textbooks.
2. Be able to better plan your study time and provide yourself with more free time.
3. Avoid last-minute reading and cramming anxiety.

Perhaps the biggest benefit of an effective study method (besides, of course, enabling you to learn more) is that you'll be able to practice better time management.

By knowing how much time you should spend studying on an ongoing basis, you'll find yourself in much better control of both your academic and your personal life.

Later on in this book, you'll learn how to very precisely determine what your daily and weekly study times should be and how to manage them to provide yourself with more free time.

You'll cease being a slave to the crunch times created by last-minute studying. You'll be in control and free from worrying about how to approach your textbooks.

The bottom line is there's no sense in reinventing the wheel every time you need to decide how to study. An effective method enables you to comfortably begin, secure in the knowledge that your time is well planned and you have a schedule to follow.

Even if you choose not to use the PRO-SUM method, I still encourage you to continue searching for a method you feel will work for you and use it.

You're going to spend a great deal of time studying regardless of how you do it. The question is, how effectively are you going to use that time?

WHY USE THE PRO-SUM METHOD?

The PRO-SUM method is designed to accomplish two major objectives:

1. Give you a consistent, effective way to condense a large amount of material into a manageable amount, without sacrificing understanding.
2. Allow you to accurately estimate how much time you'll need to spend studying. You'll no longer find yourself with too much material to study and too little time before an exam.

If you have done any looking at all, you've found there are many other books written on the subject of how to study. Some of them are even quite good and I am sure work for many people. However, for the most part, I personally have yet to find one I could effectively use.

Most methods are either (a) more complicated than the material you are studying, or (b) they attempt to cover virtually all aspects of academic life, from studying to taking tests, to where to sit in class, how to take notes, and when to raise your hand.

There are many aspects to a successful college career, but the fact still remains that over two-thirds of your time will be spent reading and studying textbooks and that is the emphasis of this book.

Perhaps the biggest drawback to most study methods is they tell you what to do but not how to do it. Often, the act of studying is intellectualized to the point where it becomes an end unto itself rather than a means to getting better grades.

The PRO-SUM method explains in detail not only what to do but exactly how to do it. It also explains how to determine the amount of time you need to spend studying.

There's one thing you'll find in only a very few of the books that give advice on how to study: any hard data about the effectiveness of the methods, or any indication that the author successfully used the method in real life.

They may give very fine advice that indeed will work well, but the process described in PRO-SUM is one developed by my own actual experiences and trial and error. It worked for me, and for many of my personal acquaintances, and I am confident it will improve the grades of anyone willing to learn and consistently apply the principles.

[AREN'T TEXTBOOKS TOO COMPLICATED FOR A SYSTEM?](#)

Despite what many authors tell you, there's no big secret or ulterior motive behind what textbooks are trying to tell you. While not always the most interesting reading, most textbooks honestly try to lay out the information in a logical manner for the reader.

However, many study methods approach the problem of reading textbooks as a battle of wits. The reader is frequently advised to develop an ever-changing array of tactics to circumvent the author's secretive intentions and pry the information out of the printed pages.

Throughout all of this, the act of reading a textbook takes on almost mystical proportions and is made to appear much more complicated than was the author's intent.

Listed below are some actual suggestions from a variety of

books on the subject of study methods, to give you a feel for how bizarre and complex many people have treated this subject.

1. One suggestion is to read each chapter backward. The theory is that textbook authors tend to save the most important information for last. By reading from the end to the beginning you can frequently avoid having to read all the material because you'll have already read the important parts at the end.
2. Another method, in the chapter on how to read textbooks, suggests that you have to analyze each book/chapter to figure out exactly what the author is trying to tell you before beginning the actual reading. This book advises the reader to "attack the textbooks like a mystery whose secret you must unlock."
3. Still another recommends you do not read the material at all. Just skim it and only read what looks important. How can you know if the instructor, who writes the tests, will agree with your assessment of what should and should not be read? This same bad advice crops up in more than one book. Another book recommends you first read the table of contents and the index, and then read the various chapter subtitles. The reasoning here is that this may be enough to give you an idea of what the material is and you therefore will not have to read further.
4. One interesting method recommends you read textbooks twice as fast as you normally read, to force yourself to concentrate and thus retain more. This may be fine for a light novel, but I question its effectiveness for a calculus textbook.
5. One book goes into great detail about where to sit in class, how to take notes that will impress the professor, when to raise your hand to answer questions, etc. When

it came to advice about how to study, the only recommendation was to develop lots of alternative methods because no two textbook authors are alike.

6. One very detailed book on the subject of studying listed and described in minute detail fifteen different study skills to learn. It then went on to say you must learn to pick and choose different combinations with each book to have one that will be right for the material you are studying. This particular method, even if mastered, would take longer to determine the best combination of the fifteen skills for each course than the actual studying of the course material.

My point in all this is not so much to criticize other author's work as it is to point out that too much mystery and confusion have been associated with the art of studying. This confusion frequently crosses over the line to the ridiculous.

This doesn't mean there aren't other good books on the subject of studying.

If you've read other books on how to study more effectively, you may have come across a very well-known and classic study method called the "SQR3" approach.

SQR3 stands for, "Survey, Question, Read, Recite, Review." It's a very good study method recommended by many educational experts. I won't go into it in detail here. Suffice it to say that I find even this method a bit too cumbersome and feel it can be streamlined even further, which is exactly why I recommend the PRO-SUM method.

The PRO-SUM method cuts through the mystery and complexity associated with studying and gives you a simple, effective way to approach your printed educational materials.

It's a method that can be learned literally in a few minutes, though it will take some practice for you to be comfortable with it. It removes the uncertainty about how to study your various courses and provides you with a way to accurately estimate your study time so you can better plan your free time.

In short, it's a method to maximize your study efforts and minimize the time spent, while still assuring you will cover and learn all the material.

Now, let's learn the PRO-SUM Method!

CHAPTER 2

THE PRO-SUM METHOD

“Experience is the hardest kind of teacher. It gives you the test first and the lesson afterward.”

- Old Teacher's proverb

The "Progressive Summarization", or PRO-SUM, method is just what the name suggests. It's a structured method to progressively read, review, and summarize your textbook material.

Make no mistake about it; *you do have to actually read all of your textbooks!* Skimming will not get you by.

In college, where essay exams are common, you must have a comprehensive understanding of the material to effectively tie concepts together.

For a full-time student, who may have several classes and textbooks each quarter, trying to maintain a level of comprehension with all of them sufficient to perform well on exams is a daunting task, to say the least.

So, the challenge here is to somehow condense a tremendous amount of material into a manageable amount, which can then be mastered.

This is exactly what PRO-SUM is designed to accomplish.

Even if you consider yourself to be an excellent reader, an important point to emphasize is you do not read textbooks the same way you read novels. You merely read novels but you have to both read and study textbooks.

Not understanding or acknowledging this difference is one of the primary reasons why so many people don't retain much of what they study.

Later on, each step of PRO-SUM will be explained in detail so you'll know exactly what to do and how much time it will take to do it.

For now, let's take a look at an outline of the various steps of PRO-SUM.

THE FIVE STEPS OF PRO-SUM

1. Summarize your material as you read with a highlighter pen.
2. Summarize your highlighted material with written notes.
3. Summarize your written notes with a highlighter pen.
4. Summarize your highlighted written notes by marking them with a red pen.
5. Summarize what you marked with a red pen on three or four sheets per textbook.

Don't be concerned that these steps appear somewhat confusing – they aren't. As soon as you see the first example, you'll be surprised at how clear and simple the process is in practice.

You can see that the PRO-SUM technique relies heavily on highlighting and taking notes on what you have read. The reason for this is that the physical act of highlighting and writing focuses your attention on what it is you're reading.

This is much more effective than merely reading and thinking about it.

When your attention is directed at deciding what is important about your material and what should be highlighted, you're forced to concentrate on what you are reading. As you go through the process of sorting through your material, you'll greatly increase your retention, as well as condense the information for later review.

You won't have to go back again before the exam to decide what is important because you'll have already summarized all of the important points. You can thus concentrate on mastering your summarized material.

As shown, PRO-SUM is a five-step process, with each step building on the preceding steps. At first, it may appear you're duplicating effort by going through the material several times. But remember, each time you'll be condensing the material more and more.

By the end of step five, you'll have a tightly summarized set of notes that can be easily reviewed. All through the process you will have constantly reinforced the major points, as well as reviewed the other material as a framework. You'll truly know the information and will be able to confidently take any exam.

After you've used the method a few times, you'll find the amount of time it takes is actually no more than you are probably spending now (assuming you are actually reading and studying all of your textbooks!). In fact, once you're comfortable with the method, you'll spend *less* time studying.

This is because you will already know how you will study and can concentrate solely on what you study.

Later in this book, you'll see objective, statistical proof that PRO-SUM takes less time than what many educational experts advise is the optimum amount of study time.

Wouldn't it be ridiculous if you had to reinvent the can opener every time you wanted to open a can? But that's exactly what you've been doing with your studying if you haven't been consistently using a method. You're spending far too much time trying to decide the best way to study for a particular class – time that could be spent on actually doing the studying!

For the balance of the book, we'll concentrate on a detailed description of each of the five steps of PRO-SUM.

CHAPTER 3

PRO-SUM STEP ONE

SUMMARIZE READING WITH A HIGHLIGHTER PEN

"Enthusiasm without knowledge is like running in the dark."
- Disraeli

WHY HIGHLIGHT?

I became acquainted with the concept of highlighting while I was browsing through the used textbook section in the college bookstore one day when I was a freshman.

I noticed that a certain number of the books were pretty well marked up with notes, underlining, or highlighting. This was certainly not an unusual sight, as I frequently saw other students marking their books in this manner.

I just hadn't previously given it much thought, as I always simply read textbooks like I read novels – quickly and without making notes of any kind.

This was a habit pretty well entrenched from high school, where you don't buy the books and consequently are discouraged from marking in them.

Seeing so many different books marked up, I began thinking there must be something to making notes or underlining material since it seemed to be so common.

After researching this, I found that the majority of students who consistently received high grades did indeed underline or make some sort of notes in their textbooks. After trying the various ways to note the important material in my texts, I found that highlighting was by far the fastest and easiest method.

The downside of highlighting, of course, is the book's value may be lower when it comes time to sell it as a used book. However, the difference usually isn't great and it's a small price to pay for the higher grades you'll receive.

If you aren't already acquainted with highlighter pens available in virtually any store, now is the time to do so. They're available in a variety of colors, with yellow being the most popular.

Unless you have a near-perfect memory, you've probably found that one of the biggest problems in reading textbooks is trying to remember when you reach the end of the book what you read at the beginning. By the time you get to page 400, what you read on page one a few weeks ago can be a dim memory.

Unless you want to reread the early chapters again, you must develop a way to summarize the key points for your later review.

The easiest way to do this without totally disrupting the pace of your reading is by using a highlighter pen. With a quick stroke, you can highlight one or more words with little disruption to your concentration.

This is easier than underlining with an ink pen or pencil and makes the material stand out much better.

This first step of condensing your material as you read is the most important one. It's your first cut through the information and is the basis for all further summarizations. You need to become familiar and comfortable with this step.

What you should attempt to do is highlight the information that you feel makes important points or requires memorization. This is more an art than a science, but after you have done it a few times you'll develop a feel for separating true information and facts from mere wordage.

How much should you be highlighting? Based on years of experience and having personally read and highlighted well over a hundred textbooks, my recommendation is that you should be highlighting approximately twenty to twenty-five percent of what you read.

This percentage may be a bit higher or a bit lower, depending on how technical the subject is, but twenty to twenty-five percent is a good ballpark figure.

For example, a book on economics may only require fifteen to twenty percent highlighting to condense the majority of the important facts and concepts. A more technical subject, such as mathematics, for example, may require thirty or even forty percent highlighting.

The important thing is to highlight a sufficient amount to trigger your memory when it comes time to review the material. With a little practice – and after a test or two – you'll quickly develop a feel for what is right for you.

[GUIDELINES FOR HIGHLIGHTING](#)

Here are a few guidelines that will help you:

1. Always highlight sub-headings in each chapter. This will make your later review flow more easily. It's best to scan each chapter first and highlight the sub-headings at that time. This will give you an overall feel for the scope of the material being presented. Then, as you read you can highlight important points under each sub-heading.
2. Be sure to look for and pay attention to summaries at the end of each section or chapter. Frequently, the author will summarize the major points every few pages with a paragraph or two. This is the author's way of "highlighting." These are ideal to trigger your memory later, so be sure to highlight them.
3. You don't have to highlight entire paragraphs or sentences. Single words or fragments of sentences are often enough to jog your memory later.
4. If in doubt as to whether or not to highlight a particular passage, don't waste valuable time agonizing over the decision. Go ahead and highlight it. You'll probably highlight too much at first, but when you go back later to review it, you'll quickly develop a feel for what did not need to be highlighted. After a few times, your highlighting will be tight and concise.
5. As easy as highlighting is, a few people find it simply too distracting to do as they read. If you find that you are one of these people, I recommend that you go back and highlight as soon as you have finished reading for that study session, or when you reach the end of a chapter, whichever comes first. If you do it then, while the material is fresh in your mind, it shouldn't take much longer than highlighting as you read. But a caution here:

be certain to go back and highlight immediately. Don't wait until later or the next day. Otherwise, your highlighting will be fragmented and not as effective. Plus, you'll fall behind, which defeats the whole purpose of using a study method.

I've spent a lot of time describing what seems to be an absurdly simple thing to do and there's a reason for this: this first step is the cornerstone of all subsequent steps.

If your highlighting is inadequate, all your later studying will be inadequate.

Please don't scrimp on learning and practicing how to effectively highlight as you read. It determines the effectiveness of all your subsequent studying efforts.

It helps to have an example of what effective highlighting looks like. Here is a sample of about five pages from a fairly technical textbook on the subject of insurance Contract Bond Coverages.

Since the material is fairly complex, approximately 30% is highlighted. You would, of course, adjust this up or down once you get a feel for what you are comfortable highlighting.

In subsequent chapters, this highlighted material will be built upon to demonstrate the subsequent steps in the PRO-SUM method.

STEP ONE EXAMPLE: HIGHLIGHTING TEXTBOOK MATERIAL

CONTRACT BOND COVERAGES

(Reprinted with permission of SAFECO Companies)

Every contract bond has three elements:

- the bond
- the underlying agreement or contract
- the law

By itself, a bond is basically incomplete because it is the contract which offers indemnity for nonperformance of the contract. The third element, the law, often stipulates the coverage provided by the bond. On the other hand, the bond and the contract may incorporate the law by specifying coverages that are spelled out in the statutes. So, it's apparent that a threefold inquiry is necessary to determine the risks and the extent of the obligations assumed under contract bonds.

A complete study is not possible here because no two contract bonds, to different owners (obligees), are exactly alike. There is a wide variety both in laws and in the working of contract documents. So, we'll limit this discussion to typical risks which surety companies and contractors are frequently asked to assume. Certain of these risks are fair and equitable, while others are not. Unfortunately, contracts are frequently one-sided instruments drafted by and for the exclusive protection of the owner and the architect/engineer, or for the general contractor, in the case of subcontract, and subcontract bond forms.

Contractors (principals) are generally optimistic people by nature. Too often they do not give enough consideration to the "fine print" in the nontechnical portions of the specifications. This is why the professional agent, as well as the surety underwriter, must take a serious interest in the documents.

Both must be sure:

1. that the contractor is not unknowingly assuming obligations which expose the construction company to unanticipated financial risk;

2. that the surety is not assuming a risk not contemplated in suretyship theory; and
3. that, in the event of the contractor's default, the terms and conditions under which the surety must perform are fair and equitable.

Every contract bond specialist must have a working knowledge of the law and must be familiar with contract documents and bond forms to effectively analyze these risks.

TYPES OF BONDS

The most common types of bonds used in conjunction with construction contracts can be classified according to their purpose. They include:

- Bid Bonds
- Performance Bonds
- Payment Bonds
- Combination Performance and Payment bonds
- Maintenance Bonds

The parties to a contract bond are the surety, the contractor, and the "owner" (the party for whom the work is performed).

BID BONDS

By law, contracts for public work are generally awarded to the lowest responsible bidder. Competitive bids are solicited by means of an advertisement call an "Invitation to Bid." As a rule, each bidder is required to submit with the bid either a certified check or a bid bond from a qualified surety for a fixed percentage of a bid price.

A contractor must meet certain prequalification standards set by the surety company before the account can be considered for bid and performance bond credit. Once a contractor has qualified for credit, requests for bid bonds are considered on the basis of the merits of each contract.

A bid bond provides that if the contract is awarded, a contractor will, within a specified time after the aware, sign the construction contract and provide the owner with a bond guaranteeing performance of the contract. The penalty for

failure to do these things is the total amount of the bid bond or the difference in contract price submitted by the contractor and the second lowest responsible bidder, whichever is smaller.

Generally, a surety will not issue a bid bond if it is unwilling to provide the required performance bond should the contractor be awarded the contract. In practice this means that the underwriting process begins when a bid bond request is received and is concluded when either the bid bond is provided to the contractor or the request is declined.

You can see that the timing of the steps of the underwriting process makes the use of a certified check in lieu of a bid bond a hazardous alternative for the contractor unless the performance bond on the specific contract has been underwritten and approved.

On public contracts, both the amount and the form of bid security will be specified by law or regulations. On private work they will be specified by the owner.

Sales Point: Where either a certified check or a bid bond is an acceptable form of security, it is to the contractor's advantage to use the bid bond. Otherwise, money is tied up in outstanding bids. The premium charge to the contractor, however, is nominal for bid bonds.

Now let's examine some typical bid bonds. Copies of all forms referred to in this course are included in the Forms Kit section at the back of this course. Forms are provided so you can study them as you complete this course and use them as reference later.

Bid Bond Form S-53 describes the contractor's obligation in a clear-cut fashion:

"If the said contract be timely awarded to the principal and the principal shall, within such time as may be specified, enter into the contract in writing, and give bond, if bond is required, with surety acceptable to the obligee for the faithful performance of the said contract, then this obligation shall be void, otherwise to remain in full force and effect."

No attempt is made to describe the exact method in which damages will be measured or how the obligee will be compensated. The other contract documents, and to an even greater extent, the laws, make this determination. The "usual" measure of damages is the difference between the principal's bid and the next higher bid.

Another common bid bond is the A-310 (S-54) used by the American Institute of Architects. It describes the type of bond the principal must furnish if awarded the contract. This form stipulates faithful performance and prompt payment of labor and materials. It also specifies the method of determining damages by requiring payment “of the difference between the amount of the contractor’s bid and such larger amount for which the obligee may in good faith contract with another party.”

A third type of bid bond referred to as Standard Form 24 (S-1815) is used in connection with all U.S. Government contracts. It provides for damages of “the cost of procuring the work which exceeds the amount of the contractor’s bid.” The bond form also specifies the time allowed the principal for compliance and incorporates an advance consent by the surety to any extension of time for acceptance of the bid, which the principal and the government may negotiate, provided the total acceptance period does not exceed 60 days.

Each of these forms, while designed to provide the same type of indemnity, has slightly different terms and conditions. It’s a fact that when these documents reach the courts the results are frequently interpretations that differ materially from general existing law.

PERFORMANCE BONDS

A performance bond indemnifies the owner (obligee) against loss if the contractor (principal) fails to perform the obligation as outlined in the construction agreement or contract. The obvious question to be asked is: What constitutes performance? In some instances, it is performing the work under contract according to the plans and specifications. On other occasions, the principal may be obligated to “promptly and faithfully perform the contract” or to “faithfully perform all of the undertakings, terms, conditions, and agreements of the contract.” Although each of these phrases includes the actual construction work, there is a substantial difference between simple performance of the work under contract and performance of each and every one of the conditions of the contract, many of which are not even remotely concerned with workmanship.

The meaning of this broad form contract language is clear. The obligation of the contractor and the surety extends to performance of all contractual commitments with the bond so states. For example, they could be held liable for warranty provisions in a contract, for failure to provide the required insurance coverages for indemnification, or for completion of the actual construction work. Therefore, a broad form of bond requires careful

determination and evaluation of the risks hidden in the agreement. Only a fair and equitable construction contract should receive consideration for surety credit. If the contract is equitable, the performance bond can be a clean, simple legal instrument which:

1. identifies the parties;
2. describes and incorporates (by reference) the underlying contract;
3. states the amount of protection; and
4. provided indemnity for the obligee in the event of the principal's nonperformance.

Where the contract is unfair and amendments cannot be negotiated, the surety can sometimes tailor-make the bond form to provide more limited coverage. Since this does not help the contractor solve the problem, surety underwriters are reluctant to amend bond forms under these circumstances.

Under no circumstances should a performance bond

1. protect people who are not parties to the underlying agreement or contract;
2. provide protection not called for by normal business practices
3. impose obligations on the contractor or the surety which are not cited in the underlying agreement with the owner;
4. require the surety to waive its established rights; or
5. absolutely guarantee completion of a project. (completion can become impossible due to circumstances beyond the control of the contracting parties, in which case a money settlement is negotiated in lieu of completion of the work)

It isn't necessary to insert lengthy clauses in a bond form covering all contingencies which are adequately covered by law or made a part of the other contract documents.

Some of the most widely used performance bond forms are A.I.A Document A-311 (S-1219), A-312 (S-1852) and U.S. Standard Form 25 (S-1816). They provide reasonably equitable coverages and contain language by which the surety specifically waives its right to notice of changes in the underlying

contract. The intent of this language is to prevent invalidation of the bond for failure to obtain the consent of surety for routine changes in the construction contract. Sureties have long been able to live with such language if they are dealing with an obligee like the federal government, which continues to require consent of surety on routine contract changes regardless of the wording of the bond form. However, a broad waiver of a surety's right to consent to changes in the underlying contract is viewed with concern when the bond runs in favor of an obligee with a reputation for unscrupulous or unethical practices. Unfortunately, such language has become so commonly tolerated by the surety industry that it is now just one more risk to be underwritten.

The A.I.A. form also spells out the surety's alternatives in the event of a principal's default. They are:

1. remedy the default;
2. step in and complete the contract in accordance with its terms and conditions; or
3. arrange for the owner to relet contract, paying for the extra cost incurred.

This is acceptable because it preserves the surety's freedom of choice in solving a problem. In contrast, provisions which require "specific performance" of a contract regardless of circumstances are unacceptable to sureties.

Some general contractors specify bond forms that call for "specific performance" by their subcontractors. Agents and underwriters need to be on the alert for these potentially very dangerous forms. A sample of an equitable form for both general contractors and their sub-contractors is S-1843.

The clause in the A.I.A. form which limits the period for filing lawsuits to two years is most desirable, particularly in jurisdictions having statutes of limitations of longer duration.

CHAPTER 4

STEP TWO

SUMMARIZE HIGHLIGHTING WITH WRITTEN NOTES

"Everybody is ignorant, only on different subjects."
- Will Rogers

After you've read and highlighted your textbook, the next step is to read what you highlighted and summarize that with handwritten notes.

Ideally, you should use a spiral-bound notebook containing at least fifty pages of lined paper. Use one notebook for each textbook. This way, your papers won't get lost and it will be much easier to review them later.

Although I use a personal computer every day and am very familiar and comfortable with it, I still prefer to summarize my highlighted textbook material by hand with pen and paper.

The reason I prefer handwriting over the PC is that I'm able to work on it anywhere at any time, and I simply find it easier to use abbreviations and incomplete sentences on paper. Also, the subsequent steps of PRO-SUM are easier to do if your notes are on paper, as you will see.

However, if you prefer to summarize your highlighted notes on a computer, I recommend you use a laptop PC rather than a desktop. A laptop is more practical because you can take it with you to most places to study, even doing last-minute reviews in the classroom before an exam.

WHY SUMMARIZE YOUR HIGHLIGHTING?

This second step of summarizing your highlighted material by taking notes on it condenses the information even further. Just as important, it puts the material in your words, which will greatly increase your understanding and retention.

Try to avoid simply copying the words from the textbook verbatim. That requires very little thinking. By interpreting and

summarizing the highlighted material in your own words, you increase your concentration and reinforce your comprehension. Once again, you should take notes only on important points and material that must be memorized.

There's a difference between summarizing in this step and the summarizing you originally did with your highlighter. This time, you should only take notes on the highlighted material that you have not retained from your first reading.

Don't make notes on highlighted material you still remember and are comfortable with from your initial reading. You've already successfully absorbed that information and can now concentrate your efforts on material you have not retained.

This second pass through the material will once again reinforce what you've already read. It will also point out areas with which you are still uncomfortable and produce an even tighter summarization of the material.

HOW MANY NOTES SHOULD YOU TAKE?

Here too, there is no one right answer. It will vary somewhat depending on how much you have highlighted.

If you're highlighting about twenty-five percent of what you read, my experience indicates you'll have about six to eight one-sided pages of handwritten notes for an average textbook chapter of 30 - 40 pages.

This is based on an average of about 125 - 150 handwritten words per page, depending on how much white space you leave, how many titles you use, etc.

I tend to leave lots of white space and use titles liberally to make my notes easier to highlight and circle later on. If you write much smaller or larger than this, adjust the number of pages accordingly. If you use a computer, this equals about four or five pages of double-spaced 12-point type.

At first, this may seem like a lot of writing, especially if you're taking several classes at once. But consider the alternative: to somehow try to keep a running summary of each of your textbooks in your head! That is an extremely difficult task for most people and is probably the single biggest reason for exam anxiety and last-minute, ineffective cramming (I'll explain later how to effectively cram).

The mental act of translating the concepts into your own words, along with the physical act of writing, combine to make a powerful reinforcement tool.

Since no one learns shorthand in this day and age, here are some suggestions for abbreviating words. You'll find that just using these shortened versions of common words will speed up your writing and make note-taking easier. They aren't hard to learn and cover many commonly used words in textbooks.

<u>WHEN YOU MEAN</u>	<u>WRITE IT LIKE THIS</u>
Account	Acct
Accumulate	accum
And	+ (do not use the more common "&" sign – it takes longer to write)
Can be	c/b
Decrease	Decr
Difference	Diff
Distribution	Dist
Dollar	\$
Equipment	Equip
For example	e.g.
Government	Gov
Greater than	>
In care of	C/o
Included	incl
Increase	incr
Information	Info
Inside	I/s
Less than	<
Management	mgt
Manufacturer	mfr
Maximum	max
Minimum	min
Month	mo
Must be	M/b
Number	#
Original or originally	Orig
Outside	O/s
Payment	pmt
Should be	S/b
Such as	i.e.
Together	T/g
Will be	W/b

With	W/
Without	W/o
Year	Yr

The best time to write your notes is as you finish reading and highlighting each chapter. The material you haven't highlighted is still fresh in your mind and your written notes will be much more tightly organized as a result.

An added benefit is you'll manage your study workload much better when you don't have to go back and take notes on ten or fifteen chapters a couple of weeks before an exam.

One of the goals of this step is to eliminate having to refer to the text again. Done properly, your notes will include only the material you haven't already retained.

Once you have it in writing, you'll be using your notes for all your subsequent studying. This means you shouldn't shortchange this step. Make an honest attempt to recap all the facts and concepts with which you're still uncomfortable.

There are some exceptions to the statement that you shouldn't have to refer to your textbook again. If the textbook contains very lengthy charts or complicated diagrams, you may want to simply mark that page with a paperclip rather than trying to duplicate it in writing. The paperclips will help you quickly locate these pages during your final review of the material.

Of course, if you're taking notes on your PC and have a scanner, you can simply scan this material into your PC and combine it with your computer notes for a high-tech solution.

There's one more advantage to summarizing your material in writing: it provides you with a reference guide for the future.

If you ever need to refresh yourself with that particular subject, you will already have a condensed version to review, rather than having to work your way through several hundred pages of text again. This is especially helpful when taking subjects in your major, several of which may build upon knowledge gained in previous courses.

One final suggestion: when writing your notes: if you use pen and paper, it's best to write in ink rather than pencil. A ballpoint pen is the best. Try to avoid felt tip pens because highlighter

markers smear over both pencil and felt tip pens. You won't have this problem with ballpoint ink.

The following example shows what the handwritten notes look like for the five pages of text highlighted in the previous chapter.

STEP TWO EXAMPLE: WRITTEN NOTES

Contract bond elements: the bond, underlying contract, law.

Types of Bonds

- Bid
- Performance
- Pmt
- Combo performance/pmt
- Maintenance

Bid Bonds

- Substitutes for certified check. Avoids tying up \$. Guarantees contractor will sign contract & provide performance bond. Damages for default are diff between that bid & next highest. Common bonds are S-53, A- 310, & Standard Form 24 (gov contracts).

Performance Bonds

- Pays owner if contractor defaults. ID's parties, describes contract, \$ of protection, describes reimbursement.
- Bonds should not:
 1. Protect people not part of contract
 2. Include things not normal
 3. Include things not in contract
 4. Waive rights

5. Guarantee project completion

- Common bonds are A-311 & Standard Form 25.
- Surety choices when contractor defaults: (1) Fix default (2) Complete contract (3) Pay extra cost of new contract

CHAPTER 5

STEP THREE

SUMMARIZE WRITTEN NOTES WITH A HIGHLIGHTER PEN

"The harder I work, the luckier I get."
- Sam Goldwyn

Now that you've condensed your material twice, you'll find that when you read your handwritten (or computer-written) notes, you've retained much of the material from which you took those notes.

It now becomes necessary to only summarize that material you still may not have totally absorbed. Remember, your ultimate goal is to end up with a very highly condensed set of notes that can be easily reviewed.

The way to summarize your written notes is to once again use your trusty highlighter. Read your notes the same as you did the original textbook material, highlighting only the facts and concepts you still haven't retained or fully understood.

This is where it becomes awkward if you're using a computer. Yes, all word processing programs can highlight the words in your document, but you must use a special command each time and it will take longer than if you simply swipe your highlighter across your handwritten notes.

However, I do know people who are proficient enough on their PC that they can highlight almost as quickly as by hand. In any event, the time difference will not be great and this is for the most part a matter of personal preference.

HOW MUCH OF YOUR NOTES SHOULD YOU HIGHLIGHT?

If you're like most people who use this method, you'll find you need to highlight a larger percentage of your notes than you did when highlighting the textbook. The reason for this is that a textbook contains a lot of description and excess wordage to flow smoothly and present a complete picture.

Your notes, on the other hand, will be tightly condensed and packed with relevant information.

While the amount of notes that you'll need to highlight will be somewhat dependent on your memory and your grasp of the material, I find that 40-50% is the average.

Don't be alarmed by this because, just like in step one, the art of focusing on the material and deciding what to highlight will reinforce the concepts and increase the amount of information you've mastered.

The following example shows what the handwritten notes from the previous chapter look like when highlighted. The amount highlighted is about 45%, which is typical for material of this degree of complexity.

STEP THREE EXAMPLE: HIGHLIGHTED WRITTEN NOTES

Contract bond elements: the bond, underlying contract, law.

Types of Bonds

- Bid
- Performance
- Pmt
- Combo performance/pmt
- Maintenance

Bid Bonds

- Substitutes for certified check. Avoids tying up \$.
- Guarantees contractor will sign contract & provide performance bond. Damages for default are diff between that bid & next highest. Common bonds are S-53, A-310, & Standard Form 24 (gov contracts).

Performance Bonds

- Pays owner if contractor defaults. ID's parties, describes contract, \$ of protection, describes reimbursement.

- Bonds should not:

1. Protect people not part of contract
2. Include things not normal
3. Include things not in contract
4. Waive rights

5. Guarantee project completion
- Common bonds are A-311 & Standard Form 25.
- Surety choices when contractor defaults: (1) Fix default (2) Complete contract (3) Pay extra cost of new contract

CHAPTER 6

STEP FOUR

SUMMARIZE HIGHLIGHTING WITH A RED PEN

"There are no shortcuts to anyplace worth going."
- Beverly Sills

You should be able to perform step four very rapidly. What you'll now do is read only the highlighted portion of your handwritten notes.

As you read the highlighted portions, summarize those with a red ink pen or pencil by either underlining or circling the words and phrases you want to retain. Personally, I find circling easier and faster, especially when circling entire paragraphs.

At this point, after your three prior summarizations, you should have a very good grasp of most of your material. General ideas and concepts will be pretty well entrenched in your mind and the main things you will summarize with your red pen are facts, figures, lists of information, and anything that must be absolutely committed to memory.

For example:

1. If the subject is math, you'll probably circle formulas and theories with your red pen.
2. If the subject is accounting, you'll probably circle ratios, what is a debit, what is a credit, etc.
3. If the subject is law, you'll probably circle significant cases, points of law, bill numbers, etc.
4. If the subject is geography, you may circle key geographical names, populations, wealth, and natural resources.
5. If the subject is history, you may circle key dates, places, and

names.

You should be very choosy about what you circle in red. It should be the cream of the cream; the most important facts in all your material. Think of it in terms of what you would ask on an exam if you wrote it.

Here too, it is difficult to say exactly how much you should underline in red. It greatly depends on the complexity of the material and how much you've already retained. However, as another general guideline, I find that 25-40% of your highlighted, handwritten notes is a reasonable target.

It's important to identify the most important facts because this will be the basis for your final review, as will be explained in the next – and final – step.

The following example shows what the circled material looks like for the highlighted written notes from the previous example.

STEP FOUR EXAMPLE: SUMMARIZED (CIRCLED) HIGHLIGHTED WRITTEN NOTES

Contract bond elements: the bond, underlying contract, law.

Types of Bonds

- Bid
- Performance
- Pmt
- Combo performance/pmt
- Maintenance

Bid Bonds

- Substitutes for certified check. Avoids tying up \$. Guarantees contractor will sign contract & provide performance bond. Damages for default are diff between that bid & next highest. Common bonds are & S-53, A-310, Standard Form 24 (gov contracts).

Performance Bonds

[Redacted]

- Pays owner if contractor defaults. ID's parties, describes contract, \$ of protection, describes reimbursement.
- Bonds should not:
 1. Protect people not part of contract
 2. Include things not normal
 3. Include things not in contract
 4. Waive rights
 5. Guarantee project completion
- Common bonds are. **A-311 & Standard Form 25**
- Surety choices when contractor defaults: (1) Fix default (2) Complete contract (3) Pay extra cost of new contract

CHAPTER 7

STEP FIVE

SUMMARIZE RED HIGHLIGHTING WITH WRITTEN NOTES

"Great works are performed not by strength, but by perseverance."
- Samuel Johnson

This final step is not for everyone. It's expressly designed for final, last-minute reviewing (okay, let's be honest and call it what it really is: cramming!).

HOW TO CRAM EFFECTIVELY

Many people will find their red underlining gives a tight enough summarization to be used as both a final review and a last minute review.

Others, like myself, find it helpful to have a few pages of facts, figures, and other data to memorize and review the night before – or a few hours before – an exam.

Since you cannot possibly review an entire course's worth of material in the final hours before an exam, you may find the best use of your time is reviewing material that you feel you absolutely, without a doubt must know.

What you do in this final step is read-only your red, circled material and write down facts, figures, concepts, formulas, etc., which appear so obviously important that you feel they have a high probability of being asked on the exam.

You'll likely find most of it has already been memorized and you are comfortable with it, yet there are a few items you're not entirely certain you have down pat. These should be the items you write down.

You should have no more than three to four pages per textbook.

Remember, the goal here is not to summarize each chapter, but to summarize the entire textbook. Only that material you feel positive will be on the exam and which you have not yet mastered should be included.

For example:

1. A math textbook may have twenty formulas you've underlined in red on your handwritten notes. You've memorized and are comfortable with seventeen of them, but find yourself still referring to your notes on the other three. These three should go on your handwritten final review notes (step 5).
2. A management textbook explains six major functions of management. During the review of your red underlining, you can consistently name only five. Worse yet, the one you keep forgetting seems to be different each time. Write all six down on your final review notes.

You can see that the purpose is to commit to writing the material with which you are still uneasy. Reviewing these notes is an excellent use of the last two or three hours before an exam.

This is a wonderful anxiety-reducing tool.

STEP FIVE EXAMPLE: SUMMARIZING RED HIGHLIGHTING WITH WRITTEN NOTES

- Bond Types: Bid, perf, pmt, combo perf/pmt, maintenance
- Bid bonds: S-53, A-310, Form 24 (gov)
- Perf. Bonds: Form 25-A (gov), A-311 (private)

CONCLUSION

I hope you're now convinced that if you faithfully use the PRO-SUM method you will truly master your material.

One of the biggest advantages of PRO-SUM is that, unlike other study methods, it can be used with virtually any kind of textbook, regardless of the subject. From the simplest to the most complex, it works equally well. Now you'll have a consistent way to study for any class.

While the five steps may appear to be overly time-consuming, you'll find in practice that they come very naturally after a few times.

The next chapter will show you that PRO-SUM takes no more time than conventional study methods. You'll find out for yourself that the more you use it, the more effective and easier it is to use.

CHAPTER 8

PUTTING IT ALL TOGETHER

“Things should be made as simple as possible, but not simpler.”
- Albert Einstein

HOW TO FIGURE STUDY TIME NEEDED

I made a statement earlier that while this method may look to be overly time-consuming to use, it isn't. It's now time to back that statement up.

Conventional college advice from many experts says you should plan to spend two hours outside the classroom studying for every hour of classroom lecture time. We'll now take a look at exactly how much study time you can expect when using the PRO-SUM method and how it compares to this traditional standard.

Once again I'll use my experience as an example. I do so because I read and study at what would probably be called an average speed. I am a bit slower than other good students I have known over the years, so my figures will be somewhat conservative.

After having read and studied over a hundred textbooks during my academic career, on a wide variety of subjects from the general to

the very complex, I've discovered an interesting fact: my initial reading time for a textbook (step one), as well as the time it takes me to re-read what I have highlighted and take notes (step two), is fairly consistent.

It usually takes me two to three minutes to read a page of text and highlight, and about two to two and a half minutes to re-read my highlighting and take notes. While my initial reading varies somewhat based on the complexity of the material, my re-reading of the highlighted material is very consistent, regardless of the subject matter.

Using the mid-point of these two figures – two and one-half minutes for initial reading and highlighting and two and one-quarter minutes for taking notes on the highlighted material – you can easily estimate your study time based on the number of pages of textbook involved.

For example, assume the average number of textbook pages for a course is 500 and the course period is ten weeks. Assuming the last week will be spent reviewing for the exam, that leaves nine weeks in which to read and recap the material. Here is how you would calculate the amount of study time per week you will need:

1. 500 pages X 2.5 minutes per page = 1250 minutes (for step one of PRO-SUM)
2. 500 pages X 2.25 minutes per page = 1125 minutes (step two)
3. 1250 + 1125 = 2375 total minutes
4. 2375 minutes divided by 60 = 40 hours
5. 40 hours divided by nine weeks = 4.5 hours per week

Only the time for PRO-SUM steps one and two are shown above because steps three, four, and five are review steps that should be done during the last week before an exam.

For planning purposes during that last week, I allowed two minutes for each page of handwritten notes, to read and highlight (step three) and one minute per page to circle the highlighted notes in red ink (step four).

The average three-credit (for semesters) or five-credit (for quarters) college course is three hours of lecture per week, or six hours outside study using conventional advice. The PRO-SUM method results in an average of 4.5 hours per week – a very favorable comparison.

Of course, higher credit classes will likely have more textbook reading and a correspondingly larger amount of studying per week, but this would be true no matter what method of studying you use.

The beauty of the PRO-SUM method is that now you'll have a way to accurately estimate how much time outside of class you should spend studying. This will help you avoid ending up with too much studying to do two weeks before the final exam.

If you're going to stay up late, do it for recreation, not studying!

It doesn't take too much effort to plan your study time at the beginning of the course. Determining how many hours per day/week and scheduling those hours in advance will greatly help you plan your time and take away the guesswork. It will soon become routine and you won't have to think about how and when you will study.

It will likely take you a week or so of timing yourself to see how close you fit into the average times I've given. You should time yourself for how long it takes you to read twenty or thirty pages of each of your textbooks.

Knowing this, you can adjust the two-and-a-half-minute average I used to read and highlight a page. I believe you'll find that your average is fairly close to this figure. If not, simply adjust the figure to your actual time.

Once you've estimated your average time, simply multiply that number times the number of pages of the textbook and complete the formula as given. If your course term is different than the example, simply substitute whatever the length is.

HOW TO PLAN STUDY TIME

We'll now look at a practical example to see exactly how you can plan your time. Assume you're a sophomore, a full-time student and you're carrying the following full load of classes:

Course	# Units	Lecture Hours per Week
Math	5	5
Economics	4	4
Literature	4	3
Geography	3	3
TOTAL	15	15

You've purchased your textbooks and have calculated your study time as follows:

Course	# of Text Pages	Est. Total Study Time	Est. Study Time Per Week
Math	700	55 hours	6
Economics	600	48	5.5
Literature	450	36	4
Geography	500	40	4.5
TOTAL	2250	179	20

In actual practice, the estimated total study time hours for each class may not work out exactly as shown. Some may be more and some less, but the total should be close and this is what's important because it tells you how much time per week you should be studying.

If you only want to study during the week and have your weekends free, the total of twenty hours per week works out to be four hours per day. My personal preference has always been to put the hours of study in during the week, but this is of course up to you.

However, regardless of how you choose to spread the twenty hours per week, I highly recommend you study during the same times each week. This gives you a consistent routine and ensures you will keep up with each course. It also means you'll know when you'll be studying and when you'll have free time.

You'll be surprised at how much free time you have when you stick to a well-organized routine.

HOW TO SCHEDULE YOUR CLASSES

Here is an example of how you might set up a schedule for the four classes, assuming your class times are as follows:

Course	Days	Time
Math	M, T, W, Th, F	8:00 – 9:00
Econ	T, Th	11:00 – 1:00
Lit	M, W, F	10:30 – 11:30
Geog	M, W, F	2:00 – 3:00

Here is how your week could be spread out: (the times shown in brackets indicate planned study times)

Mon	Tue	Wed	Thurs	Fri
8:00–9:00	8:00-9:00	8:00-9:00	8:00-9:00	8:00-9:00
[9:00-10:30]	[9:00-11:00]	[9:00-10:00]	[9:00-11:00]	[9:00-10:00]
10:30-11:30	11:00-1:00	10:30-11:30	11:00-1:00	10:30-11:30
[11:30-1:00]	Lunch	[11:30-1:00]	Lunch	[11:30-1:00]
Lunch	[2:00-4:00]	Lunch	[2:00-4:00]	Lunch
2:00-3:00		2:00-3:00		2:00-3:00
[3:00-4:30]		[3:00-4:30]		[3:00-4:30]

Note that this schedule spreads out your classes each day so that you'll have time to study on campus. My experience is that it is much easier to do most of your studying in the library while you are between classes. It is simply too easy to lose your motivation once you get home or to your dorm room.

Even the above schedule plans for some studying after all your classes are done each day, but it's only for eight of the twenty total hours of study time.

This schedule plans for your study time at home to be right after the last class every day. However, some students prefer to

put the hour or two each day in at home later in the evening. An alternative is to put those eight hours in on the weekend.

I prefer an intense five days during the week and have weekends free, but this is, of course, a matter of personal preference, part-time jobs, social activities, etc.

Like any schedule, this one should not be slavishly adhered to one hundred percent of the time, regardless of other circumstances. There are times when you simply have something else to do during the week or just want a day off.

That is perfectly okay.

The point here is to be able to intelligently estimate how much time on average you should spend studying each week and then to make sure you do it every week.

If you miss a couple of hours on your schedule here and there, simply make them up at night, the next day, or on the weekend; but make those hours up!

Don't permit yourself to fall a little behind every week or you'll end up staying up late every night in a pressure cooker situation the week before the exam.

Fifteen hours of class per week is only an average of three hours per day. If you're like many students, you'll find yourself tempted to schedule them all together (e.g. 8:00-11:00) to get out early each day, or late (e.g. 3:00-6:00) to be able to sleep in. My

advice to you is to not do this.

Let me relate a personal experience in which I made this mistake and found it nearly impossible to stay on a regular study schedule.

One semester during my sophomore year I scheduled all my classes early so that I was out by either 10:30 or 11:00 each day.

At first, it was wonderful! I was able to go to the beach when it was hot, as well as schedule some extra daytime hours at my part-time job. It seemed like I had lots of free time and I busily started filling it up with various other activities.

The problem was, with no time between classes and going home every day so early, I was faced with having to do all my studying off campus. Of course, with so many other tempting things to do, I rapidly fell behind. As a result, I had to stay up late and cram in the last few weeks before finals.

That was my most difficult semester. From then on, I spread my classes throughout the day and did most of my studying in the library. Unless you have a tremendous amount of willpower, my advice to you is to do the same.

CRAMMING THAT MAKES SENSE: FIND A PARTNER

I promised earlier to explain how to cram effectively.

First, though, I want to dispel that old myth that cramming does not work. Cramming does work, *but only as a tool for reinforcement of previously read material, NOT for first-time learning.*

There is a crucial distinction to be made here.

When the purpose of your cramming is to intensely reinforce material you've already read and reviewed, it's an effective and academically valid way to spend your time.

If you cram to read and try to memorize for the first time just before an exam, you're simply cheating yourself. You may pass the exam – you may even score a good grade – but you'll have learned nothing that will be retained for more than a short period.

With the PRO-SUM method, you'll already have your cramming effectively laid out by completing steps four and/or five. Once you've underlined or circled in red the highlighted parts of your handwritten notes, you have a very tightly compacted, manageable amount of material that you can intensely review the day before the exam.

This is not cramming in the conventional sense of the word but is better defined as a final review of the most important concepts from your textbook studying.

And now, I have one final recommendation to share with you; a recommendation that, if you're able to follow it, will result in the most powerful method for reviewing and retaining your material

that I have ever come across. Quite simply, it involves finding a study partner.

If you're able to find a friend to act as your partner in studying for an exam, and if that friend can also be persuaded to use PRO-SUM (or any other similar method for summarizing material), you can quiz each other as part of your final review.

By this, I mean each of you should ask the other questions from your red underlined/circled material. You'll very likely have much of the same material summarized and this will test your retention of it.

If your partner asks you questions from material you didn't have underlined, so much the better. It will serve as an excellent review of material for which you think you are already familiar. It will also give you a perspective on what someone else feels is important.

Between the two of you, there's quite a high likelihood that much of the actual exam material will be covered.

I was fortunate enough to have a good friend with the same major and many of the same classes as myself. We tried the study partner approach once and found it so effective that we used it in many of the same classes during our last two years of college to quiz each other before exams. My study partner graduated Magna Cum Laude.

This is an extremely powerful way to use the PRO-SUM method and you will truly be amazed at how it will improve your grades.

In the final chapter, a detailed example is given of exactly what the PRO-SUM method looks like when used. It will give you a feel for how the five steps are done, using a chapter from an actual textbook.

CHAPTER 9

Using PRO-SUM in High School

"A single idea, if it is right, saves us an infinity of experiences."
- Jacques Maritain

FOR THE HIGH SCHOOL STUDENT

I believe that one of the major deficiencies in high school curriculums is the almost complete lack of any formal teaching about

how to read and study your textbooks.

Individual teachers may take it upon themselves to give their students basic instruction in study skills, but by and large this important subject is ignored.

While this is less important in high school, with its limited textbook reading and weekly open-book tests, it leaves the students ill-prepared for the intensive reading and infrequent exams that are common in college.

Tests in high school are frequently not cumulative as far as the reading material is concerned. However, cumulative tests are common in college and require a different set of study skills.

Most good students figure this out eventually, but it does make the first year or so of college a hit-or-miss deal as far as effective studying is concerned.

Developing good textbook study skills while in high school will provide an excellent academic head start. A slightly modified version of the PRO-SUM method is an ideal way to get this head start.

[Modifying PRO-SUM for High School Studying](#)

Step One of PRO-SUM, summarizing your reading with a highlighter pen isn't feasible in high school because you don't own the textbooks.

Since you aren't permitted to mark in the textbooks, some modification to step one is necessary. Basically, step one must be modified to allow for the fact that you can't use a highlighting pen in your textbook.

The modification is quite simple. Instead of highlighting the text in the book while you read, you simply make written notes on what you read, *while you are reading*.

What you're essentially doing is "highlighting" the material by writing it out instead of highlighting the text.

This does have an advantage of sorts over highlighting, namely that you can summarize the material as you write it out. With highlighting text, you are stuck with only the words in the text. But when you're writing out your "highlighting" you can shorten sentences, use abbreviations, and generally put the material in your own words.

What you'll end up with is the equivalent of step two in PRO-SUM (summarizing highlighting with written notes). The difference is that these written notes will be quite a bit more than if you were just taking notes on the highlighted text.

This also means that it will take a little longer to produce your written notes. However, since the amount of reading in high school is considerably less than in college, the extra time shouldn't be overwhelming.

It may seem time-consuming at first, but once this first step is done you shouldn't have to refer to your textbook much, if at all, for further studying. You'll already have the important material written out and ready for studying and further condensing.

You'll more than make the time up when it comes to test time because your notes will be condensed and ready for you to study more effectively in far less time.

The remaining steps in PRO-SUM are then the same. Since you have more written notes, your subsequent highlighting of those notes (step three of PRO-SUM) will also produce a bit more highlighting. After that, you can follow steps four and five exactly as they are described.

CHAPTER 10

PRO-SUM: A DETAILED EXAMPLE

“Do not ask what it means, but rather how it is used.”
- Wittgenstein

As is true with any kind of instruction, it's difficult to truly gain a clear picture of the concepts without seeing an actual example and that's the purpose of this chapter.

On the following pages, you'll see a complete illustration of the five steps of PRO-SUM, used in a chapter from an actual legal textbook. This will help you visualize exactly what you'll be doing when you follow the various steps.

This is a fairly long example, to show you just how well PRO-SUM results in a short, tightly condensed set of notes that you can easily review before an exam. The material chosen is somewhat technical so you can see that PRO-SUM does work well with any degree of complexity.

In fact, the more difficult the material, the better PRO-SUM works, because it's this type of information that most needs highlighting and summarization to make your final review more organized and effective.

You'll see in this example that step one (highlighting) is a little over twenty-five percent of the material, due to its technical nature.

A simpler book on something such as, say, first-year history would likely require only twenty percent or even less.

Step three (highlighting the handwritten notes) is a little over forty-five percent in this example, while step four (summarizing in red) is a bit over thirty-five percent. These are the approximate percentages you should target for with material of similar difficulty.

Also, keep in mind that it will likely take you a little practice before your highlighting and summarizing are tight and concise.

At first, you'll probably highlight your textbook very liberally and make handwritten notes that are longer than the recommended percentages. Don't be alarmed by this.

It's natural to feel uncomfortable at first as you try not to include everything, but you'll soon develop a good feel for what you remember and what you need to summarize for later review. You'll find it doesn't take long to become skilled at all five steps and take control of your studying – instead of it controlling you.

I'm confident that if you give PRO-SUM an honest try according to what you have learned in the book, you'll find it has the same positive effect on your grades as it had on mine.

Good luck with all your academic efforts!

STEP ONE – SUMMARIZE READING WITH A HIGHLIGHTER PEN

3 CONTRACT BOND COVERAGES

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Every contract bond has **three elements**:

- the **bond**
- the **underlying agreement or contract**
- the **law**

By itself, a bond is basically incomplete because it is the contract which offers indemnity for nonperformance of the contract. The third element, the law, often stipulates the coverage provided by the bond. On the other hand, the bond and the contract may incorporate the law by specifying coverages that are spelled out in the statutes. So, it's apparent that a threefold inquiry is necessary to determine the risks and the extent of the obligations assumed under contract bonds.

A complete study is not possible here because no two contract bonds, to different owner (obliges), are exactly alike. There is a wide variety both in laws and in the working of contract documents. So, we'll limit this discussion to typical risks which surety companies and contractors are frequently asked to assume. Certain of these risks are fair and equitable, while others are not. Unfortunately, contract are frequently one-sided instruments drafted by and for the exclusive protection of the owner and the architect/engineer, or for the general contractor, in the case of subcontract, and subcontract bond forms.

Contractors (principals) are generally optimistic people by nature. Too often they do not give enough consideration to the “fine print” in the nontechnical portions of the specifications. This is why the professional agent, as well as the surety underwriter, must take a serious interest in the documents.

Both must be sure:

4. that the contractor is not unknowingly assuming obligations which expose the construction company to unanticipated financial risk;
5. that the surety is not assuming a risk not contemplated in suretyship theory; and
6. that, in the event of the contractor’s default, the terms and conditions under which the surety must perform are fair and equitable.

Every contract bond specialist must have a working knowledge of the law and must be familiar with contract documents and bond forms to effectively analyze these risks.

TYPES OF BONDS

The most common types of bonds used in conjunction with construction contracts can be classified according to their purpose. They include:

- Bid Bonds
- Performance Bonds
- Payment Bonds
- Combination Performance and Payment bonds
- Maintenance Bonds

The parties to a contract bond are the surety, the contractor, and the “owner” (the party for whom the work is performed).

BID BONDS

By law, contracts for public work are generally awarded to the lowest responsible bidder. Competitive bids are solicited by means of an advertisement call an “Invitation to Bid.” As a rule, each bidder is required to submit with the bid either a certified check or a bid bond from a qualified surety for a fixed percentage of a bid price.

A contractor must meet certain prequalification standards set by the surety

company before the account can be considered for bid and performance bond credit. Once a contractor has qualified for credit, requests for bid bonds are considered on the basis of the merits of each contract.

A bid bond provides that if the contract is awarded, a contractor will, within a specified time after the award, sign the construction contract and provide the owner with a bond guaranteeing performance of the contract. The penalty for failure to do these things is the total amount of the bid bond or the difference in contract price submitted by the contractor and the second lowest responsible bidder, whichever is smaller.

Generally, a surety will not issue a bid bond if it is unwilling to provide the required performance bond should the contractor be awarded the contract. In practice this means that the underwriting process begins when a bid bond request is received and is concluded when either the bid bond is provided to the contractor or the request is declined.

You can see that the timing of the steps of the underwriting process makes the use of a certified check in lieu of a bid bond a hazardous alternative for the contractor unless the performance bond on the specific contract has been underwritten and approved.

On public contracts, both the amount and the form of bid security will be specified by law or regulations. On private work they will be specified by the owner.

Sales Point: Where either a certified check or a bid bond is an acceptable form of security, it is to the contractor's advantage to use the bid bond. Otherwise, money is tied up in outstanding bids. The premium charge to the contractor, however, is nominal for bid bonds.

Now let's examine some typical bid bonds. Copies of all forms referred to in this course are included in the Forms Kit section at the back of this course. Forms are provided so you can study them as you complete this course and use them as reference later.

Bid Bond Form S-53 describes the contractor's obligation in a clear-cut fashion:

"If the said contract be timely awarded to the principal and the principal shall, within such time as may be specified, enter into the contract in writing, and give bond, if bond be required, with surety acceptable to the obligee for the faithful performance of the said contract, then this obligation shall be void, otherwise to remain in full force and effect."

No attempt is made to describe the exact method in which damages will be measured or the way in which the obligee will be compensated. The other

contract documents, and to an even greater extent, the laws, make this determination. The “usual” measure of damages is the difference between the principal’s bid and the next higher bid.

Another common bid bond is the A-310 (S-54) used by the American Institute of Architects. It describes the type of bond the principal must furnish if awarded the contract. This form stipulates faithful performance and prompt payment of labor and materials. It also specifies the method of determining damages by requiring payment “of the difference between the amount of the contractor’s bid and such larger amount for which the obligee may in good faith contract with another party.”

A third type of bid bond referred to as Standard Form 24 (S-1815) is used in connection with all U.S. Government contracts. It provides for damages of “the cost of procuring the work which exceeds the amount of the contractor’s bid.” The bond form also specifies the time allowed the principal for compliance and incorporates an advance consent by the surety to any extension of time for acceptance of the bid, which the principal and the government may negotiate, provided the total acceptance period does not exceed 60 days.

Each of these forms, while designed to provide the same type of indemnity, has slightly different terms and conditions. It’s a fact that when these documents reach the courts the results are frequently interpretations that differ materially from general existing law.

PERFORMANCE BONDS

A performance bond indemnifies the owner (obligee) against loss if the contractor (principal) fails to perform the obligation as outlined in the construction agreement or contract. The obvious question to be asked is: What constitutes performance? In some instances, it is performing the work under contract according to the plans and specifications. On other occasions, the principal may be obligated to “promptly and faithfully perform the contract” or to “faithfully perform all of the undertakings, terms, conditions, and agreements of the contract.” Although each of these phrases obviously includes the actual construction work, there is a substantial difference between simple performance of the work under contract and performance of each and every one of the conditions of the contract, many of which are not even remotely concerned with workmanship.

The meaning of this broad form contract language is clear. The obligation of the contractor and the surety extends to performance of all contractual commitments with the bond so states. For example, they could be held liable for warranty provisions in a contract, for failure to provide the required insurance coverages for indemnification, or for completion of the actual construction work. Therefore, a broad form of bond requires careful

determination and evaluation of the risks hidden in the agreement. Only a fair and equitable construction contract should receive consideration for surety credit. If the contract is equitable, the performance bond can be a clean, simple legal instrument which:

5. identifies the parties;
6. describes and incorporates (by reference) the underlying contract;
7. states the amount of protection; and
8. provided indemnity for the obligee in the event of the principal's nonperformance.

Where the contract is unfair and amendments cannot be negotiated, the surety can sometimes tailor-make the bond form to provide more limited coverage. Since this does not help the contractor solve the problem, surety underwriters are reluctant to amend bond forms under these circumstances.

Under no circumstances should a performance bond

6. protect people who are not parties to the underlying agreement or contract;
7. provide protection not called for by normal business practices
8. impose obligations on the contractor or the surety which are not cited in the underlying agreement with the owner;
9. require the surety to waive its established rights; or
10. absolutely guarantee completion of a project. (completion can become impossible due to circumstances beyond the control of the contracting parties, in which case a monetary settlement is negotiated in lieu of completion of the work)

It isn't necessary to insert lengthy clauses in a bond form covering all contingencies which are adequately covered by law or made a part of the other contract documents.

Some of the most widely used performance bond forms are A.I.A Document A-311 (S-1219), A-312 (S-1852) and U.S. Standard Form 25 (S-1816). They provide reasonable equitable coverages and contain language by which the surety specifically waives its right to notice of changes in the underlying

contract. The intent of this language is to prevent invalidation of the bond for failure to obtain the consent of surety for routine changes in the construction contract. Sureties have long been able to live with such language if they are dealing with an obligee like the federal government, which continues to require consent of surety on routine contract changes regardless of the wording of the bond form. However, a broad waiver of a surety's right to consent to changes in the underlying contract is viewed with concern when the bond runs in favor of an obligee with a reputation for unscrupulous or unethical practices. Unfortunately, such language has become so commonly tolerated by the surety industry that it is now just one more risk to be underwritten.

The A.I.A. form also spells out the surety's alternatives in the event of a principal's default. They are:

4. remedy the default;
5. step in and complete the contract in accordance with its terms and conditions; or
6. arrange for the owner to relet contract, paying for the extra cost incurred.

This is acceptable because it preserves the surety's freedom of choice in solving a problem. In contrast, provisions which require "specific performance" of a contract regardless of circumstances are unacceptable to sureties.

Some general contractors specify bond forms that call for "specific performance" by their subcontractors. Agents and underwriters need to be on the alert for these potentially very dangerous forms. A sample of an equitable form for both general contractors and their sub-contractors is S-1843.

The clause in the A.I.A. form which limits the period for filing lawsuits to two years is most desirable, particularly in jurisdictions having statutes of limitations of longer duration.

PAYMENT BONDS

An owner needs assurance that the contractor will pay for labor, materials and sub-contracts because these items can become liens against the property, thereby clouding the owner's title. A well-designed construction contract agreement will provide that the contractor pay all bills for labor, equipment

and materials used, as well as discharge any liens filed by workers or suppliers against a project. Therefore, bonds guaranteeing performance of a contract will effectively guarantee that bill will be paid.

The obvious question is: why do we need payment bonds? The answer is that a payment bond runs in favor of and directly protects designated suppliers of labor and material. It allows them to file claims directly against the bond, as well as to file suit should this become necessary.

Standard Form 25-A (S-1817) is the payment bond used on all U.S. government projects covered by the Miller Act. It states that the principal “shall promptly make payment to all persons supplying labor and material in the prosecution of the work.” This phrase is interpreted in accordance with the Miller Act, so coverage is provided only to specified claimants who comply with requirements. Form 25-A (S-1817) is an example of a well-drawn payment bond because it clearly defines:

- who is entitled to make claim, and
- the claim procedure that must be followed.

On most private projects the most prevalent bond is the Labor and Material Payment Bond portion of A.I.A. Document A-311 (S-1220) or A-312 (S-1853). It provides its own coverage formula, cites the protected parties and describes the procedure for making claims against the bond. Claimants must have a direct contract with either the prime contractor or one of the subcontractors. Written notice must be furnished in a manner similar to that followed by Miller Act claimants. Widespread use of this form has made it acceptable even though it creates a “private” lien law which may vary with the statutes in several states. For example, the coverage it provides the owner may not be needed because there is not exposure under the lien law of a given state.

Since the owner passes the risk of unpaid bills on to the contractor and the surety through the payment bond, a general contractor is certainly entitled to protection against loss caused by the subcontractor’s failure to pay their bills. This protection can easily be provided under a well-designed subcontract and a subcontract payment bond like S-859. The subcontractor’s liability should be no greater than the general contractor’s exposure. A subcontractor should not be required to pay third party claims under a payment bond for which the general contractor is not liable.

COMBINATION PERFORMANCE AND PAYMENT BONDS

Combination performance and payment bonds are also commonly used. Under this type of bond there is a potential for conflict between claims of the owner and those of suppliers of labor and materials. If, for example, there were a large loss, the face value of the bond could be used up in satisfying claims of one party and loss settlement could involve setting the priority rights of claimants. Nevertheless, combination bonds normally provide adequate protection. However, the use of separate performance and payment bonds is widespread and the premium cost is the same.

MAINTENANCE BONDS

Construction contracts usually carry one-year warranties against defective workmanship and materials. This so-called "maintenance period" guarantee falls within the scope of the performance bond running to the owner.

Even with a performance bond in force, some owners will request a separate maintenance bond. Maintenance Bond Form is S-843. If the warranty is against defective materials and workmanship for one year, there is no additional premium charge whether a separate maintenance bond is required or not. However, if the warranty is broader in scope or longer in term, additional premium is required, and the amount can be substantial. The term and scope of the warranty is also an important underwriting consideration.

You should check the contract specifications for warranty provisions before the bid, and advise the surety underwriter if the coverage is beyond the minimum. By so doing, the extra risk can be underwritten and you can get a maintenance premium quotation for the contractor to include in the bid.

CONTRACT DOCUMENTS

The second element for consideration in your study of contract bonds is the package of contract documents. This generally consists of a form of agreement citing the general, special, supplementary and other conditions as well as drawings, technical specification, addenda and modifications. The bond specialist is primarily interested in those documents which detail the key business obligations of the parties involved. The technical or engineering requirements are of secondary importance. They concern the bond specialist only to the degree that atypical or unusual technical requirements affect the degree of hazard in the risk to be bonded.

Generally speaking, the key business obligations are carefully drafted by government, municipal or private attorneys to guard the owner against every possible contingency. The great majority of information is cited in the

construction contract form or in the section of the contract documents entitled "General Conditions."

A.I.A. Document A-101 is the Standard Form of Agreement Between Owner and Contractor. It is used in conjunction with fixed price contract. A.I.A. Document A-201 outlines the General Conditions of the Contract for Construction.

The 1997 edition of A-201 replaces the 1986 edition. In the eleven years between the two editions, a significant amount of change has occurred, especially in the laws affecting the relationships of the key participants in a construction project. The new document reflects many of these developments in the law and business practice.

Discussions between various contractor associations and A.I.A. began in 1991 and continued through a number of drafts or proposed changes to A-201. The negotiations ended in early 1997.

A-201 is the most prevalent general conditions in the industry today. Most commercial projects are governed by A-201 in one form or another, and many governmental and quasi-governmental agencies use A-201. The document is widely used on small and large projects alike.

For larger projects, there is often room for negotiation and there are provisions in this document which can be negotiated on terms more favorable to general contractors. For smaller contracts (under two million dollars), however, there tends to be less room for negotiation. On these project especially, contractors need to understand and appreciate the workings of the new document.

The document has received both support and criticism from owners, architects, subcontractors and general contractor representatives. It is not our purpose to examine the document in an attempt to defend or promote one assessment or another. However, what is clear in the document is that there are many obligations on both the owner and the contractor which, through proper and diligent contract administration, can be turned into opportunities. For example, the increased scheduling responsibilities place upon contractors can be used very effectively to lock in the time periods for review of submittals and for arranging priorities on multiple prime contract jobs. Some sections of the document have been the subject of more discussion than others. Disputes and claims is one of those areas. Time limitations are strict in this section and claims may be lost. Since claims are made by both the owner and contractor, the strict time limits affect both parties.

While A.I.A. is promoting the 1997 Edition, many significant construction owners continue to use the pre-1997 Edition. For the purpose of this text, will briefly discuss both A.I.A. Editions. They will be referred to as pre-1997 Edition and 1997 Edition. Both Editions are included in the Forms Kit section is the back of this course for your reference.

These two documents, A-101 and A-201 will provide a convenient framework for our study as they allow us to select only the most significant topics for comment. They are also considered to be fair and equitable.

TYPES OF CONTRACTS

There are lump sum, unit price, cost plus fixed fee, cost plus percentage of cost and a cost plus a fee with guaranteed maximum cost contracts. Each of these is tailored to suit a given set of circumstances. The form used will be determined by the circumstances surrounding the specific risk. Cost-plus contracts with no maximum, or “upset,” price are rare and normally unbonded. Fixed fees are much more common than percentage fees.

A case in point is the multi-million dollar hydroelectric project involving elements like a dam, tunnel, and turbo-electric generation facilities. Heavy engineering jobs of this type involve a substantial amount of unit price bidding because quantities of work and quantities of materials used must be based solely on “target” or preliminary estimates prepared by highly trained estimators. Since work and material quantities are not accurately determinable in advance, a lump-sum price contract would be unsuitable to the project.

On the other hand, many major private office buildings utilize a cost plus a fee contract and are begun before they are even fully designed. A maximum cost to the owner is virtually always agreed upon once design is complete and all or most of the subcontracts have been bid.

In determining the fairness of a contract, the first thing to consider is the type of contract. The form of contract must fit the circumstances!

IDENTIFYING THE PROJECT AND THE PARTIES INVOLVED

Each contract must clearly identify the contracting parties, the nature and scope of the work to be done and the documents which comprise the contract package. A.I.A. Document A-101 provides declaration space on its face. Articles 1 and 7 in the pre-1997 Edition and Articles 1 and 9 in the 1997 Edition incorporate the other documents by specific reference. Article 2 describes the scope of the work to be done.

Occasionally, a contractor will be asked to consider a contract which contains an imprecise description of the work to be performed. This situation calls for extreme care. Contract language must be checked carefully to ensure that the contractor is not obligated to perform work not contemplated in the bid. The agent and bond underwriter must use equal care to protect their client's interests.

PAYMENTS TO THE CONTRACTOR

Article 9 of the AIA Document A-201 General Conditions concerns payments to the contractor. It is customary practice for the owner to make periodic progress payments to the contractor based on an approved percentage of completion of the work performed to date. Generally, this is done monthly. In a building contract, payments are based on a schedule of values cited in a "billing estimate" for various portions of the work. Under unit price contracts, payment is based on quantities of work completed to date as determined by engineering measurement.

An agreed percentage of each progress payment is withheld by the owner for protection until the job is completed and accepted. This retention is generally 5-10% of each progress payment. Sometimes the contract provides that retention will be withheld from only the first half of the contract amount.

After a contractor determines that the work is "substantially completed," a prescribed procedure for notifying the owner is followed. The final payment under the contract is usually due 30 days following the owner's receipt of notice of "substantial completion" of the work. This 30-day period is called the lien period wherein creditors have an opportunity to file claims against the job to secure any unpaid bills for labor materials supplied.

The terms of payment cited above are considered to be "standard" for primary construction contracts. From the surety's point of view, such terms are considered part of the normal risk. Surety companies expect a contractor to be paid a pro rata share of the contract amount proportional to construction progress. By using this method of payment the owner should always have enough money in the construction fund to complete the project. In practice, however, commonly used devices such as unbalanced bids, unbalanced schedule of values and even diversion of funds render this theory impractical in a default situation.

When contracts are drafted with nonstandard payment provisions the risk is changed in the surety's view. A good example would be a provision calling for an unearned advance payment to the contractor. This would call for caution

on the part of the underwriter and would probably be the basis for a premium surcharge if the bond were written.

By the same token, contracts providing for premature payment or for early release of retention are viewed cautiously by underwriters. After all, retention serves as the cushion against loss for the surety as well as the owner.

Payment terms in subcontract agreements also need close scrutiny to determine and evaluate the risk. The common provision in subcontracts, which provides that subcontractors will be paid only if, when and as much as the primary contractor is paid, passes much of the risk from the prime contractor to the subcontractor. It is always difficult for the subcontractor to determine the extent to which the prime contractor has been paid for his work.

Often, prime contractor/owner disputes arise over which the subcontractor has no control. The owner delays final payment pending resolution of the dispute. The subcontractor suffers because the right to timely payment and possible to any payment at all has been signed away. Because of the prevalence of this type of payment clause, the nonpayment risk is inherent in the specialty or subcontracting crafts.

Retention provisions in subcontracts also pose hazards for the subcontractor. It is commonplace to have provisions making subcontract retention payable only upon completion and acceptance of the entire construction project by the owner. From a practical standpoint, this means that an early-on-the-job subcontractor could wait months or even years to receive final payment for his services.

These examples illustrate some of the additional risks assumed by subcontractors when they eagerly "sign on the dotted line."

WARRANTY PROVISIONS

By the terms of paragraph 4.5.1 of the A.I.A. Document A-201, pre-1997 Edition or paragraph 3.5.1 of the 1997 Edition General Conditions, the contractor "warrants to the owner and the architect that all materials and equipment furnished under this contract will be new unless otherwise specified and that the work will be of good quality, free from faults and defects, and in conformance with the contract documents."

Should defective workmanship be discovered during the course of construction, the contractor is required to redo the work. Also according to

paragraph 13.2.2 of the pre-1997 Edition or paragraph 12.2.2 of the 1997 Edition, the contractor is bound to correct work found to be defective by the owner “within one year after the date of substantial completion or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the contract documents.”

Combine these two paragraphs and their elements comprise the basic form of warranty provided under most construction contracts. The contractor’s responsibility is limited to defective workmanship and materials and to a reasonable period of time.

Warranties can cause problems because the expiration of a warranty period does not necessarily bring an end to the contractor’s liability. Courts have held contractors liable for defects discovered many years after warranty periods have expired. These cases have involved latent defects where the work was not performed in accordance with specifications or where fraud was involved.

The basic warranty provisions described do not provide an “efficiency guarantee.” There is no guarantee that the construction is suitable for the purpose intended. The contractor simply warrants that the installation of all items was according to plans and that the installation was done in a workmanlike fashion. The contractor is also specifically absolved from liability for damage resulting from errors, inconsistencies, or omissions in the plans. The contractor is not accountable for the architect’s mistakes or for the sufficiency of the architect’s design.

Additional warranties are often buried in the technical specifications. For example, the contractor could be required to provide a five-year warranty on a particular piece of equipment installed during the course of construction. On other occasions, the contractor’s obligation could be limited to providing the owner with a written guarantee from the manufacturer. Increasingly, however, the warranty risk is born entirely by the contractor and the surety.

The warranty provisions in subcontract documents may pose even more hazardous risks. Often, the subcontract agreement itself is silent concerning warranties. But a typical subcontract binds the subcontractor in accordance with all the terms and conditions of the primary contract documents. A warranty or guarantee can be hidden anywhere within these documents. Since a hidden risk is not eliminated by ignorance, the subcontractor and the surety underwriter must somehow ferret out the warranty risks if they want to know the true extent of the mutual obligation they have been asked to assume.

CONTRACT DURATION, DELAYS AND DAMAGES

A properly drafted construction agreement is explicit as to time. This is done by designating a definite number of calendar days or specifying a fixed number of working days for completion. Article 3 of A.I.A. Document A-101 provides a typical example of such a provision.

Extensions of time for the contractor are provided in most contracts. Paragraph 8.3.1 of the A.I.A General Conditions contains typical wording on this subject. It cites specific causes which justify an extension of time:

1. Acts or omissions of the owner or architect
2. Delays caused by separate contractors employed by the owner
3. Delays caused by changes ordered in the work
4. Delays caused by labor disputes, fire, delays in transportation
5. Any unusual delay beyond the control of the contractor

Notice, however, that while extension of time is authorized for such reasons, it is not necessarily an exclusive remedy. In fact, it is stated that this “does not exclude the recovery of damages for delay by either party under other provisions of the contract documents.”

All contracts do not make such detailed provision for owner caused delay. Public contracts, for example, tend to go to great lengths to disclaim all liability, except for time extension due to slowdowns and postponements that are entirely the owner’s fault.

Most contracts also make provision for liquidated damages. Normally this is expressed as a fixed sum of money for each day of unauthorized delay in completing a project. If a project does run over the time limit for completion, the assessed liquidated damages are withheld from the contractor’s retention which is in the hands of the owner.

A liquidated damages provision which assesses a “reasonable” amount of monetary penalty for each day of unauthorized delay in completing the contract is desirable. It has the effect of limiting the exposure to the per day amount stated in the construction agreement,. As contract bond specialists, it is our task to analyze these clauses to make certain that a reasonable relationship exists between the contract time period, the amount of liquidated damages and the causes justifying a time extension. Contractors

and sureties cannot afford to take these provisions lightly. Some otherwise attractive jobs and bond risks have been passed up because of unacceptable terms and conditions.

Liquidated damages are actually the agreed-upon amount per day that the owner will be damaged by unexcused completion delay. If the time allowed is short and damages are high, contractors should, and often do, include some amount of anticipated possible damages in their bid. Even high-liquidated damages are much preferable to “actual damages,” which are specified in some contracts and, of course, are not quantifiable. Agents and underwriters must be on the alert for such potentially disastrous damage clauses.

CHANGES AND CHANGED CONDITIONS

The owner is normally given the right to add or delete work from the project during the period of construction. The subject of changes in the work is covered in Article 12 of the A.I.A. Document A-201 pre-1997 Edition and Article 7 of the 1997 Edition of the General Conditions. Changes must be ordered in writing by a “change order.” After receiving a signed change order and/or a confirming purchase order from the owner, the contractor initiates the change by issuing a “Field Work Order to Proceed” to the workforce or to the appropriate subcontractor. Proceeding without written authorization jeopardizes a contractor’s chance of collecting for extra work performed. Considerable care must be taken by a contractor to document changes, particularly where there isn’t complete agreement with the owner and/or architect. This is an area where it pays the contractor to have competent legal advice and excellent administrative controls.

The A.I.A. Contract Documents, as well as those of the Federal Government, outline what will happen if “changed conditions” are encountered at the job site. Briefly, “changed conditions” refer to situations encountered underground which vary from those indicated by the contract documents, or which differ materially from the type of condition ordinarily encountered and generally recognized as inherent in the type of work involved.

Owners and engineers have been known to go to great lengths to absolve themselves from liability for test borings and other site data provided to bidders. Some contracts even stipulate that the contractor assumes responsibility for conditions at the site which differ from those indicated in the bidding documents. This adds the risk of unknown site conditions to the many risks that the contractor normally assumes. So, adding a “changed conditions” clause to a contract can materially reduce this risk for both the contractor and the surety.

INDEMNITY PROVISIONS

All construction contracts contain provisions providing indemnification for the owner or the owner's agents. An indemnity clause does not concern the liability of a contractor under normal business operations. Contractual liability comes into play only when someone assumes liability which is entirely apart from that imposed by law.

Suppose, for example, that a contractor's truck leaving the job site strikes a pedestrian. Since an employer by law is responsible for the negligent acts of employees the contractor might be held liable for damages due to this accident. But this is the contractor's own liability, not that of someone else.

Now, suppose that instead of suing the contractor, the injured pedestrian sues the owner of the construction project. By law, the contractor is not responsible for the owner's liability or negligence, so if the pedestrian won suit against the owner, the contractor wouldn't be responsible for paying damages. This seems to be unfair because it was the contractor's truck which caused the damage in the first place, even though the accident occurred at the owner's job site. It was precisely to remedy this kind of inequity that owners began to require that contractors agree to hold them harmless against such hazards. Accordingly, indemnification clauses were inserted into construction contracts under which contractors assumed the liability of owners.

This "limited form" of indemnification provision holds the owner harmless for injury or damage to third parties due to negligence of the contractor, employees or subcontractors. This is equitable and is as it should be. Unfortunately things have gone far beyond this "limited form" of indemnification.

The equity of the A.I.A. indemnity clause in paragraph 4.18 of the pre-1997 Edition and paragraph 3.18 of the 1997 Edition of the General Conditions is questionable because it provides the owner with indemnity from third party claims arising from joint negligence of the contractor and owner. The passage of time has dulled the edge of this type of provision, and it is now considered acceptable in most instances. This is called an "intermediate form" of indemnification.

However, the "broad form" indemnification clause sometimes found in construction contracts cannot be justified. It places the contractor in the position of holding the owner harmless against third party liability due to the owner's sole negligence. A literal interpretation of some of these clauses

might even hold the owner harmless from liability to pay the contractor for the work performed under the contract.

The effect of these “broad form” clauses is to make the contractor the insurer of the owner, the architect, their agents and employees, to the degree specified. Contractual liability insurance is available from casualty insurance companies to protect against some of this hazard. The “limited form” and the “intermediate form” of indemnification risks are generally insurable. But “broad form” clauses covering the owner’s sole negligence are often uninsurable risks. In any event the cost of this type of insurance coverage is high. Fortunately, it is possible to arrange coverage through commercial insurance specialists. It’s a real challenge but one that must be accomplished if the contractor and the surety are to be protected against almost unlimited risk.

In this section we have discussed some important elements of a normal construction contract. We have studied only the most crucial clauses where inequities are very often found. Remember, however, that inequities can be found anywhere in the contract documents. The list of such possibilities is almost endless. It takes careful analytical reading of contract documents to determine the risks to be assumed by the contractor-client and the surety.

THE INFLUENCE OF THE LAW

In most instances of noncontract risks, coverage under the specific bond is determined by the statute which requires it. To a degree, coverage under contract bonds is also written into the statutes. There are two ways that the law may affect coverage afforded by a contract bond:

1. Specific information outlining who has rights to payment under a bond may be cited
2. The bond’s terms and conditions may be prescribed

Perhaps the easiest way to learn this relationship is to consider some special legal rights given to creditors on construction projects.

MECHANIC’S LIEN LAWS

The right to file a mechanic’s lien against a construction project is the fundamental remedy of laborers and suppliers who have not received payment for their work or material supplied during the course of construction.

In technical terms, a mechanic's lien is described as:

“a special statutory lien on buildings and other improvements upon realty and, in many jurisdictions, the land on which they are situated, in favor of certain designated classes of persons, to secure to them compensation for the labor they have performed, or the material which they have furnished for the construction, alteration or repair of buildings or improvements.”

In other words, the law gives designated creditors the right to claim a kind of equitable ownership for the value of construction services rendered which is superior to that of the owner of the property. These statutory liens have much the same effect as a mortgage. In order to obtain a clear title to the property, the owner must have the lien discharged.

Lien laws are in force in every state. They differ widely in form and detail. Attention to detail is mandatory because every requirement of the law must be met in order to create a valid lien against property.

A typical statute will require a general contractor to record a notarized claim with the county recording officer within 60 days after the owner has filed a notice of project completion, or if no notice is filed, within 90 days from the cessation of labor on the project. The general contractor's claim must identify the owner, the project, the work performed and the amount of money due.

Subcontractors and suppliers are usually required to give written notice to the owner well in advance of the actual filing of a lien. Without such timely notice, the right to claim a lien will be lost.

There are two different systems in effect which regulate the rights of subcontractors among the states. Under the New York guidelines only the general contractor has direct lien rights on a building. Subcontractors, suppliers and laborers have lien rights only against the money due to the general contractor from the owner. The amount recoverable by lien claimants is limited at any given time to the unpaid contract balance owed by the owner to the general contractor.

Under the Pennsylvania system, there is no limitation on the amount recoverable at a given time. Subcontractors, suppliers and laborers are given direct lien rights against the land and buildings. Even full payment to the general contractor by the owner will not deprive them of their remedy. So, under the Pennsylvania system an owner may be forced to pay twice.

In the filed lien claim fails to produce payment, foreclosure proceedings will be brought into the courts within a set period of time. If the court decides that the claimant's case has been proved, it will order the property sold and the proceeds used to satisfy the judgment. This remedy is not always economically sound because the property could be mortgaged and the mortgage generally enjoys priority over the liens of claimants. It is conceivable that a forced sale of the property might not provide enough cash to satisfy all creditors.

A knowledgeable owner recognizes the added credit risk posed by lien laws, so the contractor is required to indemnify and to discharge any claim of lien that may be filed. The contractor's bond covers this obligation. It is in this sense that the respective mechanic's lien statutes create the type of claim, the kind of claimant, the steps necessary to substantiate a claim and the coverage afforded by the bond.

The statutes in several states allow a surety bond to be substituted for property as security for creditors on private construction project. Under these circumstances, unpaid claimants have direct rights against the surety company.

BONDING STATUTES

Public property is exempt from statutory liens on the theory that the public should not be required to pay twice for services rendered and public contractors should assume responsibility for proper use and allocation of public funds. No special protection against nonpayment is afforded the general contractor. Any credit risk that may be present in dealing with a public bond is assumed. On the other hand, two methods have been devised to protect specified suppliers below the level of general contractor.

One of these methods allows specified creditors to file with the public owner an equitable lien in the form of a notice to withhold funds from the unpaid balance due the general contractor. Once the owner receives such a "stop notice" in proper form, sufficient funds must be withheld to pay the claim until it is released or discharged.

The other remedy is the requirement under the Miller Act that a "public" general contractor must file a surety bond protecting designated suppliers and subcontractors. The Miller Act, passed by Congress in 1935, gives laborers employed by the general contractor, subcontractors and suppliers the right to sue on the surety bond if full payment is not received within 90 days after completion of their tasks or contractual obligations. The Act gives similar rights to the workers, subcontractors and suppliers of "first lever"

subcontractors provided they file a notice with the general contractor, stating services rendered, within 90 days of the transaction.

But the Miller Act does not protect everyone. “Third level” subcontractors who deal with only the “second level” subcontractors, are not entitled to payment under the bond. They must depend solely on the “second lever” subcontractors with whom they contracted.

A lawsuit under the Miller Act must be brought in the U.S. District Court which has jurisdiction over Laws” which is available in most public libraries. the job site within one year after the services are rendered. Suits are brought in the name of the United States for the use and benefit of the party suing. Generally, reputable general contractors and their sureties will not force a claimant with a valid case to use the courts as a means of collection.

In keeping with the federal law, forty-eight states have enacted “Little Miller Acts” to regulate comparable public construction at the state and local levels. Most such statutes are summarized in the “Credit Manual of Commercial

In summary, the law specifies through mechanic’s lien and the bonding statutes which creditors have a claim against an owner or general contractor. It also stipulates the terms and conditions to be fulfilled to perfect a creditor’s claim. The law makes the contractor and the surety responsible for payment of legitimate claims.

ADDITIONAL LEGAL OBLIGATIONS

The law also frequently cites the terms and conditions of a contractor’s performance, particularly in conjunction with public works construction. This, of course, affects coverage under a performance bond. For example, the Miller Act requires that a contractor’s performance bond guarantees the payment of taxes withheld by the contractor from wages earned by employees on federal construction work.

[STEP TWO – SUMMARIZE HIGHLIGHTING WITH WRITTEN NOTES](#)

Contract bond elements: the bond, underlying contract, law.

Types of Bonds

- Bid
- Performance
- Pmt

- Combo performance/pmt
- Maintenance

Bid Bonds

- Substitutes for certified check. Avoids tying up \$. Guarantees contractor will sign contract & provide performance bond. Damages for default are diff between that bid & next highest. Common bonds are S-53, A- 310, & Standard Form 24 (gov contracts).

Performance Bonds

- Pays owner if contractor defaults. ID's parties, describes contract, \$ of protection, describes reimbursement.
- Bonds should not:
 1. Protect people not part of contract
 2. Include things not normal
 3. Include things not in contract
 4. Waive rights
 5. Guarantee project completion
- Common bonds are A-311 & Standard Form 25.
- Surety choices when contractor defaults: (1) Fix default (2) Complete contract (3) Pay extra cost of new contract

Payment Bonds

- Lets suppliers make claims when not paid. Gov contracts use Standard Form 25-A, private projects use A-311.

Maintenance Bonds

Used to broaden scope or extend standard 1 yr contract warranty.

Contract Documents

- Surety interested in business aspects, not engineering. A-101 is standard form outlining agreement. A-201 is common general conditions.

Types of Contracts

- Lump sum, unit price, cost & fixed fee, cost & % cost, cost & fee w/ max cost. Fixed fees most common. Heavy engineering jobs usually unit price bidding & office bldgs use cost & fixed fee.

Pmts to Contractor

- Owner usually makes % pmts. Final pmt 30 days after finish & this is "lien period." Subs usually paid only if & when primary paid, which is problem when primary has dispute w/ owner.

Warranty Provisions

- Contractor warrants materials w/b new & work of good quality, for 1 yr period. Courts frequently hold liable longer. No "efficiency" guarantee, nor is contractor respon. For errors in plans. Subs bound to same conditions.

Contract Duration, delays, damages

- Time extensions for:

- (1) Acts/omissions of owner
- (2) Other contractors delays
- (3) delays for changes
- (4) Delays for labor/fire/transportation
- (5) Delays beyond control

- Liquidated damages: set \$ per day paid for delays

Changes & Changed Conditions

- Changes by owner must be in writing via “change order.”
- Changed conditions clause relieves contractor for site conditions diff than in contract.

Indemnity Provisions

- All construction contracts have them. Used when someone assumes liability not req. by law. Contractors assume liab. Of owners to hold owners harmless if contractor hurts 3rd parties.
- “Intermediate form” of indemnification protects owner from joint negligence of contractor and owner.
- “Broad Form” protects owner from owner’s sole negligence. This form usually not insurable.

Mechanics Lien Laws

- Used when laborers & suppliers haven’t received pmt during course of constructions. Gives them right to claim sort of equitable ownership. Superior to property owners rights. Sort of like a mortgage.
- 2 diff systems: (1) New York guidelines – only general contractor has direct lien rights. (2) Pennsylvania system – subs, suppliers, laborers have direct lien rights.

Bonding Statutes

- Public property exempt from statutory liens.
- 2 methods for supplier to get protection: (1) File w/ public owner an equitable lien to withhold funds from unpaid balance due general contractor. (2) Miller Act requires a public general contractor to get surety bond

protecting suppliers & subs.

Summary

Law specifies via mechanic's liens & bonding statutes which creditors have claims against owner or general contractor. Contractor & surety respon. For pmt of legitimate claims.

STEP THREE – SUMMARIZE WRITTEN NOTES WITH A HIGHLIGHTER PEN

Contract bond elements: the bond, underlying contract, law.

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STEP FOUR – SUMMARIZE HIGHLIGHTING WITH RED PEN

Contract bond elements: the bond, underlying contract, law.

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Summary

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STEP FIVE – SUMMARIZE RED CIRCLED ITEMS WITH WRITTEN NOTES

- Bond Types: Bid, perf, pmt, combo perf/pmt, maintenance
- Bid bonds: S-53, A-310, Form 24 (gov)
- Perf. Bonds: Form 25-A (gov), A-311 (private)
- Contract Documents: A-101 agreement, A-201 common conditions
- Contract Types: Lump sum, unit price, cost & fixed fee, cost & % cost, cost & fee w/max cost.
- Delays get extensions for: acts of owner, other contractors, changes, labor/fire/trans.
- Indemnity: Intermediate & Broad form
- Mechanics liens: New York form, Pennsylvania form