HTETCO Carpet Flooring
Marble City Summit
Estimator Stress
Tools of the Trade for Site Visit
SEP - 11th Edition
ASPE BOARD OF DIRECTORS 2021 - 2022

President
M. Chris Morton, FCPE
cmortonfcpe@outlook.com

First Vice President
Mike A. Alsgaard, CPE
maalsgaard@fishbeck.com

Second Vice President
A. Keith Parker, CPE
keithparker@circlebco.com

Immediate Past President
Mel D. Cowen, CPE
mel@cowen-est.com

Treasurer (Appointed)
Paul Croke
pcroke@hinrest.com

Northwest Governor
Steve Watkins
steve.watkins@bnbuilders.com

Southwest Governor
Larry Lucero, CPE
llucero@redlineinsulation.com

Central Plains Governor
Matthew Burress, CPE
mburress@performanceservices.com

Southeast Governor
Carolyn Morones, CPE
aspe.carri@gmail.com

Northeast Governor
Dexter Murphy, CPE
dextercmurphy@comcast.net

INDUSTRY DIRECTORS

Barbara J. Jackson, PhD, DBIA
Director
Franklin L. Burns School

ASPE National President 3
New Members, CPEs + AEPs 5
Marble City Summit 6
Estimator Stress: Do Not Let the "Stress-o-Saurus" Trample You! 8
HTETCO Carpet Flooring 12
Tools of the Trade for Site Visit 21
Critical Calendar 22
Standard Estimating Practice 23
Chapter Meetings 24

CONTACT THE ASPE BUSINESS OFFICE

Tina Cooke
Tina@ASPenational.org
Standards Committee • Website • Accounting • Membership

Cinder McDonald
Cinder@ASPenational.org
Certification Committee & Program • Online Classes

Natasha Crumbliss
Natasha@ASPenational.org
Education Committee • Estimating Academy

215 Donelson Pike #140710
Nashville, Tennessee 37214
615.316.9200 • ASPenational.org
Spring is here, and ASPE has been hard at work on some exciting new activities! First off, we have engaged in a partnership with Bluebird Creative, a marketing consultant, to create our new marketing strategy and a brand-new website.

I am also thrilled to announce that we have launched a search for an Executive Director. After our Strategic Planning session in October, we identified that we need to right-size operations and staffing, and the decision to search for someone to fill this position was enacted as a result.

I hope that you will be able to join us virtually or in-person in Knoxville this summer for our 2022 Summit on June 24th and 25th. Additionally, I hope that you are taking advantage of our Estimating Academy courses that were launched last November and our new courses that will be launched this summer.

Please feel free to contact me if you have any questions or suggestions.

M. Chris Morton, FCPE
ASPE National President
2021-2023

S

Connect at:

cmortonfcpe@outlook.com
Chapter 5 – Denver
Estimating Academy Classes

Construction Materials and Processes
This course is an introduction to the materials and processes of general construction using the Construction Specifications Institute division format and is intended to deepen the understanding of building systems and material science. Topics include sitework & excavation, concrete, masonry, wood, steel, building envelope, openings, and finishes.

Construction Procurement Methods
Designed to help estimators learn the basics of different construction procurement methods, this course touches on the basics of design-bid-build, design-build, construction manager at risk, and public-private partnership with contract negotiation, guaranteed maximum price, and cost plus.

Estimating and Bidding
This course provides an overview of construction estimating as used in winning bids. The course teaches the student the basics of take-off and pricing, and students will be exposed to examples in several disciplines of construction to include commercial building and heavy civil construction estimates.

Fundamentals of Heavy Civil Estimating: Heavy Highway
Walk one through many aspects of estimating a Heavy Highway project, from reviewing plans and specifications to submitting a bid and understanding the results.

Introduction to Construction Estimating I
This self-paced 8-week online course is designed to help estimators learn the basic skills required to takeoff material quantities and produce successful construction estimates.

Plan Reading for Estimating
Strip away all the hieroglyphs, symbols, markings, strange words and on a set of building plans you have an outline of the building to be built. Take your first step in demystifying the art of reading plans. Learn the hidden code behind those strange symbols and grow more confident in how to read plans for estimating.

Register Now!
ASPE’s Estimating Academy e-learning courses.

For more information visit - https://www.aspenational.org/page/EA
Membership Classification Count (as of 04/15/2022)

- **Affiliate**: 52
- **AEP**: 55
- **Corporate**: 6
- **CPE**: 463
- **Estimator**: 602
- **Fellow**: 23
- **Honorary Member**: 5
- **Member Emeritus**: 43
- **Student**: 28

**Total**: 1,277

---

**NAME**  | **COMPANY** | **CHAPTER**
---|---|---
Joseph Matthews | Waconah Construction | Los Angeles 1
Alex Rodriguez | AMR Estimating Services, Inc. | Golden Gate 2
Bob Jones | Airtight Construction, Inc. | Golden Gate 2
Austin Hughes | Murow DC | Orange County 3
Brian Oberman | Life Deck Coating Installations | San Diego 4
Nicholas Houck | Western Interiors Inc | San Diego 4
Priyanka Shivaji Rothe | Arizona State University | Arizona 6
Karl Schranz | Arizona State University | Arizona 6
Storm Coates | STOA Group | New Orleans 9
Staci Hux | Weeks Marine, Inc. | New Orleans 9
Sai Shashank | | New York 10
Mohit Reddola | | New York 10
Mahesh Reddy Maale | | New York 10
Sivasree Gottimukkala | University of New haven | New York 10
E. Alexander Negrete | | Sacramento 11
Mehlek Daweed | Pixtree Technologies | Greater D.C. 23
Michael Losielle | Methuen Construction | Boston 25
Justin Lewis | Dudley Lewis, Inc. | Garden State 26
Aaron Bath | VTF Excavation, LLC | Buckeye 27
Will Woods | Hy-vee inc | Heartland 32
Patrick Moore | Hazen and Sawyer | Middle Tennessee 34
Roger Brandenburg | eX2 Technology | Great Plains 35
Darcie Burroughs | STACK Construction Technologies | Southwestern Ohio 38
Joe Bell | McGough Construction | Viking 39
Anthony Kriens | Kraus-Anderson | Viking 39
Jeff Scott | Make Ready | Dallas/Ft. Worth 43
Debbie McClure | Wyly Cost LLC | Dallas/Ft. Worth 43
Michael Schnitzius | Firmo Construction, LLC | Dallas/Ft. Worth 43
Ryan Oradat | Firmo Construction, LLC | Tampa Bay 48
Eric Walberg | | Tampa Bay 48
Juan Danilo Santiago Mella | Quantities Inc | Gold Coast 49
Jordan Brady | Quantities Inc | Gold Coast 49
Timothy McLaren | Quantities Inc | Gold Coast 49
Russell Woolery | Quantities Inc | Gold Coast 49
Maya DeBride | Quantities Inc | Orlando 50
Natalie Shaouy | Florida Blacktop Inc | Great Salt Lake 51
Travis Spiker | Ada County Highway District | Silicon Valley 55
Victoria Palmen | John McCune Construction | Delaware 75
Joseph Serafini | JCI | Delaware 75
Stephen Wollaston | Creative Floors, Inc | Delaware 75
Jack Connor | Locust | Delaware 75
Josh Quirk | Whiting-Turner | Delaware 75
Richard Hess | Tri-State Underground, Inc. | Delaware 75
Jimmy Means | Means Alarm | Delaware 75
Jelani McCoy | Watchful Eye Security, LLC | Delaware 75
Robert Knable | Crown Flooring Co. | Delaware 75
Adam Fettis | EGStoltzfus Construction, LLC | Central Pennsylvania 76
Lenora Paige | Flower City Monitor Services Ltd. | Western New York 77
Anthony Schrod | Miron Construction Co., Inc. | Brew City 78
Edward Lee | Schneider | Brew City 78
John Gail | Withum | Richmond 82
Josh Miles | Midwest Construction Group | Central Plains MAL 92
Edward L Ellis | Consolidated Construction Company | Southeast MAL 93
Jerry Strickland | RISE General Contractors | Southeast MAL 93

---

**NAME**  | **COMPANY** | **CHAPTER**
---|---|---
Adam Rickers, AEP | HL Construction Management | Orange County 3
Anthony Schry, AEP | Cappelli Organization | New York 10
Zachary Blackwood, CPE | Hill International, Inc. | New York 10
Quinton Fryman, CPE | Gray Ohio Valley | Southwestern Ohio 38
Kendall Deter, CPE | Estes Construction | Quad City 71
Ben Conroy, CPE | Dirtsworks, Inc. | J.R. Abbott Construction Inc.
Pedro Hernandez, AEP | JMD Global Developers LLC | 5 Points Electrical
Mountains meet music... art meets adventure... culture meets cuisine... and no one meets a stranger. The official Knoxville Visitors Guide highlights our music, art, adventure, and cuisine and includes everything you need to know to start planning your visit.

Crowne Plaza Knoxville is our Summit hub!

- 4 miles from the Knoxville McGhee Tyson (TYS) airport.
- Access to over 100 restaurants and shops within a square mile walking distance, along with entertainment, museums, tours, and historical sites.
- Unparalleled outdoor activities in downtown and the surrounding area: trails, greenways, river paddling, sculpture parks, cycling, golf, and so much more!
- 7 breweries and taprooms in downtown and many more in the region.

Registration opens March 1st!

In - Person Pricing

$1,000 through May 6th
$1,100 through June 1st

Virtual Pricing

$500 through May 6th
$550 through June 1st

ASPE Room Block

$149 + taxes
(865) 522-2600 In house reservations

Learn More about Knoxville...
www.visitknoxville.com

Register Now!
www.aspenational.org/page/2022Summit
Questions - Natasha@ASPENational.org
FRIDAY • JUNE 24

8:00-9:00 Breakfast
9:00-10:00 Conference Welcome Keynote
Dr. Barbara Jackson
Making the Mental Shift to Design-Build
10:15-11:15 Key Contract Terms and Litigation Strategy in Design-Build
Laurie Choi, Esq.
11:30-12:30 What is the Role of the Estimator in a Design-Build Team?
Larry Hendrick, DBIA, CPE, LEED AP
12:30-1:30 Lunch
1:30-2:00 Presentation by Togal.AI
Matt Burress, CPE, DBIA & Rose Jesse, CPE
2:00-3:00 Being Flexible - Changing Estimating Methods for Different Estimating Roles
Chris Torbert
3:30-4:30 Beck Tech Presents - The Value of Partnership in Preconstruction
Trent Warner
4:45-5:45 Trimble Presents - Conceptual Estimating

SATURDAY • JUNE 25

8:00-9:00 Breakfast
9:00-10:00 Using Subcontractors - Identifying and Managing the Risks
Laura Casey, CRMP, CSP, CHST, EMT-P, MSc.
10:15-11:15 The ASPE 11th Hour Bid Simulations - Higher Education Use is a Big Win
Kye Holtan-Brown & Eric Holt
11:30-12:30 Escalation, Inflation, Supply and Demand - What Should Estimators Do?
Deanne Goodlaxson, CPE
12:30-2:00 Awards Luncheon
2:00-3:00 Trimble Presents - Labor Market Impacts in Construction
Ian Warner
3:30-5:00 Construction Economics Forecast 2022 - Behind the Headlines
Ed Zarenski
5:15-6:00 State of the Society

*Schedule of events and programming subject to change at ASPE discretion*
Estimator Stress: Do Not Let the "Stress-o-Saurus" Trample You!

What is the "Stress-o-saurus"? It is an imaginary beast that can overrun you with emotional and physical stress. Estimators experience their own type of stress that is unique to their profession. A unique aspect of an estimator’s job is that it calls for judgment as well as skill. While many executive jobs call for this, estimators are under great pressure to produce, and the product has got to be right! The job is key to the company’s survival and profitability; and the estimator may feel he/she has "the weight of the world" on his/her shoulders with this extensive responsibility. Thus, there are three main elements that combined are unique to an estimator’s job: judgment, profitability and responsibility.

Definition of Stress

NIOSH has a definition of stress that is helpful in taming the "beast". NIOSH stands for National Institute for Occupational Safety and Health and is the government agency that is responsible for conducting various types of research related to work-related injuries, illnesses, and other similar issues and then making recommendations as to how to prevent these types of problems from occurring in the future. The NIOSH definition of stress "is the physical and emotional responses that occur in a person when the job requirements and demands exceed the capabilities, resources or needs of the worker which can lead to poor health and even injury (NIOSH, 1999)."

There are two parts to estimators’ stress: the individual’s internal reaction to work that takes place in a person’s psyche, and the external, objective part of the stress. We will call the internal reaction psychological or emotional stress. The internal reaction may be caused by the following: perfectionism, lack of interest in the job, and if an individual is not fully committed to what he/she is doing, the friction between what he/she is doing and what he/she believes they should do with their career, or one being preoccupied with other personal problems.

The second part of an estimator’s stress is its external causes. We will call this environmental or external stress. This includes working conditions, employer expectations and the tools available or not available for the estimator to execute the job.

Characteristics of an estimator’s job that are stress producing include the following: Dealing with numbers and walking the "fine line" that nothing is left out of the bid, that you are low enough to win the job but not high enough to make money for the company (Moyer, David. 2021). A job losing money is a major stressor for an estimator. It is better not to win a job than to lose money on it. There is also the concern that the job will run well without a great deal of external factors to interrupt it; in other words, unforeseen circumstances.

Individuals react differently to environmental stress depending on their emotional make up, background, constitution and work ethic. Factors contributing to an estimator’s stress level include the following: Attitude; unsupportive marriage at home; a family member that is ill and needs extra attention and concern; addictions; items that cause you to feel you are “not together “at work; alcoholism, drugs, food, gambling, financial worries, and not living within your means; and dealing with excess bodily weight.

The particular and unique sources of stress to an estimator both internal and environmental are the following:

- Deadlines
- Lack of estimating software tools that promote time savings and efficiency
- Interruptions, “stop everything” and work on this project
- Never feeling caught up
- Time pressure
- Long hours, possibly during nights or weekends; work becomes a chore not a pleasure
- Feeling over worked and overwhelmed with too much work piled on
- "Putting out fires," lack of planning to feel you have control and mastery over what you do
- A subcontractor "holding you hostage" which creates a great deal of stress and anxiety waiting to put the last "pieces of the puzzle" together in a bid because one is dependent on other busy people
- Company lack of concern for the individual or getting to know the individual as a person; being treated as a number, lack of empathy
- Lack of supervisory support
- Ebb and flow of work, not being busy can be worse than too much to do
- Learning curve for newcomers
- The job is isolating, working the numbers all day
Stress that is not just inherent in an estimator's job but can be found in many executive-level jobs:

- Friction between co-workers, whether that co-worker is a boss, subordinate or equal colleague
- Being tired: Not getting enough sleep

**The Holmes and Rahe Stress Scale**

It is beneficial to look at the big picture on stress: the reader may be familiar with the famous stress scale called the "Holmes and Rahe Stress Scale" published in 1967 which rates life stresses and links them to the propensity of getting an illness on a scale of one through ten (Pain Doctor, 2018): Here is the author of this article's greatly modified version of this scale including augmenting the number of stresses. The most stressful life event at the beginning of the list and descends from there:

- Death of a family member
- Having a child
- The Covid crisis (APA, 2020)
- Financial problems
- Dismissal from a job
- Major illness
- Winning the lottery
- Trouble with the boss
- Moving
- Getting married
- Divorce
- Not getting along with coworkers
- Bad marriage
- Driving in congested traffic
- Gaining weight and feeling you cannot control it.

This scale puts various life events into perspective as far as the stresses they evoke. The reader may feel free to adapt this scale to his/her own personal life and add to or delete from it.

**What Is the Cost of Stress?**

There is a cost of stress for the national economy as a whole as well as what it can cost to the individual. The American Institute of Stress, a nonprofit which issues a monthly newsletter on the topic and does research on stress, estimates that the annual cost to the national economy is $300 billion per year (AIS, 2021). While this figure may seem high, however, the point is the cost is major.

This cost is attributed to people in the workforce calling in sick or absenteeism due to anxiety; heartburn, cardiac stress, cardiovascular disease, back injury, psychological effects, decreased morale, musculoskeletal disorders, heart attacks, headaches and burnout.

Regarding the cost of stress to the individual estimator, it is well known that stress reduces the effectiveness of one's autoimmune system which can lead to sickness. The personal cost of stress can be as much as $10,000 per year in copays, surgical procedure deductibles, over the counter medication and chiropractor fees.

**Endorphins vs. Cortisol**

Endorphins are good, and cortisol is bad sometimes. Endorphins are natural pain and stress fighters found in the brain. They are tiny neurochemicals produced by the pituitary gland which reduce pain and boost pleasure, resulting in a feeling of well-being. The pituitary gland is no larger than a pea and is located at the base of the brain. The gland is attached to the hypothalamus (a part of the brain that affects the pituitary gland) by nerve fibers and blood vessels. Endorphins are released in response to pain or stress, but they are also released during other activities such as eating, exercise, going shopping or sex (Cafasso, 2017). To counterbalance stress an individual may want to engage in an activity which results in the release of endorphins for him or her.

On the other hand, Cortisol is known as the "the stress hormone" and is released by the adrenal glands which are located on the top of each kidney. These glands also release adrenaline. Cortisol’s positive action to reduce inflammation and repair tissue in the body can turn against you if your levels are too high for too long. The elevated levels may suppress your immune system (Premier Health, 2017). As a result, you could be more susceptible to colds and contagious illnesses. Your risk of cancer and autoimmune diseases increases, and you may develop food allergies, gain weight and experience digestive conditions such as indigestion or irritable bowel syndrome. Constricted arteries and high blood pressure can lead to blood vessel damage and plaque buildup in your arteries. This could be “setting the stage” for a heart attack or stroke.

If your entire life is high-stress and always in high gear, your body may constantly pump out cortisol. This has several negative effects. We are not saying that an estimator’s job directly results in a release of high levels of cortisol. We are saying that one may want to be aware of this phenomenon in the human body and if one experiences high level of stress in his/her job this may be balanced by seeking ways to reduce the stress and engage in activities which promote the release of endorphins.

**Fighting Fires**

We will now look at other high-stress occupations to see whether an estimator’s job stress compares. The reader may make his/her own comparison and form his/her own opinion. We are not saying the estimator endures similar or greater stress; we are simply looking at other stressful occupations.

Air traffic controller is commonly considered one of the most stressful jobs in the entire U.S. workforce. The Department of Labor, Employment & Training Administration in its O*Net OnLine Summary Report description of air traffic controllers' states, “Their work can be stressful because maximum concentration is required at all times. Night, weekend, and rotating shifts are common. The mental stress of being responsible for the safety of aircraft and their passengers can be tiring. As a result, controllers retire earlier than most workers (USDLETA: O*NET OnLine, 2021).” Air traffic controllers are mandated to take a five-to-ten-minute break every two hours. The takeaway for this description is that estimators too should take frequent breaks.
Another high stress occupation is firefighter. Compared with the general population and most other occupations, the firefighter faces higher rates of post-traumatic stress disorder, suicide, alcoholism, depression, anxiety sleep disorders and tobacco use... according to data from the USFA and NIOSH (Morman, 2019). The USFA stands for United States Fire Administration. As an entity of the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA), the mission of the U.S. Fire Administration is to support and strengthen fire and emergency medical services and stakeholders to prepare for, prevent, mitigate and respond to all hazards. Firefighters generally die of heart attacks on the job or off the job, not directly of injuries sustained while fighting fires. We are not saying the environmental factors the estimator faces are like the firefighter, but the estimator may face similar reactions and experience an attenuated version of the stress a firefighter commonly feels.

How Estimators Can Counteract Stress

We will look at how estimators can counteract stress both at work and away from work. These are some personal steps he/she can take: The most obvious but often overlooked thing one can do is take regular breaks. OSHA regulations which are in a large part, are written for construction industry safety sadly have no guidelines concerning taking breaks at work (Stone, 2018). This can be going for a walk, having a lunch break out of the office, taking a stretch break, going to the bathroom—good ideas often come when you are sitting on the toilet! A two-minute break every 30-45 minutes is recommended. Frequent rest breaks every one to two hours during demanding work are more effective in mitigating job stress and errors than taking longer but few breaks.

Breaks from estimating include not just that one take during the day but also vacation time. Two weeks off at a time is better than one week. Two weeks off and your coworkers must deal with the issues as they arise. One week off and they just shelve the item figuring you will be back soon! Taking more breaks will have the benefit of your being able to work a longer duration in your career.

Additional steps an estimator may take to reduce stress include the following: a) Take a “mental health” day. b) If you work through the weekend to meet a deadline, take a day off during the week. c) The old standby: take 2 deep breaths. Meditate. Rest. d) Avoid Friday burnout; pace yourself during the week to the extent that you can. e) Other: Have daily/weekly meetings. In house team building. Look at work as a family. You can have a fun, supportive family or a hostile family and everything in between. Go for frequent visits to coworkers by walking over to their work areas; talk shop and/or talk about something unrelated to the projects you are working on. Note: the unique pressure of construction versus all other industries permits those in that industry to swear more as a stress-relief safety valve.

Feel rested in the morning. Sleep through the night so the sleep is uninterrupted. If you sleep eight hours continuous you are much more rested than sleeping a total of eight hours but the sleep is piecemeal and made up of extended naps.

One of the most insidious causes of estimator stress is feeling isolated. Develop relationships with vendors and subcontracts so you feel more connected to them. Talk to them over the phone, do not be brief in emails, visit them at their office, encourage them to call your office. Put a face to a name, cement the relationship. The stress of bid day can be turned into excitement if you feel you are working as a team and not alone, being “thrown to the wolves”

A good way to connect with people is to join a trade association. Becoming a member of ASPE is a perfect way to feel connected.

Environmental Improvements at Work to Help Reduce Estimator Stress:

Tradesmen working in the field need the right tools to do their job. You do too. Having software tools rather than working off an Excel worksheet is one big step toward reducing stress. They can reduce your workload and the amount of “brain strain” you must endure. One software program manufacturer wrote an infomercial that their product will reduce stress. This has a degree of truth to it. The infomercial said, "…estimating doesn’t have to be as stressful as you think. Construction estimating software can help simplify your work and provide a safeguard against costly errors... You can make your job easier for you and your team — all through the use of estimating software (Geraldi, 2021)."

A working environment with good morale, starting from the top down, is an important way to minimize stress. Play music in the background with earphones or ear buds. If you set attainable goals, you will produce obtainable results.

What an estimator can do away from work

Go home and pat your dog. Have a hobby to feel you have mastery over what you are doing outside of work. Sing. Go golfing or whatever you like to do for physical activity. Have sex. Make a new friend. Start with your first name. Connect with an old friend.

What is the takeaway from this article? Lean toward activities that increase endorphins and decrease cortisol in your system. Get help from other people. Use the tools we need for the job. Take heart: experienced estimators feel less stress than neophytes. (Leong, 1999). The job gets easier as you do it for a longer period. Let us be positive: if you can get past the stress, the job is rewarding. Be aware of stress. Tame the "Stress-o-saurus."
Thank You to our Partners!

Corporate Members
- STACK Construction Technologies - Silver
- Delta Innovative Services, Inc. - Bronze
- Frank R. Walker - Bronze
- Den-Mark Specialty Construction - Basic
- Flynn BEC LP - Basic
- ML Group - Basic

Corporate Partners
- Bluebook * ConsensusDocs * DCD Magazine * On Center Software
HTETCO Carpet Flooring

TABLE OF CONTENTS

Section 1: Introduction
Section 2: Types and Methods of Measurements
Section 3: Specific Factors to Consider & Special Risk
Section 4: Overview of Costs & Mark-ups
Section 5: Ratios and Analysis
Section 6: Sample Plans and Take-off
Section 8: Glossary & References
SECTION 1: INTRODUCTION

The purpose of this paper is to provide the reader enough information for a general understanding of how to prepare an estimate of the construction costs associated with supplying and installing carpet flooring. The reader should be able to use this guide as a reference for educational purposes only, or to gain awareness of a typical carpet flooring estimate. The scope will focus on the main types of carpeting and commonly used accessories, limited to application as a floor finish over commonly found substrates. The principles described here have been prepared through research, experience, and industry-accepted practices.

The paper is structured to begin with an introduction of the system, including relevant CSI Divisions. The following section expands on the details of carpeting systems, their pertinence to estimators, and how they’re quantified. Section 3 covers specific risks to be cognizant of when evaluating the carpet scope. Sections 4-7 provide an example floor plan and estimate worksheet to guide the reader through the estimating process, as well as some rules of thumb to validate a carpet estimate.

Brief Description of Subject Matter

Carpet is a floor covering system commonly used in many types of buildings, primarily in residential and commercial, but can be seen in almost every construction market sector. Its function can serve to provide comfort, acoustics, aesthetics, and/or safety. It is manufactured in a variety of fiber types and formations composing the top layer, with multiple rigid backing layers. A cushion or pad is often placed underneath. It is usually affixed to its subsurface with chemical or mechanical methods.

SECTION 2: TYPES & METHODS OF MEASUREMENT

This section will provide a brief overview of the variations in carpet material specifications that may be encountered, including related accessories and other commonly used products required for a complete install. The project’s specifications are important in order to ascertain the correct carpeting type, as this has the greatest impact on cost. The method of quantity surveying each item for the estimator will also be presented.

Broadloom vs. Modular

The two most common types of carpeting are sheet (broadloom) and tile (modular). Both are measured in square yards (SY) and are quantified from the centerline of walls. Broadloom carpet is manufactured in 6’ – 15’ wide rolls, and requires a cut-to-fit install, with seaming at adjoining edges. Broadloom carpet is most commonly secured to the subfloor with adhesives or tack strips. Adhesives are typically hand troweled, sprayed, or rolled underneath the entire subflooring area. Tack strips can be used at edges of walls or other vertical abutments for tensioned/stretch-in applications. Because of the labor required for seaming and cumbersome handling, broadloom installations are typically more expensive. More waste is also inevitable with broadloom installs. Carpet tiles are manufactured in roughly 20” squares and usually installed with tape or adhesives. The smaller size and ease of handling allows for lower labor costs and faster scheduling. The installation also generally requires less skill than broadloom. The location of each carpet type is important to note, as each has a more suitable application depending on the building and room types.

Fibers

Perhaps the most important determinant of the cost of the carpet is the pile fiber. There are a wide variety of synthetics that dominate the market, and each has its own unique performance characteristics. The fiber types that are commonly in production are as follows:

- **Wool** – an organic material, wool sets the highest standards for performance and appearance. Its market prevalence has declined over time, due to the rise of synthetics, and is now the least produced and most expensive carpet fiber type
- **Nylon** – a synthetic material, this is the most commonly used and manufactured fiber type, it has superior wear characteristics and moisture resistance, and also offers the most economical advantage
Olefin, polyesters, acrylics, and other manufactured fibers – synthetic materials that are generally less common and available at typically lower costs. Used extensively in outdoor carpeting

Integral colors and patterns are also an important factor in the cost evaluation of a carpeting system. Though the color may not always merit an estimator’s observation, differentiation should be considered to custom graphics (such as a sports team logo) or unique borders or patterns (such as a repeating pattern), which can add a potentially significant premium to the material and labor costs. RS Means, for instance, suggests an 18% labor increase for sheet carpeting with patterns.

**Pile**

There are also variations in the fabric construction, or how the fibers are composed (referred to as the pile). A tufted carpet consists of injecting the pile fabric into the backing. It is the most commonly found method for broadloom carpeting, and is the most economical. Bonded carpet is produced with chemical adhesion and is most often used for modular carpeting. Woven carpets can consist of multiple fabrics and with different integral colors, rather than a synthetic printing. Because the woven process is more time consuming, this will be the most expensive fabric construction. There are also other variations such as knitted and needle-punched that are less common in commercial applications.

**Face Weight**

Another key metric to evaluate the cost of carpeting is the face weight, or pile density, and is expressed as ounces per square yard (oz. /sq. yd.). This is a measurement of the density of the pile and is often correlated with traffic type (i.e. light, medium, and heavy). Only the pile is considered in this measurement, not the weight of the backing or other materials. Generally, the greater the density, the higher the material cost, though that is not always the case. When comparing the pile density measurements of one carpet product to another, an evaluation of the fibers and fabric construction type must also be considered, as the pile density alone does not represent an accurate “apples to apples” comparison.

**Cushion**

Broadloom carpeting will often specify a particular cushion, which can be integrated into the backing or as a separate component. There are a handful of cushions, also measured in SY and by density (oz. /sq. yd.). Cushions are found in a variety of material types: fiber (animal hair, synthetics, and recycled), rubber, and foam (prime polyurethane, bonded polyurethane, and mechanically frothed). Each of these types have varying degrees of cost, with fibrous pads as the most expensive. Cushions are typically installed with adhesives. A double glued-down installation can sometimes be specified, requiring the cushion to be adhered to the substrate, and the carpet to be adhered to the top of the cushion. The double glued-down installation will result in higher costs. Modular tiles do not typically require a separate cushion. Most tile backings will have a “hard back” (made from PVC or an amorphous resin) or a “cushioned back” (polyurethane-based).

**Seams**

Seaming for broadloom carpeting can be achieved via several methods; applying adhesives, tape, hot-melt type bonding strips, or hand sewing. Seams can be measured by the lineal footage (LF). For most general contracting and construction management estimating firms, the seams are not typically quantified. The carpeting subcontractor however, must carefully determine the layout to minimize seam counts in order to reduce labor costs and material waste. The lay pattern and location of seams are also an important factor, and a good installer will know to not place seams in high-traffic areas. This information will typically be conveyed in a shop drawing or submittal package.

**Thresholds, Trim, and Accessories**

There a variety of accessories and materials used to facilitate a professional installation of a finished surface that gives the appearance of a clean and workmanlike finish. These items are available in a multitude of materials and styles. It may be important to note the specification requirements for each room. When adjoining different flooring material edges or thicknesses, the use of a transition strip is standard. Thresholds are also deployed at entrances and openings. These can be quantified on an each (EA) basis (depending on the opening size), or on a LF basis. Wall base is also commonly incorporated into the carpeting subcontractor’s scope. Renovation projects may only specify the use of a shoe, a smaller piece of trim that is fastened to the wall base, or to not disturb the existing wall base. Commercial projects often specify a rubber or vinyl wall base, residential applications often use a wood or MDF base. Quantities are calculated from the carpet perimeter along the wall on a LF basis.

There are a few miscellaneous items to consider if a complete detailed estimate is necessary. Fasteners or adhesives for the tack strips, wall base, thresholds, and other trim are required to secure in place. Adhesives for the carpet, pad, and seams may also be necessary, and each may specify a different agent or compound. These items will vary depending on the carpet and installation type, but are necessary to complete the job. Depending on the level of detail, these items may not be included in the estimate, or would otherwise be included within the cost of the carpeting items.
Specialties
Another increasingly common specialty are carpets with electro-static dissipative (ESD) properties. These are constructed with integral con-ducting materials in the fibers and backing, and installed with specialty adhesives and accessories. The floor is then tested to meet perfor-mance requirements. This environment is desirable in critical, dispatch, and sensitive electronic facilities. This system is more expensive than a typical carpeting system.

SECTION 3: SPECIFIC FACTORS TO CONSIDER & SPECIAL RISK CONSIDERATIONS

Carpeting is subjected to a variety of factors that affect quantities and pricing. General considerations must be in order that are associated with the inherent risk of construction, as well as a handful of carpet-specific considerations. Some of these are briefly noted below, though not all encompassing, followed by additional expanded mentions.

- The available skilled labor in a particular geographic region has an effect on the professional quality of installation. This is most applic-a ble to broadloom carpeting, as a greater degree of skill is required for an exceptional finish than of tile carpeting.
- Building configuration, or the shape of the floor layout may require more or less effort or material waste.
- Adjacent or interfacing flooring, or if attempting to match an existing carpet
- Low emissions material requirements for LEED projects
- Subfloor radiant heating will require greater attention to coordination
- Economies of scale based on quantities will have an effect on costs – larger quantities can be purchased in bulk at discounted material & shipping rates, as well as improved labor efficiencies
- Inclusion of any repairs to existing carpet
- Local building codes or regulations
- Building access and egress for installation

Staging
The vast majority (70%) of carpet that is manufactured in the United States originates from Dalton, Georgia (the city is referred to as “The Carpet Capital of the World”). Therefore shipping and transportation costs will reflect this distance. Current market oil/fuel costs may also have an impact, as well as seasonal or weather delays.

Carpet materials can be staged on-site and are not typically subjected to costs for off-site storage requirements. Storage and handling requirements prohibit stacking rolls at any time. Some manufacturers may even specify the carpeting to ‘relax’ for a 1-2 day period to allow the backing materials to release any curling or tension prior to installation. It is beneficial to acclimate the materials to the conditioned space to minimize any thermal expansion/contraction.

Schedule
Finish flooring is typically one of the final components installed on a new build or renovation project – this is to ensure damage or heavy wear is not caused from other working trades. HVAC systems must also be installed and operational because of the temperature sensitivity of carpeting materials. The slab must be sufficiently cured and dry. If the construction schedule has not been met pertaining to the carpeting scope, this could delay downstream activities such as fixtures, furnishings, equipment, or substantial completion. Cost impacts of delays could include additional labor to accelerate the schedule or risks of liquidated damages. Seasonal effects include an uptick of construction during warmer months, and may have an impact on material and labor availabilities.

Subflooring & Existing Conditions
The general contractor is typically responsible for the subflooring conditions and providing necessary testing of the substrate. A concrete slab-on-grade subfloor will demand more preparation. A moisture vapor emission rate test (MVER), relative humidity test (RH), and alkaline/PPh testing are all commonly required for a complete professional install, and must be appropriately documented in order to not risk voiding the manufacturer’s warranty. The moisture barrier must also be sufficient to avoid any below grade infiltration, and additional costs may be necessary to increase this barrier to a thicker profile. If concerns for bonding compatibility are warranted, a bond test can be performed. Priming agents can also be used to aid in certain situations.
Cracks, holes, irregularities, and greatly uneven sub-surfaces must be repaired prior to install. Foreign particles or debris must be cleaned. Carpeting is more forgiving for a wider range of tolerances of sub-surfaces that are out of level or damaged, especially with a cushion. If extensive patching or leveling is necessary, it may be beneficial to consult the carpet manufacturer’s literature for compatibility of patching or leveling compounds with intended carpet adhesives, or of cure-time delays. If wood is the substrate, any chemical treatments must be compatible, as well as any required remediation of mold, mildew, or other deleterious materials. Other substrate materials must be compatible and suitable for a secure installation.

For renovation projects, any removal of existing flooring, subflooring, trim, mastic, or adhesives must first be investigated for asbestos containing materials, or any other hazardous substances. If a hazard is discovered, a cost-saving opportunity is to consider installing the carpeting system over the existing flooring. Hauling or disposal must also be considered, and to include the cost for any trucking equipment or dump fees.

Moving furniture is also common and can add labor costs and schedule delays if not appropriately accounted for. A solution to minimize this task is a partial replacement. A partial replacement can be accomplished by “jacking” or lifting the furniture and sliding modular carpet tiles in without relocating furniture or disconnecting/reconnecting utilities. This is a common practice for replacements in office environments.

Miscellaneous

Some projects may require an Operations & Maintenance (O&M) program. Costs for this often include a quantity of additional carpet materials to be left on-site with the owner (typically 1-5%), in the event of future replacements. This cost should be considered when reviewing the project specifications and included in the material costs. Educating the owner of the manufacturer’s recommended O&M procedures is common, and may also include additional staff or labor costs.

SECTION 4: OVERVIEW OF COSTS + MARK-UPS

This section will summarize the overall costs in a carpeting estimate. For demonstration purposes, a sample estimate of a custom office carpet job is attached. The example requires removal and replacement of existing carpeting and trim. Refer to Section 6 for review of the floor plan, quantity takeoff markups have been overlaid from the takeoff software. Section 7 shows the estimate worksheet.

Labor

The type of carpet and installation method generally dictates the labor productivity rates, which drives the majority of labor costs. A typical labor crew consists of 1-2 installers; a lead installer and a helper if needed. Crews with more installers will typically work in separate areas or on different tasks to speed up the project installation. Generally, flooring subcontractors are capable of installing all types of flooring and do not often specialize solely on carpet.

In the example estimate worksheet (Section 7), labor hours are calculated by the productivity rates referenced from RSMeans. Labor hour rates will vary per estimator/firm and are influenced primarily by skill level and efficiencies. In this example, the productivity rate for sheet carpet with a separate cushion is 24 hours for 150 SY. Roughly the same area can be completed in 16 hours for tile carpet without a separate cushion. If historical productivity rates are unavailable, a conservative rule of thumb is to consider how long it would take, in 4-8 hour increments, to complete the activity independently with a helper. In this example, roughly 54 hours is required for project completion. Pricing for labor costs can also vary by factors such as geographical area or labor burdens. The national average pricing from RSMeans is shown in the example (average of union wages from 30 major U.S. cities), and includes subcontractor burden and markups (costs shown here can be adjusted to a specific city using the RSMeans City Cost Index or Location Factors, if desired).

Equipment

The use of equipment is generally not required for carpet installation. Larger jobs with many pallets of material may benefit from the use of a small forklift for staging or handling, but can generally be transported with the use of pallet jacks, dollies, carts, or by hand. Carpet is installed with mostly hand tools. The more specialized and costly hand tools include seam sealing devices and power stretchers. These can be purchased or even rented if the manufacturer requires these installation methods. Industrial vacuums can be used for clean-up and carpet-cleaning equipment can be used for more demanding soil levels. Trucks and trailers are necessary for hauling away demolished flooring or debris, as well as delivering the materials if this is not provided by the supplier.
Determining material costs will require a review of the project specifications in combination with any keynotes or finish schedules. Take note of the important material characteristics as described in Section 2 above, as well as the building space’s function. Two types of carpet are shown to be installed in the example estimate. Accompanying items include transition strips, vinyl base replacement, leveling the subfloor at the carpet tile areas, and demolition of the existing carpeting. After performing a quantity takeoff, the carpeting requirements will need to be relayed to a local supplier for pricing, or referenced in a costing database or manual. The costs shown in this example are referenced from RSMeans and include subcontractor markups. Taxes are not reflected in the example values, but should be considered for application to the specified geographic area.

Waste allowances are also necessary to ensure complete coverage and a professional installation. Some waste is unavoidable, such as defects, layout challenges or to minimize unwanted patterns. Some waste can be controlled, such as damage or from the result of re-work. The estimate example has a waste allowance of 5% of the takeoff quantities included for the flooring and wall base.

**Indirect Costs & Markups**

The markups and indirect costs in the example are based on a percentage, representative of the typical costs for each category. The estimator should be familiar with what these cost allocations represent. These values are typically calculated on a percentage basis or individually quantified and priced, and will vary per estimator. The percentages shown in this example are derived from Sierra West’s guidelines. Escalation has been forecasted for a two-month delayed start date.

**SECTION 5: RATIOS & ANALYSIS**

This section will briefly cover some guidelines to ensure an estimate is accurate and reflects the project scope. Some rules of thumb can be used to verify quantities, such as calculating the total floor finish quantities in comparison to the building or project SF area. The ceiling area, if shown in the project drawings, should also compare similarly. One common error is misappropriating the carpet quantities as SF instead of SY, which can result in a significant discrepancy. When soliciting quotes from subcontractors or suppliers, self-performing a quantity takeoff is highly recommended. Square foot costs should also be analyzed, and can be compared to other finish systems to check if prices are within reason.

Another common problem is misinterpreting drawings that may have a design error in the finish schedule, floor plan, legend, or other keys/notes. Finish schedules seldom align with the drawings and specifications. The specifications may also indicate a different product than is identified in the drawings. For example, the project drawings may have inadvertently illustrated carpeting in a mechanical room, but that realistically isn’t feasible. Attempting to guess what the architect’s intent can prove dangerous, and it is always wise to seek clarification. Above all, a critical component to any estimating department’s quality program is a formal review process. An estimator that is even unfamiliar with the project can highlight items that appear out of range from standard quantities, pricing, scope gaps, or other estimating procedures.
SECTION 6: SAMPLE PROJECT DRAWINGS

ASPE EXAMPLE CARPET PROJECT

KEYNOTES:

1. Remove existing carpet, padding, and adhesives; back strips down to concrete slab on grade. Install new carpeting materials accordingly:
   - CPT 1 - Carpet tile, 26 oz., Nylon Level-loop
   - CPT 2 - Sheet carpet, 28 oz., Nylon Level-loop

2. Remove existing baseboards. Install new vinyl base.

Transition strips to be installed at all flooring transitions

Existing restrooms to remain in place

SCALE: 1/8" = 1'-0"
DATE: 04/02/2021
FLOOR PLAN

A2

270 - Vinyl base - Q1 323 LF
273 - Carpet, 28 oz. - Q1 88 SY
438 - Carpet tile, 26 oz. - Q1 47 SY
439 - Transitions - Q1 28 LF
# ESTIMATE WORKSHEET

**AMERICAN SOCIETY OF PROFESSIONAL ESTIMATORS**

**PROJECT:** HOW TO ESTIMATE THE COST OF CARPETING  
**Bldg. Office:**

**Phase:** 100% Construction Document  
**Project SF:** 1,275

**Start Date:** June 13, 2021  
**Estimate Date:** April 13, 2021

**By:** James Padilla

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>UOM</th>
<th>MATERIAL</th>
<th>LABOR</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>DEMOLITION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>REMOVE EXISTING BASEBOARD</td>
<td>333</td>
<td>LF</td>
<td>$ -</td>
<td>$ -</td>
<td>0.813</td>
</tr>
<tr>
<td></td>
<td>REMOVE EXISTING FLOORING, SHEET CARPET</td>
<td>1,275</td>
<td>SF</td>
<td>$ -</td>
<td>$ -</td>
<td>0.008</td>
</tr>
<tr>
<td></td>
<td>REMOVE EXISTING FLOORING, CARPET PAD</td>
<td>1,275</td>
<td>SF</td>
<td>$ -</td>
<td>$ -</td>
<td>0.002</td>
</tr>
<tr>
<td>03</td>
<td>CONCRETE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PREP EXISTING FLOORING W/ LEV. COMPOUND @ TILES</td>
<td>423</td>
<td>SF</td>
<td>$ 4.90</td>
<td>$ 287.26</td>
<td>0.020</td>
</tr>
<tr>
<td>09</td>
<td>FINISHES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CUSHIONING, SPONGE RUBBER PAD, 20 OZ.</td>
<td>32</td>
<td>SY</td>
<td>$ 6.05</td>
<td>$ 193.60</td>
<td>0.053</td>
</tr>
<tr>
<td></td>
<td>SHEET CARPET, NYLON, 20 OZ., TUFTED</td>
<td>32</td>
<td>SY</td>
<td>$ 37.20</td>
<td>$ 1,190.40</td>
<td>0.167</td>
</tr>
<tr>
<td></td>
<td>TILE CARPET, NYLON, 20 OZ., 100% TUFTED</td>
<td>49</td>
<td>SY</td>
<td>$ 29.02</td>
<td>$ 1,421.98</td>
<td>0.140</td>
</tr>
<tr>
<td></td>
<td>VCT VINYL BASE, 4.0 HIGH</td>
<td>326</td>
<td>LF</td>
<td>$ 1.58</td>
<td>$ 536.52</td>
<td>0.026</td>
</tr>
<tr>
<td></td>
<td>TRANSITION STRIPS</td>
<td>26</td>
<td>LF</td>
<td>$ 7.04</td>
<td>$ 185.02</td>
<td>0.025</td>
</tr>
</tbody>
</table>

**SUBTOTAL HARD COSTS:** $11,687

**CONTINGENCY**

**ESTIMATING CONTINGENCY:** 3.00%  
**$351**

**SUBTOTAL CONSTRUCTION COSTS:** $12,038

**MARK-UPS**

**GENERAL CONDITIONS:** 15.00%  
**$1,806**

**OVERHEAD & PROFIT:** 12.00%  
**$1,561**

**INSURANCE & BONDS:** 3.00%  
**$465**

**SUBTOTAL MARK-UPS:** $3,332

**SUBTOTAL CONSTRUCTION COSTS & MARK-UPS:** $15,370

**ESCALATION**

**ESCALATION TO IMPCO (5% ANNUAL) FOR 2 YRS:** 0.83%  
**$133**

**SUBTOTAL CONSTRUCTION COSTS, MARK-UPS & ESCALATION:** $16,103

**TOTAL CONSTRUCTION COSTS:**  
$ 16,103 incl
SECTION 7: GLOSSARY & REFERENCES

Broadloom – carpet that is woven on a wide apparatus to make large sheets.
Modular – square tiled carpet.
MVER – Moisture Vapor Emissions Rate Test, measures moisture on the surface of the concrete slab.
pH – A scale to measure the of alkalinity or acidity.
Pile – the arrangement or texture of the upright surface fabric of a carpet.
Pile Weight – the average weight, in ounces, of pile yarn per square yard.
RH – Relative Humidity Test measures the moisture content within the concrete slab.
Seam – a line along which two pieces of fabric are joined together
Substrate – the underlying surface of flooring; usually concrete or plywood.
Tuft – a type of carpet pile. Made by mechanically stitching the fabric directly through its backing.
Woven – a type of carpet pile. Made by interlacing threads together on a loom.


STACK
Preconstruction in the Cloud
Your all-in-one solution for lightning-fast takeoff, complete estimating & bid-ready proposals.

Want to take STACK for a spin?
Create your FREE account today at stackct.com
Tools of the Trade for Site Visit

One of the most important job responsibilities of an estimator is performing a site visit. Below is a list of the “Tools of the Trade” I suggest having in your vehicle:

**PPE (Hard Hat, Safety Vest, Boots, Etc.)** – A good hard hat will protect your head when entering a culvert or bumping against a tree branch. Your safety vest could serve as a locator, should you become disabled from a fall or twisted ankle while walking in the woods.

**Cell Phone** - Don’t forget your phone

**Coveralls** - A set of coveralls is great for protecting your office clothes during an impromptu site visit

**25’ Tape Measure** - I suggest a 25’ Stanley Fat Max; it is durable and has almost 14’ of reach which is great when working alone

**100’ tape measure** - Great for measuring longer distances

**Digital Camera** ($150-$200 price range) - yes, we all have cell phones with cameras, however, cell phones are expensive & for some of us contain your life’s information. If you drop your cell phone you could be out $1000 and could lose all your contacts and personal information. Use a camera instead and save yourself the aggravation.

**Selfie Stick** - Selfie Sticks may be used to take photos of the inside of a pipe or anything beyond your reach with limited risk of falling

**Notebook & Writing Utensil** - A field notebook is useful for jotting down notes and sketches; Field Notes brand are durable and can fit in your back pocket

**Folding Shovel** - Useful when determining topsoil depths or uncovering manhole or catch basin lids

**Manhole Hook** - The ability to remove a manhole lid is helpful when determining flow capacity

Having these items on hand will make site visits more productive. Grab a duffel bag and always keep these items in your vehicle. Nothing is better than being prepared.

Todd Ressler, CPE
Chapter 26 - Garden State
TR1197@hotmail.com
2022 ASPE Critical Calendar: May - December

May
12 Deadline for Chapters to submit Chapter elections result form to SBO
27 Scholarship Winner(s) to be announced (to Winners only)
30 SBO Closed for Memorial Day

June
7 Last day for Chapter Reports to Governors and SBO
7 Committee and Technical Committee Chairs progress reports due to their respective Vice President and SBO
10 Last day for Board of Director Reports to SBO for Electronic Board Books
23 Board of Directors Meeting at Summit
24-25 2022 Estimators Summit
25 2022-2023 Board of Directors take Office

July
4 SBO Closed for Independence Day

August

September
5 SBO Closed for Labor Day

October
2 Society Business Office issues invoices for 2023 Membership Dues Renewals
7 Chapter Reports due to Regional Governors

November
24-25 SBO Closed for Thanksgiving

December
23 & 26 SBO Closed for Christmas

This comprehensive three-volume reference set thoroughly covers the full scope of construction cost estimating -- from basic concepts to advanced topics. Written by a team of experts in the field, under the guidance of the American Society of Professional Estimators, it will help professionals working in every area of construction make sure their estimates are accurate, consistent and verifiable. While the entire reference serves as a fully integrated guide, each volume stands alone with its own individual focus, and each volume can be purchased separately.

$89.99 Including Shipping + Digital Copy
The first volume of this reference set gives you a firm foundation in the basics of estimating and then builds on these fundamentals to give you a solid grasp of more advanced topics such as Value Engineering and BIM. You’ll get clear, step-by-step procedures for a wide range of essential tasks: from scoping out the job to bid-day procedures. This volume also provides sample spreadsheets and forms, as well as two bonus chapters on trade and conceptual estimating.

**Volume II  Trade Estimating - Detail Estimating for the Trades**
$114.99 Including Shipping + Digital Copy
The focus of this volume is trade estimating. Using dozens of real-life case studies, it demonstrates how to estimate tasks and processes that are difficult to quantify such as erosion control and power generation. Using the CSI MasterFormat™ as a roadmap, it explores all the factors that affect pricing in excavation, carpentry, masonry, electrical work, plumbing, hvac, roofing, tiling and much more. Along the way it provides you with checklists, plans, specs and sample spreadsheets to help you fully grasp the nuances of each specific type of trade estimating.

$114.99 Including Shipping + Digital Copy
The final volume of this reference set is dedicated to the topic of conceptual estimating. It provides you with an exhaustive array of case studies of such diverse projects as auditoriums, fire stations, parking garages and dozens more. For each case study you are taken on a “deep dive” into all the unique challenges it presents to the estimator. You are then shown how to quantify components, special factors to consider, risks/pitfalls to watch out for, and typical ratios that provide handy "rules of thumb." In addition, you’ll find sample sketches and spreadsheets that give you a professional’s approach to this important part of the construction process. Written by practicing estimating professionals with years of experience, this volume is a "must have" for anyone who must provide preliminary prices or budgets before the plans are even ready.

Purchase 3 set Volume for **$224.99** Including Shipping + Digital Copy and you receive...
the digital download of the 2022 BNi General Construction Costbook (a $142.95 value).
ASPE CHAPTER MEETINGS

ARIZONA

Arizona #6
Where: Varies
Website: n/a
Meeting Contact: Jerry Chandler
j.chandler@cox.net

Old Pueblo #53
Where: Varies
Website: n/a
Meeting Contact: Larry Lucero, CPE
llucero@redlineinsulation.com

ARKANSAS

Arkansas #33
Where: Varies
Website: n/a
Meeting Contact: Jack Guess
jguess@baldwinshell.com

NW Arkansas #79
Where: Varies
Website: n/a
Meeting Contact: Cami Morones, CPE
aspe.cami@gmail.com

CALIFORNIA

Los Angeles #1
Where: Virtual
Website: laestimator.org
Meeting Contact: Bruce Danielson
lalofaspe@outlook.com

Golden Gate #2
Where: Virtual
Website: aspe2.org
Meeting Contact: Robert Muir, CPE
robmuir72@hotmail.com

Orange County #3
Where: Virtual
Website: aspec-o3.org
Meeting Contact: Troy Thomas
constructionpro1984@yahoo.com

San Diego #4
Where: Virtual
Website: aspesd4.org
Meeting Contact: Paul Chang
pchang@balfourbeattyus.com

Sacramento #11
Where: Varies
Website: n/a
Meeting Contact: Bryan Hall
bryan.hall@vanir.com

Silicon Valley #55
Where: Virtual
Website: aspe55.org
Meeting Contact: Shawna Alvarado
shawna@odonnellplastering.com

COLORADO

Denver #5
Where: Virtual
Website: aspedenver.org
Meeting Contact: Jennifer Farmer, AEP
jennifer@livingdesignstudios.com

CONNECTICUT

Yankee #15
Where: n/a
Website: n/a
Meeting Contact: Bill Jacabacci
jacabacci@gmail.com

DISTRICT OF COLUMBIA

Greater D.C. #23
Where: Jacobs
Website: n/a
Meeting Contact: Maurice Touzard
mtouzard@gmail.com

FLORIDA

Tampa Bay #48
Where: The Pub Resturant
Website: aspetampabay.com
Meeting Contact: Matt Borders
mborders@realceilings.com

Gold Coast #49
Where: Varies
Website: n/a
Meeting Contact: Carri Morones, CPE
aspe.cami@gmail.com

Orlando #50
Where: Virtual
Website: n/a
Meeting Contact: Danny Chadwick, CPE
estimatordan@gmail.com

GEORGIA

Atlanta #14
Where: Virtual
Website: n/a
Meeting Contact: Clinton Aldridge
ca45@gatech.edu

Georgia #60
Where: Back Nine Tavern
Website: n/a
Meeting Contact: Harrison Levy
klevy@petraconstruction.com
ASPE CHAPTER MEETINGS (CONTINUED)

ILLINOIS
Chicago #7
Where: Virtual
Website: n/a
Meeting Contact: Bryan Mixer, CPE
bmixer_rvc@msn.com

INDIANA
Central Indiana #59
Where: Varies
Website: n/a
Meeting Contact: Chris Neal
cNeal@summitconst.com

Old Fort #65
Where: Virtual
Website: aspechapter65.org
Meeting Contact: Thad Berkes
tberkes@designcollaborative.com

IOWA
Quad Cities #71
Where: Varies
Website: aspequadcities.org
Meeting Contact: Scott Robinson, CPE
scott@jlbradyco.com

Greater Des Moines #73
Where: Varies
Website: iowaspe73.org
Meeting Contact: Dominic Filippelli
dominic.filippelli@storycon.com

LOUISIANA
New Orleans #9
Where: Varies
Website: n/a
Meeting Contact: Carri Morones, CPE
aspe.carri@gmail.com

MAINE
Maine #37
Where: Varies
Website: aspermaine.com
Meeting Contact: John Brockington, CPE
jbrockington@woodwardcurran.com

MARYLAND
Baltimore #21
Where: Varies
Website: n/a
Meeting Contact: Clint Townshend
ctownshend@phoenix-eng.com

MASSACHUSETTS
Boston #25
Where: Virtual
Website: aspe17.org
Meeting Contact: Eric Rennell
eric@rennellcapitalgroup.com

MICHIGAN
Detroit #17
Where: Virtual
Website: aspe17.org
Meeting Contact: Michael Baldwin
baldwinmj@bv.com

MINNESOTA
Viking #39
Where: Virtual
Website: n/a
Meeting Contact: Curt Kluznik
Kluz0015@umn.edu

MISSOURI
St. Louis Metro #19
Where: AGC Training School
Website: aspelistlouis.org
Meeting Contact: John Smith
john.smith@thelawrencegroup.com

NEBRASKA
Great Plains #35
Where: Varies
Website: n/a
Meeting Contact: Matt Burress, CPE
mburress@performanceservices.com

NEVADA
Las Vegas #72
Where: Varies
Website: n/a
Meeting Contact: Chuck James, CPE
wcjames2@cox.net

NEW JERSEY
Garden State #26
Where: Virtual
Website: n/a
Meeting Contact: Robert Sibilia, CPE
sibiliaconstructionservicesllc@gmail.com

NEW MEXICO
Roadrunner #47
Where: Fiestas Restaurant
Website: n/a
Meeting Contact: Scott Lovedahl
scott.lovedahl@gsa.gov
### NEW YORK
**New York #10**
- **Where:** Virtual
- **Website:** n/a
- **Meeting Contact:** Rose Jesse
  - rosejesse.aspe@gmail.com

**Empire State #42**
- **Where:** Athos Resturant
- **Website:** n/a
- **Meeting Contact:** Alvaro Garza, CPE
  - Alvaro.garza@nationalgrid.com

**Western NY #77**
- **Where:** Virtual
- **Website:** n/a
- **Meeting Contact:** Dexter Murphy, CPE
  - dextercmurphy@comcast.net

### PENNSYLVANIA
**Greater Lehigh Valley #41**
- **Where:** Varies
- **Website:** n/a
- **Meeting Contact:** Dexter Murphy, CPE
  - dextercmurphy@comcast.net

**Three Rivers #44**
- **Where:** Varies
- **Website:** n/a
- **Meeting Contact:** Dexter Murphy, CPE
  - dextercmurphy@comcast.net

**Philadelphia #61**
- **Where:** Varies
- **Website:** na
- **Meeting Contact:** Richard Baus
  - rvaub@urbanengineers.com

**Central Pennsylvania #76**
- **Where:** Loxley’s Resturant
- **Meeting Contact:** Shawn Buckwalter, CPE
  - sbuckwalter@egsconstruction.com

### TEXAS (CONTINUED)
**Dallas/ Ft.Worth #43**
- **Where:** Virtual
- **Website:** sites.google.com/view/aspe-dfw
- **Meeting Contact:** Rick Wyly, CPE
  - rick.wyly@wylycost.com

**Rio Grande #40**
- **Where:** Varies
- **Website:** n/a
- **Meeting Contact:** Rodolfo Barba, CPE
  - rodolfobarba1@gmail.com

**PENNSYLVANIA (CONTINUED)**

### OHIO
**Buckeye #27**
- **Where:** Varies
- **Where:** Virtual
- **Website:** n/a
- **Meeting Contact:** Matt Burress, CPE
  - mburress@performanceservices.com

**Southwestern Ohio #38**
- **Where:** Varies
- **Website:** aspe-cincinnati.org
- **Meeting Contact:** Dan Frondorf, CPE
  - dan@dgfrondorf.com

### OREGON
**Columbia-Pacific #54**
- **Where:** Varies
- **Website:** n/a
- **Meeting Contact:** Steve Watkins
  - steve.watkins@bnbuilders.com

### TEXAS
**Houston #18**
- **Where:** Varies
- **Website:** n/a
- **Meeting Contact:** Larry Lucero, CPE
  - llucero@redlineinsulation.com

### UTAH
**Great Salt Lake #51**
- **Where:** Virtual
- **Website:** na
- **Meeting Contact:** M. John Shampton, CPE
  - mjohnshampton@gmail.com

### VIRGINIA
**Richmond #82**
- **Where:** Varies
- **Website:** aspe-richmond.org
- **Meeting Contact:** Sid Bass, CPE
  - sbass@reynolds.edu

### WASHINGTON
**Puget Sound #45**
- **Where:** Varies
- **Website:** na
- **Meeting Contact:** Eric Benton
  - Eric.benton@pmsvs.com

### WISCONSIN
**Brew City #78**
- **Where:** Varies
- **Website:** na
- **Meeting Contact:** Matt Washkowiak, CPE
  - mattwashkowiak@camosy.com

### Please Note:
Information is subject to change. Report changes in your Chapter’s information with an email to Tina@ASPEnational.org
The industry standard for search!

Exclusively for commercial construction professionals, like you!

- Quick & easy **access to the nation’s largest database** of qualified commercial construction professionals
- Find exactly **who** you need, **where** and **when** you need them
- Always available, **always up-to-date**

TheBlueBook.com/ASPE
(844) 617-2478
ASPE CORE VALUES

EDUCATION:
ASPE educates and mentors professional estimators for the sustainability of the construction industry.

PROFESSIONALISM:
ASPE promotes the lifelong pursuit of excellence and credibility in professional estimating.

FELLOWSHIP:
ASPE develops a fellowship of professional estimators that connects and leads the construction industry.

ASPE CORE PURPOSE

ASPE is the construction industry’s leader and recognized authority in professional estimating through excellence in education, certification and standardization.