

AUGUST/SEPTEMBER 2008

Estimating

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AWARDS & HIGHLIGHTS

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OF OUR NEW PRESIDENT

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Estimating T O D A Y

AUG/SEPT | 2008

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Chapter #47

Albuquerque,
New Mexico

AUGUST/SEPTEMBER

Estimating T O D A Y



2008



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From the desk of
Paulette R. Rutlen, CPE, CEP
ASPE President

ASPE CORNER



»»» *The following was taken from the speech that was given at our National Convention's Awards Banquet.*

I want to thank John Stewart and the outgoing BOT for all of their hard work over the past years. In particular, I'd like to thank John for mentoring me. Although I can't fill his shoes, at least I feel better about stepping up to this position knowing he will continue to be there – as a mentor, advisor, and friend.

There are three things I want to stress: possibility, professionalism, and passion.

I am happy to report that the future is bright and full of possibilities for our ASPE because of our membership. Without you and your passion for our ASPE, we are nothing. It is the individual member in our Society that has allowed us to succeed. You attend meetings, volunteer your precious time, bring in new members, and promote our Society.

Thanks to our membership we have reached a new period of growth. We currently have over 2,900 members, more than we have ever had at any other time. In this coming year we have the very real possibility of reaching a national membership of well over 3,000. Our long range plan was to grow by another 500 members in less than five years. This has become a real possibility, but only you, the members, can achieve this goal by using your passion for ASPE to recruit and mentor members. I am asking each of you to help us continue to offer value by helping us with the work that needs to be done.

One of the values our ASPE can provide to our members is to inform them of the changes in our industry that will impact all of us. Our Society is engaged in dialogues with the organizations in our industry that are breaking new ground with profound innovations such as Building Information Modeling, Interoperability and the like. I have asked Frank Kutilek to chair the Industry Awareness Committee and I am proposing that we staff this committee with those individuals in our society who are truly pas-

sionate about this new technology and the possibilities that it offers us. This committee will report to the membership regarding these developments in our industry and interact within these organizations to give voice to the needs of the estimator as this technology is being developed. This effort affords us the possibility to position our ASPE as a leader among those groups setting the standards for the future of our industry.

I am establishing a new committee to address **Sustainability**. This committee's purpose is to determine how LEED affects our ASPE membership. This committee will examine how they can help the membership in responding to any challenges the greening of buildings and construction practices may present. They will work with the Standards, Certification, and Education Boards to incorporate this information into our programs. Further, our ASPE has been going green and will continue to pursue all areas of conservation. I would like the Sustainability Committee to make their recommendations to the BOT for additional ways for us to improve our efforts in the greening of our ASPE.

We have a tremendous depth of talent within our organization. We need to find every opportunity to demonstrate the high level of professionalism we have in our Society. Therefore, I have asked Bob Pratt to chair the new **ASPE Speakers Bureau Committee**. By calling upon this pool of talent we will be able to offer our ASPE as a source for keynote speakers and presenters to the industry. This committee will vet the individual speakers and post a list of available speakers on our website. These individuals will not be required to speak about ASPE, but rather they will speak on topics in their area of expertise. However, we will ask them to prominently represent themselves as members of ASPE. Again, this is one of the many opportunities available to us to raise our visibility and to become regarded as the premier organization to turn to for discussing construction costs.

Last year the BOT developed a Long Range Plan that was published in our magazine, Estimating Today. We will continue our efforts this year by creating a Strategic Plan. We need our Strategic Planning Committee to assist the BOT by monitoring the progress we make toward accomplishing our goals and reporting to the President each year.

Our Certification program is unique in the industry. We are the only national association offering certifications in building construction estimating by discipline. We currently have certifications available in most of the major trades. Every year we continue to expand the number of trades for which we offer certification. I am proud to announce that we have passed the first hurdle in gaining accreditation of our Certification program. We have received notification from the Council of Scientific Specialties Boards that our certification program has been granted provisional accreditation. The Certification Board has to provide further documentation in the next year and then we should be granted full accreditation. Accreditation will give our program the authority of professionalism that it so deserves.

Our industry is suffering from a severe shortage of qualified individuals in all areas. Fortunately, some of our chapters are involved with encouraging students to pursue careers in the construction industry, as well as funding scholarships. But we need to be developing a national campaign to recruit young people, to instill our passion in them and to mentor them in their careers. I will be reviving our National Scholarship Program to assist students in construction related programs. To accomplish this I have asked John Stewart to chair a new **Scholarship Committee** to go about reinstating our national Scholarship Award. We will need corporate sponsorships as well as chapter and individual donations to build-up the Scholarship Fund again. I will be asking the BOT to consider committing an amount each year from any money left over at the end of the year, because I truly believe that the education of each succeeding generation is vital to our industry and to the success of our nation.

Our ASPE offers estimators education and certification to help them to be the best in the industry. The Education Board's Estimating Academy, is considered to be one of the best educational events in the country. Our online estimating classes continue to grow in attendance every year and I see this as a tremendous value to those with a desire to learn about our industry and advance their careers. I will continue support the expansion of both of these programs.

In case you missed it, the Standards Board is pleased to announce that the 7th Edition of our manual of Standard Estimating Practices is now available. I wish to thank this Board for picking up the ball and getting the job done. We will continue to encourage and support the continued development and improvement to this publication, just as we will continue to make improvements to the Estimating Today magazine. I have proposed that we have a focus topic for each month.

Since I am the first woman president of our ASPE, this month's focus is on women in construction. There are many talented women in our industry and in our ASPE and I hope to see more of them taking a leadership role in our ASPE. I would also like to see us publish at least one technical article each month.

We have three publications that should be representative of our ASPE. They are our Standards, Estimating Today, and our website. If we are to continue to grow, we must have a national website that reflects our professionalism. I am sorry to say that today, that is not the case. While our long range goal is to have a website second to none, I am making this become our first goal. The generations 'X' & 'Y' are motivated differently than we were. If we are to attract the next generation of estimators, we must be able to communicate with them in a manner to which they will respond. That will be through this electronic medium. It is why our online classes have been so successful. It is, and will continue to be, the key to our communications with our membership in the future.

Last year I wanted us to do an updating of our Bylaws. Unfortunately, there were a lot of other things that needed our attention and we were unable to get the rewrite done. We need a rewrite of our Bylaws for the 21st Century. I am asking for volunteers to help complete this task.

Next year our convention will be held in St Louis. The focus at that convention will be on Building Information Modeling. We will be adding a day to the convention so members can attend the educational speaker sessions and go to operational workshops. Soplanon attending and bring your co-workers. It should be a wonderful event.

We face so many challenges in the next few years: rising costs, shortages in the labor force, developments in the use of technologies such as BIM, and the greening of American business, to name a few. Will BIM really deliver all that we hope it will? What other fascinating developments in technology await us? All of these factors will create both difficulties and opportunities for our industry. How will we reduce or off-set our carbon footprint? How will we cope with the rising cost of oil? These are challenges we must conquer in order to survive.

Despite the vagaries of the economy, I believe ASPE's future to be bright. We have spent the past fifty years positioning ourselves to be the experts and setting the standards for construction cost estimators in the United States. We have the ability to provide the industry with what they need most: estimators trained to a standard of professionalism second to none.

Passion is why most of you are members of our Society. You have a passionate interest in our industry, a passion for your profession, and a passion for our ASPE. The passion of our predecessors is what has sustained our Society for the past fifty-two years. We must not let that flame of passion die out. Like the torch of liberty it must be passed on from one generation to the next. Your passion for our ASPE is what will keep this organization alive, and our ability to instill that passion in the next generation is what will make our society endure. 



“Since I am the first woman president of our ASPE, this month's focus is on women in construction. There are many talented women in our industry and in our ASPE and I hope to see more of them taking a leadership role in our ASPE.”



about **ROBERT**
W. O'HARA
CPA/PFS, MST



Bob O'Hara, CPA/PFS, MST is the owner of O'Hara & Company, PC. He is a financial planner and exit planning advisor who works exclusively with business owners and as a business owner himself; he understands the unique issues they face. Bob founded O'Hara & Company, PC in 1995.

Prior to owning his own firm, Bob was a Senior Manager for KPMG, LLP and worked with companies ranging from start-ups to some of the largest corporations in the world. Bob brings the lessons that he learned from all of those companies to his exit planning practice.

Bob earned his Bachelor's degree in Business Administration from New York University and a Master's degree in Taxation (MST) from Bentley College. He is a licensed CPA in Massachusetts and New Hampshire and has been accredited with the Personal Financial Specialist (PFS) designation by the AICPA. Bob is a member of the AICPA, MA Society of CPAs and NH Society of CPAs. He is also a member of the Financial Planning Association and the Personal Financial Planning Section of the AICPA.

Bob has his General Securities license, an Investment Advisor license, and an Insurance Brokers license in Life, Health, Disability, and Long-Term Care Insurance. He is a Registered Representative with US Wealth Advisors, LLC, and an Investment Advisor Representative of US Financial Advisors, LLC (USFA), a SEC-Registered Investment Advisor.

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Exit planning: take realistic strategies today to secure your tomorrow

By Bob O'Hara

A recent nationwide survey of construction owners indicates that an estimated 24% of all contractors/small construction company owners intend to opt out of their business within the next five years, either through an internal transfer or outright sale. Of that significant number, 50% of those responding were unsure or unaware of techniques for transferring or selling ownership; not surprising as transfer or sale can take up to a decade to transpire and requires a comprehensive action plan.

When it comes right down to it, there are but five ways for owners to leave their companies: sell to a third party, sell to a family member, sell to key employees, die owning the business or liquidate the company.

For those in the beginning stages of an exit plan, consider that leaving your company is a process that, if it is to be successful, requires a written plan. This documented strategy should set your exit objectives – financial and otherwise – and detail how you will achieve those goals.

Your written plan will greatly benefit from a checklist that assigns responsibility for all tasks that must be completed throughout the exit plan process. This vital directory should also set a date for task completion and designate parties responsible for completing each task.

No matter how skilled or experienced a business person you are, executing an exit plan is not something that should be done solo. If you opt to go it alone, chances are you will leave a lot on the table – in terms of money, time and perhaps even your emotional well-being. A successful exit plan involves a number of elements – legal, financial, tax, to name a few. It is in your best interest to hire an experienced team of professionals, including an attorney, CPA and financial advisor to assist you through the exit plan process.

In order to select an exit path, you must identify your most important objectives, both financial and non-financial. Internal and external considerations impact an owner's choice of exit. An example of an interior consideration is the owner who wants to transfer the business for cash, but is unwilling to place his established company and the fates of his employees to an unknown third party; in this case he/she may decide that an Employee Stock Ownership Plan or carefully-designed sale to a key employee or group of employees is most suitable. Exterior considerations that may impact the choice of exit path include business, market or financial conditions. If selling "right now" is not necessary, a business owner may opt to wait it out a couple years to avoid dealing with an anemic market.

For many business owners, the answer to the following key

questions determines if and when they will transfer or sell – how much is my business worth and what is its marketability? An experienced appraiser active in the merger and acquisition marketplace can give you an accurate answer, largely based on your company's financial statements.

The importance of financial statements cannot be overstated when going through the exit plan process. Whether you intend to transfer your business to someone within the company or sell to a third party, demonstrating financial stability is a crucial step in establishing a successful exit.

The CPA or other financial advisor you retain must determine your company's current situation, which will require the review of business tax returns for a minimum of the past two years. Current financial statements of the business must also be evaluated. Financial statements provide a clearer picture of your current financial position, in effect gauging what has already been accomplished and what still needs to be completed to create a successful exit plan.

These all-important statements provide cash flow information, which is used to determine the value of your business and the price it may be sold for – they show historic earnings, cash flow results and trends that have been established over the years, in effect creating an indicator of the company's financial future. If you plan to sell your business during the first half of 2009, you should have cash flow projections for the remainder of that year, in addition to the years 2010 through 2013. Understand that these projections must be grounded in the reality of past actual performance, rather than your rosy hopes for the future.

Retaining the services of a valuation specialist will provide you and your advisors with a good idea of what your company is worth. Regardless of whether an exit plan revolves around an internal transfer or ownership or sale to a third party, an

independent valuation provides a solid basis for planning. The last thing you want is to spend time and money planning your exit, only to discover that the value of your company can not support the exit, either financially or time wise.

Evaluating various tax consequences is also paramount to choice of exit plans. This assessment will include several factors, such as the form of business entity as well as any changes that must be made.

For those seeking to outright sell, there are both advantages and disadvantages to dealing with a third party. On the plus side, if the business is properly prepared for sale, you can get cashed out – in other words, you can get the majority of your money at closing. Immediate cash translates into less risk down the road. But if this important detail is not part of your sales contract with the new owner, you will be at a disadvantage. Bottom line is you want to receive the bulk of the purchase price in cash at closing. Another advantage – if the market is "hot" for your business, you may be pleasantly surprised with receiving more cash than anticipated. As with most things, timing is everything when selling a business.

One significant disadvantage to selling to a third party is more emotional than monetary. Regardless of what the buyer says, the personality and culture of your business will undergo a radical change. Maintaining the culture and core essence of a business is normally best achieved by selling to someone other than an outside third party.

Ultimately, your exit plan must integrate your exit desires – when you want to leave, how much money you want for the business and who you want to own the business. With the proper guidance and a firm grasp on realistic expectations, your exit plan could be the start of something very good – for your future and your employees'. ■



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HOW TO ESTIMATE the COST

OF FIRE ALARM CONDUIT AND WIRE

Candidate No.306049
Date Written: May 2006

Lisa Bacon is from Toledo, Ohio. She received a BA in Communications from the University of Toledo. She moved to Denver in 1990. After arriving in Denver, Lisa worked part time at a home remodeling business. Then an opportunity came to join Bonfil's Blood Center as a Bone Marrow Donor recruiter. Lisa believed she could better utilize her communication degree there. She enjoyed that for several years, but missed working with her hands, so she went back to construction.

Ms. Bacon realized she needed to made construction a legitimate career choice and entered an electrical apprenticeship program. Lisa went to work for Sturgeon Electric toward the end of her apprenticeship and remains there today. Sturgeon trained her in electrical estimating and she now holds an estimating position in the construction division at Sturgeon's Denver offices.

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INTRODUCTION

This paper will give the reader an understanding of the steps to take to estimate conduit/raceway and wire/cable for a fire alarm system. The particulars of the installation of fire alarm devices/appliances will not be covered in this paper. The types of devices are noted only because they determine the wiring requirements.

Main CSI Division – Division Sixteen (16) “Electrical”
Subdivisions- Section 161100 - Raceways
Section 16120 - Wires and Cable
Section 16700 - Fire Alarm

BRIEF DESCRIPTION

The NFPA definition of a fire alarm system is as follows: “A system or portion of a system consisting of components and circuits arranged to monitor and annunciate the status of fire alarm or supervisory signal initiating devices and to initiate appropriate response to those signals”.¹ In order to meet this definition, fire alarm system installation must meet the National Fire Alarm Code, NFPA 72 requirements.

A fire alarm system detects fire conditions, notifies building occupants and /or emergency personnel, and provides control functions. There is a difference between fire alarm systems and other electrical systems.

A fire alarm system monitors its field wiring and devices for operation readiness. In an electrical system, a broken wire goes unnoticed until it is needed. A fire alarm system monitors itself for broken or damaged wires, shorts, grounds, and malfunction of any devices. Any problem generates a visual or audible trouble signal. This functionality makes the proper installation of the fire alarm system's field wiring important to the successful installation of an operational system.

Most fire alarm systems are composed of FACP (fire alarm control panel or brains which monitors all the circuits for trouble), initiating devices and circuits, notification devices and circuits, power supply, and auxiliary control functions and circuits.

A fire alarm system is one of a number of "special LV (low voltage) systems" that are in Division 16000 of most specification books. Fire alarm wiring or cabling specifications are usually manufacture and application driven. It's important to understand the type of building and the manufacturer's wiring requirements. This will help in determining the type of wire or cable to be used and the method of installation.

TYPES OF MEASUREMENT USED

A fire alarm system's conduit/raceways and wire/cable is measured with counts/quantities and measurements/lengths. The devices, junction boxes, conduit connectors, couplings, and supporting straps are all determined by counting and determining quantities. The conduit and the wire are measured in length or feet. The length can be determined by using a measuring device such as an architectural ruler, digitizer, or a rotometer to determine the lengths or distances between two or more devices from the plan drawings/blue prints. When taking measurements be aware of the scale noted on the blue prints and make sure the same scale is used with the measuring tool when determining lengths.

Calculations, ratios, and /or assemblies are a useful tool to use while determining lengths of conduit and wire. With an added calculation, ratio, or an assembly one can incorporate a counted or quantity item that pertains to the length. An example of this would be for every 10' of conduit the estimate will need one coupling, or for every 8' of conduit and wire you may need a supporting device like a strap, anchor and a screw.

FACTORS EFFECTING TAKE-OFF AND PRICING

Some factors that may affect a pricing and take off are: type of project; building height; extreme weather; scheduled overtime; abnormal project durations; abnormal work schedules; shortages of qualified electricians; and/or project location (NECA Manual of Labor Units) The weight of material, performance of general contractor, whether the wiring is concealed or exposed, and installation in a new or existing building are all also things that may affect pricing.

Small quantities vs. large quantities

As in most construction jobs, smaller jobs require more time and cost per unit. Small jobs have higher percentage of overhead than a large job. On smaller jobs employees mobilize and demobilize more often and are doing many different types of installation. On larger jobs, a team can be assigned to one system. Employees doing the same type of installation for a couple days increase their efficiency. Commodities too can be less expensive when bought in larger quantities.

Geographic Location

Geographic location may pose a factor. Commodities and labor prices may differ depending on geographic location. Local codes and "authority having jurisdiction (state electrical board, and local fire department)" would also be something that may affect the type of installation.

Seasonal Effect

In general seasonal changes would have minimal effect on the installation process Fire Alarm systems are usually installed inside a structure. The structure is sometimes enclosed before the fire alarm system is installed. However, extremely cold temperature's should be avoided when installing fire alarm wire (check manufacturers rating). Some wire's insulation may become brittle and crack or damage if installed in extreme temperature.

OVERVIEW OF LABOR, MATERIAL, EQUIPMENT, INDIRECT COSTS, APPROACH AND MARK-UPS

The following is an example of how to estimate (take off) a fire alarm system conduit and wire. The take-off or quantitative survey is based on the sketch in section 8 of this paper. Most companies use a computer estimating program that will calculate hours and material costs once the quantitative survey or take off is input. I used a program called ACCUBID to generate my take off pricing sheets. (See sections 9 through 11 of this paper)

The estimate should be taken off in a logical order. That logical order should become a routine and the order should be adhered to for every estimate. A step by step procedure will help eliminate most common mistakes. In this way no material or labor is overlooked or left out. After completing an estimate it's a good idea to have another person do a quick review of the documents and the take off sheets. Sometimes a new eye may be able to spot any glaring omissions or data entry errors.

Methods and Materials Used

The first task is to read the specifications and review all of the project documents, including the mechanical and architectural drawings. The architectural drawings will help determine elevations and building construction. The mechanical drawings may have a motor, a damper, or duct detector that's not on the electrical drawings.

Section 16700 is usually the fire alarm section of the specification. This section should include the manufacturer's product information and will sometimes include information on the wiring /cable type, size (AWG- American wire gauge)

The NEC (National Electrical Code) states that only copper solid or stranded wire is to be used. NEC also mentions the minimum wire gauge/size of 18AWG.

Installation methods, such as Class A (4 wire) or Class B (2 wire) wiring method should also be noted in this specification section. If this information is not there, refer to specification sections 16110 "raceways" and 16700 "wire and cable". General wire types, applications, and installation requirements should be mentioned in these sections also.

Some jurisdictions and manufacturers allow FA cable to be installed "wild" without a raceway or conduit. If cable is to be installed in this manner it will be noted in the specifications. The cable used in this application needs to be rated as such and is usually supported at shorter intervals. Supporting distances are usually addressed in the specifications.

Before taking off FA conduit and/or wiring, the fire alarm devices should be counted and identified. Care must be taken to distinguish the initiating devices from the annunciating or notification devices. Initiating devices are input devices such as smoke detectors; fire pull stations, ionization smoke detectors, photoelectric smoke detectors, fixed temp thermal detectors, rate of rise detectors, duct smoke detectors, valve-tamper switches, and water flow switches. Initiating devices, after identified and counted, are then wired and most often looped/daisy chained together.

The annunciating or notification devices are output devices such as audio or visual horn and strobes. After identifying and counting the annunciating devices, they are also then piped and wired together often in a looped/daisy chain. The annunciating devices may also require a different size wire than the initiating devices which is usually larger.

Care must also be taken to distinguish between Class A and Class B circuiting. The wiring circuit method should be addressed in the specifications. Class B circuits will usually require only two wires. Class A circuits will require 4 wires (the additional wires are installed back to the panel from the last device on a loop).

As mentioned earlier, most fire alarm wiring must be daisy-chained which is wiring from one single device to the next single device. When doing the take off, lengths should be measured with this in mind. T-taps are usually not allowed, but some addressable systems may permit them. **It is important to refer to and follow Manufacturer's Instructions.** ²

After all the devices are counted and identified, the amount of conduit and wire needed should be determined. The junction boxes and/or back boxes and supports should be incorporated with the devices. It's easier to include the boxes and supports while counting the devices and then build an assembly.

The next step is to locate the FACP (Fire Alarm Control Panel). The fire alarm conduit and wire will originate at the FACP. Using a scale, digitizer, or rotometer measure the lengths of conduit and wire that come from the panel. Start at the panel. Then use a scale, digitizer, or rotometer to determine the distance to the first initiating device or annunciating device. Don't forget to include the conduit and wire needed to get up to the ceiling.

Keep in mind that circuit lines shown on the plans represent only the horizontal portion of the circuit run. To accumulate the vertical runs or distances into the system the architectural drawings showing the elevations of the various floors and ceilings of the building should be referenced. Run the conduit straight, parallel and perpendicular to the building lines. This is how it will be installed in the field. Keep measuring or scaling and counting until the loop or circuit for the initiating devices is completed. The specifications and/or manufacturers installation requirements will determine the amount of devices on a loop or circuit. The counts in between devices are used to determine conduit connectors and additional make-up wire in each device junction box, which again can be incorporated with the use of an assembly.

The next step is to take off conduit and wire to all the annunciating devices in a similar manner. Install the conduit and wire for the annunciating devices on a loop or circuit of their own. Again the number of devices per loop or circuit will be noted in the specification and/or manufactures installation instructions. Double check the proper number and size of cables or wires. Notification devices sometime require larger gauge of wire than the initiating devices. Care must be taken to include length of the conduit and wire that will go down the wall to notification devices such as horn/strobes.

All conduit and wire should include extra measurements for any changes in elevation (down walls, between floors, etc.) Elevation changes increase the total footage of conduit and wire. In addition to the distances for elevation changes, wire needs to include additional lengths for terminations. Each time wire enters and leaves a device, junction box, or panel, make up wire is required. Usually about 6" of wire is required for make up in a junction box. (NEC 2005) More than 6" of make-up wire is usually needed at the FACP panel for terminations. Three to six feet should be sufficient for panel make-up.

Finalization is completed once all of the direct cost of the material and labor is determined with the take-off / quantitative survey. When determining overhead, markup, and indirect labor or supervision, it is vital to have a proper understanding of the whole scope of work. Items such as location, available labor force, abnormal scheduling, taxes, access to the job site, and any equipment needed for the installation that wasn't included in the direct costs should be addressed and be included when determining these finalization costs.

SPECIAL RISK CONSIDERATION

Perhaps the biggest risk would be a lack of understanding of the scope of work and/or the specifications, therefore using the wrong material and/or installation methods. Another problem would be not having the architectural drawings and knowing little about building material, structure, and ceiling heights. This may cause the bid to be too high or too low. And winning a low bid that did not include enough labor and/or material would affect profits. Safety and housekeeping practices may always be a concern too.

RATIO AND ANALYSIS

Actual historical data should be used where possible to compare estimates with the same type of scopes of work. Ratios are also a good check to determine variances. When putting an estimate together ratios should not be used exclusively to prepare a total estimate. Ratios are no substitute for accurate company and job specific historical cost data. Accurate material cost can always be determined from a local vendor. Estimators should make labor productivity rates unique to the job. Companies and different crews may also have unique labor productivity rates. Even though national labor rates are established and available from several published sources (NECA), they should be used as a reference only and not a substituted for your own historical data.

RATIO AND ANALYSIS cont.

UNIT PRICES A QUICK BUDGET

Unit prices from historical data or a quick calculation off the job at hand can also be used for a check of magnitude. For example each fire alarm device may be counted and an average amount of conduit and wire can be determined. Assign a total dollar amount that includes all the material and labor per device. The devices are then totaled and the figure is multiplied. Be sure to include overhead and markup in this equation too.

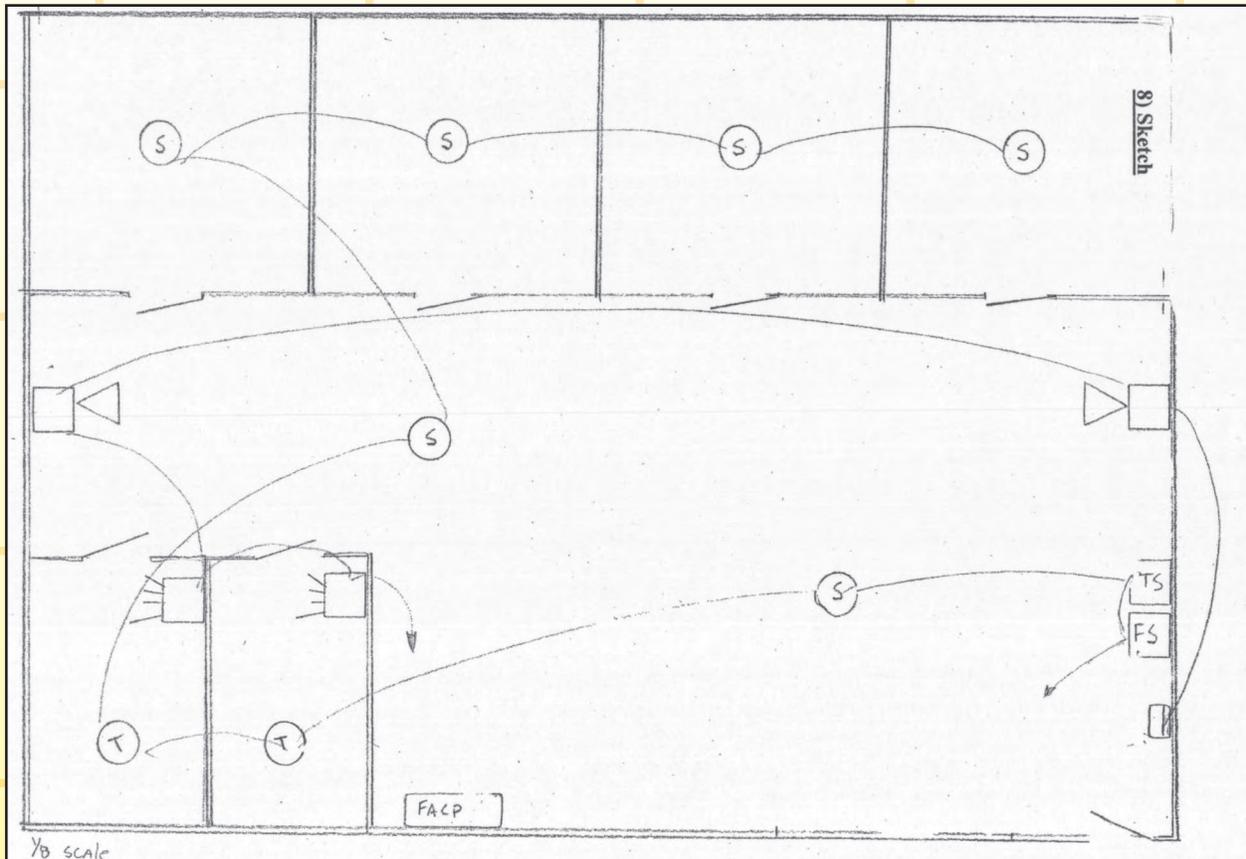
POST PROJECT ANALYSIS

As an estimator, post analysis is important to future bids. Determining what should have been included and what was overlooked will be valuable information to apply to an estimator's future bids. This information helps the estimator sharpen his/her skills. Learning what to watch for and what questions to ask makes the bid process less risky for a seasoned estimator.

MICELLANEOUS INFORMATION

For the above estimating (take off) for fire alarm system conduit and wire, I've included: #8- A sample plan sketch; #9 a copy of the audit trail (counts and lengths taken from sketch); #10 all the items in each assembly of the audit trail; and #11 take-off pricing sheet (total direct labor and material for the plan sketch (#8)). Most companies use a computer estimating program that will calculate hours and material costs once the quantitative survey is input. I used a program called ACCUBID to generate these take off pricing sheets.

SKETCH



AUDIT TRAIL

ASPE Fire Alarm Take-off			
	Audit Trail Description	Length	Count
1	1/2" EMT CONC T-ROD	228	10
2	1/2" EMT CONC T-ROD Notification	205	5
3	PULL STATION STUD WALL		1
4	SMOKE DETECTOR SUSPEN CEIL		6
5	RATE OF RISE DETECTOR		2
6	F/A-HORN/STROBE STUD WALL		2
7	F/A STROBE LIGHT STUD WALL		2
8	DOOR HOLDER IN DOOR HDWE		1
9	TAMPER SWITCH		1
10	WATER FLOW CONTACT		1
11	F/A 12 ZONE CONTROL PANEL		1
12	1/2" EMT CONC T-ROD	50	1

ASSEMBLIES OF AUDIT TRAIL

Project Name: Fire Alarm; Bib Summary: Default 5/17/2006 5:36:10 PM
1

(1) 1/2" EMT CONC T-ROD
 <Fire Alarm || Fire Alarm> <E-1> <MAIN BULDING> <10 || 1ST FLOOR> <32 || Connect Equip. By Others> <Pipe and wire> <STANDARD>
 Length = 228.00 Count = 10.00

228) 1/2in EMT
 20) 1/2in EMT STL SS CONN
 23) 1/2in EMT STL SS CPLG
 29) 1/4in SCREW ANCHOR
 86) 1/4in PLATED T-ROD
 29) CDOB 1/2in MINERALLAC
 57) 1/4in HEX NUT (PLATED)
 228) #16- 1P AWM-105 (FA) CABLE
 10) #16- 1P AWM-105 (FA) CABLE
 20) #16 WIRE TERM-CONTROL

(2) 1/2" EMT CONC T-ROD Notification
 AIN BULDING> <10 || 1ST FLOOR> <32 || Connect Equip. By Others> <Pipe and wire> <STANDARD>

205) 1/2in EMT
 10) 1/2in EMT STL SS CONN
 21) 1/2in EMT STL SS CPLG
 26) 1/4in SCREW ANCHOR
 77) 1/4in PLATED T-ROD
 26) CDOB 1/2in MINERALLAC
 51) 1/4in HEX NUT (PLATED)
 205) #14- 1P AWM-105 (FA) CABLE
 5) #14- 1P AWM-105 (FA) CABLE
 10) #14 WIRE TERM-CONTROL

(3) PULL STATION STUD WALL
 AIN BULDING> <10 || 1ST FLOOR> <32 || Connect Equip. By Others> <Devices> <STANDARD>

1) PULL STATION
 1) 4in SQ BOX 2-1/8 D COMBO
 1) 4in SQ 1G PL-RING 3/4
 1) H23 QK/MTD BOX SUPP

(4) SMOKE DETECTOR SUSPEN CEIL
 AIN BULDING> <10 || 1ST FLOOR> <32 || Connect Equip. By Others> <Devices> <STANDARD>

6) SMOKE DETECTOR
 6) 4in OCT BOX 1-1/2 D 3/4 KO
 6) T-BAR BOX HANGER

(5) RATE OF RISE DETECTOR
 <Fire Alarm || Fire Alarm> <E-1> <MAIN BULDING> <10 || 1ST FLOOR> <32 || Connect Equip. By Others> <Devices> <STANDARD>
 Length = 0.00 Count = 2.00

2) RATE OF RISE DETECTOR
 2) 4in SQ BLANK COVER
 2) 4in SQ BOX 2-1/8 D COMBO
 4) #6-10 PL ANCHOR (3/16)

(6) F/A-HORN/STROBE STUD WALL
 <Fire Alarm || Fire Alarm> <E-1> <MAIN BULDING> <10 || 1ST FLOOR> <32 || Connect Equip. By Others> <Devices> <STANDARD>
 Length = 0.00 Count = 2.00

2) F/A-HORN/STROBE

10) Assemblies of above Audit Trail

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Description	Qty	Price	U	Disc	Net Price	Labor	U	Total Mat(\$)	Total Hours
1 1/2in EMT	483	60.35	C	55.00	27.16	2.93	C	131.18	14.15
2 1/2in EMT STL SS CONN	32	111.48	C	80.00	22.30	5.80	C	7.14	1.86
3 1/2in EMT STL SS CPLG	49	147.93	C	50.00	73.97	0.00	C	36.25	0.00
4 3/4in PLASTIC BUSHING	2	28.58	C	20.00	22.86	3.00	C	0.46	0.06
5 1/2in ALUMINUM FLEX	9	42.14	C	40.00	25.28	30.00	M	2.28	0.27
6 1/2in STR FLEX CONN	6	232.50	C	34.00	153.45	10.00	C	9.21	0.60
7 B1-1 YELLOW WIRE CONN	4	10.89	C	10.00	9.80	5.00	C	0.39	0.20
8 4in OCT BOX 1-1/2 D 3/4 KO	6	303.41	C	50.00	151.71	22.00	C	9.10	1.32
9 4in SQ BOX 2-1/8 D COMBO	6	525.42	C	73.00	141.86	23.00	C	8.51	1.38
10 4-11/16in SQ BOX DEEP COMBO	4	633.71	C	55.00	285.17	25.00	C	11.41	1.00
11 4in SQ BLANK COVER	5	122.60	C	66.00	41.68	2.50	C	2.08	0.13
12 4in SQ 1G PL-RING 3/4	1	230.39	C	76.00	55.29	2.50	C	0.55	0.03
13 4-11/16in BLANK COVER	2	220.03	C	60.00	88.01	2.50	C	1.78	0.05
14 #6-10 PL ANCHOR (3/16)	10	9.66	C	10.00	8.69	5.00	C	0.87	0.60
15 #10-12 PL ANCHOR (1/4)	4	9.81	C	10.00	8.83	7.00	C	0.35	0.28
16 1/4in SCREW ANCHOR	61	19.85	C	10.00	17.87	8.00	C	10.90	4.88
17 1/4in PLATED T-ROD	182	75.50	C	55.00	33.98	2.50	C	61.84	4.55
18 1/4in HEX NUT (PLATED)	121	2.79	C	25.00	2.09	2.00	C	2.53	2.42
19 1inx8 S-TAP SCREW	4	6.30	C	25.00	4.73	2.50	C	0.19	0.10
20 1inx10 S-TAP SCREW	10	8.99	C	25.00	6.74	2.50	C	0.67	0.25
21 MSF M/STUD BOX SUPP	2	61.17	C	22.00	47.71	5.00	C	0.95	0.10
22 H23 QK/MTD BOX SUPP	3	96.77	C	22.00	75.48	5.00	C	2.26	0.15
23 CD0B 1/2in MINERALLAC	61	29.48	C	22.00	22.99	6.00	C	14.02	3.66
24 T-BAR BOX HANGER	6	471.93	C	22.00	368.11	12.00	C	22.09	0.72
25 #16 WIRE TERM-CONTROL	22	0.10	E	0.00	0.10	0.07	E	2.20	1.54
26 #14 WIRE TERM-CONTROL	10	0.15	E	0.00	0.15	0.08	E	1.50	0.80
27 PULL STATION	1	25.00	E	0.00	25.00	0.40	E	25.00	0.40
28 SMOKE DETECTOR	6	25.00	E	0.00	25.00	0.50	E	150.00	3.00
29 F/A-HORN/STROBE	2	25.00	E	0.00	25.00	0.65	E	50.00	1.30
30 DOOR HOLDER IN DR HDWE	1	25.00	E	0.00	25.00	1.40	E	25.00	1.40
31 WATER FLOW CONTACT	1	25.00	E	0.00	25.00	0.70	E	25.00	0.70
32 TAMPER SWITCH	1	25.00	E	0.00	25.00	0.80	E	25.00	0.80
33 F/A STROBE LIGHT	2	25.00	E	0.00	25.00	0.70	E	50.00	1.40
34 RATE OF RISE DETECTOR	2	25.00	E	0.00	25.00	0.40	E	50.00	0.80
35 F/A 12 ZONE CTRL PANEL	1	500.00	E	0.00	500.00	8.00	E	500.00	8.00
36 #16- 1P AWM-105 (FA) CABLE	289	409.86	M	0.00	409.86	5.70	M	118.45	1.65
37 #14- 1P AWM-105 (FA) CABLE	210	350.00	M	0.00	350.00	6.00	M	73.50	1.26
Totals								1,432.65	61.80

(1) Take-off pricing sheet (total direct labor and material for the plan sketch (#8))

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TERMS / GLOSSARY

Annunciation/notification Device/Appliance- An electro-mechanical appliance that converts energy into audible or visible signal for perception as an alarm signal.

Annunciation/Notification- A visible and or audible indication.

Class A Circuit (Loop)- An arrangement of supervised initiating device, signaling line, or indicating appliance circuits that prevent a single open or ground on the installation wiring of these circuits from causing loss of the systems intended

Class B Circuit (Loop) - An arrangement of supervised initiating device, signaling line, or indicating appliance circuits, which does not prevent a single open or ground on the installation wiring of these circuits from causing loss of the systems intended

Initiating Circuit- A circuit that transmits an alarm signals initiated manually or automatically, such as a pull station, smoke, heat sensing device, when activated, causes an alarm to be initiated through an alarm signaling device.

REFERENCES

Electrical Cost Data, RSMeans, 29th Edition

Guide for Proper use of system Smoke Detectors, NEMA
(National Electrical Manufacturers Association)

NEC 2005 National Electrical Code

NECA Manual of Labor units 2004-2005

NJATC Fire Alarms Reference Text

Training Manual on Fire Alarm systems;
NEMA (National Electrical
Manufacturers Association)

1 NJATC Fire Alarms Reference Text

3 NEC 2005 National Electrical Code

2 Guide for Proper use of system Smoke Detectors, NEMA

(National Electrical Manufacturers Association)



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INTERVIEW

MARCENE TAYLOR

Principal of Cost Planning & Management, Mack5

Rising from Administrative Assistant to Principal of Cost Planning & Management – A SUCCESS STORY



In accordance with this month's theme 'Women in Construction', Estimating Today profiles one of our industry's leaders – Marcene Taylor, Principal of Cost Planning & Management at Mack5, a San Francisco Bay Area cost and project management firm. Marcene is a stellar example of how women can quickly advance through the ranks in the construction industry and be a leader while balancing family life.

ET: How did you get your start in cost estimating?

MT: I never did finish college, but I was working full time, mainly in administrative and accounting type positions. When I began working for Adamson - which later became Davis Langdon Adamson (DLA) - I was basically their "it" girl at the time, answering phones, typing estimates and providing accounting support. I had always had an aptitude for numbers and after I'd been there about six months, I was offered an apprenticeship in estimating.

ET: How did the offer of apprenticeship come about and were you aggressively pursuing that career path?

MT: Up to that point, I really hadn't considered the construction industry a potential career. But I did my job well, and I paid attention to detail, and it peaked my interest. DLA saw some potential and they offered me the apprenticeship.

Conducted by *Estimating Today* – The monthly news magazine of ASPE (American Society of Professional Estimators)

I've always loved math and working with numbers. But the really intriguing thing about estimating -- especially conceptual estimating -- is just how creative it really can be. It's not accounts payable, though there's certainly nothing wrong with that - there's just a lot more going on.

ET: So tell our readers about your apprenticeship program. What was that process like?

MT: It basically just started with one small element of an estimate -- floor finishes as I recall. Then it really became just a piece by piece, building by building, learning process. Of course, during this time I was still doing all of my administrative work for the firm as well, so my training took a while. But within a couple of years I was running all my own jobs and a lot of client contact.

ET: Tell us about your first assignments once you were running your own jobs.

MT: Actually, the projects varied quite a bit. They were mainly institutional, a lot of labs, hospitals, K-12 and university work. Most of these projects were on the smaller side and generally didn't exceed \$15M. And at this point, I was working more with very detailed drawings and not involved in much conceptual work. But after about 4 years I started to train on the more conceptual work. This was a really good way to progress.

ET: Once you had completed your apprenticeship, what other training did you pursue?

MT: I knew I needed more in terms of education and wanted a broader based background in construction. So I went to school at night and obtained a certificate in Construction Management from California State University Dominguez Hills. This was one of the most important things that I've ever done. I was exposed to how construction really works. Since I worked for an estimating firm as opposed to a contractor, I didn't have the opportunity to be directly around the construction process. Obtaining this certificate really helped me to learn about the industry as a whole.

ET: After 5+ years at DLA, you moved on to HMC. What prompted that change?

MT: You know sometimes it's just time to move on in order to advance your career. Because I had started

in an administrative position at DLA, I was always their back up and that conflicted with being able to solely concentrate on estimating.

So in the fall of 2001 I went to HMC as a Senior Cost Estimator. It was then that I had a very rude awakening as to how architects view cost! Cost estimating seemed to be a necessary evil required

by contract, versus something that could really help them do their job better. So, quite literally, the first 6 months I was there I didn't have any work!

Then I started looking for those project managers who would be receptive, and one by one, demonstrated what estimating could do for them. I showed them how we could do the early conceptual estimates, and instead of cost estimating being just a contractual requirement, how it could actually be a positive tool that could help them on their projects.

HMC has about 400 architects, so it took several years of development time to fully integrate estimating into the project process. But through these efforts, a standard procedure at HMC was implemented that no one could start a schematic design until a cost estimator had verified the scope and budget on the project. I would venture to say this additional step easily added 10% to HMC's profitability.

HMC has 10 offices, and over several years I built an estimating department that provided services for all office locations.

ET: When did you become a Certified Professional Estimator (CPE)?

MT: I had talked about getting my CPE early on as an estimator. In addition to my certificate in Construction Management, I knew that I needed additional credentials specific to my discipline. Then in 1997, shortly after moving to Las Vegas, NV, I received a call from ASPE asking me to come to a meeting and assist in forming a Las Vegas chapter.

It was there that I met some people from our national organization, and I told them then that I wanted to be a CPE. And it was soon after that I was approached about beta testing their new on-line version of CPE testing and ultimately obtained my CPE certification. That was in 2003.



The really intriguing thing about estimating - especially conceptual estimating -- is just how creative it really can be. It's not accounts payable, though there's certainly nothing wrong with that - there's just a lot more going on.



ET: How important has ASPE been to you professionally?

MT: In addition to obtaining my CPE, the fellowship I've experienced through ASPE and knowing that I have peers to whom I can pose any construction related question and receive an accurate answer is an invaluable resource!

Because of the value I have received from ASPE, I have become very involved in the organization and am personally committed to growing the organization for others. Initially, I served as treasurer for the Las Vegas chapter and eventually became the chapter president. I am currently entering my second term in that capacity. We have been able to build our Las Vegas chapter to about 40 members and by the end of this year we anticipate increasing our membership by 25%. In addition, I really enjoy the ability to give back to the community. We have established an annual golf tournament, which typically raises about \$15,000. From that we give scholarships and support the construction management programs at the local universities and colleges.

ET: So now you are a Principal at Mack5. What's different about being part of Mack5 than your previous positions?

MT: While I was at HMC, I made great strides as a cost professional but I knew that since HMC's primary business was architecture, that I would always be in a supporting role, even though I was a Senior Associate and on track to becoming a Principal.

I knew that to further advance my career, I needed to be in a firm who's primary business was cost management. So I left HMC in January of 2008 to join Mack5 as the Principal of Cost Planning & Management.

Being able to work with owners directly is invaluable! I am currently working with the County of Alameda on a \$700M Hospital Tower Replacement project. By working with the Owner directly, I am able to actually help shape how they're going to spend their money, and make sure they're getting the best value for every dollar spent. It's the ability to be ahead of design and work on scope definition and budgets that is personally rewarding for me.

ET: Are there any final thoughts you'd like to share with our readers about developing a career in the cost management field?

MT: I started estimating when my son was 8 years old. He's now in the United States Navy. So, I was very involved with him while working at the same time. But having a career in estimating provided the flexibility that I needed to balance my professional development and family life. I know other women estimators with small children also take advantage of the flexibility that this career provides in order to have balance with their families. I think estimating is a great opportunity for both men and women who want a career and need flexibility.

I'd also like to say that ASPE has given me a lot of personal satisfaction. Giving back is very important to me personally and being able to sit on the board of a non-profit has been extremely gratifying. It's enabled me to be instrumental in educational projects and mentoring opportunities. I'd very much encourage anyone to get involved and find out what membership could do for them. It's literally changed my life for the better, and I have no doubt there are others out there that could benefit the way I have.



Marcene Taylor can be reached at 510.735.7980 or mtaylor@mack5.com



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HOW DID I GET SO Lucky

Through sheer luck and circumstance I wound up with a career in the construction industry.
A career that I love.

When I was 16, my best friend, Matt, introduced me to his boss, Jack. Jack owned a small construction company in Cocoa Beach, Florida specializing in building apartment complexes and high end single family homes. He was always on the lookout for workers. Matt convinced Jack (and me) that I would be good at hanging, taping and mudding drywall. I was hired on the spot - even though I had no previous experience.

That's how it all started. – a friend helping a friend get a job for the summer.

The job was great. We worked from 6:30 to 3:30 at \$6.00 an hour. Other friends were working at K-Mart or Food World or Hardees for the minimum wage of \$1.83 per hour. (I refuse to tell you how many years ago that was!!) I was making good money, building places where people would live and still had plenty of daylight time to surf. What more could a teenager in Florida ask for?

Of course, things changed. They always do.

While I was a good drywaller, Jack decided he had a better plan for me. After high school, he sent me to a tech school to learn drafting so I could help in the office by reviewing plans and submittals, performing material quantity surveys, making bills of materials to order as jobs progressed, drawing any changes to the jobs, and some estimating. With a raise!! How lucky can one person be?

Well, the luck continued. I got married and had two children. I was even lucky enough to be able to stay at home to raise our babies. (Have I mentioned I am a woman?) After thirteen years of being a stay-at-home mom, I decided it was time for me to re-enter the workforce.



Cyndi Walker
Metro St. Louis Chapter #19

Again, luck was on my side. I started the search for a job as a drafter at architectural firms or as an estimator at general contractor offices. I interviewed at many places with no success. Then one day I had an interview at a small specialty subcontractor's office. The owner of the company was impressed that I had just completed two volunteer projects for the Girl Scouts. I had planned two separate week long events for over 600 Girl Scouts to attend. I had estimated the cost to feed, house and transport all those girls; planned and purchased supplies for activities for them; fixed the fees to charge for them to attend; and recruited and managed the other volunteers to staff the events. Nothing to do with construction, but he recognized my ability to prepare cost estimates for craft supplies, estimate the time requirements to complete several different activities, estimate quantities and cost of food for the events, plan staggered deliveries of material or food as required and communicate all those ideas to others. He offered me a job as an assistant estimator that day.

That was twenty-three years ago. I still work at the same specialty subcontractor's office – although, we aren't so small anymore. We are a Division 10 specialty subcontractor for Eastern Missouri and Southern Illinois and a national manufacturer of acoustical products. (Visit our websites www.goltermansabo.com or www.golterman.com) And, I still absolutely love what I do. How many people are lucky enough to really love their jobs?

Alphabetically (because no one duty of my job is more important than any other), my job consists of being: an architectural rep (call on architects to help them determine the appropriate products for their projects and specify and detail those products in their documents); an estimator (determine our scope of work and arrive at material and labor costs); a project manager (coordinate with general contractors and related trades, field measure jobs, produce work and fabrication tickets, purchase materials, etc.); and a sales person (preparing proposals from estimates, meeting with owners and contractors, networking within the community, etc.). Lots of different responsibilities that keep every day varied, interesting and exciting.

While I was lucky enough to fall into my career, I recommend that people actually prepare to work within the construction industry. After all, most people work 40 to 50 years of their lives – everyone should have a job they enjoy and can be proud of.

As I am so happy working in the construction industry, I also want to contribute to our industry. I developed a presentation to give throughout the area's middle schools and high schools to introduce the idea of a construction related position to the kids and to help them realize all the wonderful choices of employment there are in our industry. I also meet with disadvantaged women's groups to help them translate their "house-wife duties" into marketable skill terms to enable them to procure jobs.

Every day I still ask myself,
"How did I get so lucky?"



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THE MYTH OF

Sq. FOOT COST

Dominic J. Maltese, Jr., CPE

It is a trend in construction to use the square footage as a guide to determine the approximate cost to build a house or commercial building. This is a myth and can be very misleading. I have recently visited several custom home subdivisions to compare construction costs of subdivision homes versus an individual lot custom homes that we have built (this would, also, be relevant to commercial buildings.) From my visits and thirty two years of experience, I have discovered that one cannot compare an “apples to apples” cost of a subdivision home to a single custom home or commercial building.

We build homes and commercial buildings from the basic to the very upscale luxury. Even if you take the same home in a subdivision or commercial building that is being built on a single site, the costs increase due to the construction reduction of mass production alone; in a subdivision, homes are built in a production process that offer certain economies that are not possible when building one of the same homes or commercial buildings on a single lot.

Most of the custom/luxury homes and commercial buildings we have completed offer much more architectural detail and quality than any subdivision home or production commercial building, thereby increasing the cost. >>>

Costs are driven by many different elements. One is SHAPE, others are DETAILS, ASSEMBLY, FIT AND FINISH, MATERIALS, QUALITY and ARCHITECTURE to name a few. Examples of various costs are as follows: >>>

SHAPE

The Shape of a building has a great impact on the cost.

A square building of 30'x30' is 900 SF and 120 LF of exterior wall. A rectangular building of 18'x50' is still 900 SF, however the exterior wall is now 136 LF thereby increasing the cost of exterior walls considerably.

The same 900 SF with short walls that step in and out around the building can double the exterior wall area adding considerable cost to foundation work, framing and finishes.

DETAILS

The Details in each component of the building, both interior and exterior will impact the cost.

An exterior wall of 50'x 10' with brick would be in the range of \$ 4,000.

Add four stone window surrounds and the stone could add about \$ 1,000 per window or \$4,000, now the same wall is \$ 8,000.

Add a special shape to the stone and the stone work could double.

ASSEMBLY

The Assembly method will impact the cost.

The assembly of the various elements of the building vary drastically. An example is in the exterior walls of the homes. Most of the homes (even the larger ones) had 2x4 stud exterior walls for framing. Most of the homes we build include 2x6 stud exterior walls. This is a 50% increase in lumber just on the exterior walls.

Another item is the flooring system. Most of the homes I visited offered only a single 3/4 plywood floor over the joist. We build our homes with the 3/4 plywood deck and either 1/2 underlayment for carpet or hardwood flooring. This adds both quality and cost.

Another item is sound insulation. We insulate all interior walls for sound. This adds mass to the walls and deadens the sound and echo of drywall.

FIT AND FINISH

The fit and finish is another area that will greatly effect costs.

One example of fit and finish is in the exterior trim. Many of the homes I visited did not miter the exterior wood trim, furthermore the exterior trim was spray painted. The mitering of the trim added a quality fit look. And, the finish being sprayed on is a short term durability issue. The trim needs to be hand painted to penetrate the wood for a long lasting finish. To add an even better lifetime to the wood it should be back primed before installation.

Another example is brick work. Many of the homes I visited have mortar joints that varied from 1/4" to 3/4." This is very poor fit and finish. Mortar joints should be more consistent.

MATERIALS

The selection of materials can greatly impact the costs of the home.

One example of this is ceramic tile and marble tile. Standard ceramic tile of 4"x4" or 6"x6" can cost anywhere from \$9.00 per SF to \$12.00 per SF installed. Add a pattern and the costs can double. Likewise with marble in lieu of tile. Marble tile can cost anywhere from \$15.00 to \$22.00 per SF installed. Change this to slab marble and the cost can double.

The same is true for all materials from doors and hardware to carpet, to appliances, to brick and roofing, etc.

QUALITY

My favorite saying is "after the dust settles... all that remains is the quality" and this is very true. Quality is gauged in many ways from architecture, to materials, fit and finish and on and on. The thing to remember is you only have one chance to buy quality. It starts with the foundation and framing. If these components are not built with quality, the work that follows will not have good quality. This includes square corners, level floors, plumb windows and doors etc. Even the least expensive materials can be used in a quality home with the proper workmanship in installation. Choose your builder wisely.

OTHER PARTS OF THE EQUATION

The American Institute of Architects (AIA) has established an industry standard for cost estimating. Finished living spaces are to be estimated at 100% of the gross area. Other areas including overhangs, two story areas, porches, covered parking, basements, unfinished areas, decks, etc. are to be estimated at 50% of their value in determining the gross square footage of a building.

ARCHITECTURE

One of the most important features in a home or commercial building is the architecture. It also has an impact on cost.

An example is tudor homes. A look back at the tudor homes built in the 1970's and '80's were very basic. Today the tudor homes include more stone, curved and extended roof lines, higher roof lines, etc., all adding cost to the home that do not reflect in the square foot cost approach.

The bottom line is the square foot cost of a building can only be used as a guide and needs to encompass unfinished areas as well as finished areas and many other factors.



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Historic EVENT

By Larry L. Cockrum, FCPE – Cockrum & Associates Consulting Services

At the 2008 Annual Meeting in Baltimore, a \$1 million budget was presented for the 2008-2009 Society year. It was approved at the National Council Business Session. This is a milestone never considered as recently as five years ago. A little history/review will show how we reached this significant event.

Presidents Bob George, and John Stewart, with the dedicated support and hard work of Ed Walsh and Patsy Smith, have continued the mission of growing ASPE's visibility in the industry, maximizing member services and planning for the future growth of ASPE.

Throughout the 1990's our annual membership numbers were averaging just under twenty-three hundred.

By the late 90s the Board of Trustees concluded that with an all volunteer leadership, President through BOT, there was no one to make a concerted effort to publicize the Society. In order for ASPE to be viewed as the voice of estimators, we needed a dedicated, full-time staff member to better present us to the industry.

At the 1999 Convention in Cleveland, President Lew Finkel, FCPE, established an Executive Director Research Committee to determine duties, requirements and expectations for the position. The committee completed their work and reported at the 2000 NCBS. An Executive Director funding account was set up to build a financial reserve for the position.

At the 2001 Convention in Atlanta, President Joe Majewski, FCPE, established the Executive Director Search Committee to begin the process of advertising the position, reviewing applications, determining a short list of qualified candidates and interviewing them. The committee completed their work and recommended to the BOT the hiring of Ed Walsh. This was done in June of 2003.

At the Fall 2003 BOT Meeting, it was decided to restructure the Society Business Office in anticipation of a dynamic growth. In the following months a new Director of Administration was hired, plans were made to relocate the SBO from the eastern time zone to a more central location. Immediately after the 2004 Chicago Convention, the SBO moved to its current Nashville location.

Presidents Bob George, CPE (2004-2006) and John Stewart, CPE (2006-2008), with the dedicated support and hard work of Ed Walsh and Patsy Smith, have continued the mission of growing ASPE's visibility in the industry, maximizing member services and planning for the future growth of ASPE.

When the decision was made in 1999 to aggressively grow ASPE, our annual budget was just over \$300,000. The hiring of our Executive Director and the revamping of the SBO pushed the budget to over \$400,000 in 2004. Since the reorganization and support have been in place, membership has grown to over 2,900 at the end of 2007/2008, we assist ABC and AGC in seminars and training for their members, interact with numerous industry businesses and are sought after by many industry organizations.

As so often happens in business, a major decision is made but it takes quite a while to see the results of that decision. ASPE has been working for ten years to enhance our reputation and position in the industry and, even with all that has been accomplished, we will continue to work and grow your ASPE.

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ONVENTION MEMORIES



Joe Flemming and Don Frondorf on Cruise



Incoming President Paulette and Joe Flemming



Tom Robinson receives Chpt. President of the Year



Spouses outing *Top row lft. to rt.* Jeanette Miller, Laurie Finkel, Betty Kutilek, Susan Stewart, Claudia Alexander. *Bottom row* Tami Millard, Donna McGeehan, Rita Lese, Joyce Thomas

Photos from our July 2008 Convention in Baltimore, Maryland



Luncheon speaker and guests.



Greg Williamson Recruiter of the Year.



San Diego President receives outstanding chapter with distinction



Pres. John and wife Susan



Outstanding Chapter winners



John receives past president plaque



Larry Cockrum receives Fellow



P. Smith receives President award



Alan Skinner receives golf from Pete Zoller



Taking the oath of office



Deke Smith, Executive Director buildingSMART Alliance



Gov. Gowen opens banquet



Superior Chapter winners



Joe and Cheryl Graney on cruise



Ed Walsh receives President award

The American Society of
Professional Estimators 2008

NATIONAL AWARD WINNERS

CHAPTER MEMBERSHIP AWARDS

CHAPTER MEMBERSHIP INCREASE AWARDS BY COUNT

For chapters with LESS than 20 MEMBERS:

National Winner (with 12 new members)

Central Florida #50

CHAPTER MEMBERSHIP INCREASE AWARDS BY COUNT

For chapters with MORE than 20 MEMBERS

National Winner (with 70 new members)

Boston #25

CHAPTER MEMBERSHIP INCREASE AWARDS BY PERCENTAGE

For chapters with LESS than 20 MEMBERS

National – (with 300% increase)

Central Florida #50

CHAPTER MEMBERSHIP INCREASE AWARDS BY PERCENTAGE

For chapters with MORE than 20 MEMBERS

National – (with 275% increase)

Santa Clara Valley #55

CHAPTER RETENTION AWARDS BY COUNT

For chapter with LESS than 20 MEMBERS

Three way tie renewing all members

- **Greater Lehigh Valley #41**
- **New Orleans #9**
- **Rio Grande #40**

CHAPTER RETENTION AWARDS BY COUNT

For chapter with MORE than 20 MEMBERS

National Winner (Renewing all but one member)

Detroit #17

CHAPTER CERTIFICATION CHAIR

(LESS than 20 members)

DAN ERGLE, CPE –
ATLANTA #14

CHAPTER CERTIFICATION CHAIR

(MORE than 20 members)

FRANK HAAS, CPE –
DALLAS/FT. WORTH #43

CHAPTER MEMBERSHIP RETENTION AWARD BY PERCENTAGE

For chapters with LESS than 20 MEMBERS:

National 4 Way Tie (with 100%)

- New Orleans #9
- Rio Grande #40
- Greater Lehigh Valley #41
- Inland Empire #68

CHAPTER MEMBERSHIP RETENTION AWARD BY PERCENTAGE

For chapters with MORE than 20 MEMBERS

National Winner (with 100%) **Detroit #17**

CHAPTER MEMBERSHIP INCREASE AWARDS BY PERCENTAGE

For chapters with LESS than 20 MEMBERS

National Winner (with 300% increase)

Central Florida #50

CHAPTER MEMBERSHIP INCREASE AWARDS BY PERCENTAGE

For chapters with MORE than 20 MEMBERS

National – (with 275% increase)

Santa Clara Valley #55

CHAPTER RETENTION AWARDS BY COUNT

For chapter with LESS than 20 MEMBERS

Three way tie renewing all members

- Greater Lehigh Valley #41
- New Orleans #9
- Rio Grande #40

CHAPTER RETENTION AWARDS BY COUNT

For chapter with MORE than 20 MEMBERS

National Winner (Renewing all but one member)

Detroit #17

CHAPTER ACTIVITY AWARDS

BEST CHAPTER PROGRAM

National Winner Gold Coast #49

BEST CHAPTER FUNDRAISER

National Winner Gold Coast #49

BEST CHAPTER EDUCATIONAL ACTIVITY

National Winner Denver #5

BEST CHAPTER NEWSLETTER

National Winner San Diego #4

BEST CHAPTER WEBSITE

National Winner San Diego #4

BEST CHAPTER MEMBERSHIP RECRUITMENT/RETENTION PROGRAM

National Winner Gold Coast #49

NATIONAL CHAPTER ACHIEVEMENT AWARDS

OUTSTANDING CHAPTER

Completed 20 Activities

National Winner

- St. Louis #19
- Southwest Ohio #38
- Nutmeg #60

SUPERIOR CHAPTER

Completed 25 Activities

National Winner

- Denver #5
- Reno #12
- Gold Coast #49
- Philadelphia #61

SUPERIOR CHAPTER WITH DISTINCTION

Completed 35 Activities

National Winner San Diego #4

CHAPTER PRESIDENT OF THE YEAR

National Winner

Gold Coast #49 Chapter President, Thomas A. Robinson, CPE

FELLOW AWARD

National Winner

**Larry L. Cockrum, FCPE
Memphis Chapter #62**

The American Society of
Professional Estimators 2008

R REGIONAL AWARD WINNERS

REGIONAL AWARD WINNERS

BEST CHAPTER PROGRAM

Northwest – Reno #12

Southwest – San Diego #4

Southeast – Gold Coast #49

Northeast – Philadelphia #61

BEST CHAPTER FUND RAISER

Northwest – Denver #5

Southwest – San Diego #4

Southeast – Gold Coast #49

Northeast – Nutmeg #60

BEST CHAPTER EDUCATIONAL ACTIVITY

Northwest – Denver #5

Southeast – Gulf Coast #49

Northeast – Philadelphia #61

BEST CHAPTER NEWSLETTER

Northwest – Reno #12

Southwest – San Diego #44

Central Plains – Des Moines #73

Southeast – Gold Coast #49

Northeast – Philadelphia #61

BEST CHAPTER WEBSITE

Southwest – San Diego #4

Southeast – Gold Coast #49

Northeast – Philadelphia #61

CHAPTER MEMBERSHIP AWARDS AWARDS

CHAPTER MEMBERSHIP INCREASE AWARDS BY COUNT

For chapters with LESS than 20 MEMBERS:

Central Plains Region (Tied with 3 each)

Great Plains #35

Viking #39

Northeast Region *(Tied with 3 each)*

Maine #37

Empire State #42

Southwest Region

San Antonio #57

Northwest Region

No chapters with less than 20 members

CHAPTER MEMBERSHIP INCREASE

AWARDS BY COUNT

For chapters with **MORE** than 20 MEMBERS

Central Plains Region Southwestern #38

Northwest Region Denver #5

Southeast Region Gold Coast #49

Northwest Region Dallas/Ft. Worth #43

CHAPTER MEMBERSHIP INCREASE AWARDS BY PERCENTAGE

For chapters with **LESS** than 20 MEMBERS

Central Plains Region Buckeye #27

Northeast Region Empire State #42

Southwest Region San Antonio #57

CHAPTER MEMBERSHIP INCREASE AWARDS BY PERCENTAGE

For chapters with **MORE** than 20 MEMBERS

Central Plains Region Brew City #78

Northeast Region Three Rivers #44

Southeast Region Tampa Bay #48

Southwest Region Dallas/Ft. Worth #43

CHAPTER RETENTION AWARDS BY COUNT

For chapter with **LESS** than 20 MEMBERS

Central plains region *(Tied with one each)*

Buckeye #41

Viking #39

Cedar Rapids #74

CHAPTER RETENTION AWARDS BY COUNT

For chapter with **MORE** than 20 MEMBERS

Northeast Region *(Tied with two each)*

Three Rivers # 44

Central Pennsylvania #76

Northwest Region Golden Gate #2

Southeast Region Arkansas #33

Southwest Region Old Pueblo #53

CHAPTER MEMBERSHIP RETENTION AWARDS BY PERCENTAGE

For chapter with **LESS** than 20 MEMBERS

Central Plains Region Viking #39

CHAPTER MEMBERSHIP RETENTION

AWARD BY PERCENTAGE

For chapter with **MORE** than 20 MEMBERS

Northeast Region Boston #25

Northwest Region Golden Gate #2

Southeast Region Arkansas #33

Southwest Region Dallas/Ft. Worth #43

MEMBER SPONSORSHIP AWARDS

The following members have sponsored five or more new members in 2007-2008.

Sponsored Five (5) new MEMBERS

Juan Barroso Santa Clara Valley #55

Arthur Gudith Arizona #6

Mary Crawford, CPE, Three Rivers #44

Timothy Rielly, CPE, Boston #25

Sponsored Seven (7) new MEMBERS

Completed 25 Activities

Henry Zurbrugg Denver #5

Joe Flemming, CPE, Reno #12

Sponsored Seven (7) new MEMBERS in Multiple Chapters

Mike Luke Salt Lake City #51–Dallas /Ft. Worth #43 and MAL Northwest Region #90

Gary Faust Central Indiana #59 – Denver #5 – Chicago #7 – Old Fort #65 and Brew City #78

Sponsored Nine (9) new MEMBERS

Frank Haas, CPE, Dallas/Ft. Worth #43

Sponsored Eleven (11) new MEMBERS

Kevin Fennimore, CPE,,

Santa Clara Valley #55

RECRUITER OF THE YEAR

Sponsoring Twenty-Four (24) new MEMBERS

Gregory Williamson, CPE,

Boston #25 – 23 new members and MAL

Northwest Region #90, 1 new member

CPE S 2008

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Matthew Maupin, CPE	Golden Gate	2
Michael Mills, CPE	Orange County	3
Stephen Fisher, CPE	San Diego	4
Sean Kabo, CPE	San Diego	4
Stephen Sekeres, CPE	San Diego	4
Ken Kuivenhoven, CPE	Sacramento	11
John Smith, CPE	St. Louis Metro	19
Steve Renschen, CPE	St. Louis Metro	19
Everett Myers, CPE	St. Louis Metro	19
John Graham, CPE	St. Louis Metro	19
Stan Lewicki, CPE	Baltimore	21
Nicholas Kontos, CPE	Baltimore	21
Paul Lingg, CPE	Baltimore	21
Michael Zingaro, CPE	Garden State	26
Daniel G. Frondorf, CPE	Southwestern Ohio	38

Rodolfo Barba, CPE	Rio Grande	40
Frank Barrows, CPE	Dallas/Fort Worth	43
Raymond Bodo, CPE	Dallas/Fort Worth	43
Joel Otts, CPE	Dallas/Fort Worth	43
Luis Galnares, Jr., CPE	Dallas/Fort Worth	43
Gene Schaeffer, CPE	Dallas/Fort Worth	43
Charles Rachuiq, CPE	Dallas/Fort Worth	43
Gary Morgan, CPE	Dallas/Fort Worth	43
John Coakley, CPE	Dallas/Fort Worth	43
Shawn Gibson, CPE	San Antonio	57
Margaret Jones, CPE	Philadelphia	61
Brian Wirth, CPE	Memphis	62
Kevin Lisowski, CPE	Packerland	66
James DeLap, CPE	Des Moines Area	73
David Rodney, CPE	Central Penn.	76
John Feiertag, CPE	Brew City	78
Randall Russell, CPE	Razorback	79
Chris Brown, CPE	Southeast Region M-A-L	93

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Golden Gate	2	Ronald A. Perkins
Golden Gate	2	David W. Northall
Golden Gate	2	Onne Broek
Golden Gate	2	Kevin W. Kennard
Golden Gate	2	Adam Finkin
Orange County	3	Era Swanepoel
Orange County	3	John Tolman
Orange County	3	Gary Casper
San Diego	4	Mark Purdy
San Diego	4	Christopher Friesen
San Diego	4	Bob Zaiser
San Diego	4	John Fredrickson
San Diego	4	Robert Bospflug
San Diego	4	Thomas J. Geever
Denver	5	Robert Pohl
Denver	5	Cody Miller
Denver	5	Michael Webster
Denver	5	Anthony Parse
Denver	5	Michael Cohig
Denver	5	Fred Joseph
Denver	5	Roger Graham
Denver	5	Kevin V. Johnson
Denver	5	Tony Peters
Denver	5	Mark Kaiser
Arizona	6	Michael P. Smith
Arizona	6	Mia Akins
Arizona	6	Donald R. Dendy
Chicago	7	Jim Rogers
Chicago	7	Ryan Mitchell
Chicago	7	Joe Burger
Chicago	7	David H. Wilde
New Orleans	9	David V. Lamastus, Sr.
New York	10	Douglas Schneider
Sacramento	11	William C. Potter
Sacramento	11	Kirk Thompson
Sacramento	11	John R. Gordon
Sacramento	11	David M. Reyes
Sacramento	11	Ryan E. Zuehlke
Sacramento	11	Kendrick R. Sutherland
Sacramento	11	Robert D. Ward
Sacramento	11	Tom Camden

CH. NAME	CH. NO.	MEMBER
Reno	12	Bernie Schaber
Reno	12	Samantha Dowd
Reno	12	Veronica Chauvel
Reno	12	Jeffrey M. Claypool
Reno	12	Michael Robert Beloud
Reno	12	Scott J. Novotny
Atlanta	14	Wyatt Alex Laney
Atlanta	14	Prince Adusei
Atlanta	14	James M. Davis
Atlanta	14	Edward Hulsey
Atlanta	14	Jack C. Fuller
Houston	18	Edwin M. Thomas
Houston	18	Robert Manzano
Houston	18	David Shachov
St. Louis Metro	19	Suzanne M. Shaffer
St. Louis Metro	19	Jack Thomas
Baltimore	21	Steve Krell
Baltimore	21	Joseph Tiberi
Baltimore	21	Dmitriy Simanovskiy
Baltimore	21	Scott Murray
Baltimore	21	Edwin A. Cluster, Jr.
Baltimore	21	Robert Giroux
Baltimore	21	Samuel Martins
Baltimore	21	Dan Ormston
Baltimore	21	Matt Asherman
Baltimore	21	Randy L. Eckley
Baltimore	21	Kevin M. Beichler
Greater D. C.	23	Lawrence S. Reinhart
Greater D. C.	23	Adam L. Decker
Boston	25	Tony Giordano
Boston	25	Michael E. Giordano
Boston	25	Lauren Vancheri
Boston	25	Barbara Connolly
Boston	25	Roland Oreste
Boston	25	Joseph J. Ardagna III
Boston	25	Gregory McKenna
Boston	25	Bradford Hawes
Boston	25	Robert Smith
Boston	25	Sean Kimmins
Boston	25	Katherine D. Muldoon
Boston	25	Mark Dettenrieder
Boston	25	Mark Wallace

NEW MEMBERS

CH. NAME	CH. NO.	MEMBER
Boston	25	Greg Shaw
Garden State	26	David P. Brunski
Arkansas	33	Joshua Sowards
Middle Tennessee	34	Kelly Dando
Great Plains	35	Roger Wilson
Southwestern Ohio	38	Elmer W. Pittman, Jr.
Southwestern Ohio	38	Anne Lehmeyer
Southwestern Ohio	38	Justin Webb
Southwestern Ohio	38	Robert E. Norman
Southwestern Ohio	38	Kate Csizmadia
Southwestern Ohio	38	Carolyn VanPaepeghem
Viking	39	Scott A. Bents
Viking	39	Lee Martinsen
Rio Grande	40	Tommy V. Lopez
Rio Grande	40	Alex Leal
Rio Grande	40	Simon Woodart
Rio Grande	40	Tom S. Lopez
Empire State	42	Andrew Philips
Dallas/Fort Worth	43	Jeremy Hogan
Dallas/Fort Worth	43	Geoffrey L. Mbaku
Dallas/Fort Worth	43	Mark Meendez
Dallas/Fort Worth	43	C. Aaron Oliver
Dallas/Fort Worth	43	Kimberly Ellis
Dallas/Fort Worth	43	Shayne Armstrong
Three Rivers	44	Chris Burns
Three Rivers	44	Daniel Ford
Puget Sound	45	James (Mike) M. Wood
Puget Sound	45	Derek Kiel
Puget Sound	45	Mark Ford
Puget Sound	45	Scott Day
Roadrunner	47	Steven J. Witt
Roadrunner	47	John Roger Pike
Tampa Bay	48	Andrew Wright
Tampa Bay	48	Tanya L. Jackson
Tampa Bay	48	Michael A. Leone
Tampa Bay	48	Matt Asherman
Gold Coast	49	Jorge Gutierrez
Gold Coast	49	Louie Cimino
Gold Coast	49	Leigh Anne Hart
Gold Coast	49	Brad Kogan
Central Florida	50	Steven G. Beatty
Central Florida	50	Cameron Martin
Central Florida	50	C. M. "Hap" Cameron, Jr.

CH. NAME	CH. NO.	MEMBER
Great Salt Lake	51	Tek Hipwell
Old Pueblo	53	Ralph Hunnicutt
Columbia-Pacific	54	Hester Troutman
Santa Clara Valley	55	Ron Karbowski
Santa Clara Valley	55	Mike Carter
Central Indiana	59	Bradley E. Whitaker
Central Indiana	59	Andrew S. Lock
Nutmeg	60	Alan Burns
Philadelphia	61	Matt Asherman
Old Fort	65	Shanan L. Miller
Old Fort	65	Robert Stepler
Old Fort	65	William C. Warren II
Western Michigan	70	John S. Becker
Western Michigan	70	Wesley A. Jones
Quad Cities	71	John Blow
Quad Cities	71	Christopher L. Jepsen
Quad Cities	71	Scott Mouw
Las Vegas	72	David Hoyt
Las Vegas	72	Jim Line
Las Vegas	72	Craig J. LoValvo
Las Vegas	72	Jason E. Lords
Las Vegas	72	Stephen Kiefer
Las Vegas	72	Sharon P. Novak
Las Vegas	72	Glenda Linton
Delaware	75	Rich Slusser
Brew City	78	Jeremy Hillebrand
Brew City	78	Frank Kosmach
Razorback*	79	Ines Fernandez
Razorback	79	David Sibert
Razorback	79	Gary W. Young
Razorback	79	Jason Adams
Razorback	79	Christopher Davis
Razorback	79	Leroy Schmuck
Razorback	79	Cuyler Scates
Razorback	79	Christopher Hobby
Razorback	79	Sara McKay
Razorback	79	Matthew George
Razorback	79	Jeff DeLoach
Razorback	79	Scott McCauley
Razorback	79	Marty Warner
Razorback	79	Tony Garner
Southwest Region M-A-L	91	Michael Vachio
Southwest Region M-A-L	91	Lan McCabe
Southwest Region M-A-L	91	Rick E. Martin

N

The American Society of
Professional Estimators 2008

NEW MEMBERS
May 1st to August 1st

NEW MEMBERS

CH. NAME

CH. NO. MEMBER

Southwest Region M-A-L	91	James Geddes
Southwest Region M-A-L	91	Brent Armstrong
Southwest Region M-A-L	91	Phillip Brandt
Southwest Region M-A-L	91	Mark Little
Southwest Region M-A-L	91	John Smartt
Central Plains Region M-A-L	92	Jorgen Jensen
Southeast Region M-A-L	93	Kenneth C. Malone
Southeast Region M-A-L	93	Greg S. Ellis
Southeast Region M-A-L	93	Vince Pianalto
Southeast Region M-A-L	93	Gregory M. Hall
Southeast Region M-A-L	93	Sidney L. Newell
Southeast Region M-A-L	93	Greg Goza
Southeast Region M-A-L	93	Kip Clark
Southeast Region M-A-L	93	Jeremy Dunaway
Southeast Region M-A-L	93	Park Murray
Southeast Region M-A-L	93	Mack E. Reifers
Southeast Region M-A-L	93	Karen Gordon
Southeast Region M-A-L	93	Ricky Burns
Southeast Region M-A-L	93	Aleck C. Moody
Southeast Region M-A-L	93	Paul Nicholas Apostle
Southeast Region M-A-L	93	Dan Lamberson
Southeast Region M-A-L	93	Ricky Cain
Southeast Region M-A-L	93	Jeff Sims
Southeast Region M-A-L	93	Mac McDaniel
Southeast Region M-A-L	93	James Brabston
Southeast Region M-A-L	93	Alfred Laird Jr.
Southeast Region M-A-L	93	Brian Stump
Southeast Region M-A-L	93	Mike Posey
Southeast Region M-A-L	93	David Nicholas
Southeast Region M-A-L	93	Alan Jones
Southeast Region M-A-L	93	Steve Stephens
Southeast Region M-A-L	93	Daniel Johnson
Southeast Region M-A-L	93	Adam Conerly
Southeast Region M-A-L	93	Mark Whitman
Southeast Region M-A-L	93	Ronnie Reeves
Southeast Region M-A-L	93	Seth M. Greene
Southeast Region M-A-L	93	Heath O'Brian Cahoon
Southeast Region M-A-L	93	John F. Kemp, Jr.
Southeast Region M-A-L	93	J. Craig Miller
Southeast Region M-A-L	93	Shane Jenkins

*Chapter in chartering process



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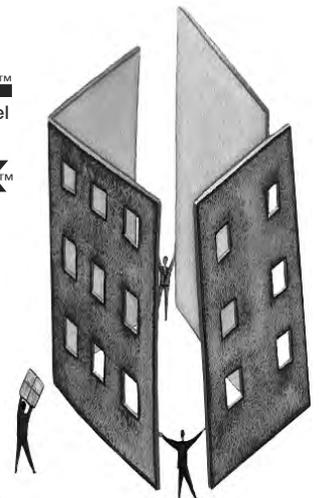
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MISTAKES GONE RIGHT!!!

(GOOEY BUTTER CAKE) – A baker got the recipe proportions wrong and didn't bake the cake quite long enough and the result is delicious! A yellow cake, very moist and dense with a sour cream based topping sprinkled with powdered sugar. Try it. You'll like it!!

(TOASTED RAVIOLI) – A ravioli, dropped into the frying pan by accident, was served to (or served by – the legend has both versions) baseball legend Joe Garaglola's brother, Micky. Yummy! Most Italian restaurants have this item on their menus as an appetizer. Definitely a St. Louis original.

(ICE CREAM CONE) – An ice cream vendor at the 1904 World's Fair (held in what is now the largest urban parks in America) ran out of serving cups for his ice cream. The vendor in the next booth made waffles. They put their heads together and fixed the serving issue and created a great American treat. (landmark)reverted to primarily serving his frozen custard (mixed with your selection of fruit, nuts,



Forest Park – one of Ted Drewes (a local and candy) in cups.

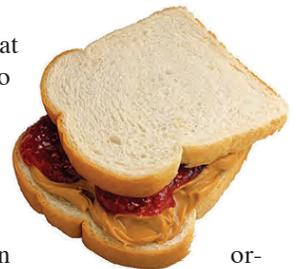
FIRST IN ST. LOUIS



(TWINKIES) – A St. Louis bakery wanted to make out the year – not just when strawberries were in season. They started filling them with golden sponge cake to fill with a banana filling. The change to a vanilla filling was the result of a shortage of bananas during WWI. You can buy these at home, but thought you should know where they started!!

use of their shortbread pans through-

(PEANUT BUTTER) – Another food item you can buy at home – and I am sure you do – but, it started in St. Louis by a physician so people with poor teeth who couldn't chew meat had a protein substitute. George Washington Carver pushed planting peanuts, sweet potatoes and other crops to replenish the soil in the South, but was NOT the inventor of peanut butter.



(7-UP SOFT DRINK) – Originally called "Bib-Label Lithiated Lemon-Lime Soda" in 1929. Formulated by Charles Leiper Gregg for his own company, "Howdy". Mr. Gregg also formulated "Whistle" (an orange flavored soda) while working for Vess in 1919.

or-

(TUMS) – An antacid invented in 1928 by pharmacist Jim Howe. If you eat all of the foods above, you'll be glad to have some.

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CARRI MORONES, CPE, CIT

I started my career in Electrical Construction in the early 1980's as a Project Administrator.

Fortunately for me there were several Project Managers who needed help estimating change orders. It didn't take long before I was counting devices and rolling branch. Over the years I had plenty of "on the job" training, took a couple of estimating classes at NECA and an estimating class at the local community college. In 1997 I became a member of the National Association of Women in Construction (NAWIC). It was through this association that I was first introduced to ASPE by

Patsy Smith. I was particularly interested in the educational opportunities and signed up for the Certified Professional Estimator (CPE) program. As a member at large I did not have the advantage of Chapter support in this process. The on line introduction had just launched so I was able to take advantage and was able to find a CPE to administer the exams. This was an important step in my career path as it provides a way to measure my knowledge and experience as an estimator in the electrical discipline.

As soon as I relocated to Las Vegas I got involved with the local Chapter #72. It is a great resource for business opportunity, educational programs, networking among peers and learning from each other.

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Group seeks to get more women into the
CONSTRUCTION TRADES

By Riddhi Trivedi-St. Clair



WE WANT OTHER YOUNG WOMEN WHO MAY NOT THINK OF CONSTRUCTION AS A CAREER TO DO SO. WOMEN MAKE UP HALF THE (OVERALL) COMMUNITY AFTER ALL, WHY NOT IN CONSTRUCTION?

For almost 25 years, Pamela Crews has been among the small group of women who work in the construction trades.

“It’s like being a male nurse where you are surrounded by hundreds of women. It’s intimidating,” said Crews, 42, who became a wallpaper hanger in the mid-1980s. “Being part of the minority all these years, I have always felt there should be more women in the construction industry.”

Now Crews has teamed up with other women in construction trades such as carpentry, welding, painting and wallpaper hanging to start a local organization that she hopes will provide mentors to young women.

“I had no one to talk to, to compare my day, my life, my situation with, ever,” Crews said. “I want young women to know they don’t have to have a master’s degree or work five jobs to raise their children.”

Missouri Women in Trades officially incorporated last month. Teresa Willis, another driving force behind the

group, is the director. Willis has worked for women’s rights most of her life, and spent 12 years as development director of a shelter for battered women.

About two years ago, she heard about a Chicago area group that helped women enter construction trades. It made her think about starting a similar local organization.

“A lot of women enjoy being in non-traditional professions like construction, but often they don’t know their options,” Willis said. “And they are not encouraged to go into those areas.”

Based on statistics from the U.S. Department of Labor, Willis said, a majority of women are segregated in about 20 out of 500 major occupations in the economy. Only three or four out of those 20, she said, pay enough to support a family.

Photo Info.

Mekole Fleming, of St. John, practices welding at the Plumbers & Pipefitters Training Facility. She is a member of the group Missouri Women in Trade and is working on receiving her welding certification. (Sarah Conard/Special to the Post-Dispatch)

Construction pays well, and yet there are not many women in it, she said.

"I always felt there should be more women in construction," Crews said. "But a lot of women find construction a tough industry to be in."

Construction hasn't been a women-friendly workplace, Willis said.

"The guys aren't openly hostile, but they have been doing things in one way for so long, they don't know how to deal with women on a site," Willis said.

The organization wants to help female — and male — construction workers learn how to deal with gender differences, she said. It also is trying to help women new to construction navigate their way through the industry.

After starting as an informal group in September 2006, the group has grown and will be a chapter of the National Association of Women in Construction.

One member, Mekole Fleming, a 34-year-old pipe fitter and welder, doesn't have many fond memories of her apprenticeship in 1994. She only knew of three other women welders.

"It was absolutely terrifying. This was a male-dominated trade, and I was one of a few getting ready to occupy it," Fleming said.

She often felt like the industry was not ready to accept women. Even finding work attire was difficult. The uniforms and helmets were all fitted for men and there were no special ones for women workers.

"I wish I had a local organization I could have gone to and talked to other women who were like me," Fleming said.

Even today, fewer than 10 percent of the more than 2,000 active members of the local pipe fitters union are women. One reason, said Beth Barton, 28, is gender stereotypes.

As a young woman whose parents were in health-related fields, she said, she was expected to keep up the tradition and enrolled in pre-nursing. She didn't find it engaging.

Then, Barton said, she got pregnant. Her \$7-per-hour pay as a certified nursing assistant wasn't enough to support herself and her baby.

"So I made up my mind to become a carpenter," Barton said. "I opened the phone book and started calling every single contractor in the book. Most people laughed at me and hung up."

They didn't think construction was the right field for a young woman looking for a job, she said.

Finally someone at BSI Constructors directed her to the Carpenters Union and its apprenticeship program.

As an apprentice, she was making \$13.53 an hour and had health and dental benefits, she said.

Whether she is accepted at a job site, Barton said, "varies from contractor to contractor."

Some of the men cuss and then apologize to her and think they're being chivalrous, she said.

"The true problem is men and women in construction just don't know how to handle working together," Barton said. The men tend to either go overboard trying to be polite, she said, or don't acknowledge any difference between them and the women.

The women either try too hard to fit in or spend most of their time alone.

Missouri Women in Trades hopes to remedy the issues by raising awareness of the trades, along with offering training and other assistance to women as well as construction companies and unions, Barton said.

The organization held its first networking event and career fair at the Construction Careers Center — a high school for young people considering a career in construction — in St. Louis this week in conjunction with National Women in Construction Week.

Female high school students were able to meet other women in construction trades and learn about options available to them in the industry.

"We want other young women who may not think of construction as a career to do so," Barton said. "Women make up half the (overall) community after all, why not in construction?"

"SO I MADE UP MY MIND TO BECOME A CARPENTER. I OPENED THE PHONE BOOK AND STARTED CALLING EVERY SINGLE CONTRACTOR IN THE BOOK. MOST PEOPLE LAUGHED AT ME AND HUNG UP."

Article courtesy the St. Louis Post-Dispatch. First published by the Post-Dispatch March 7, 2008. Riddhi Trivedi-St. Clair can be reached at rtstclair@post-dispatch.com | 314-340-8206.

Hard-hatted women struggle to land construction jobs

BY JULIA MARSH

“It’s a man’s world, You work hard, come to the job every day and you’re often not given a shot at a promotion.”



Carole Jordan’s first day at work was a frigid January morning in 2003. She rose early and arrived at the job site by 6:30 a.m. After eight hours of standing on concrete, carrying sheetrock up and down stairs, Jordan left the skeleton of the skyscraper she was helping to build, arrived home by 5 p.m. and collapsed in bed by 6.”

After the first two weeks I thought I was dying. Muscles I didn’t even know I had were aching,” said Jordan, a native New Yorker who is in her late 40s.

A little more than three years later, the elements haven’t proved to be the hardest part of Jordan’s career as a construction worker.

“It’s a man’s world,” she said. “You work hard, come to the job every day and you’re often not given a shot” at a promotion.

Jordan is among a small but budding number of women entering what is officially called nontraditional employment -- a range of jobs that includes fishing and fire fighting, the toughest of which to break into is the construction industry. About 900,000 women across the United States work in some form of construction, be it brick masonry or drywall installation, a rise of 18 percent over the last eight years, according

to the National Association for Women in Construction.

Though the Equal Employment Opportunity Act was passed in the early 1970s, women account for only 9 percent of construction workers, according to the Bureau of Labor Statistics, which recently published a survey showing that 88 percent of those women had experienced sexual harassment on the job.

Jordan sat at a table with two other women, Olga Aguilar, 29, and Donna Kielbasa, 28, at the New York headquarters of a job-training nonprofit group called Nontraditional Employment for Women, known as NEW. The three came through NEW’s construction school, a six-week program in which they learned to read blueprints and handle skill saws. Seventy percent of graduates are placed in jobs averaging \$53,000 a year in the construction, transportation and utilities industries.

Photo Info.

Carole Jordan works with a four woman crew to unload truck shipments of sheetrock and studs on the construction site. (Courtesy of Nontraditional Employment for Women)

“A lot of women don’t think about it. They’re raised on Barbie dolls, not tools.”

The NEW model of supporting women in blue-collar trades is also used by sister organizations like Trades-women Inc. in California and the North Carolina group Charm and Hammer.

All three women had some history in construction. Aguilar’s father renovated homes. Jordan’s childhood mentor was a woodworker. Kielbasa built tree houses.

“I always liked to work with my hands and wear my jeans,” Aguilar said, slapping her paint-speckled pants. “The better angle is that I make \$16 an hour.”

The lure for many women, said NEW’s director, Anne Rascon, is a desire for economic independence. Rascon, who worked in a gold mine in California to pay for college, added, “Our experience has been that the women spend their 20s cycling through dead-end, low-wage jobs, and then a light goes on and they see us as an alternative.”

Women entering the trades are ethnically diverse, typically about 31 years old and single heads of households, according to statistics from advocacy groups.

Participants of Hard Hatted Women, Cleveland’s version of NEW, which also began in the late 1970s, have an average income of \$15,000 before entering the training program. The pay they receive in their first jobs is \$11.50 an hour, which with overtime and union benefits comes to an annual salary of just under \$30,000.

“It’s a different kind of lifestyle,” Rascon said. “You have to like getting up early, working in the hot and cold weather.”

Though the women have to be prepared for physical work, technology is such today that workers no longer have to rely solely on brute strength.

The women also often have to go it alone. Though the current job the NEW graduates are working on, a building for City University of New York, has a relatively high 7-to-45 ratio of women to men, in many cases there may be only one woman on the site.

“The women have it real rough,” said Kevin Simmons, shop steward for the CUNY site. “I tip my hat to the ones that last.”

Although the construction industry has experienced a labor shortage in recent years, one of the greatest challenges to bringing in women is simple recruitment.

“A lot of women don’t think about it,” said Nancy Gentile, former chairwoman of the Committee of Women in the Trades, a division of the AFL-CIO. “They’re raised on Barbie dolls, not tools.”

Though trade unions are mandated to train a certain percentage of women in construction, for Aguilar and Jordan the unions still have an old boys club feeling.

“Have you been in a union hall?” Aguilar asked. “It’s all white Irish men sitting in the directors’ chairs.”

Jordan switched out of a floor-covering apprenticeship, when, she said, she was twice overlooked by her construction teacher and then by a union director to fill job openings.

Kielbasa and Jordan said the harassment they had encountered included lurid sexual drawings at the site and come-ons by coworkers. Sometimes the discrimination is less overt or emerges as a lack of awareness about women’s needs in a male-dominated environment.

The three women said that at their most recent job, the one portable toilet for seven women was being used regularly by men. Also, without any running water to wash their hands, the women found it unsanitary to switch from fitting insulation to using the facilities during menstruation.

“Sometimes I feel like a stepchild [and] I don’t want to be too much of a problem,” Aguilar said. “But are we a problem now that we need a place to wash our hands when we have a ‘woman’s issue?’”

But as Beth Young, director of Trades-women Inc., points out, it’s less of an anomaly to see a woman with a tool belt slung on her hip than it was 20 years ago when she worked as a crane operator.

“When I started I was told straight up, women don’t belong here,” Young said. “[People thought] I either wanted to be a man or I wanted to get a man. I just wanted to get a paycheck like anyone else.”



Photo Info.

Donna Kielbasa finds satisfaction using her mind and body as a construction worker.



Carole Jordan puts the finishing touches on an insulation job.



Five of the seven women building new dorms for City College of New York.



Carole Jordan on the job.

Photos courtesy of Nontraditional Employment for Women

Article courtesy the Columbia University School of Journalism. First published by the Columbia News Service on February 28, 2006. Julie Marsh can be reached at jkm2111@columbia.edu

UPCOMING CHAPTER *Meetings*

ARIZONA

ARIZONA Chapter 6

2nd. Tues. of the Month • Check with Chapter for Times • Doubletree Guest Suites • 320 44th St., Phoenix, AZ Arthur Gudith • 602.956.1323 X241

OLD PUEBLO Chapter 53

1st Wednesday of the month • 5:30 Networking • 6:00 Dinner Meeting @ El Parador • 2744 East Broadway, Tucson, AZ 85716 • Christopher Kraft 520.621.7546

ARKANSAS

ARKANSAS CHAPTER 33

3rd Fri. of Month Aug-May • 12:00 Noon • Powers of Arkansas • 1111 West 6th Street, Little Rock, AR Todd Piepergerdes 501.221.7036

CALIFORNIA

LOS ANGELES Chapter 1

4th Wed. of each month except Nov. & Dec. • 6 PM Social Hour • 7 PM Dinner Meeting • Barkley Restaurant 1400 Huntington Dr., South Pasadena, CA • Robert Franco: 626.289.8608

SACRAMENTO Chapter 11

2nd Fri. of the Month Sept. - June 11:30 AM • Buggy Whip Restaurant George Leighton • 916.444.3700 X1248

SAN DIEGO Chapter 4

3rd Tues. of Each Month • 5:30 PM Social Hour • 6:30 PM Program • Butcher Shop • 5255 Kearny Villa Rd., San Diego, CA • Hendrik Degenaar 858.453.0224

GOLDEN GATE Chapter 2

Douglas J. Bibby CPE 510.525.9499

ORANGE COUNTY Chapter 3

2nd Wed. of month Sept. - June • 5:30 PM Social Hour • 6:15 PM Dinner • 7PM Program • Mezzanine-at-the-towers Restaurant • 19800 MacArthur Blvd., Irvine, CA • Ron Svarc 949.683.4751

SANTA CLARA VALLEY Chp. 55

2nd Tuesday of Month • 5:30 PM Blach Construction Office • 469 El Camino Real, Ste. 120 Santa Clara, CA 95050 Carlos Sempere 408.869.8354

COLORADO

DENVER Chapter 5

2nd Tuesday of month Sept. - May 5:30 PM Social Hour • 6:30 PM Dinner 7:30 PM Program • Red Lion Hotel, 4040 Quebec St., Denver, CO Kye Holtan-Brown: 303.751.1478

CONNECTICUT

NUTMEG Chapter 60

2nd Wed. of the month • 6:00 PM Social Hour • 7:00 PM Dinner • 7:30 Program • Brannigan's Restaurant, 176 Laning Street, Southington, CT Mark Ray 860.649.3281

YANKEE Chapter 15

TBD • Contact Chapter for info. 203.876.8331.

DELAWARE

DELAWARE Chapter 75

2nd Wed of the Month • 5:30 PM Social Hour • 6:30 PM Dinner • 7:30 PM Program • Christiana Hilton • 100 Continental Dr., Newark, DE 19713 Rob Anderson: 302.453.4000

DISTRICT OF COLUMBIA

GREATER D.C. Chapter 23

Last Wed. of Each Mont Except August 6:00 PM • Pepco Energy Services 1300 N. 17th Street, Ste. 1600, Arlington, VA • Tom Lang 703.253.1760

FLORIDA

CENTRAL FLORIDA Chapter 50

Contact for Meeting Info.

GOLD COAST Chapter 49

3rd Tues. of Every Month • 5:30 PM Social Hour • 6:30 PM Meeting • Fort Lauderdale/Hollywood - Holiday Inn Just West of I-95 off the Sheridan St. Exit. Tom Robinson 954.772.7285

TAMPA BAY Chapter 48

3rd Thurs. Every Month • 6 PM • Sam Seltzers Steakhouse • 4744 N Dale Mabry Hwy., Tampa, FL • Robert Nidzgorski 831.282.7100

GEORGIA

ATLANTA Chapter 14

3rd Thurs. of Each Month • 12:00 noon - 1:00 PM • Cross Creek Café • 1221 Cross Creek Parkway, Atlanta, GA

ILLINOIS

CHICAGO Chapter 7

Various Days/Times • 6:00 PM Social Hour • 7:00 PM Dinner • 8:00 PM Program • Various Locations • Marvin Fitzwater: 630.678.0808

INDIANA

CENTRAL INDIANA Chapter 59

3rd Thurs. of every Month except July and Aug. • 5:30 PM Social Hour • 6:30 PM Dinner • 7:15 Program • Location Varies Gary Faust: 317.432.2731

OLD FORT Chapter 65

Last Thurs. of Month • Check Chapter Website or Contact Chapter • Elks • Chad David 260.490.7449

IOWA

CEDAR RAPIDS AREA Chp. 74

No Meeting Info.

DES MOINES AREA Chapter 73

3rd Thurs. of Month • 5:30 PM Social Hour 6:30 PM Dinner • 7:30 PM Program Various Locations • Steve Watrous: 515.264.0782

QUAD CITIES Chapter 71

4th Tues. of Month except June, July, Aug., Dec. • 5:30 PM Social Hour • 6:30 PM Dinner 7PM Program • The Steeplegate Inn 100 W. 76th Street, Davenport, IA 52806 Robert Guild 563.285.2565

LOUISIANA

NEW ORLEANS Chapter 9

Contact Chapter for Meeting Info. Huey P. Breaux FCPE 504.835.7200

MAINE

MAINE Chapter 37

1st Wed. in Oct., Dec, Feb, April & June • 5 PM Social Hour • 6PM Dinner • 7PM Program • Various Locations • Chris Bellevue 207.784.7461

MARYLAND

BALTIMORE Chapter 21

3rd Thurs. of the Month • 6:30 Social Hour 7PM Program • 7:30 PM Dinner • Location TBD • Shana Opdyke 410.458.0289

MASSACHUSETTS

BOSTON Chapter 25

Last Wed., of Each Month • 6:30 PM • Location TBD • Melissa Bowen 615.878.4888

MICHIGAN

DETROIT Chapter 17

2nd Thurs. of Each Month • 5:30 PM Social Hour • 6PM Meeting • Location Varies Richard Schwarzingler 248.334.2000

WESTERN MICHIGAN Chp. 70

3rd Thurs. of the Month • Check with Chapter for time • Builders Exchange of Grand Rapids & Western Michigan Elizabeth Austhof 616.949.8650

MINNESOTA

VIKING Chapter 39

No Meeting Info.

MISSOURI

HEARTLAND Chapter 32

2nd Tues. of the Month Sept - May • 5:30-6:00 Social 1/2 hour • 6 PM Dinner and Program • Hereford House, 20th and Main, Kansas City, MO • President: Phillip Tourner, CPE, 816.231.8200

ST. LOUIS METRO Chapter 19

4th Thurs. of the Month • 5PM Social Hour 6 PM Program • 6:45 Dinner Maggie O'Brien's • 2000 Market, St. Louis, MO Cyndi Walker 314.781-1422

NEBRASKA

GREAT PLAINS Chapter 35

2nd Wed. of the Month • 11:30 AM • Jericho's 11732 West Dodge Road • Justin Short: 402.334.3332

NEVADA

LAS VEGAS Chapter 72

22nd Thurs. of Month • 6 PM • Desert Pines Golf Club • Marcene Taylor 702.315.4203.

RENO Chapter 12

2nd Wed. of Every Month • 5:30 PM Atlantis Casino Resort Spa • 3800 S. Virginia, Reno, NV • Joseph Flemming 775.353.7092

NEW JERSEY

GARDEN STATE Chapter 26

4th Tues. of Month • 6PM Social • 7PM Dinner • 8PM Program • Pal's Cabin, 285 West Prospect Ave., West Orange, NJ Richard Lemere 973.577.2552

NEW MEXICO

ROADRUNNER Chapter 47

Contact Chapter for Date and Location Glynette Hale: 505.823.4449

NEW YORK

NEW YORK Chapter 10

Contact Chapter for Meeting Info. Arnie Weitzman CPE 914.592.1155

EMPIRE STATE Chapter 42

3rd Wed. of Month Sept, Nov., Feb., April • 6PM Social Hour • 6:30PM Dinner • 7:30 PM Program • Butcher Block Restaurant • Central Ave., Albany, NY • Mike Bouchey: 518.272.2541

WESTERN NEW YORK Chp. 77

3rd Thurs. of Jan., March, May, July, Sept., & Nov. • Contact Chapter for Time • The Compton Company Inc. • 2400 Rt. 64, Bloomfield, NY • William R. Compton CPE 585.657.7041

OHIO

NORTHEAST OHIO Chapter 28

3rd Tues. of the Month except Jul., Aug., Sept. • 5:45 PM Social Hour • 6:15 PM Dinner • 7:15 PM Program • Dimitri's Restaurant • 1830 Snow Road, Parma, OH • Brandon Lawler 216.619.1700

SOUTHWESTERN OHIO Chp. 38

Bi-Monthly on 4th Thurs. • Contact Chpt. for Times • Contact Chapter for Location Arthur DeFazio: 513.639.2246

OREGON

COLUMBIA-PACIFIC Chp. 54

3rd Tues. (No Meetings in Dec.) • 5:30 PM Social Hour • Dinner & Program 6:30 • University Place • 310 SW Lincoln, PSU, Dwnntwn. Portland Curt Kolar, CPE 503.962.7100

PENNSYLVANIA

GREATER LEHIGH VALLEY Chp. 41

No Meeting Info.

CENTRAL PENNSYLVANIA Chp. 76

2nd Wed. of the Month • 6:30 PM • Call chapter for meeting location • Jerry Long 717.445.7130

PHILADELPHIA Chapter 61

4th Wed. of Month • 6:30 PM Meeting Doubletree Hotel Plymouth • Lee Hartwig 610.399.5201

THREE RIVERS Chapter 44

TBD • Richard Krapp: 412.255.5400 X535

RHODE ISLAND

SOUTHERN NEW ENGLAND Chp. 31

Contact Chapter for Meeting Info.

TENNESSEE

MEMPHIS Chapter 62

Contact Chapter for information. Larry Cockrum: 662.837.8037

MIDDLE TENNESSEE Chapter 34

3rd Fri. of the Month • 11:30 AM • Contact chapter for location • Marty Morris 615.373.4343

EAST TENNESSEE Chapter 56

No Meeting Info.

TEXAS

DALLAS/FORT WORTH Chapter 43

3rd Thurs. of Month • 6 PM Dinner • AGC/Quinn Building • 11111 Stemmons Frwy., Dallas, TX • Frank Haas: 469.420.6082

HOUSTON Chapter 18

2nd Mon., of Each Month • 6 PM • 8 PM • Location Varies • Ellis Landreth: 713.479.8981

RIO GRANDE Chapter 40

1st Tues. of Month • 11:30 AM • El Paso Club, 201 E Main • Adolf Martinez 915.920.8730

UTAH

SALT LAKE CITY Chapter 51

3rd Thurs. of Every Month • 5:30 PM • 7:30 PM • Mountain Land Area Planroom, 583 W 3560 S, Ste. 4, Salt Lake City, UT • Shaun Robbins 801.983.5233

WISCONSIN

PACKERLAND Chapter 66

1st Thurs. after the 1st Wed. of the Month 5:30 PM Social Hour • 6 PM Dinner & Meeting • Liberty Hall, Kimberly, WI • Nelson Leister 920.832.0324

BREW CITY Chapter 78

2nd Tues. of Month • 5:30 PM Social • 6 PM Dinner • Charcoal Grill & Rotisserie • 15375 W. Greenfield Ave, New Berlin, WI • Tom Turner: 262.446.7149

WASHINGTON

PUGET SOUND Chapter 45

3rd Wed. of Each Month • Dinner & Program 5:30PM - 8PM • McCormick & Schmick's - 1200 Westlake (on Union Bay) - Seattle • TJ Schwertfeger 253.446.3421



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