

Design Drafting NEWS

Ron McDonald ADDA President



Job or Profession

At the ADDA's Fall Board meeting, there was some casual discussion on how what someone does for a living can be considered a job or profession. Interesting comments followed many paths but the consensus was that a job was just a task someone performs for a predetermined value, usually monetary, for another individual or entity. A profession is an occupation or vocation that requires specific training in a specialized field to perform a job or task.

This leads to the following questions. Do we in the design/drafting field consider ourselves to be just performing a job or actually participating in a specialized profession? Do we look at our daily jobs as just a means to earn money? Do we only perform as required to complete the job? Do we expand our experience within that job or remain static? Tough questions.

I must admit that when I started my career, I did not give any thought on where I was headed or where I would end up. It was all about the 'Benjamins'. I had a family to support and my only concern was how much I earned. There was little thought given to advancement other than how much more I could earn. I did not even consider drafting as a career until 10 years after my first job, I realized that I enjoyed what I did and frankly was very good at. I looked for other opportunities to enhance my skills and expand my knowledge. Instead of just doing what was required I asked for additional challenges and additional responsibilities. Now I did not succeed always and there were setbacks but the challenge I had created for myself never stopped. I came to realize that what I did was no longer just a job but I was now a member in a profession. A professional doing a specific task(s) for an employer while continuing to improve my skills. A big change from that first job as a detailer for McDonnell-Douglas many years ago.

So I started to look for other areas where I could expand my professional experience. Night courses in engineering and management, joined the ASME, attended ASME instructional conferences and finally found the

On the Drawing Board

2013 ADDA Conference—Kansas City
On-Line Examination & Review Guide Updates
New Website & Development
Museum Donations and Funding Grants
New Examination Development and Grants

As Built

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Drafting, Secondary Education and Industry Certification E. H. Lindsey

In Florida, there has been enacted legislation which has established what is now referred to as CAPE, (Career and Professional Education). CAPE does not require but greatly rewards classroom teachers to push their students towards industry certification. The rewards come in the form of additional funding from the state to purchase equipment and other items intended to enhance the educational process.

When I first started leading my students forwards industry certification, I incorporated the certification process as part of my Drafting I curriculum. At first, we did not change the curriculum but on Wednesday's we stopped everything and concentrated solely on one of the individual competencies contained in the ADDA's Apprentice Draftsman Certification process. Looking at the numbers, there are approximately 400 questions on the exam, two hours to take the exam and that leaves about 25 seconds a question. Therefore we drilled, drilled, drilled and then drilled some more. My thought process was that when taking the certification exam, you have very little time to think. You have to have almost instant awareness of the answer. It is like, "What is 2 + 2?" The answer is 4 but you did not have to think about it. That is the level I want my students at. Having worked in heavy industry for 30+ years, that is what is demanded.

Now that our state has made the commitment to industry certification, I am finding the need to have our state standards for Drafting changed. They should reflect and mirror the ADDA competencies for each appropriate level. All of the material is still covered, simply in a different sequence of time. It is simple logic. Kill two birds with one stone which makes my life as a drafting teacher easier.

I have found that aligning my curriculum with the ADDA competencies for Drafting, my job is easier, more efficient and with the certification process now mandatory (for my class) the rewards come pouring in. We have approximately a 90% pass rate. The high rate of success among my students is contagious. No one wants to fail which is driving all of my students to a higher level of success (and certification.)

Welcome

ADDA would like to welcome 5 new Student Chapters



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John Prebble

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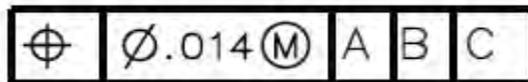
ZERO Tolerance ? Dennis Schwartz



What do you think of when you see a feature control frame like the one above? There is a lot of misunderstanding and or misinterpretation of a position feature control frame with zero tolerance at MMC. This is a comment I have heard when someone sees this and does not understand it. "First of all the feature is located with basic dimensions (which locate the theoretical exact location of the feature) that have no tolerance then you don't give me any positional tolerance." I will try to explain.

The dimension of a hole is designated below:

$\varnothing.500 \pm .002$

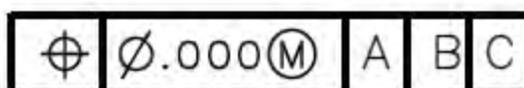


Hole Size	Positional Tolerance
.498	.014
.499	.015
.500	.016
.501	.017
.502	.018

The hole size and positional tolerance allowed for this scenario are in the table below.

The virtual condition of the hole is $\varnothing.484$ which is the same as the virtual condition of a pin that is meant to assemble into the hole. If the hole was manufactured at a diameter of .484 and was located perfectly on position and in orientation, the hole would be rejected because it measures too small but the pin would fit into the hole. To account for this possibility, the hole size can be changed to $\varnothing.484 - .502$ and the position tolerance will be zero (see below).

$\varnothing.493 \pm .009$



ZERO Tolerance ? Dennis Schwartz

Continued from page 3

The hole size and positional tolerance allowed for this scenario are in the table below. The numbers in red represent the allowable increase in the tolerance of the hole size when using zero position tolerance at MMC.

Hole Size	Positional Tolerance
.484	.000
.485	.001
.486	.002
.487	.003
.488	.004
.489	.005
.490	.006
.491	.007
.492	.008
.493	.009
.494	.010
.495	.011
.496	.012
.497	.013
.498	.014
.499	.015
.500	.016
.501	.017
.502	.018

Important things to remember.

1. Zero tolerance at MMC works well for parts that fit together (pins into holes).
2. Zero tolerance is not applied on an RFS basis because then there would be no position tolerance allowed at any size of the feature.
3. When using zero tolerance at MMC, the tolerance of the feature is increased accordingly (as in the example above).
4. Don't be afraid to use zero position at MMC. When used properly it ultimately allows more tolerance.

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54th Annual Technical & Educational Conference
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ADDA will be making a bold and interesting change of pace this year. We have chosen Kansas City Missouri as our Conference Site for the next 3 years, starting in 2013. We will be hosted by the Holiday Inn Plaza Hotel, located only one block from the historic Kansas City Country Club Plaza. After a long day of educational and training seminars you can relax in one of the dozens of eateries, have a Coldstone's Ice Cream or visit some of the unique shops and stores located here. It is a pleasant and level stroll throughout the Plaza.

Don't worry about walking. If you don't feel up to the scenic and majestic walk to the plaza. Holiday Inn will shuttle you there and back at no charge. They will also carry you to some of the other sites around Kansas City at no charge.

Learn with us in KANSAS CITY

During the 4 days of the 54th Annual Conference we have lined up some of the most innovative speakers related to the Design Drafting and Graphics Profession. Don't plan on just listening. These are all workshops where you will take back time saving procedures and ideas to increase production.

GD&T Fundamentals

ArchiCAD Workshop

Pro-E CREO

MathCAD

Introduction to Stacks

Sustainable Design

Chief Architect Workshop

Workplace Ethics

GD&T Applications

Professional Development

ASME Standards

Designing for DOD

IronCAD

Green Building

AutoCAD Workshop

Skills USA

Building Information & Modeling

Process Piping Workshop

Solidworks Workshop

3D Fundamentals

BIM Applications & Implementation

LEED

AutoCAD 2014

Industry Roundtable

Exhibit with us in KANSAS CITY

We will have some of the leaders in the industry exhibiting their products and services which can impact the future of design and graphics. You will have the opportunity to speak one-on-one to the management of these organization and discuss implementation of and use of their products.

Bauer Ethics

Chief Architect

Solidworks

Global Computer

MathCAD

PTC-Creo

BizSupplies

Delmar Cengage

Drafting Steals

Hearlihy

McGraw Hill

Goodheart Wilcox

CAD Academy

Design Data

Bentley

IronCAD

Pearson

CADcard

SDC

TSI

EAC

ASME

ASTS

Continued from page 1- Job or Profession

ADDA. First joining as a member in 1997, attending technical conferences, becoming a Certified Drafter and finally joining the Board of Directors. The ADDA became the resource/tool to advance my experience by interacting with other professionals in my chosen profession.

ADDA is the only organization that promotes and supports the design/drafting profession while also supporting students and their instructors in educational programs to learn the skills of the profession. ADDA offers training conferences, curriculum certification for schools and instructors, drafter certification for students and professionals. Most importantly, ADDA offers the opportunity to meet and interact with other individuals that truly are professionals who want to enhance the profession for all involved, either as a student, instructor or someone who has been in the profession for years.

You might have noticed that after the first part of this message, that I stopped using the word 'job' and replaced that with 'profession' or 'professional'. It is my intent to relay to you that what you are doing in the design/drafting, no matter what your current level, involves specific skills. Thus you are a professional. Think like one. Become involved. Improve your skills. Reach that next level. Accept setbacks along with victories, remembering that setbacks are nothing else but a learning aid.

Finally, the staff and Board of Directors of ADDA are here to support you! That support is always available but can only become useful once you get involved. Become a member, attend the Technical Conferences, enter the annual drafting/poster contest (students only), become a judge for the annual contests, visit the website and ask questions. The important step is to get involved.

In closing, I truly would like to see/meet all of you reading this at the 2013 Technical Conference in Kansas City, Missouri next April. That would allow me the opportunity to meet you and listen to your experiences/needs and help in any way possible.

Congratulation's!!



Tennessee Technology Center-Newbern for being recognized by the Tennessee Board of Regents for collecting 6,522 cans of food for the "Holiday Food Drive". You are to be commended for the tremendous effort and generous expression of giving during the holiday season.

Autodesk



Ethics Thought

Dr. Christopher Bauer

Might Your Company Need A Digestive Aid?

Are You Choosing The Right Battles?

We all know the importance of choosing our battles carefully, both on the job and off. At the very least we can reduce our unnecessary stress by carefully choosing our battles and, after all, who needs extra, unnecessary stress? Choosing one's battles carefully is clearly a good thing.

There are some uncomfortable battles, however, that we must not avoid. Prominent among these are conflicts involving others' violations of ethical mandates or the ignoring of your organization's core values.

The above might sound like an extreme case of stating the obvious. However, many of us sit passively, day-by-day, and allow others to expect us to accept or participate in actions running contrary to the stated ethics and values of our organizations. Responding directly and appropriately to these challenges is a type of battle we must not avoid, no matter how difficult it may be and how uncomfortable it might make us.

Choosing to challenge others' unethical or values-averse actions - or our own - doesn't need to mean choosing a life of perpetual confrontation or conflict. In fact, that would probably ultimately be quite self-destructive both personally and organizationally. It does, however, mean that you need to make a both persistent and truly credible effort to bring the actions of your colleagues and coworkers - as well as your own - fully in line with the values that you and your organization profess to hold. (Lest it need to be said, this does *not* mean crusading for your personal religious or political beliefs on the job. If you choose to do that, save that for your life away from work.)

So should we choose our battles carefully? Absolutely. Let the little stuff go! Just don't fool yourself into thinking that ethics and values are part of the little stuff.

Christopher Bauer provides keynotes and seminars on how to prevent costly employee ethics problems on the job. He also provides consultation on ethics and values training program development and implementation.

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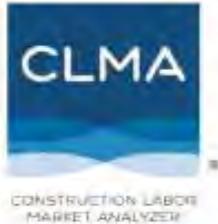
Technical Illustration - Graphic Arts
 Engineering and Architectural Design

ADD^A authorized the creation of the International Museum of Design Drafting on April 16, 2010 in Louisville Kentucky with the purpose of collecting, displaying and preserving the history of the Design, Drafting, Architectural, Engineering and Graphics Professions for future generations.

If you would like to donate monetarily, journals, tools, books or any items related to the profession it would be greatly appreciated. Currently about 400 items are on display in our lobby. ADDA is seeking more items with plans to build a facility to house the items in the future.

Help us Preserve our past for the future.

A Subsidiary of the American Design Drafting Association - a 501(c)3 Non-Profit Corporation and Charity for the education and preservation of the design profession and history.



Eliminate the guesswork, eliminate the doubt.



Projected Demand for Craft Labor for the Southeast United States (2012–2017)

Recession, recovery, growth...and back to the future. In 2008 and the first part of 2009, the nation's economy took a nosedive, during which we entered into a sustained recessionary period and commercial activity came to a near halt. The construction industry was particularly vulnerable to the downturn and as businesses abandoned their plans to expand (or at best, put them on hold), construction volumes plummeted and unemployment soared. While economic growth resumed in 2009, the recovery has been far from robust and construction remains anemic, with nonresidential volumes of just \$533 billion posted for the U.S. in 2011 (down from \$710 billion in 2008) and an unemployment rate still in the double digits. And the Southeast has proven to be no exception, with similar, if not greater declines in construction employment.

On the upside, there are signs of a strengthening economy. Construction volumes in the U.S. are beginning to trend slightly upward and particularly so for the private sector and industrial categories (i.e., manufacturing and power). Similarly, the industry's unemployment rate is falling. However, so too is its labor force. And while uncertainty with the upcoming presidential election and concerns of outstanding fiscal issues have been cited as reasons behind the sluggish recovery, once greater certainty and fewer risks unfold later in the year, our seemingly resilient economy should accelerate further. The construction industry will be a direct beneficiary of the anticipated growth, but with its weakened labor force (currently standing at about 4.5 to 5.0 million nonresidential workers nationwide compared to an estimated 5.5 to 6.0 million in 2008), there is worry that we will regress to a period reminiscent of the late 1990s and early 21st century, when labor shortages were widespread.

The construction industry's labor force suffered greatly during the downturn. As activity plummeted and employment opportunities became increasingly scarce, many unemployed workers left the industry, either moving to other industries requiring similar skills or opting for retirement. Unless the industry finds a way to quickly replenish its labor force with a supply of skilled workers, construction programs and project managers, as well as planners, will be faced with staffing issues as growth resumes. Use of the Construction Labor Market Analyzer® (CLMA®) will become ever more important to help address this need.

The CLMA® and its directly sourced industrial owner project data (coupled with non-industrial information from McGraw-Hill Dodge) were employed to estimate future labor demand for the SEMTA region. The CLMA® has identified potential shortages and surpluses of workers at the national, regional, and local levels. Selected highlights

A nationwide shortage of as many as 2,000,000 workers is looming and project planning will become increasingly more difficult.

- 2012 Mid-Year Report

What's included in this report...

- National and regional macroeconomic construction perspective
- Regional labor demand scenarios by state
- Regional supply/demand gap analysis by craft and state
- Open shop wage trend data
- Collective bargaining settlement trend data
- Raw demand data in table format

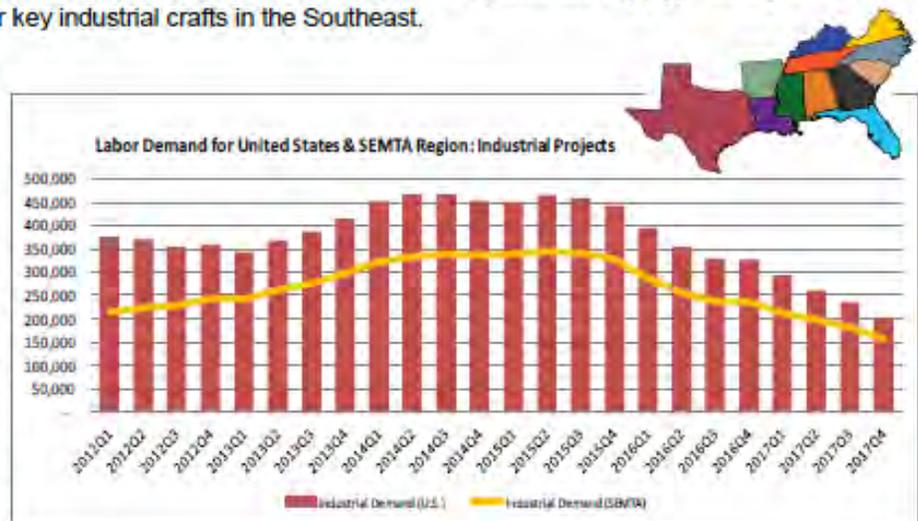
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of project volume and anticipated labor requirements are as follows with detail and craft-specific information contained in the full report.

- Projects starting in the U.S. between 2010 and 2017 have a total estimated value of \$2.7 trillion. In the southeastern United States' twelve-state region, a total value of \$1.3 trillion is reported.
- Among the twelve southeastern states, Texas leads with an estimated overall total project value of \$298 billion. Louisiana leads among the twelve states with an estimated industrial project volume of \$131 billion.
- Industrial projects commencing in the U.S. during the 2010 to 2017 time period total \$877 billion, while those in the Southeast total \$677 billion.
- Nationally, the CLMA® warns of steadily rising labor demand through much of the demand scenario period, increasing from 2.4 million at the start of 2012 to a peak of 6.7 million in 2016. Through 2017, quarterly nationwide labor demand is expected to average 5.3 million workers for all projects (vs. 4.5 to 5.0 million in today's labor force).
- Within the Southeast's twelve-state region, overall labor demand (industrial and non-industrial combined) is expected to average 2.3 million workers through 2017, peaking at 2.9 million at the end of 2016. Labor demand for the region's industrial projects is forecasted to peak at 344,000 workers in the second quarter of 2015.
- Among the twelve states, Texas should see the greatest overall demand, with a peak of 688,000 workers in the fourth quarter of 2016. Louisiana should experience the highest labor demand for industrial projects.

The CLMA® provides estimates not only of total labor requirements, but also of demand for forty-two individual crafts. Nearly all key crafts will see an increase in demand and without a replenished supply, shortages can be expected for most and particularly for key industrial crafts in the Southeast.

The economic downturn has left the construction industry with a smaller labor force and today, there are an estimated 4.5 to 5.0 million nonresidential workers nationwide (employed and unemployed). Looking ahead, planned projects will lead to an average demand of 5.3 million workers in the coming years and a peak of 6.7 million by 2016. And as more projects appear on the drawing board, we can expect demand to rise even further, taking us back to the future...to a time when shortages were the norm.



This study was prepared for the Southeast Manpower Tripartite Alliance (SEMTA). Conceived in 2005, SEMTA is an unincorporated organization of people from across the construction industry, including representatives from owner organizations, the trades and the contractor community, who share a common vision of a safe, skilled workforce, as well as a collective concern about the rapidly declining numbers of qualified craft in the southeastern United States construction industry.

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Graduate Lapel Pins

ADD A has authorized the creation of a new product for Certified Curriculum Program Graduates. These pins are 1" in diameter, with Turquoise and

Black Cloisonné filled with a bottom rocker indicating a Certified Program Graduate. These pins are available for \$5.00 each, or \$3.50 each if you order 2 or more. Price includes all shipping and handling. Pin orders must be made by the instructor and are shipped directly to the instructor of the program. No sales will be made to individuals.

Graduate Certificates

As a reminder, Graduates from ADD A Certified Programs are entitled to Graduate Certificates indicating their completion from an ADD A Approved Program. These Certificates are not Certified Drafter Certificates. This only indicates ADD A has approved the material content of the schools curriculum.

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- Assist in many State Competitions

