

# Does anyone want to be a detailer?

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**R**obert Morgan takes great pride in his craft—a job that is critically important to America’s construction industry. His labor is fundamental to the erection of safe, efficient, high-quality buildings. Now, after 39 years, Morgan is retiring. And as he goes, two increasingly scarce attributes leave with him: experience and expertise as a structural steel detailer. And most troubling, he has precious few contemporaries who can adequately fill his shoes.

While a fictional character, Robert Morgan’s tale is an all-too-familiar scene playing out in engineering offices and detailing houses across the U.S. Plagued by an aging workforce and insufficient training opportunities, the steel fabrication industry is at a critical juncture. Simply stated, we have an emerging manpower crisis and we need to do something about it—now.

## DETAILER AVAILABILITY DECLINING

The average age of a structural steel detailer in the U.S. is 55 years—an already small workforce on an unrelenting march toward retirement. Although a younger generation of detailers is in place, their average age is 40-45 years and their ranks are alarmingly thin. How did we arrive at this precarious position?

Our manpower dilemma is not a recent phenomenon. Fifteen years ago the shortage of detailers was beginning to have a negative impact on the industry. In response, many fabricators ex-

tended pay increases to skilled detailers and started new ones out at a slightly higher wage to attract them. While this strategy placated older workers and attracted the new generation of detailers mentioned earlier, it did not bring sufficient numbers into the employee pipeline.

Complicating matters was the widespread adoption of computerized technology that, while improving quality and increasing productivity of shop drawings, also masked an escalating personnel problem. Nationally, production levels of fabricated steel were increasing using the same—or fewer—number of steel detailers.

Meanwhile, a valuable “farm team system” was slowly disappearing. As recent as thirty years ago, large steel manufacturers provided apprenticeships in which many budding detailers received on-the-job training. Today, those mills have consolidated—in some cases failed—and such training has all but disappeared.

Still, few fabricators today give serious consideration to the industry’s future workforce requirements. The number of qualified job candidates continues to decline as a once-abundant employee pipeline slows to a trickle.

## INDUSTRY PRACTICES PARTIALLY TO BLAME

Clearly, we must develop another “new generation” of steel detailers. But there are thorny fiscal matters to be considered. Many managers, hobbled by shrinking profits and tight budgets,

often ignore job-training funding requests. For many fabricators it is financially prohibitive to hire graduates of a two-year AutoCAD program who, because of elementary skills, require four or five years of additional training. And experienced employees often must devote valuable time in an already demanding workday to guide these new hires.

Trainees typically do not receive full detailer pay until they become profitable for the company, which often leads to negative impressions of our industry. “Why bother with two expensive years of college preparing for a job that will pay only slightly more than flipping burgers—for the next five years?” recruits ask.

And we are guilty of raiding our own talent. Fabricators often exacerbate the workforce dilemma when they pluck skilled detailers out of their engineering departments, turn them into estimators and project managers, and then replace them with employees of lesser capability—or not at all. Walt Kelly’s comic strip character Pogo once famously observed, “We have seen the enemy and it is us.”

## ACTION NEEDED

We ignore this looming workforce crisis at our peril. Yes, technology has given us powerful computers and software that, when properly used by experienced detailers, dramatically increase the already break-neck speed of getting drawings to the shop for fabrication. However, fabricators and detailing houses are beginning to

recognize the folly of asking two-year college graduates with minimal experience to manage such sophisticated software. These programs have limitations and are most effective when implemented by more experienced users.

So how then should we respond? The industry must rapidly implement training programs that are both effective and attractive to the emerging workforce. One example is the partnership between Vincennes University, a partner in the Community Colleges of Indiana (CCI), specializing in business solutions, and CenterLine Detailing Services, a steel detailing firm in Danville, Indiana. The Fundamentals of Structural Steel Detailing is an intensive three-week course taught by a steel detailer who is certified under the National Institute of Steel Detailing's Individual Detailer Certification program (NISD-IDC). A detailer training series of CDs developed jointly by NISD and the American Institute of

Steel Construction (AISC), are used in teaching this course. In addition to steel detailing, other subjects included in the course are:

- Management of contract documents that have missing or incorrect information
- How erection plans should be represented
- Managing large volumes of job revisions, while ensuring proper documentation
- Project organization, including identifying cost-effective methods of detailing
- Effective communication with employees and customers, especially on troubled projects
- Welding, weld symbols and the impact improper symbols have on production

Students work using the AISC/NISD Detailer Training CDs program and receive a certificate of completion. Students who have had three

years steel detailing experience, and who have completed the training CDs, are eligible to take NISD's IDC test (Detailer Class II certification).

In the class the students actually detail the structural steel referenced in the training CDs while learning to manage revisions to the building. Small classes ensure individual attention and direction in this comprehensive course. The three-week course costs around \$3200, including room and board on campus, parking, two texts (ASD 9<sup>th</sup> Edition and Detailing For Steel Construction), as well as the latest Jobber calculator, to be kept by each enrollee. The next CenterLine/Vincennes University course is scheduled July 8<sup>th</sup> - 26<sup>th</sup> 2002. For additional information contact Liz Bechner at CenterLine Detailing 317.745.1301 or at centerln@ameritech.net. CenterLine Detailing and Vincennes University will have a booth at the NASCC in Seattle, 2002.

## Resources for Steel Detailing Training

American Institute of Steel Construction <i>Detailer Training Series on CD-ROM</i>	<a href="http://www.aisc.org">www.aisc.org</a>
National Institute of Steel Detailing	<a href="http://www.nisd.org">www.nisd.org</a>
Vincennes University/CenterLine Detailing	317.745.1301
British Columbia Institute of Technology	<a href="http://www.bcit.ca">www.bcit.ca</a>
Steel Detailers Institute of British Columbia	604.588.9274
Steel University (Steel Plus Network) <i>Partner Institutions:</i> <i>CEGEP de Rimouski (Rimouski, QC)</i> <i>Humber College (Toronto, ON)</i> <i>New Hampshire Community Technical College (Nashua, NH)</i> <i>Southwestern Community College (Creston, IA)</i>	<a href="http://www.steelplus.com">www.steelplus.com</a>