

**DESIGNING A  
PRE-APPRENTICESHIP MODEL  
FOR WOMEN ENTERING AND  
SUCCEEDING IN THE  
CONSTRUCTION TRADES:  
A Report to YouthBuild Providence**

Elizabeth Skidmore and Susan Moir, Consultants

September 2004





## CONTENTS

The Problem	Page 3
Study methods	Page 5
Results	Page 7
Discussion and recommendations	Page 20
FIGURE 1: Staffing needs and program elements for model pre-apprenticeship for women entering the construction trades	Page 24
References	Page 25
Appendix A: Related organizations	Page 26
Appendix B: Internet survey	Page 33
Author's biographies	Page 37

**THE PROBLEM:**

It has been over a quarter century since the Carter administration set a goal of increasing the number of women working in the construction industry to 6.9% of the workforce. It is often overlooked that the stated intent of this policy initiative was for women to make up 25% of construction workers by the year 2000 (Eisenberg, 1999). While some isolated projects have met or exceeded the 6.9% target, the number of women working in the construction trades nationally increased in the first few years after 1979, but leveled off at under 3% in the early 1980's and has stayed at that level for over two decades (Bureau of Labor Statistics, 2003). In fact, recent reports show that while the number of women moving into management and ownership positions in the construction industry has gone up sharply in the past few years, the number of tradeswomen has gone down.

YouthBuild Providence recognized this problem and sought to identify and better understand the impacts of social barriers, gender prejudices and sexism on women entering their training programs and succeeding in careers in the construction trades. In Rhode Island, women who successfully enter and build careers in the trades can expect to make 74% more than the statewide median per capita income. Women working in construction experience many other individual benefits, such as improved job security and self-esteem, financial independence and pride of craft. For those working in the union sector, there are excellent health and retirement benefits. There are also great community and social benefits from increasing the number of women in construction and other higher paid non-traditional work. Putting more income in the hands of women and redressing the disproportionate poverty rates among women and children (NOW) contributes to more stable communities, healthier children, a broader tax base and a brighter future for all.

Changes in the demographics and nature of construction work may make this an opportune time to implement models for increasing the percentage of women working in construction. Despite recent short-term downturns in construction jobs, the long-term projection is for a severe labor shortage in the industry (Horschel). The projected

shortage is due to several factors, including the aging workforce, changes in vocational education and deskilling of the work (Chini, Brisbane H. Brown, & Drummond, 1999). Among the historic primary pool for recruiting future construction workers, high school age vocational/technical students, construction is no longer a favored career choice. A frequently cited Wall Street Journal Almanac Poll found that high school aged voc-tech students ranked construction 248<sup>th</sup> out of 250 possible occupation choices (Chini et al., 1999) (Shelar). The traditional resistance of the union sector to greater recruitment of women is also changing. As some in the non-union sector are taking aggressive steps to recruit women, some union leaders have recognized that low numbers of women among skilled construction workers will threaten market share in the long term.

YouthBuild Providence has a commitment to successfully bringing women through their construction pre-apprenticeship program and moving them into long-term employment in the skilled construction trades. Yet the Board, the staff and the women trainees find themselves up against political and macro-economic barriers that keep women from entering and staying in the construction industry. YouthBuild commissioned this study to identify policy and programmatic efforts that they can make to improve their success rates.

The purpose of this report is to

- Identify barriers to women entering and remaining in the construction trades,
- Outline a plan for a pre-apprenticeship program model for women seeking to enter the construction trades,
- Identify key resources needed and barriers to be addressed for the pre-apprenticeship model to be successful.

## STUDY METHODS

In order to better understand why efforts to increase the number of women in construction have stalled and what women need in order to successfully complete their training and enter the trades, data were gathered using two methods.

**Review of existing programs:** Over 50 related organizations around the country that are involved in the recruitment and retention of women in the construction industry were identified (Appendix A). These groups provide networking, training, lobbying and support for tradeswomen. Many of the organizations are involved in the national coalition Tradeswomen Now and Tomorrow (TNT). A representative sample of the existing organizations were identified through the consultants' professional contacts and the TNT network. Data from websites, printed materials and interviews were used to review the history, work and current programs of these organizations with the objective of identifying and better understanding the barriers that keep women from entering the trades and critical elements of successful programs.

**Survey of individuals in the industry:** A survey was designed to gather information from a sample of participants in the construction industry who have had experience with pre-apprenticeship and efforts to bring more women into the trades (Appendix B). The survey was loaded onto an internet platform and the link was distributed by email to a core group of respondents who were, in turn, encouraged to distribute the link to their circle of contacts. Ninety-two responses were received within the 3-week period that the survey was available. The profile of the respondents follows:

- Ninety-three percent were female.
- The average years of experience in the construction trades among those who responded to the question was almost 20 years.
- The largest single category was union tradespeople and staff (71%). Twenty-six percent of respondents were educators or advocates and the balance of those answering the question regarding their organization or union were utility workers, contractors and other non-traditional tradespeople.

- In response to the question, “In what capacity have you had personal experience with women entering or working in the construction trades?,” results were as follows:

<b>Construction worker</b>	<b>72.8%</b>
<b>Teacher in a training program</b>	<b>34.8%</b>
<b>Administrator or manager of a training program</b>	<b>27.2%</b>
<b>Working in a pre-apprenticeship program</b>	<b>25%</b>
<b>Union official</b>	<b>25%</b>
<b>Contractor</b>	<b>8.7%</b>
<b>Current trainee</b>	<b>1.1%</b>

\* Total is greater than 100% due to multiple responses.

- In response to the question, “How much would you say that things have changed for women entering the trades in the past 10 years?” 65% of respondents said “somewhat” and “very much”; 35% said “not much.

## RESULTS

### Review of existing programs

No single program or organization has solved the problem of increasing the numbers of women entering and succeeding in the construction trades, but many successes have occurred at the local level or on specific projects. We reviewed these for keys to success and lessons learned.

*Washington Women in the Trades* is an association that publicizes and promotes all the pre-apprenticeships in the state. They focus on networking and educating women and girls to the possibilities and ins and outs of entering the trades. They report that “[a]pprenticeship...has the highest economic outcomes of all workforce training programs, as evidenced by the 1998 Workforce Training and Education Coordinating Board's evaluation of the nine largest training programs” in their state. They attribute this to “the partnership apprenticeship creates with business, labor and education.” Apprenticeship provides “a well-defined career pathway for a specific occupation.” The critical elements of apprenticeship are:

- Paid on-the-job training, under the guidance of a journeylevel worker in that trade
- Related supplemental instruction, classroom theory and hands-on practical training
- Progressive, increasing wages as the apprentice's skill level increases
- Journeylevel certificate upon successful completion, with nationwide recognition

*Wider Opportunities for Women (WOW)* works to get women into higher paid non-traditional work as part of a national strategy to achieve economic independence and equality of opportunity for women and girls. Their report, “Coming up short: A comparison of wages and work supports in 10 American communities,” focuses on the supports needed for single mothers to move from public assistance to full-time work. They have identified three stages of support for women’s successful entry into the permanent workforce:

1. A **package of financial supports** to help women leaving welfare transition from public assistance toward full-time work. This includes child-care assistance, transitional Medicaid, and Food Stamps.
2. A **post-transition package**, which typically includes child-care assistance, state-subsidized or employer-paid health insurance benefits and food stamps.
3. The **full work-supports package**, which includes a combination of child care, health insurance, food stamps and housing subsidies. (*Coming up short: A comparison of wages and work supports in 10 American communities*).

WOW's program includes multiple strategies. One that is most relevant to training programs is their advocacy of educational methods specifically designed for adult learners and populations that may have low-literacy. The specific method that WOW recommends is Functional Context Education.

*Seattle Port JOBS* is a non-profit organization working to increase access to living wage jobs for all residents of the Greater Seattle area. Their Apprenticeship Opportunities Project assists individuals seeking entrance into the building and construction trades. To better understand issues of the recruitment and retention of women and people of color in the JATC system, they looked at data over a 6-year period in the 1990's. (*Entry and Retention of Women and Minorities in Six King County Apprenticeship Programs, 1992-1998*, 2000) The study found that "most programs [were] meeting their internal goals for indenturing minorities, but most fall well short of their goals for women." They found a wide range of dropout rates from apprenticeship programs (9% - 91% ), but they also note that the rates in the programs they reviewed were about the same for women and people of color as for the overall population. In this data, "almost half of all apprentices who drop[ped] out of their programs [did] so within the first six months." The costs of attrition was calculated by costing out the years of training provided to those who dropped out. During the years studied, just one trade, the Carpenters, had spent \$665,500

to train apprentices who never completed their training. The study concluded, “Getting better information about why apprentices leave their programs is the key to developing strategies to reduce attrition.”

One innovative component of the Port JOBS approach is their car ownership program, “Working Wheels.” ([www.working-wheels.org](http://www.working-wheels.org)). After identifying transportation as a major obstacle to good steady employment, Port JOBS looked at best practices among programs for affordable car ownership around the country (*Working Wheels Update: Car ownership program practices nationwide*, 2001). They then established their own non-profit that provides assistance to eligible applicants in purchasing low mileage used cars and other services such as access to affordable and secured financing, credit repair, subsidies for insurance and training in basic auto maintenance.

*Change the Face of Construction* is a project in the United Kingdom to increase diversity and the number of women, black, minority and the disabled in the construction workforce ([www.change-construction.org/](http://www.change-construction.org/)). It is managed by three consultants, all women, who provide consultation on diversity to construction contractors and owners, a clearinghouse and networking for individuals seeking entry into the construction trades and auditing services. They work with a training partner called Building Work for Women that reports high rates of placement of women in construction jobs. The program develops collaborative relationships with contractors, municipal authorities, housing associations and other employers to provide OTJ training and placement in the construction crafts and trades.

Women in the program are provided with:

- a training allowance or wage
- childcare and travel costs
- tool kits and protective clothing
- career development
- supervisory support

Partnering employers are provided with:

- supervisory support
- training for staff in mentoring and equal opportunities
- opportunities to acquire site assessor qualifications
- project promotion

***The Portland (ME) Bridge Project*** was a \$157 million bridge replacement project (*Administration of Civil Rights Obligations for Portland/South Portland Bridge Replacement Project*). Over the 4 years of the project between 1994 and 1998, the Maine Department of Transportation's Office of Equal Opportunity/Employee Relations contracted with a private compliance consultant to provide oversight and monitoring of the DOT's civil rights goals. Among its goals, the DOT sought to increase the number of women on the project through making it "women friendly." They accomplished this through a number of actions that spanned the length of the project:

- During the planning and construction phases of the DOT funded several programs to increase women's awareness and knowledge of bridge and the potential for construction jobs.
- The training programs available included a 14-week hands-on skills training incorporating physical conditioning, job readiness skills, and a tradeswomen's "job bank."
- The DOT funded an introduction to the trades for all women accessing Job Partnership and Training Act (JPTA) services.
- During the construction phase the Maine DOT designed and funded near-site childcare and on-site compliance by a women-owned firm. In addition to daily monitoring of EEO goals, the compliance consultant worked directly with and provided support for the women and minority trainees; compliance, coordinated activities with community organizations and women and minority owned businesses; and assisted contractors with recruitment and retention issues.

*The Boston Tradeswomen's Network (BTN)* conducted a mentoring program with ISTEA funds administered by the Massachusetts Department of Labor's Apprenticeship Bureau. The program had two components:

- Women apprentices were mentored by experienced women in their specific trades.
- Mentees were required to attend skills classes with their mentors. The classes addressed issues such as physical fitness for construction; finances and budgeting, including dealing with debt and budgeting for seasonal work; sexual harassment; leadership development; what goes on in union meetings, including Parliamentary Procedure; and power tool safety.

This two-year program improved the retention rate in Massachusetts for women from 64% (women without mentors) to 96% (women in the mentoring program).

### **Survey of individual construction industry participants**

Ninety-two respondents to an internet survey answered six questions regarding their experience with women entering and succeeding in the construction trades. Their responses are summarized below.

1. Responses to the question, "*What are 2-3 things that you think women most need in order to enter and stay in the trades?*" broken down into external and internal factors.

- External factors: One third of the respondents mentioned "support:" support from family and friends; support networks, women's groups in unions, financial support, and support from unions and employers. Twenty percent specifically called for mentoring. Childcare and stronger union support were each mentioned by over 10%. Twenty-five percent said good quality training. Among the types of training described were pre-apprenticeship, hands on, on-the-job, safety, and training in body mechanics. Other responses included job placement and steady

work, aggressive anti-harassment policies at work and in the unions, fair treatment and opportunities for advancement.

- Internal factors: Almost 60% of respondents mentioned at least one personal characteristic that is needed for success. These included thick skin, strong work ethic, sense of humor, stamina and endurance, stubbornness, determination, confidence, self-esteem, good physical conditioning and mental strength, and a good attitude. One respondent pointed out that it takes commitment and desire to be a trailblazer.

The bridge between the internal and external factors was represented in responses such as having realistic and accurate information on the trades and working conditions and a strong desire to do the work. These factors are not inherent, but can be taught in a curriculum that is designed to give participants accurate information on the career that they are entering.

2. In contrast to question one, when respondents were asked, “*What are 2-3 things that keep women out of the trades or cause them to leave?*” very few responses were related to personal characteristics (a half dozen answers touched on low self-esteem or unrealistic expectations). Eighty of the 92 respondents (87%) mentioned some aspect of the work itself. These included: work is seasonal and not always available; it is hard and dirty and working conditions are poor; women are isolated and subject to harassment from co-workers and others; childcare is difficult to arrange. Among the problems mentioned were, “work is dirty dangerous and HARD;” “rude foremen not willing to work with females;” “Child care is hard to find for the hours we work in the trade;” “absence of DFR [Duty of Fair Representation] from ambivalent union officials;” “awful patriarchal discrimination (working with animals that don't respect them or protect them like other men).” There are very strong feelings and some bitterness.

3. This bitterness manifested as cynicism and fatalism among some respondents when they were asked, “*What is one thing that would influence men in the industry to be more accepting of women entering the trades?*” Four respondents did not answer; several suggested lobotomies or medication for the men; two said “a 2 x 4;” one answered, “I

have no idea;” and another said, “Good Question - who knows? Why did the doors open so dramatically with women entering legal & medical professions but the trades were the last bastion?”

Of those respondents who offered a suggestion to the question, over one-third said, in one way or another, the solution is to have more women in the trades. One acknowledged the “Catch 22” nature of this suggestion. Among the specific answers were that the men needed to know and work with more women, that female relatives of male workers should enter the trades, and that unions need to provide more leadership in supporting women.

4. Respondents wrote over 5300 words (15 pages of text) in response to the question, “*If you could design a pre-apprenticeship program for women entering the trades, AND MONEY WAS NO OBJECT, what would you say are the most important parts of the program?*” Some had designed training programs or aspects of programs. All had valuable experience. Their suggestions are summarized by stages of a program:

Outreach and recruitment- Many respondents referred to the importance of recruiting and training women who have the aptitude and desire to make it doing a very difficult job in an often-hostile environment. Suggestions included screening for women who understand what they are getting into and are prepared to work really hard to get it and recruiting in workplaces where women are already doing heavy manual labor, such as airports and warehouses. Respondents said that the good wages should not be the single motivating factor; it must be balanced with a strong a desire to be a tradeswoman. An appropriate screening process should include a written protocol and training for staff that are conducting recruitment to ensure that personal biases and discrimination do not taint the process. A woman may have many lifestyle barriers to becoming a tradeswomen, but may be an excellent candidate if she is realistic about what she is taking on and has the will and desire to make it.

Physical conditioning- It is important for women to experience doing physical labor for 8 hours a day and to get enough sleep and practice good nutrition. However, as

one respondent pointed out, many male construction workers are not athletes. Women need to condition specific muscle groups used in their trades and know how to use their bodies in the ways that they will not be injured or unnecessarily fatigued. Several respondents spoke of the need for training in ergonomics and body mechanics. Gym memberships would help women to get in shape.

Job skills training- The major emphasis here was on the importance of hands-on training and exposure to tools and their proper use. It was suggested that trainees receive the tools of their trade early, so that they can get comfortable using them and that free tools and a good pair of boots would ensure that women did not go out to work with “dinky tool aprons and toy tools” because they could not afford better. They should get exposure to the various trades through jobsite and apprenticeship school visits and presentation from experienced journeypeople. Many trainees need remedial math construction math. Classes should include hands-on use of rulers, measuring tapes, squares, etc. Blueprint reading is essential. Many respondents said that women need the experience of completing a construction project in order to experience the pride of craft that balances out all the difficult aspects of construction work.

Safety- Trainees need to get “what they need to know to go home in one piece every evening,” All should receive the OSHA 10-hour training, OSHA Standards for the Construction Industry (OSHA 510). This training is now required by law for all workers on state-funded construction projects in Rhode Island. OSHA 10-hour certification would also be an asset to women trying to enter a union apprenticeship or find employment by a contractor. Safety training should also be provided in scaffold use, first

aid and CPR. Future apprentices should know their rights to safe work and how problems are addressed on a construction site.

Life skills- A paid training program simulates real working conditions and takes pressure off the trainees to be able to afford the time to attend the training. One program secured funding to offer childcare and rent subsidies making it easier for women to commit. Transportation issues need to be addressed early. Legal assistance regarding discrimination, housing, immigration or other issues makes the program accessible to a more diverse audience.

Job search and placement- Trainees need interview skills and assistance with job application and resume writing. They need to learn the importance of being on time every day, with their tools and ready to work. They also need training in the particulars of job hunting within construction (show up at 6 am, tools in hand; go to the same site multiple times over the course of a project because different contractors work different portions of jobs, etc).

Programs need to have active retention/advancement components and develop strong partnerships with employers to ensure good placements for graduates. Programs that merely provide training with no placement or long-term follow-through are inadequate. There needs to be active partnerships with area JATC's and involvement by union leaders. The facts of sexual harassment and the potential for hostile co-workers need to be addressed and trainees need to learn how to tell the difference between harassment and the job culture of the lowly apprentice. Role playing, guest speakers and facilitated discussions should be part of the curriculum. Women need to understand the

culture that they are getting into and how to handle it in a way that they protect themselves and keep the job- a tricky balance.

Follow up: Continuing mentorships established during training can provide women with support they need during the rough times. Mentors should be compensated for their time. Women need to learn how their union works and what they have to do in order to get jobs and keep them. Support groups for graduates will keep women connected, reduce isolation and create networks of women to help with outreach, serve as teachers, guest speakers and future mentors.

A process for tracking students for *at least* one year, and providing both job-finding and life skills assistance is key to helping women adjust to the seasonal and insecure nature of construction jobs.

In addition a pre-apprenticeship program should be designed to address the fact that respondents felt that women graduates needed the confidence and self-esteem to believe that they can do the job and the skills to prove to others that they can do it.

5. The survey asked respondents, “*For those who have had experience with pre-apprenticeship training, what are the 2 or 3 most successful elements of the program with which you are involved?*” The most frequently mentioned program element was hands-on training in tool and equipment use. The second most frequent response was the importance of providing role models for the female trainees. This was done through guest speakers, field trips to visit women on construction sites, providing tradeswomen mentors and having tradeswomen teach in the program. Other issues that were frequently raised were the importance of a physical fitness component to the program and the need for union buy-in to get women into apprenticeship programs and out to work. Raised strongly, but less frequently, were the importance of construction math, screening of applicants and follow up with program graduates. Several respondents stressed the importance of trainees completing a project to develop pride in craft, which is key to longevity in the trades. One suggested that programs lacking facilities partner with Habitat for Humanity to provide trainees with on-site experience and the satisfaction and self-confidence that come with seeing a finished job.

6. Finally, the survey asked. *"If you are involved in training or pre-apprenticeship program for women, what is one mistake that was made in your program that others could learn from?"* There was a wide range of responses:

*On screening and recruitment:* "Didn't recruit enough likely candidates;" "Be prepared to deal with physical and emotional abuse with the participants;" "Not providing adequate screening to be sure an individual was sufficiently motivated for the tough work needed to succeed." "Didn't have buy-in from enough unions." "Too much emphasis on the dollars." "Construction work will not cure target client population poverty - It is an appropriate fit only for some people." "Construction is a very demanding occupation for anyone working in the trade. If you are emotional, lack good work ethics and good sense of humor, it probably would not work for you. Prior work experience would be very helpful."

*The lifestyle and soft skills curricula took too much time from job skills:* "The primary focus should be on learning to be a good tradesperson and union member, getting as much time on tools and beginning to establish the relationships necessary to network in this business."

*Not enough individual support and lifestyles teaching:* "Take a serious diversity course before attempting to understand others people's cultures- not just one hour." "Include some amount of drug and alcohol counseling;" "The need for more individualized case management and support greatly affected the ability of participants to problem-solve with each other and become competent members of a group." "Not having an exit interview in place to learn from the women who leave and don't complete the program." "Lack of an extensive counseling staff," "Programs cannot be too structured where there is not time for some freedom and time to have fun."

*Not setting realistic expectations about the work:* "Not teaching enough of the humble part of being new to construction work. Not teaching enough about what to

expect in terms of attitudes. Know when it's personal and when it's just about you being new or just about you being the one who everyone loves to tease.” “[N]ot preparing them of the hostile environment. or harassment.” “It is important for women to know how to deal with sexual harassment and to know the laws that apply. Some people say that this sets women up with a bad or defensive attitude when they go on the job. You should safeguard against setting women up this way. They need to know how to handle themselves but they also need to know that not every man is an enemy. On the other hand they need to know that they shouldn't get into the trades to find a husband. The worse thing they can do is get a reputation for being easy. I know it isn't fair but construction is still a man's world and women must learn how to work in that environment.”

*Too much discouragement:* “Entering into the ironworkers apprenticeship, the coordinator felt he should warn the women coming in about what assholes the men could be (which is true) but he neglected to mention how supportive the men and women of the trade could be as well;” “Women were discouraged from aspects of the trade they were interested in because of their size or current strengths. These are things that can be worked on and learn to handle if not with brute force then with skills and experience;” “[O]ne of the trainers was fairly negative. Instead of being honest about the pros and cons for us out there, she would always tell women how absolutely horrible the guys are and how difficult it is to work in the field. Apparently she had had some difficult times out there. You need to be honest but you need to be positive.”

*Follow up and retention:* “Not enough work on retention of women in trades; not enough data on retention; not enough work with industry employers and unions to promote retention;” “[We] felt we could do anything once we finished the course. I felt they didn't deal with the retention issues that tradeswomen face. That to me was the big mistake. So I say to you have something in place for after they get through your program and use them to help your cause. The majority will want to give back if they feel appreciated. Many women want to make it easier for the sisters behind her if given the opportunity.” ”I am no longer involved in such a program but when I was I would say

again - no one is accountable for tracking or following the women. The women were more like bonus items for the program without anyone caring if they made it a week, a month, a year in the trades.” “working graduates need to be pulled together for quarterly or semi annual meetings to keep in touch class by class and once a year ALL graduates and families for an event that involves eating together.”

*Women-only programs are a mistake:* “I think it is better to have men and women together in a pre-apprenticeship program. It helps both to understand one another and may even resolve issues in the workplace.;;“ “...men from the industry were not included enough.” “An all-women class! That's not the real world. It makes more sense to have men in the group too so that it is more like the jobsite.”

*Having men in the program is a mistake:* “The men felt they had to prove they knew more than the women even though neither had any prior training. It didn't leave the women room to prove to themselves or others that they could develop the new skills. The men where constantly putting the women down to make themselves feel bigger and better. Women need their own space to feel comfortable in trying something new that can also be very frightening.”

*Lack of marketing:* “You can't get them in to test train or take an exam if they don't know about it. This takes time, expertise and funding.”

*Underfunding:* “Get your funding together BEFORE you open so as not to disappoint the students; “ “I wasn't involved in pre-apprenticeship training for women because it was unpaid and I couldn't live for six weeks with no income:”

One respondent summed up programmatic mistakes as “Don't hire women; don't give them leadership positions; no peer women; no role models; no support for women in trades.” Failure will follow.

## DISCUSSION AND RECOMMENDATIONS

This study surveyed factors affecting women's entry into the construction trades and influences on their decisions to stay in the industry or to leave. Data was gathered from over 50 organizations and ninety-two individuals. In one sense, there were few surprises. The challenges to women entering the physically rigorous and male-dominated world of construction work are well known. There is value, however, and great power in seeing those challenges condensed into a few pages. Those who responded to the survey, and especially the over 80 respondents who are themselves tradeswomen, gave powerful testimony to the hard work they have undertaken and the daily obstacles they face to succeed in this world. The programs that were reviewed have devised many innovative ways to address the problem and most of them reported modest but steady progress. For the people behind these programs, getting more women into the construction trades is not just a goal. It is a lifelong passionate crusade. They are to be admired for continuing to do the right thing for decades against immense odds.

It was one of the surprises of the study that these champions have been pushing uphill in the face of little progress over the past 25 years. What caused the progress made in the first few years after 1979 to stall? Why did the percentage of women in construction leveled off at under 3%? What will it take to make progress towards the goal of significant numbers of women having access to the high paid skilled work in the construction industry?

Solutions to these mega-policy questions are beyond the scope of this small study but, before entering into the nitty-gritty of the components to greater success at the individual and program level, the elephant in the room calls out (trumpets out?) to be named.

### ***The unions have not done enough***

The unions have not done what they need to do for significant change to happen. Labor unions are the organized voice of workers in society. If the union leadership made a concerted commitment to increasing the numbers of women in construction, it would happen. Some unions have made efforts, but they have not pushed hard enough for their

brethren to do more. As one of the survey respondents said, the best way to get more women into the trades is to have more women in the trades. The goals of 1979 will be met when unions accept significant numbers of women. For the champions who will lead this change, there are a number of specific actions that will break down the barriers:

- Unions need to partner with pre-apprenticeship programs, help to improve the programs and guarantee their support for qualified female graduates.
- Find jobs for women who successfully complete the best pre-apprenticeship and admit them to the JATC programs.
- On the worksite, the employer is ultimately responsible for working conditions, but on construction worksites, above all other sectors, the union leadership sets the tone. Stewards and foremen need to know that their unions support women entering in the trades, and they need training in how to support the women and be leaders in the changing workplace.
- Bring childcare to the bargaining table. This is not only a women's issue. It is also important to more male members as the structure of working families has evolved.
- Those women who have made it through, who are paying their dues both literally and figuratively, are heroes. Honor them, promote them, recruit them to leadership positions. They are among the best of the labor movement today.
- Support the establishment of Women's Committees at the local and national level. Get over the antiquated argument of "dual unionism." The union is strengthened, not weakened, when members want to come to the hall after work to discuss and take action on union issues.

These are the right things to do, but they need not be done out of altruism. Workers who want to work in the field are needed to address the impending labor shortage. The non-union sector sees the value added in bringing women into the industry.

When the non-union sector takes the lead for change, it gains market share. The leadership of the building trades unions can ill-afford to give ground in our era of declining power of the organized workforce.

### ***Recommendations for programmatic improvements***

Beyond the larger issues surrounding the relationship between women and the building trades unions, the data in this study pointed to a number of programmatic components that, if implemented, should improve the skill levels and preparedness of women coming out of pre-apprenticeships and attempting to enter the trades. Important components of a successful program are broken out as “Staffing” and “Program Elements” and they are presented on page 25 in FIGURE 1: *Staffing needs and program elements for model pre-apprenticeship for women entering the construction trades.*

The data also lead to the following recommendations:

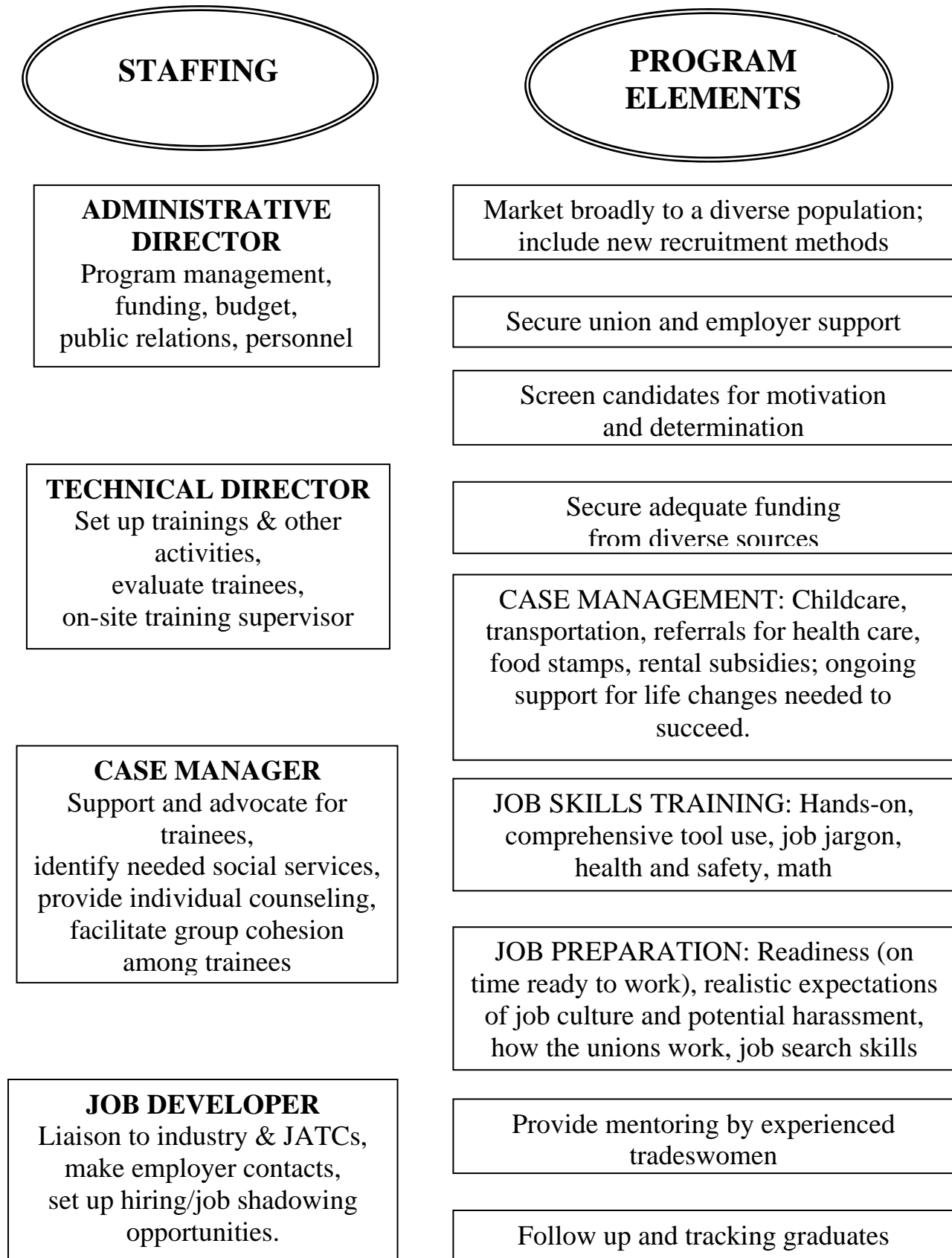
- Recruitment should be broad and reach a diverse population. The women who have what it takes to make it in the world of construction are not concentrated in any one population of poor women or athletes or young women. They do not live in certain neighborhoods. As one respondent noted, a strategy for outreach would be doing jobsite visits: to recruit, to go to workplaces where women are already doing heavy manual labor for 8 hours a day for low pay and no benefits (hospitals, back-of-the-house hotel workers, factories (for both heavy and light manufacturing), nursing homes, institutional laundries, etc).
- Women considering construction work need to know the real deal. Yes, the money is good, but the work is hard and uncertain. The relatively high hourly wage cannot be the only, or even the primary, motivator. Women have to want to do this work. Tell them what it is like and what they are taking on.
- The advocates of “women-only programs” say that women need space to learn without pressure or competition from men. On the other side are those who say that mixed gender programs more accurately reflect the real world of construction and it is important for women to experience that.

Whatever the student composition of a pre-apprenticeship program, those who have gone before say that women need training in self-assertiveness; they need to gain the skills to understand the culture they are entering and navigate the thin line between harassment and the pecking order of the hierarchy. Women need to be able to “take it” while protecting themselves.

- Some believe that there is too much emphasis on lifestyle and soft skills in the curricula of pre-apprenticeship and some think that there is not enough. There is strong sentiment from both camps on the importance of hands-on training, good time with the full range of tools that are used in construction and that women should have their own tools and be comfortable with using them before they go on site or into apprenticeship. Women who have attended pre-apprenticeship programs stress the value in working on an actual construction project through completion.
- Mentoring works and should be provided by experienced tradeswomen. When women have relationships with other women who have gone into the field, it reduces their isolation, gives them access to a friend in the field and increases their chances of making it.
- Women role models should be integrated into all facets of a program, including teaching, guest speakers, job shadowing, site visits, and an active alumnae presence..

Integrating all of the recommended components into one program will be costly. Funding should be sought from the widest possible sources, including government support, foundation grants, union, contractor and individual contributions. This is a good investment. One tradeswoman pointed out in her response to the survey that our society too often treats” blue-collar workers as lesser people than white collar [and] treats the trades as the place where the stupid failures go.” She said, “Believe me you do NOT want stupid people building your houses, your bridges, your water systems.” Successful pre-apprenticeship programs are the first step to turning out the skilled and motivated tradeswomen and men who will build our future.

**FIGURE 1: Staffing needs and program elements for model pre-apprenticeship for women entering the construction trades**



## REFERENCES

- Administration of Civil Rights Obligations for Portland/South Portland Bridge Replacement Project.* (1998). Compliance, USA., Inc. Available: <http://www.newit.org/execsum.htm#con>.
- Chini, A. R., Brisbane H. Brown, & Drummond, E. G. (1999). *Causes of the Construction Skilled Labor Shortage and Proposed Solutions*. Paper presented at the ASC Proceedings of the 35th Annual Conference, California Polytechnic State University - San Luis Obispo, California.
- Coming up short: A comparison of wages and work supports in 10 American communities.* (Summer/Fall 2004). Wider Opportunities for Women. Available: [www.wowonline.org](http://www.wowonline.org).
- Eisenberg, S. (1999). *We'll Call You If We Need You: Experiences of Women Working Construction*. Ithaca NY: ILR Press.
- Entry and Retention of Women and Minorities in Six King County Apprenticeship Programs, 1992-1998.* (2000). Office of Port JOBS.
- Horschel, R. (Spring 2004). Construction Labor Shortage is a Reality. *The Alaska Contractor*.
- Shelar, S. (September 5, 1997). Labor shortage threatening U.S. construction industry. *Atlanta Business Journal*.
- Working Wheels Update: Car ownership program practices nationwide.* (2001). Office of Port JOBS.

## APPENDIX A: Related Organizations

### Alaska Works Partnership

Women In Construction Trades, PO Box 74313  
Fairbanks AK 99707  
*Work* 907-457-2597  
*Fax* 907-1157-2591  
alaskaworks.org

Nellie Andrews  
nelle@alaskaworks.org

### Apprenticeship & Non-Traditional Employment for Women (ANEW)

Gary Kiesling  
PO Box 2490  
Renton WA 98056  
*Work* 425-235-2212  
*Fax* 425-235-7864  
wawomenintrades.com

### Asian Neighborhood Design

1182 Market St, Suite 300  
San Francisco CA 94102  
*Work* 415-593-0423  
*Fax* 415-593-0424  
andnet.org

### Atlanta Tradeswomen's Network

(see Tradeswomen Now and Tomorrow)  
Atlanta GA

Sharon Turner

### Bay Area Construction Sector Intervention Collaboration

Oakland CA  
*Work* 510-891-8773 x301

### BTN Boston Tradeswomen's Network

12 Southern Ave  
Dorchester MA 02124  
*Work* 617-929-0433  
*Fax* 617-929-0434

Felicia Battley  
catpalm@netzero.org

### Build a Career Project of Glide Memorial Church

330 Ellis St  
San Francisco CA 94102  
*Work* 415-674-6176  
bapd.org

### California Women's Ventures Project

Watsonville CA  
*Work* 831-724-0206

**Carpenter's Pre-Apprenticeship**

Chicago & Northeast Ill District Council of Carpenters  
Chicago IL

Kate Shaffer  
drill\_bit@juno.com

**Center for Employment Training**

Nat'l HQ: CET Center, 701 Vine St  
Oakland CA 95110  
*Work* 408-287-7924  
cetweb.org

maxm@cet2000.org

**Charity Cultural Services Center**

827 Stockton St  
San Francisco CA 94108  
*Work* 415-989-8224  
charitycultural.org

**Chicago Women In Trades (CWIT)**

1657 West Adams, Suite 401  
Chicago IL 60612  
*Work* 312-942-1444xs214  
*Fax* 312-942-0802

Lauren Sugarman  
lsugerman@cwit2.org

**Chinese For Affirmative Action**

The Kuo Building, 17 Walter U. Lum Place  
San Francisco CA 94108  
*Work* 415-274-6750  
*Fax* 415-397-8770  
caasf.org

**City of Gilroy Mujeres Pueden (Women Can)**

7351 Rosanna St  
Gilroy CA 95020  
*Work* 408-846-0400  
*Fax* 408-846-0500  
ci.gilroy.ca.us/bles/jujeres\_pueden.html

**College of Alameda Diesel & Truck Mechanic**

555 Atlantic Ave  
Alameda CA 94501  
*Work* 510-748-2357  
peralta.cc.ca.us/coa/dmech/dmech

**Construction Training City College**

San Francisco CA  
*Work* 415-550-4444

**Cosumnes River College Pre-Apprenticeship**

8401 Center Parkway, Portable Bld 48  
Sacramento CA 95823  
*Work* 916-691-7465  
crc.losrios.edu

Liz Strauss  
lizjstrauss@hotmail.com

**CT Permanent Commission on the Status of Women**

18-20 Trinity St

Doreen Fredette

Hartford CT 06106

**Work** 860-240-8300**Fax** 860-240-8314

cga.state.ct.us/pcsw/

**Cypress Mandela Training Center**

The Oakland Private Industry Council, 1212

Joyce Harris

Oakland CA 94612

joyce\_btca@sbcglobal.net

**Work** 510-208-7356 510-768-4498**Fax** 510-839-3766

oaklandpic.org/cypress\_mandella-wist

**Ella Hill Hutch Community Center**

1050 McAllister St

lechaprince@ellahill.org doesn't work 8/2/04

San Francisco CA 94115

**Work** 415-921-6276**Fax** 415-921-0643

ellahutchcomctr.citysearch.com

**Fresh Start of Wausau**

Wausau Area Hmong Mutual Assn, 514 Fulton St Vang Yi

Wausau WI 54403

**Work** 715-842-8390**Fax** 715-842-9202

dwd.state.wi.us/accessres/226a\_152

**Gearing Up Project - Women's Opportunities & Resource**

Women's Opportunity &amp; Resource Dev. Inc, 127 N.

Missoula MT 59802

**Work** 406-453-3555

wordinc.org/gear

**Hard Hatted Women**

3043 Superior Ave

Kathy Augustine

Cleveland OH 44114

kaugustine@hardhattedwomen.org

**Work** 216-861-6500**Fax** 216-861-7204

hardhattedwomen.org

**International Union of Bricklayers & Allied Crafts**

1776 Eye St, NW

Coleen Muldoon

Washington DC 20006

cmuldoon@imiweb.org

**Work** 202-783-3788

bacweb.org

### Laney College Gender Equity Department

900 Fallon St, Admin Bld, 6th Floor, Rm 607      Joycelyn Robinson Hughes  
 Oakland CA 94607  
**Work** 510-464-3275  
[peralta.cc.ca.us/laey/student-serv/gender-equity](http://peralta.cc.ca.us/laey/student-serv/gender-equity)

### Laney Workforce Development/CalWORKS

900 Fallon Sts  
 Oakland CA 94607  
**Work** 510-986-6946

### Legal Momentum

295 Hudson St  
 New York NY 10014  
**Work** 212-925-6635  
**Fax** 212-226-1066  
[legalmomentum.org](http://legalmomentum.org)

### McAfee Construction Welfare to Work Program

4671 E. Heller Rd      Kate Shaffer  
 Columbia MO 65202      [drill\\_bit@juno.com](mailto:drill_bit@juno.com)  
**Work** 573-474-4397  
**Fax** 573-474-0160  
[midmo.unclewebster.com/lc/bus/659/index](http://midmo.unclewebster.com/lc/bus/659/index)

### National Ass'n of Service & Conservation Corps

666 11th St NW, Suite 1000      Virginia Northrop  
 Washington DC 20001      [vnorthro@ebmud.com](mailto:vnorthro@ebmud.com)  
**Work** 202-737-6272  
**Fax** 202-737-6277

### NERCC Carpenters Women's Committee

803 Summer St      Elizabeth Skidmore  
 South Boston MA 02127      [eskidmore2@aol.com](mailto:eskidmore2@aol.com)  
**Work** 617-312-1608

### New Choices for Women/Goodwill Indus. of North Georgia

2201 Glenwood Ave, SE  
 Atlanta GA 30316  
**Work** 404-486-8400  
[ging.org/employment](http://ging.org/employment)

### Nontraditional Employment for Women (NEW)

243 W. 20th St      Angela  
 NY NY 10011      [syx086@aol.com](mailto:syx086@aol.com)  
**Work** 212-627-6252  
**Fax** 212-255-8021  
[new-nyc.org](http://new-nyc.org)

**Northern New England Tradeswomen**

51 Park St  
 Essex Junction VT 05452  
*Work* 802-878-0004  
*Fax* 802-878-0050  
 nnetw.org

Susie J. (S.J.) Saufai  
 susie@nedlc.org

**NorthWest Regional Council of Carpenters Training Center**

1630 County Hwy  
 Mosinee WI 54455  
*Work* 715-355-0800  
*Fax* 715-355-0807  
 carpenterspnwrc.org/trainingcenters

Kate Shaffer  
 drill\_bit@juno.com

**NYC & Vicinity Carpenters Labor Management and Coop. Trust**

395 Hudson St  
 New York NY 10014  
*Work* 212-366-7500  
*Fax* 212-675-3118  
 nycdistrictcouncil.com/labor\_manage

Elly Spicer  
 espice@aol.com

**Operating Engineers Women**

355 Haddon Rd  
 Oakland CA 94606  
 oe3.org/openg.womenframe

**Oregon Tradeswomen Inc**

1714 NE Albert St  
 Portland OR 97211  
*Work* 503-335-8200  
*Fax* 503-249-0445  
 tradeswomen.net

Connie Ashbrook  
 connie@tradeswomen.net

**Port Jobs**

Office of Port Jobs, c/o Port of Seattle, PO Box  
 Seattle WA 98111  
*Work* 206-728-3883  
*Fax* 206-728-3532  
 portjobs.org

Stephanie M. Kellner  
 Kellner.S@portseattle.org

**Second Chance Program**

505 16th St  
 San Diego CA 92101  
*Work* 619-234-8888

Kate Shaffer  
 drill\_bit@juno.com

**Splinter Group**

(see Tradeswomen Now and Tomorrow)  
 Oakland CA

### Tradeswomen of Purpose/Women in Nontraditional Work (TOP/WIN)

Linda Butler  
2300 Alter St  
Philadelphia PA 19146  
**Work** 215-545-3700  
**Fax** 215-545-8713  
womensway.org

### Tradeswomen Inc

PO Box 882103  
San Francisco CA 94188  
**Work** 415-487-6419  
tradeswomen.org

Molly Martin  
molly@tradeswomen.org

### Tradeswomen Now & Tomorrow

c/o CWIT, 1657 W. Adams St, Suite 401  
Chicago IL 60612  
**Work** 312-942-1444  
**Fax** 312-942-0802  
tradeswomennow.org

Lauren Sugarman  
lsugerman@cwit2.org

### Transportation Alliance for New Solutions

Kate Shaffer  
drill\_bit@juno.com

### Washington Women in Trades Association

PO Box 837  
Seattle WA 98111  
**Work** 206-903-9508  
wawomenintrades.org

### WATT Women (IBEW Local 716)

1475 North Loop West  
Houston TX 77008  
**Work** 713-869-8900  
**Fax** 713-868-6342  
ibew716.org/wattwomen.cfm

Pam Burnham  
wattwomen716@cs.com

### Women in the Building Trades (WIBT)

12 Southern Ave  
Dorchester MA 02124  
**Work** 617-929-0433  
**Fax** 617-929-0434  
communityworks.com/html/mgd/wibt.html

Maura Russell  
wibt@tiac.net

### Wider Opportunities for Women (WOW)

1001 Connecticut Ave NW, Suite 930  
Washington DC 20063  
**Work** 202-464-1596  
**Fax** 202-464-1660  
wowonline.org

Joan Kuriansky, Esq

**Woman Operator** (website)  
258 Third Ave  
Troy, NY 12182  
womanoperator.com

Marianne Rafferty

**Women in Nontraditional Employment Roles (WINTER)**  
1932 West 19th St  
Long Beach CA 90810  
*Work* 562-590-2266  
*Fax* 562-430-9181  
constructionaffairs.com/winter.html

**Women Unlimited**  
71 Winthrop St  
Augusta ME 04330  
*Work* 207-623-7576  
*Fax* 207-623-7299  
womenunlimited.org

Mary Lake  
mary@womenunlimited.org

**Women Ventures Project**  
406 Main St, Suite 202  
Watsonville CA 95076  
*Work* 831-724-0206  
*Fax* 831-724-0220  
cabinc.org/wvp

Helen Ewan  
wvp@cabinc.org

**Women's Employment Resource Corporation**  
Berkeley CA  
*Work* 510-652-5484  
tradeswomen.org

**Women's Project, Association for Union Democracy**  
104 Montgomery St  
Brooklyn NY 11225  
*Work* 718-564-1114  
*Fax* 718-855-6799  
uniondemocracy.org/women's/wphome.htm

## **APPENDIX B: Internet survey (surveymonkey.com)**

### **Best practices and barriers to recruiting and retaining women in construction**

Thank you for taking time to help us learn more about what is needed for women to successfully enter and stay in the construction trades. After some general questions, this survey will ask questions specifically about pre-apprenticeship training.

**1. To begin, please tell us about yourself. This information is optional and will be kept confidential.**

Name	<input type="text"/>
Organization and/or union	<input type="text"/>
Number of years of experience in the construction industry	<input type="text"/>
Are you male or female?	<input type="text"/>
Phone #	<input type="text"/>
Email address	<input type="text"/>

**2. In what capacity have you had personal experience with women entering or working in the construction trades? CHECK ALL THAT APPLY.**

**I am a:**

Construction worker

Teacher in a training program

Administrator or manager of a training program

Working in a pre-apprenticeship program

Union official

Contractor

Current trainee

Other (please specify)

**3. What are 2-3 things that you think women most need in order to enter and stay in the trades?**

a.

b.

c.

**4. What are 2-3 things that keep women out of the trades or cause them to leave?**

a.

b.

c.

**6. If you could design a pre-apprenticeship program for women entering the trades, AND MONEY WAS NO OBJECT, what would you say are the most important parts of the program?**



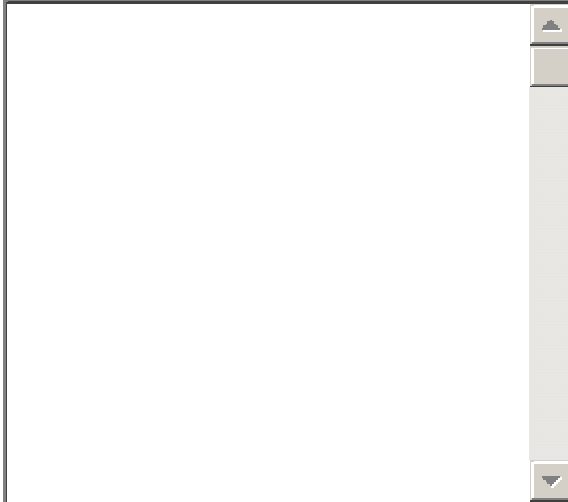
**8. For those who have had experience with pre-apprenticeship training, what are the 2 or 3 most successful elements of the program with which you are involved?**

a.

b.

c.

**9. If you are involved in a training or pre-apprenticeship program for women, what is one mistake that was made in your program that others could learn from?**



**10. THANK YOU! We will send an email summary of our results to all respondents when our report is complete.**

**Any additional comments?**

## *The authors' biographies*

### *Elizabeth Skidmore*

Elizabeth Skidmore is an Organizer with the New England Regional Council of Carpenters, and is a member of Carpenters Local 218. She graduated from Women in the Building Trades' Pre-Apprenticeship Program in 1989. She worked in the field as a carpenter between 1989 and 1999, and has been on staff with the union for five years. In 1989 she was a founding member of Boston Tradeswomen's Network (BTN), a non-profit committed to increasing the numbers and diversity of women in the trades. She has led a monthly women's group in her local for the last 15 years, and five years ago was appointed Chair of the New England-wide Carpenter's Women's Committee. In 2002 and 2004, she was appointed to an International Steering Committee of the United Brotherhood of Carpenters to design and organize the first two International Carpenters Women's Conferences. She teaches Labor History, Workers PhD in Economics, Preventing Harassment, and Ergonomics for Construction to union members and stewards.

BTN's accomplishments include passing a Massachusetts state law expanding affirmative action to include tradeswomen on state funded projects, establishing a multi-trade mentoring program which significantly increased retention of female apprentices, negotiating with City of Boston officials to improve compliance with city and federal hiring goals for women, designing and teaching a leadership development course for tradeswomen, and publishing both a rank-and-file tradeswomen's newsletter and a guidebook for women entering the trades. Elizabeth has led workshops at numerous conferences including "Starting Women's Committees" at the 2002 UBC International Women's Conference, "Addressing Racism for Tradeswomen" at the National Tradeswomen's Conference and "Women in Construction" at the United Nations Conference on the Status of Women in Beijing, China in 1995.

### *Susan Moir, ScD*

Susan Moir, ScD, has recently been appointed Director of the Labor Resource Center at the University of Massachusetts Boston. She spent 12 years with the Construction Occupational Health Program (COHP) at the University of Massachusetts Lowell. She was a co-founder of the COHP and served as Director for the first nine years of the program. Her research has centered on the social and political barriers to improving health and safety conditions in the construction work environment and the role of worker participation in identifying problems and implementing strategies for change. Health and safety conditions for tradeswomen have been a key focus of Dr. Moir's research. For two years, she facilitated a Research Circle of 17 tradeswomen who explored the current conditions for women in the construction industry, developed a vision of what conditions need to be for women to enter and stay in the trades, and proposed strategies for change, including specific recommendations to construction owners and contractors, OSHA and the building trades unions. The results of this research are included in her dissertation, "Worker participation in occupational health and safety change in the construction workplace,"