



Construction Pre-Apprenticeship Programs

I N T E R V I E W S W I T H F I E L D L E A D E R S

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Construction Pre-Apprenticeship Programs

INTERVIEWS WITH FIELD LEADERS

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Executive Summary

The construction sector in the United States is vital in both helping drive the country's economic growth and in employing millions of people across the nation. Whether one looks to reinvigorating the housing market, rebuilding the nation's transportation and energy infrastructure, or stimulating a "green" economy as a key to reviving the nation's economy, the availability of a skilled construction trades workforce will be critical to making that vision a reality. As a consequence, building and maintaining a highly skilled and diverse construction workforce is imperative. As the country looks to the construction industry to be a job creator and leader in moving the United States toward a more prosperous and greener economy, a greater understanding of the workforce strategies and policies that help shape our construction workforce is essential.

To help foster this understanding, the Aspen Institute's Workforce Strategies Initiative (WSI) continues to investigate how pre-apprenticeship programs are used to train low-income and disadvantaged adults for careers in construction. The aim of this research is to shed light on how these programs may be better utilized as part of a broader workforce development strategy for the construction sector. For the research presented in this paper, we interviewed 25 leaders of promising and innovative pre-apprenticeship programs across the country to explore factors that impact how programs are designed and to identify policies that constrain and support their efforts. Our key findings from these interviews include:

- ▶ Pre-apprenticeship programs' unique designs and approaches are appropriate given the different needs of the populations they train, the various employers they serve and the specific job opportunities present in their local labor markets.
- ▶ Pre-apprenticeship programs are incorporating green concepts into their curricula.
- ▶ Programs are experiencing higher than average funding through ARRA and other sources, but accessing WIA funding remains challenging.
- ▶ Programs often struggle to find resources to build and maintain effective industry partnerships that would connect graduates to jobs and strain to support program graduates for an appropriate amount of time after job placement.
- ▶ Quality construction jobs and apprenticeship opportunities remain scarce for program graduates at the present time, but program leaders expect economic recovery will bring renewed demand for skilled construction workers.

Above all, we found that pre-apprenticeship programs play a significant role in developing a skilled and diverse construction workforce. This role could be expanded, however, through additional support to local programs. In particular, the following support could help build and sustain program capacity:

- ▶ Consistent funding to maintain program capacity, and, in particular, to support the development of industry relationships and the provision of post-completion services to trainees, would help programs better serve both workers and employers. Access to WIA funding in particular could be improved through guidance that considers some of the specific needs of the construction sector.
- ▶ Additional investments to improve aging public infrastructure and promote energy efficiency would create needed job opportunities that could, and should, be linked to hiring from pre-apprenticeship programs.
- ▶ Additional research into construction career paths, and into effective program design and operations, will help newer and lower-performing programs better meet the needs of their local communities.

If implemented, these supports could help the pre-apprenticeship model in the U.S. become stronger and more viable. As a result, a ready pipeline of skilled and diverse workers would be established for the construction sector to tap into, and more career and high-wage opportunities would be created for low-income adults, minorities and women.

Introduction

As policy makers and workforce leaders seek to connect people to jobs in our current economy, one industry that continually attracts attention is construction. While construction workers have experienced repeated layoffs in the current downturn, demand for construction skills is expected to rebound as the economy picks up. In addition, new policies designed to promote energy efficiency and support the development or re-development of critical infrastructure have the potential to create significant demand for construction trades skills. Moreover, the construction industry is experiencing an aging labor force, particularly among highly skilled craftspeople, which will also contribute to an increased demand for construction trades skills in the near future. Given this climate and the potential role public investment may play in stimulating industry demand, the question becomes: how do we ensure that a variety of individuals are prepared to take advantage of these emerging career opportunities in construction?

In particular, construction careers have generated interest among organizations and institutions working to help low-income individuals access jobs. In many ways, construction careers are viewed as accessible to low-income groups, since formal education credentials beyond a high school degree are generally not required to begin a construction career. Also, most construction trades opportunities do not have statutory issues that bar individuals with a criminal justice history from employment. Further, Registered Apprenticeship positions offer the exceedingly rare opportunity to work in a job that offers good wages and benefits, while simultaneously learning job-related skills that lead to even better earning opportunities. Such “earn and learn” opportunities are rare in today’s economy.

Construction labor markets, however, are quite complex and include a range of job types. In previous work, we summarized the various market segments and other factors that contribute to the variation and complexity among local construction trades labor markets.¹ Within those labor markets, high-quality construction jobs are quite competitive. Further, knowledge of the construction industry hiring process is often needed to understand how to compete for high quality jobs, particularly for entry into Registered Apprenticeship. In addition, construction careers have often been seen as inaccessible to some groups, and women and minorities are frequently underrepresented in trades occupations. At the same time, there are organizations that have had success in helping low-income, women and minority workers successfully prepare for, and enter, high-quality construction jobs.

Given the needs of low-wage workers and the potential opportunities in the construction sector, it seemed worth exploring how a better connection might be made between the two. Pre-apprenticeship training programs are one common mechanism for bridging low-income workers to construction careers. In this publication, we present what we learned from leaders of pre-apprenticeship training programs that have been successful in helping their participants prepare for, and access, quality construction jobs.

RESEARCH INFORMING THIS PUBLICATION

AspenWSI piloted a survey of construction pre-apprenticeship programs in April 2009. Survey questions covered a wide range of topics, including the population(s) targeted and served by the programs, and the percentage of program participants placed in Registered Apprenticeship or a construction-related job.² In particular, we were interested in programs that were working to help populations that have historically faced barriers in the construction labor market. In analyzing the survey results, we found a subset of respondents that reported achieving markedly better outcomes than most, while also tailoring services to harder-to-serve populations and serving substantial

¹ See Maureen Conway and Allison Gerber, *Construction Pre-Apprenticeship Programs: Results from a National Survey* (Washington D.C.: The Aspen Institute/Workforce Strategies Initiative, July 2009); available from <http://www.aspenwsi.org/publications/09-007.pdf>; Internet.

² Conway and Gerber.

numbers of participants. In narrowing down to a final sample of programs to contact, we also sought geographic diversity, diversity in construction market segments targeted, and some variety in the range of organizational types involved in the initiative. The list of programs participating in the interviews can be found in Appendix A.

WSI conducted 25 structured phone interviews with leaders from some of these more promising pre-apprenticeship programs. As mentioned above, we asked the program leaders a range of questions about their program design, population served, partnerships, relationships to business and industry, funding, strategy with respect to “green,” and impressions regarding public or industry policies that affect their work. Most interviews involved only one other person, but several programs were based on partnerships, and, in such cases, often more than one person may have participated in an interview. Interviews varied somewhat in length, generally lasting between 45 and 74 minutes. A limited document review and a summary of what we had learned from a program’s survey response were conducted up front. This summary was shared with program leaders in advance so that interview time did not have to be spent covering the program basics, but rather could focus on why the program is designed in the way it is, and on leaders’ perspectives regarding opportunities and challenges in doing this work.

Why Aim for Apprenticeship?

One of the goals of this second phase of research was to better understand the nature of the job opportunities to which programs connect their graduates following training. From the 2009 survey, it was clear that pre-apprenticeship programs connect their graduates to a range of employment and educational opportunities; however, in many cases, programs were connecting very few graduates to Registered Apprenticeship programs. And yet, it was also clear that the vast majority of programs worked with Registered Apprenticeship programs at some level — only five percent of respondents reported that they did not — and that placement with a Registered Apprenticeship program remained an important goal for programs. As a result, we asked pre-apprenticeship program leaders a series of questions about their approach to connecting low-income adults to construction apprenticeship opportunities, or other career-oriented opportunities in construction, including how they think about defining their area of work and its relationship to the Registered Apprenticeship system, the opportunities outside of apprenticeship they consider to be good opportunities for their clients, and the sort of career path and/or next steps that are available to individuals placed in these jobs.

Nearly all of the pre-apprenticeship program leaders reported that, in fact, placement in a Registered Apprenticeship remains a core goal.³ In describing why they target Registered Apprenticeship on behalf of program graduates, interviewees indicated that they see apprenticeship as a means of ensuring their graduates are placed in a quality job. Registered Apprenticeships are typically sponsored by local employers, trade associations, and/or joint employer and labor groups, which assist apprentices with placement in a job. These opportunities tend to provide better than average wages and benefits. Registered Apprenticeship also provides entering apprentices with a clear career pathway and process by which they can advance. Under the supervision of journey-level craft persons, apprentices participate in a structured program, which combines classroom and applied, on-the-job learning. The classroom training is often, although not always, paid for by the apprenticeship sponsor. During the three- to five-year apprenticeship period, apprentices earn progressively higher wages as they work to acquire industry-recognized skills and, ultimately, their Apprenticeship Completion Certificate and attain journeyworker status. The Certificate is a portable, marketable credential, which is recognized by companies throughout the United States and Canada. Finally, Registered Apprenticeships are regulated and governed under Federal Law by the U.S. Department of Labor (DOL) as a result of the National Apprenticeship, or Fitzgerald Act, of 1937. As such, minimum standards around Registered Apprenticeship program quality are set by the DOL as part of the National Apprenticeship System, and quality assurance assessments occur through either the department or a recognized state apprenticeship agency.⁴

In describing the opportunities Registered Apprenticeship presents, a few program leaders noted that the design, and sometimes the quality, of Registered Apprenticeship opportunities may vary. A small subset of program leaders described targeting apprenticeships that are not only registered by either the U.S. Department of Labor or their state apprenticeship system, but also have active registered apprentices and have graduated apprentices on a regular basis in recent years. These leaders stated that they avoid placing participants in apprenticeship programs that were established for a particular construction project or for bidding purposes and may not last beyond the life of the project, as that diminishes the chances of a participant completing the Registered Apprenticeship program. It should be noted, however, that the U.S. Department of Labor has tightened the regulations governing apprenticeship programs in order to discourage the establishment of such programs solely for bidding purposes.⁵

³ Only two program leaders stated that they do not pursue Registered Apprenticeship placements on behalf of their graduates, and they attributed this to the lack of such opportunities in their area.

⁴ U.S. Department of Labor, Employment and Training Administration, *Apprenticeship Programs, Labor Standards for the Registration of Apprenticeship*, U.S. Code of Federal Regulations, 29 CFR Part 29 (amended October 29, 2008).

⁵ Specifically, changes to program performance standards in Section 29.6(a) of the revised *Apprenticeship Programs, Labor Standards for the Registration of Apprenticeship*, in the U.S. Code of Federal Regulations, 29 CFR Part 29 (amended October 29, 2008), have been implemented and now require that every federally Registered Apprenticeship program have at least one registered apprentice, except under a limited set of circumstances.

Pre-Apprenticeship Program Elements

From our survey of pre-apprenticeship programs, we learned that there were a number of elements common across programs — such as a focus on developing math skills, promoting safety and providing hands-on experiences — yet there were also a number of areas in which programs varied. Program length varied greatly. The criteria by which program participants were screened and selected also differed. Respondents reported using different curricula, and there were a range of special certificates, such as forklift driving or lead abatement, which some programs elected to offer. In this section, we unpack the major components of a pre-apprenticeship program and describe what we learned from our interviews about why program leaders design their initiatives in specific ways. In general, there are four factors that commonly influence program design: organizational mission, funding availability and requirements, institutional capacity, and local industry demand. Below we describe how the different ways in which these factors come together for a program prompt program leaders to make very different choices about program design and operations.

OUTREACH AND RECRUITMENT

Program leaders described a number of motivations for their approach to outreach and recruitment. The organization's mission was often a prominent factor. For example, some programs' missions involved serving a particular constituent group, such as women or youth. Other programs had a mandate to increase diversity in the construction industry — occasionally this mandate may be driven by statutory or contractual requirements around diversity or local hire. Some programs had a desire to help low-income groups find better jobs and looked to opportunities in construction to help participants improve their earning ability. And still others looked to serve a particular community or geographic area. This focus on mission had a large influence on how a program would conduct outreach and recruitment and, ultimately, who the program enrolled.

Oregon Tradeswomen Inc.'s goal is to help women enter and succeed in the construction trades. This mission focus drives its outreach and recruitment strategy, which it uses not only to target potential recruits for upcoming classes, but also to encourage women and girls to think of the trades as a career possibility. Each year Oregon Tradeswomen organizes a Women in Trades Career Fair, which hosts 1,500 adult, middle school and high school females during a three-day period. Participants in the Fair learn about careers in construction, meet employers and tradeswomen, and participate in hands-on activities and workshops. Executive Director Connie Ashbrook described the fair as not just people behind tables, but as a series of dynamic workshops that give women and girls the chance to experience an individual trades activity, such as operating a crane or working with concrete. She notes that this very tangible and hands-on method of engaging women and girls is important in order to counter the prevalent cultural notion that trades occupations are not for women, and she notes that women-serving pre-apprenticeship programs often spend a disproportionate amount of their budget on outreach and recruitment because of the need to overcome these perceptions.

Many programs described less intensive recruitment approaches designed solely to attract appropriate candidates to their programs. Such efforts commonly involved direct outreach at community meetings or events, advertising program orientations, and soliciting referrals from local nonprofit agencies, schools or other community organizations. **Building New Careers** in Des Moines, IA, which is staffed by the United Way, employs such an approach. It operates the program as part of its mission to help community residents build self-sufficiency. As such, staff conducts community outreach at a variety of community venues, including local high schools, community organizations and prisons, to get the word out regarding opportunities in the trades. Over time, however, the success of the program in helping participants access apprenticeship opportunities has led to word-of-mouth referrals, an important source of new participants cited by nearly all of the program leaders.

While organizational mission is a strong driver of approaches to outreach and recruitment, funding sources can also influence the strategy. For example, some programs noted that their funds are for residents of a specific geographic jurisdiction, or that they may have received a grant to serve a specific population, such as veterans. Such funding will have obvious influences on recruitment strategies in that it may narrow a program's focus.

SCREENING AND ASSESSMENT

Mission, as well as institutional capacity, plays a large role in how program leaders think about the design and criteria used in their screening and assessment processes. As mentioned earlier, many programs are designed to serve specific populations and, therefore, would like to be as inclusive of those groups as possible. At the same time, program leaders are aware that their participants must meet certain industry standards to enter apprenticeship or other quality employment opportunities. Thus, program leaders must also consider whether they have the capacity to address certain barriers. For example, programs may want to serve low-income groups and out-of-school youth, but if they do not have the capacity to ensure participants have a realistic opportunity to complete a GED while in the program, and the apprenticeship programs in their area require a high school degree or equivalent, then they may require participants to have obtained their high school diploma or GED prior to entry. In such cases, industry requirements and demand also play an obvious part in influencing the development of these criteria, as well as the availability of resources to build and sustain different programmatic elements. These factors come together in a wide range of ways, and we observed considerable variety in how programs approached screening and assessment.

In Louisville, KY, the **Kentuckiana Works Construction/Skilled Trades Pipeline Project** has developed a set of screening criteria to help identify candidates who can be successful in a construction job after the two-week training period. The project began with a recognition of the need to bring more women and minorities into apprenticeship positions, and initial research found that awareness among women and minority groups regarding apprenticeship opportunities in the area was quite low. After initial outreach to raise awareness and interest, the program has a two-stage assessment process. The program offers an orientation that provides potential candidates with detailed information about the working conditions in the construction trades and the characteristics needed to be successful in construction. Candidates who are still interested proceed to the next phase, in which they must pass a test demonstrating a minimum eighth-grade proficiency in reading and math, pass a drug screen and demonstrate interest and motivation in a construction career during an interview. Making sure participants come in at this level allows the curriculum to focus largely on construction-specific job-readiness skills and apprenticeship test preparation and to graduate individuals who are ready to enter an apprenticeship program.

Other programs designed screening processes based on their individual missions, resources and local opportunities. Most programs use an academic assessment, such as the Test for Adult Basic Education (TABE) or Comprehensive Adult Student Assessment System (CASAS), to assess potential trainees' math and reading skills. While eighth-grade proficiency in reading and math was a common requirement, other levels were often cited, and some programs did not require that participants demonstrate a particular proficiency level at all but may use a test of basic skills as part of a needs assessment for the individual. In contrast, some respondents noted that their program requires individuals to have a high school degree or GED for entry, often because such a credential is required by their local apprenticeship programs. The table below shows the range of academic and education requirements a few organizations use as criteria for acceptance into their program.

PROGRAM EXAMPLE	ENTRY ACADEMIC OR EDUCATION LEVEL REQUIRED
<ul style="list-style-type: none"> • PRIDE • Building New Careers 	None – Programs serve people with disparate education levels since different unions and trades have different skill-level requirements.
<ul style="list-style-type: none"> • Construction Training Opportunities Program, Northern Virginia Family Service 	Sixth-grade proficiency in reading, writing and math.
<ul style="list-style-type: none"> • Hartford Jobs Funnel • Building Works, New York District Council of Carpenters • Kentuckiana Works Construction/Skilled Trades Pipeline Project 	Eighth-grade proficiency in reading, writing and math. Many organizations use the TABE mentioned previously and some require students pass another math assessment.
<ul style="list-style-type: none"> • Jumpstart, Job Opportunities Task Force • Newark/Essex Construction Careers Consortium • Oregon Tradeswomen • CityBuild 	GED or High School Diploma

Other common entry criteria set by programs we interviewed included residency (both national and, in some cases, local) and income guidelines. Residency requirements set by programs are often the result of a funding mandate or organizational mission to serve a specific geographical area. For example, programs such as **CityBuild** in San Francisco, which relies heavily on financing from local government and was created to serve local residents, only enrolls individuals who reside within the San Francisco city limits. Similarly, programs that screen potential participants for U.S. citizenship or legal residence may be driven by federal or state funding restrictions that prohibit programs from supporting undocumented workers. And, while most of the programs we interviewed target low-income populations for training, programs that use definitive income levels as a criterion for accepting participants into training often do so to meet funder requirements.

Many programs also screened participants based on their age. Youth programs interviewed including **Just-A-Start Youthbuild** in Cambridge, MA, and the **Curlew Job Corps Civilian Conservation Center** in Curlew, WA, which is one of 28 U.S. Forest Service Centers in the country with a pre-apprenticeship program, accept participants between the ages of 16 and 24 in order to align with their programs’ mission of serving youth and also to meet funding requirements defined by Job Corps and Youthbuild grants. Adult programs required participants to be at least 18, so that they may start work legally upon program completion.

Industry demands also shape a program’s screening criteria. Construction workers may travel to several work sites during a day. In urban areas, public transportation is often too slow, geographic coverage may be too limited, and workers may not be able to carry all of their tools. In rural areas, there may not be a public transportation option, particularly as the distances between work sites may span several towns or counties. The ability for a construction worker to successfully retain his or her job is thus, in part, dependent on their ability to move from job to job in a timely manner. As a consequence, participants in almost all of the programs interviewed must have, or be able to obtain, a driver’s license, and a few programs mandated participants actually have a car or reliable source of independent transportation.

The physical rigors of construction work may also influence the criteria programs use to screen participants. Many programs assess participants’ physical condition, both formally and informally. **Apprenticeship and Non-Traditional Employment for Women (ANEW)**, in Seattle, engages new entrants in a range of academic, physical and employment-readiness assessments during the first week of the program. As part of the physical assessment process, applicants must work in teams on construction-related tasks. These physical tests allow program staff to assess a potential trainee’s ability to endure the physical challenges of the work, while introducing students to the range of

skills and abilities they will need in their future careers. Moreover, industry safety standards mean apprentices and new hires must be drug free. All of the programs interviewed require participants to be drug free, and some require participants to pass a drug test prior to entry and/or at various points in the training.

Prior to their entry into a program, participants in many of the programs interviewed must also demonstrate their desire and motivation to work in construction. In an industry where turnover is traditionally high and investments in apprentices or new hires are often significant, employers want to reduce their risk of loss and, therefore, are more favorably disposed toward candidates who demonstrate commitment to a construction career. And, pre-apprenticeship programs, which often work hard to develop and maintain their industry relationships, do not want to be seen or known as the program whose graduates, as one program leader stated, “don’t stick.” Many interviewees reported using program staff and partner industry representatives to interview training candidates regarding their motivation for working in the industry and to ensure the candidate’s long term goals and expectations are a good match for construction. Participants in **West Virginia Women Work’s (WVWW)** pre-apprenticeship program must go through an extensive interview and application process. Similar to other programs, Janis Gunel of WVWW said this in-depth interview helps the program select participants they know are motivated, which is important when funding is a challenge and the program’s capacity to train large numbers of participants is limited.

TRAINING AND CURRICULUM DESIGN

Mission, funding, institutional capacity and local industry demand all impact the design of programs’ training and curricula. In developing a training model, program leaders must often balance the needs of their participants with the demands of industry, and they must do so under a number of funding constraints and with limited institutional capacity. To begin with, the length of time participants spend in pre-apprenticeship training varied greatly among programs, and this diversity in training length seemed to be predominantly influenced by the organization’s mission to meet their participants’ needs appropriately, although other drivers are readily apparent.

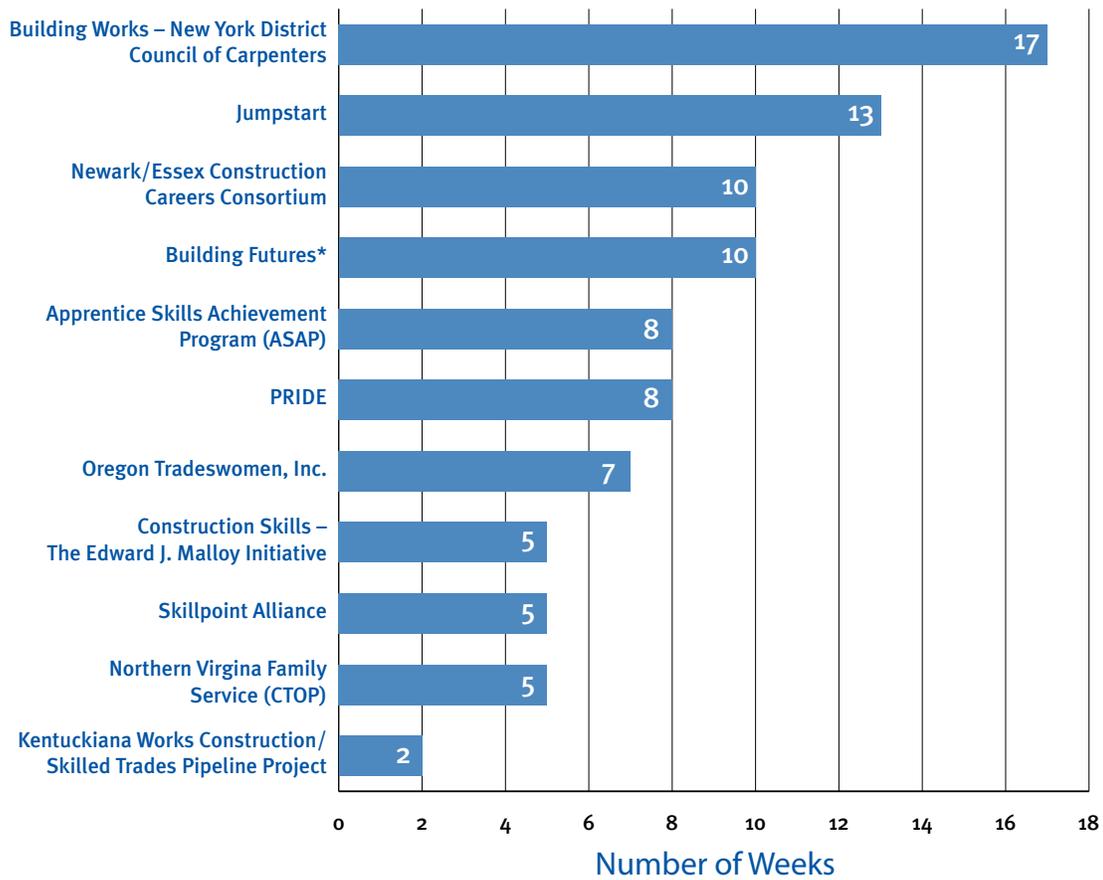
Length of Training

Most of the adult programs interviewed provide training for anywhere from one to three months and, in so doing, attempt to strike a balance between a participant’s immediate need to work and their longer-term need to develop job skills. The **Kentuckiana Works Construction/Skilled Trades Pipeline Project** in Louisville, KY, conducts rigorous initial recruitment and screening, followed by two weeks of training. The program approach is designed to be quick in responding to employer demand and believes that, once placed in an apprenticeship, participants will gain the work skills they need to be successful. On the other hand, **Newark/Essex Construction Careers Consortium (N/ECCC)** in Newark, NJ, which is geared toward substantially improving participants’ math and academic skills, provides 10 weeks of training. Al Williams, Director of Workforce Development and Training at New Jersey Institute of Social Justice, the organization that manages the N/ECCC program, reported he would extend the length of the program if additional funding were available.

Some organizations have a range of training offerings, which vary in length, depending on the skill set currently in demand. At the **Wisconsin Regional Training Partnership** in Milwaukee, there are 41 different training programs, which range in length from one to eight weeks, or 40 hours to 320 hours. In general, training provides an introduction to one or more of the trades, including tool use and identification, construction math, workplace safety, and blue print reading, and students may earn certificates in OSHA 10, flagging and CPR. The organization’s goal is to prepare participants to enter locally-available apprenticeship opportunities. However, the organization also tries to work with its employer and union networks to see where demand is emerging and offers trainings that will give its participants an edge in the job market. This may mean providing additional training in electrical line work, installing underground pipes for the sewage district, or working on copper roofs for a municipal building project.

Compared to adult programs, youth programs tend to be much longer in length. In Cambridge, MA, **Just-A-Start Youthbuild** may train participants for two to three years as they finish their GED or High School Diploma. The diagram below shows the range of time some of the adult programs interviewed reported that their participants are engaged in training; no youth programs are reflected on the chart.

ADULT PRE-APPRENTICESHIP PROGRAM LENGTH



**Training length may vary, depending on a participant’s needs. Ten weeks is the average length for this program.*

Training Schedule

Interviewees also reported their programs take a variety of factors into account when scheduling training. Many of the programs we interviewed schedule training to simulate the hours construction workers typically work. For many programs, this means training takes place 40 hours a week, Monday through Friday, from 7:00 a.m. to 3:00 p.m. Programs using this schedule to prepare trainees for the early hours the construction industry demands facilitate a program graduate’s transition to the world of work. Other programs, however, offer training on a part-time basis, at night or on weekends to accommodate participants’ need for a more flexible schedule. For these programs, the organization’s mission to serve its clients, by taking into account their need to work while in training or to secure appropriate child care, drives the training schedule.

Classroom Training Components

In addition to variations in the timing and length of training, the programs interviewed use a variety of curricula. Curricular choices and decisions were most often the function of industry demand. A few programs chose nationally recognized curricula. For example, **Just-A-Start Youthbuild**

in Cambridge, MA, uses the Home Builders Institute's Pre-Apprenticeship Certificate Training (PACT) curriculum, while other programs interviewed, including **Skillpoint Alliance** in Austin, TX, and **Northern Virginia Family Service**, use the National Center for Construction Education and Research (NCCER) curriculum. However, most programs interviewed use curricula their organization and industry partners designed. Common curricular approaches and topics emerged across the programs interviewed, though programs also exhibited some idiosyncrasies or unique curriculum elements, which were often driven by local industry or organizational mission.

At the outset of training, participants in all of the programs we interviewed receive some introduction to the trades that provides an overview of different occupations and the skills they require, as well as the culture and working conditions on construction job sites. Programs serving groups not traditionally represented in construction, such as women and minorities, often focused more, or took a different perspective on, discussing workplace culture. Preparing women for sexism or minorities for racism is viewed as essential to long-term job retention and to helping create a more diverse construction workforce, which are often goals embedded in a pre-apprenticeship program's mission. In addition, some programs, with a union partner or focus on union apprenticeship, also provide an overview of the history and tradition of organized labor, the way a hiring hall works, and the application process for different union apprenticeships.

The industry's demand for individuals who are literate and have strong math skills is a primary driver in all of the programs interviewed. Many programs, especially those serving youth, offer participants the opportunity to earn a GED or High School Diploma to develop these academic skills and meet a common industry requirement. Program leaders repeatedly emphasized the importance and industry need for participants with strong math skills. Though the amount of math training varies among programs, all of the programs reported dedicating a significant number of hours of their training to building participants' math and measurement skills. This focus on math is done to help participants perform on the job site and to pass apprenticeship exams. Instruction in test taking and opportunities to take practice apprenticeship tests were also common curriculum elements. Safety was another curriculum topic across all the programs, and almost all program leaders interviewed include an OSHA 10 certification in their training curriculum, as most construction jobs require workers to obtain this certification early on in their employment.

In addition to math skills, construction employers demand new hires or apprentices come with a set of professional behaviors often referred to as soft skills. Almost all of the programs interviewed reported dedicating a substantial amount of training hours to discussing and improving participants' soft skills and life skills, which often includes a focus on punctuality, attendance, workplace professionalism and work ethic. Financial literacy and conflict resolution are other subjects programs commonly incorporate into their training. Some program leaders said physical education and strength building are standard in their programs, as well, in order to get participants ready for the physical rigors of work in construction.

A common set of work skills is also present across most of the pre-apprenticeships programs, with some program leaders expressing the view that all construction workers, regardless of trade, need a strong foundation in carpentry. So, in addition to math and measurement, programs also typically teach tool use and identification, and blueprint reading. Many programs also offered participants the opportunity to earn certifications in other areas such as welding, forklift operation, lead abatement or asbestos removal. Variations in local demand, or in the particular agencies that a program partners with, may drive the variations in certifications included. For example, weatherization certifications are often offered when large public weatherization projects are present or expected in the local area, and lead abatement and asbestos removal are usually offered when the program is funded through an E.P.A. Brownfields grant.

While programs shared a lot of curriculum topics in common, a few program leaders described unique training approaches or instructional topics that are specifically aligned with job opportunities present in their local economy or that are meant to address the unique challenges their participant population faces. The table below highlights a few examples of these innovations.

PROGRAM EXAMPLE	EXAMPLES OF UNIQUE CURRICULAR COMPONENTS
Building Futures (Providence, RI)	The curriculum incorporates two tiers of training. The first tier is a 32-hour course designed to assess, provide basic preparation to, and place those candidates with the requisite skills. The second tier is a 200-hour follow-on course, crafted to provide training for participants who need more skills development prior to entering employment, and includes an Apprenticeship Survival Class.
The Edward J. Malloy Initiative for Construction Skills, Inc. (New York, NY)	The curriculum is delivered through an Introduction to the Building and Construction Trades course offered to high school students in the spring semester of their senior year.
Newark/Essex Construction Careers Consortium (Newark, NJ)	The curriculum incorporates instruction in Logic and Critical Thinking, designed to prepare individuals to solve problems and make decisions on the job, particularly in situations where safety is involved.
Philadelphia Housing Authority Building Program, Maintenance and Construction Trades Pre-Apprenticeship Program (Philadelphia, PA)	The curriculum incorporates weatherization and building maintenance to prepare program graduates to work on Housing Authority maintenance or renovation and rehabilitation projects.
Wisconsin Regional Training Partnership (Milwaukee, WI)	The curriculum varies, depending on the job opportunities available and the target population served. Training may be targeted toward traditional construction occupations, such as electricians, or newer opportunities in areas such as urban forestry.

Hands-on Training

Nearly all of the programs combine classroom training with hands-on training. However, the balance of time and focus spent in each type of training differed among programs, and funding seems to be one of the primary drivers behind how these two elements are balanced. Some program leaders lamented the challenge of raising funds to do hands-on training, and those with limited resources often relied more on classroom-based instruction. Other program leaders interviewed stated that hands-on training is pivotal to contextualizing the math and measurement skills participants learn in the classroom and is key to sustaining students' motivation and interest.

In the hands-on training, the project and project hours worked are also often designed to replicate an actual construction site to provide participants with the opportunity to better understand and adapt to the working conditions present in the construction industry. Many programs offer the hands-on training in facilities next to their classrooms and/or work on smaller projects, such as constructing a shed or small house. A few programs, on the other hand, have developed the ability to allow participants to work on full-scale projects outside of the training facility.

After the first three weeks of training in **Minnesota Build**, participants are placed as a multi-craft licensed apprentice on a real job site with a union contractor. Through these unique apprenticeships, the Minnesota Build participants build valuable skills, earn a wage, and have the chance to see whether they enjoy the work, and, at the same time, the contractor can evaluate whether the participant would be a good fit for them. If the participant and contractor agree to continue working with each other, the contractor is asked to formally sponsor the participant's apprenticeship in the particular craft in which the participant is working. If there is not a good fit, or the student wants to explore another opportunity, the student can be placed with another contractor and/or in a different trade. The goal is for the student to be placed within a few weeks or months, but they may stay in the multi-craft program for a maximum of two years.

Some youth and adult programs use the hands-on component as a way for the program and participants to connect to their community by working on community-based construction projects. **Building Works**, the pre-apprenticeship program operated by the New York City District Council of Carpenters, partners with Habitat for Humanity and United Way to place the program's trainees on two- to four-week service learning projects where they renovate low-income housing.

SUPPORT SERVICES

In the pre-apprenticeship interviews, program leaders were asked a number of questions regarding the population they target and serve, the challenges or barriers those populations face in entering the construction industry, and the strategies they use to address these barriers. Similar to what was described about programs' curriculum and training designs, pre-apprenticeship leaders also reported differences and similarities in the support services offered by their organizations. A few of the programs described their services as targeted exclusively toward a specific population, such as women or adjudicated youth. But, for the most part, the programs interviewed enrolled a demographically diverse population into their pre-apprenticeship training programs. Nonetheless, program leaders clearly articulated some of the challenges their participants experience and described some of the supports their programs offer to help participants address these obstacles. Program leaders often described these supports as critical to allowing participants to complete training and to get and keep jobs. The specific menu of support services offered by a program is, unsurprisingly, driven by the needs of the participants the program serves, as well as the organization's funding and capacity to deliver services. The table below highlights some common barriers that program leaders said their participants face and shows some examples of the different services or approaches programs use to address those barriers.

BARRIER	SUPPORT SERVICE
Transportation	St. Paul Building Trades Council in St. Paul-Minneapolis, MN , and Jumpstart in Baltimore, MD , partner with agencies providing cars at minimal costs and low interest rates. Jumpstart advocates for lower driver's education fees and partners with a local CBO to help pay past fees/fines and get participants' licenses reinstated.
Child Care	Oregon Tradeswomen, Inc., in Portland, OR , assists participants with developing a child care plan at the beginning of training and refers participants to appropriate resources. Building Futures in Providence, RI , developed MOUs with child care providers that have agreed to prioritize available slots for trainees.
Substance Abuse	The Apprenticeship Skills Achievement Program in Cleveland, OH , partners with the Alcohol and Drug Board in Cleveland to provide counseling for trainees who are still battling substance abuse.
Housing	Skillpoint Alliance in Austin, TX , partners with the Salvation Army and the Texas Research Center for the Homeless to provide participants with temporary housing while in training.
Work Expenses	The Hartford Jobs Funnel in Hartford, CT , provides free work gear and tools to the participants. Building Works in New York, NY , provides students with a \$100 voucher to purchase clothing appropriate for construction work. ANew in Seattle, WA , assists graduates in purchasing tools, boots, and clothing, as well as in paying union dues and initiation fees.
Living Expenses	Philadelphia Housing Authority Building Program, Maintenance and Construction Trades Pre-Apprenticeship program in Philadelphia, PA , employs participants and pays them minimum wage for doing renovation and weatherization projects, allowing participants to earn while they learn. Building Futures in Providence, RI , provides program participants with a small stipend during training to help trainees pay for everyday living expenses.

Assistance with transportation expenses was especially common among the programs interviewed since, as mentioned above, dependable transportation is critical to success as a construction worker and often a criterion for landing a construction job. Participants may receive vouchers for public transportation or gasoline purchases to make it to training. Some programs offer graduates who are placed in employment additional assistance to help the graduate make it to the different job sites where he/she works. Many programs offer assistance with related legal issues. Programs reported that past parking fines, driver's education fees, or a suspended license (often due to unpaid fines or fees) can

make obtaining a driver's license difficult for many of their participants. Many of the programs have also developed partnerships with the local court systems and legal agencies to assist participants with getting their driver's licenses reinstated. Some programs are also trying to address driver's license issues at a policy level. In Baltimore, the Job Opportunities Taskforce, with its **Jumpstart** pre-apprenticeship program, and the New Jersey Institute for Social Justice with the **Newark/Essex Construction Careers Consortium (N/ECCC)** program, are engaging state policymakers on changing existing laws to minimize the costs associated with overcoming this barrier many participants face.

Some leaders emphasized that programs often struggle with identifying viable solutions to meet participants' transportation needs and that helping students obtain driver's licenses or gas or bus money is not enough. A few programs, such as **Jumpstart** in Baltimore, MD, offer participants the opportunity to buy cars at a minimal cost and low interest rate. In Jumpstart's case, they offer participants this service through a partnership with Vehicles for Change.

Pre-apprenticeship participants in the programs interviewed encounter a range of obstacles in addition to transportation. To help pay for other small living expenses that may prohibit a participant from completing training, a few programs such as the **Hartford Jobs Funnel** reported offering a small living stipend during training. Stipends such as this are often between \$50 and \$100 per week and may help participants buy lunch, get a bus pass, or pay for any number of expected or unexpected expenses. Many of the youth programs, such as **Operation Reconstruct of the Home Builders Institute** in Gretna, LA, structure their stipends around training performance and goal attainment, where participants earn the stipend for completing different training modules and increasing their skill levels. Participants in the **Philadelphia Housing Authority Building Program, Maintenance and Construction Trades Pre-Apprenticeship Program** receive minimum wage while in training, as they are hired by the Housing Authority to do renovation and weatherization projects, which gives them an opportunity to earn while they learn.

Throughout the training, programs commonly offer some level of career counseling as trainees determine which construction trade or other job opportunities they want to pursue. **The Edward J. Malloy Initiative for Construction Skills** in New York, which works with high school seniors, puts a heavy emphasis on career counseling and requires that participants in the program meet regularly with staff who helps them chart their career path. The staff's knowledge of the construction industry means participants receive individualized coaching and services based on the trade they wish to enter. For example, a student pursuing a plumbing apprenticeship would receive services and advice tailored toward that trade. Many of the programs also take trainees on tours of apprenticeship facilities and construction job sites. These field trips provide trainees with the opportunity to see first-hand the work they are interested in doing, and, in some programs, including **Oregon Tradeswomen, Inc.**, trainees are allowed to engage in construction-related tasks while visiting the facility. Many programs also noted that guest speakers in their training classes include apprenticeship coordinators, current apprentices, tradesmen, tradeswomen and former graduates of the programs. Along with the field trips, these classroom visits provide trainees the opportunity to meet people currently working in the field who can also assist with helping steer them down the right career path. And, the industry representatives who host these visits or who are guest speakers also have the chance to meet and evaluate potential hires or apprentices, which helps facilitate a graduate's job placement.

JOB PLACEMENT

Through the interviews, we asked program leaders a number of questions about the types of construction job opportunities available in their region and the specific job opportunities their programs target on behalf of graduates. Program approaches to connecting participants to apprenticeship or other post-program opportunities were again quite varied. Both program mission and local industry characteristics play a large role in shaping how programs approach job placement. In general, programs work to match their participants with the best post-program opportunity available to them, and in many cases the goal is apprenticeship. However, the individual student's interests and abilities, as well as the larger industry context in which the programs operate, including the partners

they work with and the jobs available in the local labor market, have an effect on the opportunities to which programs ultimately connect their graduates.

As mentioned above, a program's mission may lead them to serve different populations, and the populations they serve have implications for the job placement strategies they use. For example, some programs, particularly those that serve youth, like the **Curlew Job Corps Civilian Conservation Center** program in Curlew, WA, may work with their participants to address a broad array of their interests and abilities and, therefore, connect participants with a wider variety of education and employment opportunities upon graduation from their program.

Other programs have developed a close relationship with particular industry sponsors, and they use those relationships to connect participants to job opportunities those industry partners identify. Programs may either develop close relationships with union partners, or they may choose to work more closely with non-union employers. And, in a few cases, programs may work collaboratively with both union and non-union organizations. **Jumpstart** in Baltimore, MD, targets apprenticeship opportunities on behalf of its graduates through their partner Associated Builders and Contractors (ABC), which typically represents non-union employers. All graduates are entered into the ABC employee pool, and ABC uses its connections with particular contractors to get graduates into contractor-sponsored Registered Apprenticeships. Similarly, **CityBuild** in San Francisco works with its industry partners to connect students to opportunities in Registered Apprenticeships with local unions. In fact, program staff reports that 85 to 90 percent of their students are placed in union apprenticeship positions. To help connect students to these opportunities, an important part of the placement strategy involves engaging in an ongoing dialogue with industry partners, developing staff knowledge regarding factors affecting industry demand, and then using that knowledge to help students maximize the opportunities available to them. To accomplish this, CityBuild employs three employment liaisons who each work a different neighborhood and are responsible for visiting job sites and building relationships with industry representatives from contractors and unions in that neighborhood. The employment liaisons also work with students to broaden their interest in a range of available opportunities in the skilled trades and steer them away from occupations where opportunities may be waning.

In a few cases, programs described using specific mechanisms for connecting people they serve directly to union apprenticeship opportunities through industry partners. **Building Futures** in Providence, RI, **The Edward J. Malloy Initiative for Construction Skills** in New York, and the New York City District Council of Carpenters' **Building Works** program have direct entry agreements with local Building and Construction Trades Building Trades apprenticeship programs. Through direct entry arrangements such as these, applicants must meet the entry level criteria for the trade they wish to enter, but these participants do not have to wait for open enrollment to start. Typically, unions only open enrollment to new apprentices a few times a year, and some only open enrollment once a year. With direct entry arrangements, training participants can bypass this process and enter an apprenticeship, which allows them to go to work sooner and means they are less likely to lose motivation or pursue other opportunities.

However, it is important to note that even in cases where a program may prefer to place students within their network of industry partners, they too are likely to pursue additional opportunities on behalf of their participants when jobs opportunities are limited. Simply put, apprenticeship opportunities may not always be available, or, in some cases, such opportunities may not be a good match for a participant at that particular point in time. For example, the **PRIDE** pre-apprenticeship program in St. Louis, MO, described working with unions, contractors and apprenticeship programs in a variety of ways to place its graduates in Registered Apprenticeship positions with contractors on the I-64 expansion project, which the pre-apprenticeship program was initially developed to support. However, as Jim Duane who manages the pre-apprenticeship program for the University of Missouri described, because of the downturn in the economy, their partners have not been consistently hiring and it has impacted the number of apprenticeship opportunities available to their graduates. As a result, while not all of their graduates are currently placed in apprenticeships, they have worked to get them into a number of different construction opportunities. And, they continue to seek opportunities for trainees who have yet to be placed in an apprenticeship.

Some programs viewed placement in non-apprenticeship positions as a stepping stone that participants

can use to move up to better opportunities once they are done with these “first step” jobs. As Al Williams with the **Philadelphia Housing Authority Building Program, Maintenance and Construction Trades Pre-Apprenticeship Program** explained, in some cases opportunities outside of apprenticeship can help clients make ends meet and build experience that they can then transfer back to an apprenticeship if an opening occurs. Mr. Williams went on to say that, while their students are working in opportunities outside of the apprenticeships, the program tries to “stay engaged with the clients and when an opportunity opens for an apprenticeship, we can pull them out, and they’ve proven themselves.”

POST-PLACEMENT FOLLOW-UP

Program leaders generally agreed that offering some support to students after job placement would be useful in helping recent graduates stay connected to construction employment. Given that most jobs are temporary, help finding a second or third job in construction can be needed. A new apprentice or construction employee may not yet have the industry contacts or the knowledge needed that would allow them to navigate a hiring hall or the employer market effectively. Similarly, a new construction employee without guidance may not know what additional certifications or skills they should develop to help them stay marketable. In addition, someone new to the construction field may not yet be familiar with the need to set aside money for times when they are not working or waiting for a new project to start. Challenges such as these often contribute to new apprentices or construction employees dropping out or changing professions during the first year. Support in adjusting to the rigors and culture of construction work could be very useful for construction workers in the first year of their new profession. However, many program leaders noted that they experienced difficulty finding funding that would allow them to hire an additional case manager or placement specialist to provide post-placement support to students. Some, nonetheless, offered low-cost facilitated peer group support, and a few were able to finance a set of post-placement services for their individuals.

Project CRAFT (Community Restitution and Apprenticeship Focused Training) in Avon Park, FL, has Employment Specialists who work with participants on employability skills as they approach program completion. The Specialists help participants consider their options, which may include employment or opportunities to further their education. To help ensure participants are successful in their re-entry to life outside of Project CRAFT, the Employment Specialists follow up with participants for at least six months after program completion. The program works with adjudicated youth from across the state of Florida and is funded by the Florida Department of Juvenile Justice. It is also affiliated with the Home Builders Institute/National Association of Home Builders and utilizes that network in the job placement process. Prior to program completion, Employment Specialists talk with the student about the jobs that are available in their home area. They work with them on their job search, show them how to look for openings, and help them figure out which ones they are most interested in and target those. This process can lead to a variety of opportunities, depending on the individual student’s knowledge, skills and abilities. Some of the participants have a strong interest in a specific trade and focus on that. Those that go to work do a range of things in the industry – Carpenter’s Helpers, workers at Home Depot/Lowe’s. A small percent enroll in an apprenticeship. Some youth choose to finish their high school degree or equivalent or pursue other educational opportunities. Program staff believes the follow up is critical if their students are going to make a productive transition back to their home community.

Union Construction Industry Partnership (UCIP) in Cleveland, OH, has, as the name implies, very close relationships with local unions that are the main conduit to jobs and apprenticeship opportunities for the program’s participants. The program was designed to give residents of Cleveland a way to access construction jobs and, in particular, to open these opportunities to low-income minority and women residents. Recognizing that their participants may need support in adjusting to construction work, UCIP created a mentoring group for former graduates, with the goal of improving participants’ retention in construction. Participants attend regular meetings to share their work experiences and listen to guest speakers. The manager of this program, Cindy Marizette, notes that, “We are able to hear both negative and positive exchanges and to redirect energies to help turn negatives into positives.” This element of the program is in its first year of operation, but Cindy notes that they get about 20 participants each month, and the feedback she gets from participants is very positive.

Relationship to Industry

In our interviews with pre-apprenticeship programs, we asked program leaders a number of questions regarding their involvement in the larger regional construction industry in their area. We explored their relationships with contractors, business associations, unions and apprenticeship programs, including why specific industry partners were chosen for collaboration. Program leaders were asked to describe the range of activities they worked with industry partners on, as well as the roles and responsibilities of staff members in developing or maintaining industry relationships. Furthermore, we tried to gather some regional context surrounding a program's industry partnerships and used the interviews to delve into the larger industry environment in which the program operates. Thus, a good picture of how programs built, structured, and maintained these relationships, as well as some of the common challenges programs encountered while engaging industry, emerged through our discussions.

PROGRAM APPROACHES TO INDUSTRY ENGAGEMENT

The depth of involvement in and sophistication around industry engagement among programs varied. All of the programs interviewed saw relationships with industry as key to aligning their training with industry demand and to connecting clients with quality job opportunities. To this end, all program leaders reported their programs worked to establish and maintain relationships with contractors, industry associations and/or apprenticeship programs. However, a number of the programs interviewed appeared to have a deeper level of engagement with their industry partners and worked with them on a number of different program activities, while some programs struggled to establish and maintain these relationships.

On the whole, programs described putting a good bit of time and effort into the initial development of industry relationships. And, they commonly described working to overcome cultural differences around mission and approach to arrive at common objectives. For example, Arcadia Maximo of **CityBuild** in San Francisco described a process by which educators, nonprofits, city officials and industry partners worked to develop a common understanding regarding the kind of program CityBuild should be: "As we were piloting the program, there were a lot of stumbling blocks ... it was a bit of a contentious relationship." She noted that City College and the unions each had their own approach to training, and it took considerable negotiation to get everyone to agree. From that initial planning phase forward, as described above, the program has incorporated an approach to regular check-ins with industry partners, using neighborhood-specific employment liaisons and the information they glean to both match students with job opportunities as well as continually inform the program design.

Several other programs described engaging in ongoing work to maintain and further develop industry relationships. For example, staff from both the **Curlew Job Corps Civilian Conservation Center** program in Curlew, WA, and **Building New Careers** in Des Moines, attend regional and local apprenticeship coordinator meetings to stay abreast of changes in the industry and to garner feedback on curriculum and placement strategies. Similarly, the University of Missouri's **PRIDE** pre-apprenticeship program conducts monthly meetings with the apprenticeship coordinators from the Carpenters, Laborers, Operating Engineers, Steelworkers and Cement Masons, as well as the state Department of Transportation and the main contractor for its I-64 expansion project, which was the initial employer for the project. And finally, a number of programs, including **Oregon Tradeswomen, Inc.**, mentioned they have industry representatives serve on the organization's board of directors or an advisory committee as another way to foster collaboration and partnership.

As stated previously, programs commonly employ staff with a construction industry background as instructors and job placement coordinators, in order to aid the establishment of relationships with industry and to help broker placement. In many cases, programs also described building the work of maintaining employer relationships into ongoing program functions, such as job development, or into an existing staff position, such as a case manager. Likewise, a number of programs described programmatic approaches for involving business partners in ongoing curriculum design, content delivery and program oversight.

PROGRAM CHALLENGES

As mentioned above, programs sometimes struggle to find the resources, including time, money and staff, to build industry partnerships. Outside of these typical challenges, the pre-apprenticeship program leaders interviewed described a few other common challenges they encounter in building and maintaining effective industry relationships. One common challenge involved expanding the demand for graduates. Often, this challenge revolved around how to diversify relationships with industry partners beyond a select few with which a program works closely. However, in other cases, concerns over demand were directly related to the downturn in the economy and the relatively high rate of unemployment in the construction industry. The other challenge we heard came from programs which had achieved a greater diversity of industry relationships. These programs, which often collaborated with both union and non-union partners, discussed the challenges in balancing the competing interests of these different industry approaches.

Reaching a Wider Range of Industry Partners

Programs often described relationships with a few key industry partners in their geographical area, but a number of programs seemed to experience some difficulty reaching large numbers of employers. Given that the construction industry tends to be dominated by small firms, many potential employers of pre-apprenticeship graduates, such as contractors or apprenticeship programs, may not have a high volume of hiring needs or apprenticeship slots available. As a result, programs must connect to a wide range of employers or employment opportunities to place all of their graduates. In many cases, programs addressed this need to connect to a scale of demand through partnerships with building trades councils or trade associations, which, in turn, can help programs access a larger number of apprenticeship programs and/or contractors. A number of programs recognized this need at the beginning and started in conjunction with building trades consortia and/or industry associations, such as Associated General Contractors (AGC), Home Builders Institute (HBI), and Associated Builders and Contractors (ABC), while others have worked to engage or deepen relationships with these agencies over time. Nonetheless, most programs, particularly at this time, struggle with finding a sufficient number of quality employment opportunities in the construction trades to meet the needs of all their graduates.

Stimulating Demand for Pre-Apprenticeship Program Graduates

Perhaps unsurprisingly, given the current funding and economic environment and the high levels of employment in the construction industry discussed above, programs reported struggling to find placement opportunities for all of their graduates. Nonetheless, a few programs have developed innovative ways not only to connect to a larger number of employment opportunities, but also to support policies that stimulate demand for their graduates. For example, in an effort to increase the number of available apprenticeships in the community, **Building Futures** in Providence, RI, works with regular users of construction services to adopt apprentice utilization language through mechanisms like bidding specifications, project labor agreements, or memoranda of understanding. Typically, this language specifies that a certain percentage of the total construction labor hours on a project come from apprentices. Where that goal cannot be met, contractors must demonstrate that they have made their best effort to uphold it, in part by working with Building Futures to source labor. At the same time, the organization works with state and local government to help increase entry-level apprenticeship opportunities through promotion of First Source Hiring ordinances, which promote employment opportunities for local residents on construction projects where public funding is involved, and mandated contractor participation in Registered Apprenticeship programs for state projects valued over \$1 million.

Managing Diverse Industry Partners

Several interviewees described the challenge of managing diversity among their industry partners, but the clearest challenge seemed to be among programs that seek to work with both union and non-union companies in a coordinated way. In some cases, programs were either designed to, or made an

initial decision to, work primarily with union or non-union industry partners. In some cases this choice seemed almost serendipitous. For example, **Northern Virginia Family Service (NVFS)** partners with Associated Builders and Contractors (ABC) to deliver their pre-apprenticeship programs and place graduates in the non-union construction market. Given ABC's deep involvement in Northern Virginia's residential market where NVFS operates, this choice seems to make sense. Nonetheless, ABC and NVFS began partnering because senior staff at each of the organizations knew one another. Similarly, the South Central Iowa Federation of Labor, AFL-CIO (SCIFL) and United Way of Central Iowa have a long-standing relationship, born out of the agencies' cooperation on community service projects. Their work and collaboration in these areas eventually grew and expanded to include **Building New Careers**, the pre-apprenticeship program operated by the United Way.

In other instances, the decision to work primarily on the union side seemed to be driven by public interest in expanding access to local hiring opportunities in communities where large publicly-funded union construction projects were underway. In St. Louis, the unions and contractors participating in the **PRIDE** labor management partnership were already involved in the Missouri Department of Transportation's I-64 project, and the pre-apprenticeship program was designed as a strategy for increasing the number of minority apprentices on that project. Similarly, the Union Construction Industry Partnership in Cleveland helped create the **Apprentice Skills Achievement Program** in 2003 when the City of Cleveland was trying to provide area residents, particularly low-income minorities and women, access to construction jobs where City funds were being used.

While some program leaders were interested in working more with both union and non-union companies, few reported that they have achieved a great deal of success in this realm. For example, the **Louisville Urban League** initially designed their program in conjunction with the local building trades. However, the program outpaced the building trades' demand for apprentices and, therefore, began working to integrate the local ABC chapter into their program approach. Currently, both the Building Trades and ABC participate in monthly meetings, as well as post-graduation interviews and placement activities, but, as of late 2009, few graduates had been placed with ABC contractors. In a parallel example, the Job Opportunities Task Force (JOTF) has traditionally partnered with ABC as a part of its **Jumpstart** pre-apprenticeship program. In recent years, they have tried to work with union apprenticeship programs more and more. Though JOTF has a good bit of success partnering with unions on policy and advocacy issues around worker supports at the state level, they have a limited success working with apprenticeship coordinators to place graduates in union apprenticeships.

In the few cases where a program was successful in bridging the gap between union and non-union companies, there appears to have been significant investment in developing an approach that truly served all partners. Moreover, it seems that, in some cases, the strategy was developed at a time when industry demand for additional labor was at its peak and the workforce system was able to leverage this demand to develop true working partnerships. For example, **The Hartford Jobs Funnel**, which collaborates with both union and non-union partners, said that the dual approach was difficult to sell and implement in the beginning due to the competition between the two sides. However, the shortage and need for skilled labor at the time the Funnel was created promoted consensus among the union and non-union companies. Strong local leadership helped focus all of the partners on the Funnel's mission to create opportunities for city residents. As a result, over time, both union and non-union partners began to see the Funnel as a source of qualified workers to whom they could present their job opportunities and advantages and allow students to choose the right fit for them. In addition, having multiple partners and perspectives at the table promoted innovation. Currently, the programmatic approach to work with each partner may vary, given their different training and hiring needs, but, fundamentally, the Funnel views itself as working with both.

Greening Pre-Apprenticeship

As new workers enter the construction sector, another common challenge they face is an industry that is “greening.” In our discussion with program leaders, we asked a number of questions about the impact “green” is having on pre-apprenticeship and the construction industry as a whole. There was broad consensus among program leaders interviewed that their program design and approach were clearly being influenced by the national conversation around green jobs. And, interviewees described a range of ways and reasons they were pursuing green opportunities. However, program leaders also expressed concern about the lack of industry demand for specific green jobs and the limited number of green jobs available as a result.

The vast majority of programs were either currently developing a green component or had recently added a green component. Weatherization was by far the most common component mentioned. Other components typically included an overview of green construction, green materials, and an introduction to green terminology, including rating systems such as LEED (Leadership in Energy and Environmental Design). Some of these programs use curricula from national organizations or industry associations and are adopting their green additions as they become available. For example, programs that use the Home Builders Institute’s (HBI) Pre-Apprenticeship Certification Training (PACT) curriculum, such as **Project CRAFT** and **Operation Reconstruct**, are in the process of incorporating the green curricular elements. This includes information on general green building techniques and weatherization, which was developed in November 2009 to complement its PACT curriculum. In developing these components, The Home Builders Institute worked to align their training curriculum to the new National Green Building Standard developed by HBI’s parent organization, the National Association of Home Builders (NAHB), and approved by the American National Standards Institute (ANSI). In developing the National Green Building Standard, NAHB gathered green construction experts from around the country to determine the green competencies their construction trades training programs needed to develop.

Other programs described offering a specific green skill as part of their training, although these specific skill areas were quite variable. For example, Al Williams with the New Jersey Institute for Social Justice’s **Newark/Essex Construction Careers Consortium** described adding training and certification in lead abatement and asbestos removal through a U.S. EPA Brownfields Job Training grant. And, the **Philadelphia Housing Authority Building Program, Maintenance and Construction Trades Pre-Apprenticeship Program** has added weatherization-related skills training to its curriculum to prepare program graduates to help weatherize housing authority residences in conjunction with the local trades.

Program leaders described a range of factors driving these program changes. Some programs seem to be prompted by the projected demand for workers with green knowledge and skills. For example, an expected project in Portland that would weatherize nearly 100,000 homes led **Oregon Tradeswomen, Inc.**, to add green components to their pre-apprenticeship curriculum. In San Francisco, local policies have inspired greener construction practices. Arcadia Maximo with San Francisco’s **CityBuild** described how, for example, students now need to be more knowledgeable of materials and sorting to maximize re-use and recycling potential, “No longer can you throw everything into one bin.” A few programs reported that the trade associations, unions or other industry partners with which they work closely had encouraged them to green-up. Several programs noted that the green skills are not new, and that learning to manage new materials in order to achieve greater energy efficiency or reduce waste has always been a part of construction training. Funding also played a role in adding green components to curricula, and several programs noted they had been awarded additional funding for green jobs-related training, including competitive DOL and EPA grants programs, as well as local formula money under the Recovery Act. As Kevin Fields from the Louisville Urban League and the **Kentuckiana Works Construction/Skilled Trades Pipeline Project** said, “Green is something we’ve been doing a long time. It’s just now federal investment has chosen to wear that tagline.”

Despite these various opinions and motivations, however, there nonetheless seemed to be a consensus that students should have some awareness of green skills. Nicole Bertran with **The Edward J. Malloy Initiative for Construction Skills** in New York stated, “These are new skills in existing jobs as opposed to new jobs with new skills... There’s not going to be a plumber and a green plumber.”

Despite the hope that green job opportunities would result in additional placement opportunities for graduates, most program leaders had yet to see a large impact on hiring. Industry partners seem to be encouraging green training in hopes that demand will emerge for the type of work that would require certain types of green skills. As Jim Duane with **PRIDE** in St. Louis described, contractors have an interest in improved materials or greener techniques and designs, but there is very little in the way of new, green projects. Instead, contractors are adding green certifications so they can market themselves as qualified in that area. Similarly, Jason Perkins-Cohen with Job Opportunities Task Force and **Jumpstart** in Baltimore noted that, although funders and industry partners think a greener curriculum is a good idea, “No one hiring has said I’ll take the guy with the green training.”

Program leaders described doing a range of things to “green” their programs, give their trainees some background in green construction and educate new entrants regarding industry trends. While interviewees described different activities and approaches to adding green components to their programs, there were some overriding categories related to their work. In particular, three areas of work were prevalent: adding an introduction to green construction, capitalizing on current or projected opportunities related to weatherization, and offering special certifications designed to develop a particular green skill. Similarly, programs tended to describe a few common reasons for incorporating these components, which often related to market demand or, more often, projected demand. In addition, respondents described receiving program support or funding that encouraged the incorporation of green elements into the training. In addition, several programs mentioned that they hoped the additional skills would make their trainees marketable to a broader range of employers. The chart below summarizes some of the common strategies pre-apprenticeship programs described and their rationale for incorporating these strategies. Please note that this table does not provide a complete list of the programs implementing a particular strategy; rather it is meant to provide a few examples.

GREEN STRATEGY	RATIONALE	EXAMPLE PROGRAM
Introduction to Green Construction Incorporating introductory curricular elements, including: <ul style="list-style-type: none"> • Green terminology • Using green materials • Deconstruction and recycling of materials • Entry-level green skills • Green building standards and certifications 	Current demand	CityBuild (CA)
	Prepare for projected demand	The Edward J. Malloy Initiative for Construction Skills (NY); Home Builders Institute: Project CRAFT (FL); Job Opportunities Task Force: Jumpstart (MD); Skillpoint Alliance (TX)
	Increasing trainees' marketability	The Center for Construction Research and Training Workers Rights (MD); West Virginia Women Work
	Funding <i>To satisfy requirements or capitalize on opportunities to further develop programming.</i>	Curlew Job Corps Civilian Conservation Center (WA)
Weatherization Incorporating weatherization training and/or certification components to prepare individuals for related job opportunities.	Current demand	Home Builders Institute: Operation Reconstruct (LA); Philadelphia Housing Authority Building Program, Maintenance and Construction Trades Pre-Apprenticeship Program (PA)
	Prepare for projected demand	Hartford Jobs Funnel (CT); New York City District Council of Carpenters: Building Works (NY); Oregon Tradeswomen, Inc.; PRIDE (MO)
	Funding <i>To capitalize on opportunities to further develop programming.</i>	ANEW (WA); Oregon Tradeswomen, Inc.
	Social enterprise opportunities <i>To develop a business or earned income.</i>	Just-a-Start Youthbuild (MA)
Specialized Green Certifications Offering specialized components or certifications designed to develop a particular skill set, including: <ul style="list-style-type: none"> • Asbestos abatement • Lead removal • Energy auditor • Solar panel installation 	Prepare for projected demand	Building Futures (RI); New York City District Council of Carpenters: Building Works (NY)
	Increasing trainees' marketability	Building Futures (RI); Wisconsin Regional Training Partnership
	Funding <i>To capitalize on opportunities to further develop programming.</i>	Building Futures (RI); New Jersey Institute for Social Justice: Newark/Essex Construction Careers Consortium (NJ)

Construction Pre-Apprenticeship Program Funding

The pre-apprenticeship program leaders interviewed reported a wide variety of funding sources, both public and private, that they have used to support their work. Similar to the broader sample that responded to our survey, the public funding sources mentioned by program leaders we interviewed included a range of federal, state and local sources. Workforce Investment Act (WIA) funding was commonly discussed by interviewees, but program leaders also mentioned a number of other sources of public support. The most common source of private support was philanthropic funding, although programs often described in-kind industry contributions, and some programs have developed entrepreneurial opportunities that result in some earned income. While, in the survey, it was difficult to distinguish the relative importance of specific funding sources to a particular program, in the interviews, program leaders tended to describe primarily relying on a small number of funding sources for the bulk of their program budget. Perhaps not surprisingly, in a number of these cases, the requirements or structure of these primary source(s) of funding were important drivers of program design. These primary funding sources varied from program to program. Some programs also relied on a few smaller funding sources, that, while not large in terms of the program's overall budget, were nonetheless important in covering gaps in a program's offerings.

PUBLIC FUNDING

Individual programs described a wide variety of public funding sources they tapped into for support. Some of these sources were specific to their state or local area, while others were federal grants that interviewees had successfully competed for, and still others were federal formula funds that are locally administered. For most programs, local, state and/or federal government support played a primary role in sustaining the programs, with the particular mix varying from program to program.

Some programs blend several local public funding sources. For example, **CityBuild** in San Francisco is funded through a combination of public funds. A large part of the program's funding is derived through the Proposition K (Prop K) tax, a half-cent local transportation sales tax. The San Francisco County Transportation Authority, which administers the tax, uses tax revenues to improve local transportation infrastructure and to support the San Francisco Mayor's Office of Economic and Workforce Development in building a skilled workforce for construction projects related to transportation through programs such as CityBuild. Tax revenues help pay for salaries for CityBuild instructors and staff and for participants' case management and support services. Over time, other San Francisco City departments, including the Department of Public Works, the Department of Human Services, and the City's General Fund, have supported the program in a variety of ways.

Oregon Tradeswomen, Inc., has also benefited largely from the support of local government. In 2004, the City of Portland launched the Portland Economic Opportunity Initiative (EOI). The Initiative coordinates and supports 32 poverty reduction strategies, including four pre-apprenticeship programs in Portland. EOI's goal is to increase the income and assets of low-income participants by at least 25 percent within three years of their enrollment in the Initiative. EOI supports projects through a mix of funding from the City's General Fund, Community Development Block Grants and private grants through foundations such as the Northwest Area Foundation. Oregon Tradeswomen, Inc., trainees and participants in all of the Initiative's sponsored programs receive three years of personal support, including job training, wraparound support services, peer support, job retention and advancement. EOI is also actively involved in building staff and organizational capacity in supported projects. Staff from organizations working on EOI supported projects, including staff from Oregon Tradeswomen, Inc., benefit from training, resource sharing, peer support, meetings aimed at solving mutual problems, and a variety of other services that individual organizations and projects would normally find difficult to fund.

Some states and local governments have specific interests in, and dedicated funding streams for, pre-apprenticeship training. For example, many pre-apprenticeship programs in New Jersey, such as the New Jersey Institute of Social Justice's **Newark/Essex Construction Careers Consortium (N/ECCC) Pre-Apprenticeship Training Program**, are partially funded through a state fund set

aside to train women and minorities for careers in construction. New Jersey allocated one half of one percent of the public money for reconstruction of schools in the Abbott School District to this goal. N/ECCC is primarily funded through the Abbott grants program, and many of the program’s core components, including its curricular approach and its mandatory program partners, are dictated by that funding stream. N/ECCC also receives other public monies. Additional funding comes from the Port Authority of New York/New Jersey and the U.S. Environmental Protection Agency’s Brownfields Training grant program, which allows the program to provide participants with some additional training and certification in asbestos abatement and lead removal. The program also receives some local philanthropic support from the Prudential Foundation.

Several programs blend funding sources from different types of governmental departments. Departments have different missions and motivations for supporting pre-apprenticeship training. For example, transportation departments are interested in developing workers who can build transportation infrastructure, while the Environmental Protection Agency is interested in developing workers for projects that improve and protect the environment, and the Department of Labor is primarily interested in programs that provide skills that will help individuals get jobs. The table below provides some further examples of the range of funding sources that programs cited receiving, with examples of programs that mentioned such sources were important to them. The table is not an exhaustive list, but rather an example of the variety of public funding available to support pre-apprenticeship programs.

	GOVERNMENT FUNDING SOURCE⁶	PROGRAM EXAMPLES
FEDERAL SOURCES	USDOL-Women in Apprenticeship and Non-traditional Occupations (WANTO) grant	ANEW (WA); Oregon Tradeswomen, Inc.
	USDOL-Youthbuild grant	Just-a-Start Youthbuild (MA)
	USDOL- The American Recovery and Reinvestment Act grant	Building Futures (RI), JumpStart (MD)
	USDOL-Job Corps	Curlew Job Corps Civilian Conservation Center (WA)
	Environmental Protection Agency’s Brownfields Job Training grant	Oregon Tradeswomen, Inc.
	National Institute of Environmental Health Sciences	Building Works (NY), The Center for Construction Research and Training (MD)
STATE SOURCES	Departments of Education	West Virginia Women Work; Building Futures (RI)
	Departments of Juvenile Justice	HBI-Project CRAFT (FL)
	Departments of Labor/Workforce Development	Newark/Essex Construction Careers Consortium (NJ); Hartford Jobs Funnel (CT)
	Departments of Transportation	PRIDE (MO)
	Governor’s Discretionary 15 percent program under WIA	Building Futures (RI), KentuckianaWorks Construction/Skilled Trades Pipeline Project (KY)
LOCAL SOURCES	Workforce Investment Act formula funding	Apprenticeship Skills Achievement Program (OH); Hartford Jobs Funnel (CT)
	Water and Sewer Authority	Wisconsin Regional Training Partnership
	Department of Housing and Urban Development’s Community Development Block Grant (CDBG) program	Construction Training Opportunities Program (VA); Oregon Tradeswomen, Inc.
	Department of Health and Human Services’ Community Services Block Grant (CSBG)	JumpStart (MD), Construction Training Opportunities Program (VA); The Philadelphia Housing Authority Building Program, Maintenance and Construction Trades Pre-Apprenticeship Program (PA)
	City general funds	CityBuild (CA), Oregon Tradeswomen, Inc. (OR)
	Local port authorities	The Edward J. Malloy Initiative (NY), Newark/Essex Construction Careers Consortium (NJ)
	Public housing authorities	The Edward J. Malloy Initiative (NY); The Philadelphia Housing Authority Building Program, Maintenance and Construction Trades Pre-Apprenticeship Program (PA)

⁶ Please note that sources are categorized as to whether they are local, state or federal according to the perspective of the program, that is, whether the program had to apply to a local, state or federal agency to receive funding.

The Workforce Investment Act

The Workforce Investment Act (WIA) is the primary federal formula program for supporting job training, and most program leaders had tried gaining support for their program through locally administered WIA funds. Program leaders' success in accessing WIA funding, however, was decidedly mixed. In this section, we discuss some of the issues that program leaders raised with respect to their ability to access locally administered formula monies.

In other research, we have heard from leaders of job training programs that the funds available through WIA are very limited, and a similar theme came through in our conversations with construction pre-apprenticeship program leaders. While in many places there has been a one-time infusion of funds through the American Reinvestment and Recovery Act (ARRA), leaders note that, typically, funds are quite scarce to meet training needs. For example, Janus Gunel with **West Virginia Women Work** described how local WIA funding typically runs out very early in the fiscal year. In other places, program leaders noted that their programs were viewed as too expensive to be eligible for funding through WIA or that Individual Training Account (ITA) vouchers in their area were capped at a level that is insufficient to cover the costs of training for an individual.

In some local areas, requirements regarding what qualifies as a placement under WIA and how placements should be tracked caused challenges. For example, one program leader said that a barrier to WIA funding for them was the fact that they track placement numbers with Registered Apprenticeship programs and not necessarily specific employers. The pre-apprenticeship program had elected to track placement this way because apprentices tend to be employed by a number of different contractors, as hiring halls place individuals on a range of jobs. Nonetheless, the local WIA area required specific job placement outcomes, which were too difficult and costly for the program to track.

A few programs also reported difficulties accessing WIA to support a particular population they serve. For example, one women-serving program hypothesized that it was difficult to access WIA dollars because they served a specific population and that local WIA funds were reserved for programs that serve a broader population. In other cases, requirements surrounding qualifying for placement on the WIA-eligible training provider list seemed to be an issue. For example, program leaders described difficulty qualifying because they did not provide students with a portable industry-recognized credential or certificate.

It should be noted that programs leaders whose organizations did not receive WIA funding were not always sure that they really understood why. For example, program leaders did not necessarily know whether it was local or state policies that kept them from accessing WIA funding, or if it was federal regulations governing WIA. In some cases, however, due to the limited funding available through WIA and the perceived difficulty in using the funds, it seemed that program leaders had made a determination it was not worth their while to pursue WIA funding further or to devote organizational resources to learning more about the issues pertaining to WIA funds.

PRIVATE FUNDING

Program leaders described three areas of private funding that provide important support to their programs: philanthropic grants, support from local industry and earned revenue. In general, these resources were important sources of flexible funding that helped programs fill in funding gaps, offer a broader array of services, or try new programmatic approaches. While, in general, private funding sources were not the bulk of program money, they, nonetheless, could play critical roles in a program's funding picture.

Many programs described using philanthropic funding to fill gaps or support program components that public funds did not cover. For example, **Building Futures** in Providence relies on the Rhode Island Foundation to help support its advocacy work on helping change public policies to increase construction opportunities for low-income communities. The Annie E. Casey Foundation, the Nellie Mae Education Foundation and United Way also support the program's advocacy work as well as elements of the pre-apprenticeship program, helping the program offer a robust set of services to participants. Similarly, the **Just-a-Start Youthbuild** in Cambridge, MA, was able to increase its

post-placement support services with funding from the Hyams Foundation. The program used these funds to hire a Life Resource Advisor who case manages, counsels and coaches graduates for at least a year following graduation. The program views this work as critical to helping the graduates “establish themselves in the world of work and education.” In these ways and others, foundation funding provides programs with the flexibility to do some of the things they otherwise would struggle to do.

Program leaders cited unions and industry partners as an important source of in-kind support, providing materials, instructors and assistance with hands-on opportunities. The **Wisconsin Regional Training Partnership (WRTP)** in Milwaukee described leveraging support from the Joint Apprenticeship Training Council and local unions for its training programs in a number of ways. For example, as a part of WRTP’s sewer and water training program, the local Laborers and Operating Engineers host trainees on a local job site for a week and provide them with introductory on-the-job training. Similarly, the local International Brotherhood of Electrical Workers (IBEW) donates wire and materials that the students work with as part of WRTP’s electrical training program. Pre-apprenticeship programs tended to describe these types of investments on the part of industry partners as key to their success. Such investments have real financial value — wire and materials are expensive. But more importantly, they ensure that the program is well connected to industry practices and is appropriately preparing trainees for the construction industry. These connections also help trainees begin to make the connections that will be key to their ultimate employment and retention in the industry.

While these in-kind contributions were critical, and not uncommon among interviewees, direct funding or cash donations from industry partners to programs were unusual. It is perhaps not surprising that contractors and construction companies do not tend to fund pre-apprenticeship programs directly, in that construction employers that participate in the apprenticeship system already contribute quite substantially to the development of their workforce. Furthermore, across industries, employers typically contribute little to pre-employment training, and the training of entry-level workers in general receives substantially less employer investment than the training of higher-skilled workers. The current high-unemployment environment provides employers with further disincentives to make investments in pre-employment training. Given the investment in skills that some employers in the industry are already making, and the tendency among employers in general not to invest in entry-level workers, it is not surprising that cash contributions from employers in support of pre-apprenticeship programs are rare.

In a few cases, programs described entrepreneurial ways of generating revenue to support their work. For example, at **Skillpoint Alliance** in Austin, students build storage sheds as part of their hands-on training. The sheds are then auctioned off to support the program. At **Just-A-Start Youthbuild** in Cambridge, MA, as part of their training, participants work in teams on renovating or building affordable housing for low-income people. Participants work under the supervision of state licensed contractors employed by the community development corporation that sponsors the program. Students are dual enrolled in AmeriCorps and are given a weekly living allowance in exchange for their participation. The revenues from the projects, in turn, provide additional support for the program.

FUNDING CHALLENGES

For the most part, programs described a funding climate where there is increased support and resources for their work. ARRA funding and other federal and state dollars devoted to training are clearly helping programs do things they have not previously been able to do. For example, at **Oregon Tradeswomen, Inc.**, where the program had struggled for over a decade, the addition of support from Portland’s Economic Opportunity Initiative and the Bureau of Housing and Community Development, highlighted above, along with an EPA Brownfields Training Grant has allowed the organization to begin offering what its Director, Connie Ashbrook, felt was a “real pre-apprenticeship program,” in which all the necessary components of wraparound support services, classroom training, and hands-on learning were present. And, they have plans to “train 50 percent more women in fiscal 2010 over 2008.” As Nicole Bertran with **The Edward J. Malloy Initiative for Construction Skills** in New York noted, “There’s loads of money out there. It’s just a matter

of what you go for and how you use it.” With the increase in funding and the increased capacity it has provided, program leaders noted the new challenges this situation has led to in meeting performance outcomes in a down economy and in planning strategically for the long-term once ARRA funding fades. In addition, interviewees also discussed a few continuing and long-standing challenges they face in supporting participants after job placement, which was discussed earlier, and in finding flexible funding to build industry relationships, discussed below.

Operating and Planning in the Current Funding Environment

As noted above, the current funding environment has been largely beneficial to programs. Some of the program leaders who accessed new federal and state funding streams have been expanding their program’s capacity to train more individuals and provide them with more support services. Despite the increases in funding some programs are seeing, and the expanded training opportunities that funding can provide, most program operators are very concerned about where or how trainees will be placed in employment or apprenticeships in an economy where construction is suffering. This mismatch between a plethora of training dollars and dearth of job opportunities makes it difficult for program operators to fully take advantage of these funding opportunities and meet the associated outcomes requirements. Some programs reported being hesitant to access or use all the available funding to train more individuals, citing their concern they will not be able to find participants a job. Programs that do not choose to train additional participants are responding to this challenge in different ways and directing resources toward other goals.

Many of the programs interviewed reported scaling back the number of participants they were enrolling in training. For example, **Building Futures** in Providence, RI, planned on scaling back the number of trainees they had intended to accept for 2010 given their assessment of placement opportunities. As they bring in new funding, however, they are thinking critically about not just the number of participants they can serve, but also about broadening the skill sets that they develop in their participants in order to make them more marketable in a competitive job market. In addition, Building Futures is using new funding to expand opportunity for new hires by encouraging policies like apprenticeship utilization and working with the building trades to integrate entry-level green construction certifications into their curriculum. As programs such as Building Futures are thinking about how to use and take advantage of the current funding cycle to build program capacity, they must also weigh the long-term sustainability and impact of their decisions due to the foreseen decrease in public funding in the years ahead.

While funding for FY 2010 has been atypically robust, it is anticipated that this situation will soon revert back to the previous funding environment when resources for pre-apprenticeship programs were relatively scarce. Interviewees described a constant struggle to stay afloat prior to 2010. Local public funding typically has not been sufficient, and given the looming state and local budget shortages and the end of ARRA dollars, that situation is likely to reoccur. As described above, while philanthropic support does supplement public workforce funding, it does not typically wholly support programs. The result is that some of the more traditional funding challenges programs face, such as finding resources for building industry relationships, may be exacerbated for programs in the near future.

Support for Ongoing Industry Relationship Building

Program leaders described accessing funding flexible enough to support some of the industry-specific aspects of their work is key. For example, interviewees commonly described the importance of employing former or current tradespeople or journeypersons as staff. Having a staff person with a construction industry background was considered to be integral to establishing relationships with industry and brokering placement. However, salaries for individuals with industry experience were reported to be higher than that typically paid to program staff. This tends to create a funding challenge, as it makes program costs look high relative to other types of job training. As Nicole Bertran with **The Edward J. Malloy Initiative for Construction Skills** in New York described,

having journeypersons on staff helps get your program recognized by the unions and builds legitimacy for your program. However, “Finding instructors is a tremendous challenge because you’re competing with union wages.”

In addition to staff expenses, program leaders noted that it is critical to dedicate staff time to developing and managing relationships with business. As Arcadia Maximo with **CityBuild** in San Francisco stated, “It’s really important to keep that dialogue going with contractors as well as our union representatives.” This dialogue and the relationships that have evolved with the unions and contractors is essential to CityBuild’s ability to forecast job demand and prepare students to enter the labor market. In some cases, programs described building some of the staff time needed for this relationship management work into ongoing program functions, such as job development and curriculum updates. For example, CityBuild brings the unions and contractors to the table at the beginning of each cycle to discuss upcoming needs. Other programs, however, did not have the resources to build such activities into their regular program cycle.

Initial planning or partnership grants were important to some programs’ ability to establish strong industry relationships. For instance, the **Hartford Jobs Funnel** received start-up funding to design a program with input from a range of stakeholders from all different backgrounds. On the industry side, both union and non-union contractors, developers, and other perspectives were included in all phases of design, as well as in the ongoing operation of the service model. This was done so they would understand the need of the industry and put a service model in place that met that need. On the other hand, planning grants are not permanent funding streams, and organizations who receive them must subsequently figure out how to continue to maintain these relationships and create new partnerships.

Some interviewees described the ongoing work of establishing and maintaining industry connections as something that was typically not explicitly funded, and as a result, they dedicate little staff time to this aspect of their work and often rely on a handful of key relationships. In exploring this issue, it became clear that the source, level and flexibility of the program’s funding has a lot to do with whether or not these activities are well supported. Simply put, programs that either have some amount of flexible, core funding or explicit funding that supports industry relationship building are able to spend more time on developing employer relationships; those programs whose funding is closely tied to the provision of specific services or service numbers find these activities more challenging to support.

Certifying or Standardizing “Pre-Apprenticeship”

As part of the interviews with pre-apprenticeship programs, we asked interviewees how they think about defining their area of work and its relationship to the Registered Apprenticeship system. More specifically, we asked them whether certifying “pre-apprenticeship” in some way would be helpful or not and the key issues they would want to see considered in developing a certification. In this section we discuss program leaders’ responses to these questions.

We posed these questions about certifying pre-apprenticeship because, in developing the earlier census of construction pre-apprenticeship programs and in seeking comments on the results, it became clear that there is some level of disagreement in the field as to what pre-apprenticeship means or should mean. For example, in some discussions, the primary interest seemed to be in ensuring that pre-apprenticeship programs offered high-quality training that prepared individuals for construction trades jobs, and there was concern about apparent uneven quality among pre-apprenticeship training programs. In other conversations, the driving consideration seemed to be whether or not the majority of program graduates actually entered an apprenticeship in the construction trades. In still other conversations, the primary interest lay in how pre-apprenticeship programs can improve the chances of disadvantaged job seekers connecting to quality jobs in the construction trades, particularly those created by public investments. Furthermore, there was also interest in how pre-apprenticeship could connect low-income individuals to a career path in which further learning could lead to further wage increases. Thus, it seemed that a better understanding of the existing workforce training infrastructure in construction could, in fact, better inform this discussion and related policy options that might be considered.

In our interviews with program leaders, we asked their opinion as to whether some sort of certification of pre-apprenticeship programs was needed or would be helpful. We asked this question in a very general way, without specifying what such a certification would entail, who would manage the process or providing any other details. Thus, the wide variety of responses interviewees had to the question was in some respect due to their different expectation of what certification would entail rather than to clear differences of opinion among respondents. In general, programs favored some level of quality control, but many expressed concern that strict requirements on how to design/run programs would limit their flexibility to respond to the specific needs of the workers they serve, to adapt to changing market conditions, or to develop new program innovations.

As shown in the table below, programs cited several potential benefits to standardizing or certifying pre-apprenticeship. The most commonly described benefit reported by interviewed programs included raising pre-apprenticeship’s profile within the construction industry or with employers. Interviewees believed — or hoped — that more clarity around what pre-apprenticeship means and what pre-apprenticeship programs do would create better brand recognition in the industry, would lead to more generally accepted standards for moving from pre-apprenticeship to apprenticeship, and would ultimately lead to closer relationships with unions, trade associations and construction-related businesses. In particular, program leaders described certification as a means to promoting quality pre-apprenticeship programming. A certification would help create clarity around the skills and competencies pre-apprentices need. As a result, programs may benefit from a clearer direction, and, at the same time, industry representatives would be assured an employee or potential hire from a pre-apprenticeship program meets an agreed upon standard. One program leader lamented the lack of an agreed upon standard or definition for pre-apprenticeship, “It’s like trying to hit a moving target with what you do.” The table below summarizes the primary arguments program leaders made in support of pre-apprenticeship certification.

ARGUMENTS IN SUPPORT OF “PRE-APPRENTICESHIP” CERTIFICATION	
ARGUMENT	DESCRIPTION
Clarify skills trainees need to enter apprenticeship	Developing a set of standards that clarifies the core set of competencies needed to enter the construction industry and certifying that programs meet those requirements will ensure that students are provided the skills needed to enter the construction industry.
Promote program alignment with employer needs	If program certification involves validating or aligning curricula to industry needs, the process will promote program alignment with employer needs, thus, making programs both more useful and attractive to employers.
Increase trainee marketability	If program certification was based on an industry recognized set of standards or resulted in an industry recognized credential, it would help sell pre-apprenticeship students to employers. In turn, this certification may make pre-apprentices more competitive than other applicants for entry-level construction positions. And, certification could make pre-apprenticeship credentials more portable.
Ensure pre-apprenticeship programs link to quality apprenticeship opportunities	Part of defining and standardizing pre-apprenticeship would be to ensure programs are connected to quality apprenticeship programs and produce strong apprenticeship applicants. These applicants will, in turn, be prepared to take advantage of the training, advancement and long-term career pathway apprenticeship offers.
Promote stronger ties with unions	Introduce clients to the concepts of unions, provide them with an overview of their role in the industry, and help them better understand how to navigate entry. In turn, help alleviate any union concerns about pre-apprentice programs’ quality, their role in preparing individuals to enter the industry, and ability to prepare students for apprenticeship.
Regulate/reduce poor quality or ineffective pre-apprenticeship programs	There are a lot of “bogus” pre-apprenticeship programs (both non-union and union) out there and DOL certification or regulation is needed to “police” these programs.
Promote minority representation in the trades	A standard definition or standard requirement would make it more transparent what is needed to get into the field, heighten awareness of the opportunities within the fields, and serve to reduce some populations’ fears that they can not enter this field because of racism/sexism.

On the other hand, program leaders also expressed a number of reservations about standardizing or certifying pre-apprenticeship. In particular, it is interesting to note that many of the interviewees described a range of ways that standardization or even certification might limit their flexibility to respond to local labor market needs and, thereby, their ability to serve the students and businesses they work with. In addition, there were concerns that certification could create another barrier for disadvantaged workers trying to access quality jobs. Finally, some program leaders expressed skepticism that a certification or credentialing process that would be meaningful or credible to their local industry partners could be achieved at a national level.

ARGUMENTS AGAINST “PRE-APPRENTICESHIP” CERTIFICATION

ARGUMENT	DESCRIPTION
Dilutes or distorts program mission	Differences in program design are often a function of the demographic of groups being served and the jobs targeted on their behalf. A certification or standardization process may not adequately allow for these differences, forcing programs toward a one-size-fits-all model.
Potential to decrease the quality of programming	Creating nationwide consensus among employers, unions, program operators and funders on a definition of pre-apprenticeship will be challenging and difficult. Therefore, the set of common pre-apprenticeship components or measures agreed upon may be fairly generic, which could lead to a definition or standards that focus on the lowest common denominator instead of promoting innovation or quality.
Limits programs' flexibility to meet clients' needs	A program's success often hinges on its ability to meet different participant needs, which means programs may offer a wide menu of potential services, but not all participants receive or need the same supports. Similarly, programs may need to add or drop components as participant needs change. A standard definition or certification process could limit programs' ability to serve clients in different ways or try different approaches in real time.
Limits programs' flexibility to meet employers' needs	Labor markets differ greatly across the country, and, even within labor markets, there are differences among the various trades as to what they look for in an apprenticeship candidate, and needs change over time. Thus, the design of pre-apprenticeship programs is heavily influenced by a program's industry partners. Certification may hamper a program's ability to be flexible in meeting the range of needs of local industry.
Creates another barrier for access to opportunities in construction	Mandating a certain education or skill level could deter programs from working with hard-to-serve clients. On the other end of the spectrum, certification or standardization may require programs to provide more training or preparation than a client needs to be successful in the industry, wasting both program resources and participants' time. Certification could put up yet another barrier to participants obtaining employment in the construction sector.
Increases bureaucratic obstacles to service delivery	Workforce development already has many regulatory hoops to jump through regarding funding and outcomes, and certification would become just one more bureaucratic process for programs with limited resources to navigate.
Overall quality and outcomes issues should be addressed within larger workforce system	Current outcomes measures around placements and wage-at-placement required by the funding systems supporting training programs should ensure participants are being properly served. If pre-apprenticeship programs are not adequately preparing and placing participants in the industry, the current funding system should address the problem by failing to support them.
Lack of evidence certification is needed	It is uncertain that many bad or fraudulent programs exist through which participants are getting injured or that are perpetuating abuses to warrant regulation.

In the context of the pre-apprenticeship certification discussion, program leaders offered a range of opinions regarding the outcomes that pre-apprenticeship programs should be expected to achieve. In particular, there was some debate whether or not connecting substantial numbers of participants to apprenticeship should be a primary outcome for all pre-apprenticeship programs. Many programs clearly stipulated that pre-apprenticeship should directly relate to, and prepare participants for, an apprenticeship in construction. On the other hand, programs in areas with lower union density, where apprenticeships are typically less prevalent, see pre-apprenticeship somewhat differently. While they agree that pre-apprenticeship should prepare participants for apprenticeship-level work, a sufficient number of these opportunities may not exist, and, therefore, they see pre-apprenticeship as a means to prepare participants for work in a variety of construction-related jobs.

Other program leaders viewed the pre-apprenticeship program as an opportunity for candidates to get a sense of whether apprenticeship is the right path for them and whether they are ready to commit to the three to five years of training necessary to complete an apprenticeship. These program leaders did not feel it should reflect poorly on the ability of their program to prepare candidates for construction

trades apprenticeship if candidates instead choose to continue their education or pursue a different career. And finally, given the ups and downs of construction employment in general and the difficult employment situation in many areas right now, many program leaders did not think it would be reasonable to expect consistent success in placing candidates in apprenticeship positions year after year, given the variable rate at which these positions become available. All in all, while programs agreed that a pre-apprenticeship program should give participants the skills to succeed in construction trades apprenticeship, opinions varied greatly as to how a program's actual success in placing candidates in apprenticeship positions should be used in assessing a program as part of a certification process.

Overall, program leaders agree on the need to offer quality programs that offer participants real opportunity. Program leaders were not so sure, however, about whether a pre-apprenticeship certification would contribute to the goal of ensuring program quality and would be hard pressed to agree on what performance standard or other indicator should be used for assessing quality. Clearly, program leaders would not advocate having all programs follow the same model as a route to quality.

Policy Recommendations

Our interviews with program leaders from across the country reveal that pre-apprenticeship programs are helping develop a strong and viable pipeline of employees for the construction industry. Moreover, these programs are serving disadvantaged populations, minorities and women, who have not traditionally been a large part of the construction workforce, to enter and succeed in this challenging sector. Programs with deep industry relationships leverage these contacts to build first-rate curricula and training models designed to prepare program participants to access a wide range of employment opportunities in construction. However, this is not to say that successful programs are the same. They are not, and, in fact, their core differences are often designed in response to conditions in their local labor markets, demands of their industry partners, and the unique needs of the participants they serve. As such, the variety and flexibility inherent in many of these program designs are critical to their success. Despite their many positive aspects, even successful pre-apprenticeship programs struggle to overcome a common set of challenges. To better support, equip and monitor pre-apprenticeship programs' efforts, we suggest the following:

Technical Assistance and Funding for Industry Relationships and Post-Program Supports

Building and maintaining industry relationships can be challenging. Yet, these relationships are the key to building an effective curriculum and accessing job opportunities on behalf of program participants. Programs need skilled staff, often with a construction background, to build these relationships. However, successful program leaders report challenges in being able to find individuals with meaningful construction experience who can also understand the training program and its mission. Having sufficient resources is one key to attracting and retaining these individuals. Management must also invest time in building and managing relationships with industry partners. These types of activities require significant financial support. In addition, programs often need guidance on building industry relationships. Stakeholders from unions, construction associations and the public sector, including the Department of Labor, can all play a greater role in supporting and building pre-apprenticeship programs' capacity to work with industry partners through increased access to industry representatives, technical assistance on how to approach and talk to industry, and the provision of better information about industry needs.

A second common challenge programs typically face involves conducting appropriate follow-up with participants post-placement. As discussed above, there are a number of challenges new entrants must overcome to build a successful career in construction. The work is physically demanding and the workplace culture may not be receptive to new or nontraditional workers. Navigating hiring halls or moving from project to project in an unorganized local labor market means employees often drop-off before they gain strong footing on the career ladder. And, with dozens of construction-related programs and certificates available, workers need assistance in figuring out what continuing education opportunities best fit their goals and are a good match for their local labor market. We have begun to see career navigator positions crop up in other sectors and the national debate around career navigation is intensifying. Construction workers just beginning their new career and pre-apprenticeship graduates, in particular, could benefit from increased attention and support for longer-term job/industry retention activities.

Increase Pre-Apprenticeship Programs' Access to WIA Funding

As we call for increased financial support for pre-apprenticeship programs, Workforce Investment Act funding is one funding stream that could play an increased role. However, many pre-apprenticeship programs are currently constrained in their ability to access WIA support. Insufficient levels of local funding, difficulties qualifying or understanding the process and requirements for qualifying as an

eligible training provider, and ill-suited placement outcomes and tracking through WIA are inhibiting pre-apprenticeship programs in their efforts to leverage WIA funding. With WIA reauthorization on the horizon, now is the time to think about how this legislation can be better structured or interpreted to support pre-apprenticeship programs.

Notably, the Department of Labor issued guidance in 2007⁷ that provides information on working with the Registered Apprenticeship system to state and local Workforce Investment Systems. The guidance provides information on a number of topics, including registering apprenticeship programs as eligible training providers under WIA, using ITAs to support apprenticeship, activities One-Stops can employ to connect job seekers to Registered Apprenticeship, supporting employer's contributions to apprenticeship with on-the-job training funds, and supporting apprenticeship's classroom training component through customized training funds. The guidance also briefly described pre-apprenticeship programs and their ability to "bridge" participants into apprenticeship. Nonetheless, while there does seem to be information available that is designed to help local Workforce Investment Areas connect to apprenticeship, pre-apprenticeship programs typically described difficulty connecting with their local WIA system.

We suggest that the Department of Labor provide some guidance and training to local Workforce Investment Areas designed to help them better understand the nature of the construction industry and the role pre-apprenticeship programs can play in preparing workers to enter that industry. Work in the construction sector is unique in that apprentices and other new entrants change employers frequently as they move from work site to work site. And, they may experience gaps in employment in the interim. As a result, a new apprentice may not work 40 hours a week or every week in a month. These gaps may be misinterpreted as un- or insufficient-employment for WIA purposes. Tracking these changes in employment also places a significant burden on pre-apprenticeship programs. A better understanding on the part of the local Workforce Investment Boards (WIB) regarding the seasonal and cyclical nature of the industry, as well as the role union hiring halls and joint-apprenticeship training programs play in employment, may help overcome some of these issues.

In addition, a number of pre-apprenticeship programs described having difficulty qualifying for certification as an eligible training provider by their local WIB. The most common explanation provided was that they were not seen as providing their graduates with an industry-recognized credential. In many cases, the pre-apprenticeship programs described equipping their participants with a skill set that was defined by local industry partners and successfully preparing graduates for employment in the construction industry. Nonetheless, the local WIB's definition of an industry-recognized credential was strict enough to exclude these programs. Thus, the Department of Labor may want to consider expanding on the definitions provided to date, regarding the definition of a credential, to include pre-apprenticeship programs developed in conjunction with local industry or employer partners.

Support the Demand for Graduates of Pre-Apprenticeship Programs

Pre-apprenticeship programs currently have a relatively high capacity to train individuals, in comparison to the number of employment opportunities and apprenticeships available to their graduates. Unemployment in the construction sector is still relatively high and many pre-apprenticeship graduates are waiting for a job opportunity to develop. At the same time, our transportation, energy and utility infrastructure is in serious disrepair, and, while some money has been slated for infrastructure development, projects have been slow to come online and more needs to be done. Similarly, investments in, and incentives to build demand for, weatherization projects are only just beginning to ratchet up, but many programs have the training in place to equip workers with the skills they need to carry out these energy efficiency efforts. Large public investments

⁷ See U.S. Department of Labor, Employment and Training Administration, *Leveraging Registered Apprenticeship as a Workforce Development Strategy for the Workforce Investment System*, Training and Employment Guidance Letter No. 02-07 (July 12, 2007).

in highways, public housing, sports arenas, airports and other public infrastructure spawned the creation of many pre-apprenticeship programs in the past and created valuable opportunities for their graduates. Public investment in infrastructure continues to make sense now more than ever.

Moving forward, it is important to link public investments in the construction industry to skill development programs, like pre-apprenticeship, so that graduates leave with skills that are in demand and these public investments lead to job opportunities for underserved individuals. There are a variety of mechanisms, such as project labor agreements, community benefits agreements and apprenticeship utilization, which, if properly structured and enforced, can be used to insure that as demand ramps up, opportunities are more accessible for pre-apprenticeship graduates. To complement these types of arrangements, government should encourage partnerships between apprenticeship programs and pre-apprenticeship programs. In New Jersey, apprenticeship programs that hire from select pre-apprenticeship programs are provided \$5,000 to help support the apprentice's training during the first two years. Incentives such as this encourage collaboration and, in turn, build demand for graduates of pre-apprenticeship programs.

Continue to Build Knowledge about Quality Programming

Workforce development stakeholders from a range of perspectives reported concerns that there are construction pre-apprenticeship programs operating in local communities that fail to meet the needs of either their participants or local industry. However, as discussed above, the solution does not seem to lie in standardizing the approach to pre-apprenticeship, such that all programs conduct the same activities or use the same assessments. Nonetheless, methods for recognizing and promoting quality programs are needed. It seems clear that there is a potential role for the Department of Labor to play in encouraging high quality programming among pre-apprenticeship programs. For example, the DOL's prior work in curriculum development seems to have been very well received and influential. To build on this, the collection and dissemination of best practices, particularly on connecting to industry demand, would likely be helpful. Opportunities for programs to receive technical assistance, especially from their peers, would help struggling programs better serve their participants and local employers.

There are also a variety of areas in which further research into best practices and into the construction sector labor market could be helpful to programs. For example, as indicated above, the complexity of the career path in the industry warrants additional post-placement services and support to assist participants in navigating the industry. And yet, few programs have deep experience or knowledge in this area at present. Given the limited experience base in post-program support models, research on best practices would be a fruitful area of inquiry. It will be important to support and document different approaches to determine what seems to work, for whom and under what circumstances. In addition, programs often pursue a range of employment and education outcomes on behalf of their clients. However, little has been done to categorize, clarify or evaluate these outcomes. Programs could also benefit from increased knowledge of the various career paths within the construction trades. Research around the benefits and career opportunities present in different industry segments and different construction occupations would help program leaders understand how to navigate their local labor market and find a wider range of opportunities for their participants. Better information on best practices and career paths in construction will help programs better tailor their services to their local labor market and to their participants and will help funders, stakeholders and programs themselves know what outcomes they should be measuring and, thus, help define the criteria by which to judge a program's success.

Conclusion

As Nicole Bertran, Vice President of Programs at **The Edward J. Malloy Initiative for Construction Skills** in New York said, “Pre-apprenticeship is such a tremendous way to move people out of poverty.” In light of this, what more can we learn to make sure pre-apprenticeship programs continue to offer and expand these opportunities? Our early research served as a census of pre-apprenticeship programs across the country, and *Construction Pre-Apprenticeship Programs: Results from a National Survey* showed what pre-apprenticeship programs did and who they served, and revealed a variety of program approaches and designs. Through the most current investigation presented in this paper, we have garnered more details about what services programs provide, who programs partner with in their efforts and what policies influence their work. We have discovered why this rich and necessary variety in programs occurs and concluded with a set of policy recommendations that will help guide policy makers and stakeholders to help pre-apprenticeship programs become a more robust pipeline of skilled workers for the construction industry.

Through these first two parts of our research into pre-apprenticeship programs, we also found that stakeholders and policy makers in different states, cities and geographical regions vary in how they approach and organize their efforts to build a skilled workforce for their respective construction sectors. It is evident from this research that while stakeholders in some cities, including local government, workforce investment boards, community colleges, union and non-union contractors, and pre-apprenticeship programs, have clearly coalesced around a central strategy, the approach and strategy in other cities seems more fragmented. It is also evident the role and level of engagement of state governments and agencies in these efforts varies as well.

Moving forward, AspenWSI will be conducting further research to identify and better understand a select number of regional approaches to coordinating workforce development for the construction industry. It is our hope that this work will prove useful in illustrating how demand and supply in the construction workforce can be more effectively managed and aligned. Moreover, investigating how pre-apprenticeship programs are viewed and leveraged in relation to these larger regional strategies, and how policies and collaboration are crafted to support the development of the construction workforce, is essential to understanding how better linkages can be built between pre-apprenticeship programs and employment opportunities and how, or if, some of these regional strategies can be improved, scaled-up or replicated.

Appendix A: Pre-Apprenticeship Program Interviews

Jennifer Albert, *Curlew Job Corps Civilian Conservation Center (Curlew, WA)*

Connie Ashbrook, *Oregon Tradeswomen, Inc. (Portland, OR)*

John Bengel, *Just-a-Start Youthbuild (Cambridge, MA)*

Nicole Bertran, *The Edward J. Malloy Initiative for Construction Skills, Inc. (New York, NY)*

Bob Brown, *United Way of Central Iowa (Des Moines, IA)*

Earl Buford, *Wisconsin Regional Training Partnership (Milwaukee, WI)*

Johanna Chestnutt, *Apprenticeship and Nontraditional Employment for Women (Seattle, WA)*

Andrew Cortes, *Building Futures (Providence, RI)*

Jim Duane, *PRIDE Pre-Apprentice Training (St. Louis, MO)*

Kevin E. Fields, Sr., *Louisville Urban League (Louisville, KY)*

Roger Grissom, *Operation Reconstruct, Home Builders Institute (Gretna, LA)*

Janis Gunel, *West Virginia Women Work (Morgantown, WV)*

Donald Killinger, *New York City District Council of Carpenters (New York, NY)*

Lynn Knox, *Portland Economic Opportunity Initiative (Portland, OR)*

Don Lauser, *Central New Mexico Community College (Albuquerque, NM)*

Sharon LeGrande, *Northern Virginia Family Service (Oakton, VA)*

Cindy Marizette, *Union Construction Industry Partnership-Apprenticeship Skills Achievement Program (Cleveland, OH)*

Arcadia Maximo, *City College of San Francisco (San Francisco, CA)*

Harry Melander, *St. Paul Building Trades Council (St. Paul, MN)*

Tadar Muhammad, *Project CRAFT, Home Builders Institute (Avon Park, FL)*

Michael Patrick, *Sheet Metal Workers #20 Training Trust (Indianapolis, IN)*

Jason Perkins-Cohen, *Job Opportunities Task Force (Baltimore, MD)*

Yoland Rivera, *Hartford Jobs Funnel (Hartford, CT)*

Tom Ruby, *Northern Virginia Family Service (Oakton, VA)*

Tom Serafin, *Skillpoint Alliance (Austin, TX)*

Lisa Telford, *Apprenticeship and Nontraditional Employment for Women (Seattle, WA)*

Kizetta Vaughn, *The Center for Construction Research and Training (Silver Spring, MD)*

Albert Williams, *New Jersey Institute for Social Justice (Newark, NJ)*

Al Williams, *The Philadelphia Consortium for Community Solutions (Philadelphia, PA)*

Appendix B: Individuals Consulted

Dana Daugherty, *Office of Apprenticeship, U.S. Department of Labor*

Bob Giloth, *The Annie E. Casey Foundation*

Laura Ginsburg, *Office of Apprenticeship, U.S. Department of Labor*

Kermit Kaleba, *National Skills Coalition*

Franchella Kendall, *Office of Apprenticeship, U.S. Department of Labor*

John Ladd, *Office of Apprenticeship, U.S. Department of Labor*

Nancy Mills, *Working for America Institute, AFL-CIO*

Jeffrey Rickert, *Working for America Institute, AFL-CIO*

Dennis Torbett, *Home Builders Institute*

ADDITIONAL RESOURCES

This paper builds on an earlier survey of 260 construction pre-apprenticeship programs from across the United States. The results of this survey are discussed in *Construction Pre-Apprenticeship Programs: Results from a National Survey*, which was published in July 2009. Copies of this publication can be downloaded from the AspenWSI Web site: <http://www.aspenwsi.org/publications/09-007.pdf>.

In addition, AspenWSI has a number of profiles of construction pre-apprenticeship programs, which use a range of strategies, posted on its Web site. Visit: <http://www.aspenwsi.org/WSIprofiles-program.asp>.



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