



Building a Statewide System of High Road Pre- Apprenticeship in California

Lessons from the California
Clean Energy Jobs Act

HIGH ROAD

CONSTRUCTION CAREERS

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Introduction

The California Clean Energy Jobs Act (Proposition 39), approved by voters in 2012, closed a corporate tax loophole and directed the revenue to a new program that invests in energy efficiency retrofits and renewable energy installation projects at public schools statewide. The program, hereafter referred to as Prop 39, is further defined by Senate Bill 73 (Chapter 29, Statutes of 2013), which sets aside funding for job training to expand and diversify the workforce of Californians qualified to perform clean energy upgrades to educational facilities. Since 2014, the California Workforce Development Board (CWDB, or State Board) has invested \$12 million of Prop 39 funds to build twelve pre-apprenticeship training partnerships serving disadvantaged Californians by providing fundamental skills-training and supportive services. Collectively, these training partnerships are creating a coherent system for workforce development in the construction trades that addresses energy and climate change, job quality and job placement, as well as access to training and employment for disadvantaged populations.

Preparing disadvantaged young people and adults seeking new, high-quality career opportunities requires much more than a curriculum. It requires a coherent system of training and resources built on regional partnerships, standardized curriculum and credentials, mechanisms to calibrate the training of workers (i.e., labor market supply) with actual employment opportunities (i.e., labor market demand), and a wide range of supportive services to address barriers to employment. Prop 39-funded training partnerships are piloting and modeling these principles and strategies with the pre-apprenticeship cohorts they serve.

Similarly, preparing new workers for a long-term career, rather than just an immediate job, requires a systematic approach to training and job placement. Learning particular “green” skills prepares individuals to work on energy efficiency and renewable energy projects, including Prop 39 school retrofits. But learning a trade – through a comprehensive curriculum and formalized connection to state-certified apprenticeship – prepares disadvantaged Californians for a middle class career, and lifelong opportunities to build California’s low-carbon infrastructure. This is precisely the value proposition of Prop 39-funded training partnerships. Their thorough approach to pre-apprenticeship enables disadvantaged Californians to establish a quality career in the construction trades, and develops the robust, highly skilled workforce necessary to build and maintain the state’s clean energy future.

This report aims to capture the promising practices and lessons learned by Prop 39-funded training partnerships, in order to guide pre-apprenticeship initiatives and

associated public investments in California and elsewhere. The guidance offered through this report is intended to support State workforce investments in the construction trades writ-large, including but not limited to programs targeting: building efficiency upgrades, renewable energy installation, and major transportation infrastructure projects.

A. Rationale for Prop 39 Investments in Construction Pre-Apprenticeship Partnerships in California

Pre-apprenticeship training provides disadvantaged and under-represented workers the first stepping-stone on a pathway to more advanced and comprehensive career training that culminates in secure and stable employment. For this reason, Prop 39 pilot programs focused on preparing individuals from various target populations to gain entry to and succeed in state-certified apprenticeship programs. Through apprenticeship, workers gain trade-specific skills and knowledge required for a wide range of construction projects, including performing clean energy upgrades at schools and other non-residential buildings. The focus on apprenticeship as the ideal job placement outcome stems from the fact that, in construction, apprenticeship provides a reliable pathway to middle-class careers with family-supporting wages, employer-provided benefits (health, retirement, and continuing education), career advancement opportunities, and worker voice and labor protections via union representation.² This is critical, because job quality – i.e., honorable compensation and a rewarding career-trajectory – is a cornerstone of an equity agenda serving disadvantaged and under-represented workers.

It is not easy to get into a state-certified apprenticeship program. Applicants must have high math and reading levels, some unions require a G.E.D. or high school diploma, and others require passing a physical fitness test. In addition, apprentices must be capable of arriving at construction worksites early in the morning reliably and consistently, which can put a strain on families without a car and/or access to childcare. Consequently, the CWDB's Prop 39 investments are supporting 12 pre-apprenticeship pilots focused on removing barriers to employment and preparing disadvantaged populations to meet the minimum standards to qualify for a state-certified apprenticeship.

Prop 39 investments in pre-apprenticeship focus on the construction trades for a variety of reasons. First, construction is the industry under which most clean energy work falls. Building energy retrofits, installation of solar and wind energy systems as well as electric vehicle charging equipment, battery storage maintenance and repair, and many other clean energy projects require workers skilled in the construction crafts. Thus, developing California's clean energy workforce is essentially synonymous with developing California's skilled and trained construction workforce, and diversifying this workforce requires deliberate practices to increase access to building trades employment.³ Second, construction is the industry for which apprenticeship is the best developed career pathway, with extensive on-the-job training and comprehensive classroom instruction requirements. Third, apprenticeship is a form of both training and employment – hence, it is described as an earn-while-you-learn career pathway. In the multi-year, earn-while-you-learn program, apprentices receive progressive wage increases tied to skill acquisition, resulting in an industry-recognized journey card credential.

In California, the Division of Apprenticeship Standards (DAS) regulates state-certified apprenticeship programs to ensure that apprentices meet minimum training requirements. ⁴DAS oversight guarantees quality and accountability so that contractors can be certain when hiring an apprentice, or recent graduate at the journey-level, that their employees have the skills needed to perform their job requirements and are up-to-date on emerging technologies. This is particularly important in the rapidly evolving fields of energy efficiency, renewable energy, and transportation electrification.

Quality pre-apprenticeship is a systematic approach to apprenticeship readiness that combines industry-based training, classroom instruction, and supportive service provision to prepare participants to advance to a state-certified apprenticeship program. ⁵The DAS certification for apprenticeship programs does not apply to pre-apprenticeship programs yet. This lack of oversight has had important consequences for participants as not all construction-sector pre-apprenticeship programs in California are designed with the same goals, nor are they equal in their outcomes.

All pre-apprenticeship should be based on certain fundamental principles and practices. For example, pre-apprenticeship programs should be delivered by training partnerships comprised of a diverse set of public and private entities, including industry (i.e., labor and employers) to guide participants along a career pathway in the construction sector. These partnerships also help ensure that the training is “demand-driven” in order to reflect the needs of the local labor market and ensure that participants are competitive for apprenticeship or other forms of construction sector employment in their region upon graduation.

There is ample room for program customization, the need to orient programs around standard promising practices notwithstanding. Diversity of supportive service offerings, specific work experience opportunities, and partnerships should reflect the specific needs of participants, the employers and program sponsors, and specific opportunities within the local labor market. ⁶The Prop 39 pilots identified the needs of the construction industry and surveyed existing literature about promising practices at work nationally (including California), and implemented a range of program structures designed to serve specific disadvantaged populations in different regions of California. In short, the foundational practices reflected standardized promising practices, but the flavor of each program reflected regional needs and opportunities.

Recent studies of racial and gender diversity in the construction sector in California and New York emphasize the need for pre-apprenticeship training partnerships to recruit, prepare, and retain workers who are under-represented in the industry, and particularly in high-wage, unionized positions. ⁷A recent case study noted that “entry into the unionized construction trades is challenging for those with little knowledge of or personal connections to the industry” due to historical reliance on “informal social networks for both recruitment and training [that] consistently resulted in low minority representation in the construction workforce.” ⁸ Prop-39 funded training partnerships have been addressing the under-representation of women and people of color in the construction

trades, and in high-wage unionized positions in particular, through supply-side interventions primarily. These interventions include strategic outreach and recruitment, often partnering with CBOs that have trusted relationships with target populations; and training and retention strategies that build solidarity and camaraderie among pre-apprentices, as well as between new and more experienced workers in the field. Demand-side strategies also play a critical role in diversifying the construction workforce. For instance, the use of “targeted hire” policies intended to increase the share of currently under-represented populations in the construction sector can and do create a real, clear demand for specific populations of workers.⁹

There is also a general demand for new apprentices and highly-skilled journey-level workers currently, due to the aging construction trades workforce and a massive wave of retirements (sometimes referred to as a “silver tsunami”).¹⁰ It is therefore an opportune time to redress the under-representation of, and create pipelines for, various target populations (e.g., at-risk youth, formerly incarcerated individuals, women, veterans, and other disadvantaged workers) in the high-road construction sector. **This goal is fundamental to Prop 39 pre-apprenticeship pilots, which are leveraging partnerships to reverse historical patterns of exclusion and offer critical assistance to under-represented workers in meeting the requirements for entry into state-certified apprenticeship.**

Increasing Equity in the Construction Trades

The Prop 39 pre-apprenticeship partnerships operationalize the California Workforce Development Board’s equity agenda. This agenda promotes income mobility and shared prosperity through an inclusive human capital strategy that a) prioritizes job quality; b) supports economic and climate resilience; and c) links worker-centered, regionally-based sector work to a statewide skills agenda.¹¹

B. Prop 39 Pre-Apprenticeship Pilots: Elements of Successful Programs

Prop 39 pilots have prepared more than 2,000 disadvantaged Californians for a future career in the construction trades using a standardized, comprehensive, 120-hour curriculum designed with the input of industry (including both labor and employers/contractors), and that leads to an industry-recognized credential. **The National Building Trades’ Multi-Craft Core Curriculum (MC3)** was designed to prepare interested young people and transitioning adults to enter and succeed in registered apprenticeship programs. Quality pre-apprenticeship programs using the Multi-Craft Core Curriculum can help to increase the number of qualified candidates for apprenticeship across all crafts and improve the retention rate among apprentices by providing them with a deeper understanding of both the industry and the role of trades unions in construction.

The following goals have guided the Proposition 39 pre-apprenticeship pilots:

- Train at-risk youth, women, veterans, formerly incarcerated individuals, and other disadvantaged job seekers in basic skills that are widely applicable across different trades and crafts, and fundamental in clean energy-related construction work.
- Create structured pathways to state-certified apprenticeship that help grow and diversify the construction trades workforce, and ensure apprentices are capable of performing clean energy-related construction work.
- Align workforce development systems and leverage resources to reduce service duplication.
- Replicate and scale innovations as they emerge from individual pilots.

From the Prop 39 pilots, the CWDB was able to identify four elements to successful pre-apprenticeship: (1) build training partnerships, not just programs; (2) respond to industry demand; (3) provide supportive services from recruitment to placement; and (4) evaluate and incorporate what works for program sustainability and expansion. The following report details each of these principles and the promising practices identified from across the 12 pilots. This report offers both a baseline of quality pre-apprenticeship already in place in California and goes beyond the literature to show what successful program design looks like in practice through case studies from the 12 pilots.

Build Comprehensive, Multi-Pronged Training Partnerships

Delivering quality pre-apprenticeship is a collective effort. Success depends as much on the strength of partnerships between organizations as on the effectiveness of any single organization. Partners are critical for recruitment, training, supportive service delivery, and placement. In the recruitment phase, partners can help reach new or different populations. In the implementation phase, partners can expand the training and supportive services available to participants. They may also help to grow the resource base of the program, offering financial assistance, staff, or in-kind contributions such as training facilities. Cultivating employer, labor, and government partnerships is critical to expanding placement opportunities for graduates and building relationships that contribute to pre-apprenticeship programs' sustainability and ongoing success. Pre-apprenticeship programs around the state have different partners that may take on the lead role of convening and coordinating local training initiatives, or take the financial and administrative lead. Typically, and as is the case with Prop 39 pilots, the local Building Trades Council (BTC), local workforce board, a local educational institution (high school or community college), or a community-based organization play the administrative role. For pre-apprenticeship to be successful, however, it is critical that the local BTC and Joint Apprenticeship and Training Committees (JATCs) champion the program's value to industry.

Early on, partners should focus on establishing the values and principles of the partnership, and identify what value-added results they aim to deliver from the partnership. Early discussions should also focus on the structure and governance of the program. Even though day-to-day administration and coordination of the program may be conducted by a non-industry stakeholder, BTCs and JATCs should be involved in the dialogue regarding structure and governance in order to secure their support and involvement.

Early discussion questions for training partnerships:

- Which local partners are required to enable the program to effectively serve the needs of both workers and employers?
- What is required of partners to ensure the program is industry/demand driven, worker-centered, and community focused?
- What is the level and type of investment from each partner?
- How will partners engage in program activities, participate in strategic decisions, champion the program, and otherwise contribute to its success?
- Who will champion the partnership/program to the larger community?
- How will the program meet labor market needs in the region and, where possible, increase access and equity related to specific construction projects?
- Are there specific barriers that partners intend to address with creation of the program, such as lack of industry awareness, basic math skills, transportation, or child care? Are additional partners needed to address those barriers?
- Are there specific populations (e.g. youth, women, people of color, formerly incarcerated, veterans) who are under-served by the existing system or certain targeted hire goals that are going unmet?
- How will the program be evaluated? How will success be defined?

Other partners often include local workforce development boards, community-based organizations, community colleges, high schools, supportive service providers, and construction union affiliates. Many of these entities have a wealth of experience in different forms of career readiness training. Many pre-apprenticeships have an advisory committee or a steering committee to address implementation issues, coordinate roles, and insure the program's value to industry and job seekers. Working with existing training partnerships to understand what has been tried, what challenges programs have faced in the past, and what works well can avoid some of the trial and error that new programs often encounter.

A. Building Trades Council (BTC) Sponsorship

Pre-apprenticeships have an opportunity to engage industry partners in a deep and ongoing manner. When beginning to form a new pre-apprenticeship program, coordinators should initiate a discussion with their local Building Trades Council (BTC) leadership. Obtaining and maintaining the support and participation of local BTCs, their

union affiliates, and Joint Apprenticeship and Training Committees (JATCs) is crucial. Their investment in the pre-apprenticeship program should go beyond sitting on an Advisory Committee. Rather, building trades partners should be called upon and motivated to:

- Make presentations by individual crafts so that pre-apprentices understand the variety of occupations and careers available in the construction industry.
- Provide tours and hands-on instruction at apprenticeship training facilities.
- Serve as instructors of the Multi-Craft Core Curriculum (MC3) course.
- Weight the MC3 certificate to give a priority to MC3 graduates applying for apprenticeship (e.g., waiving required testing and guaranteeing interviews).
- Include explicit referral and/or funding support for the pre-apprenticeship program in local Project Labor Agreements, Community Benefit Agreements, or Community Workforce Agreements.

PROMISING PRACTICE: PARTNERING WITH LOCAL BTCS AT EVERY STAGE (RICHMONDBUILD)

Many of the Prop 39 pilots built or leveraged existing relationships with their local building trades to benefit their participants. RichmondBUILD has a track record of preparing disadvantaged populations for careers in construction. Together with other MC3-based partnerships in the East Bay, including Future Build, and Cypress Mandela, RichmondBUILD has been written into multiple Project Labor Agreements and regional construction polices that mandate local hire. In all of these programs, BTCs serve as program advisors while community-based organizations (CBOs) deliver job readiness, MC3 training, and supportive services. The Laborers and Carpenters unions have contributed instructors, who have high-level knowledge of their crafts, commitment to their community, and the desire to teach their skills. Further, some pilot programs have negotiated direct entry into apprenticeships with Carpenters, Laborers, Drywall/Lathers, and Ironworkers unions for MC3-certified pre-apprenticeship graduates.

B. Joint Apprenticeship and Training Committees (JATCs)

State-certified apprenticeship programs must have a governing body to oversee the design, development, and delivery of apprenticeship. Joint Apprenticeship and Training Committees (JATCs) do this work via formal partnership between unions and employers (namely, signatory contractors), with both parties having equal representation in decision-making. As such, including local JATCs in training partnerships is key to ensuring that pre-apprenticeship is demand-driven and provides meaningful value to local industry (labor and employers).

Employers contribute the bulk of funds for each apprenticeship program's operation,¹² investing \$10,000-20,000 in training for each apprentice in the first several years. This investment is lost however when individuals quit before the end of their four- or five-year apprenticeship. Thus, employers have a significant stake in ensuring that the

apprenticeship program recruits individuals with not just the interest and ability, but the commitment and preparation to complete their apprenticeship and become journey-level construction workers. Pre-apprenticeship programs are, therefore, of significant value to JATCs, because of their role in assessing interest, knowledge, skills, and abilities of potential apprentices. Exposure to the work across a wide variety of trades helps pre-apprentices discern whether it's a good career pathway for them before the investment is made in their continued training. Pre-apprenticeships also provide participants with support, resources, and services to enable their success in apprenticeship and ongoing employment in the construction industry.

PROMISING PRACTICE: CREATING COMMUNITY PIPELINES AND PATHWAYS WITH JATCS (TIP AND TOP)

The South Bay pre-apprenticeship project is a labor-driven, labor-operated program that works in partnership with a variety of regional workforce entities in Silicon Valley. The Trades Introduction Program (TIP) in San Mateo County is the vision of the Bay Area Apprenticeship Coordinators Association (BAACA), a regional group of JATC coordinators. TIP is operated in partnership between BAACA, the San Mateo Building Trades Council, and the San Mateo County Union Community Alliance. A sister program in Santa Clara County, the Trades Orientation Program (TOP), is part of the Construction Careers Initiative: a collaborative effort by industry, community, and the public workforce development system to create a community workforce pipeline into construction apprenticeships.

In 2016, TIP and TOP built on their Prop 39-funded success to refine and strengthen partnership, coordination, and integration of training and job placement services between local Workforce Development Boards (WDBs), Joint Apprenticeship and Training Committees (JATCs), and community-based organizations. As a result of these efforts, some JATCs amended their apprenticeship standards to give preference to graduates from MC3 pre-apprenticeships. Others went through a process with the California Division of Apprenticeship Standards (DAS) and U.S. Department of Labor (DOL) to waive introductory testing requirements, allowing graduates to go directly to the interview phase of the apprentice indenturing process. Apprenticeship coordinators have become stronger advocates for pre-apprenticeship graduates seeking coveted apprenticeship slots, as they have participated more extensively in the MC3-based pre-apprenticeship training and built relationships with TIP and TOP students.

C. Contractors/Employers

While the contractors and employers involved in JATCs have a clear link to pre-apprenticeship, other contractors and employers also have opportunities to contribute to the success of pre-apprenticeship programs and partnerships. One function of pre-apprenticeship is to help participants assess their interest and skills for success in apprenticeship. For those unable or uninterested in pursuing apprenticeship, however, pre-apprenticeship plays an important role in connecting participants to alternative employment or post-secondary education opportunities. Building partnerships with a

broad set of employers, including those that are and are not involved in JATCs, is therefore an important way to effectively serve all participants in pre-apprenticeship programs.

PROMISING PRACTICE: RECRUITMENT & PLACEMENT OPPORTUNITIES WITH MAJOR EMPLOYERS AND CONTRACTORS (RICHMONDBUILD)

RichmondBUILD entered into a partnership with NET Electric, the local contractor for the Solar One project developed by Marin Clean Energy, who agreed to hire 50% of RichmondBUILD graduates. RichmondBUILD also developed several partnerships with major industry employers in the East Bay region, including Chevron with whom they hosted a “Trades Day” that included 19 trades and two main contractors—Cherne Contracting Corp. and Harder Construction. RichmondBUILD coordinated meetings with representatives of the IBEW, Ironworkers, Carpenters, and Laborers unions to discuss hiring opportunities, and they hosted luncheons sponsored by various trade unions.

PROMISING PRACTICE: INTRODUCING EMPLOYMENT OPPORTUNITIES IN CLEAN ENERGY (URBAN CORPS)

Urban Corps of San Diego has formed numerous partnerships with local and regional employers through which pre-apprentices learn about and gain access to various high-road employment opportunities in the clean energy sector. Hands On Solar, for instance, provided pre-apprentices with training in energy surveying and energy retrofits. Participants also shadowed Pro-Cal, the company that performed energy retrofits at Urban Corps’ facility, and had an opportunity to complete two weeks of paid training with the same company. Another cohort participated in an energy audit workshop led by Strategic Energy Innovations and toured San Diego Gas & Electric’s Energy Innovation Center.

D. Interagency MOUs

A memorandum of understanding (MOU) defining each partner’s roles and commitments is a crucial element of successful pre-apprenticeship partnerships. MOUs specify roles regarding governance and administration, participant eligibility, outreach and recruitment of job seekers, the provision of instruction and supportive services, apprenticeship placement and retention, and other placement outcomes (i.e., non-apprenticeship employment and post-secondary education). In addition, MOUs can help formalize partners’ obligations, expectations, and responsibilities to programs and participants. After several years of pilot trials, multiple grantees have begun to sign MOUs with a wide range of partners including BTCs, community colleges, and workforce development boards. Such MOUs solidify the roles and contributions of respective organization to enhance program stability for future cohorts of pre-apprentices.

PROMISING PRACTICE: WORKING WITH PUBLIC AGENCIES TO OVERCOME HOUSING BARRIERS (RISING SUN ENERGY CENTER)

In 2016, Rising Sun's program and case managers discovered an extensive barrier for graduates once placed in further training or employment. Participants were no longer eligible for certain forms of public assistance due to their increase in hourly salary, and their daily expenses skyrocketed as a result. Graduates that had paid nothing for child care were suddenly expected to pay \$1000 a month, those who had paid \$121 a month for rent in public and/or Section 8 housing were suddenly responsible for coming up with \$1100 to \$1800 a month. Many lost access to food stamps. Rising Sun and the Oakland Housing Authority (OHA) partnered to find innovative solutions to the housing affordability challenge. OHA now offers rent control for five years after job or apprenticeship placement to residents that are also Rising Sun pre-apprentices, thereby eliminating the fear of eviction, homelessness, and displacement from their community and support system. Additionally, OHA started a program to assist residents in pre-apprenticeship with purchasing a home.

E. Community Colleges

Community colleges in California have a "mission to advance and improve career technical education and serve businesses to bolster regional economies,"¹³ making them key partners in regional workforce development strategies. They are also critical partners in the success of pre-apprenticeship, as an important component to post-secondary education and occupational training in California. Community colleges offer valuable resources, including training facilities, classroom space, instructors, and recruitment opportunities for pre-apprenticeship programs.

PROMISING PRACTICE – PARTNERSHIP FOR EDUCATION & TRAINING (LOS ANGELES TRADE TECHNICAL COLLEGE)

The pre-apprenticeship program in the city of Los Angeles is the only Prop 39 pilot led by a community college. Participants enroll in Los Angeles Trade Technical College (LATTC), which offers access to additional certificate and degree opportunities. The pilot program paired the Multi-Craft Core Curriculum (MC3) with their energy efficiency and construction boot camp that prepares participants to enter either an apprenticeship or a post-secondary degree program. Using the MC3, the 120-hour base program addresses prerequisites to all Building Trades apprenticeships and is supplemented with 40 hours of advanced, contextualized preparation in math and computer skills. An additional 160-hour career exploration module encourages students to thoroughly explore a craft of their choice through work-based learning projects, onsite visits, and guest lectures.

LATTC has a robust construction department that has embraced collaboration and works closely with labor and community partners to recruit participants and create placement opportunities. In 2016, working with the Anti-Recidivism Coalition (ARC) and the Los Angeles County Labor Federation, the Prop 39 pilot expanded to create pipelines to

quality construction careers for individuals who were formerly incarcerated or otherwise justice-involved. LATTC also developed a partnership with Los Angeles County Metropolitan Transportation Authority (MTA) to train women for job opportunities with the MTA construction department and with its subcontractors.

PROMISING PRACTICE: COMMUNITY COLLEGE PARTNERSHIP FOR RECRUITMENT, PROGRAM DELIVERY, AND PLACEMENT (NORTH BAY TIP)

The North Bay Trades Introduction Program (TIP), sponsored by the Marin Building Trades Council, engages partners and program participants from Marin, Sonoma, Napa, Solano, Mendocino, and Lake Counties. Partners include local Workforce Development Boards and Building Trades Councils, several state-certified apprenticeship programs, and community colleges throughout the region. North Bay TIP secured community college facilities for classroom-based instruction and to host graduation events for participants and their families. Additional support from education partners helps build the capacity and political capital of the program. For example, Napa Valley College used the program for outreach, the Vallejo Adult School sent notices about the program to local residents, and the College of Marin named North Bay TIP in the local hire targets in their Project Labor Agreement (PLA) for construction projects.¹⁴

F. Community-Based Organizations

Community-based organizations (CBOs) often house pre-apprenticeship programs or work in close partnership with local Building Trades Councils, community colleges, and workforce development boards to provide pre-apprentices with effective supportive services. Some CBOs have extensive experience and expertise in working with disadvantaged populations, including at-risk youth, young parents, homeless, low-income, or chronically-unemployed workers, veterans, and individuals who were formerly incarcerated or otherwise justice-involved. Community-based organizations with such experience are critical partners, particularly in leveraging the trust they have with target populations to conduct and improve recruitment and participant retention. Similarly, CBOs that are familiar with local agencies, and resources they offer, can play important roles in the provision and coordination of supportive services for program participants.

PROMISING PRACTICE: SEEK SUPPORTIVE SERVICES FROM COMMUNITY-BASED EXPERTS (TOP AND FLINTRIDGE)

The TOP program, as part of the South Bay Prop 39 pilot in Santa Clara County, partnered with Working Partnerships USA to coordinate the training facilities, plan site visits, and engage in local and regional policies related to pre-apprenticeship. Additionally, TOP developed a partnership with a community program serving formerly incarcerated and individuals with substance dependency.

Flintridge Center also models the importance of working with community-based organizations capable of addressing pre-apprentices' specific needs. Flintridge Center

staff receive training from 2nd Call, a CBO whose mission is to reduce violence and improve the lives of those involved in the criminal justice system.¹⁵ Flintridge also receives support from other service providers offering trauma-informed care. 2nd Call facilitated a condensed version of their training to all Prop 39 grantees during a quarterly Community of Practice meeting. As a result, many of the Prop 39 pre-apprenticeship coordinators requested more information about 2nd Call and other organizations offering similar services, with plans to incorporate trauma-informed care in their pre-apprenticeship programs.

G. Workforce Development & Government

Municipal and county government are important partners in creating pathways to high-road construction careers as further described in the section on *Community Workforce Agreements and Public Ordinances for Local/Targeted Hire*. In brief, local government can signal demand for quality pre-apprenticeship through existing and new workforce policies governing publicly-funded construction projects within their jurisdiction. Local government can also provide financial support for regional pre-apprenticeship programs and partnerships.

The 45 local workforce development boards (WDBs) across California also provide important linkages between public agencies, insights about establishing effective partnerships, and recommendations on how to meet the needs of program participants in each stage of pre-apprenticeship described in the section *Provide Career Pipeline from Recruitment to Placement*. Local workforce development boards provide day-to-day administrative and policy oversight to aid job seekers and businesses under “specific service strategies [that] are designed to reflect regional labor market needs, economic and social conditions, and demographics.”¹⁶ Local workforce boards, connected to and directed by the same policy goals as the state Workforce Development Board, can be important partners in scaling up strategies to expand successful pre-apprenticeship program.

PROMISING PRACTICE: CREATING A REGIONAL PARTNERSHIP (VALLEY BUILD)

The Valley Build program began out of a fruitful partnership between the Fresno Regional Workforce Development Board and the regional Building Trades Council, and has evolved into a cooperative operational model based on a shared vision. The local Building Trades’ apprenticeship programs conduct the pre-apprenticeship training at their facilities, allowing students to get a true understanding of the construction industry directly from potential employers. At the same time, the four local workforce boards involved (Fresno WDB, Madera WDB, Stanislaus WDB, and Merced WDB) provide participants with critical services and resources to support retention in and completion of pre-apprenticeship; the impact of this support often extends beyond pre-apprenticeship and helps individuals succeed in their careers and communities.

Valley Build broadened its community impact by aiding the Fresno-Madera-Tulare-Kings Counties Building Trades Council in securing the National Targeted Hire Initiative with the

City of Fresno. This new public works policy will better enable community members to advance into middle-class construction careers by mandating the use of registered apprentices and/or Valley Build graduates on all city-funded projects.

Orient Programs to Industry Demand

The California Workforce Development Board stipulates three main policy objectives in its 2016-2020 Unified State Plan for Strategic Workforce Development, including:

1. Enable upward mobility for all Californians;
2. Align, coordinate, and integrate programs and services to economize on limited resources; and
3. Foster “demand-driven skills attainment... to provide California’s employers and businesses with the skilled workforce necessary to compete in the global economy.”¹⁷

Uniting these objectives is an orientation to high-road education and training to ensure that workers acquire the knowledge and skills to gain quality employment and succeed in a career that provides family-supporting wages and benefits. The Prop 39 pre-apprenticeship pilots build pathways to move disadvantaged Californians into such high-road training and employment opportunities. The pilots model quality program delivery and standardize a legible, industry-valued credential for early-stage workers in the construction trades.

Credentials demonstrate the completion of a program of study and document competency in the skills, knowledge, and abilities learned. However, not all systems of credentialing – including certificates and certifications, as well as degrees and licenses – are equally useful. While an indication of having completed some education and/or training, a credential has meaning and value in the labor-market when it is a standardized, recognized credential that employers can use as a marker to identify desirable candidates with the competency and ability to perform, learn, and grow on the job. This “industry-value” of credentials emerges from two related, but distinct elements:

- The Establishment of Credentials: Is industry insight embedded in the process of creating and updating a curriculum or program? Are employers and workers fully engaged in developing curricula and establishing the competencies and qualifications for a given credential?
- The Deployment of Credentials: Are firms willing to use the credentials to hire and promote? What advantage does the credential provide in the labor market?¹⁸

Industry is most likely to value a training certificate when involved in creating its content, and when they trust the trainer and the process by which training is delivered to potential

workers. Training certificates are most useful when they are recognized by employers and contribute to their decisions to hire job seekers who have acquired them. For these reasons, national leadership of the North America's Building Trades Unions (NABTU) Standing Committee on Apprenticeship and Training, with trades unions and their employer and contractor partners, designed the Multi-Craft Core Curriculum (MC3).

A. Standardized, Industry-Valued Credentials

The Multi-Craft Core Curriculum (MC3) is a comprehensive pre-apprenticeship training curriculum that has received support from industry, government, and labor partners¹⁹ and exemplifies elements of an industry-valued certificate program. The MC3 is designed to introduce individuals to the construction industry while also preparing them for success in registered apprenticeship programs in any of the construction crafts. In California, these crafts include:

- Boilermakers
- Bricklayers
- Cement Masons
- Electrical Workers
- Elevator Constructors
- Heat and Frost Insulators
- Iron Workers
- Laborers
- Operating Engineers
- Painters
- Plumbers/Pipefitters
- Roofers
- Sheet Metal Workers
- Teamsters

These 14 participating trades drew upon their industry expertise to develop the MC3 in order to provide greater awareness about different crafts and the nature of construction work. In addition, the MC3 teaches important required competencies, including those that have been historical barriers to entrance to, or retention in, apprentice programs (e.g., basic math). The curriculum also addresses prerequisites to participation in the apprentice programs – meeting GED or high school algebra requirements, having a valid driver's license, and successful drug screenings among other needs.

All pre-apprenticeships using the Multi-Craft Core Curriculum must contain a minimum total of 120 classroom hours. There is an 84-hour set of core modules required for all programs, and local Building Trades Council and their partners choose the electives to fill the remaining hours.

The Multi-Craft Core Curriculum (MC3): Required and Elective Sections

Required Sections (84 Hour Core)	Elective Sections (Select to complete the 120-hour requirement)
Orientation and Industry Awareness- 8 hours	Construction Health and Safety- 22 hours <ul style="list-style-type: none"> • CPR and First Aid- 8 hours • OSHA-10- 10 hours • Women’s Health and Safety- 4 hours
Construction Trade Awareness- 8 hours	Blueprint Reading- 24 hours
Tools and Materials Hands on Training- 8 hours	Green Construction- 4-8 hours
Basic Math for Construction- 40 hours	Financial Responsibility- 4-8 hours
Heritage of the American Worker- 8 hours	-
Diversity in the Construction Industry- 12 hours <ul style="list-style-type: none"> • Diversity Awareness- 4 hours • Sexual Harassment- 8 hours 	-
Total 84 Hours	Total 54 Hours (Choose 36 out of 54)

Because it is designed to respond to signals from employers and union partners about the skills needed for industry success, the MC3 is an important element of creating demand-driven pre-apprenticeship programs. The second element is to create a demand mechanism to pull pre-apprenticeship graduates into the labor market. As introduced above in the section on *Placement*, there is not an endless need for apprentices. JATCs only accept and train as many people as they can guarantee work. Apprentices must complete a strict number of on-the-job training hours, and to ensure that apprentices will be able to meet their training requirements and go on to work in the industry, apprenticeship openings are carefully calibrated to 3-5 year projections of available work. This calibration of openings is fundamental to ensuring that both trainees and employers sponsoring the training see a return on their investments—that the trainees find employment.

Placing more pre-apprenticeship graduates into apprenticeship depends, not only on partnerships and strong placement practices, but also on the demand signal from the labor market demonstrating an expansion of construction work opportunities. Project Labor Agreements (PLAs) and Community Workforce Agreements (CWAs) are often used

to signify construction work opportunities for apprentices, and in turn, can signal demand to pre-apprenticeship training partners.

B. Demand-Side Strategies to Pull Participants into the Labor Market

Conventional workforce development programs and practices are focused on the supply side of the labor market, involving training programs and institutions and the workers or job-seekers in need of skills development. Accordingly, this approach represents a “push strategy” to move people into jobs and careers by providing them training, and supportive services in some cases. Training alone, or training with supportive services, however does not guarantee someone a career or even connect them to a job. Rather, training programs must plan for, and develop industry partnerships to help facilitate job or career placement; this is standard practice among Prop 39-funded partnerships and explained further in the section about placement in Part 3 of this report (*Provide Career Pipeline Support Services from Recruitment to Placement*).

Training partnerships should also pursue “pull strategies” on the demand side of the labor market that establish formal linkages between employment opportunities on construction projects and pre-apprenticeship training programs. This can be done through Project Labor Agreements (PLAs) and Community Workforce Agreements (CWAs), which set the terms and conditions of employment and hiring on particular construction projects – and do so in a manner that results in good jobs and access to them for target populations. PLAs and CWAs are explained in more detail below, followed by examples of Prop 39-funded partnerships leveraging PLAs and CWAs for job placement of their MC3-certified graduates.

PROJECT LABOR AGREEMENTS (PLAS)

Project Labor Agreements are multi-craft, pre-hire labor agreements that are negotiated between building and construction trades unions and construction managers or general contractors to govern the terms and conditions of employment on a project. Since the 1930s, construction projects in California have relied on PLAs for both public and private projects, particularly in cases in which the terms of labor relations are not defined in the statute. In California, prevailing wage standards and requirements for a trained and skilled workforce on certain public and private infrastructure projects facilitate high-road job creation (for more information see Appendix C).

Managers may see a PLA as a “construction management tool” that guarantees no strikes or lockouts for the project, puts in place a grievance procedure, and “standardize[s] work rules and other conditions on a construction project (e.g., shift schedules, holidays, break times, travel pay, drug testing), thus eliminating the potentially conflicting practices of different contractors and potentially conflicting terms of different craft-specific collective bargaining agreements.”²⁰ PLAs may also set the terms of funding contributions from contractors to apprenticeship or pre-apprenticeship training programs, and may include targeted hiring goals for graduates of particular pre-apprenticeship programs or other local residents.

PROMISING PRACTICE: CONTINUING CONSTRUCTION JOB OPPORTUNITIES ON PLAS (SETA)

The Sacramento Employment and Training Agency (SETA) leads the Capitol Region Prop 39 pilot, coordinating recruitment, screening, case management, job placement, follow-up and retention. The Sacramento-Sierra Building Trades Council and their respective JATC coordinators serve the partnership in an advisory role, while American River College, Sierra College, and Northern California Construction Training, Inc. deliver the Multi-Craft Core Curriculum and additional apprenticeship-readiness training. Pre-apprentices that completed the training were more competitive for positions that opened on construction of the new Golden 1 Arena in downtown Sacramento. Leveraging the success of the Priority Worker Program – the Arena’s local hire provision – the Capitol Region training partnership connected participants to the Arena and other major construction projects, including downtown revitalization, state building retrofits and new construction, and expansion of the Sacramento Regional Transit system.

COMMUNITY WORKFORCE AGREEMENTS (CWAS)

Community Workforce Agreements (CWAs) are the most powerful tool to increase the share of disadvantaged and under-represented workers employed in high-road construction careers. CWAs are project labor agreements that include “a targeted hire provision designed to get low-income workers into construction careers.”²¹ Expanding the use of CWAs is a critical strategy for connecting pre-apprenticeship programs with regional labor market demand. The more that CWAs are applied to climate, energy, and public infrastructure investments throughout California, the more disadvantaged workers will have access to high-quality employment opportunities and high-road careers.

PROMISING PRACTICE: CITY-SIGNED COMMUNITY WORKFORCE AGREEMENTS WITH SPECIFIED PRE-APPRENTICESHIP PARTNERS (CITY OF BERKELEY/RISING SUN)

In 2011, the City of Berkeley signed a CWA adopting a 30% goal for targeted hire of workers from the East Bay Green Corridor and Alameda County. In 2015, after labor force analysis revealed that only 2% of Berkeley residents are journey-level workers, the City revised the goal to 20% of work hours to be performed by Berkeley residents. The revised policy focuses on new apprentices in order to create pathways for entry into the trades for Berkeley residents. Specifically, contractors are required to hire one new apprentice that is also a Berkeley resident for every \$500,000 dollars budgeted for the project. The City helps to fund this effort and directs contractors to seek workers from Rising Sun's pre-apprenticeship program.

PUBLIC ORDINANCES FOR LOCAL OR TARGETED HIRE

Many public agencies that receive state or federal funding already face mandates to hire disadvantaged, low-income, or local workers when possible. City and municipal governments have taken the lead on standardizing targeted hire requirements on public projects to create career pathways for their residents through Community Workforce Agreements. CWAs may also stipulate funding for pre-apprenticeship programs or require other community benefits from contractors. Cities have also adopted local or targeted hire ordinances for public works projects that may not be covered by a CWA, but still require contractors to aim to hire local residents. Pre-apprenticeship partnerships are helpful collaborators in targeted hire programs as they have connections both to community-based organizations and labor, and can help recruit, train, and retain disadvantaged workers.

PROMISING PRACTICE: WORKING WITH LOCAL GOVERNMENT TO CREATE CAREER PATHWAYS (RICHMONDBUILD)

RichmondBUILD directly connects its pre-apprenticeship graduates to union positions and local projects through the City of Richmond's Local Employment Ordinance. The city adopted the ordinance to ensure full and equitable opportunities for Richmond residents to participate in public works and publicly-subsidized projects. The City set a 20 percent local hire target and apprenticeship requirements for all projects with a value of at least \$100,000. The City of Richmond's ordinance signaled an increase in demand for apprentices, thereby indicating additional demand for more pre-apprentices.

Run Integrated, Comprehensive Programs from Recruitment to Placement

Pre-apprenticeship can create pipelines into apprentice programs for: (1) those seeking alternatives to a traditional 4-year post-secondary degree who are not apprenticeship ready, (2) persons historically denied access to construction careers in significant numbers (e.g., women), or (3) those lacking industry knowledge or lacking attachment to the construction labor market such as those re-entering society from incarceration.

Pre-apprenticeship programs often pair educational services in the classroom or on-the-job training with personalized services to address the specific barriers that have kept participants from a high-road career. The level and type of services that participants need varies throughout the course of pre-apprenticeship, from recruitment and training to placement and retention. Between each of these stages, individual assessments help identify participant needs, in addition to gauging knowledge and skills gained to date. Additional effort spent in recruitment, screening, and needs assessment before a participant enrolls will improve retention in pre-apprenticeship and placement into state-certified apprenticeship, employment in the construction industry other than as a registered apprentice, or post-secondary education. This section reviews the stages of pre-apprenticeship: recruitment, assessment, supportive services, training and contextualized learning, and retention and placement.

A. Recruitment

Pre-apprenticeship programs should have a targeted outreach plan that identifies possible pools of applicants. This outreach plan must recognize that the construction industry is not for everyone, but may present career options for under-represented populations who have not considered a career in construction. All Prop 39 pilots pursued an equity agenda to enhance diversity in high-road training programs, with some programs focused on specific sub-populations (e.g. women or individuals leaving the justice system). Targeted recruitment may also be important to meet the mandates of specific organizations²² or the targeted hiring requirements of local agencies and employers. Outreach may involve community-based organizations, workforce system partners, educational institutions, public agencies engaged in community/economic development, or organizations not involved in construction that serve targeted populations of job seekers.

PROMISING PRACTICE: TARGETED OUTREACH FOR AT-RISK YOUTH (URBAN CORPS SAN DIEGO)

Urban Corps of San Diego works with at-risk youth that need a second chance at a high school education and face many barriers to success including poverty, lack of language proficiency, lack of job skills, aging out of foster care, court involvement, young parenthood, or homelessness. Urban Corps strategized with San Diego Workforce Partnership on recruitment through the CONNECT2Careers Job Portal, which places young adults in paid job experiences. The CONNECT2Careers team screens applicants and refers qualified candidates to organizations.

With Prop 39 funding for the MC3 program, Urban Corps identified and implemented key enhancements to its existing construction-training program to create successful pathways for its participants into the region's high-road building and construction sector. Courses ranged from Multi-Craft Core Curriculum (MC3) training, energy audit and retrofit training, HAZMAT Incident Response Operations, and Lead Safety Renovator training. New students have been recruited from their existing Corps program pool and from the outside community. Urban Corps hosted recruitment booths at a variety of job/career fairs and community events around San Diego County including: Chicano Park Day, Camp Barrett Summer Kick-Off Job/Resource Fair, Community Graduation Celebration Resource Fair hosted by the Office of San Diego City Councilmember David Alvarez, Access Summer Job Fest, San Diego Earth Day Fair, and attendance at the Second Chance Re-Entry Round Table meetings.

B. Assessment (pre-program and on-going)

Formal and informal assessments can be valuable tools to develop a worker's skills and self-efficacy. Initial and ongoing assessment of program participants is important for insuring that those receiving certificates meet the requirements and standards for careers in the construction industry. Assessment is recommended between every stage of the pre-apprenticeship process. Pre-enrollment assessments should be used to determine if prospective participants have the interest and potential ability to complete a pre-apprenticeship, and any barriers that may prevent them from doing so. Over the course of the program, participants may need help getting work documentation, finishing their G.E.D. or high school diploma, obtaining a driver's license or discharging traffic violations to lift a suspension on their license, budgeting, accessing substance abuse counseling, expunging conviction record, securing childcare, or meeting other education, skill, and fitness requirements needed to be competitive for an apprenticeship. Outstanding needs can be addressed with additional resources, if available.

Over time, the program may identify barriers to program and industry participation from the initial or on-going assessments, and the need for resources the program did not identify earlier. On-going assessments of students should also measure progress in industry specific competencies and should be used to provide students feedback on their progress toward acquiring those competencies. Assessments further offer feedback to

the program as to what is working and what needs to change. Goal-setting and program evaluation are discussed in greater detail in section four, Sustainability and Expansion.

PROMISING PRACTICE: PRE-ENROLLMENT ASSESSMENT (VALLEY BUILD)

The Valley Build Multi-Craft Pre-Apprenticeship Program (Valley Build) began ten years ago when the Fresno-Madera-Tulare-Kings Counties Building Trades Council received a small grant from their local Housing Authority. The program has since expanded throughout the San Joaquin, laying the training foundation for construction of California's High Speed Rail system. Valley Build's rigorous pre-screening process identifies participants that have the highest chances of completion and success in the program. This unique screening and intake process assesses both academic and physical fitness levels, which are both common barriers to apprenticeship and employment in the trades. This process includes required minimum reading and math levels, background checks, and drug-testing. Individuals that score lower than the minimum required reading and math levels are invited to improve their skills and re-take the assessment. The program was also the first to include a substantial fitness regime, developed in partnership with the local police academy, to prepare participants for the physical demands of construction work.

PROMISING PRACTICE: INTAKE, POST-GRADUATE, AND ON-GOING SELF ASSESSMENTS (RISING SUNENERGY CENTER)

Rising Sun's mission is to empower individuals to achieve economic and environmental sustainability for themselves and their communities. One of their programs that fulfill this mission is the Green Energy Training Services (GETS) that aims to provide pathways out of poverty for low-income adults with a specific emphasis on formerly-incarcerated individuals and women. Rising Sun assesses all applicants prior to enrollment to determine their educational and employment skill needs. This is not used as a means to dismiss applicants, but instead as a starting marker for progress to be measured against. This benchmark ensures that participants see their growth and can observe their knowledge gained through on-going self-assessments as they move through the program. Since many of the participants experienced multiple barriers to education and employment, recognizing their progress over shorter periods of time increases self-esteem and goal actualization. Post-graduate surveys assess overall program efficacy and each participant's individual education plan while also allowing participants to reflect on their experiences and skills attained. These surveys help to shape the program elements for upcoming cohorts and give insights to program staff about the elements that best support pre-apprentices' needs.

C. Effective Supportive Services

Traditional case management has focused primarily on identifying supportive service needs of clients and connecting them to resources. For those involved in workforce development, case managers should act as counselors and coaches, and should reinforce industry expectations and practices. Over the course of the program, staff counsel and coach participants in developing self-sufficiency/career plans; assessing and establishing basic and applied skills; assessing vocational interests and aptitudes; setting wage and income goals; and establishing short and long-term financial, education/training and employment goals. This process should be structured to compliment and reinforce instructional components. To address participants' needs identified through pre-enrollment or on-going assessments, support must be ongoing and complementary to construction industry requirements. The target populations for Prop 39 pilots require a different approach to case management that may include more specialized services specific to the barriers that have kept them from high-road employment. Program staff may require additional training to support specific populations (e.g., trauma-informed care).

PROMISING PRACTICE: HUMAN-CENTERED SERVICE DELIVERY (FLINTRIDGE CENTER)

Flintridge Center's mission is to break the cycle of poverty and violence through community planning, innovation, and action. Their pre-apprenticeship program specializes in serving formerly incarcerated and gang-impacted populations. It offers participants the skills and knowledge to succeed in the building and construction trades while reshaping their lives. In addition to the pre-apprenticeship component of their program, Flintridge Center provides trauma-informed care, which engages participants in therapeutic exercises and discussions. Through these workshops and activities participants are able to recognize their past traumatic experiences and learn how to appropriately cope with anger, poor communication, and risk-taking behaviors.

Their human-centered, holistic approach to service delivery specifically aims to help participants prepare for the physical and mental demands of the workload and the workplace in the construction sector. Program graduates frequently attribute their success to these life skills workshops, which are facilitated by a partner organization, 2nd Call. Life skills assessments of participants measure decreases in anger, increased self-esteem, and improved communication skills and family function. These changes are indications of an individual's ability to be successful upon completion of pre-apprenticeship. Flintridge Center tracks employment retention and recidivism rates amongst their graduates within a three-year period and reports that graduates from their program have an 11 percent recidivism rate,²³ compared to a statewide recidivism rate of 46 percent.²⁴

D. Contextualized Learning

Effective program delivery requires innovative teaching methods that address the barriers to education and skill acquisition that out-of-school youth or adults returning for training may face in a traditional classroom setting. Contextualized learning can include both the introduction of career information in the classroom and teaching basic skills content (e.g. math, reading, and writing proficiency) on the job and so that students acquire skills necessary for success in the construction industry in a format relevant to them.²⁵ (See appendix B for more information)

PROMISING PRACTICE: TEACHING WITHIN AND OUTSIDE THE CLASSROOM (URBAN CORPS)

The unique work-learn program of Urban Corps is a leading model of teaching in a format relevant to participant needs. Each week, Corps members attend school for two days and work in the field for three days. Prop 39 participants are included in the Corps-to-Career (C2C) program, which is funded by Urban Corps' charter school and other private grants. Members are paid for their work and earn a high school diploma at Urban Corps's charter high school that offers an "accelerated, needs-based, technology-rich academic structure and a low teacher-to-student ratio."²⁶

Student retention and engagement has been a challenge among some Prop 39-funded pre-apprenticeship programs, and Urban Corps' model – stipulating that students must attend school while they also earn a paycheck – has proven effective at improving retention rates by making the training relevant to future career goals. Through individual case management, counseling sessions, attendance incentives, and Life Skills classes, the program successfully increased attendance rates to over 90% program wide. In addition to these elements of the program design, Urban Corps also found that hosting guest speakers and "apprentice for a day" tours helped ignite a passion in students to pursue careers in the building trades.

E. Placement

Effective participant assessments and supportive services throughout the duration of pre-apprenticeship leads to higher attendance and graduation rates. However, building career pathways for pre-apprentices does not end with their graduation; many participants require ongoing support to meet familial obligations, or need interim employment while on an apprenticeship waitlist. Placement into an apprenticeship or job is not guaranteed after completing pre-apprenticeship, and even when placement does occur, it's rarely immediate upon graduation.

Apprenticeship programs are demand driven. If there is an increase in the size and number of construction projects in the region, or a drop off, the number of future apprenticeship openings created by a Joint Apprenticeship and Training Committee (JATC) will change accordingly. During the 2008 recession for instance, most JATCs shuttered their programs for a period. Pre-apprenticeship programs should be in regular communication with JATCs in the area to become aware of their demands and

schedules. Each craft has its own entrance requirements and each apprentice program will be on its own calendar, which is driven by the projected demand for the coming year.

- Pre-apprenticeship partnerships should align their training with the needs of local apprenticeship programs. Pre-apprenticeship coordinators should learn the requirements of each apprentice program, to the degree possible align pre-apprenticeship program completion with apprenticeship opening dates, and get to know JATC and their staff.
- JATC coordinators should be actively engaged and invited to visit programs to discuss requirements and future demand. JATC business agents are particularly important contacts as they are often a key intermediary in construction sites, particularly where targeted or local hire agreements or Community Workforce Agreements are established.
- Some of the Prop 39 pre-apprenticeship pilots formed close relationships with JATCs or hiring halls so that participants received interviews or hiring preference upon earning the MC3 certificate.

F. Interim Employment

Prop 39-funded programs report the need for interim employment options after people complete pre-apprenticeship due to the different testing dates among apprenticeship programs, and the often long wait times between graduation, testing, and apprenticeship placement.

- Pre-apprenticeship programs should work with individual JATCs and local union affiliates to consider utilizing Construction Worker 1's (CW 1's) or other basic, entry-level positions to employ MC3-certified graduates as helpers on project sites.
- Programs should also work with their local workforce development boards on interim hiring possibilities while graduates wait for individual apprenticeship openings.

PROMISING PRACTICE: STIPENDS, PART-TIME, AND INTERIM EMPLOYMENT (RISING SUN)

Throughout the pre-apprenticeship program, Rising Sun Energy Center offers participants stipends based on attendance. Participants learn time management using time clocks and punch cards, and can earn up to \$500 during the program. Deductions to their stipend result from tardiness (\$5.50) and absence (\$11). After program completion, Rising Sun offers graduates the opportunity to become interns as they await testing dates and interviews for apprenticeship programs. Rising Sun has several internships available including Construction Assistant Instructor, a position that allows a graduate to train new participants and be an assistant to the instructor. Another position allows graduates to assist with recruitment, and both pay \$18 an hour and consist of 180 hours.

Further, Rising Sun developed an agreement with local employer, Orchard Supply Hardware Store (OSH), to offer program participants a guaranteed interview for part-time employment in the evenings and on weekends. The OSH Store is in close proximity to the

Rising Sun facility, reducing the need for additional travel and transportation costs for the participants. The agreement allows participants to make extra income, aside from their program stipend, with an employer that tries to accommodate their training schedule.

G. Retention Strategies to Keep Graduates Engaged Over Time

After completing a pre-apprenticeship, graduates need to continue preparing for matriculation into an apprenticeship. Many graduates need to earn money, but this gap period is also a time to continue math preparation or finalize paperwork to meet apprenticeship entrance requirements. Commitment is a significant concern that pre-apprenticeships programs must take into consideration when advising participants and program partners on career opportunities; participant screening and assessment are valuable mechanisms to assess interest and commitment to a career in the construction trades. Given the rigorous work and class schedule required of apprentices for three to five years, apprenticeship coordinators look for signs of commitment early on. Using the gap period for extra preparation can indicate this interest and commitment to the JATC and may enhance graduates' chances of getting into the apprenticeship program of their choice.

Both the gap period between finishing a pre-apprenticeship and entering apprenticeship, as well as the duration of apprenticeship, can be difficult for graduates. Pre-apprenticeship programs can help ease the burden by keeping in touch with their graduates and building a cohort community that graduates can rely on after program completion. Both pre-apprenticeship and apprenticeship programs invest time and resources into training participants, and they must consider strategies for retention both when participants are enrolled in training or waiting to matriculate to insure that this investment in skill acquisition is not lost.

PROMISING PRACTICE: 12-MONTH CASE MANAGEMENT AND BUILDING A COMMUNITY OF CARE (RISING SUN)

Rising Sun Energy Center provides 12 months of case management and career services after graduation to support a “whole-person” approach. This on-going case management, in which each graduate is engaged with a case manager who is familiar with their barriers and needs, provides consistency to the participants and helps keep them on track. The case management consists of weekly check-ins with graduates who have not been placed, and bi-weekly check-ins with placed graduates. Retention strategies and practices help newly-indentured apprentices overcome issues with attendance, acquiring tools, transportation, time management, financial literacy, and other challenges that may require additional supportive services. Graduates waiting to be placed into apprenticeship continue to receive assistance with long-term barriers such as homelessness, drug addiction, and transportation. Rising Sun also seeks placement opportunities in non-union occupations to allow participants to gain work experience and develop a work ethic prior to union apprenticeship placement.

In addition to case management, Rising Sun seeks to foster mentorship and build communities of care. Mentorship is key to retain under-represented populations in the construction sector that may face harassment or discrimination on the job. In 2016, Rising Sun completed their first all-women training cohort. Since the building and construction trades are male-dominated, offering an all-women cohort provides female participants the opportunity to learn skills in a comfortable environment. Rising Sun partnered with Tradeswomen, Inc. to help them recruit and support female participants. Tradeswomen, Inc. advised Rising Sun in ways to modify program elements to address particular challenges for women at the worksite. Tradeswomen, Inc. sent tradeswomen as guest speakers to classes to build mentorships. They also hosted participants at their annual fundraiser that convenes large numbers of tradeswomen and celebrates them. Rising Sun instructors and case managers report the all-women cohorts created lasting community ties between the participants as they supported each other in and out of the class by offering day-care options, car-pooling, and encouragement.

Measure What Works, and Plan for Sustainability and Expansion

It is important to evaluate success, work toward improving outcomes, develop more and stronger partnerships, and replicate successful innovations. All of these objectives point to the need to build on effective existing models of pre-apprenticeship. Having invested in 12 regional pilots throughout the state, California now has a functional model of high-road workforce development that meets the needs of industry and disadvantaged workers alike. Opportunities to improve upon and expand this system must be grounded first and foremost in the promising practices covered in this report. The following section identifies measures of success, as well as the most effective ways to maintain, scale, and replicate success.

A. Evaluating Success

Proposition 39 leveraged state investment into workforce training to advance job quality and equity by targeting pre-apprenticeship for disadvantaged workers. Metrics to evaluate success for these CWDB-initiated partnerships focus on the quality of partnerships that generate specific and lasting returns for pre-apprentices. The Prop 39 pre-apprenticeship training pilots assess performance through outreach, completion, and placement criteria, including: outreach targets; enrollment; training completion; attainment of industry-valued credentials (i.e., NABTU's MC3 Certificate); placement in a state-certified apprenticeship program; placement in post-secondary education; and placement in construction-related employment other than apprenticeship. Ideally, MC3 partnerships should track post-program employment and apprenticeship retention, as well as income increases over time.

These measures of training outcomes must continue to guide pre-apprenticeship program development and operations, and the promising practices identified in this report aim toward improving them. Partnerships, demand-driven program design, and comprehensive supportive services work together to improve student outcomes. Innovations to improve results should aim to build stronger partnerships, expand the use of Community Workforce Agreements and targeted hire policies, and provide services to participants to overcome the barriers that have kept them from quality jobs.

B. Sustainable Funding

Effective partnerships require ongoing investment and relationship-building. As cross-sector partners work more closely over a sustained period of time, new ideas and opportunities emerge to improve programs and services. Critical supportive services for pre-apprentices and graduates also depend on continuity of programs. Systems of regular check-ins and tracking, fostering communications or mentorship between former graduates and current pre-apprentices to show pathways to success, and other reliable program elements enhance recruitment, retention, and placement of individuals. Sustainable sources of funding are necessary for maintaining critical continuity of training programs and partnerships.

C. Opportunities for Expansion

The coherent system of pre-apprenticeship emerging from the twelve Prop 39 pilots represents scaffolding upon which a more robust statewide system can be built. Care must be taken to build out the rest of the system in a thoughtful way that avoids duplication of efforts and prevents an over-supply of training capacity in any single region. A core principle of demand-driven training is calibrating the fresh supply of qualified workers with actual labor market demand in a region. While the goal is to match the number of workers trained with the number of available employment opportunities, oversupplying pre-apprentices by graduating too many relative to regional demand is a more damaging mistake than failing to meet demand. Pre-apprenticeship programs offer a stepping stone to disadvantaged job seekers with links to, and help with, placement and success in actual employment opportunities. If those opportunities fail to materialize—if placement is not achieved—the training program is not a success, no matter how many individuals the program recruited, provided services for, and retained throughout the training.

Over forty organizations throughout California are authorized to deliver the Multi-Craft Core Curriculum. While JATCs benefit from a large and diverse pool of MC3-certified pre-apprentices to select from, care must be taken not to oversaturate local labor markets with pre-apprenticeship graduates. Regional coordination of program delivery can avoid duplicative recruitment and training efforts while allowing for program customization to meet the needs of, and provide services for, specific populations such as women, youth, formerly incarcerated individuals, parents, etc. This approach will also align well with local, state, and federal targeted hire mandates (See Appendix C: State and Federal Law).

Conclusion

With the Prop 39 investments in construction pre-apprenticeship, California has charted a high-road workforce development pathway to expand access to middle-class careers in the construction trades for disadvantaged workers. The 12 pilot partnerships have modeled promising practices that serve both job seekers and industry alike. The coherent system of workforce development is built on regional partnerships, standardized multi-craft credentials, a demand-driven orientation, and comprehensive supportive services. Together these principles and practices bolster the training and support provided to disadvantaged workers, and improve placement into high-road career pathways. The lessons learned and promising practices in this report should be used to guide future clean energy training programs and pre-apprenticeship partnerships in California and elsewhere.

Appendix

Appendix A: Becoming a Multi-Craft Core Curriculum (MC3) Certificate Program

The widespread deployment of the MC3 certificate program in California is a testament to its quality and its value to the construction industry. To date, the MC3 certificate is offered in 41 locations throughout California, with different partner configurations, but always with the local Building Trades Council, local Joint Apprenticeship and Training Committees (JATCs), and local construction trades affiliates as central partners in its delivery.

For those looking to launch a new MC3-based pre-apprenticeship program, engagement and inclusion of their local Building Trades Council (local BTC) and Joint Apprentice and Training Committees (JATCs) should take place early in the planning process. As the entity where most local construction affiliates work together, local BTCs represent the breadth of construction trades regionally, and therefore often know the regional employment demand across the construction trades and crafts.

Although developing a pre-apprenticeship partnership requires more than securing a curriculum, the MC3 is a critical core element. Becoming an industry-recognized MC3 provider is a straightforward formal process. The steps toward approval ensure quality delivery of the curriculum. More importantly, the process operationalizes the value of demand-driven curriculum and training by requiring engagement with, and approval from the local Building and Construction Trades Council (BTC) to utilize the MC3. The local building trades also use these steps as criteria to assess the quality of instruction over time so that the MC3 remains an industry-valued certificate.

Steps to approval:

1. Engagement and a letter of approval demonstrating partnership from the local Building Trades Council (BTC) leadership toward becoming an MC3 program. The North America's Building Trades Union (NABTU) requires a letter of support from the local BTC leader for organizations or partnerships looking to offer the MC3. Local BTCs' contact information can be found on the State Building and Construction Trades Council of California's website: <http://www.sbctc.org/doc.asp?id=214>. Initial discussions should focus on:
 - Becoming aware of existing pre-apprenticeship programs and capacity in the region;
 - Understanding general construction demand, as well as learning about specific construction projects in the future (1 to 5 years out); and
 - Determining the local Building Trades Council's interest, needs, and potential challenges in moving forward.
2. Submittal of an MC3 Implementation Plan to NABTU. The MC3 Implementation Plan must answer the following questions:

- Who will teach the MC3 and where will the program be located?
 - What is a complete list of all the organizations partnering with the local Building Trades Council in the pre-apprenticeship program?
 - How will the program be funded and what is the source of these funds?
 - How many people will be trained?
 - What is the start/end date for the training?
 - What is the name of the Council or Council partner representative who will attend the required Train-the-Trainer course, which is designed to prepare coordinators/instructors to set up and teach the MC3?
 - Where and how will successful graduates of the MC3, assuming they meet all other requirements, be placed in local building trades registered apprenticeship programs?
3. To ensure the quality of its certificate, NABTU requires that the teaching of the MC3 curriculum only be done by instructors who have participated in its Train-the-Trainer course.
- Prospective trainers provide a letter of support from their local BTC leader to register for the training, which is done through the NABTU office.
 - The Train-the-Trainer course is designed to prepare coordinators/instructors to set up and teach the MC3. Participants who complete the program are credentialed by NABTU to assist local Building Trades Councils in the implementation of the MC3 and to train other instructors.
 - Overseen by the National Building Trades Academy at Michigan State, the course encompasses coordination of the MC3 and a broad range of teaching techniques, from planning a time-sensitive teaching outline to conducting an effective class. Emphasis is placed on participatory techniques; trainer's practice teaching with the guidance and feedback of a skilled labor educator.
 - The course also covers reporting and record keeping, proctoring of examinations, coalition building, partnership agreements with community organizations, articulation with JATCs, and staffing.
4. Provision of the MC3 is now entirely on-line. After NABTU has approved the MC3 Implementation Plan, they will issue user names and passwords for approved trainers/instructors to access the curriculum. Trainers/instructors will also receive instructions on how to register students and generate reports on the student's work in the MC3. Only students registered on-line are issued MC3 certificates upon completion of the coursework.

Appendix B: Considerations for Developing Contextualized-Learning Curriculum/Training

Programs can address different types of learners – auditory, visual, and kinesthetic – through contextualized learning. Contextualized learning is the process of constructing meaning from learning. It is particularly helpful in a context in which students are interested and motivated toward a particular career and able to apply their classroom instruction to occupational applications. Characteristics of contextualized learning include:

- A. Emphasizing problem-solving.
- B. Recognizing that teaching and learning need to occur in multiple contexts.
- C. Assisting students in learning how to monitor their learning and thereby become self-regulated/reflective learners.
- D. Anchoring the teaching in the present and/or future life context of the students.
- E. Encouraging students to learn from each other.
- F. Employing authentic assessments, particularly those related to careers in construction.

When defining and developing a contextual task for the curriculum, program coordinators should ask:

- A. Does the task fulfill the intended learning goals?
- B. Does the task involve problems that require students to use their knowledge creatively to find a solution?
- C. Is contextualization used only in a basic skill dimension, or in other areas by referring to authentic practices related to future careers?
- D. Is the task an engaging learning experience?
- E. Does the task require students to use processes, products and procedures that simulate those used by people working in construction?
- F. Is the task inclusive of all students?
- G. Are there criteria for students on how the product, performance, or standard is evaluated?
- H. Are there models of excellence which demonstrate standards?
- I. Are students involved in the assessment process? This develops critical thinking.
- J. Is there a provision made for continuous formative feedback, from teachers and peers to help students improve?

Appendix C: State and Federal Law

California Unemployment Insurance Code (UIC 14230) establishes the following requirements for the design and implementation of construction pre-apprenticeship:

- A. Conduct pre-apprenticeship training in coordination with one or more state-certified apprenticeship programs (i.e., programs approved by the California Division of Apprenticeship Standards) to the maximum extent feasible;
- B. Use the Multi-Craft Core Curriculum (MC3); and
- C. Develop a formal outreach and retention plan for female participants in pre-apprenticeship to help increase the representation of women in the building and construction trades.

California prohibits affirmative action or targeted hiring programs based on race.

California does not require E-Verify.

California State Labor Code (Labor Code 1777.5 (g)), requires that the apprentice ratio should be no less than one hour of apprentice work for every five hours of journey-level work. In Northern California, for Laborers and Operating engineers, the ratio can be 4 to 1. These apprenticeship requirements are for projects over \$30,000.

California (Labor Code 1720, 1721) requires prevailing wage on public works projects carried out by "any county, city, district, public housing authority, or public agency of the state, and assessment or improvement districts".

Federal Executive Order 11246: 6.9% female and 25.6% minority participation is required on federally-funded construction projects. It also requires that 25% of apprentice hours be completed by "National Targeted Workers" and that 10% of National Targeted Worker hours be completed by "Disadvantaged" workers. The federal definitions are below:

National Targeted Worker: an individual whose primary place of residence is within an economically disadvantaged zip code that includes a census tract or portion thereof in which the median annual household income is below \$40,000 or a disadvantaged worker.

Disadvantaged Worker: an individual who, prior to commencing work on the project resides in an economically disadvantaged area and faces at least one of the following barriers to employment:

- Being a veteran;
- Being a custodial single parent;
- Receiving public assistance;
- Lacking a GED or high school diploma;
- Having a criminal record or other involvement with the criminal justice system;
- Suffering from chronic unemployment;
- Emancipated from the foster care system;
- Being homeless; or
- Being an apprentice with less than 15% of the required graduating apprenticeship hours in a program.

*Some grants also target women and minority workers.

Appendix D: Prop 39 Partnerships

Fresno Regional Workforce Development Board

San Joaquin Valley

Building & Construction Trades Councils: Fresno, Madera, Tulare, Kings BCTC; Stanislaus, Merced, Mariposa, Tuolumne BCTC; Kern, Inyo, Mono BCTC; San Joaquin, Calaveras, Alpine BCTC

Workforce Development Boards: Fresno; Kern, Inyo, & Mono; Kings; Madera; Merced; Mother Lode Job Training; San Joaquin; Stanislaus; Tulare

Los Angeles Trade Technical College (LATTC)

Los Angeles Basin

Building & Construction Trades Councils: Los Angeles/Orange BCTC

Workforce Development Boards: Los Angeles City

Additional Partners: L.A. County Federation of Labor; L.A. Conservation Corps; LATTC Vernon- Central WorkSource Center; Anti-Recidivism Coalition; L.A. Metro

RichmondBUILD

East Bay

Building & Construction Trades Councils: Alameda BCTC; Contra Costa BCTC

Workforce Development Boards: Richmond; Alameda; Contra Costa

Additional Partners: RichmondBUILD; RichmondWORKS; Future Build; Cypress Mandela

Sacramento Employment Training Agency (SETA)

Capital

Building & Construction Trades Councils: San Francisco BCTC

Workforce Development Boards: Sacramento; Golden Sierra

Additional Partners: Northern California Construction Training; American River College; Consumnes River College, Sierra College; CA Conservation Corps, Sacramento Regional Conservation Corps, People Working Together

San Francisco Conservation Corps (SFCC)

Bay Peninsula

Building & Construction Trades Councils: San Francisco BCTC

Workforce Development Boards: San Francisco

Additional Partners: Laborers Community Training Fund; SF Conservation Corps; SF City College; Skyline Community College; CA Conservation Corps; OEWD/CityBuild

Santa Clara TOP & San Mateo TIP

Bay Peninsula

Building & Construction Trades Councils: Santa Clara, San Benito BCTC

Workforce Development Boards: Work2Future; NoVa

Additional Partners: Bay Area & South Bay Apprenticeship Coordinators Association; San Mateo Community College District; San Jose City College; San Mateo County Union Community Alliance; Working Partnerships USA

Flintridge Center

Los Angeles Basin

Building & Construction Trades Councils: Los Angeles/Orange BTC

Workforce Development Boards: Foothill; South Bay

Additional Partners: Pasadena Unified School District, Police Dept., Public Health Dept., Chamber of Commerce, Parole, & Prosecutor's Office; LA County Probation Dept.; LA Metro; PCL Construction; 2nd Call; Union Homeless Services

Monterey County Workforce Development Board

Coastal

Building & Construction Trades Councils: Monterey/Santa Cruz BTC

Workforce Development Boards: Monterey; Santa Cruz; San Benito

Additional Partners: Monterey Bay Center CA Conservation; Central Coast Energy Services; Pacific Grove Adult School

North Bay TIP

North Bay

Building & Construction Trades Councils: Marin BTC; Sonoma, Mendocino, Lake BTC; Napa, Solano BTC

Workforce Development Boards: Workforce Alliance of the North Bay; Solano; Sonoma

Additional Partners: Community Colleges of Marin, Mendocino, Napa Valley, Santa Rosa, & Solano; Vallejo Regional Education Center; Marin Adult ED Consortium; North Bay; Employment Connection

North Central Counties Consortium (NCCC)

Capital

Building & Construction Trades Councils: Mid Valley, Yuba, Sutter, Glenn, Plumas, Butte, Colusa BTC

Workforce Development Boards: NCCC

Additional Partners: Colusa, Glenn, Sutter, & Yuba County One Stops; Glenn County Community Action Agency; Sutter County Superintendent of Schools; Yuba County Office of Education

Rising Sun Center for Opportunity

East Bay

Building & Construction Trades Councils: Alameda BTC

Workforce Development Boards: Alameda; Contra Costa; Oakland

Additional Partners: Bay Area Apprenticeship Coordinators Association; Tradeswomen, Inc.; A Squared Ventures; West Oakland Job Resource Center; City of Berkeley; Port of Oakland; Bay Area Rapid Transit; AC Transit; Oakland Housing Authority

Urban Corps of San Diego County

Southern Border

Building & Construction Trades Councils: San Diego BCTC

Workforce Development Boards: San Diego Workforce Partnership

Additional Partners: Family Health Centers of San Diego; U.S. Green Building Council; San Diego Community College District; Building Principles Institute; American Red Cross

Notes

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