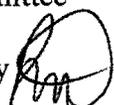


MEMORANDUM

TO: Government Operations and Fiscal Policy Committee

FROM: Robert H. Drummer, Senior Legislative Attorney 

SUBJECT: **Worksession:** Bill 40-14, Contracts and Procurement – Prevailing Wage Requirements – Apprenticeship Training

Expected attendees:

David Dise, DGS Director
Bonnie Kirkland, Assistant CAO
Grace Denno, DGS
Jack Gibala, DGS

Bill 40-14, Contracts and Procurement – Prevailing Wage Requirements – Apprenticeship Training, sponsored by Councilmembers Riemer and Branson, was introduced on September 9, 2014. A public hearing was held on October 7.

Bill 40-14 would require a contractor or subcontractor on County construction contracts subject to the County Prevailing Wage Law to provide apprenticeship training directly or by making payments to support apprenticeship training programs operated by other organizations, including the Building and Construction Technology Program operated by Montgomery College. The Bill would also permit required payments made by a contractor or subcontractor for apprenticeship training programs to be deducted from the applicable prevailing wage rate.

Background

Although the construction industry is an important source of middle class jobs, many construction contractors report that they are having trouble finding qualified workers to fill key positions. Apprenticeship training for construction craft workers is declining. Chapter 687 of the 2009 Laws of Maryland established a State Apprenticeship Training Fund and required State construction contractors to provide apprenticeship training or pay into the Fund. Bill 40-14 would provide a similar requirement for County construction contractors. Councilmember Riemer explained the purpose of the Bill at ©13-16.

Public Hearing

Each of the 5 speakers at the public hearing supported the Bill. DGS Director David Dise, speaking on behalf of the Executive, supported the Bill as a necessary effort to increase funding for apprenticeship training. (©24) Jeff Guido, of the Community Hub for Opportunities in Construction Employment (CHOICE), an organization that represents 25,000 skilled construction craft workers in Maryland, Virginia, and the District of Columbia, supported the Bill (©25). Joslyn

Williams, President of the Metropolitan Washington Council, AFL-CIO (©26-28) and Victoria Leonard (©29), representing the Laborers' International Union of North America (LiUNA) both supported the Bill. Finally, Jason Roberts, representing the Associated Builders and Contractors of Metro Washington (ABC) also supported the Bill to increase funding for apprenticeship training. (©30-33)

Issues

1. What is the fiscal and economic impact of the Bill?

To implement the Bill, DGS would probably add this responsibility to the County's Prevailing Wage monitoring contractor. OMB estimated that this added responsibility would cost between \$47,000 and \$130,000 (8% to 24% cost increase) each year, depending on how the apprenticeship contribution information is tracked. (©18-20) One part of the Bill would permit a contractor or subcontractor to satisfy the requirements by making payments to the Building and Construction Technology Program operated by Montgomery College; consequently, the Bill may result in an undetermined amount of additional revenue for Montgomery College. OMB was unable to provide a dollar estimate for additional staff time, but did note that this added responsibility would require the Prevailing Wage Program Manager to spend at least 3 hours per week on this new requirement. OMB also noted that bid prices on construction contracts may rise to cover the cost to comply with this new program.

Finance was unable to estimate the economic impact of the Bill because they could not estimate the future need for more skilled craft workers in the County. (©21-23) Finance pointed out that the Bureau of Labor Statistics data shows increasing demand greater than average nationally for 8 of the 9 skilled craft job categories. However, they pointed out that construction work in the County is cyclical and that they could not locate data showing a lack of skilled workers in the County.

2. How does the State Apprenticeship Training Program work?

Although the General Assembly enacted the law requiring State construction contractors to support apprenticeship training programs in 2009, the State did not adopt regulations and implement the program until July 1, 2013. Bill 40-14 is similar to the State law. A contractor or subcontractor on a State construction contract valued at \$100,000 or more must contribute 25 cents per hour for each hour worked by an employee in a covered craft on a prevailing wage contract to an approved apprenticeship program or to the State Apprenticeship Training Fund. A State Division of Labor and Industry publication explaining the program is at ©34-37.

Under the State program, only a subcontractor performing work valued at \$100,000 or more must satisfy the apprenticeship training program. According to the C. Edward Poarch II, Administrator of Prevailing/Living Wage Units for the State Division of Labor and Industry, some contractors have been able to avoid the law by awarding subcontracts valued at less than \$100,000 on large contracts. Some contractors have avoided the training requirement completely by breaking down the entire contract into subcontracts valued at less than \$100,000. Since July 1, 2013, the State has only collected approximately \$28,000 in its State Apprenticeship Training Fund. Bill 40-14 does not have an exemption for a subcontract valued at less than \$100,000. Under Bill 40-14, all work performed on a prevailing wage contract valued at \$500,000 or more

would be covered. Bill 40-14 would substitute payments to the Building and Construction Technology Program operated by Montgomery College instead of the State Apprenticeship Training Fund.

3. What is the Building and Construction Technology Program at Montgomery College?

Montgomery College provides training for a career as a carpenter, plumber, electrician, HVAC technician, trade supervisors, code officials, and builders. The program is approved by the Suburban Maryland Building Industry Association. The College is a member of the Registered Apprenticeship College Consortium. See a description of the program is at ©38. The program is best described as a pre-apprenticeship program. Councilmember Riemer plans to introduce an amendment at Committee that would amend lines 20-24 of the Bill as follows:

Building and Construction Technology Program means the pre-apprenticeship-related instruction programs operated by Montgomery College for building trades, including, carpentry, drywall, electricity, heating, ventilating and air conditioning (HVAC), plumbing, sprinkler fitting, and steam fitting.

Bill 40-14 would require a contractor or subcontractor to contribute 25 cents for each hour worked in a covered trade on the County contract to an approved apprenticeship training program or to the College. An apprenticeship training program must be approved by the Maryland Division of Labor and Industry.

4. Should the Bill be included in the prevailing wage law or as a separate section?

The County Attorney Bill review memorandum (©39) suggests that the training requirement in the Bill be made a separate section of the Code. However, the training requirement is part of the Prevailing Wage Law, only applies to contracts subject to the Prevailing Wage Law, and would be paid out of the fringe benefit requirement in the prevailing wage rate set by the State Division of Labor and Industry. Council staff continues to recommend that the training requirement remain part of the County Prevailing Wage Law. The County Attorney's Office also suggested that DGS may have some business issues with the Bill. However, DGS has not communicated any business issues with the Bill to date.

5. Should the Bill be enacted?

Bill 40-14 is another new requirement for County contractors and subcontractors with a noble purpose. It is important to note that all of the public hearing testimony supported the Bill. We received testimony from labor unions representing these workers, an association of building contractors, and the Executive. As OMB noted, the current prevailing wage program is administered by 1/3 of a full-time equivalent manager and a contractor. This would add work for an already overburdened County program manager. DGS did not indicate that another employee would be needed to administer this new program. DGS plans to add the monitoring responsibility to the County's contractor at a cost of between \$47,000 and \$130,000 per year. It also may result in increased bid prices from contractors who must comply and must ensure their subcontractors comply. The potential benefits are unknown. The State has not published any studies showing

the effect of the State apprenticeship training requirement on the availability of skilled workers in the State. Career training for careers that are needed is beneficial to all residents of the County.

Workforce development is an important part of the mission of the Department of Economic Development. If Bill 40-14 results in additional opportunities for residents to obtain training that qualifies the recipients for family-supporting careers, it would be a success. Skilled construction craft work can be a family-supporting career when construction work is plentiful. A local law firm that regularly represents skilled craft unions recently published a report arguing that there is a great need for skilled construction craft workers in the Washington Metropolitan Area and that additional support for apprenticeship training would be beneficial. See ©40-56. Although Bill 40-14 would make both executing and administering construction contracts more complicated and costly, the fiscal impact statement does not indicate that the cost is unreasonable in relation to the potential benefits. **Council staff recommendation:** enact the Bill with amendments described below.

6. What should the effective date be?

The Bill, as introduced, would take effect 90 days after it is signed into law by the Executive. However, it is unclear if it applies to contracts awarded before the effective date. Bill 40-14 would impose a new requirement on contractors and subcontractors and should be part of the original solicitation documents that contractors bid on. In addition, DGS may need some additional time to set up the monitoring of contractor compliance. **Council staff recommendation:** add a new Section 2 that makes it clear when the law takes effect and that the law applies to contracts awarded on or after the date the law takes effect as follows:

Sec. 2. Effective date.

This law takes effect on _____ . The amendments made in Section 1 apply to a contract awarded on or after the date the law takes effect.

Council staff recommends that DGS representatives be given the opportunity to recommend an effective date that gives them adequate time to get the program running.

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Bill No. 40-14
Concerning: Contracts and Procurement
- Prevailing Wage Requirements -
Apprenticeship Training
Revised: September 1, 2014 Draft No. 6
Introduced: September 9, 2014
Expires: March 9, 2016
Enacted: _____
Executive: _____
Effective: _____
Sunset Date: None
Ch. _____, Laws of Mont. Co. _____

COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND

By: Councilmembers Riemer and Branson

AN ACT to:

- (1) require a contractor or subcontractor on certain County financed construction contracts to provide apprenticeship training directly or by making payments to support apprenticeship training programs operated by other organizations;
- (2) provide that payments made by a contractor or subcontractor to the Building and Construction Technology Program operated by Montgomery College satisfy the obligation to provide apprenticeship training programs under the applicable prevailing wage;
- (3) provide that certain payments made by a contractor or subcontractor for apprenticeship training programs can be deducted from the applicable prevailing wage rate; and
- (4) generally amend the prevailing wage law.

By amending

Montgomery County Code
Chapter 11B, Contracts and Procurement
Section 11B-33C

Boldface	<i>Heading or defined term.</i>
<u>Underlining</u>	<i>Added to existing law by original bill.</i>
[Single boldface brackets]	<i>Deleted from existing law by original bill.</i>
<u>Double underlining</u>	<i>Added by amendment.</i>
[[Double boldface brackets]]	<i>Deleted from existing law or the bill by amendment.</i>
* * *	<i>Existing law unaffected by bill.</i>

The County Council for Montgomery County, Maryland approves the following Act:

1 **Sec. 1. Section 11B-33C is amended as follows:**

2 **11B-33C. Prevailing Wage Requirements — Construction Contracts.**

3 (a) *Definitions.* In this Section, the following words have the meanings
4 indicated:

5 *Apprentice* means an individual who:

- 6 (1) is at least 16 years old;
- 7 (2) has signed an agreement with an employer or employer's agent,
8 an association of employers, an organization of employees, or a
9 joint committee, that includes a statement of:
- 10 (A) the trade, craft, or occupation that the individual is
11 learning; and
- 12 (B) the beginning and ending dates of the apprenticeship; and
- 13 (3) is registered in a program of a Council or Bureau of
14 Apprenticeship and Training of the United States Department
15 of Labor.

16 *Apprenticeship training program* means an apprenticeship training
17 program that is registered with, and approved by, the Maryland
18 Apprenticeship and Training Council or the United States Department
19 of Labor.

20 *Building and Construction Technology Program* means the
21 apprenticeship-related instruction programs operated by Montgomery
22 College for building trades, including, carpentry, drywall, electricity,
23 heating, ventilating and air conditioning (HVAC), plumbing, sprinkler
24 fitting, and steam fitting.

25 *Construction* means work defined in Section 11B-1(c).

26 *County financed construction contract* means a contract for
 27 construction work that is awarded by the County or where County
 28 funds are used to finance all or part of the cost of the contract.

29 *County funds* means any:

- 30 (1) funds directly appropriated by the County; or
 31 (2) grant funding for construction under Section 20-75 that
 32 cumulatively exceeds \$500,000.

33 *Covered craft* means a classification of workers listed in the
 34 prevailing wage determination applicable to the County financed
 35 construction contract.

36 *Employee* means a laborer, apprentice, journeyman, or mechanic
 37 employed by a contractor or subcontractor on a County financed
 38 construction contract.

39 *Participates in an apprenticeship training program* means that a
 40 contractor or subcontractor makes regular financial contributions for
 41 each covered craft to apprenticeship training programs for covered
 42 crafts during the term of the County financed construction contract
 43 that are at least equal to the hourly fringe benefit contribution rates
 44 required for apprenticeship training by the applicable prevailing wage
 45 determination for the contract.

46 *Prevailing wage* means the hourly wage rate set by the State
 47 Commissioner of Labor and Industry for State-funded construction
 48 contracts in the County.

49 (b) *Exclusions.* This Section does not apply to a County financed
 50 construction contract:

- 51 (1) of less than \$500,000;
 52 (2) that is subject to a Federal or State prevailing wage law;

- 53 (3) awarded without competition under Section 11B-14;
- 54 (4) with a public entity;
- 55 (5) to the extent that the contractor is expressly precluded from
- 56 complying with this Section by the terms of any Federal or
- 57 State law, contract, or grant;
- 58 (6) entered into as a bridge contract under Section 11B-42;
- 59 (7) entered into as a cooperative procurement under Section 11B-
- 60 40; or
- 61 (8) which results from an emergency procurement under Section
- 62 11B-16.

63 (c) *Payment of prevailing wage.* Any contractor and subcontractor that
 64 performs direct and measurable construction work on a County
 65 financed construction contract must:

- 66 (1) pay each employee at a rate equal to or more than the prevailing
- 67 wage in effect when the solicitation is published for the type of
- 68 work performed; and
- 69 (2) satisfy the apprenticeship training requirements established in
- 70 subsection (i).

71 (d) *Prevailing wage.*

- 72 (1) *Basic rate.* The prevailing wage rate is the prevailing wage rate
- 73 established annually by the Commissioner of Labor and
- 74 Industry for State financed construction work performed in the
- 75 County by an employee who performs direct and measurable
- 76 work.
- 77 (2) *Overtime rate.* A contractor or subcontractor must pay an
- 78 employee at a rate equal to or more than the prevailing wage

79 rate for overtime for the type of work performed for each hour
 80 that the employee performs direct and measurable work:

- 81 (A) more than 10 hours in any single calendar day;
- 82 (B) more than 40 hours in a workweek; or
- 83 (C) on a Sunday or a legal holiday.

84 (3) *Deductions.* A contractor or subcontractor may only make fair
 85 and reasonable deductions that are:

- 86 (A) required by law;
- 87 (B) authorized in a written agreement between an employee
 88 and an employer signed at the beginning of employment
 89 that:
 - 90 (i) concerns food, sleeping quarters, or similar items;
 - 91 (ii) is submitted by the employer to the Chief
 92 Administrative Officer or a designee; [or]
- 93 (C) required or allowed by a collective bargaining agreement
 94 between a bona fide labor organization and a contractor
 95 or subcontractor; or
- 96 (D) payments made for apprenticeship training programs
 97 required by subsection (i).

98 (4) *Apprentices.* Each apprentice must be paid at least the rate that
 99 the State’s Apprenticeship and Training Council sets for an
 100 apprentice in the trade involved, based on a percentage of the
 101 prevailing wage rate in that trade.

102 (d) *Contract requirements.* Each contract covered by this Section must:

- 103 (1) require the contractor and subcontractor to comply with this
 104 Section; and

- 125 (2) specify that an aggrieved employee, as a third-party beneficiary,
126 may by civil action recover the difference between the
127 prevailing wage for the type of work performed and the amount
128 actually received, with interest and a reasonable attorney's fee.
- 129 (e) *Misclassification of employees.*
- 130 (1) A contractor or subcontractor must not split or subdivide a
131 contract, pay an employee through a third party, or treat an
132 employee as a subcontractor or independent contractor to avoid
133 any requirement of this Section.
- 134 (2) A laborer may perform any work that is not ordinarily
135 performed by a mechanic or mechanic's apprentice, but must be
136 paid the prevailing wage rate for the work performed.
- 137 (3) A laborer receiving the prevailing wage rate for laborers must
138 not perform work ordinarily performed by a mechanic or
139 mechanic's helper.
- 140 (4) If a laborer performs work ordinarily performed by any
141 mechanic or mechanic's apprentice, the laborer must be paid for
142 the entire time of performance of that work at the prevailing
143 wage rate for a mechanic.
- 144 (f) *Helper and trainee restrictions.* A contractor or subcontractor must
145 not employ any individual classified as a helper or trainee to perform
146 direct and measurable work on a contract covered by this Section.
- 147 (g) *Posting requirements.* Each contractor and subcontractor must post a
148 clearly legible statement of each prevailing wage rate in a prominent
149 and easily accessible place at the work site during the entire time work
150 is being performed in English and any other language that is primarily
151 spoken by the employees at the work site.

- 132 (h) *Payroll records.*
- 133 (1) Each contractor and subcontractor must submit a complete copy
- 134 of its payroll records for construction work performed on a
- 135 contract covered by this Section to the Chief Administrative
- 136 Officer or a designee within 14 days after the end of each
- 137 payroll period.
- 138 (2) The payroll records must contain a statement signed by the
- 139 contractor or subcontractor certifying that:
- 140 (A) the payroll records are correct;
- 141 (B) the wage rates paid are not less than those required by
- 142 this Section; and
- 143 (C) the rate of pay and classification for each employee
- 144 accurately reflects the work the employee performed.
- 145 (3) Each payroll record must include:
- 146 (A) the name, address, and telephone number of the
- 147 contractor or subcontractor;
- 148 (B) the name and location of the job; and
- 149 (C) each employee's:
- 150 (i) name;
- 151 (ii) current address, unless previously reported;
- 152 (iii) specific work classification;
- 153 (iv) daily straight time and overtime hours;
- 154 (v) total straight time and overtime hours for the
- 155 payroll period;
- 156 (vi) rate of pay;
- 157 (vii) fringe benefits by type and amount; [and]
- 158 (viii) gross wages; and

159 (ix) apprenticeship training program payments made
 160 under subsection (i).

161 (4) Each contractor or subcontractor must:

162 (A) keep payroll records covering construction work
 163 performed on a contract covered by this Section for not
 164 less than 5 years after the work is completed; and

165 (B) subject to reasonable notice, permit the Chief
 166 Administrative Officer or a designee to inspect the
 167 payroll records at any reasonable time and as often as
 168 necessary.

169 (5) The Chief Administrative Officer or a designee must make
 170 payroll records obtained from contractors or subcontractors
 171 under this Section available for public inspection during regular
 172 business hours for 5 years after the Chief Administrative
 173 Officer receives the records.

174 (i) Apprenticeship training requirements.

175 (1) A contractor or subcontractor that performs direct and
 176 measurable construction work on a County financed
 177 construction contract must:

178 (A) participate in an apprenticeship training program for each
 179 covered craft in which it will employ persons for the
 180 County financed construction contract;

181 (B) pay to the Building and Construction Technology
 182 Program the amount determined by the Secretary of
 183 Labor, Licensing, and Regulation for payments to the
 184 State Apprenticeship Training Fund established under
 185 Section 17-602 of the State Finance and Procurement

186 Article for State financed construction work performed in
 187 the County; or

188 (C) pay to a registered apprenticeship program or to an
 189 organization that has a registered apprenticeship program
 190 for the purpose of supporting these programs the amount
 191 determined by the Secretary of Labor, Licensing, and
 192 Regulation for State financed construction work
 193 performed in the County.

194 (2) If a contractor or subcontractor pays the Building and
 195 Construction Technology Program under subparagraph
 196 (i)(1)(B), the contractor or subcontractor must:

197 (A) pay each employee in a covered craft in wages any
 198 amount of a required fringe benefit contribution for
 199 apprenticeship programs that is greater than 25 cents per
 200 hour; and

201 (B) pay monthly to the Building and Construction
 202 Technology Program.

203 (i) *Enforcement.*

204 (1) The Chief Administrative Officer or a designee may perform
 205 random or regular audits and investigate any complaint of a
 206 violation of this Section. If the Director determines that a
 207 provision of this Section has been violated, the Director must
 208 issue a written decision, including appropriate sanctions, and
 209 may withhold from payment due the contractor, pending a final
 210 decision, an amount sufficient to:

- 211 (i) pay each employee of the contractor or
212 subcontractor the full amount of wages due under
213 this Section; and
- 214 (ii) satisfy a liability of a contractor for liquidated
215 damages as provide in this Section.
- 216 (2) A contractor or subcontractor must not discharge or otherwise
217 retaliate against an employee for asserting any right under this
218 Section or for filing a complaint of a violation.
- 219 (3) The sanctions of Section 11B-33(b) which apply to
220 noncompliance with nondiscrimination requirements apply with
221 equal force and scope to noncompliance with this Section.
- 222 (4) Each contract subject to this Section may specify the payment
223 of liquidated damages to the County by the contractor for any
224 noncompliance with this Section.
- 225 (5) Each contractor is jointly and severally liable for
226 noncompliance with this Section by a subcontractor.
- 227 (6) If a contractor or subcontractor is late in submitting copies of
228 any payroll record required to be submitted under this Section,
229 the County may deem invoices unacceptable until the contractor
230 or subcontractor provides the required records, and may
231 postpone processing payments due under the contract or under
232 an agreement to finance the contract.
- 233 (7) A contractor may appeal a written decision of the Director that
234 the contractor violated a provision of this Section to the Chief
235 Administrative Officer within 10 working days after receiving a
236 copy of the decision. The Chief Administrative Officer must
237 designate a hearing officer to conduct a hearing under Chapter

238 2A upon receipt of a timely appeal. If the contractor does not
239 appeal a written decision within 10 working days after receipt,
240 the decision of the Director becomes final and binding.

241 ~~(j)~~ (k) Report. The Chief Administrative Officer must report annually
242 to the Council and Executive on the operation of and compliance with
243 this Section.

244 *Approved:*

245 _____
George Leventhal, President, County Council Date

246 *Approved:*

247 _____
Isiah Leggett, County Executive Date

248 *This is a correct copy of Council action.*

249 _____
Linda M. Lauer, Clerk of the Council Date

LEGISLATIVE REQUEST REPORT

Bill 40-14

Contracts and Procurement – Prevailing Wage Requirements – Apprenticeship Training

DESCRIPTION: The Bill would require a contractor or subcontractor on certain County financed construction contracts to provide apprenticeship training directly or by making payments to support apprenticeship training programs operated by other organizations, including the Building and Construction Technology Program operated by Montgomery College.

PROBLEM: There is a shortage of trained workers for construction projects in the County.

GOALS AND OBJECTIVES: The goal is to increase the availability of trained workers for construction projects in the County.

COORDINATION: DGS, County Attorney

FISCAL IMPACT: To be requested.

ECONOMIC IMPACT: To be requested.

EVALUATION: To be requested.

EXPERIENCE ELSEWHERE: The State of Maryland recently enacted a similar law requiring its construction contractors to provide funding for apprenticeship training.

SOURCE OF INFORMATION: Robert H. Drummer, Senior Legislative Attorney

APPLICATION WITHIN MUNICIPALITIES: Not applicable.

PENALTIES: Contractual remedies.



MONTGOMERY COUNTY COUNCIL
Rockville, Maryland

Councilmember Hans Riemer
At Large

MEMORANDUM

To: Councilmembers
From: Councilmember Hans Riemer 
Re: Bill on Craft Training
Date: September 2, 2014

Colleagues, I am writing to ask that you co-sponsor and support the attached bill I plan to introduce to encourage craft training in the construction industry. I believe this bill is necessary to ensure a continued supply of skilled labor on county construction projects as well as to reinforce a vital part of our middle class. This bill modeled on a recent state law - HB 644 passed in 2009 - and requires that most construction firms that receive County contracts either provide apprenticeship training directly or pay a fee to support the Building and Construction Technology Program operated by Montgomery College.

The construction industry is critical to our economy. Trained construction workers are necessary for completing all building and transportation projects, as well as renovations, additions and rehabs. In Montgomery County, the construction industry directly employed 23,264 people in 2012 (5% of total employment), but because of its nature in servicing other sectors, the industry touches nearly all forms of economic activity.

The industry is also an important source of middle-class employment, especially for workers who do not have bachelors' or graduate degrees. Following are the average hourly wages earned by common construction occupations in the Washington-Arlington-Alexandria Metropolitan Area.

Mean Hourly Wage, Washington-Arlington-Alexandria Metropolitan Area, May 2012

Source: U.S. Bureau of Labor Statistics

<u>Occupation</u>	<u>Mean Hourly Wage</u>
Plumbers/Pipefitters	\$27.76
Electricians	27.10
Reinforcing Iron Workers	24.76
Sheet Metal Workers	23.81
Operating Engineers	23.11
Carpenters	21.93

Structural Iron Workers	21.65
Brickmasons	20.71
Roofers	20.26
Cement Masons	18.80
Painters	18.19
Construction Laborers	15.23

The County Council recognized the importance of this industry when it passed the county's prevailing wage law in 2008. That law requires that construction workers employed on county projects be paid at least the prevailing rate of compensation in their trades. This provides a fair floor for these workers and ensures that their construction contractors do not win county work by low-balling worker pay.

But the prevailing wage law does not address an issue of critical importance for workers, employers and the broader community: craft training.

The construction trades are demanding occupations. Workers in this industry must acquire and maintain exacting skill sets to complete often-complicated projects. The traditional model of construction training involves joint labor-management funds providing four or five years of apprenticeship, combining both classroom instruction and on-the-job training. Graduates from these programs go on to regular upgrade and safety training to keep their skills contemporary and competitive. Because the training is provided by funds sustained by large groups of contractors, employers could pay for training and have confidence that those workers would not be hired by competitors who did not pay those costs.

This system has broken down badly in recent years. According to data from the U.S. Bureau of Labor Statistics, the percentage of construction workers enrolled in building trades unions has fallen from 40% in 1973 to 14% in 2013. That has reduced the ability of labor-management funds to train the next generation of construction workers. The non-union side of the industry has not filled the gap with a comparable training model. Consider what has happened as a result.

1. In 2013 dollars, the average hourly wage in construction has fallen from \$30.23 in 1972 to \$24.22 last year, a decline of 20%. This injures the ability of the construction industry to attract qualified applicants who are willing and capable of learning its demanding skills.

2. In September 2013, the Associated General Contractors of America (the industry's largest general contractor association) reported that "seventy-four percent of construction firms report having trouble finding qualified workers amid growing labor shortages." The AGC commented:

Nearly three-fourths of construction firms across the country report they are having trouble finding qualified craft workers to fill key spots amid concerns that labor shortages will only get worse, according to the results of an industry-wide survey released today by the Associated General Contractors of America. Association

officials called for immigration and education reform measures to help avoid worker shortages.

“Many construction firms are already having a hard time finding qualified workers and expect construction labor shortages will only get worse,” said Stephen E. Sandherr, chief executive officer of the Associated General Contractors of America. “We need to take short- and long-term steps to make sure there are enough workers to meet future demand and avoid the costly construction delays that would come with labor shortages.”

Of the 74 percent of responding firms that are having a hard time finding qualified craft workers, the most frequently reported difficulties are in filling such onsite construction jobs as carpenters, equipment operators and laborers, Sandherr said. Fifty-three percent are having a hard time filling professional positions – especially project supervisors, estimators and engineers.

3. In September 2009, a report by the Governor’s Workforce Investment Board of Maryland discussed construction labor shortages in our state. The report said:

With the industry poised for recovery and expansion, significant construction workforce training and education challenges must be addressed. Currently there is an inadequate pipeline of qualified workers within the state to fuel the future growth of Maryland’s construction industry. Prior to the downturn in the economy, shortages of workers already existed, both in the skilled trades and in occupations such as engineering, construction management and project management. An aging workforce, and the predicted loss of workers through retirement or attrition, adds to the problem.

Maryland companies have been struggling to attract, recruit and train sufficient numbers of qualified construction employees from within Maryland to meet the growing needs of the construction industry. In spite of excellent earnings potential, including hourly wages that exceed the national average for non-supervisory workers in private industry, sufficient numbers of young people and career changers do not opt for a career in construction. Further, as the construction industry becomes more technologically advanced, current employees may lack the necessary technical and professional skills. With initiatives such as BRAC expected to bring new high-tech buildings to Maryland, having sufficient numbers of construction and building trades workers skilled in the latest technologies is critical.

4. The state’s Department of Labor, Licensing and Regulation has informed me that the state’s registered apprentice programs had just 8,324 enrollees as of September 30, 2011. According to the U.S. Bureau of Labor Statistics, the state had 146,009 construction workers in that month, meaning that just 6% of them were in training.

The State of Maryland chose to remedy this problem with HB 644 (2009), which was set in place with regulations last year. The law requires construction contractors on state projects

to participate in a state-registered apprentice program or pay a fee to the state intended to promote craft training. Contractors can no longer "free ride" by paying nothing for training while their competitors bear the costs. My bill (attached) is modeled on the state's law and institutes similar requirements for county projects. I have discussed it with representatives of both the labor community and the business community. In my bill, any fees will be paid to the Building and Construction Technology Program operated by Montgomery College, helping to support this critical program.

This bill is good for construction workers. It's good for responsible construction contractors who already pay to train their employees. It's good for the county as a construction owner since it will contribute to our ability to build quality projects. And it's good for our local economy since it encourages skill development in a vital section of our middle class.

I ask you to co-sponsor and support it.



ROCKVILLE, MARYLAND

MEMORANDUM

October 13, 2014

TO: Craig Rice, President, County Council

FROM: Jennifer A. Hughes, Director, Office of Management and Budget
Joseph E. Beach, Director, Department of Finance

SUBJECT: Council Bill 40-14, Contracts and Procurement – Prevailing Wage Requirements – Apprenticeship Training

Please find attached the fiscal and economic impact statements for the above-referenced legislation.

JAH:mc

cc: Bonnie Kirkland, Assistant Chief Administrative Officer
Lisa Austin, Offices of the County Executive
Joy Nurmi, Special Assistant to the County Executive
Patrick Lacefield, Director, Public Information Office
Joseph F. Beach, Director, Department of Finance
David Platt, Department of Finance
David Dise, Director, Department of General Services
Robert Hagedoorn, Department of Finance
David Dise, Director, Department of General Services
Pam Jones, Office of Procurement, Department of General Services
Susan Madden, Montgomery College
Erika Lopez-Finn, Office of Management and Budget
Naeem Mia, Office of Management and Budget
Felicia Zhang, Office of Management and Budget

Fiscal Impact Statement

Council Bill 40-14

Contracts and Procurement - Prevailing Wage Requirements - Apprenticeship Training

1. Legislative Summary.

The bill requires a contractor or subcontractor on certain County-financed construction contracts to provide apprenticeship training directly to or by making payments to support apprenticeship training programs operated by third-party organizations. The legislation allows for contractors and subcontractors to make payments to Montgomery College's Building and Construction Technology Program in lieu of providing apprenticeship training. The legislation also allows for contractor or subcontractor payments to be deducted from the prevailing wage rate pay to the employee for the cost of apprenticeship training programs.

2. An estimate of changes in County revenues and expenditures regardless of whether the revenues or expenditures are assumed in the recommended or approved budget. Includes source of information, assumptions, and methodologies used.

No County revenues are affected; however Montgomery College may experience a change in its revenue.

The compliance monitoring requirement under the proposed bill is currently not in the scope of the contract with the County's Prevailing Wage compliance monitoring contractor. To add this responsibility, DGS estimates an additional cost between \$47,000 and \$130,000 (8% to 24% cost increase) annually based on its discussions with the contractor. The contractor estimates a cost of \$25 - \$50 per contractor/subcontractor per month which it would bill on an hourly basis to the County. The contractor noted that the additional cost would be driven by how the apprenticeship contribution information is tracked and whether this information will be able to be verified quickly with online access or a more cumbersome process.

3. Revenue and expenditure estimates covering at least the next 6 fiscal years.

The proposed legislation does not affect County revenues. County expenditure estimates for the next six years range from \$282,000 to \$780,000.

According to Montgomery College, the bill would have a fiscal impact on their operations; however, the specific impact cannot yet be quantified because there are multiple variables in the legislation the College does not have the capacity to calculate such as the number of contracts that might be subject to the legislation and the number of individuals employed by such contractors.

Additionally, the legislation appears to allow revenues to flow to different entities, again impacting the ability to calculate the fiscal impact. The College is committed to “learn and earn” opportunities and currently supports approximately 900 individuals in apprenticeships. It is likely a marginal increase to that number would not create a fiscal challenge. A significant increase would likely mean the need for increased staff and faculty to manage and teach the appropriate courses.

4. An actuarial analysis through the entire amortization period for each bill that would affect retiree pension or group insurance costs.

The proposed bill does not affect retiree pension or group insurance costs.

5. Later actions that may affect future revenue and expenditures if the bill authorizes future spending.

The proposed bill does not authorize future spending.

6. An estimate of the staff time needed to implement the bill.

Assuming that the primary monitoring responsibilities will be included as an added requirement in the County’s existing compliance monitoring contract County staff time for monitoring would be minimal. However, once a noncompliance issue is identified by the contractor, DGS staff will need to follow up, investigate, and decide what actions the County needs to take. A low end workload scenario assumes an additional 3 hours per week of staff time would be needed to implement the bill.

7. An explanation of how the addition of new staff responsibilities would affect other duties.

The additional staff responsibilities would be a part of the responsibility of the Prevailing Wage Program manager. DGS currently has 1/3 FTE working in the Prevailing Wage Program.

8. An estimate of costs when an additional appropriation is needed.

If CCMI is tasked with monitoring this requirement, CCMI will increase their rate to the County by \$47,000 to \$130,000 annually.

9. A description of any variable that could affect revenue and cost estimates.

There is a potential for Bidders or Offerors to build increased rates into their bids or proposals to the County resulting from the apprenticeship training requirements.

The number of workers and their work hours under each construction contract can affect the cost to the County.

10. Ranges of revenue or expenditures that are uncertain or difficult to project.

No revenue is expected to be generated for Montgomery County Government. The revenue range for Montgomery College is difficult to predict. Please see response to item 2 on expenditure estimates.

11. If a bill is likely to have no fiscal impact, why that is the case.

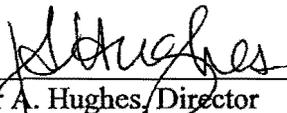
Not Applicable.

12. Other fiscal impacts or comments.

DGS notes that this requirement may also reduce competition by qualified construction contractors as companies who would not choose to make payments would not participate in the bidding process.

13. The following contributed to and concurred with this analysis:

Pam Jones, Office of Procurement, Department of General Services
Grace Denno, Office of Procurement, Department of General Services
Beryl Feinberg, Department of General Services
Angela Dizelos, Department of General Services
Susan Madden, Montgomery College
Linda Hickey, Montgomery College
Erika Lopez-Finn, Office of Management and Budget



Jennifer A. Hughes, Director
Office of Management and Budget

10/13/14
Date

Economic Impact Statement
Bill 40-14, Contracts and Procurement – Prevailing Wage Requirements –
Apprenticeship Training

Background:

This legislation would:

- require a contractor or subcontractor on certain County financed construction contracts to provide apprenticeship training directly or by making payments to support apprenticeship training programs operated by other organizations,
- provide that payments made by a contractor or subcontractor to the Building and Construction Technology Program operated by Montgomery College satisfy the obligation to provide apprenticeship training programs under the applicable prevailing wage, and
- provide that certain payments made by a contractor or subcontractor for apprenticeship training programs can be deducted from the applicable prevailing wage rate.

This economic impact statement provides an analysis of the construction industry in terms of demand for occupations that learn their trade through an apprenticeship and the recent construction economy, both new constructions starts and employment, in Montgomery County. This analysis will help determine whether Bill 40-14 will have an impact on employment, investment, and incomes in Montgomery County.

Bill 40-14 identifies apprenticeship-related programs operated by Montgomery College for building trades, including carpentry; drywall; electricity; heating, ventilating and air conditioning ((HVAC), plumbing, sprinkler fitting, and steam fitting.

1. The sources of information, assumptions, and methodologies used.

Sources of information and data include:

- Department of General Services (DGS),
- Maryland Association of General Contractors (MAGR),
- Bureau of Labor Statistics, U.S. Department of Labor (BLS), and
- McGraw-Hill Dodge Construction (Dodge)

According to BLS, construction occupations include boilermakers; brickmasons, blockmasons, and stonemasons; carpenters; cement masons and terrazzo workers; construction and building inspectors; construction equipment operators; construction laborers and helpers; drywall and ceiling tile installers, and tapers; electricians; elevator installers and repairers; glaziers; hazardous materials removal workers; insulation workers; painters, construction and maintenance; plumbers, pipefitters, and steamfitters; roofers; sheet metal workers; solar photovoltaic installers; structural iron and steel workers; and tile and marble setters.

Economic Impact Statement
Bill 40-14, Contracts and Procurement – Prevailing Wage Requirements –
Apprenticeship Training

Of those twenty occupational categories in the construction and extraction industry nine occupations learn their trade through an apprenticeship (Source: BLS). Those occupations include boilermakers; brickmasons, blockmasons, and stonemasons; carpenters; electricians; elevator installers and repairers; glaziers; plumbers, pipefitters, and steamfitters; sheet metal workers; and structural iron and steel workers.

BLS reported the job outlook between 2012 and 2022 for each of the nine occupational categories as follows:

- Boilermakers (4% - slower than average growth)
- Brickmasons etc. (34% - much faster than average growth)
- Carpenters (24% - much faster than average growth)
- Electricians (20% - faster than average growth)
- Elevator etc. (25% - much faster than average growth)
- Glaziers (17% - faster than average growth)
- Plumbers (21% - faster than average growth)
- Sheet metal workers (15% faster than average growth)
- Structural iron and steel workers (22% - much faster than average growth)

While the BLS data represent demands for these occupations at the national level, they can be applied to Montgomery County albeit dependent on the new construction. Based on the BLS forecast, growth rates among eight of the nine occupational categories (excluding boilermakers) range from 1.6 percent per year (glaziers) to 3.0 percent per years (brickmasons etc.).

However, the construction industry is highly cyclical and over ten calendar years (CY2003 – CY2012), both construction projects and employment experienced a distinct cyclical pattern in Montgomery County. For example, new construction of single-family and multi-family units averaged over 4,100 units per year between 2003 and 2007. Between 2008 and 2012, that averaged declined to slightly over 2,100 units per year – a decrease of 49 percent. Employment in the building construction averaged nearly 10,300 per year between 2003 and 2007 but declined to nearly 8,700 – a decrease of nearly 16 percent. Between 2003 and 2012, the number of employees per new residential construction starts averaged 3.70 per unit.

According to information provided by MAGR regarding the survey taken in January of this year by the Association of General Contractors of America, there was insufficient responses from Maryland based companies/contractors to determine whether there is difficulty in finding qualified workers to fill key positions and whether apprenticeship training for construction skilled/craft workers is declining. However, MAGR did provide anecdotal data from MAGR members that construction professionals such as project managers, project engineers, and superintendents have a more critical shortage than skilled/craft workers.

Economic Impact Statement
Bill 40-14, Contracts and Procurement – Prevailing Wage Requirements –
Apprenticeship Training

The Division of Facilities Management (DFM), Department of General Services, does not have any data from local studies that can verify whether there is a shortage of skilled trade workers in the area. However, during the past year or more, DFM has seen a low number of qualified applicants for skilled trade positions that have been advertised.

2. A description of any variable that could affect the economic impact estimates.

The demand for skill trade positions versus the current supply of skilled trade positions could affect economic impact estimates. If there is either a shortage or surplus of skilled workers, it would have an impact on the economic estimates. However, the estimate is difficult to quantify without detailed data on the demand for skilled workers and the current supply. Also, the estimate is dependent on the short- and long-term construction outlook and specifically the types of construction that would require specific types and experience of skilled workers. Moreover, there may be a wage effect as a result of either surplus (negative wage effect) or shortage (positive wage effect) of skilled labor. For example, adding more skilled labor to the labor market may result in a lower wage for both incumbents and new labor, which may partially offset the benefit of the additional employment to the economy.

3. The Bill's positive or negative effect, if any on employment, spending, saving, investment, incomes, and property values in the County.

Without data on the lack of skilled workers in the County and the short- and long-term outlook for construction, the effect on employment, spending, saving, investment, incomes, and property values in the County is uncertain.

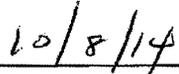
4. If a Bill is likely to have no economic impact, why is that the case?

See paragraph #3

5. The following contributed to or concurred with this analysis: David Platt and Rob Hagedoorn, Finance.



Joseph F. Beach, Director
Department of Finance



Date

1

**Testimony on behalf of County Executive Isiah Leggett
Bill 40-14, Contracts and Procurement – Prevailing Wage Requirements –
Apprenticeship Training**

October 7, 2014

Good afternoon members of the County Council. I am David Dise, Director of Montgomery County's Department of General Services, and I am here to testify on behalf of County Executive Isiah Leggett regarding Bill 40-14, Contracts and Procurement – Prevailing Wage Requirements – Apprenticeship Training.

A recent article in *Forbes* cited a 2012 study indicating that 53 percent of skilled-trade workers in the U.S. were 45 years and older and 18.6 percent were between the ages of 55 and 64. In Maryland, 50.1% of the skilled-trade workforce is over 45 and almost 20% is over 55. Electricians have the largest percentage of aging workers where nearly 70% of the workforce is 45-plus years old and will need an influx of new talent sooner than others. All skilled trades have far fewer 65-and-older workers than the total labor force (~2% compared to ~5%), which is a clear sign that these jobs are more physically demanding than the typical job. The heavy proportion of older skilled-trade workers puts into focus the pending retirement of baby boomers and ongoing concern between the skills that employers need and available workers possess.

Considering all of this, it isn't surprising that market forecasts indicate a significant gap in available skilled construction trades workers and the future job market reflect this. Skilled trades can provide a promising career path if an individual possesses the appropriate level of training. Construction industry leaders are acutely aware of this and have invested in apprenticeship training programs across all trades. Supporting a training and educational program through Montgomery College helps ensure we are building a strong local resource of skilled workers and future owners of successful local businesses.

In keeping with his broad commitment to education and, further, to ensure that contractors building Montgomery County's public facilities employ a workforce having a uniform level of skills and training, County Executive Leggett supports the intent of this bill and commits executive branch staff to working with the Council to work out details on how this may be effectively implemented.

Thank you for the opportunity to speak with you this afternoon.

2



Mark Coles
Executive Director
(202) 756-4660

www.CHOICEworks.org

To: Council President Mr. Craig Rice

Montgomery County Council

Ref: Bill 40-14 Contracts and Procurement – Prevailing Wage Requirements –Apprenticeship Training

Please accept this testimony in support of Bill 40-14 Contracts and Procurement – Prevailing Wage Requirements – Apprenticeship Training

Dear Council members,

I am the field representative for C.H.O.I.C.E. the Community Hub for Opportunities In Construction Employment. I represent over 25,000 skilled construction craft workers in Maryland, Virginia and the District of Columbia. Construction always has a need for skilled labor. The project must be built in place and cannot be manufactured overseas and shipped in. Employers need a trained work force to mitigate construction costs for on time and on budget completion of projects. Single contractors may find it unfeasible to commit funding to training programs and incur a loss when employees migrate to a competitor, hence the need for an inclusive funding program. The Montgomery County Community College pre-apprenticeship courses are a first step for individuals wanting to learn a skilled craft. Apprenticeship programs registered with the Maryland Apprenticeship Training Council and the U.S. Department of Labor are the best vehicle for training the next generation of skilled labor in Montgomery County. As the skilled workers of today begin to retire it is imperative to train the next generation to take their place. The Maryland Center for Construction Education and Innovation 2012 study states the reason for people not seeking a career in construction is the perception it is dirty, dangerous and low paying. The solution for this is to coordinate educational opportunities between Career and Technological education, Community Colleges and registered apprenticeship programs. Only the Building and Construction Trades affiliated Unions have the capacity to train and fill skilled craft positions that are becoming so in demand in the coming boom for mixed use development, schools, industrial energy and infrastructure capital improvement projects. The Building and Construction Trades and our signatory contractors spend approximately \$20M annually in the State of MD on apprenticeship training and consequently graduate nearly 80% of all apprentices in the State. With the passage of Bill 40-14 we will look forward to working directly with Montgomery County to develop a means of direct entry into our apprenticeship programs and maintain a path to the middle class so vital to all of our economic interests. I urge the Council to give Bill 40-14 a favorable report. Thank you.

Jeffrey Guido - Field Representative -240-687-5195 [C]

COMMUNITY HUB *for* OPPORTUNITIES *in* CONSTRUCTION EMPLOYMENT

815 Sixteenth Street, N.W. • Suite 600 • Washington, D.C. 20006-4104





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Testimony of Joslyn N. Williams, President

On Bill 40-14

Contracts and Procurement-Prevailing Wage
Requirements- Apprenticeship Training

Before the Montgomery County Council

7 October 2014

Good afternoon Members of the County Council. I am Jos Williams and I am here on behalf of the 150,000 area members of the Metropolitan Washington Council, AFL-CIO.

We are in support of Bill 40-14. Construction is an industry that can offer great wages and benefits with chances for advancement and entrepreneurship for those with an interest and aptitude for challenging blue collar work. It is also an industry that has a demand for more and more skilled individuals for jobs in Montgomery County and in the metro area as we anticipate major transportation, infrastructure and federal and commercial building projects in the near future.

The building of a workforce development pipeline- which we believe this bill helps to do- is critical to first, aid area employers in finding the prepared employees they need from among our local Montgomery County population, and second, to assist a variety of local residents with solid preparation for entry into the industry. These days, it takes more than just a warm body with muscles to do construction, and many residents would be able to successfully enter earn-while-you-learn apprenticeship programs leading to journeyworker status, or start jobs directly with contractors, if they had access to pre-apprenticeship programs that provided math review, construction industry and apprenticeship awareness and overview, job readiness skills, and certifications in OSHA 10, CPR, First Aid and Flagger Safety. These programs cost money to operate, but they pay for themselves by helping move low-income, immigrant, ex-offender men and women into good-paying opportunities in the construction, transportation and energy sectors, where employers are always looking for ready-to-work trained workers.

We urge the Council to support this bill, and we are anxious to work with the County Council and the County's workforce development system to help build a great pipeline from communities into living wage jobs in this critical sector.

Thank you and I'm happy to answer any questions you may have.



Community Services Agency



AFL-CIO Community Services and United Way Partnership

of the

Metropolitan Washington Council, AFL-CIO



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Connecting Area Residents with Good Jobs in Construction

The Community Services Agency of the Metro Washington Council, AFL-CIO operates the Building Futures program, which is a pre-apprenticeship training and job placement program for low-income metro area adults, men and women, 18 and over. The program's aim is to prepare and place trained graduates into family-sustaining jobs in the construction industry and related occupations. The program has operated for 7 years and has a 95% completion rate, and an 80% placement rate of program graduates.

Individuals are academically tested and must score at 8th grade reading and math or above, must be drug-free, and must attend a 6-week pre-apprenticeship class with a curriculum which includes construction math review, blueprint reading, tool identification and use, OSHA 10, CPR/First Aid, and Flagger Safety and Traffic Control certifications, as well as job readiness preparation. A green jobs/weatherization element, hands-on training at the area's union apprenticeship schools, problem-solving and conflict resolution, and gender-focused topics for women are also part of the curriculum. Case management services pre-and post-placement help ensure retention in the schools and on the job.

This program is designed to provide **READY-TO-WORK** individuals to assist contractors and apprenticeship programs with screening, recruitment, hiring and retention of the target populations.

The Community Services Agency is the non-profit arm of the local AFL-CIO and has been providing worker-centered services since 1991. It receives funding from the United Way, Combined Federal Campaign, the Maryland Department of Labor, Licensing and Regulation, the DC Workforce Investment Council, and other area private foundation funders. It is a preferred training provider for the Maryland Transit Administration for work on the proposed Purple Line project.

**United Way/DC One Fund
Designation Number
8253**
**Combined Federal
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Campaign Number 9320**

DONATE NOW!
Go to www.dclabor.org,
click on
Community Services Agency



4

TESTIMONY OF VICTORIA LEONARD
Before the Public Hearing on
B40-14: Prevailing Wage Apprenticeship Training Requirements
October 7, 2014

Thank you Council President Rice for holding this public hearing on Bill 40-14.

My name is Victoria Leonard. I am employed by the Mid-Atlantic Laborers' Cooperation Trust. The Trust represents more than 200 Washington area construction firms, as well as the thirty-five hundred union construction laborers that they employ. The Trust is part of the Laborers' International Union of North America, or LiUNA for short. LiUNA represents more than 500,000 construction workers across the United States and Canada. LiUNA has three locals that serve the Washington region, and many of their members live and work in Montgomery County.

LiUNA believes in training. Our apprenticeship training program for construction craft laborers—or CCL for short—is the only one of its kind. LIUNA fought very hard to gain an approved apprenticeship program for the CCL trade. In the early 1990s, we worked with the US Department of Labor to register CCL apprenticeship standards. Approval was awarded in 1994. Here in the Baltimore/Washington area, LiUNA operates three apprenticeship training centers.

We support the goals of B40-14, which is to fund construction apprenticeship programs. Construction is an occupation that provides a career pathway and good, family-supporting wages, and we need to ensure training options exist for County residents interested in the field.

We are concerned however, about lines 188 through 193 of the bill. This section of the bill allows construction companies that choose *not* to participate in an apprenticeship program to *instead* either make a payment to a registered apprenticeship program or make a payment to an organization that operates one. *Making a payment to and participating in* an apprenticeship program are two very different things, especially when the source of the funds for the payment is a worker's wages. Non-union companies more often than not pay all or part of prevailing wage fringes in cash instead of offering benefits such as health care or retirement, or funding a training program. When a company simply makes a payment to an apprenticeship program or an organization that sponsors one instead of actually participating, the workers who have the 25 cents debited from their paychecks have no access to and do not benefit from the training programs they are helping to pay for.

We believe this disconnect needs to be addressed, and look forward to working with Councilmember Riemer and his staff to do so. Thank you for the opportunity to comment on B40-14.



S

Metro Washington Chapter

October 7, 2014

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TO: Montgomery County Council
FROM: Associated Builders and Contractors (ABC) of Metro Washington
RE: Bill 40-14, Contracts and Procurement- Prevailing Wage Requirements- Apprenticeship Training

Mr. President and members of the Council. I am Jason Roberts, Director of Education for Associated Builders and Contractors (ABC) of Metro Washington and responsible for the administration and oversight of our apprenticeship programs both in Maryland and the District of Columbia.

We welcome the opportunity to comment on Bill 40-14 which addresses the issue of apprenticeship training. All of ABC's apprenticeship programs have been approved by and are registered with the Maryland Apprenticeship Training Council. We currently have 21 approved programs which allows us to offer a variety of training opportunities in the Washington metropolitan area. Both ABC members and non-members can participate in the training programs. The programs range from two years for drywall and cement mason to the more comprehensive four-year programs for electrical, plumbing and HVAC.

Bill 40-14 is patterned after legislation first enacted by the Maryland General Assembly back in 2011 but just recently implemented in July of 2013. We are only now starting to see the impact of the State program.

We encourage the administration of this law be transparent and efficient so that the contractors fully understand their responsibilities. We want the contractor's experience with this process to be as seamless as possible.

We have included with our testimony information on apprenticeship training nationally. It is imperative that we continue to provide quality training to the industry as it is anticipated there will be a need for 1.6 million new skilled workers between now and 2022. Hopefully this legislation will help address this shortage as it relates to Montgomery County.

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(F) (301) 595-9718

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abcmetrowashington.org

As to the specifics in the Bill, we ask that it provide a clear effective date and that the Council consider language that it apply to projects advertised for bid after July 1, 2015. This would give the County a reasonable amount of time to get the program up and running and provide the industry with enough time to understand and prepare for this new requirement.

We also recommend the County consider offering workshops to contractors to assist them in understanding and complying with the law. The State did this and it proved invaluable to the industry.

We thank Councilman Riemer for his sponsorship of the bill and look forward to working with the Council on this important issue.

Construction is a great career path with limitless possibilities

Middle School
(Career Awareness)

High School or
Tech School

Craft Training

Industry
Apprenticeship

Community or
Technical College

University Degree

\$30K-\$60K

Craft
Professional

Entry Level

\$60K-\$160K

Crew Leader/
Foreman

Assistant Project
Manager

Superintendent

Project
Manager

\$160K+

Senior MGMT

CEO, Executive
or Officer

Ranges based on average annual salary
(BLS Occupational Outlook Quarterly,
Winter 2013-2014)

Career progression
BuildYourFuture.org

The construction industry
is rapidly growing...

Employment will
grow at an
annual rate of

2.6%

That's with the health
care sector for

fastest growth

5 of the 30 occupations
projected to experience the
largest employment increase
between 2012-2022 are
related to construction.

22.2%

More than twice as fast as
the average of all industries.

US Department of Labor's 2013 Occupational Outlook Handbook

workforceunderconstruction.com
abc.org



ABC IS DOING ITS PART TO TRAIN THE FUTURE WORKFORCE

\$29,000,000+ Total Investment

This data represents ABC chapter training done in 2013. It does not include training completed by individual member companies.

3,000,000+ Total Classroom Learning Hours (not including OTJ)

SCHOOLS COMMITTED TO CAREER AND TECHNICAL EDUCATION ARE HAVING GREAT SUCCESS

High School CTE

Graduates earn

more per quarter on average and are 2% more employable long term.

Post-Secondary CTE

\$1,000

more per quarter on average and are 5.7% more employable long term.

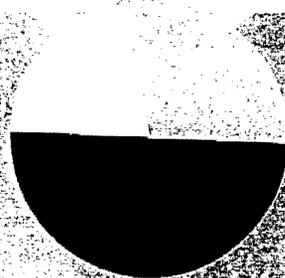
National Research Center for Career and Technical Education, conducting return on investment analyses for secondary and postsecondary CTE: A framework, January 2011

AMERICA IS STILL FACING A HUGE SHORTAGE OF SKILLED CONSTRUCTION CRAFT PROFESSIONALS

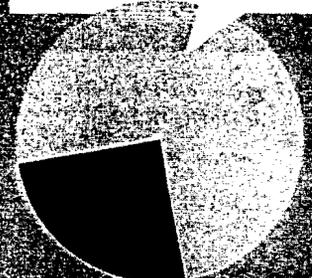
21% of skilled workers are 55 years and up

29% of skilled workers are between the ages of 45-54

75% of ABC members report a shortage of qualified craft professionals



Economic Modeling Specialists, 2013 Q3 data set



ABC Member Questionnaire

1.6 million new skilled workers will be needed between now and 2022.

workforceunderconstruction.com
abc.org



Division of Labor and Industry

Overview - Maryland Apprenticeship and Training Program

Overview of Apprenticeship

Registered apprenticeships are voluntary, industry-driven programs sponsored by employers, employer associations, and jointly by management and labor. Apprenticeships combine supervised, structured, on-the-job training and related technical instruction to teach apprentices the skills necessary to succeed in a specific occupation.

Registered Apprenticeship means the apprenticeship is registered with the State of Maryland. By completing the registration process, the program has to comply with the State and Federal regulations regarding apprenticeship. The main regulations concerning Registered Apprenticeship include: supervised on-the-job training with a ratio of one apprentice to one journey person (skilled craft person), the on-the-job training meets the minimum 2,000 hours (per year if the apprenticeship is longer than 1 year) and related classroom instruction meets the minimum 144 hours (per year if the apprenticeship is longer than 1 year). To read the full regulations please visit the [Regulations \(apprregs.shtml\)](#) tab above

Apprenticeships are Jobs:

Apprenticeships are jobs. The apprentice works full time and receives training from the sponsoring organization. Typically apprentices are hired at a percentage of a journey person's salary. As the apprentice completes training section as and demonstrates skills mastery, the percentage of a journey person's wage received increases until the apprentice makes journey person's wages upon completing the program.

Apprenticeships are designed to meet the workforce needs of the sponsors. Because of a need for highly skilled workers many sponsors use apprenticeship as a method to train employees in the knowledge necessary to become a skilled worker. This also means the number of apprenticeships available are also dependent on the current training needs of the industry.

Apprenticeable Occupations:

A position must require at least 2,000 hours of training to be considered as an apprenticeable occupation. If an occupation is apprenticeable, an apprenticeship program will then be divided into on-the-job-training and related instruction.

On-the-job training must consist of at least 2,000 hours per year of the apprenticeship, the equivalent of working fulltime. On-the-job training for apprentices takes place at the work site under the direction of a highly skilled journey person(s). The related instruction component is the classroom training apprentices receive to supplement the on-the-job training and teach fundamental principles of the trade. Each apprenticeship must have at least 144 hours of related instruction per year of the apprenticeship.

Maryland encourages any organization with a training need meeting the above criteria to consider apprenticeship. No industry is unwelcome.

Apprenticeships are In-Depth and Certified:

The minimum length of an apprenticeship is one year, however, most apprenticeship programs take 3-6 years to complete. Successful completion of a registered apprenticeship leads to a nationally recognized *Certificate of Completion of Apprenticeship* attesting to the individual's attainment of skills and knowledge to be considered a journey person.

Apprenticeships are Diverse:

In Maryland there are over 230 registered occupations and over 9,000 registered apprentices. Most apprenticeships are within the building trades and construction industries; however there are also apprenticeship opportunities in non-construction occupations such as Child Care Development Specialist. For a complete list of all the occupations registered to have apprenticeship programs please visit [Find an Apprenticeship \(../approcc/\)](#).

[Return to the Maryland Apprenticeship and Training home page \(../appr/\)](#)
[Return to the Division of Labor and Industry home page \(../labor/\)](#)

Questions or comments about Apprenticeship and Training may be directed to matp@dllr.state.md.us
(<mailto:matp@dllr.state.md.us>).

Questions or comments regarding the Division of Labor and Industry may be directed to dli@dllr.state.md.us
(<mailto:dli@dllr.state.md.us>).

Questions or comments regarding the DLLR website may be directed to webmaster@dllr.state.md.us
(<mailto:webmaster@dllr.state.md.us>).

Updated January 19, 2010

Division of Labor and Industry

Frequently Asked Questions (FAQs) - State Apprenticeship Training Fund

June 2013

1. [When does this law become effective? \(#when\)](#)
2. [Who is covered by this law? \(#who\)](#)
3. [What do contractors and covered subcontractors need to do prior to commencing work on a State prevailing wage project? \(#whatprior\)](#)
4. [What do contractors and covered subcontractors obligations once work has commenced? \(#whatonce\)](#)
5. [What do approved apprenticeship programs need to do? \(#approved\)](#)

1. When does this law become effective?

The State Apprenticeship and Training Fund law will apply to prevailing wage projects that have been advertised for bid or proposal on or after July 1, 2013.

2. Who is covered by this law?

The requirements of this law apply to contractors and certain subcontractors (those performing work on a prevailing wage project valued at \$100,000 or more) on State public work projects.

Approved apprenticeship programs, an apprenticeship program or organization with an apprenticeship program, that are registered with and approved by the Maryland Apprenticeship and Training Council or the U.S. Department of Labor, have certain obligations under this law if they receive contributions from contractors and subcontractors.

3. What do contractors and covered subcontractors need to do prior to commencing work on a State prevailing wage project?

The first step for contractors and covered subcontractors is to register online with the Division of Labor and Industry, [Prevailing Wage Unit \(https://www.dlir.state.md.us/prevwage/\)](https://www.dlir.state.md.us/prevwage/).

Contractors and covered subcontractors will be required to complete the required project log information including the project number, contract value, identification of all subcontractors on the project and the subcontract amount.

Contractors and covered subcontractors also will be required to select the approved apprenticeship program or the State Apprenticeship and Training Fund to receive their contributions prior to the commencement of work on a State prevailing wage project.

Contractors and certain subcontractors who hire subcontractors performing work valued at \$100,000 or more are required to provide their covered subcontractors with written notice of the requirement that subcontractors and their subcontractors performing work valued at \$100,000 or more are required to register and complete the required project log information and make contributions under this law.

Contractors and covered subcontractors are required to retain a copy of the written notice provided to subcontractors for 3 years after the completion of their work on the public work project.

4. What do contractors and covered subcontractors obligations once work has commenced?

Contractors and covered subcontractors are required to make a contribution of \$0.25 per person per hour for each employee in each covered craft on the prevailing wage project to an approved apprenticeship program or the State Apprenticeship and Training Fund.

It is important to note that a contractor's and covered subcontractor's obligations under the Maryland Prevailing Wage Law still apply so a contractor or subcontractor is obligated to pay the full prevailing wage rate that includes the basic wage rate and fringe benefits. A contractor or subcontractor may count

the \$0.25 apprenticeship contribution toward the fringe benefit portion of a prevailing wage rate required under the applicable wage determination. However, if there are no fringe benefits in the wage determination, an employer under the Apprenticeship and Training Fund law is still required to make a contribution of \$0.25 per person per hour for each employee in each covered craft while continuing to pay the prevailing wage basic wage rate.

The contributions of \$0.25 are required to be reported on the contractor and subcontractor electronic certified payroll reporting system that is required for all State prevailing wage projects.

Contractors and subcontractors are required to certify that their contributions were received by an approved apprenticeship program or the Fund.

Contractor and subcontractor payments to the State Apprenticeship and Training Fund shall be made payable to the State of Maryland and mailed to the Prevailing Wage Unit, Department of Labor, Licensing and Regulation, 1100 North Eutaw Street, Room 607, Baltimore, Maryland 21201. Payments to the State Apprenticeship and Training Fund are due within 14 days after the end of the previous month.

5. What do approved apprenticeship programs need to do?

The Prevailing Wage Unit of the Division of Labor and Industry will notify an approved apprenticeship program that it has been designated by a contractor or subcontractor for contributions.

Once an approved apprenticeship program has received notice from the Prevailing Wage Unit, the approved apprenticeship program is required to register on the Department's website (<https://www.dllr.state.md.us/prevwage/>).

Once registered, the approved apprenticeship program is required to report on-line the contributions received on a quarterly basis.

Approved apprenticeship programs are required to certify that the contributions that they have received from contractors and subcontractors are being used for the purpose of improving or expanding apprenticeship training in the State.

[Return to the Maryland Apprenticeship and Training home page \(../appr/\)](#)

[Return to the Division of Labor and Industry home page \(../labor/\)](#)

Questions or comments about Apprenticeship and Training may be directed to matp@dllr.state.md.us (<mailto:matp@dllr.state.md.us>).

Questions or comments regarding the Division of Labor and Industry may be directed to dli@dllr.state.md.us (<mailto:dli@dllr.state.md.us>).

Questions or comments regarding the DLLR website may be directed to webmaster@dllr.state.md.us (<mailto:webmaster@dllr.state.md.us>).

Updated June 13, 2013

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Building and Construction Technology

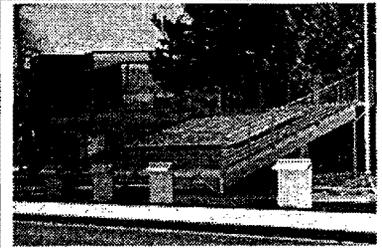
Building and Construction Technology training provides students with a comprehensive mixture of academic and practical training in areas of residential building. Coursework is laboratory intensive complemented with additional classroom studies. Career paths include carpenter, plumber, electrician, HVAC technician, trade supervisors and code officials, and builders. This program is approved by the Suburban Maryland Building Industry Association. Montgomery College is a member of the Registered Apprenticeship-College Consortium. Apprenticeship-related instruction programs includes such trades as: Carpentry, Drywall, Electricity, Heating, Ventilating and Air Conditioning (HVAC), Plumbing, Sprinkler Fitting, and Steam Fitting.

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John.Phillips@montgomerycollege.edu

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Montgomery College
Montgomery County, MD

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Isiah Leggett
County Executive

Marc P. Hansen
County Attorney

OFFICE OF THE COUNTY ATTORNEY

MEMORANDUM

TO: David E. Dise, Director
Department of General Services

VIA: Marc P. Hansen *Marc Hansen*
County Attorney

FROM: Karen L. Federman Henry *Karen L. Federman Henry*
Chief, Division of Finance and Procurement

DATE: September 16, 2014

RE: Bill 40-14, Contracts and Procurement – Prevailing Wage Requirements –
Apprenticeship Training

The above-referenced bill has been introduced and is scheduled for a public hearing on October 7, 2014. I have reviewed the bill and see no legal issues that affect its passage. There are a few logistical issues that may affect the use and implementation of the new provision.

First, the inclusion of the provision within the Prevailing Wage Law seems a bit awkward. Rather than expand the Prevailing Wage, the bill really sets up a new program that accompanies the Prevailing Wage Law.

The more important issue involves enforcement of the Apprenticeship Training requirement. By including the provision within the Prevailing Wage Law, the remedies appear ambiguous—if the goal is to ensure that apprenticeship programs exist, and payment into a fund may suffice, the payroll records may not be enough to show compliance.

The bill mainly poses business issues that DGS will want to clarify during the legislative process.

Cc: Bonnie Kirkland, ACAO
Trevor Ashbarry, Assistant County Attorney

Construction Skill Shortages Policy Brief

Gerard M. Waites, Esq.
O'Donoghue & O'Donoghue LLP
4748 Wisconsin Ave N.W.
Washington D.C. 20016

September 2014

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I. INTRODUCTION

Construction is a highly skilled, highly labor intensive industry that requires the systematic recruitment, training and deployment of multiple trades, and often hundreds of workers, for a single project. Typically, construction labor also represents 25 to 30 percent of total project costs. Craft labor not only plays a critical role in the construction process, but also has a major impact on every aspect of project delivery, including cost, quality, schedule and safety.

For these reasons, a reliable supply of well trained, highly skilled craft labor can help ensure successful delivery in all respects. Inadequate supply, on the other hand, can cripple a project and impose significant cost-overruns, schedule delays and other serious risks to project owners. Yet the role of craft labor is often overlooked in the planning process, overshadowed by other factors such as project delivery methods, design issues and selection procedures for contractors and A/E firms. These issues are undoubtedly crucial. But craft labor is just as important and is becoming an increasingly critical concern because the industry is facing unprecedented and potentially massive skill shortages—a skills gap of up to 2,000,000 workers, according to a recent report supported by extensive industry research.

This paper summarizes the most comprehensive data on craft labor shortages, including information from key studies from the 1990s to the present. The skill crisis has been long in the making and is well documented. Fortunately, these same reports examine the root causes of the problem and offer new strategies for the industry to begin addressing its immense workforce development challenges.

II. EXECUTIVE SUMMARY

The challenges of ensuring that sufficient craft labor will be available for a given project are difficult under any circumstance. However, the industry currently faces unique challenges due to the following three trends:

- 1) An expanding construction industry—driven by an enormous backlog of work pent up from the Great Recession and fueled by major growth in several big industries, including energy, healthcare and technology;
- 2) A steep decline in labor supply—caused by the mass retirement of the industry's most experienced and skilled workers and exacerbated by a decreasing number of young workers/new entrants in the field; and
- 3) A general, steady drop off over the past several decades of effective skill training programs throughout most of the industry.

The convergence of these factors, creating what some have called a *Perfect Storm* in the construction industry, represents growing risks for project owners that there will be insufficient manpower to staff future projects. For several decades, natural market forces have not fixed the problem; nor have government-supported training programs or voluntary contractor initiatives.

What's more, new construction workers cannot be trained and deployed with the "flip of a switch" since it typically takes three to five years to properly train craft persons in the skilled trades. Simply hiring unemployed workers without the required knowledge, skills or training will not solve the problem. Increasing wages, which will drive up construction costs, may help in recruiting new workers but will not address the need for the type of large-scale, systematic training needed in the industry.

Due to unique conditions and current market dynamics, owners face heightened risk of exposure in project planning and greater uncertainty when seeking assurances from contractors on the availability and reliability of their craft labor resources, a risk which grows with each new project and each passing year.

Without effective solutions, project owners will pay more for craft labor as basic laws of supply and demand play out, plus end up with a situation where they are paying more and still getting less—less in terms of quality, productivity, safety and other key delivery factors. Some experts predict that owners will be forced to cancel or significantly delay major projects, no matter how critical.

The bright side of all this is that the project owner community is no longer viewing the skill crisis as simply a "contractor" problem. Instead, they are taking steps to exercise more direct control over craft labor supply to protect investments and minimize risk. This paper reviews the key facts and data surrounding this issue and examines key recommendations by owner groups designed to address this challenge—namely, to establish specifications in the bidding process, via prequalification or otherwise, that require contractors to participate in reliable, effective craft training as a condition of performing work.

Experts agree. Project owners alone have the power to drive change needed in the industry and, by all accounts, it is in their interests to do so. As mounting evidence shows, new owner-driven strategies provide the most effective solution to craft labor shortages.

III. CONSTRUCTION LABOR SKILL SHORTAGES

A. MAJOR TRENDS & DRIVING FORCES

Numerous studies over the past fifteen years have documented a veritable skill crisis that has been developing in construction since the late 1990s, spurred by changing demographics, an expanding industry and a general decline in the level of skill training provided.¹ A 1997 survey of the Business Roundtable, for example, found that 60% of its

¹ See, e.g., *Confronting the Skilled Construction Work Force Shortage*, Business Roundtable, Construction Cost Effectiveness Task Force (1997); *Apprenticeship Training in the U.S. Construction Industry*, Cihan Bilginsoy (Sept. 1998); *Key Workforce Challenges Facing the American Construction Industry: An Interim Assessment*, Center for Construction Industry Studies (Mar. 1999); *AGC Announces Model Language for "Training for the Trades" in RFPs*, AGC News & Bulletins (1999); *Workforce Conference Report*, BNA Construction Labor Report, Vol. 47 No. 2352 (Nov. 21, 2001); *Craft Labor Shortage Provokes More Studies of Pay and Safety*, Engineering News Record (August 20, 2001); *Confronting the Skilled Workforce Shortage*, Construction Users Roundtable (June 2004); *The Perfect Storm: Factors Come Together Creating a Storm in the Construction Workforce*, The Construction Executive (June 2004); *America's Construction Industry: Identifying and Addressing Workforce Challenges*, ETA/Business Relations Group Report (Dec. 2004); *Craft Labor Supply Outlook: 2005-2015*, Construction Labor

members reported skilled labor shortages on construction projects and conditions which caused serious turmoil for construction planning and project delivery. A steady stream of additional reports over the years shows this problem has persisted and is more acute today than ever.² Industry experts have identified several driving forces behind the skills crisis:

Factor #1—Fast Growing Demand:

As U.S. population expands, the construction industry grows to accommodate increased demand. In addition to the need for greater housing stock and commercial building, this triggers the need for massive infrastructure re-building to replace and expand already seriously aging systems.³

- In its *2013 Report Card for America's Infrastructure*, the American Society of Civil Engineers estimates that the U.S. will need \$3.6 trillion in infrastructure investments alone by 2020.⁴
- A number of other major market sectors are also poised for substantial growth, including energy, healthcare, manufacturing and information technology, with many huge building programs in these areas already underway.⁵
- For example, between 2008 and 2012, the share of the construction workforce participating in direct oil and gas construction nearly doubled from 3.8% in 2008 to 6.4% by 2012. FMI projects the share to climb to 10% by 2017, with the segment requiring more than 500,000 workers.⁶
- In addition, a huge amount of pent-up work across various sectors, which had been delayed by the Great Recession, is also moving from planning to construction.⁷

Research Council (2004); *A Workforce Needs Assessment of the Arizona Construction Trades Industry*, Arizona Department of Commerce (Feb. 2005); *The 2005-2006 U.S. Markets Construction Overview*, FMI Management Consulting (2005); *Workforce Development Committee, The Voice, Construction Users Roundtable* (Summer 2006); *Solving the Construction Industry Workforce Crisis – Ideas for Action*, McGraw Hill/ENR (2007); *In Demand: Emerging Solutions for the Workforce Crisis*, The Voice, Construction Users Roundtable (Spring 2007); *The Construction Chart Book*, CPWR—The Center for Construction Research and Training (2008); *Maryland's Construction Industry Workforce Report*, Governor's Workforce Investment Board (Sept. 2009).

² *Confronting the Skilled Construction Work Force Shortage*, *supra* note 1, at 26.

³ *Global Construction Market Set to Grow by Over 70% to \$15 Trillion by 2025*, Bloomberg, PR Newswire (July 17, 2013), available at <http://www.bloomberg.com/article/2013-07-17/aveLfqCxl.s8.htm>, citing *Global Construction 2025*, Global Construction Perspectives, Oxford Economics (July 2013), full report available at <http://www.globalconstruction2025.com/worldwide/products#reportproducts>.

⁴ Available at <http://www.infrastructurereportcard.org>.

⁵ See *The 2013 U.S. Markets Construction Overview*, FMI Corporation (2012); *2013 Dodge Construction Outlook*, McGraw-Hill Construction Research & Analytics Group (Oct. 2012).

⁶ *Skill Shortages in a Booming Market: The Big Oil and Gas Challenge*, FMI Corporation (2013) 1, available at <http://www.fminet.com/media/pdf/report/OilandGasChallenge.pdf>.

⁷ See *The 2013 U.S. Markets Construction Overview*, FMI Corporation (2012); *2013 Dodge Construction Outlook*, McGraw-Hill Construction Research & Analytics Group (Oct. 2012).

Collectively, these factors indicate unprecedented growth. One global study predicts that the U.S. and Canada will witness the highest overall investments in construction among developed countries over the next twelve years. Specifically, it is estimated that the U.S. will spend some \$14.5 trillion in construction by 2020 and the construction industry is expected to be 40% larger in 2025 than in 2007.⁸

Factor #2—Fast Shrinking Supply:

The construction labor pool is aging and supply generally is shrinking. This trend is caused by shifting demographics—namely the aging of baby boom generation, which is leading to massive retirement of the most skilled and experienced workers in the construction industry. The industry is also failing to recruit and train sufficient numbers of replacement workers.

- One recent report estimates over half of the construction labor pool is 45 or older and nearly 20% are between the ages of 55 and 65.⁹ Moreover, a study by the Construction Industry Institute (CII) found that the median age of the construction workforce rapidly increased in the early 2000s, while retirement age remained constant.¹⁰
- As a result of these factors, the skilled workforce has gradually been shrinking over the last several decades relative to the overall size of the industry.¹¹
- According to preliminary estimates by the Department of Labor's Bureau of Labor Statistics (BLS), the construction industry had 152,000 job openings left unfilled by the end of June 2014, the second highest level since May 2008.¹² Another report indicates that 45% of general contractors surveyed expect to see craft labor shortages in 2014.¹³

⁸ See *Bloomberg and Global Construction 2025* reports, *supra* note 3.

⁹ *Is Your Workforce Ready for the Rebound*, The Voice, Construction Users Roundtable (Summer 2013) 20.

¹⁰ *The Shortage of Skilled Craftworkers in the U.S.*, Construction Industry Institute (Sept. 2003) 10.

¹¹ *Confronting the Skilled Construction Work Force Shortage*, *supra* note 2, at 26.

¹² Bureau of Labor Statistics Job Openings and Labor Turnover (JOLT) Survey. The Bureau of Labor Statistics considers a job "open" if it meets the following conditions: (1) "[a] specific position exists and there is work available for that position. The position can be full-time or part-time, and it can be permanent, short-term, or seasonal"; (2) "[t]he job could start within 30 days, whether or not the establishment finds a suitable candidate during that time"; and (3) [t]here is active recruiting for workers from outside the establishment location that has the opening." Additional information on the JOLT survey is available at <http://www.bls.gov/jlt/jltdef.htm>.

¹³ *The Importance of Owner Support for Workforce Development*, the Voice, Construction Users Roundtable, (Summer 2013) 26.

- According to a 2013 survey, nearly three-quarters of jointly managed apprenticeship program representatives expect a shortage of skilled candidates for apprenticeship training programs to be a challenge for the next two years. Moreover, almost one-third of respondents expect it to be more difficult in the future for training funds to recruit apprentices.¹⁴
- Similarly, according to an Associated General Contractors of America survey conducted of its members, nearly three-quarters (74%) of firms report challenges filling craft worker positions.¹⁵
- Top-level industry groups have likewise identified serious industry-wide shortages as a major problem for future project planning.¹⁶ According to a June 2014 survey, two-thirds of firms reported having labor shortages in the past year.¹⁷ One-quarter of the firms reported turning down work due to a lack of labor.¹⁸

The fact is that the skills crisis has been decades in the making—it has not and will not be corrected by natural market forces. The potential negative impact of the downward spiral of the craft labor supply is further examined below.

Factor #3: Decline in Training & Productivity:

Over the past several decades there has been a steady, consistent decline in skill training throughout most of the construction industry that seriously compounds the industry's other significant challenges. Evidence of this factor has been mounting:

- According to the Department of Labor data, while there were on average 5.78 million workers employed in construction during fiscal year 2013, there were only 101,947 active apprentices participating in registered apprenticeship programs in the construction trades, a participation rate of less than 1.8%.¹⁹

¹⁴ The survey findings are based on 153 responses received to a survey sent by the International Foundation of Employee Benefit Plans in September and October 2013 to training funds in a number of industries in the United States and Canada, including carpenters, plumbers, electrical workers, operating engineers, and iron and steel workers. The survey report, *Top Trends in Jointly Managed Apprenticeship Programs (2013)* available at <https://www.ifebp.org/pdf/research/RS140035ApprentRprt.pdf>.

¹⁵ *AGC of America Worker Shortage Survey Analysis (2013)*, available at [http://www.nwagc.org/Resources/Documents/Owners%20Panel/2013 Worker Shortage Survey Analysis.pdf](http://www.nwagc.org/Resources/Documents/Owners%20Panel/2013%20Worker%20Shortage%20Survey%20Analysis.pdf).

¹⁶ See *2013 U.S. Markets Construction Overview*, FMI Corporation (2012); *2013 Dodge Construction Outlook*, McGraw-Hill Construction Research & Analytics Group (Oct. 2012).

¹⁷ See AGC of America Press Release, *Construction Employment Increases in 223 Metro Areas Between July 2013 & 2014 as 25 Percent of Firms Report Turning Down Work Because of Labor Shortages* (August 27, 2014), available at http://www.agc.org/cs/news_media/press_room/press_release?pressrelease.id=1620.

¹⁸ *Id.*

¹⁹ These statistics are taken for the Office of Apprenticeship's fiscal year from 10/01/12-9/30/13. The number of construction workers is the average taken from the number of construction workers reported on a seasonally adjusted basis in the BLS Current Employment Statistics Survey for the Construction Sector (NAICS

- Similar facts were documented in a critical study from the National Institute of Standards and Technology (NIST), which found a steep and steady decline in craft training throughout most of the construction industry.²⁰ A primary reason for this is the general lack of training provided in the open shop sector.²¹
- The NIST study also reveals that productivity in the construction industry currently ranks among the lowest, and possibly the lowest, of all non-farm industries. Specifically, examining construction skill shortages, NIST found that over the past 40 years, labor productivity in construction has actually trended *downward* at an average annual rate of *-0.6%*.²²
- Not surprisingly, the study finds that falling productivity is attributed in substantial part to a decline in skill training.²³ Less training means as older workers increasingly leave the industry, their younger, less-experienced counterparts are being neither recruited nor trained in sufficient numbers to maintain supply and productivity levels.²⁴

23) available at <http://www.bls.gov/iag/tgs/iag23.htm#workforce> for that period; the apprenticeship participation figure is taken from the Office of Apprenticeship's Fiscal Year 2013 data reported for the top 10 apprenticeship participation programs, available at http://www.doleta.gov/oa/data_statistics.cfm.

²⁰ See Allison L. Huang, Robert E. Chapman, and David T. Butry, *Metrics and Tools for Measuring Construction Productivity: Technical and Empirical Considerations*, U.S. Department of Commerce, National Institute of Standards and Technology, Office of Applied Economics (Sept. 2009) [hereinafter NIST report] 23, available at http://www.nist.gov/customcf/get_pdf.cfm?pub_id=903603.

²¹ *Id.* at 23. The study notes that *prior to* the last several decades, training had been provided comprehensively throughout the industry, most typically through joint labor-management training programs administered by contractors and building trade unions under collective bargaining agreements and that in the union sector this continues. It further notes that, while "open shop training programs exist, they tend to be rare." *Id.* at 23. Data from the past forty years has shown that "[w]ith the decline of union membership and collective bargaining agreements, training programs and the number of apprentices also have declined." *Id.*

Currently, the non-union sector appears to invest substantially less than the union sector, even though the former accounts for over 80 percent of the industry. One report, for example, showed the open shop Associated Builders and Contractors invested approximately \$28 million in apprenticeship programs, while the union sector invested \$750 million in such programs. *The Perfect Storm: Skilled Worker Shortage Looms for Construction Sector*, International Brotherhood of Electrical Workers, available at <http://www.ibew.org/articles/13ElectricalWorker/EW1307/IBEW%20EW%20V07%20N07.pdf>.

²² *Id.* at 39.

²³ This statistic is even more troubling when construction labor productivity is compared to other industries. The NIST report reveals that during the same time period labor productivity in *all non-farm industries has increased at an average annual rate of 1.8%*. *Id.*

²⁴ *Id.* at 23.

- Market surveys support these studies. In one, some 56% of specialty trade contractors surveyed believe that the “next generation” of employees are receiving “inadequate education” to prepare them for the workforce.²⁵ Similarly, according to a survey conducted of general contractors, nearly two-thirds of respondents (65%) report that the local pipeline for preparing new construction craft workers is below average or worse and 64% responded that there are too few local high school skills and technical-based programs.²⁶

While the economy is showing signs of continued growth and gradual post-2008 recovery, skill shortages threaten to impair broader growth and continue to limit the industry’s ability to fully revive itself. Years of underinvestment in skills training has led to a serious, steady decline in productivity and construction quality, trends which will only grow worse as the mass retirement of baby boomers continues to unfold. As the sources reviewed below indicate, the collective impact of these trends will be to impede project planning and undercut project delivery unless effective solutions are found.

B. CUMULATIVE IMPACT OF NEW MARKET CHALLENGES

A 2014 Construction Labor Market Analyzer (“CLMA”) report predicts a nationwide craft labor shortage of as many as two million construction workers by 2018—a figure that could be even further due to demand for skilled labor from unidentified construction projects and continued development in oil and gas.²⁷ The simple fact is that increased project demand, shrinking labor supply and a general decline in training add up to huge challenges that the industry must address in real time.

CLMA’s prediction of a potential two million worker shortfall is not based on vague estimates, but thorough research and analysis of key market factors, including planned project data and demand for skill crafts.²⁸ CLMA analyses have been forecasting such a shortage since at least 2012.²⁹ According to the Director of Operations of the Construction Users Roundtable (“CURT”), who offered a detailed review of the 2012 analysis, this prediction was “aggressive and bold.” He explained, “[s]ome people thought the number was too high but most thought it was correct or actually too low. What everyone agreed on was that the challenge our industry faces is tremendous.”³⁰ Similar forecasts have been

²⁵ See *2013 Dodge Construction Outlook*, McGraw-Hill Construction Research & Analytics, *supra* note 5, at 24.

²⁶ *AGC of America Worker Shortage Survey Analysis* (2013), available at [http://www.nwagc.org/Resources/Documents/Owners%20Panel/2013 Worker Shortage Survey Analysis.pdf](http://www.nwagc.org/Resources/Documents/Owners%20Panel/2013%20Worker%20Shortage%20Survey%20Analysis.pdf).

²⁷ CLMA is an analysis tool developed in alliance with the Workforce Development Committee of the Construction Users Roundtable (CURT). See CLMA, *Skilled Worker Shortage Escalates* (Winter 2014) [hereinafter 2014 CLMA Study Summary], summary available at <http://myclma.com/wp-content/uploads/2014-Winter-Report-Handout-SE.pdf>.

²⁸ *Id.*

²⁹ See CLMA and Southeast Manpower Tripartite Alliance (“SEMTA”), *Projected Demand for Craft Labor for the Southeast United States (2012-2017)* (2012) [hereinafter 2012 SEMTA Handout], available at <http://myclma.com/wp-content/uploads/Foresight-Report-SEMTA-Handout-2012Oct18.pdf>.

³⁰ *Is Your Workforce Ready for the Rebound*, The Voice, Construction Users Roundtable (Summer 2013), 18.

given in other reports. For example, by one estimate the industry will need to recruit and train 275,000 workers per year for at least the next 10 years to fill the growing skills gap.³¹

A primary factor for growth in the near future is that the construction industry is that approximately one-sixth of workers are anticipated to retire in the near future.³² While the industry has increased the availability of skilled workers, the industry must continue to replenish the labor supply.³³ The study identified office, commercial, gas, and manufacturing construction to be among the strongest performers in the industry in the near term. In addition to the revival in traditional projects, the industry is also experiencing major expansion in competition for labor in other industries, such as oil and gas.³⁴

Moreover, a recent study by McGraw Hill Construction predicts that green jobs will account for 48% of the commercial construction market by 2015.³⁵ However, as this sector expands, green building firms face a lack of experience, certification and accreditation among prospective workers, which poses a serious impediment to this important emerging sector.³⁶

The McGraw-Hill report also underscores significant industry anxiety over future workforce shortages, with two-thirds of the industry reporting concern.³⁷ Nearly half of general contractors expected difficulty finding experienced craft workers by 2014.³⁸ Respondents anticipated that specialty trades would experience the highest shortage levels.³⁹ Specifically, respondents suggest that the loss of knowledge and experience due to retirement and layoffs would sharply reduce the number of skilled workers available.⁴⁰

³¹ See e.g., *Bad for Business: Skilled Labor Shortages in Alabama's Construction Industry*, The Associated Schools of Construction (2012).

³² See 2012 SEMTA Handout *supra* note 29.

³³ See 2014 CLMA Study Summary *supra* note 27.

³⁴ *Id.*

³⁵ 2013 Dodge Construction Work Outlook, McGraw-Hill Construction Research & Analytics, *supra* note 5, at 5.

³⁶ *Id.*

³⁷ *Id.* at 21.

³⁸ *Id.* at 1.

³⁹ *Id.* at 21. Notably, the skilled trades that expect "major expected shortages" are 1) carpentry, 2) electrical, 3) HVAC/boilermaker, 4) concrete finisher/cement mason, and 5) ironworker/steel erection, fabrication and welding. *Id.*

⁴⁰ *Id.* at 24.

To address the crisis created by a situation in which demand for a skilled workforce is increasing as supply and skill levels decrease, the industry must make changes to ensure that it recruits an adequate number of workers who have the necessary skills to perform successfully for years to come. This includes ensuring that training opportunities are available and that contractors are motivated and incentivized to participate in them. Otherwise, project owners, who ultimately have to absorb the construction costs, will be injured in both the short and long term by the adverse impact of a widening gap between supply and demand of skilled workers.

C. FAILURE TO TRAIN: CONSEQUENCES OF INACTION

Leading experts agree: failing to address the skills crisis can produce multiple negative effects. As one report from a top trade association stresses, “[p]otential project delays or cancellations, loss of business, wage and benefit escalations and negative future impact on attracting new facilities or expansions are just a few of the potential negative consequences.”⁴¹ This report notes that such effects will also include lower productivity, cost-overruns, schedule delays, increased safety incidents and outright project failures.⁴²

Similar findings were noted in the NIST study referenced above, which also found that skill shortages produce higher costs for project owners and greater schedule delays.⁴³ The NIST study further cautions that the challenge posed by a shortage of skilled workers is only projected to grow worse in future years.⁴⁴ In addition, a lack of skilled manpower has other crippling repercussions for construction, including: poor quality workmanship, increased re-work, higher life-cycle costs, lower overall value, excessive claims, change orders, increased litigation and related financial and administrative burdens and headaches for project owners forced to deal with major performance problems.

In sum, if project owners fail to act, they will, through the basic law of supply and demand, inevitably be exposed to serious risks and increasingly debilitating problems. Now more than ever, owners need to protect their short-term interests in securing successful project performance and promote their long-term interests in promoting effective workforce development.

⁴¹ *Id.* See also, *The Importance of Owner Support for Workforce Development*, The Voice, Construction Users Roundtable (Summer 2013) 26.

⁴² *Id.* at 26-27.

⁴³ See NIST report, *supra* note 20.

⁴⁴ *Id.*

IV. MEETING THE CHALLENGE OF THE SKILLS CRISIS

A. MANDATING TRAINING: RECOMMENDATIONS FROM PROJECT OWNERS

Recognizing the urgency of the skills crisis, the Construction Users Roundtable (CURT), the nation's leading trade association for project owners, has repeatedly issued strong recommendations to those responsible for capital facilities construction to take ownership of this problem and drive the changes needed in the industry. The primary solution CURT recommends in this regard is that project owners should prequalify contractors on the basis of skill training and mandate such requirements as a condition of doing business.

CURT has made this recommendation repeatedly for almost a decade, increasingly stressing the need for action in light of the growing nature of the problem. In its recent 2013 publication, it squarely addresses the issue as follows:

The Need to Mandate Craft Training: While Owners have historically considered it the contractor's responsibility to deliver a qualified and competent workforce, it's clear that Owners will have to take a more active role in workforce development for the industry to meet its current and future workforce demands. Most importantly, Owners can drive greater industry-wide commitment to workforce development by only doing business with contractors who invest in training and maintain the skills of their workforces. CURT and other forward thinking Owner groups have supported this idea for years.⁴⁵

In its white paper on skill shortages, CURT further explains that: "[t]he most effective and long-lasting changes in the industry are changes that are supported and encouraged by the owner community."⁴⁶ To this end, CURT specifically urges owner companies to:

- Recognize the necessity of investing in training.
- Establish expectations in the areas of workforce training and development, workforce recruitment, and worker retention.
- Only do business with contractors who invest in training and maintain the skills of their workforce.
- Make contractor commitment to craft training a factor in the qualification process.⁴⁷

⁴⁵ *The Importance of Owner Support for Workforce Development*, The Voice, Construction Users Roundtable (Summer 2013) 26.

⁴⁶ *Confronting the Skilled Workforce Shortage*, Construction Users Roundtable, (2004) 9.

⁴⁷ *Id.*

In a follow-up report CURT again promotes the critical need of project owners to require skill training because of its direct and substantial impact on project delivery both in the short and long term.⁴⁸ Explaining the context and rationale for CURT's recommendations, this report notes at the outset that CURT's mission is to "promote cost effectiveness for owners doing business in the United States by providing aggressive leadership on issues that will significantly improve project engineering, maintenance and construction processes, thereby creating value for the owners."⁴⁹

Project owners, CURT explains, depend on skill training to protect their own interests in securing successful projects and, therefore, should take a progressive and proactive role to ensure contractors provide skill training to craft workers.⁵⁰ Reports and studies from various other top industry groups also support these recommendations and similar proactive strategies by project owners to address the construction skills crisis.⁵¹

B. CONSTRUCTION INSTITUTE REPORT: POSITIVE IMPACT OF CRAFT TRAINING

As reports from CURT and other sources show, the failure to train can result in serious negative consequences for project owners. On the other hand, owners and the industry at large both reap significant benefits from skill training, provided it is done right.

Available evidence conclusively demonstrates that investments in craft training make significant positive returns, both for individual workers and for the industry as a whole. As explained by the 2007 industry report, *Construction Industry Craft Training in the United States and Canada*:

A preponderance of evidence demonstrates that training pays off, as indicated not only in the analysis from this study but others as well. The research team analyzed benefits from craft training from three perspectives: employer, project, and craft worker. Craft training can benefit both the individual worker and the employer.⁵²

⁴⁸ *Construction Labor: Managing the Construction Workforce*, Construction Users Roundtable (March 2005), available at http://www.nwoglca.org/PDF_Files/up403%20Construt%20Labor_%20Managing%20Construction%20Workforce.pdf.

⁴⁹ *Id.* at 9

⁵⁰ *Id.* at 9; see also *In Demand: Emerging Solutions for the Workforce Crisis*, The Voice, Construction Users Roundtable (Spring 2007).

⁵¹ See e.g., *Confronting the Skilled Construction Work Force Shortage*, Business Roundtable, Construction Cost Effectiveness Task Force (1997); *AGC Announces Model Language for "Training for the Trades" in RFPs*, AGC News & Bulletins (1999); *Workforce Conference Report*, BNA Construction Labor Report, Vol. 47, No. 2352, (November 21, 2001); *Craft Labor Shortage Provokes More Studies of Pay and Safety*, Engineering News Record (8/20/01); *Confronting the Skilled Workforce Shortage*, Construction Users Roundtable (June 2004); *Craft Labor Supply Outlook: 2005-2015*, Construction Labor Research Council (2004); *The 2005-2006 U.S. Markets Construction Overview*, FMI Management Consulting (2005); *Workforce Development Committee*, The Voice, Construction Users Roundtable (Summer 2006); *Solving the Construction Industry Workforce Crisis – Ideas for Action*, McGraw Hill/ENR (2007).

⁵² *Construction Industry Craft Training in the United States and Canada*, Construction Industry Institute (Aug. 2007) 12, available at <http://ps.businesssocialinc.com/media/uploads/abceastflorida/craftstudy.pdf>.

Some of the benefits of craft training include lesser percentages of voluntary turnover and absenteeism as well as a higher likelihood that the worker would be rehired on another project by the same company.⁵³

In reviewing this report, Sandra Olson, president of the Construction Industry Training Council, explained that the study showed that "a 1 percent investment in training netted benefits on both capital and maintenance projects, ranging from an 11 percent hike in productivity to a 27 percent decrease in injury rates." The report also highlights the potential benefits of reducing turnover, absenteeism, injuries and rework, and "estimated improvements in all categories."⁵⁴

Craft training is also an obvious way to attract the younger generation and help rebuild a solid pipeline of productive, skilled workers.⁵⁵ Thus, in addition to improving the quality of work and overall project success, training programs within the trades provide an economically sound and commonsense way to bring new workers into the industry.

C. REGENERATING CRAFT LABOR SUPPLY THROUGH APPRENTICESHIP TRAINING

Promoting the use of formal apprenticeship training programs in the construction industry provides one of the most viable means for addressing the growing skills gap. This is due to the fact that, as many experts agree, apprenticeship training offers the most reliable, time-tested and effective options for educating the next generation of skilled construction workers.⁵⁶

In a report titled *The Benefits and Challenges of Registered Apprenticeship*, the Urban Institute reviews the utility of registered apprenticeship programs based on how capable such programs are in conducting effective skill training.⁵⁷ This report and an underlying survey were commissioned by the Employment and Training Association of the U.S. Department of Labor. Key findings are as follows:

⁵³ *Id.* at 12-13.

⁵⁴ Sandra Olsen, *Construction Training is Good for Your Bottom Line*, Seattle Daily Journal of Commerce (March 27, 2008), available at <http://www.djc.com/news/co/11198999.html>.

⁵⁵ See 2013 *Dodge Construction Outlook*, McGraw-Hill Construction Research & Analytics, *supra* note 5, at 47-48.

⁵⁶ The NIST study referenced above likewise explains that skill training in construction yields substantial benefits, noting that it increases productivity and reduces turnover, absenteeism, and rework. In addition, craft training increases individual skills, knowledge, income, and job satisfaction – variables that help to counteract industry-wide recruitment problems that have been linked to a poor industry image and perceived limitations in career development opportunities.

⁵⁶ Industry research indicates that contractors agree that on-the-job training and apprenticeship programs were thought to be the most important and valuable means for combating these problems.

⁵⁷ Robert Lerman, *The Benefits and Challenges of Registered Apprenticeship: The Sponsors' Perspective*, The Urban Institute (2009), available at http://www.urban.org/UploadedPDF/411907_registered_apprenticeship.pdf.

- The most frequently cited benefit of apprenticeship programs, identified as very important by over 80% of sponsors, was that it helped satisfy the demand for skilled workers. The second most frequently cited benefit (noted by 72% of sponsors) was apprenticeships' role in reliably showing which workers have acquired the necessary skills.
- Other benefits, cited by 68% of sponsors as very important, were: raising productivity, strengthening worker morale and pride, and improving worker safety. A majority of sponsors also cited the role of apprenticeship in worker recruitment and retention and in meeting licensing requirements as important benefits.⁵⁸
- "Ninety-seven percent of sponsors of registered programs said they would recommend the program to others, with 86 percent stating they would 'strongly' recommend it and 11 percent indicating they would recommend it with reservations, due primarily to problems with accessing related instruction."⁵⁹ With few exceptions, those who decide to participate in registered apprenticeship immediately realize the benefits.
- The report also found few drawbacks to formal apprenticeship training, indicating they are relatively few and insignificant in comparison to the overwhelming benefits. The most interesting of these is as follows: "Competitor firms' bidding away trained apprentices, commonly called 'poaching,' and thought by economists to be a major disincentive to employer involvement in apprenticeship, was a concern but not a deterrent among current sponsors in the survey."⁶⁰
- Sponsors generally reported high program completion rates. Specifically, the report found that "[f]orty-four percent of sponsors said that the completion rate for their program was between 90 to 100 percent and 21 percent indicated it was between 70 and 89 percent, thus making a total of 65 percent of sponsors who reported completion rates at or above 70 percent."⁶¹
- The great majority of apprenticeship programs are funded, designed and administered by private parties, usually employers or joint employer-labor

⁵⁸ *Id.* at 7.

⁵⁹ *Id.*

⁶⁰ *Id.* "Surprisingly, only 25 percent of sponsors identified this as a significant problem while 29 percent saw it as a minor problem, and 46 percent did not perceive it as a problem at all. However, even among sponsors who perceived poaching as a problem, about 85 percent would still strongly recommend apprenticeship to others." *Id.*

⁶¹ *Id.* at 8.

programs. But all “registered” programs are overseen and assisted by the U.S. Department of Labor or state agencies. This report shows that sponsors gave “high marks to their State Apprenticeship Agencies. Eighty-two percent indicated the agencies did a ‘good or ‘excellent’ job in being timely; 80 percent gave similar ratings for clarity of guidance; 70 percent gave similar marks for use of on-line registration; and 64 said the SAs were ‘good’ or ‘excellent’ in promoting and publicizing registered apprenticeship.”⁶²

According to the President’s Export Council’s Subcommittee on Workforce Readiness “[a]pprenticeship training programs, especially those offered in the construction industry ... provide viable career paths for those seeking employment in the skilled building trades.” As the subcommittee highlighted, the key characteristics of the construction industry apprenticeships that make them so successful are: (1) apprentices are learning industry-specific skill sets while receiving livable wages; (2) the program is completely self-funded; (3) the program is demand-driven; and (4) apprentices are provided practical employment training.⁶³

Similarly, as recognized in a recent study by Columbia University, “[u]nion apprenticeship programs have been important for meeting the construction industry’s need for recruiting, training and educating skilled labor... [The] cost-sharing partnership is essential to both labor and management for ensuring a highly skilled workforce without placing an undue burden on either the industry or labor.”⁶⁴

A 2012 study commissioned by the Department of Labor further highlights the benefits of registered apprenticeship for participating workers and the public. The report compared participants in registered apprenticeship to non-participants, without regard to whether they completed the program, and found that participants earned significantly more, experienced greater employment opportunities, and had less dependence on government assistance.⁶⁵

⁶² *Id.* at 10.

⁶³ The President’s Export Council, *Compilation of the Council’s Recommendations during the First Term of the Obama Administration, 2010-2012*, 32 available at http://trade.gov/pec/docs/PEC_Term_Report_2010-2012_12062012.pdf.

⁶⁴ Fuchs, Warren, and Bayer,, *Expanding Opportunities for Middle Class Jobs in New York City: Minority Youth Employment in Building and Construction Trades*, March 2014, Columbia University’s School of International and Public Affairs, p. 4 citing Bertran, Nicole. *Meeting the Challenge of Increasing Diversity in the Unionized Construction Industry: CSKILLS and the Role of Pre-Apprenticeship* (May 2011).

available at https://sipa.columbia.edu/system/files/Columbia%20SIPA%20Construction%20Skills%20Report%20Final%20-%20March%202014_0.pdf.

⁶⁵ See Debbie Reed et al, *An Effectiveness Assessment and Cost-Benefit Analysis of Registered Apprenticeship in 10 States*, Submitting by Mathematic Policy Research to the U.S. Department of Labor Employment & Training Division (July 25, 2012), available at http://wdr.doleta.gov/research/FullText_Documents/ETAOP_2012_10.pdf.

With respect to higher earnings, participants in registered apprenticeship earned an average of \$5,839 more than non-participants in the ninth year after enrolling in the program.⁶⁶ Over a career, participants in registered apprenticeship earned an average of \$98,718 more than nonparticipants, and those who completed the program earned an average of \$240,037 more than nonparticipants.⁶⁷ In addition to the apprentice's increased earnings, when considering increased tax revenues and lower support spending, the report found that “[o]ver the career of an apprentice, the estimated social benefits of [registered apprenticeship] exceed the social costs by more than \$49,000.”⁶⁸ This evidence illustrates that craft labor training investments produce a high return on investment.

V. CONCLUSION

Considering current pressures placed on the industry by skill shortages and the proven benefits of craft training, especially via registered apprenticeship programs, there is a compelling rationale behind qualifying contractors based on their participation in such programs. As studies continue to show a widening gap between the demand and supply of skilled craft workers, it is clear that the industry must make changes to implement effective policies that respond to these problems, and the research has demonstrated that increasing commitments to craft training is one of the most effective solutions.

⁶⁶ *Id.* at xiv.

⁶⁷ *Id.*

⁶⁸ *Id.*