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**ASSESSMENT OF THE NEED FOR A PROJECT LABOR AGREEMENT  
COVERING THE BRISTOL TOWNSHIP SCHOOL CONSTRUCTION  
PROJECT**

PREPARED FOR  
Bristol Township School District

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## A. Executive Summary

This report assesses the appropriateness of a Project Labor Agreement (PLA) that would cover the Bristol Township School District construction project (“the Project”). It finds that a PLA would be appropriate for the Project. In part because of a recent aging of the construction industry workforce and a drop-off in apprenticeship intake since 2007, the benefits of a PLA could be further enhanced if it has strong apprenticeship utilization provisions. Increasing use of apprentices on the project could lower overall labor (or “crew”) costs on the project as well as help head off a future skill shortage that could have negative impacts on costs on future projects. Strong apprenticeship utilization provisions could be coupled with local hire provisions that encourage use of current or past graduates of Bristol Township School District (as journeyworkers or apprentices) and/or an increase in the minority and female share of the Project workforce.

### *The Need for a PLA*

This assessment finds that the draft PLA would advance the following goals of Bristol Township School District on the Project:

- The PLA would provide access to high quality labor with skills to complete the Project on time and on budget. The PLA would provide this access by giving all contractors, union and non-union, access to non-managerial labor from federally regulated union-sponsored hiring halls. These hiring halls have access to the region’s largest and most uniformly trained and experienced pool of workers in each construction craft.
- The PLA would help cut taxpayer costs through standardization of contract terms, work rules and work practices. A recent New York study estimated savings from an “Economic Recovery PLA” that had covered 73 private sector projects as of early 2011—over \$14 billion in construction—at between 16% and 21%.
- The PLA would help guarantee labor/management harmony and provide insurance against costly work disruptions by establishing and imposing a formal and binding process to resolve labor/management disputes.
- The PLA could help ensure increased investment in high-quality apprenticeship training, a critical need because of a fall in apprenticeship intake and aging of the industry workforce since 2007. The PLA would do this by ensuring that access to most non-supervisory labor is secured from hiring halls linked with State and Federally approved and regulated apprenticeship and training programs that account for most apprenticeship training in the regional construction industry. The PLA would further increase investment in apprenticeship training if it specifies a minimum ratio of apprentices to journeyworkers. Over half of 185 PLAs examined in a recent national study include an apprentice utilization provision such as a requirement that apprentices perform 15-20% of the hours on covered projects.
- The PLA would help ensure significant reliance on labor from within the SE PA/Southern NJ region. The agreement would require accessing most non-managerial labor from federally regulated union-sponsored hiring halls, which refer individuals from within the region (including portions of southern New Jersey) when those are available. Without a PLA, when contractors from outside the region win contracts or sub-contracts, they are under no obligation to use workers from the Bristol Township, Bucks County, or other parts of the region.
- The PLA could further ensure reliance on local labor if it includes strong local hire provisions. The PLA could include goals and monitoring mechanisms that encourage

hiring of journeyworkers who live in the School District and/or induction of apprentices who live in the district and/or are recent or past graduates of the School District. Local hire goals and monitoring mechanisms could be incorporated within an “Economic Opportunity Plan” along with provisions designed to expand opportunities for minorities and women (see the next bullet). Economic Opportunity Plans within PLAs have become common in recent years on major city of Philadelphia construction projects.

- The PLA could also expand opportunities for qualified members of minorities and women. This could be accomplished by adding provisions that set goals for the share of craft labor and/or apprenticeship hours performed by minorities and women. As with local hire provisions, goals for hiring minorities and women should be accompanied by monitoring mechanisms. In addition, the School District could consider establishing (or strengthening) career education and training in construction designed to enable diverse high-school students – or out-of-school youth – qualify for apprenticeship. The cities of Reading and Philadelphia each have extensive experience with programs for enabling current and/or past students qualify for apprenticeship programs that could inform efforts in Bristol Township.
- Similar to other PLAs, this PLA would be open to both union and non-union contractors. For example, on three very large national projects that used PLAs, 141 of 382 contractors used, or 37%, were non-union.

In customizing a PLA to meet the interests of, and enhance the benefits to, the School District, we strongly recommend that the School District engage the Philadelphia Area Labor-Management (PALM) Committee which has extensive experience helping construction owners (customers), contractors, and unions to negotiate, customize, and implement PLAs, including Economic Opportunity Plans. If it is helpful, Keystone Research Center could support the School District and PALM in the customization of a PLA that would cover the Project.

## **B. Introduction**

This report considers whether and how a Project Labor Agreement would contribute to achieving the following objectives of importance to Bristol County School District on the Project.

- Ensure a sufficient pool of skilled labor necessary to complete the project in a safe, efficient and timely manner.
- Maintain an expedited and uninterrupted construction schedule to ensure completion and occupancy by or before the completion and occupancy deadline.
- Provide for economic savings and predictability through standardization of contract terms, work rules and practices and through other provisions that enhance and assure productivity, efficiency, and quality.
- Provide that all phases of construction be open to qualified contractors regardless of whether they are party to a collectively bargained agreement.
- Ensure labor/management peace and harmony through a no-strike, no-lock-out commitment by all involved personnel/entities in order to meet construction and occupancy deadlines.
- Increase reliance on local labor from Bristol Township and from the Philadelphia metro area and southern New Jersey.
- Ensure adequate investment in apprenticeship training to help replace the large number of skilled workers projected to retire in the next 10 years.

- Increase and expand opportunities for minorities and women, including as apprentices.

### **C. Project Labor Agreements: History and Experience in Pennsylvania and Beyond**

Project Labor Agreements, also referred to as Project Labor Agreements (PLAs), are collectively bargaining agreements in which the owner of a proposed construction, renovation, alteration and/or demolition project sets certain minimum terms and conditions of employment applicable to the skilled construction workers performing work on the project. In both the private and public sector, PLAs are used extensively in southeast Pennsylvania, including on some school construction. For example, the Philadelphia School District Partnership Agreement covered school district construction projects over a four-year period beginning in 2006.

While there have been a handful of legal challenges to the use of PLAs in the public sector in Pennsylvania, the courts have generally upheld their use on projects where factors such as the size and complexity of the project, the nature of the local labor market environment, the timing needs of the project, access to an adequate and adequately trained workforce, and total costs savings that could be generated by a PLA have been judicially considered and explored in evaluation of the appropriateness of a PLA. In Pennsylvania, the Luzerne and Berks County Convention center PLAs were judicially determined to be valid and not in violation of the Pennsylvania competitive bid statute. Similarly, the Forest County State Prison Construction PLA was found by the courts to be valid. The vast majority of PLAs have not been the subject of any form of litigation.

To date there has been no systematic effort to collect data on the characteristics of public and private sector PLAs in Pennsylvania and their impact on project outcomes like the number of bidders, cost, and on-time delivery. The available evidence on outcomes on Pennsylvania PLA projects is anecdotal.

Anecdotal evidence collected in interviews about Southeast region construction projects with a PLA revealed mostly positive project outcomes. For example, the Pennsylvania Department of General Services (DGS) utilized a PLA on the Philadelphia Convention Center project, which was opened on time and achieved unprecedented workforce diversity and Minority and Women-Owned Business Enterprise (MWBE) participation. While there were a few informational pickets, there were no disruptions nor any lost time on the project due to labor/management disputes.

The largest recent PLA governing school construction in the region was a six-year agreement established in 2006 by the School District of Philadelphia. While the total amount of construction governed by the agreement was about a billion dollars, many of the individual projects were similar in scale to the three state-of-the-art schools planned for Bristol Township School District – about \$25 million or \$30 million. According to one official familiar with the Philadelphia School District Partnership Agreement, every project was done within budget and ahead of schedule. This agreement also served to increase local recruitment: over the course of the agreement, the trades took 825 School District graduates (past and current) into apprenticeship, over three quarters of them people of color.

## D. Evidence on the Impact of PLAs on Project Outcomes

Since there has been no systematic evaluation of the impact of PLAs in Pennsylvania on project outcomes, we review here research conducted in other jurisdictions or the United States as a whole.

A 2011 Cornell University study concluded that PLA's lead to substantial cost savings and provide broad social and economic benefits. The study cites the example of an innovative private-sector "Economic Recovery PLA" negotiated in New York City to achieve cost savings that would help maintain construction activity during and after the Great Recession. This PLA reduced construction costs by an estimated 16-21%, primarily as a result of work rule changes.<sup>1</sup>

James O'Neill's and Michael Griffin's review of experience with PLAs concludes that:

"Probably the best argument for PLAs in the public sector is that they have been for decades, and still are, used in the private sector by large, sophisticated, experienced developers, owners, construction managers and contractors, all of whom are driven by the profit motive. They want the best job for the lowest price in the shortest period of time. Disney World, the GM Saturn Facility, and the TransAlaska Pipeline are but a few examples of major private projects where PLAs have been successfully employed. Currently, the Goldman Sachs Group, Inc. is proceeding with a billion-dollar multi-building project in Jersey City, New Jersey, called Project Phoenix. It will include an 840-foot tall office building (the tallest in New Jersey), a global conference and training facility, and a 250-room hotel. The project will be on a fast-track construction schedule and the multiple contractors will be required to execute a PLA with the appropriate members of the local Building and Construction Trades Council. It is obvious that the owners, after due diligence, determined that requiring a PLA in the bid specifications for Project Phoenix was in their best interest, i.e., it would give them the best job, at the best price, in the shortest period of time."<sup>2</sup> If Project Labor Agreements continue to be utilized by the profit-oriented private sector after all these years, there must be a reason. Clearly, the reason is that they work. If they work for the private sector owners, they will work for public sector owners..."

A Power Point by Deputy City Attorney Hugo S. Rossitter and Inspector of Public Works John L. Reamer ("Paving the Way: Using Project Labor Agreements—the City of Los Angeles experience) summarizes experience with PLAs in Los Angeles. The Power Point reports most bid prices coming in near or below engineers' pre-bid estimates (and declining bid prices as the economy weakened).

In October of 2001, a comprehensive survey of PLAs was produced for the California legislature.<sup>3</sup> Based on a review of 82 PLAs, 59 of them private sector agreements, the study found (p. 59) that "Owners increasingly want PLAs in order to meet their speed-to-market demands and to ensure against delays that can be caused by worker shortages, work stoppages, or collective

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<sup>1</sup> Kotler, *Project Labor Agreements in New York State II*, pp. 49-55.

<sup>2</sup> James M. O'Neill, Esq. and Michael V. Griffin, P.E., Hill, International, Inc., *The Case for Public Owner Project Labor Agreements (PLAs)*, available at <http://www.hillintl.com/PDFs/Project%20Labor%20Agreements%20%28PLAs%29%20-%20O%27Neil.pdf>

<sup>3</sup> Kimberly Johnston-Dodds, *Constructing California: A Review of Project Labor Agreements* (Sacramento: California Research Bureau, California State Library, October 2001), CRB 01-010.

bargaining negotiations.” The study also concluded that, “from a contractor’s point of view, a PLA can provide the stable, uniform labor-management foundation on which to build methodical planning and scheduling on a project.” It added that “Contractors that use PLAs maintain that on complex, long-term projects, a PLA fosters positive communication channels to address worker concerns, grievances or disputes and resolve them quickly, thereby creating continuity and stability of the work force at the job site.” Ken Hedman, Principal Vice President, Labor Relations, Bechtel Construction Company, maintains that, in his experience, he has “never seen anything to indicate that a PLA was the cause of increased costs or delays.”

While no data exist, most stakeholders interviewed indicate that unionized and non-union contractors had participated on past projects governed by PLAs in Pennsylvania. For a few large projects covered by PLAs, data do exist on the number of union and non-union contractors:

- On the Boston Harbor Project, ICF Kaiser found that 55 prime contracts went to union contractors and 16 to nonunion contractors; of the 257 prime contracts and subcontracts, 155 went to union firms and 102 to nonunion firms.<sup>4</sup>
- On the Central Artery/Tunnel Project in Boston, 13 of the original 55 contracts let were to non-union contractors.<sup>5</sup>
- On the Southern Nevada Water Authority Project, Michael D’Antuono, president of Parsons Construction Company, said that six of 16 prime contracts and 26 of 70 both prime and subcontracts went to nonunion firms.<sup>6</sup>
- In 1991, the General Accounting Office (GAO) found that 86 of 286 contractors on the Idaho National Engineering Laboratory project covered by a PLA were nonunion.
- Under the 2005-2009 New York School Construction Authority PLA, an estimated 20% of successful bidders were non-union companies.<sup>7</sup>

Interviews also touched on the related question of the impact of a PLA on the number of contractors who would bid on the Bristol Township School District Project, or similar projects, today. One construction executive with experience on a dozen school district construction projects (none of which had a PLA) expressed concern that there would be fewer bidders on the Project with a PLA. He suggested that non-union contractors would not bid and the largest union contractors would not bid either, because the Project is “too small” to be of interest to them. This executive feared that fewer bidders would result in higher costs to the School District. Other sources, however, said that a PLA could increase the number of responsible bidders by eliminating concerns about low bids from contractors that circumvent state laws (e.g., prevailing wage and benefit laws). A third view was that, in the current construction industry market – which still has not recovered from the steep downturn starting in 2007 – large numbers of contractors, union and non-union, are likely to bid on projects of any scale..

Belman, Bodah, and Philips have conducted the only rigorous academic analysis of the number of bidders on projects with and without PLAs. Using a sample of “natural experiments” in neighboring California school districts—some of which used PLAs and some of which did not—the authors estimated the impact of PLAs on the number of bidders and thus potentially on cost.<sup>8</sup> Controlling also for other factors (such as the business cycle) that might influence the

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<sup>4</sup> Dale Belman and Matthew M. Bodah, *Building Better: A Look at Best Practices for the Design of Project Labor Agreements*, Economic Policy Institute Briefing Paper, p. 33; online at [http://www.epi.org/publication/building\\_better\\_a\\_look\\_at\\_best\\_practices\\_for\\_the\\_design\\_of\\_project\\_labor/](http://www.epi.org/publication/building_better_a_look_at_best_practices_for_the_design_of_project_labor/)

<sup>5</sup> O’Neill and Griffin, *The Case for Public Owner PLAs*, p. 15.

<sup>6</sup> This and the next bullet are from Belman and Bodah, *Building Better*, p. 33.

<sup>7</sup> Kotler, *Project Labor Agreements in New York State II*, p. 31.

<sup>8</sup> Dale Belman, Matthew M. Bodah, and Peter Philips, *Project Labor Agreements* (Bethesda: MD,

number of bidders, Belman, Bodah, and Philips (BBP) found no statistical relationship between the presence of a PLA and the number of bidders in their sample of school construction projects.

Belman, Bodah, and Philips (BBP) note that some research which maintains that PLAs increase costs is plagued by a lack of adequate data and poor statistical modeling.<sup>9</sup> A general challenge for researchers is the difficulty of identifying a sample of projects covered by a PLA and a “comparable” control group. Several studies by the Beacon Hill Institute (BHI) at Suffolk University in Boston, for example, only control for size of project, whether the project was new construction or a renovation, the number of stories, and whether the project was an elementary or high school. Without adequate controls the authors attribute cost differences to PLAs that are really the result of missing controls such as whether the project was in an urban area. Without controls for whether a project is urban, if PLAs are more commonly used in urban areas and costs are usually higher in urban areas, statistical analysis will attribute what is really an urban effect to using a PLA. BBP replicated BHI’s work with a study of 108 school construction projects in New England but include 30 controls. They find no relationship between the presence of a PLA and construction costs.<sup>10</sup>

Moving beyond the issue of PLAs on cost, the single most important factor that research shows does make a big difference to school construction costs is when in the construction industry business cycle that a project takes place. Projects built when the market is depressed cost as much as 20% less than projects at market peak. Together with the low bond prices currently available, the lower cost of schools built off cycle underscores that the School District is making a cost-effective choice to move forward soon with these projects, before construction prices and borrowing costs start to rise again. (Since early 2008, Keystone Research Center has used the research on the lower cost of projects built when the construction market is depressed to support a policy proposal for a state-supported “Buy Low” school construction and infrastructure initiative. In practice, much school construction tends to take place when the state and school districts have the most money – at the peak of the cycle when bid prices and interest rates both tend to be high.)

## **E. The Project**

Project descriptions were obtained in an interview with the Construction Manager and from the School District website (at <http://www.btsd.us/subsite/dist/page/new-buildings-plan-8622>.)

The Project will replace nine elementary buildings with three state-of-the-art schools and provide for significant improvements at the high school and two middle schools. Each of the three new elementary schools will be on an existing elementary school site and accommodate the student population of three existing schools. The building budget for each of the three schools is

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ELECTRI International, January 2007), Chapter 1. See also Dale Belman, Kenneth A. Frank, Richard Kelso, Russell Ormiston, and William Schriver, “The Effect of Project Labor Agreements on the Cost of School Construction in Massachusetts,” *Industrial Relations*, forthcoming; and Dale Belman, Russell Ormiston, William Schriver, and Richard Kelso, “The Effect of Project Labor Agreements on the Cost of School Construction,” Sloan Industry Studies Working Papers, 2005 Number WP-2005-01; online at <http://www.industry.sloan.org/industrystudies/workingpapers/index.php>.

<sup>9</sup> Belman, Bodah, and Philips, *Project Labor Agreements*; Belman et. al., “The Effect of Project Labor Agreements on the Cost of School Construction in Massachusetts,” and Belman, et. al., “The Effect of Project Labor Agreements on the Cost of School Construction.”

<sup>10</sup> For similar results, see Belman et al, “The Effect of Project Labor Agreements on the Cost of School Construction in Massachusetts,” and Belman, et al., “The Effect of Project Labor Agreements on the Cost of School Construction.”



about \$37 million, including \$30 million for construction and \$7 million for other costs. The production schedule is February 2014 to August 2015, with on-time completion of the Project critically important to enabling occupancy of the new schools in the 2015-16 school year. Failure to complete the project on time would lead to additional costs for the school district for interim arrangements regarding the buildings to which students are assigned. Failure to complete the project on time could also lead educational performance to suffer if shifting students to the new schools mid-year interrupts the continuity of education.

The new state-of-the-art schools will feature environmentally sustainable design, encompass improved building systems, be built to ADA (American Disability Act) standards, and incorporate integrated security systems. The projects will require virtually the full complement of specialized crafts at some point in the project.

With a total construction cost of \$90 million, the three new schools together will have a labor cost of about \$18 million, or something over 100 FTE (full-time employee) construction years of labor. Most individual crafts will not work full-time on the project for the approximately 19 months of the project and the amount of labor working at each site will fluctuate substantially at different points in the project. Therefore, several hundred workers are likely to work for at least some period of time on the project.

## **F. Analysis of Local Construction Industry and Labor Environment**

The state of the construction industry and its labor market provide important parts of the context for the Project, including the availability of labor required to complete the project on time and on budget.

The U.S. economy as of September 2013 is still recovering from the worst recession since the Great Depression, and remains 9.4 million jobs short of full employment. At the current pace of job growth the labor market in the United States will not return to normal conditions until after the end of this decade. The epicenter of the recession was the residential housing market which shed 1.4 million jobs (a decline of 43%) between its April 2006 peak and its January 2011 trough. Employment in non-residential construction continued to grow in 2006 and 2007 before reaching its peak in February 2008. From that peak to its February 2010 trough non-residential construction shed just shy of a million jobs (a decline of 22%). Thanks to a combination of increased public sector spending from the American Recovery and Reinvestment Act as well as extraordinary measures by the Federal Reserve to keep mortgage interest rates low, employment in both residential and non-residential construction is growing again. From their respective troughs to August 2013, employment in residential and non-residential construction has increased by 161,900 (8.2%) and 204,800 (5.9%) respectively.

Turning our attention to Pennsylvania, between the 2nd quarter of 2007 and the 2nd quarter of 2010 Pennsylvania shed 45,000 construction jobs, a decline of 17%, versus 28% over the same period nationally. Since 2010 construction employment is up 2.1% (4,700 jobs) in Pennsylvania, versus 4.8% nationally.

Analysis of another data source—the Quarterly Census of Employment and Wages (QCEW)—which is only available through the fourth quarter of 2012 shows a decline from peak (Q4-2005) to trough (Q4-2009) in residential construction of 25% in Pennsylvania. Non-residential construction in Pennsylvania peaked in 2007 (Q4) and by its trough in 2010 (Q4) was down 8%. Residential construction jobs in Pennsylvania increased slightly in 2010, held steady in 2011, then fell another 1.3% in 2012. Non-residential construction employment growth has been

stronger, rising since 2010 by 7%. Part of the strength since 2010 in non-residential construction can be attributed to the healthy growth of employment in pipeline construction, a sector driven the expansion of Marcellus shale natural gas extraction. It is difficult to predict whether the growth in pipeline construction will continue as falling natural gas prices have reduced new drilling in the Commonwealth.

In the Philadelphia Metropolitan Division of Pennsylvania (which includes Bucks, Chester, Delaware, Montgomery, and Philadelphia counties) between the second quarter of 2007 and the second quarter of 2010, overall construction<sup>11</sup> employment was down by 16,500 jobs or 20%. Between the second quarter of 2010 and the 2<sup>nd</sup> quarter of 2013, construction employment in the Philadelphia Metro Division has grown by just over 2% with most of that growth occurring in the City of Philadelphia. Other metropolitan areas in eastern Pennsylvania, including Allentown-Bethlehem-Easton, Scranton-Wilkes-Barre, Reading and Lancaster, all suffered comparable percentage declines in construction employment as a result of the recession and likewise have made only very modest employment gains through the 2<sup>nd</sup> quarter of 2013.

We can use the QCEW data—only available at the county level through the fourth quarter of 2012—to examine trends in residential and non-residential construction employment in Bucks County and in 11-county region<sup>12</sup> that includes Bucks County.<sup>13</sup>

Considering only Bucks County, the residential construction sector has been hit hard with residential construction employment falling an astonishing 79% from its peak in the fourth quarter of 2005 to the fourth quarter of 2012. In the 11-county region, residential employment fell 22%.

Non-residential construction employment fell less – by 13% in Bucks County from its peak in the fourth quarter of 2006 to its trough in the fourth quarter of 2010. In the 11-county region non-residential construction is down 18% over the same period. Since 2010, non-residential employment is up by less than a percentage point in Bucks County and over by just over 1% in the 11-county region.

Overall the construction labor market in the region remains very weak, especially within residential construction. The bulk of the labor used to complete the Project will be drawn from the non-residential construction labor market, a labor market that has not seen as deep of job loss as the residential market but one that remains below peak employment levels throughout the region. By August 2015, the non-residential construction market may recover somewhat, in part because of several very large construction projects in the pipeline. Nonetheless, the state of the construction industry labor market suggests that quantity of labor should not be a problem on the project.

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<sup>11</sup> Construction employment is defined as total employment in construction, natural resources, and mining – employment in just construction is not available by Metropolitan area. Construction accounts for more than 90% of this aggregate.

<sup>12</sup> These eleven counties include – Berks, Bucks, Chester, Delaware, Lancaster, Lebanon, Lehigh, Montgomery, Northampton, Philadelphia and Warren.

<sup>13</sup> Due to the non-disclosure of data by the Bureau of Labor Statistics we are not able to identify the residential/non-residential status of 5% of construction employment in Bucks county as well as in the eleven county region.

Table 1.								
Construction Industry Employment (thousands) in Pennsylvania 2nd Quarter, 2007-2013								
Area	2nd Quarter							2013 as pct of 2007
	2007	2008	2009	2010	2011	2012	2013	
Statewide†	267.0	262.9	229.8	221.6	225.4	228.3	226.3	85%
<b>A-B-E§, PA-NJ</b>	<b>16.9</b>	<b>16.3</b>	<b>13.5</b>	<b>12.5</b>	<b>12.7</b>	<b>12.4</b>	<b>13.0</b>	<b>77%</b>
Altoona, PA								
Erie, PA	5.0	4.5	4.0	4.0	4.1	4.2	4.5	90%
Harrisburg-Carlisle, PA	13.0	12.6	11.1	11.0	10.8	10.6	10.5	81%
Johnstown, PA								
<b>Lancaster, PA</b>	<b>17.6</b>	<b>17.3</b>	<b>15.4</b>	<b>14.5</b>	<b>14.6</b>	<b>14.8</b>	<b>15.6</b>	<b>89%</b>
<b>Philadelphia, PA Metro Division</b>	<b>82.0</b>	<b>81.4</b>	<b>67.9</b>	<b>65.5</b>	<b>66.2</b>	<b>65.0</b>	<b>67.0</b>	<b>82%</b>
Philadelphia City, PA	11.8	12.6	10.1	10.2	10.3	10.1	11.6	99%
Pittsburgh‡, PA	58.5	58.8	54.5	51.4	51.9	55.3	54.9	94%
<b>Reading§, PA</b>	<b>9.27</b>	<b>9.13</b>	<b>7.67</b>	<b>7.20</b>	<b>7.27</b>	<b>7.10</b>	<b>7.37</b>	<b>79%</b>
<b>Scranton--Wilkes-Barre, PA</b>	<b>11.5</b>	<b>11.4</b>	<b>9.8</b>	<b>9.6</b>	<b>9.8</b>	<b>10.3</b>	<b>10.4</b>	<b>90%</b>
State College, PA								
Williamsport, PA								
York-Hanover, PA	12.7	12.3	10.5	10.4	10.7	10.3	10.3	81%
§ A-B-E refers to Allentown-Bethlehem-Easton, PA-NJ Metropolitan Area								
§ Reading refers to Berks County								
¶ Construction employment unless specified otherwise is defined as total employment in construction, natural resources, and mining. Construction accounts for more than 90% of this aggregate								
† Construction employment only								
Source. Keystone Research Center based on the Bureau of Labor Statistics-Current Employment Statistics, Not Seasonally Adjusted Data								

Table 2.								
Construction as a Share of Total Employment								
Area	2nd Quarter							
	2007	2008	2009	2010	2011	2012	2013	2012 as pct of 2006
Statewide†	4.6%	4.5%	4.1%	3.9%	3.9%	4.0%	3.9%	85%
<b>A-B-E§, PA-NJ</b>	<b>4.9%</b>	<b>4.7%</b>	<b>4.0%</b>	<b>3.7%</b>	<b>3.7%</b>	<b>3.6%</b>	<b>3.7%</b>	<b>75%</b>
Altoona, PA								
Erie, PA	3.7%	3.4%	3.1%	3.1%	3.1%	3.2%	3.4%	92%
Harrisburg-Carlisle, PA	3.9%	3.7%	3.4%	3.4%	3.3%	3.2%	3.2%	82%
Johnstown, PA								
<b>Lancaster, PA</b>	<b>7.4%</b>	<b>7.2%</b>	<b>6.7%</b>	<b>6.3%</b>	<b>6.4%</b>	<b>6.4%</b>	<b>6.6%</b>	<b>90%</b>
<b>Philadelphia, PA Metro Division</b>	<b>4.3%</b>	<b>4.2%</b>	<b>3.6%</b>	<b>3.5%</b>	<b>3.5%</b>	<b>3.4%</b>	<b>3.5%</b>	<b>82%</b>
Philadelphia City, PA	1.8%	1.9%	1.5%	1.5%	1.6%	1.5%	1.7%	98%
Pittsburgh†, PA	5.1%	5.1%	4.8%	4.5%	4.5%	4.7%	4.7%	92%
<b>Reading§, PA</b>	<b>5.3%</b>	<b>5.2%</b>	<b>4.6%</b>	<b>4.3%</b>	<b>4.3%</b>	<b>4.2%</b>	<b>4.3%</b>	<b>81%</b>
<b>Scranton--Wilkes-Barre, PA</b>	<b>4.4%</b>	<b>4.3%</b>	<b>3.9%</b>	<b>3.8%</b>	<b>3.8%</b>	<b>4.0%</b>	<b>4.0%</b>	<b>93%</b>
State College, PA								
Williamsport, PA								
York-Hanover, PA	6.9%	6.7%	6.0%	5.9%	6.0%	5.8%	5.7%	83%
Note. See notes for Table 1.								
Source. Keystone Research Center based on the Bureau of Labor Statistics-Current Employment Statistics, Not Seasonally Adjusted Data								

*Access to skilled labor.* Although skilled labor shortages in non-residential construction have been alleviated temporarily by the Great Recession and slow recovery, a PLA still guarantees access to the most uniformly skilled labor pool in the construction industry. Labor available through the hiring hall is more uniformly high in quality because of the higher investment in apprenticeship training by the unionized part of the construction industry (for evidence on this, see below) and also because workforce age, experience, and occupational tenure are all higher among unionized blue-collar skilled trades than non-union blue-collar workers.

According to O’Neill and Griffin (writing before the Great Recession): “In urban areas nationwide and particularly in the Northeast Corridor, there is not only full employment but continuing shortages of skilled labor. PLAs provide at least a partial answer to the problem in that union hiring halls and apprenticeship programs have been recognized sources of skilled labor for generations. Though there are also some non-union contractor-sponsored training programs, the numbers of trained workers these produce are a small fraction of the numbers of union workers.”<sup>14</sup>

Official U.S. Department of Labor statistics show that, in Pennsylvania too, most construction industry apprenticeship training takes place through joint labor-management

<sup>14</sup> O’Neill and Griffin, *The Case for Public Owner PLAs*, p. 17.

programs.<sup>15</sup> Joint programs had 10,163 active apprentices in 2002, compared to 1,731 in employer-only programs. Since more training takes place via joint labor-management programs, this reinforces the likelihood that skilled workers will be more accessible via hiring halls and a PLA. When the industry faced shortages in the second half of the 1990s, joint labor-management apprenticeship programs also responded more to the industry need for labor than employer-only apprenticeship programs did.

### **G. Workforce Demographics and the Use of a PLA to Expand Investment in Apprenticeship and Opportunities for Local and Diverse Workers**

*The aging workforce, reduced recent apprenticeship investment, and the potential of apprenticeship utilization provisions in a PLA.* Job losses and higher unemployment rates in the construction sector have lowered intake into Pennsylvania apprenticeship programs recently. Disinvestment in apprenticeship in the slow economies of the early 1980s and early 1990s are major reasons for the skill shortages in the industry during the 2002-2007 expansion. Interviews with apprenticeship coordinators indicate that intake into apprenticeship declined by 50% or more in 2010 and 2011 compared to pre-recession peaks.

Before the current downturn, there was general agreement among all industry stakeholders about the existence of a skill shortage. For example, the Philadelphia Regional Construction Industry Education Partnership, which has close ties to the Associated Builders and Contractors, has noted that the upcoming retirement of "baby boomers" will increase the need for replacement workers. This Industry Partnership – and other industry sources – also note that, with society's emphasis on "college" after high school rather than trades, the number of youth who are exploring construction-related training is declining.

Skill shortages are likely to become severe as the industry fully recovers due to the further aging of the construction industry's workforce since 2007. In 1980, 34% of blue-collar construction workers in the Philadelphia Metropolitan area were 40-64 years old. By 2009-2011, that share had grown to 47% (see Figure on the next page).<sup>16</sup> Table 3 shows that the union construction workforce in the Philadelphia Metropolitan Division is even older: 63% of the union workforce is now over 40 years of age (versus 42% of the non-union workforce). The bottom line: the non-residential construction industry does face a severe challenge because of its aging workforce, and that challenge will get substantially worse if the industry invests in little or no apprenticeship training in the next several years.

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<sup>15</sup> David Bradley and Stephen Herzenberg, *Construction Apprenticeship and Training in Pennsylvania*, (Harrisburg: Keystone Research Center, 2002). A new report indicates that joint apprenticeship programs accounted for an even larger share of apprenticeship training in the 2002-2006 period. This report reports apprentice enrollment in Pennsylvania joint apprenticeship and training programs to be about 12 times higher than in Pennsylvania Associated Builders and Contractors programs. See Thomas J. Kriger, *Analysis of Associated Builders and Contractors*, National Labor College Working Paper, May 31, 2012, pp. 105-112, online at [http://www.knowyourabc.com/ULWSiteResources/abc/Resources/file/TJK\\_Reports/ABCResearchReport-FINAL5-31-12.pdf](http://www.knowyourabc.com/ULWSiteResources/abc/Resources/file/TJK_Reports/ABCResearchReport-FINAL5-31-12.pdf).

<sup>16</sup> Authors' analysis of the public use micro-data from the 1980 Census and the 2009-2011 American Community Survey (ACS) provided by Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010.

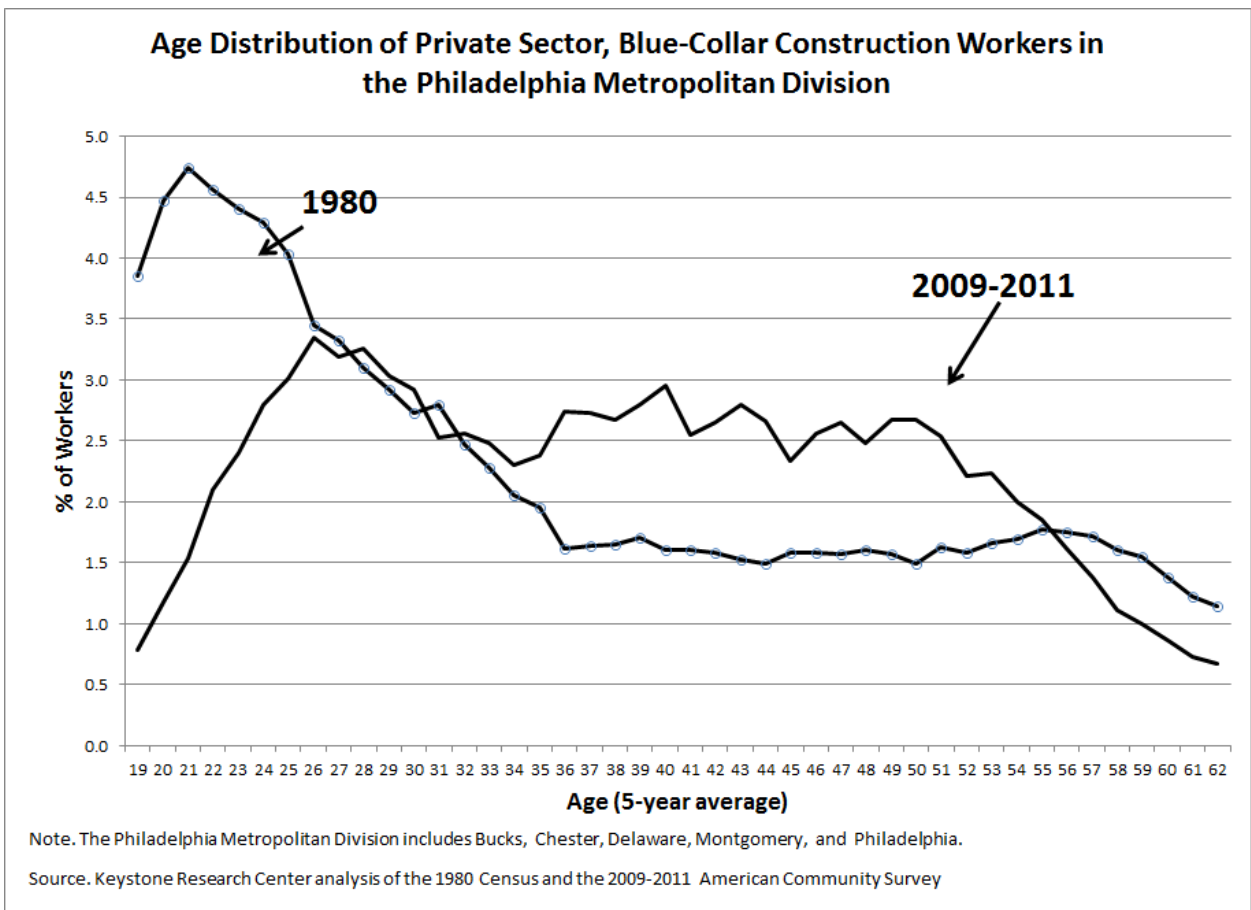
For these reasons, the Project could benefit from establishing ambitious apprenticeship utilization provisions through its PLA. Using more apprentices could also lower total labor (or “crew”) costs on the project. In addition, more apprenticeship slots could expand the opportunity to enable School District residents to enter a middle-class construction career through working on the project, with tax benefits to the District for a generation.

**Table 3.**

Age	Union		Non-union	
	Count	%	Count	%
16 to 30	2,316	15%	10,239	35%
31 to 40	3,458	22%	6,617	23%
41 to 50	5,594	36%	7,135	25%
51 to 54	2,627	17%	761	3%
55 and older	1,555	10%	4,366	15%

Note. Sample is limited to private sector blue-collar workers employed in the construction industry living in the Philadelphia Metropolitan Division.

Source. Keystone Research Center analysis of the Current Population Survey



*Reliance on local labor.* A PLA, through reliance on union hiring halls, will guarantee first opportunities for employment to labor within the region (the size of the “region” depending on

the geographic area covered by the local union for each craft). Hiring halls only reach out beyond the region if workers with the requisite skills are not available locally and rarely need to rely on out-of-state labor. Many PLAs across the country (see below) also include provisions that set targets for hiring of residents of the jurisdiction of the project owner (as apprentices and/or journeyworkers), which in this case would be Bristol Township. As noted, one particular advantage of provisions that increase recruitment of School District residents into apprenticeship would be a long-term boost to the tax revenue of the School District: any individual that successfully begins a career in construction via an apprenticeship that begins on the Project could then end up paying robust taxes for 30+ years while working on projects anywhere in the region.

*Access for minorities and women to jobs and apprenticeship.* Another benefit from the use of a PLA, especially with apprenticeship utilization provisions, could be the provision of increased opportunities for minorities and women, including as apprentices (but also as journeyworkers). Official statistics show that the overwhelming majority of women and minorities in Pennsylvania who participate in apprenticeship programs do so through joint programs. In 2001, joint labor-management programs in Pennsylvania registered 319 additional male minorities and 76 female apprentices.<sup>17</sup> This compared with 33 male minorities and five women in non-union apprenticeship programs. The relative success of jointly sponsored apprenticeship programs also shows up in data on union membership by race and ethnicity in Pennsylvania (see Table 4). African-Americans in particular account for a higher share of the union workforce (14%) than of the non-union workforce (7%) in the Philadelphia Metropolitan Division.

**Table 4.**  
**Race and Ethnicity of Union and Non-Union Blue-Collar Construction Workers Living in the Philadelphia Metropolitan Area, 2009-2012**

Race & Ethnicity	Union Trades	Non-Union Trades
White	82%	81%
Black	14%	7%
Hispanic	4%	9%
Other	0%	2%

*Source.* KRC analysis of the Current Population Survey

A PLA on the Bristol Township School District projects could establish and help achieve local hire and workforce diversification goals, especially if it has an Economic Opportunity Plan, a common feature of PLAs in the region. According to industry sources, a PLA is the best vehicle for enforcing these kinds of targets. (For more detail on Economic Opportunity Plan provisions, see below.)

*Apprenticeship utilization provisions are increasingly common in PLAs.* According to industry sources, the last six or seven PLA agreements in the Philadelphia region have included specific language to incorporate apprentices. A recent national analysis of 185 PLAs found that more than half of them had apprentice utilization provisions (see Table 3). The use of similar language for the a PLA covering construction in the City of Allentown could be a source of cost

<sup>17</sup> Bradley and Herzenberg, *Construction Apprenticeship and Training in Pennsylvania*, op. cit.

savings and also address the need for expanded apprenticeship opportunities for the residents of City of Allentown.

<i>Apprentice Utilization Requirement</i>	<i>Number of PLAs With Provision</i>
15 to 20% of total hours	8
20 to 40% of workforce	18
20 to 33.3% of workforce by craft	16
Ratios set by state, federal laws, and CBAs	55
Other	3
<b>Total PLAs (out of 185) with Apprentice Utilization Provisions</b>	<b>100</b>
<i>Source. Maria Figueroa, Jeff Grabelsky, and Ryan Lamare, Community Workforce Provisions in Project Labor Agreements: A Tool for Building Middle-Class Careers, October 2011, on line at <a href="http://www.ilr.cornell.edu/news/upload/PLA-REPORT-10-6-2011_FINAL.pdf">http://www.ilr.cornell.edu/news/upload/PLA-REPORT-10-6-2011_FINAL.pdf</a></i>	

*Many PLAs also contain local hire provisions.* A PLA, through reliance on union hiring halls, will also guarantee first opportunities for employment to labor within the region. Hiring halls only reach out beyond the region if workers with the requisite skills are not available locally and rarely need to rely on out-of-state labor. A growing number of PLAs across the country include explicit provisions encouraging hiring locally. Some of these provisions include specific targets for local hiring (see Table 4).

<i>Local Hire Provisions</i>	<i>Number of PLAs</i>	<i>Share Out of the 70 That Have Local Hire Provisions</i>
Provisions without specified ratios	42	60%
Ratios of 50 to 80% of workforce	15	21%
Ratios of 25 to 40% of workforce	9	13%
Ratios of 20 to 50% of work hours	4	6%
<b>Total PLAs with Local Hire Provisions</b>	<b>70</b>	<b>100%</b>
<i>Source. Figueroa et. al. Community Workforce Provisions in Project Labor Agreements</i>		

*Many PLAs also Contain Workforce Diversity Provisions.* More than 100 of 185 PLAs implemented during the last 14 years have minority and/or female hiring provisions (Table 5). PLAs in the Mid-Atlantic region are the most likely to have goals for hiring minorities and the economically disadvantaged and implementation provisions to monitor progress towards these goals. Local hire provisions are most predominant in the West and Northeast. A small but growing share of PLA include diversity provisions specific to apprentices (Table 6).



<i>Economic Opportunity/Diversity Provision</i>	<i>Number of PLAs Out of 185 with the Provision</i>
Helmets-to-Hardhats (H2H)/Veterans Hiring	139
Minority/Women Hiring	103
Apprentice Utilization	100
Local Hire	70
Implementation & Monitoring Process	65
Union Pre-Apprenticeship Program Utilization	55
Econ. Disadvantaged as % of Local Hires	45
Women/Minority-Owned & Small Business Util.	36
Local Residents as % of Employed Apprentices	25
Community Involvement and Resources	12
Other Pre-Apprenticeship Program Utilization	6

*Source. Figueroa et. al. Community Workforce Provisions in Project Labor Agreements*

Local/Diverse Apprentice Provisions	Number of PLAs with Provision
Percent of Employed Apprentices that should be Minority, Women, or Economically Disadvantaged	14
Percent of Employed Apprentices that should be Local Residents	11

*Source. Figueroa et. al. Community Workforce Provisions in Project Labor Agreements*

Some of the strongest economic opportunity and workforce diversity provisions exist on PLAs negotiated in Philadelphia. For example, the Economic Opportunity Plan of a recent “Partnership Agreement” governing the construction of the Philadelphia Youth Center included three main components:

- provisions for construction contractors bidding for project work to make “best and good faith efforts” to use minority workers and minority- and women-owned businesses on the project;
- numerical targets for use of minority workers and minority- and women-owned businesses on the project (the goal for minority workers was 40% of all project hours for both journeyworkers and apprentices); and
- evaluation provisions that monitor implementation of the best and good faith efforts and the success at achieving numerical targets.

Ongoing multi-year construction at Temple University is also governed by similar PLA provisions and has so far achieve a minority share of 36%, a female share of 7%, and a minority plus female share of 40%.

*Establishing effective pipeline and career development programs.* One comment feature of projects governed by PLAs with strong local and/or diverse hiring and apprenticeship targets is investment in effective recruitment, screening, and pre-apprenticeship training programs that can help target groups (such as School District residents) qualify as apprentices. A natural fit with the Project would be investment in strengthening school-based career counseling and pre-apprenticeship programs for students in the school district and possibly for out-of-school youth. Programs for high-school students from which Bristol Township School District could learn exist in many places in the broader region, including Norristown, Delaware County, and the cities of Reading and Philadelphia.

## **H. Analysis of Project Labor Agreement Benefits Based on Survey of Collective Bargaining Agreements**

Approximately 18 building trades are likely to be involved in the Project. The most pertinent terms and conditions of recent collective bargaining agreements of most of the local trade unions or councils were compared against each other and with the standard provisions of a PLA, and analyzed with regard to whether they would achieve the goals listed in Section B above. This comparison and analysis revealed the following.

### **1. Strikes and Lock Outs**

PLAs, in general, provide that there shall be no strikes, lockouts, work stoppages, or other disruptive activity during, or as a result of, re-negotiations of local agreements during the term of the project.

The expiration of these agreements during construction of the project would, absent a PLA, have the potential for resulting in a lawful strike that could substantially delay the project construction and completion.

### **2. Hours of Work, Shifts, Premium Pay and Holidays**

There is diversity among local agreements in terms of start and quit times, rules governing the establishment of additional shifts outside the standard work day, whether work starting outside the standard work day requires premium pay, and the number of observed holidays.

It is quite common in the normal course of construction that any given trade will require the support and/or assistance of one or more other trades in the performance of routine work. It is imperative, therefore, that for efficient scheduling and cost control purposes, the contractor can depend upon the entire workforce being on the job on the same days, with predictable start and quit times and clear rules regarding premium pay for work scheduled outside the normal shift.

PLAs, in general, provide standardized hours of work, shifts, premium pay and observed holidays across the various trades creating both potential cost savings and flexibility to aid in the on time completion of a project.

### **3. Disputes/Grievances/Arbitration**

#### **i. Jurisdictional Disputes and Work Stoppages**

Procedures for dealing with jurisdictional work assignments and consequential disputes are not uniform and consistent. Agreements vary, with regard to costs, binding effect of award, and work disruption pending decisions. Most importantly, there is no existing method, means, or procedure to ensure that there will be no strike, lockout, work stoppage or other work disruption pending resolution of such a dispute.

In general, PLAs set forth the procedures dealing with construction work assignments on the project and consequential jurisdictional disputes that might arise. This provision establishes that there will be no strike, work stoppage or other disruptive activity pending

resolution of the dispute.

ii. Disputes and Grievance Resolution.

Though local labor-management grievance procedures exist, they vary among specific crafts and contractors associations. No standardized, binding forum exists with authority over all respective parties.

PLAs sets forth a standardized procedure for resolution of grievances or disputes arising from a claimed violation of this agreement or from disputes between or among signatories to this agreement other than jurisdictional disputes or alleged violations of the "No Strike, No Lock Out" provisions.

4. Management Rights

Several of the existing agreements do not contain a Management's Rights clause. Those that exist are either ambiguous or inadequate to provide the contractor with the authority and/or flexibility required for necessary control and management of the project work.

A comprehensive Management's Rights clause applicable to all contractors and all unions is a standard feature of PLAs. It enumerates the powers and exclusive authority of the contractors for management and control of project operations including: direction of work force (numbers and qualifications), assignment and schedule of work (regular hours and overtime), promulgation of work rules, and determination of and choice of equipment, materials, techniques, methods and technology utilized on the project, regardless of their source.

5. Apprentices

In local agreements, typical craft variation in local agreements exists regarding the ratio of apprentices to journeyman to be used on project.

In an effort to meet the need to maintain continuing supportive programs designed to develop adequate numbers of competent workers in the building construction trades, most PLAs encourage (in general terms) contractors to utilize apprentices. As noted, some PLAs include stronger apprenticeship utilization provisions, both to capitalize on the economic benefit to the use of apprentices, to ensure adequate long-term investment in apprenticeship, and sometimes to expand apprenticeship opportunities for local workers, minorities, and/or women.

6. Work Rules

PLAs provide that the Construction Manager and the Contractors establish reasonable project rules as appropriate for the good order of the project.

7. Open to Both Union and Non-Union Contractors

In general, PLAs provide access to union hiring halls and thus a secure supply of skilled workers. PLAs can also include flexible provisions permitting Contractors to employ applicants from any available source if the Union is unable to fill an opening. Contractors

are also typically allowed to utilize their existing employees in the positions of project manager, project superintendent and project foreman.

## **I. Customizing and Administering the PLA**

The previous section reviews the general advantages of a PLA. The section prior to that discussed at some length the benefits of customizing a PLA to achieve specific priorities and goals of the School District.

We recommend that the District seek the assistance of the Philadelphia Area Labor-Management Committee (PALM) and its Executive Director Tony Wigglesworth in customizing and then implementing the PLA. PALM has extensive experience in both these roles on large Philadelphia-region construction projects. PALM also has excellent relationships with owners, contractors, and unions, and is thus able to achieve PLAs viewed as constructive tools by all parties and that ordinarily achieve projects on-time and on-budget.

Two standard features of PALM-negotiated and -monitored PLAs are the incorporation of the “Built-Rite” program established three decades ago by PALM and the incorporation of an Economic Opportunity Plan. The “Built-Rite” program, established in 1983 by PALM, is a “process” innovation that promotes structured communication and problem-solving among contractors, owners, and building trades unions. In the context of projects governed by PLAs, Built-Rite serves as a generic way to surface problems early that might drive up costs or delay project completion. By integrating Built-Rite with PLAs, PALM helps make PLAs “living agreements” that encourage multi-stakeholder cooperation that benefits owners in particular. As noted, an Economic Opportunity Plan is a standard tool for promoting increased local, minority, and/or female hiring, including through establishment of goals (for journeyworker and apprentice hiring) up front, monitoring and problem-solving mechanisms (monthly reporting on outcomes coupled with review by committees of all relevant parties), and enhanced pipeline programs that serve school students, community members, or both.

To the extent that it is helpful, Keystone Research Center could, under the terms of its existing contract (i.e., without additional compensation), assist PALM and the School District in customizing a PLA.

## **J. Conclusion**

Based on the analysis above, we find that a PLA would facilitate successful completion of the Project on time and on budget as well as achieve the other outcomes listed in B above.

A customized PLA with strong provisions for apprenticeship utilization and the recruitment of local and diverse apprenticeships could powerfully complement the School District’s strategic decision to undertake the Project while borrowing costs and bid prices are still low.