

Testimony of Peter Philips, Ph.D., Professor of Economics, University of Utah

PLAs Are Common in California

Project labor agreements (PLAs) are a common contractual agreement found both in the public and private sectors of U.S. construction. In California, the California Research Bureau of the California State Library found that 72 percent of the sample of PLAs they studied were private sector project labor agreements.¹ Because they are public documents, public sector PLAs are more easily tracked.

Kevin Dayton, a critic of public sector PLAs, has compiled a list of 213 public sector PLAs signed since 1993 of which 74 were with California public school districts or community colleges. Between 2013 and early 2015, 37 public sector PLAs were signed, with just over half (19) being school district or community college PLAs.² In the Bay Area, Dayton found 27 public school and community college project labor agreements. These are listed in the footnote below.³

New Partners: New Opportunities

To understand why project labor agreements are popular both in the public and private sectors of construction, one needs to understand what a PLA is.

¹ Kimberly Johnston-Dodds, "Constructing California: A Review of Project Labor Agreements," California Research Bureau, California State Library, CRB 01-010, 2001, <https://www.library.ca.gov/crb/01/10/01-010.pdf>

²Kevin Dayton, President and CEO, Labor Issues Solutions, LLC, "Copies of All Project Labor Agreements on California Government Projects, 1993-Present," Chart compiled as of April 6, 2015. <http://laborissuesolutions.com/list-of-all-project-labor-agreements-imposed-on-government-projects-california-1993-2012/>

³ They included: Albany Unified School District, Alum Rock Union Elementary School District, Antioch Unified School District, Berkeley Unified School District, City College of San Francisco, College of Marin (Marin Community College District), Contra Costa Community College District, East Side Union High School District, Foothill-DeAnza Community College District, Fremont Union High School District, Hayward Unified School District, Milpitas Unified School District, Mt. Diablo Unified School District, Oakland Unified School District, Oakley Union Elementary School District, Peralta Community College District, Pittsburg Unified School District, San Francisco Unified School District, San Jose-Evergreen Community College District, San Leandro Unified School District, San Mateo Community College District, San Mateo Union High School District, San Ramon Valley Unified School District, Solano Community College District, Vallejo City Unified School District, South San Francisco Unified School District, West Valley-Mission Community College District; Kevin Dayton (see citation above).

A project labor agreement is a pre-hire contract between an owner with work to be done and a group of construction craft unions hoping to get some of that work. In traditional collective bargaining, in construction, specific craft unions bargain with their related specialty or general contractors over future prospective work in general. With project labor agreements, all construction craft unions in an area, as a group, bargain with an owner over a known amount of specific work.

The owner has a bargaining advantage with PLAs that contractors engaged in traditional bargaining do not have. Owners have a bird in the hand--known work, while contractors are bargaining over birds in the bush--possible, prospective work. Unions are attracted to known, upcoming work as opposed to prospective work that may or may not emerge.

Thus, the owner can ask for something (or many things) of unions in exchange for actual, in-the-works, employment opportunities. What the owner asks for is up to the owner. It could be a no-strike pledge. It could be concessions on work schedules, holidays, overtime or work rules. The owner could ask for wage concessions or expedited worker compensation procedures.

In addition to possible concessions, the owner could also ask for sweeteners--local hire provisions, local access to apprenticeship training, help with project permits or project bonding. Whatever the combination of concessions or sweeteners that the owner asks for, the owner is offering to trade real work for these modifications from or additions to the local collectively bargained contracts.

As with all bargaining, the union and the owner may not reach "yes" in negotiating over a project labor agreement. Each party is free to walk away if the inducement is not worth the cost.

All that a PLA does is bring new parties together to explore new possibilities of win-win. If they are found, then a PLA is signed. If they are not found, the PLA goes unsigned. The provisions of a PLA vary widely based on the needs of the owners and unions that get together to explore mutual benefits. The key point is that PLAs provide a tool for owners and unions to explore potential mutual benefits that are not available to either party through traditional collective bargaining. When more lines of negotiation exist, when more negotiation partners are joined, new and potentially creative win-wins are opened for exploration.

Critics Argue that School PLAs Increase Costs by Reducing the Number of Bidders

Despite the popularity of PLAs, they remain controversial in the public sector. Critics argue that PLAs come with a cost: they raise public construction costs. The route to raising costs on prevailing wage projects is through reducing the number of bidders on PLA public projects compared to non-PLA public projects. Also, critics argue that union work rules hobble productivity and increase costs. Furthermore, critics state that PLAs discriminate against nonunion contractors and workers.

Setting aside the issue of the number of bidders for the moment, because PLA provisions are flexible, owners concerned with nonunion access to PLA projects or work rules can negotiate into their PLA provisions allowing nonunion contractors to bid on their PLA project, and/or allowing nonunion

contractors to bring onto the project core nonunion workers. The owner can negotiate work rules and jurisdictions between crafts. The owner can negotiate accelerated dispute resolution procedures.

PLAs are contracts and as such the contract can be tailored to the needs and concerns of the owner.

Nonetheless, the Associated Builders and Contractors (ABC) argues that PLAs are poor public policy because "PLAs increase the costs to taxpayers, reduce the number of potential bidders, and do nothing to improve the quality, safety, timeliness or overall efficiency of government construction projects."⁴

In support of the argument that PLAs raise government construction costs, the ABC underwrote a study of public school construction costs in California.⁵ This study noted that

Opponents argue that PLAs increase costs. They claim that the requirements imposed by PLAs discourage nonunion contractors from bidding on projects and subcontractors from participating. This reduced competition, it is claimed, results in overall higher bids. Opponents also claim that the work condition rules required in PLAs increase labor costs and that these are passed onto the project's developer.⁶

To test this proposition, the authors selected data from 551 public schools with 88% built without PLAs and 12% with PLA contracts. Using standard statistical techniques, the authors concluded that school construction "costs are 13 to 15 percent higher when school districts construct a school under a PLA."⁷

If correct, these are dramatic conclusions because labor costs as a percent of total costs in California construction averages around 25%.⁸ Wage rates and benefits on public school construction do not vary significantly between PLA and non-PLA projects because both require the payment of prevailing wages. Thus, without changing wage rates or benefits at all, the authors conclude that with the elimination of PLA agreements, wage costs would fall by 60 percent due to the elimination of union work rules and or the increase in the number of bidders.⁹

The source of this conclusion may, however, be the result of a statistical confusion. The higher cost of school PLAs in the authors study is primarily driven by higher costs of building schools in Los Angeles. So

⁴ Maurice Baskin, Esq, Associated Builders and Contractors (ABC), "Statement for the Record for Associated Builders and Contractors," Before the House Oversight and Government Reform Committee Technology, Information Policy, Intergovernmental Relations and Procurement Reform Subcommittee, June 3, 2011, p. 2, http://edworkforce.house.gov/uploadedfiles/baskin_-_testimony.pdf

⁵ Vince Vasquez, Dr. Dale Glaser, and W. Erik Bruvold, "Measuring the Cost of Project Labor Agreements on School Construction in California," 2010, <http://www.nusinstitute.org/assets/resources/pageResources/Measuring-the-Cost-of-Project-Labor-Agreements-on-School-Construction-in-California.pdf>

⁶ Vasquez, et al. p. 1.

⁷ Vasquez et al. p. 1.

⁸ US Bureau of the Census, EC1223A1, Construction: Geographic Area Series: Detailed Statistics for the State: 2012, California, 2012 Economic Census <http://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>

⁹ If labor costs are 25% of total costs, and total costs fall by 15% due to a change in labor costs, then labor costs must fall from 25% to 10%. This is a 60% decline in the cost of labor.

the question becomes--is the 15% higher cost they find due to PLAs or due to the costs of construction in Los Angeles?

The authors submitted their statistical analysis for review to the University of Southern California, Keston Institute for Public Finance and Infrastructure Policy. The Keston Institute pointed out that:

The LAUSD projects [in the Vasquez study] represent an unavoidable dilemma of covariance which hindered the ability of the research team to delineate to what extent it was the presence of PLAs or the LAUSD that explain the variability in cost. Despite laudable efforts by the research team to address this issue, they were not able to disentangle the two factors.¹⁰

The statistical term "covariance" in this case simply means one cannot know from the Vasquez study whether the more expensive schools in Los Angeles are due to the PLAs on LAUSD schools or other factors such as the cost of construction in LA or the characteristics unique to LAUSD schools. Unlike some of the literature that the authors criticize, a search of Google Scholar does not show that the Vasquez paper has ever passed peer review and been published in an academic journal. The likely reason for this is the "covariance" hole in the Vasquez research found by the Keston Institute.¹¹

Vasquez et al. also failed to show that PLA projects actually discouraged contractors from bidding on PLA projects in sufficient numbers so as to increase construction costs. Given that the hypothesized cause of higher PLA costs is fewer PLA bidders, this is an important missing piece of the puzzle. We now turn to that piece.

The General Relationship between Bidders and Costs in Construction

Increasing the number of bidders on a construction project can increase competition and decrease costs but there are diminishing returns to increasing the number of bidders. The second bidder on a project has the biggest effect on competition because that bidder breaks the monopoly held by the first bidder. The third bidder also increases competition but less so than the second. The fourth bidder will increase competition but with less of an impact compared to the third. And so on. In general, the effect of a

¹⁰ Letter from Richard G. Little, AICP, Director, The Keston Institute for Public Finance and Infrastructure Policy to Mr. Kevin D. Korenthal, Executive Director, Associated Builders and Contractors of California Cooperation Committee, July 13, 2011 found in Vasquez, et al. p. 18.

¹¹ For instance, Vasquez et al. criticize Belman et al. who do not find a cost increase associated with school PLAs. But while the Belman piece passed peer review and was published in the University of California journal *Industrial Relations*, the Vasquez paper has not been accepted in a peer-reviewed academic journal. See: DALE BELMAN, RUSSELL ORMISTON, RICHARD KELSO, WILLIAM SCHRIVER and KENNETH A. FRANK, "Project Labor Agreements' Effect on School Construction Costs in Massachusetts, *Industrial Relations*, Volume 49, Issue 1, pages 44–60, January 2010.

seventh or eighth bidder on the lowest bid price will be minimal. In a sprint does the fastest runner run that much faster when there are seven runners instead of six?¹²

Various factors will determine how many bidders there are on a project and how much influence the next bidder will have on the lowest bid. All other things being equal, larger projects will have fewer bidders because fewer contractors will have the resources and qualifications to build larger projects. In the downturn, there will be more bidders for each of the fewer available projects as contractors scramble for work. In the upturn, each project will attract fewer bidders as contractors are busy.

The size of a project will affect the importance of each additional bidder on the competition for a project. In general, the larger the project, the fewer bidders are needed to make a project competitive. This is because the value of large projects to contractors induces them to carefully prepare their bids fearful of losing a big project. Typically where 4 or 5 bidders are needed to make a smaller project competitive, 3 or even 2 will do on a larger project.¹³

Prequalification will affect the number of contractors actually bidding on a project by eliminating less qualified contractors. This is not necessarily a bad thing in the construction industry because reducing the number of bidders may be justified by the elimination of a potential winner who might not actually be able to build the project.

In the analysis of the San Jose Unified School District compared to East Side Union High School District below, the slight difference in the average number of bidders between the two districts can be accounted for by the fact that during the period of analysis, San Jose Unified used multiple prime contracts while East Side used general contractors. The smaller values on the multiple prime contracts helps explain the slight increase in the average number of bidders (4.5 vs. 4.0). In the analysis of the College of Marin projects below, the PLA projects were larger also helping to explain the somewhat larger number of bidders on the smaller non-PLA projects (8.5 vs. 7.3). Having one additional contractor bidding on a project that already has 4 to 7 bidders is unlikely to cut labor costs by 60%.

San Jose Unified School District vs. East Side Union High School District

The East Side Union High School District and the San Jose Unified School District are similar adjacent public school districts in San Jose, California.¹⁴ In March 2002, voters in both districts approved bond issues for school construction, repair and renovation. The East Side vote allowed the district to borrow up to \$300 million. In San Jose, the vote capped borrowing at \$429 million. In 2004, the East Side district

¹² Sheng Li, Joshua R Foulger and Peter W Philips, "Analysis of the Impacts of the Number of Bidders Upon Bid Values," *Public Works Management Policy*, January 2008 vol. 12 no. 3 503-514

¹³ Sheng Li and Peter Philips, "Construction Procurement Auctions: Do Entrant Bidders Employ More Aggressive Strategies than Incumbent Bidders?," *Review of Industrial Organization*, May 2012, Volume 40, Issue 3, pp 191-205.

¹⁴ https://en.wikipedia.org/wiki/East_Side_Union_High_School_District
https://en.wikipedia.org/wiki/San_Jose_Unified_School_District

entered into a PLA with the Santa Clara and San Benito Building and Construction Trades Council. The San Jose district chose to build without a PLA.

The different decisions of the districts with regard to a PLA leave us with the perfect ingredients for a naturally occurring experiment. We can compare bidding behavior with the East Side district before and after the implementation of the PLA, and we can compare across districts.

Belman, Bodah and Philips identified 21 projects in the East Side district bid under the PLA and 35 projects bid during the same period without a PLA in the San Jose district. They also identified twelve projects bid prior to the PLA agreement in the East Side district and 96 projects in the San Jose district during the same period. Thus, they compared 164 projects, 21 of which were built under a PLA.

There were two potentially important differences between the two districts with respect to project bidding. First, the East Side projects were, in dollar value, approximately two to three times larger than the San Jose projects both before and after the use of PLAs. Also, the two districts employed different bidding procedures. The East Side district favored hiring a single prime contractor, who then sought its own subcontractors, while the San Jose district treated specialty contractors as individual prime contractors.

Data on these projects showed that the East Side district received, on average, fewer bidders per bid opening compared to San Jose Unified (approximately 4.5 versus approximately 4.0). This result would be consistent with the assertion that PLAs reduce the number of bids on a project, except that the result holds for both before and after the implementation of the PLA. In fact, the difference in the number of bidders between the two districts decreased after the acceptance of the PLA.

Further, the number of bidders dropped across both districts over the time period. This decrease was probably due to an increase in construction activity in the area at the time. In general, during busy periods fewer contractors bid on any given project compared to slack times when idle contractors crowd onto the bid lists of available projects.

The small difference in the number of bidders both before and after the PLA across both districts is probably due to the differing methods of construction management. By using separate prime contracts on specialty work San Jose Unified would attract slightly more contractors simply because there are more specialty than general contractors in most construction markets. Also by chopping projects up into smaller multiple prime contracts, the smaller dollar size of contracts helps qualify more contractors to bid.

The key point is that the ratio of bidders on the East Side and San Jose Unified projects remained unchanged before and after East Side Unified High School District took on a PLA.¹⁵

¹⁵ Dale Belman, Matthew M Bodah and Peter Philips, "Project Labor Agreements," Electri International, The Foundation for Electrical Construction, 2007, pp. 53-59.

College of Marin PLA vs. Non-PLA Projects

Vasquez was criticized the Keston Institute for being unable to disentangle the effects of PLAs from the effects of building schools in the Los Angeles Unified School District (LAUSD). Keston stated:

Perhaps the only way to do so is empirically, with LAUSD undertaking a group of projects which do not utilize PLAs to serve as a control group.¹⁶

While the LAUSD has not performed such an experiment, the College of Marin recently has. "The College of Marin is a community college in Marin County, California, U.S., with two campuses, one in Kentfield, and the second in Novato. It is the only institution operated by the Marin Community College District."¹⁷ In June 2007, the Marin Community College District Board approved negotiations for a PLA (called a project stabilization agreement--PSA) with the Marin County Building Trades to build three projects-- the Science/Math/Central Plant project at the Kentfield Campus, and the Main Building project at the Indian Valley Campus. After a year of negotiations, the PLA was approved. Contemporaneously, the Board had authorized the construction of four projects-- the Performing Arts Center, the Diamond PE Complex, the Transportation Technology Center, and the Fine Arts Center at Kentfield without PLAs.¹⁸ Pleased with the performance of the first two PLAs, the Board adopted an additional PLA for the New Academic Center (NAC) project in 2013.

The NAC, as planned, is a 44,257 square foot, three level facility located along College Avenue at the District's Kentfield campus. The NAC will house classrooms, a large 120-seat capacity lecture room, computer labs, ESL facilities, and faculty offices, including the Dean's office. The NAC will replace five existing older buildings on the site: Harlan Center, Business Management Center, Olney Hall, the Administrative Center, and the Taqueria restaurant building.¹⁹

So here we have the "a group of projects which do not utilize PLAs to serve as a control group."²⁰ Table 1 shows the average start and completion dates for the three PLA and four non-PLA College of Marin projects. The New Academic Center will be completed in 2015 but is still wrapping up construction. The non-PLAs, on average, began at the bottom of the Great Recession while the PLA projects began, on average in 2011. Both projects, on average, are completed in two years. While all of the PLA projects required that contractors be prequalified, half of the non-PLA projects did not require contractor prequalification. The PLA projects were larger--with an average engineer's estimate of \$29.3 million compared to \$12.5 million for the non-PLA projects.

¹⁶ Letter from Richard G. Little, AICP, Director, The Keston Institute for Public Finance and Infrastructure Policy to Mr. Kevin D. Korenthal, Executive Director, Associated Builders and Contractors of California Cooperation Committee, July 13, 2011 found in Vasquez, et al. p. 18.

¹⁷ https://en.wikipedia.org/wiki/College_of_Marin

¹⁸ http://www.marin.edu/WORD-PPT/BoardPacket4_16_2013.pdf

<http://www.marin.edu/WORD-PPT/PSAMCCDNACInclusionBOT20130618.pdf>

¹⁹ http://www.marin.edu/WORD-PPT/BoardPacket4_16_2013.pdf

²⁰ Letter from Richard G. Little, AICP, Director, The Keston Institute for Public Finance and Infrastructure Policy to Mr. Kevin D. Korenthal, Executive Director, Associated Builders and Contractors of California Cooperation Committee, July 13, 2011 found in Vasquez, et al. p. 18.

On the PLA projects, on average, 7.3 contractors bid while on the non-PLA projects, on average, 8.5 contractors bid. The one fewer bidders on the PLA projects may be explained by 1) the larger size restricting the pool of qualified contractors, 2) prequalification restricting the pool of qualified contractors, 3) the upswing in the construction business cycle limiting the availability of qualified contractors, or 4) the PLA discouraging nonunion contractors (50% of the non-PLA general contractors were nonunion compared to 33% of the PLA general contractors).

Regardless of the reason for one fewer bidders on the PLA contracts, the number bidding were sufficient to generate a competitive low bid. In the case of the PLA projects, the low bidder was, on average, 25% below the engineer's estimate compared to a similar average low bid coming in 22% below the engineer's estimate on the non-PLA projects.

However, in the case of final costs, the gap between the engineer's original estimate and final costs almost converge in the case of the non-PLA projects while in the case of the PLA projects, the final cost still came in 14% below the engineer's estimate.

One can argue whether the change orders that lead to higher final costs compared to accepted bid price are the fault of the owner or the contractor. Regardless, in this controlled experiment, the PLA projects were certainly no more expensive than the non-PLA projects and a case can be made that they were, on average, cheaper. Certainly the decision of the Board of Trustees to adopt an additional PLA after experience with both PLA and non-PLA approaches suggests that this group of decision makers were pleased with this contractual tool.

Table 1: A comparison of bids and final costs for 3 PLA and 4 Non-PLA projects built for the College of Marin

	PLA	Non-PLA
Number of Projects	3	4
Average Start Date	2011	2009
Average Completion Date	2013	2011
P% Projects Requiring Pre-qualified Bidders	100%	50%
Number of Bidders	7.3	8.5
Percent Nonunion Winning Bid	33%	50%
Average Engineer's Estimate	\$29,347,000	\$12,471,250
Average Lowest Bid	\$22,107,667	\$9,721,303
Average Percent Lowest Bid below Estimate	-25%	-22%
Average Final or Current Contract	\$25,318,296	\$12,194,125
Average Percent Final Contract Below Estimate	-14%	-2%

Conclusion

Project labor agreements from the perspective of the owner is a management tool used to exploit their advantage of controlling specific work. They can use this advantage to negotiate either or both concessions or sweeteners relative to the local collectively bargained contracts in construction. The owner can address concerns regarding nonunion access to PLA work through provisions in the PLA contract permitting nonunion bidding and core nonunion worker arrangements. Critics caution that

PLAs will increase public school construction costs by around 15% based on the proposition that PLAs will discourage the number of bidders on public school projects. However, in both the case of comparing San Jose Unified School District compared to East Side Union High School District before the Great Recession and PLA compared to non-PLA projects for the College of Marin after the Great Recession, the difference in bidders was from one-half to one more bidder on the non-PLA projects. In both cases, the increased number of bidders on the non-PLA projects may have been due to the smaller size of these projects rather than the PLA provisions themselves. And furthermore, the proof is in the pudding. There is no evidence that the Marin PLA projects were more expensive relative to the engineer's estimate, and some evidence to suggest that these PLAs projects were less expensive relative to the engineer's estimate. The College of Marin Board members seemed satisfied with using the PLA tool by the fact that after using PLAs twice, they chose to use it again with their last project.

About the Author

Peter Philips, Professor of Economics, received his B.A. from Pomona College and his M.A. and Ph.D. from Stanford University and since 1978 has been on the faculty of the Economics Department at the University of Utah. For the last 25 years, Philips' research has focused on the construction industry including bidding in construction, construction safety, and construction labor market regulations. Philips was the only economist on the National Academies review panel of the National Institutes of Health construction safety research program. Philips has served as a construction expert for the U.S. Labor Department and U.S. Justice Department. Philips has served as a forensic expert on construction issues for major utilities and nonunion contractors. Philips has testified in the Federal Court of Claims on construction labor shortages as well as before many state legislatures and Congress on construction issues.

Philips' peer-reviewed academic journal publications for the last 3 years are:

- Kevin Duncan, Peter Philips and Mark Prus, "Prevailing Wage Regulations and School Construction Costs: Cumulative Evidence from British Columbia," ***Industrial Relations***, Vol. 53, No. 4 (October 2014).
- JaeWhan Kim and Peter Philips, "Remuneration and absenteeism on a large construction site," ***Construction Management and Economics***, October, 2014 Vol. 32, No. 10, 983–999.
- Ziad Hamideh, David Blatter, Peter Philips, Guowang Rao, Josh Simnitt and Tao Yu, "The Impact of IIPP Policies on Statewide Injury Rates in U.S. Construction," ***The Center for Construction Research and Training, CPWR Small Study Final Report***, May 2014
- JaeWhan Kim, Kuo-Liang Chang and Peter Philips, "The Effect of Prevailing Wage Regulations on Contractor Bid Participation and Behavior: A Comparison of Palo Alto, California with Four Nearby Prevailing Wage Municipalities" ***Industrial Relations***, Vol. 51, Issue 4, pp. 874-891, October, 2012.
- Kevin Duncan, Peter Philips and Mark Prus, "Using Stochastic Frontier Regression to Estimate the Construction Cost Inefficiency of Prevailing Wage Laws," ***Engineering, Construction and Architectural Management***, Vol. 19 Iss: 3, pp.320 - 334.

- Sheng Li and Peter Philips, "Construction Procurement Auctions: Do Entrant Bidders Employ More Aggressive Strategies than Incumbent Bidders?," ***Review of Industrial Organization*** Volume 40, Number 3, 191-205.