

Attachment 3

City of Seattle Construction Hiring Analysis

ANALYSIS OF COST DATA

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OUTLINE

1 BID POOL

- Summary Statistics
- Data Challenges
- Addressing Data Challenges

2 DUAL BENEFIT REIMBURSEMENT

- City of Seattle Methodology
- Additional Data Analysis

EXISTING RESEARCH ON COMMUNITY WORKFORCE AGREEMENTS AND SIMILAR AGREEMENTS

The City of Seattle enacted its Community Workforce Agreement (CWA) in April 2015. CWAs and Project Labor Agreements (PLAs) are authorized under the National Labor Relations Act, and have been used in various forms in the United States since the 1930s.

As a result, there have been several research studies done on the impacts of CWAs and PLAs to project costs. These studies vary in the methodology employed, but all use project data from before and after PLAs or CWAs were enacted in order to better understand the impacts of PLAs and CWAs.

- The Employee Policy Foundation found that project costs under a PLA or CWA increase by up to 7% as a result of requiring contractors to pay their workers the union wage rate rather than the prevailing wage rate. (Cato Journal, 2010)
- A 2009 study by the Cornell University School of Industrial and Labor Relations found that PLAs and CWAs do not discriminate against employers and workers, limit the pool of bidders, or raise construction costs. (Cornell University School of Industrial and Labor Relations, 2009)
- The Beacon Hill Institute developed studies in 2003, 2004, and 2006, and found that costs increased by up to 20% for CWA or PLA projects in Connecticut, New York, and Massachusetts. (Beacon Hill Institute, 2003-2006)
- A 2009 study to determine whether these agreements should be used in Department of Veterans Affairs' projects found that costs would increase if CWAs or PLAs were used. Notable, this project found that costs would increase the highest in areas with low union presence, and would increase the lowest in areas with high union presence. IN San Francisco and New York, the study found that the high union presence might even result in cost savings under PLAs or CWAs. (Rider Levett Bucknall, 2009)

METHODOLOGY

CAI compared non-CWA projects from before the CWA was enacted with similar non-CWA projects after the CWA was enacted. This acts as a kind of control, attempting to distinguish if differences between project bids before and after the CWA were related to time.

ALL BIDS

- There were 18 bids across four projects.
- On average, bids were 13.1% lower than the engineer's estimate for each project, with a variance of 2.1%

PRE-CWA BIDS

- There were 11 bids on two projects before the CWA was enacted.
- On average, bids were 21.6% lower than the engineer's estimate with a variance of 1.3%.

CWA BIDS

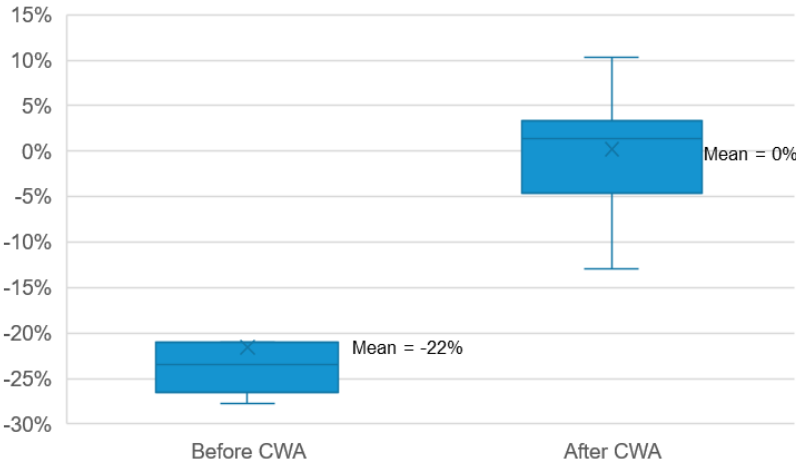
- There were 7 bids on two projects after the CWA was enacted.
- On average, bids were 0.2% higher than the engineer's estimate, with a variance of 0.5%.

CONCLUSION

Differences between contractor bids and engineer's estimates were higher in the time period after the CWA was enacted than they were in the time period before the CWA. However, the small sample size prevents any conclusions from being drawn on this observation. Additionally, the four projects analyzed here involved asphalt and concrete paving. The projects analyzed in the next section are for fire stations and buried reservoirs. These projects are significantly different from one another, and it is therefore difficult to compare Exhibit 1 and Exhibit 2.

EXHIBIT 1. BOXPLOT OF DIFFERENCES BETWEEN ENGINEER'S ESTIMATE AND BID

Non-CWA Projects Before CWA and Similar Projects Post-CWA



Sources: City of Seattle, 2016; Community Attributes Inc., 2016.

METHODOLOGY

In order to normalize bid data from pre-CWA projects and CWA projects, CAI chose to primarily investigate the differences between individual contractor bids and the engineer's estimate for each project. This limits inflation and cost of materials as confounding factors, as both are included in contractor bids and engineer's estimates.

The CWA was enacted in 2015. As a result, looking at post-2015 CWA projects and comparing them to similar pre-2015 projects may introduce time as a confounding variable: **Post-CWA projects could be more expensive due to external factors that may not be adequately captured in the engineer's estimate.**

Because the CWA was only recently enacted, there is too little data available on CWA project bids to draw statistically significant conclusions. In order to assess whether or not there was enough CWA bid data to draw conclusions, CAI performed simple statistical analyses, which is presented here. CAI looked at three CWA projects that had similar projects before the CWA was enacted. There were not enough similar projects that occurred in the same time frame to provide a truly accurate comparison group.

ALL BIDS

- There were 68 bids across 16 projects from 2011 to 2016.
- On average, bids were 13.5% higher than the engineer's estimate for each project, with a variance of 4.1%

PRE-CWA BIDS

- There were 59 bids on 13 pre-CWA projects.
- On average, bids were 13.0% higher than the engineer's estimate with a variance of 3.6%.

CWA BIDS

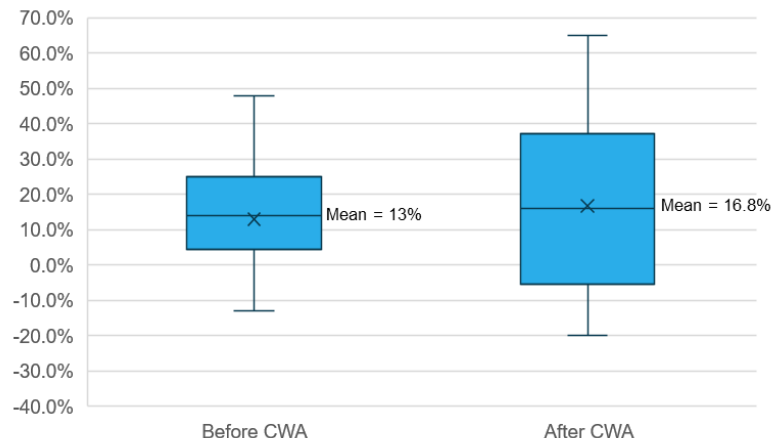
- There were 9 bids on 3 CWA projects.
- On average, bids were 16.8% higher than the engineer's estimate, with a variance of 7.7%.

CONCLUSION

While CWA bids were higher on average than pre-CWA projects, there is not enough data on CWA bids to conclude that the CWA is responsible for the increase in cost with statistical certainty. In addition, engineer's estimates are based on estimated costs while contractor bids are based on actual costs and the difference between the two fluctuates over time. Administrative costs in engineer's estimates are based on general industry information. Contractor's administrative costs, however, are specific to their business model, and vary by business.

EXHIBIT 2. BOXPLOT OF DIFFERENCES BETWEEN ENGINEER'S ESTIMATE AND BID

All CWA Buried Reservoir and Fire Station Projects and Similar Pre-CWA projects



Sources: City of Seattle, 2016; Community Attributes Inc., 2016.

ENGINEER'S ESTIMATE

- > Engineer's estimates are based on estimated costs. Contractor bids are based on actual costs.

ADMINISTRATIVE COSTS

- > Administrative costs in engineer's estimates are incidental and are based on generalized industry analysis. Administrative costs (e.g. contractor's overhead, profit and social equity) in contractor bids are specific to their business model, and vary by business type and level of effort.

SAMPLE SIZE

- > There were only 3 CWA projects that had comparable non-CWA projects. Additionally, there were only 9 bids on these CWA projects. As a result, analysis of the difference between pre-CWA and CWA project bids is not statistically significant.

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BACKGROUND

Open-shop contractors with existing employee benefit programs may request reimbursement for those costs for the hours worked on priority hire projects. When open-shop contractors contribute into both an existing employer-sponsored benefit plan while also making required payments into the trust fund, they are eligible for dual benefit reimbursement. This prevents them from paying more than other contractors.

CITY OF SEATTLE METHODOLOGY

It is important to note that, to date, no contracts under the CWA have been closed. As a result, there is no final project cost data to analyze.

The City of Seattle has provided data on the total amounts paid on CWA projects through September 2016 and the total dual reimbursement paid on CWA projects through October 2016. **Exhibit 3** summarizes this information. At this time, there are no pending dual reimbursement requests.

EXHIBIT 3. DUAL REIMBURSEMENT AND TOTAL PAID ON PROJECTS

All CWA Projects

| Project | Total Paid on | | Dual Reimbursement Paid on Project | Share |
|---|----------------------|---------------------|---------------------------------------|--------------|
| | Project | Project | | |
| Elliott Bay Seawall | \$283,163,041 | \$56,033 | | 0.02% |
| Denny Substation | \$13,265,295 | \$0 | | 0.00% |
| Denny Network | \$7,337,151 | \$0 | | 0.00% |
| Fire Station 32 | \$3,695,368 | \$0 | | 0.00% |
| Fire Station 22 | \$1,820,872 | \$0 | | 0.00% |
| Buried Reservoir Seismic Program--Maple Leaf & Myrtle | \$5,275,160 | \$88,363 | | 1.68% |
| Blue Ridge Conduit Replacement | \$1,903,052 | \$0 | | 0.00% |
| Total | \$316,459,939 | \$144,396.51 | | 0.05% |

Sources: City of Seattle, 2016; Community Attributes Inc., 2016.
 Notes: Total Paid is accurate through September 2016 and Dual Reimbursement Paid is accurate through October 2016.

APPENDIX

1 BIBLIOGRAPHY

BIBLIOGRAPHY

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