

Project of Change for Policy Group on Tradeswomen's Issues

BUILDING EQUITY: Diversifying Boston's Construction Workforce



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Introduction

Boston is in the midst of a construction boom, with more than \$9.8 billion in ongoing construction and \$6.8 billion in new development approved in the construction pipeline,¹ and with employment in construction in the Boston area increasing by 5.6% between September 2017 and 2018.² However, questions remain as to who will benefit from Boston's construction boom. The Boston Resident Jobs Policy (BRJP) sets standards for contractors to employ women, people of color, and Boston residents, but it remains to be seen whether inflowing capital will help remediate Boston's vast racial wealth

¹The Bay State Banner. "Council probes Boston Jobs policy." October 31st, 2018.

<https://www.baystatebanner.com/2018/10/31/council-probes-boston-jobs-policy/>

²Bureau of Labor Statistics. "Boston Area Employment — October 2018." November 30, 2018.

https://www.bls.gov/regions/new-england/news-release/areaemployment_boston.htm

inequalities³ and benefit women and people of color who have historically been excluded from the construction industry,⁴ or help reproduce existing disparities within Boston and across the nation.

This report sets out to help answer this question, and identify strategies for the City of Boston, planners, and labor advocates to improve representation in the construction industry. We developed this report for Susan Moir, Research Director at the Policy Group on Tradeswomen's Issues (PGTI). PGTI is a collaborative of stakeholders in the construction industry with the goal of improving women's representation in the construction industry, co-convened by the UMass Boston Labor Resource Center, the Metropolitan Boston Building Trades Council, the New England Regional Council of Carpenters, the Massachusetts AFL-CIO, and the Dorchester/Roxbury Labor Committee.⁵

To create this report, we reviewed the history of the BRJP and BRJP regulations; analyzed publically available data on contractors' compliance with the BRJP from 2013 to December 31, 2018; and conducted four interviews with officials in the Mayor's Office of Economic Development and Boston Employment Commission, two interviews with Susan Moir, and attended two hearings on the BRJP (one monthly meeting, and one biannual meeting).

Although the BRJP sets hours-worked goals for women, persons of color, and Boston residents, our report primarily focuses on women and persons of color. This reflects both the interests of our client-organization and limitations of the residency metric. Boston officials and PGTI both told us that the residency goal can be a "moving target" because once Boston construction workers earn enough money to buy a house, they can only afford to purchase a home outside the city.

Background

Boston Residents Job Policy History & Overview

The history of the BRJP dates back to 1979 when Mayor Kevin White issued an Executive Order requiring private contractors to hire 50, 25, and 10 percent residents,

³Federal Reserve Bank of Boston. "The Color of Wealth." March 25, 2015.
<https://www.bostonfed.org/publications/one-time-pubs/color-of-wealth.aspx>

⁴Erich, Mark and Jeffrey Grabelsky. "Standing at a Crossroads: the Building Trades in the Twenty-First Century." September 9, 2005. Electronic version. Retrieved 12/3/2018 from Cornell University, ILR school site:
<http://digitalcommons.ilr.cornell.edu/articles/281/>

⁵Susan Moir and PGTI sponsor a number of events specifically focused on increasing women's' participation in the construction industry, based on disparities in outreach to women compared to men. Ms. Moir mentioned the Tradeswomen's Leadership Circle, comprising 8-10 tradeswomen of color who meet every 6 weeks. She also described Tradeswomen Tuesday, a monthly meeting for tradeswomen to discuss their experiences in the construction industry.

minorities, and women respectively on all publicly funded development projects. Early supporters of the order included former City Councilor Chuck Turner; however, the order was challenged by the Associated General Contractors of Massachusetts and the residency requirement was struck down until the U.S. Supreme Court's review of the ruling, which overturned the challenge to the residency requirements in 1983 and upheld Boston's right to establish a residency requirement.⁶ In October of 1983, Mayor Raymond Flynn signed the BRJP into law as Chapter 30 of the ordinance of 1983; in 1985 through Executive Order, he extended the policy to include all private construction projects over 100,000 square feet as well as Development Impact Projects (DIPs), which are projects that will add over 100,000 sq. ft. of gross floor area for certain nonresidential uses, or for uses that will directly reduce the City's supply of affordable housing.⁷ Completing legislative development of the BRJP ordinance, the Boston Employment Commission (BEC)—a quasi-judicial, seven-member, mayoral-appointed body of the City of Boston—was established in July 1986. The BEC's initially established role was review and enforcement—through sanctions—of BRJP compliance for qualifying projects “in a manner that is comprehensive, consistent, and fair for all parties involved” as well as “generally encouraging the training and hiring of Boston's residents, minorities, and women.”⁸ There were no amended changes to this policy and structure after 1986 until January 2017, when Boston's current Mayor, Marty Walsh, amended the ordinance to increase employment standards to now require 51, 40, and 12 percent residents, minorities and women respectively for all qualifying public and private projects.⁹ Mayor Walsh's amendment also extended qualifying projects subject to BEC review, by expanding the commission's oversight and ability to enforce compliance with all projects currently monitored by the Boston Planning and Development Agency.¹⁰

Boston Residents Job Policy and Requirements for Construction Contractors

The Office of the Boston Residents Job Policy is responsible for the planning, implementation, and overall coordination of compliance monitoring on all Covered Projects (all projects subject to BRJP

⁶<https://www.baystatebanner.com/2016/11/30/mayor-increases-construction-jobs-goals-for-people-of-color/> ; https://archive.org/stream/bostonresidentsj1991bost/bostonresidentsj1991bost_djvu.txt

⁷ <http://www.bostonplans.org/getattachment/610ddaf1-a547-4eb9-bb22-4d0938f354f6>

⁸ https://www.boston.gov/sites/default/files/brjp_preconstruction_package.pdf

⁹ <https://www.constructionlawzone.com/2017/04/amended-ordinance-expands-boston-residents-job-policy-for-certain-projects-in-the-city-of-boston-and-provides-for-sanctions-against-non-complying-developers-or-contractors-effective-january-25-201/>

¹⁰ <https://www.boston.gov/departments/economic-development/boston-residents-jobs-policy-construction-projects>

standards).¹¹ These efforts are implemented through the Mayor’s Office of Economic Development, and led by the BRJP Manager. Construction monitors report to the Manager, and are assigned development projects which they are responsible for by overseeing and enforcing the compliance of general contractors. Contractors are required to submit weekly reports detailing compliance data via payroll sheets to these monitors that include sensitive identifiers and demographic information on subcontracted employees. The BRJP office IT staff receive these weekly reports and generate reports for monitors that indicate whether each development project is meeting BRJP ordinance standards. Monitors also conduct randomized on-site inspections to verify and supplement weekly reports, as well as to serve “as a visible reminder of the seriousness of the City's commitment to the BRJP policy.”¹² Contractors found to be in noncompliance are subjected to corrective action meetings, which are the main lever of the enforcement process “since they provide an opportunity for [BRJP] staff to outline their concerns and for the contractor to present his/her case.”¹³ The expanded ordinance granted the BEC review and oversight of the corrective action process, who determine the appropriate response to address noncompliance based on project updates from the BRJP office, as well as outcomes of monthly commission hearings. Throughout, the commission retains the power to impose sanctions, which could result in an up to \$300 fine per day of noncompliance.¹⁴

Compliance

There are several ways a contractor can be found in noncompliance:

- 1) Failure to designate an individual to serve as project’s compliance officer.
- 2) Failure to have a representative attend an initial review of BRJP standards meeting with the assigned BRJP Monitor and/or subsequent failure to submit a projection of workforce needs that reflect the needs by trade for each month of the construction process.
- 3) Failure to ensure requests to union or nonunion agencies for qualified applicants asking for referrals in preferential order specific to BRJP categories, with specific language adjusted with requests on behalf of projects falling short in any BRJP-specified category, and/or subsequent failure to obtain written confirmation from referral source indicating insufficient supply of employees in requested categories.
- 4) Failure to refer and/or submit record of any unhired BRJP category applicants for Covered Projects to BRJP Jobs Bank.
- 5) Failure to maintain and/or submit record of BRJP category unhired applicants or referrals.

¹¹ Boston, MA., City of Boston Municipal Code. § 8-9.2 (2017)

¹² https://archive.org/stream/bostonresidentsj1991bost/bostonresidentsj1991bost_djvu.txt

¹³ https://archive.org/stream/bostonresidentsj1991bost/bostonresidentsj1991bost_djvu.txt

¹⁴ Boston, MA., City of Boston Municipal Code. § 8-9.8 (2017)

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- 6) Failure to obtain and submit sworn statement and proper documentation verifying residency for each Boston-resident worker.
 - 7) Failure to submit weekly compliance data report to BRJP office.
 - 8) Failure to attend corrective action meetings with assigned compliance monitor.
 - 9) Failure to submit final certificate of occupancy related to a Covered Project.
 - 10) Failure to appear before the BEC when requested.
 - 11) Failure to maintain records necessary to ascertain attempts at compliance.
 - 12) Failure to incorporate BRJP standards expectation in subcontractor contracts.¹⁵

If found in noncompliance, general contractors are required to work with their monitors and the BRJP office to take steps towards compliance in order to avoid fines and other penalties, with the foundation of the corrective action process relying on these mandatory corrective action meetings with monitors.

Boston Residents Job Policy Implementation

As written, the policy does not penalize contractors for not meeting BRJP goals; rather, the policy requires that contractors make “good faith efforts” towards meeting them. The BEC relies on measures taken by compliance monitors, corrective action meetings and monthly public hearings as the main tools to support contractors’ efforts in meeting goals. The BEC does have the authority to impose sanctions and \$300 fines. Another measure that impacts policy implementation and has the potential to impact compliance is the transparency of the process; non-sensitive compliance data are publicly available online and through the BRJP office regarding current and past Covered Projects including information on lead general contractors. This information can be used by community and other agencies to target or address continually noncompliant contractors. Given the expansion of BRJP office oversight to include BPDA projects, compliance monitors and BEC commissions develop relationships with contractors more consistently and—through those relationships—build rapport that can be used to leverage compliance.

With these history and policy considerations in mind, as well as the questions posed by PGTI, our project set out to determine the impact of the policy over time specifically under Mayor Walsh’s administration.

¹⁵ Boston, MA., City of Boston Municipal Code. § 8-9.2 (2017)

Findings

Diversity in Boston's Construction Industry since 2013

Racial and Gender Analysis Overall

Our contact at PGTI estimated that nationally, women only represent 3% of the construction industry-workforce.¹⁶ She said that prior to the election of Mayor Walsh in 2014, Boston did not prioritize enforcement of the BRJP. She hypothesized that women's participation in construction in Massachusetts and Boston had increased based on increases in the percentage of women in apprenticeships in Massachusetts, from 4 percent in 2012 to 8.37 percent in 2018.¹⁷

To help assess diversity in Boston's construction industry and factors affecting representation, we analyzed Boston city data on workers' total hours on construction projects in Boston from January 1st, 2013 to December 31st, 2018.¹⁸ Overall during this time period, we found that the total hours worked on Boston construction projects increased from approximately 6.8 million in 2013 to 9.5 million in 2018 (the last fully-year of data), consistent with Boston's construction boom. Of this total, women worked 4.8 percent of all hours between 2013 and 2018, and the percent of hours worked by women increased by about 1% between 2013 and 2018. The increase is attributable to both an aggregate increase in the number of hours from 2013, and an increased share of total construction hours as the number of total hours in the Boston construction industry also increased.

¹⁶Although BLS data estimates women's employment in construction at 9.1% of all workers and people of color at 11.2% as of 2017, our contact at PGTI raised concerns about that BLS data includes pink and white-collar workers in its statistics. Our contact's estimate of 3 percent is consistent with her research on national apprenticeship demographics, and other estimates of women participation. As compared with Boston's BRJP compliance data, BLS data tracks the number of workers, but not the total hours worked. BLS. "Labor Force Statistics from the Current Population Survey." Last modified January 19, 2018. <https://www.bls.gov/cps/cpsaat18.htm>. Moir, Susan; Thomson, Meryl; and Kelleher, Christa. "Unfinished Business: Building Equality for Women in the Construction Trades." Erlich and Grabelsky, "Standing at a Crossroads," 2005.

¹⁷PGTI receives data from the Massachusetts Division of Apprenticeship Standards (DAS) on the demographics of apprentices in Registered Apprenticeship Programs, and publishes data on its website. PGTI. "20% by 2020: Quarterly report on Massachusetts apprenticeship." August 24, 2018.

<https://policygroupontradeswomen.org/2018/08/24/20-by-2020-quarterly-report-on-massachusetts-apprenticeship/>.
¹⁸The date we downloaded the data. The data can be found here: <https://data.boston.gov/dataset/boston-jobs-policy-compliance-reports>.

Figure 1: Overall Percent of Hours Worked by Women on Boston Construction Projects, 2013 to 2018

Hours worked in Boston Construction Industry between 2013 and 2018

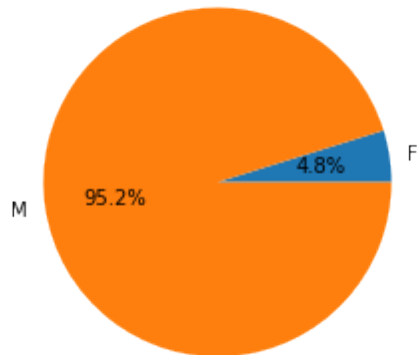
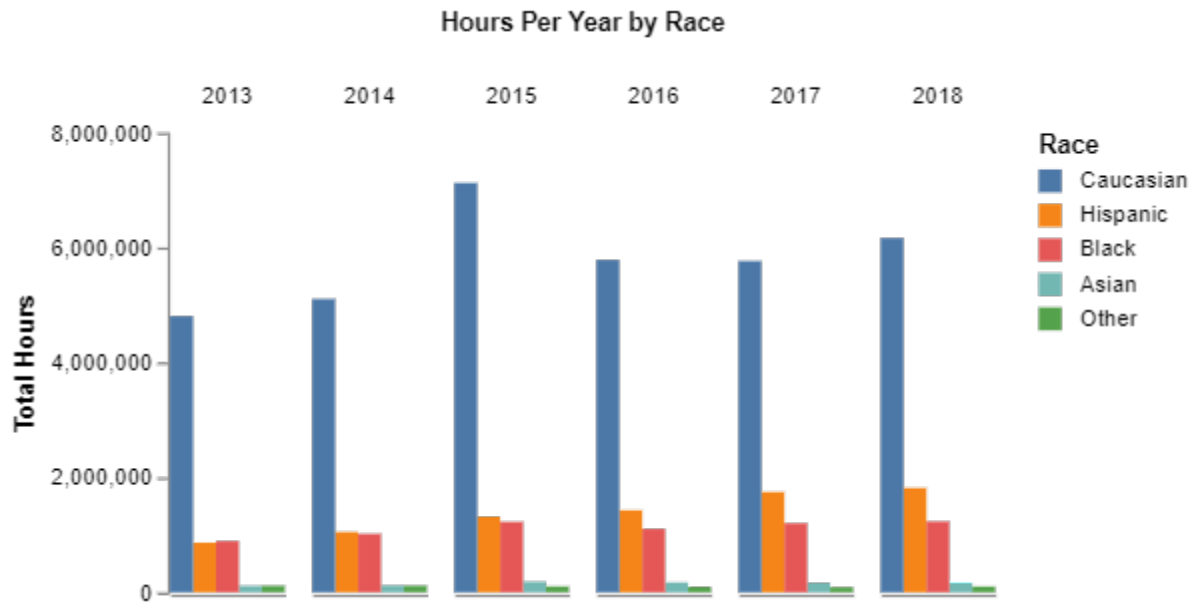


Table 1: Hours Worked by Women in the Boston Construction Industry, 2013 to 2018

Year	Aggregate Hours			Percent of Hours	
	F	M	Total	F	M
2013	283,035	6,513,392	6,796,427	4.16%	95.84%
2014	325,600	7,090,886	7,416,486	4.39%	95.61%
2015	465,490	9,495,750	9,961,240	4.67%	95.33%
2016	443,639	8,146,647	8,590,286	5.16%	94.84%
2017	447,571	8,526,779	8,974,350	4.99%	95.01%
2018	492,395	8,994,972	9,487,367	5.19%	94.81%
All	2,457,729	48,768,427	51,226,156	4.76%	95.24%

Boston's construction data also indicate that the construction industry became more racially diverse between 2013 and 2018. The number of hours worked by persons of color increased in both absolute and relative terms, as the hours worked by persons of color increased from approximately 1,990,207 hours to 3,321,715 between 2013 and 2018, and the share of hours worked increased from approximately 29% to 35% in 2018 (the last complete year of data).

Figure 2: Hours Worked by Race on Boston Construction Projects, 2013 to 2018

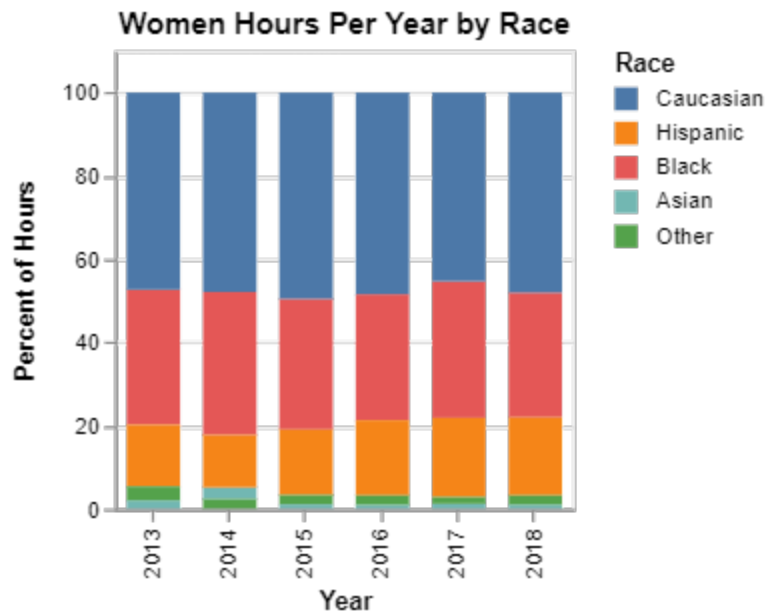


Both our PGTI contact and Boston officials reported that a large number of people of color work in the Boston construction industry, such that it should not be challenging for willing-contractors to meet BRJP goals.

Intersectional Analysis

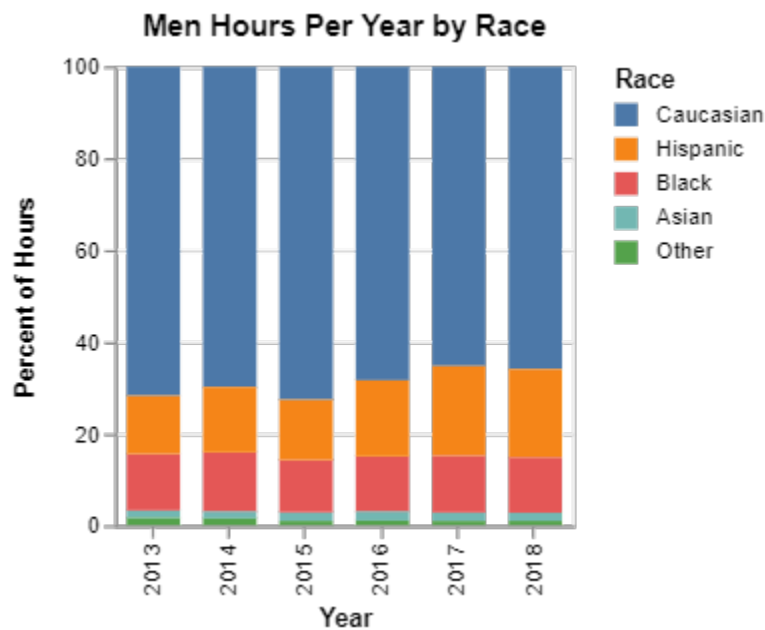
Although Boston's construction workforce does not resemble Boston's racial demographics overall, the picture looks different when broken out by gender. Women of color worked the majority of hours among women in Boston's construction industry, representing 52.23% of hours worked by women between 2013 and 2018.

Figure 3: Distribution of Women Hours by Race per Year, 2013 to 2018



By comparison, white men performed 68.85% of hours worked by men, although the percent of hours worked by men of color increased from approximately 28.27% to around 34% between 2013 and 2018. The change was almost entirely attributable to an increased share of hours worked by Hispanic workers and a corresponding decline in the share of hours worked by white workers.

Figure 4: Distribution of Men Hours by Race per Year, 2013 to 2018



Compliance with BRJP Goals

We also identified the number of projects that would have met BRJP metrics under both the new and the old ordinance between 2013 and 2018¹⁹ (for data on goal attainment by subcontractors and general contractors, see Appendix A), and the characteristics of those projects. We found that far more projects met BRJP goals for hours worked by persons of color than for women. Overall over the last five years, only 84 out of 967 (8.7%) projects would have met gender goals under the new ordinance, and only 103 (10.7%) met gender goals under the old ordinance. By comparison, 399 projects (41.3%) would have met goals for persons of color under the new ordinance, and 648 (67%) met goals under the old ordinance.

Table 2: Attainment of BRJP Gender Goals by Projects, 2013 to 2018

Ordinance Goals for Women	Total Projects Meeting Gender Goals	Average Total Hours Worked by Women on Projects	Average Percent of Total Hours Worked by Women on Projects	Average Total Hours for Projects Overall
Below Ordinance Goals	864	2,792	2%	58,914
Meets Old Ordinance	19	1,080	11%	9,832
Meets New Ordinance	84	297	30%	1,636

Table 3: Attainment of BRJP Person of Color Goals by Projects, 2013 to 2018

Ordinance Goals for People of Color	Total Projects	Average Total Hours Worked by People of Color on Projects	Average Percent of Total Hours Worked by People of Color on Projects	Average Total Hours for Projects Overall
Below Ordinance Goals	319	7,730	9%	35,185
Meets Old Ordinance	249	39,901	32%	131,426
Meets New Ordinance	399	10,208	72%	18,238

¹⁹Our analysis includes projects between 2013 and 2018 that started before January 1, 2013, but only includes hours worked on those projects after January 1, 2018.

Factors Affecting Representation in the Construction Industry

In addition to identifying trends in the demographics of Boston's construction industry, we examined other factors that could explain demographic disparities.

General Contractor, Project, and Subcontractor Variation and Size

Although most contractors, subcontractors, and projects were below BRJP workforce goals, we examined variation in the attainment of goals across each to determine the extent to which any of the goals were being met. We found that more than 25% of each group met or exceeded goals for persons of color and that the percent of workers of color ranged from 0 to 100%, while only around 5% of contractors met or exceeded BRJP goals for women and that the percent of women working on projects only ranged from 0 to 38% (for variation across subcontractors and projects, see Appendix C). Finally, we found that 168 of 304 contractors (55%) did not have any hours worked by women from 2013 to 2018.

Table 4: Summary Statistics on General Contractor Attainment of BRJP Goals Between 2013 and 2018

Statistic	Total Hours Worked by People of Color	Percent of Total Hours Worked by People of Color	Total Hours Worked by Women	Percent of Total Hours Worked by Women	General Contractor Total Hours
Count of General Contractors	304	304	304	304	304
Average	54,192	35%	8,085	3%	168,507
Standard Deviation	276,881	32%	46,129	5%	966,943
0% (lowest attainment by a contractor)	0	0%	0	0%	0
25th percentile	0	0%	0	0%	101
50th percentile	233	30%	0	0%	803
75th percentile	5,530	54%	425	4%	14,499
90th percentile	47,609	90%	5,906	8%	129,880
95th percentile	172,907	100%	23,666	13%	452,686
Max (highest attainment by a contractor)	3,744,316	100%	593,470	38%	13,472,554

To assess whether differences existed across size, we also examined each of the BRJP metrics based on the size of general contractors, subcontractors, and projects based on the total hours worked on for each.

We found that the share of hours worked by women generally increased from around 1 to 5 percent with general contractor and sub-contractor size. We also found that that the percent of hours worked by people

of color increased compared to the smallest contractors, but decreased at the top 1% of contractors and subcontractors.

Table 5: Average Hours for Persons of Color and Women based on General Contractor Size between 2013 and 2018

Contractor Size by Total Hours	Average Total Hours Worked by People of Color	Average Percent of Total Hours Worked by People of Color	Average Total Hours Worked by Women	Average Percent of Total Hours Worked by Women	General Contractor Average Total Hours
Bottom 25%	7.6	17.7%	0.2	0.6%	33.8
25-50%	117.0	37.8%	8.1	2.4%	285.1
50-75%	2,085.9	40.5%	211.6	3.9%	4,712.3
75-90%	21,991.9	45.0%	1,952.6	4.2%	47,943.1
91-99%	271,107.1	41.5%	34,301.5	4.4%	753,714.1
Top 1%	1,999,190.4	28.5%	356,752.5	5.3%	7,084,017.6

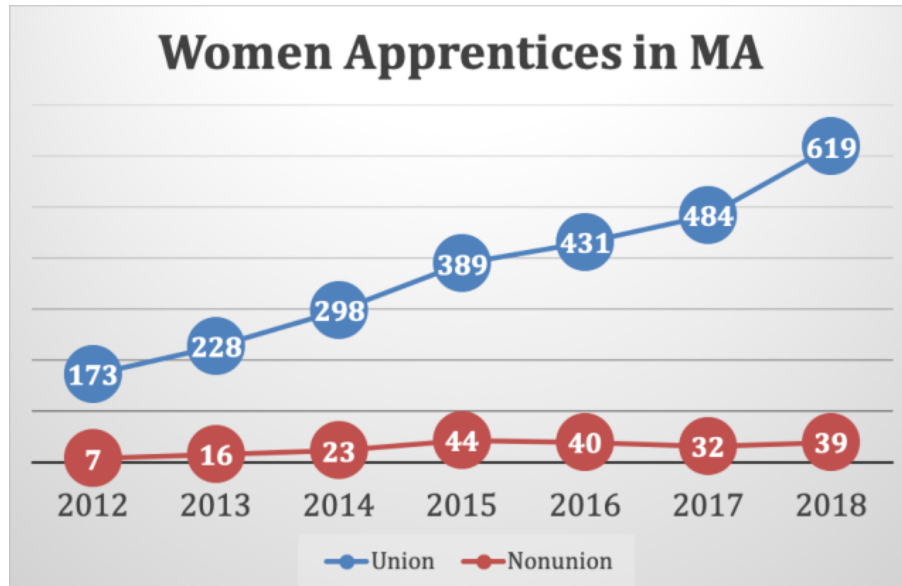
Trends differed slightly by project size. The share of hours worked by women on the smallest projects was higher (although the low-hours total warrants caution about reading too much into the data), whereas the share of hours worked by persons of color decreased on the largest 10% of projects compared to the remaining 90% (for project and subcontractor data by size, see Appendix D).

Employers' Unionization Status

Our PGTI contact hypothesized that non-unionized construction contractors would be less willing than unionized contractors to hire women, and that this difference might help explain women's low participation in Boston's construction industry. This hypothesis was partially based on stark differences between union and non-union firms in the number of women apprentices in Massachusetts in 2018—with women occupying 8.37% of unionized apprenticeships compared to 3.9% of apprenticeships at non-union

firms—and the number of persons of color in apprenticeships, with persons of color occupying 27.8% of union apprenticeships compared to 19.16% in non-union firms.²⁰

Figure 5: Women Apprenticeships in Massachusetts between 2012 and 2018



However, a representative of the Boston Employment Commission raised questions about the racial demographics of construction unions, citing unions’ resistance to share demographic information on their general membership with the city, unions’ reluctance to work with minority-owned businesses that were not unionized, and the process required for new members to join unions.

Ultimately, we found that there was a 1% difference between hours worked by women in unionized firms compared to non-unionized firms in 2017, with unionized contractors exceeding non-unionized in their share of hours for women.²¹

²⁰PGTI, “20% by 2020,” 2018.

²¹Our contact at PGTI reviewed all 118 general contractors that worked on projects in 2017, and categorized them as union or nonunion based on her knowledge of their unionization status and projects that went before the Boston Employment Commission. She identified 38 union general contractors and 87 non-union general contractors.

Table 6: Hours worked by Gender in 2017 Based on Contractor Unionization Status

Unionized Contractor in 2017	Gender	Total Hours	Percent
N	F	88,019	4.13%
	M	2,043,229	95.87%
Y	F	359,551	5.25%
	M	6,483,550	94.75%

However, we also identified differences in the racial demographics of union and non-union general contractors, with non-unionized contractors giving more hours to persons of color (especially Hispanic workers) than unionized contractors.

Table 7: Racial Demographics of Hours Worked for Union and Non-union in 2017

Unionized Contractor in 2017	Asian	Black	Caucasian	Hispanic	Other
N	1.31%	14.63%	49.96%	33.32%	0.78%
Y	2.02%	13.04%	68.70%	15.16%	1.08%

Trades

We also analyzed the distribution of women and persons of color across trades. A list of the top-five trades by women and persons of color can be found below (for a full list of the top trades by gender and race, see Appendix B).

Table 8: Top 5 Trades Worked by Women and Persons of Color Between 2013 and 2018

Ranking	Persons of Color		Women	
	Total Hours Worked	Percent of Hours Worked ^a	Total Hours Worked	Percent of Hours Worked ^a
1.	Laborer	Asbestos Worker	Laborer	Painter
2.	Carpenter	Welder	Carpenter	Oiler
3.	Electrician	Floor Covers	Electrician	Taper
4.	Iron Worker	Carpet Layer	Iron Worker	Insulator
5.	Plumber	Installer/Apt Wirer	Plumber	Laborer

^aFor trades with at least 4,000 hours worked between 2013 and 2018 (excluding the bottom 25% of trades by hours worked).

Best Practices in Achieving BRJP Goals

Boston officials identified a number of effective practices to enforce the BRJP:

- **Being proactive and developing relationships:** Boston officials said that it's important to engage contractors early on a project, and that improving workforce-representation requires joint-trust between the contractors and BRJP. Boston officials said that they reached out to business agents early to try to build a relationship with them and looked for contractors to demonstrate a willingness to improve over the course of the project.
- **Visiting sites:** Officials highlighted the importance of visiting project sites to see whether subcontractors are being truthful about their workforce hiring numbers.
- **Collaboration with labor and community organizations:** In hearings and interviews, Boston officials highlighted the important role played by labor and community leaders in monitoring construction projects, developing a pipeline of tradeswomen, and connecting firms with women workers.

Challenges with Reaching BRJP Goals

Officials also identified obstacles to achieving BRJP goals:

- **Holding contractors accountable:** As of November 8, 2018, The Boston Employment Commission had not issued any fines on contractors for failing to comply with the BRJP. The Boston Employment Commission representative we spoke with questioned the efficacy of fines, saying that they were not ear-marked for job training and that he did not see a connection between fining contractors and creating jobs for diverse workers. On the other hand, officials said that some contractors were just unwilling to follow the BRJP, putting no effort into hiring a diverse workforce and providing the BPDA inadequate excuses for their behavior. Officials said that some resistant-contractors have existed in Boston for a long time, but have the resources to submit lower-bids on projects than other contractors that would put more effort into meeting BRJP goals (e.g., women or minority-owned contractors). Finally, our contact at the Boston Employment Commission said that developers did not always pay attention to overseeing their contractors or subcontractors' workforce practices.
- **Hiring pipelines for women:** Boston officials said that contractors would sometimes ask them about hiring women workers. Officials would direct them to the [Build a Life Campaign](#) or to Hiring Halls, but officials said that workers would not always be available and that the Build a Life Campaign had limited capacity.
- **The bidding process for construction projects:** Boston Employment Commission representatives said that projects involving public money go through a closed-bidding system, and that some contractors from outside the city will submit low-cost bids with little intent to comply with the BRJP.²² In part to address concerns with contractors' intent to comply, the city now asks that contractors replying to requests for proposal describe how they plan to meet BRJP metrics.
- **Limited training for firms:** Boston officials said that PGTI offers training for firms to improve their hiring of women, but PGTI restricts their training to firms with a union contract.

²²City of Boston. "How Boston's Bidding Process Works." <https://www.boston.gov/departments/procurement/how-bostons-bidding-process-works>

Recommendations

Recommendations Directed at the City of Boston

BRJP Goals

Based on our conversations with Boston officials and with PGTI, our observations of hearings, and our data analysis, we believe the following practices could potentially help the City of Boston in pushing Boston's construction industry towards BRJP goals.

- 1. Target larger contractors, subcontractors, and projects:** The average hours worked by the largest 1% of contractors (as measured by total hours between 2013 and 2018) exceeded the average hours worked by the 90th-99th percentile of contractors by almost 10 times, the average hours worked by the largest subcontractors exceeded the 90th-99th percentile by around 6 times, and the average hours worked on the largest projects exceeded the 90th-99th percentile by 3 times. BEC officials also acknowledged that larger contractors often have additional resources for BRJP compliance due to their scale, especially in a low-margin industry like construction. The largest projects should also theoretically offer the city the most leverage in negotiations with contractors over BRJP compliance. However, the proportion of hours going to people of color in particular fell-off for the largest contractors, subcontractors, and projects. Directing requirements or agency resources towards the largest contractors, subcontractors, and projects offers a chance to more-efficiently increase wide-scale representation of women and people of color.
- 2. Invest in workforce development programs in construction for people of color and women:** Boston officials cited the low capacity of programs like the Build a Life Campaign as one difficulty in diversifying the Boston workforce, and raised concerns about the sustainability of their funding sources. The relatively-low number of projects, contractors, and subcontractors whose hours distribution met BRJP goals (see table 4 and Appendix C) may suggest the need to recruit and retain more women to construction work. Investing in building the capacity of these types of programs could help address this problem.
- 3. Facilitate knowledge-sharing between contractors:** One Boston official we spoke with said that he would like to see the efforts of contractors doing well on BRJP metrics highlighted more. Additionally, while we found that most contractors are doing poorly on BRJP metrics, there are some contractors substantially exceeding BRJP goals, even for hours worked by women (see table 4 and Appendix C). These contractors serve as existence-proof that contractors can do well on BRJP metrics, and it would be worth looking towards their practices for a sense of how the city can improve representation in Boston's construction industry.

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4. **Improve use of Boston's job bank:** Boston officials cited concerns with finding available women workers when contractors sought to hire them, and with the willingness of union officials to refer women to general contractors' projects. Rather than rely exclusively on union hiring halls, Boston officials could seek to build up their Job Bank. This could also help diagnose whether hiring issues are due to a low number of available workers; discrimination in hiring, or low search-efforts by contractors for women and people of color; or some other explanation.
 5. **Leverage fines:** Although Boston officials expressed wariness about using fines for fear of breaking relationships with contractors and questioned their effectiveness, all BRJP officials said that some contractors were persistently stubborn in resisting BRJP compliance. It seems worth reconsidering using fines against these contractors, to spur compliance by these contractors; drive them out if they are unwilling to follow BRJP guidelines; and to signal to other contractors that fines are not an empty threat. Especially in such a high-demand market, assessing a \$300 fine should not be so disruptive as to risk derailing Boston's construction industry.
 6. **Consider factoring BRJP performance into the contract-bidding process:** Boston officials said that cost-prioritization in contract-bidding allowed some low-cost contractors to consistently win projects. Finding ways to direct more projects to better-performing contractors or direct bids away from poorly performing contractors (e.g., implementing a penalty system in bidding for contracts if contractors violate the BRJP, even if fines aren't assessed) could provide another incentive for compliance with the BRJP.

Data Recommendations

As Boston officials admitted in hearings, enforcement of the BRJP relies on monitoring by active and engaged members of the public. Accessible data also can help the public check the claims of Boston officials, to ensure that officials are holding contractors accountable to BRJP goals. Yet, certain features of the publically available data-set on BRJP-compliance inhibit the public's ability to easily understand the data and use it to check whether contractors are meeting their hour requirements.

1. **Develop a public user-interface for data-analysis:** Analyzing BRJP data currently requires manipulating an Excel datasheet. While this is within the capabilities of researchers and academics, members of the public or community groups may lack the time or capacity to do so easily. A public-facing, interactive data interface (e.g., one that allows users to view and compare historical data on the workforce-demographics of contractors or subcontractors, or on specific projects) could make it easier for Boston residents to understand the demographics of projects within their community, and apply leverage to contractors to improve their hiring. Officials in the Mayor's Department of Economic Development told us that the City of Boston uses an internal

database management system to generate reports for public hearings, but that the interface makes it hard for Boston officials to use. Officials did say that an improved internal database management system was being developed, but they were not clear on whether it would be available to the public.

2. **Improve data documentation:** It took us a long time and extensive communication with Boston officials to fully-understand how the BRJP Compliance dataset reports information from general contractors. We needed to rely on communications with Boston officials because the [dataset webpage](#) does not provide documentation that could help users interpret how data is collected and reported. Improving dataset documentation should be an easy step to ensure that users correctly interpret the data.
3. **Standardize fields and ensure integrity of data-entry processes:** We identified aberrations in some data entries, some more serious than others. For example, in fields like the project name, in some instances there were small differences between names of the same project (e.g., “Work, Inc.” vs. “Work Inc.”). Although Boston officials told us that the city uses a standardized set of IDs for contractors and projects, these IDs are not included in the public dataset, meaning that small differences in names will affect how data gets aggregated if users do not check beforehand. Additionally, there were a small number of error-entries in demographic fields (e.g., a value of “Y” under “Sex,” or “T” under “Resident,” or a “date entered” value of 2025). Finally, some of the reported weekly hours are high-enough as to raise questions. Boston officials did provide several possible explanations for seemingly-high weekly total hour amounts (e.g., aggregating hours across workers with shared characteristics). Nonetheless, we identified supposedly weekly hour-totals in rows that significantly exceeded 1000 hours, and it would be worth verifying that the reporting system is correctly aggregating rows.
4. **Make more data available:** Payroll data collected by Boston includes information on individual workers, their hourly wages, union status, and apprenticeship status. However, the public dataset only reports hours worked, preventing users from understanding the number of employees working on projects or compensation differentials between workers with different demographic characteristics. Even if privacy or sensitivity concerns prevent the release of all of this data, providing aggregated data on the number of employees, wage-rates (e.g., by trade), and/or union status would allow users to delve-deeper into inclusion in Boston’s construction workforce (rather than relying on national-level datasets).

For Labor Advocates and Organizations

1. **Emphasize racial and gender diversity in organizing:** While the percentage of women in apprenticeships in Massachusetts exceeds the percentage of hours going to women in Boston's construction industry, the percentage of women remains below BRJP goals. Additionally, there is a substantial difference between the share of hours performed by persons of color in unionized firms compared to non-unionized firms, and persons of color in Massachusetts apprenticeships are even lower. That both Boston and PGTI officials said that there are a large number of workers of color in Boston's construction industry suggests that unions could do a better job of organizing persons of color and women in construction.

For Planners

1. **Contextual considerations:** Boston's history of racial tension was alluded to in our interviews to enough of an extent to indicate the existence of at least a perceived sense of difficulty or necessary caution between monitors and contractors in relation to addressing race-based discrimination in the hiring process. Monitors used different approaches specific to what they particularly found comfortable, i.e. using personal experience to establish personal connection to common neighborhoods and communities rather than strictly racialized identification/considerations. The existence of this difficulty in dialogue presents an opportunity for planners to create discursive arenas with contractors, or monitors, or both to pursue race-based conversations about equity and address Boston's history and potential future regarding race relations head on.
2. **Economic and political considerations:** Conversations with BRJP and BEC representatives addressed economic and political considerations regarding relationships with contractors, unions, stakeholders and the tensions of the positionality of supporting economic development while being responsive to needs of equity. Contractors and developers are necessary to supporting Boston's growth through their projects and capacity to hire and thus those relationships are important; however, contractors continually in noncompliance reinforce inequity. This tension presents an opportunity for planners to serve as an unbiased arbitrator or negotiator with the specific and exclusive mission of creating more equitable outcomes for residents, people of color and women.
3. **Barriers to collaboration:** While the goal of both PGTI and the BRJP office are to increase equity, both entities have their own goals and limitations. PGTI leans on the BRJP to be less lenient and to reinforce the policy more strictly, while the BRJP asks for agencies like PGTI to

provide more qualified applicants that identify within the BRJP categories. Both entities have their limitations and justification for their positions that can create a stalemate and barrier to ideal collaboration. Planners can play the role of consensus builder in order to find compromises and reach agreements that can lead to progress and move both entities closer to their ideal outcomes.

Conclusion

Based on our analysis, Boston's construction industry is not meeting any of the hours-goals under the new ordinance.

Table 9: Distribution of Boston Construction Hours in 2018 Compared to BRJP Goals

Statistic	2018	Old Ordinance Goals	New Ordinance Goals
Percent of Hours Worked by Women	5.19%	10%	12%
Percent of Hours Worked by People of Color	35.01%	25%	40%
Percent of Hours Worked by Boston Residents	25.27%	50%	51%

However, this does not signal that the BRJP or its most recent amendment are failures. Based on our conversations with Boston officials, attendance at hearings, and discussions with PGTI, the BRJP instantiated a set of expectations, values, and aspirations for Boston's construction industry, and its amendment reaffirmed the city's commitment to those goals. In public hearings, Boston's Chief of Economic Development cited the implementation of the new ordinance as a harbinger of the city's renewed focus on compliance with the BRJP, warning contractors that those failing to comply would start facing fines and sanction from the city. BRJP officials also said that the new ordinance gave teeth to the requirements of the BRJP, and community leaders at the biannual hearing on the BRJP emphasized the importance of the new ordinance in influencing contractors' behavior. The coming months and years will demonstrate whether the city is willing and able to enact the values represented by the new BRJP ordinance, stand-by its messages to contractors, and leverage the opportunities facing contractors and developers to advance equity.

Future research could examine workforce retention across projects. Boston officials raised concerns about contractors hiring people to improve their performance on BRJP metrics without investing in training them, and letting them go as soon as the project concludes. Research could also more closely examine the characteristics of contractors, subcontractors, and projects that perform well on BRJP metrics, to identify hiring, workforce development, or organizational characteristics that could help other organizations diversify their construction workforce, or help with selecting contractors bidding for projects.

Appendices

Appendix A: Attainment of BRJP Goals by Contractors and Subcontractors

Although general contractors' compliance is evaluated on a project-by-project basis, we examined the extent to which contractors' and subcontractors' workforces met BRJP goals for women and people of color under both the new and old ordinance.²³

General Contractor Goal Attainment

Table 10: General Contractor Attainment of BRJP Goals for Women, 2013 to 2018

Ordinance Goals for Women	Total General Contractors	Average Total Hours Worked by Women	Average Percent of Total Hours Worked by Women	Average General Contractor Total Hours
Below Ordinance Goals	284	8,570	2	179,781
Meets Old Ordinance	4	2,560	11	23,489
Meets New Ordinance	16	845	21	4,652

Table 11: General Contractor Attainment of BRJP Goals for People of Color, 2013 to 2018

Ordinance Goals for People of Color	Total General Contractors	Average Total Hours Worked by People of Color	Average Percent of Total Hours Worked by People of Color	Average General Contractor Total Hours
Below Ordinance Goals	132	1,245	6	6,021
Meets Old Ordinance	61	220,515	32	749,427
Meets New Ordinance	111	25,753	70	42,490

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Subcontractor Goal Attainment

Table 12: Subcontractor Attainment of BRJP Goals for Women, 2013 to 2018

Ordinance Goals for Women	Total Subcontractors	Average Total Hours Worked by Women	Average Percent of Total Hours Worked by Women	Average Subcontractor Total Hours
Below Ordinance Goals	2079	655	1	40,146
Meets Old Ordinance	64	3,664	11	60,296
Meets New Ordinance	190	1,164	27	19,096

Table 13: Subcontractor Attainment of BRJP Goals for People of Color, 2013 to 2018

Ordinance Goals for People of Color	Total Subcontractors	Average Total Hours Worked by People of Color	Average Percent of Total Hours Worked by People of Color	Average Subcontractor Total Hours
Below Ordinance Goals	1114	1,968	7	31,143
Meets Old Ordinance	383	13,147	32	94,577
Meets New Ordinance	836	4,826	76	23,965

Appendix B: Top and Bottom Trades by BRJP Goals

We also analyzed the distribution of construction hours going to women and people of color across trades, using trade classifications reported in BPDA data.

Women in Trades

Table 14: Top 20 Trades by Percentage of Women, 2013 to 2018

Trade	Total Hours Worked by Women	Percent of Total Hours Worked by Women	Trade Size by Total Hours
Stage Hand	4,219.9	76.4	25-50%
Chain Saw Operator	22.0	50.6	Bottom 25%
Surveyor	275.0	32.1	Bottom 25%
Hoisting Engineer	7,641.0	19.5	25-50%
Groundman	643.5	15.1	25-50%
Wrecker	1,214.5	11.3	25-50%
Painter	106,245.5	9.8	75-90%
Oiler	8,805.5	8.1	50-75%
Taper	94,708.0	7.5	75-90%

Insulator	30,693.0	7.2	75-90%
Laborer	643,801.2	6.7	91-99%
Elevator Mech	34,084.0	6.7	75-90%
Elev Const Helper	11,784.8	6.6	50-75%
Carpet Layer	9,328.5	5.8	50-75%
Telephone/Data Inst.	2,807.5	5.7	50-75%
Pipefitter	110,723.5	5.6	91-99%
Technician	3,476.5	5.5	50-75%
Glazier	57,251.5	5.1	75-90%
Installer/Apt Wirer	2,667.5	5.0	50-75%
Tile Worker	4,812.5	4.8	50-75%

Table 15: Top 20 Trades by Hours Worked by Women, 2013 to 2018

Trade	Total Hours Worked by Women	Percent of Total Hours Worked by Women	Trade Size by Total Hours
Laborer	643,801.2	6.7	91-99%
Carpenter	462,759.6	4.0	Top 1%
Electrician	292,303.5	4.7	91-99%
Iron Worker	189,009.5	4.6	91-99%
Plumber	128,417.5	4.1	91-99%
Pipefitter	110,723.5	5.6	91-99%
Painter	106,245.5	9.8	75-90%
Taper	94,708.0	7.5	75-90%
Equipment Operator	75,553.0	4.4	91-99%
Glazier	57,251.5	5.1	75-90%
Elevator Mech	34,084.0	6.7	75-90%
Sprinkler Fitter	31,702.5	3.1	75-90%

Insulator	30,693.0	7.2	75-90%
Bricklayer	21,791.5	2.5	75-90%
Sheetmetal Worker	19,235.0	1.4	75-90%
Asbestos Worker	18,583.8	4.4	75-90%
Roofer	16,409.0	2.3	75-90%
Floor Layer	12,816.5	4.0	50-75%
Piledriver	12,628.0	3.3	75-90%
Elev Const Helper	11,784.8	6.6	50-75%

Table 16: Bottom 20 Trades by Percentage of Hours worked by Women, 2013 to 2018

Trade	Total Hours Worked by Women	Percent of Total Hours Worked by Women	Trade Size by Total Hours
Boilermakers	0.0	0.0	Bottom 25%
Concrete Worker	0.0	0.0	25-50%
Curbsetter/Paver	0.0	0.0	Bottom 25%

Diver	0.0	0.0	25-50%
Driller	0.0	0.0	Bottom 25%
Fire Proofing Sprayer	0.0	0.0	25-50%
Lather	0.0	0.0	Bottom 25%
Metal Refinisher	0.0	0.0	Bottom 25%
Millwright	0.0	0.0	25-50%
No Work	0.0	0.0	Bottom 25%
Pipelaye	0.0	0.0	Bottom 25%
Pumpman	0.0	0.0	Bottom 25%
Tree Surgeon	0.0	0.0	Bottom 25%
Truck Driver	0.0	0.0	Bottom 25%
Utility Operator	0.0	0.0	25-50%
Blaster	0.0	0.0	Bottom 25%
Dock Builder	0.0	0.0	Bottom 25%

Sandblaster	0.0	0.0	Bottom 25%
Slater	0.0	0.0	Bottom 25%
Splicer	0.0	0.0	Bottom 25%

Persons of Color

Table 17: Top 20 Trades by Percentage of Hours worked by Persons of Color, 2013 to 2018

Trade	Total Hours Worked by Persons of Color	Percent of Total Hours Worked by Persons of Color	Trade Size by Total Hours
Dock Builder	20.0	100.0	Bottom 25%
Wrecker	9,718.5	90.2	25-50%
Tree Surgeon	106.5	89.1	Bottom 25%
Concrete Worker	11,443.1	81.6	25-50%
Asbestos Worker	345,749.6	81.2	75-90%
Metal Refinisher	1,182.0	78.4	Bottom 25%
Welder	31,465.0	72.8	25-50%
Millwright	4,636.3	71.4	25-50%

Stage Hand	3,741.9	67.8	25-50%
Floor Covers	164,929.0	63.1	50-75%
Carpet Layer	98,320.4	61.1	50-75%
Installer/Apt Wirer	31,613.3	59.4	50-75%
Floor Layer	176,350.0	54.7	50-75%
Truck Driver	1,591.0	53.6	Bottom 25%
Chain Saw Operator	22.0	50.6	Bottom 25%
Mason Tender	176,637.9	49.5	50-75%
Taper	615,274.7	48.5	75-90%
Pipelayer	1,510.0	48.3	Bottom 25%
No Work	36.0	46.8	Bottom 25%
Curbsetter/Paver	145.5	45.7	Bottom 25%

Table 18: Top 20 Trades by Total Hours Worked by Persons of Color, 2013 to 2018

Trade	Total Hours Worked by Persons of Color	Percent of Total Hours Worked by Persons of Color	Trade Size by Total Hours

Laborer	3,946,286.1	41.2	91-99%
Carpenter	3,849,939.2	33.3	Top 1%
Electrician	1,601,849.4	25.8	91-99%
Iron Worker	1,251,360.0	30.2	91-99%
Plumber	655,924.6	21.2	91-99%
Taper	615,274.7	48.5	75-90%
Painter	483,474.5	44.4	75-90%
Pipefitter	445,678.1	22.4	91-99%
Asbestos Worker	345,749.6	81.2	75-90%
Sheetmetal Worker	345,374.7	24.8	75-90%
Bricklayer	294,527.6	33.9	75-90%
Roofer	272,490.4	37.7	75-90%
Sprinkler Fitter	246,132.5	23.9	75-90%
Equipment Operator	218,361.1	12.6	91-99%

Mason Tender	176,637.9	49.5	50-75%
Floor Layer	176,350.0	54.7	50-75%
Glazier	175,302.3	15.6	75-90%
Floor Covers	164,929.0	63.1	50-75%
Cement Laborer	131,588.1	37.1	50-75%
Insulator	126,173.5	29.6	75-90%

Table 19: Bottom 20 Trades by Percentage of Hours Worked by Persons of Color, 2013 to 2018

Trade	Total Hours Worked by Persons of Color	Percent of Total Hours Worked by Persons of Color	Trade Size by Total Hours
Blaster	0.0	0.0	Bottom 25%
Sandblaster	0.0	0.0	Bottom 25%
Slater	0.0	0.0	Bottom 25%
Splicer	0.0	0.0	Bottom 25%
Pumpman	16.0	1.3	Bottom 25%

Raker	797.5	5.9	25-50%
Elev Const Helper	12,285.8	6.9	50-75%
Elevator Mech	41,425.0	8.1	75-90%
Crane Operator	4,314.3	9.1	25-50%
Boilermakers	323.0	9.9	Bottom 25%
Hoisting Engineer	4,891.0	12.5	25-50%
Equipment Operator	218,361.1	12.6	91-99%
Glazier	175,302.3	15.6	75-90%
Driller	556.0	16.3	Bottom 25%
Marble Tile Worker	36,058.5	16.6	50-75%
Lather	40.0	17.2	Bottom 25%
Plumber	655,924.6	21.2	91-99%
Tele-Communications	3,968.5	21.6	25-50%
Telephone/Data Inst.	10,729.7	21.9	50-75%

Appendix C: Variation in Subcontractor and Project Performance by BRJP Goals

Table 20: Summary Statistics on Subcontractor Attainment of BRJP Goals Between 2013 and 2018

Statistic	Total Hours Worked by People of Color	Percent of Total Hours Worked by People of Color	Total Hours Worked by Women	Percent of Total Hours Worked by Women	Subcontractor Total Hours
Count	2,333	2,333	2,333	2,333	2,333
Average	4,827	36	779	4	38,985
Standard Deviation	20,203	34	3,639	9	157,484
0% (lowest attainment by a subcontractor)	0	0	0	0	0
25th percentile	6	2	0	0	244
50th percentile	352	27	0	0	2,056
75th percentile	2,351	58	175	4	14,680
90th percentile	9,895	100	1,351	10	69,517
95th percentile	20,303	100	3,089	17	185,692
Max (highest attainment by a subcontractor)	446,432	100	61,029	100	2,600,483

Table 21: Summary Statistics on Project Attainment of BRJP Goals Between 2013 and 2018

Statistic	Total Hours Worked by People of Color	Percent of Total Hours Worked by People of Color	Total Hours Worked by Women	Percent of Total Hours Worked by Women	Project Total Hours
Count	967	967	967	967	967
Average	17,036	41%	2,542	5%	52,974
Standard Deviation	42,511	31%	7,377	9%	142,575
0% (lowest attainment by a project)	0	0%	0	0%	0
25%	8	21%	0	0%	64
50%	493	34%	6	1%	1,420
75%	8,416	59%	845	5%	19,905
90%	57,076	100%	6,705	11%	164,672
95%	103,419	100%	17,389	25%	333,274
Max (highest attainment by a project)	368,646	100%	74,385	73%	1,317,625

Appendix D: Variation in Project and Subcontractor Performance by Size

Table 22: Average Hours for Persons of Color and Women based on Subcontractor Size between 2013 and 2018

Subcontractor Size by Total Hours	Average Total Hours Worked by People of Color	Average Percent of Total Hours Worked by People of Color	Average Total Hours Worked by Women	Average Percent of Total Hours Worked by Women	Subcontractor Average Total Hours
Bottom 25%	22.0	21.4%	1.2	1.6%	75.2
25-50%	360.9	40.8%	27.5	3.4%	916.2
50-75%	2,366.6	44.8%	218.4	4.5%	6,314.5
75-90%	6,796.1	40.2%	930.3	5.0%	32,363.0
91-99%	24,626.1	32.3%	4,614.3	5.2%	211,922.6
Top 1%	88,166.8	28.4%	15,828.9	4.2%	1,287,239.0

Table 23: Average Hours for Persons of Color and Women based on Project Size between 2013 and 2018

Project Size by Total Hours	Average Total Hours Worked by People of Color	Average Percent of Total Hours Worked by People of Color	Average Total Hours Worked by Women	Average Percent of Total Hours Worked by Women	Average Project Total Hours
Bottom 25%	5.3	47.3%	1.0	7.2%	14.6
25-50%	207.4	38.7%	15.2	2.6%	518.8
50-75%	2,423.5	39.7%	279.7	4.4%	5,713.1
75-90%	29,688.7	43.3%	2,993.2	4.3%	70,958.8

91-99%	100,140.7	29.8%	16,817.9	4.9%	341,522.4
Top 1%	282,163.6	29.1%	48,921.9	5.0%	971,875.7