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# ***State of New York Workforce Study***

## ***I. Introduction***

This Workforce Study was commissioned as part of the 2016 Minority and Women-owned Business Enterprise (MWBE) Disparity Study to assess the employment of minorities and females on contracts awarded by the State’s agencies and authorities. The Equal Employment Opportunity (EEO) provision of Article 15-A provides guidance related to the recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, termination, rates of pay and compensation methods of minority and female workers on State contracts.<sup>1</sup> Article 15-A’s EEO provisions apply to contracts for construction, construction-related services, non-construction related services, and commodities and other services.

The Workforce Study has three objectives: 1) to assess the level of minority and Caucasian female employment on State contracts during the January 1, 2016, to December 31, 2016, study period (incumbent workforce); 2) to determine the available minorities and females by Equal Employment Opportunity (EEO) category, as recorded in the United States Census Bureau (Census); and 3) to compare the prime and subcontractors’ incumbent workforce percentages to the percent of available minority and female workers by EEO category.

Workforce utilization data were provided to the agencies and authorities by their prime and subcontractors. The workforce utilization reports detail quarterly workforce data disaggregated by gender, race, and EEO categories for each contract active during the study period of January 1, 2016, to December 31, 2016. The hourly utilization of minority and Caucasian female workers in each of the EEO categories was calculated. The availability of workers in the labor force, as reported by the Census in the American FactFinder EEO Tabulation, was compared to the total hours employees worked on the State’s contracts as reported by the prime and subcontractors.

To determine if an underutilization exists between the number of hours expected to be worked by minority and Caucasian females (proportioned by the availability percentages enumerated in the Census) and the number of hours worked on the State’s contracts, a disparity ratio was calculated. The findings provide the workforce data that agencies and authorities can use in drafting their annual master employment goal plan.

Agencies and authorities are required under the provisions of Article 15-A to submit annual master goal plans to the Division of Minority and Women’s Business Development (DMWBD), including their proposed workforce participation goals. Proposed participation goals should be based upon the most recently published labor force availability data, which DMWBD provides at the request of a State agency or authority.<sup>2</sup>



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<sup>1</sup> N.Y. Exec. Law § 312(A).

<sup>2</sup> N.Y. Exec. Law § 312(A), Section 140.1.V.

## **II. Legal Guidelines for the EEO Standards**

### **A. State EEO Administrative Procedures**

#### **1. Article 15-A Administrative Responsibility**

Article 15-A delegates responsibility for promulgating “rules and regulations to ensure that prime contractors and subcontractors undertake programs of affirmative action and equal employment opportunity” to DMWBD.

DMWBD is responsible for ensuring that State agencies and authorities submit their annual goal plan. DMWBD also ensures that bidders submit an EEO policy statement and proposed staffing plan at the time of award, and quarterly workforce compliance reports during the term of the contract. The DMWBD Director has authority to take remedial action when an agency, authority, or contractor fails to comply with the EEO provisions.

#### **2. New York Codes, Rules and Regulations**

##### **a. Application of the Workforce Compliance Reporting Requirement**

The workforce compliance reporting is determined by industry and the value of the contract.<sup>3</sup> The New York Codes, Rules and Regulations (NYCRR) defines the prime contracts and subcontracts that are subject to workforce compliance reporting. Under the provisions of NYCRR Section 143, the EEO workforce compliance reporting provisions apply to prime contracts awarded by an agency that meet the following criteria:

- A written agreement for a total expenditure of more than \$25,000 in return for labor, services (including legal, financial and other professional services), travel, supplies, equipment, or materials
- A written agreement of more than \$100,000 in return for the acquisition, construction, demolition, replacement, major repair, or renovation of real estate property owned by a contracting agency or owner of a State-assisted housing project
- A lease agreement of more than \$100,000, in which the terms provide for the contracting agency to cover the cost of the construction, demolition, replacement, major repair, or renovation to the real estate property
- All revenue contracts, defined as any written agreement between a State entity and an individual or entity whereby the State entity gives or grants a concession or a franchise



<sup>3</sup> New York State Department of State, Division of Administrative Rules. New York Codes, Rules and Regulations. New York State. 2015. Section 140.1.

The EEO workforce compliance reporting provisions also apply to subcontracts that meet the following criterion:

- An agreement for an expenditure more than \$25,000 between a business enterprise and a prime contractor to provide services, supplies, or materials of any kind.

**b. EEO Compliance Reporting Requirements for Agencies and Authorities**

Agencies and authorities must submit an annual EEO master goal plan to DMWBD. The master goal plan must include the proposed EEO workforce participation goal for each State contract by industry.<sup>4</sup> The master goal plan must also contain procurement procedures that specify which bidders are required to submit EEO documentation, the prime contractor's submission deadline, and the required reporting forms.<sup>5</sup> Contracts exempt from the requirement to submit a pre-award staffing plan must be specified in the master goal plan. The EEO requirements, including the goal for minority and Caucasian female workforce participation and the EEO reporting requirements for the prime contractor and subcontractors, must be stipulated in each agency and authority solicitation and contract.<sup>6</sup> The anti-discrimination policies must also be published in both the solicitation and contract.

**c. EEO Compliance Reporting Requirements for Contractors**

The contractor's EEO documentation must be submitted prior to award and include an EEO policy statement and staffing plan. The EEO policy is subject to DMWBD's approval, and the contractor is required to take good faith action to achieve the minority and Caucasian female EEO goal participation stipulated in the contract. The staffing plan must include a breakdown by ethnicity, gender, and job category of the workforce to be utilized on the contract. In addition, each subcontractor must submit a separate staffing plan. The prime contractor that cannot separate its workforce to be utilized on the contract from contractor or subcontractor's workforce must provide its total workforce staffing information.<sup>7</sup>

### **III. Methodology**

The Workforce Study methodology is based on the standards set forth in the equal opportunity and affirmative action clauses in 41 Code of Federal Regulations (CFR) Part 60-1.4(a) and (b), 41 CFR Part 60-250.4, and 41 CFR Part 60-741.4. The methodology involves two steps. The first step is

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<sup>4</sup> New York State Department of State, Division of Administrative Rules. New York Codes, Rules and Regulations. New York State. 2015. Section 143.2.

<sup>5</sup> New York State Department of State, Division of Administrative Rules. New York Codes, Rules and Regulations. New York State. 2015. Section 143.2 (d).

<sup>6</sup> New York State Department of State, Division of Administrative Rules. New York Codes, Rules and Regulations. New York State. 2015. Section 143.3.

<sup>7</sup> New York State Department of State, Division of Administrative Rules. New York Codes, Rules and Regulations. New York State. 2015. Section 143.2.



to enumerate the proportion of minorities and Caucasian females available to work on the State’s construction, construction-related services, non-construction related services, and commodities and other services contracts. The second step is an analysis of the utilization of minority and Caucasian female workers on the construction, construction-related services, non-construction related services, and commodities and other services contracts awarded by the State and its prime contractors. Under a fair and equitable system, according to 41 CFR Part 60-1, the percentage of labor hours worked by minorities and Caucasian females should be relatively close to the percentage of available minorities and Caucasian females in the workforce.

A disparity ratio was calculated for the minority and Caucasian female workforce to determine the level of utilization in each EEO category. If the ratio was lower than 80%, the underutilization is evidence of disparity.

**A. Workforce Utilization Analysis**

**1. Data Source**

According to the NYCRR Section 143.5, EEO goal setting and data collection is at the discretion of the DMWBD Director. At the time of the Study, the workforce utilization reporting requirement had not been initiated. To secure the utilization data required for the analysis, the agencies and authorities were instructed to submit a quarterly workforce utilization form for all active contracts during the period January 1, 2016, through December 31, 2016. The standard form was submitted to each agency and authority for distribution to the prime contractors with one or more active contracts.

The workforce utilization forms provided to the prime contractors requested that they classify all workers on contracts active during the January 1, 2016, to December 31, 2016, study period into one of 10 EEO Job Titles. The assignment of job title was to be based on job description, Standard Occupational Classification (SOC) Job Title, and SOC Job Code.

Table 1 lists the EEO job titles used to classify the occupations of the utilized and available workers. These EEO job titles were derived from the quarterly workforce utilization reports submitted by the State’s prime contractors and subcontractors

**Table 1: List of EEO Job Titles**

<b>List of EEO Job Titles</b>	
Administrative Support Workers	Operatives
Craftworkers	Professionals
Executive/Senior Officers and Managers	Sales Workers
First/Middle Officers and Managers	Service Workers
Laborers and Helpers	Technicians



## 2. Data Limitations

The quarterly workforce utilization reports submitted by the State's prime contractors and subcontractors had several limitations impacting the compilation of the data and analysis. Although provided with a standard form, the prime contractors submitted their information in various non-standard versions of the provided quarterly workforce utilization form. Each variation of the required form captured workforce utilization differently. In total, 17,617 forms were provided to Mason Tillman for analysis. Of the 17,617 files, 17,192 were spreadsheets, and 425 were assorted file types. Of the 17,192 spreadsheets, 13,870 were .XLSX or .XLS file types. There were 3,300 spreadsheets submitted in .XLSM file type. The .XLSM files were not opened because it could not be verified that these files were free of malicious codes. VBA macros were written to extract the data from most of the submitted forms.

The 13,870 .XLSX or .XLS spreadsheets were bulk processed by identifying the standard features of each spreadsheet to identify which spreadsheets followed a standard format. A script was written to validate the data in each form. Among the 13,870 forms, several thousand varied in the location of the data fields. Additionally, several forms were modified by the contractor, password protected, or not in any standard format which would allow for bulk processing. A tabular dataset was only produced for the forms that were submitted in either of the two standard workforce utilization form formats.

Of the spreadsheets that were processed and included in the tabular dataset for analysis, several workforce utilization forms were incomplete. Incomplete records were those without an EEO job title, Standard Occupational Categorization (SOC) job group, SOC job code, head count, number of hours, ethnicity, and gender.

Incomplete forms and forms that were substantially modified by the preparer were excluded from the analysis. The final dataset analyzed was comprised of 30,127 individual lines of data.

### ***B. Workforce Availability Analysis***

#### **1. Data Source**

The occupation data was derived from answers to questions 45 and 46 in the American Community Survey (ACS). The Census Bureau uses these questions to describe the work activity and occupational experience of the American labor force. The data are also the information source for the occupational skills of the workforce used to analyze career trends; and to measure compliance with antidiscrimination policies.<sup>8</sup>

Question 45 asks: "What kind of work was this person doing?" Question 46 asks: "What were this person's most important activities or duties?" These questions were asked of all people 16 years old and over who worked in the past five years. For employed people, the data refer to the person's job during the previous week. For those who worked two or more jobs, the data refer to the job at

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<sup>8</sup> United States Census Data. "American Community Survey 2012 Subject Definitions." 2012.





which the person worked the greatest number of hours. For unemployed people and people who were not currently employed but reported having a job within the last five years, the data refer to their last job.

## 2. Data Limitations

ACS statistics are estimations based upon a sample. The sample provides data on which inferences can be made about the population under examination. A statistical sample attempts to come as close as possible to the corresponding responses that would be obtained from the entire population, which is a complete census. Because the ACS can be conducted on a smaller scale than the decennial census, errors can presumably be controlled more effectively, resulting in more accurate results.<sup>9</sup> The findings from the availability analysis of the minority and Caucasian female workforce is presented in *Section III*.

## 3. Overview of Availability Analysis

The occupations utilized on prime contracts and subcontracts procured by the State and its prime contractors as reported on the quarterly workforce utilization forms provided the parameters for the availability analysis. The reported occupation codes were used to query American FactFinder™ to define the baseline availability. The data in American FactFinder™ were obtained from the EEO Tabulation. These data are collected annually by the Census from the ACS, a mandatory nationally representative survey that ascertains demographic information, including current occupation. Data were downloaded from the table titled “EEO 2r. Detailed Census Occupation by Sex and Race/Ethnicity for Residence Geography, Citizen Universe: Civilian labor force 16 years and over who are United States citizens EEO Tabulation 2006-2010 (5-year ACS data).”

## 4. Relevant Occupations

Table 2 lists the relevant occupations by EEO Job Title and corresponding Census code. The Census code enabled Mason Tillman to narrowly tailor the availability of workers in the geographic area based on the composition of the incumbent workforce.

**Table 2: Relevant EEO Job Titles by Census Code**

EEO Job Title	Census Codes						
Administrative Support Workers	2016	5020	5165	5320	5420	5620	5860
	2145	5030	5200	5330	5510	5630	5860
	2160	5100	5240	5350	5520	5700	5910
	2540	5110	5250	5360	5560	5800	5940
	5000	5120	5260	5400	5600	5820	5940
	5010	5140	5310	5410	5610	5850	



<sup>9</sup> “United States Census Bureau Limitations of the Data,” accessed March 30, 2017, <https://www.census.gov/prod/1/gen/95statab/app3.pdf>.

<b>EEO Job Title</b>	<b>Census Codes</b>						
<b>Craftworkers</b>	6200	6360	6700	7020	7300	7540	8620
	6210	6400	6710	7100	7315	7630	9510
	6220	6420	6720	7110	7330	7740	9520
	6230	6430	6730	7130	7340	8030	9560
	6240	6440	6765	7140	7350	8250	
	6250	6460	6800	7150	7360	8256	
	6300	6500	6820	7200	7410	8350	
	6320	6515	6940	7210	7420	8450	
	6330	6520	7000	7220	7430	8500	
	6355	6530	7010	7240	7510	8550	
<b>Executive/Senior Officers and Managers</b>	0010						
<b>First/Middle Officers and Managers</b>	0020 0050	0100 0110	0120 0136	0150	0230	0420	0430
<b>Laborers and Helpers</b>	4210 4250	6005 6050	6120 6260	6600 7610	8950	9620	9630
<b>Operatives</b>	7700	7840	8140	8540	8800	9000	9420
	7720	7850	8255	8630	8810	9120	9600
	7750	7855	8300	8650	8830	9130	9640
	7800	7900	8320	8710	8850	9150	9720
	7810	7950	8460	8720	8930	9310	9750
	7830	8100	8530	8740	8965	9415	
<b>Professionals</b>	2720	3150	3220	3250	3258	4930	6660
	3030	3160	3230	3255	3260	6010	9030
	3060	3210	3245				
<b>Sales Workers</b>	4700	4720	4750	4800	4820	4850	4950
	4710	4740	4760	4810	4840	4940	4965
<b>Service Workers</b>	3600	3730	3910	4020	4120	4230	4600
	3640	3740	3930	4030	4130	4240	4610
	3645	3750	3955	4050	4200	4320	4620
	3649	3900	4010	4060	4220	4540	4650
	3655						
<b>Technicians</b>	1540	1900	1920	2900	3310	3420	3510
	1550	1910	1965	3300	3320	3500	3540
	1560						

## **C. Workforce Disparity Analysis**

### **1. Overview of Disparity Analysis**

The objective of the disparity analysis is to determine any underutilization of the minority or Caucasian female workforce on the State's prime contracts. The findings from the workforce disparity analysis are presented in *Section VI*.



## **IV. Findings**

### **A. Workforce Utilization Analysis**

#### **1. Workforce Utilization: All Workforce**

Table 3 summarizes the workforce utilized on the State's construction, construction-related services, non-construction related services, and commodities and other services contracts. Minorities performed 25.73% of the hours worked on State contracts; Caucasian females performed 18.74%; and Caucasian males performed 55.53%.

**Black Americans** represented 2,380 or 10.52% of the workforce utilized on State contracts awarded during the study period, representing 592,614 or 10.21% of the hours worked on State contracts.

**Asian Americans** represented 634 or 2.80% of the workforce utilized on State contracts awarded during the study period, representing 201,624 or 3.47% of the hours worked on State contracts.

**Hispanic Americans** represented 2,318 or 10.24% of the workforce utilized on State contracts awarded during the study period, representing 678,387 or 11.68% of the hours worked on State contracts.

**Native Americans** represented 123 or 0.54% of the workforce utilized on State contracts awarded during the study period, representing 21,497 or 0.37% of the hours worked on State contracts.

**Caucasian Females** represented 4,233 or 18.71% of the workforce utilized on State contracts awarded during the study period, representing 1,088,008 or 18.74% of the hours worked on State contracts.

**Caucasian Males** represented 12,942 or 57.19% of the workforce utilized on State contracts awarded during the study period, representing 3,224,202 or 55.53% of the hours worked on State contracts.



**Table 3: Workforce Utilization Data: All Workforce**

<b>Ethnicity</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black Americans	2,380	10.52%	592,614	10.21%
Asian Americans	634	2.80%	201,624	3.47%
Hispanic Americans	2,318	10.24%	678,387	11.68%
Native Americans	123	0.54%	21,497	0.37%
Caucasian Females	4,233	18.71%	1,088,008	18.74%
Causasian Males	12,942	57.19%	3,224,202	55.53%
<b>TOTAL</b>	<b>22,630</b>	<b>100.00%</b>	<b>5,806,332</b>	<b>100.00%</b>

  

<b>Ethnicity</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black American Females	394	1.74%	115,505	1.99%
Black American Males	1,986	8.78%	477,109	8.22%
Asian American Females	188	0.83%	60,256	1.04%
Asian American Males	446	1.97%	141,368	2.43%
Hispanic American Females	389	1.72%	129,667	2.23%
Hispanic American Males	1,929	8.52%	548,720	9.45%
Native American Females	18	0.08%	4,152	0.07%
Native American Males	105	0.46%	17,345	0.30%
Caucasian Females	4,233	18.71%	1,088,008	18.74%
Causasian Males	12,942	57.19%	3,224,202	55.53%
<b>TOTAL</b>	<b>22,630</b>	<b>100.00%</b>	<b>5,806,332</b>	<b>100.00%</b>



## 2. Workforce Utilization Data: Administrative Support Workers

Table 4 summarizes the administrative support workers utilized on the State's construction, construction-related services, non-construction related services, and commodities and other services contracts. Minorities performed 38.53% of the administrative support hours worked on State contracts; Caucasian females performed 35.24%; and Caucasian males performed 26.24%.

*Black Americans* represented 346 or 10.73% of the administrative support workers utilized on State contracts awarded during the study period, representing 94,759 or 9.25% of the administrative support hours worked on State contracts.

*Asian Americans* represented 135 or 4.19% of the administrative support workers utilized on State contracts awarded during the study period, representing 48,344 or 4.72% of the administrative support hours worked on State contracts.

*Hispanic Americans* represented 715 or 22.17% of the administrative support workers utilized on State contracts awarded during the study period, representing 248,273 or 24.24% of the administrative support hours worked on State contracts.

*Native Americans* represented 10 or 0.31% of the administrative support workers utilized on State contracts awarded during the study period, representing 3,216 or 0.31% of the administrative support hours worked on State contracts.

*Caucasian Females* represented 1,249 or 38.73% of the administrative support workers utilized on State contracts awarded during the study period, representing 360,895 or 35.24% of the administrative support hours worked on State contracts.

*Caucasian Males* represented 770 or 23.88% of the administrative support workers utilized on State contracts awarded during the study period, representing 268,702 or 26.24% of the administrative support hours worked on State contracts.



**Table 4: Workforce Utilization Data: Administrative Support Workers**

<b>Ethnicity</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black Americans	346	10.73%	94,759	9.25%
Asian Americans	135	4.19%	48,344	4.72%
Hispanic Americans	715	22.17%	248,273	24.24%
Native Americans	10	0.31%	3,216	0.31%
Caucasian Females	1,249	38.73%	360,895	35.24%
Causasian Males	770	23.88%	268,702	26.24%
<b>TOTAL</b>	<b>3,225</b>	<b>100.00%</b>	<b>1,024,189</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black American Females	120	3.72%	24,161	2.36%
Black American Males	226	7.01%	70,598	6.89%
Asian American Females	43	1.33%	13,179	1.29%
Asian American Males	92	2.85%	35,165	3.43%
Hispanic American Females	136	4.22%	32,283	3.15%
Hispanic American Males	579	17.95%	215,990	21.09%
Native American Females	3	0.09%	1,096	0.11%
Native American Males	7	0.22%	2,120	0.21%
Caucasian Females	1,249	38.73%	360,895	35.24%
Causasian Males	770	23.88%	268,702	26.24%
<b>TOTAL</b>	<b>3,225</b>	<b>100.00%</b>	<b>1,024,189</b>	<b>100.00%</b>



### 3. Workforce Utilization Data: Craftworkers

Table 5 summarizes the craftworkers utilized on the State's construction, construction-related services, non-construction related services, and commodities and other services contracts. Minorities performed 13.73% of the craftworker hours worked on State contracts; Caucasian females performed 4.23%; and Caucasian males performed 82.04%.

*Black Americans* represented 538 or 8.72% of the craftworkers utilized on State contracts awarded during the study period, representing 45,285 or 5.83% of the craftworker hours worked on State contracts.

*Asian Americans* represented 66 or 1.07% of the craftworkers utilized on State contracts awarded during the study period, representing 13,449 or 1.73% of the craftworker hours worked on State contracts.

*Hispanic Americans* represented 494 or 8.01% of the craftworkers utilized on State contracts awarded during the study period, representing 45,139 or 5.81% of the craftworker hours worked on State contracts.

*Native Americans* represented 46 or 0.75% of the craftworkers utilized on State contracts awarded during the study period, representing 2,877 or 0.37% of the craftworker hours worked on State contracts.

*Caucasian Females* represented 195 or 3.16% of the craftworkers utilized on State contracts awarded during the study period, representing 32,856 or 4.23% of the craftworker hours worked on State contracts.

*Caucasian Males* represented 4,831 or 78.30% of the craftworkers utilized on State contracts awarded during the study period, representing 637,612 or 82.04% of the craftworker hours worked on State contracts.



**Table 5: Workforce Utilization Data: Craftworkers**

<b>Ethnicity</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black Americans	538	8.72%	45,285	5.83%
Asian Americans	66	1.07%	13,449	1.73%
Hispanic Americans	494	8.01%	45,139	5.81%
Native Americans	46	0.75%	2,877	0.37%
Caucasian Females	195	3.16%	32,856	4.23%
Causasian Males	4,831	78.30%	637,612	82.04%
<b>TOTAL</b>	<b>6,170</b>	<b>100.00%</b>	<b>777,218</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black American Females	11	0.18%	220	0.03%
Black American Males	527	8.54%	45,065	5.80%
Asian American Females	5	0.08%	2,390	0.31%
Asian American Males	61	0.99%	11,059	1.42%
Hispanic American Females	7	0.11%	446	0.06%
Hispanic American Males	487	7.89%	44,693	5.75%
Native American Females	2	0.03%	104	0.01%
Native American Males	44	0.71%	2,773	0.36%
Caucasian Females	195	3.16%	32,856	4.23%
Causasian Males	4,831	78.30%	637,612	82.04%
<b>TOTAL</b>	<b>6,170</b>	<b>100.00%</b>	<b>777,218</b>	<b>100.00%</b>





#### 4. Workforce Utilization Data: Executive/Senior Officers and Managers

Table 6 summarizes the executive/senior officer and manager workforce utilized on the State's construction, construction-related services, non-construction related services, and commodities and other services contracts. Minorities performed 3.50% of the executive/senior officer and manager hours worked on State contracts; Caucasian females performed 17.05%; and Caucasian males performed 79.45%.

*Black Americans* represented 4 or 1.29% of the executive/senior officer and managers utilized on State contracts awarded during the study period, representing 915 or 0.77% of the executive/senior officer and manager hours worked on State contracts.

*Asian Americans* represented 6 or 1.94% of the executive/senior officer and managers utilized on State contracts awarded during the study period, representing 1,280 or 1.08% of the executive/senior officer and manager hours worked on State contracts.

*Hispanic Americans* represented 4 or 1.29% of the executive/senior officer and managers utilized on State contracts awarded during the study period, representing 1,480 or 1.25% of the executive/senior officer and manager hours worked on State contracts.

*Native Americans* represented 1 or 0.32% of the executive/senior officer and managers utilized on State contracts awarded during the study period, representing 480 or 0.40% of the executive/senior officer and manager hours worked on State contracts.

*Caucasian Females* represented 62 or 20.06% of the executive/senior officer and managers utilized on State contracts awarded during the study period, representing 20,246 or 17.05% of the executive/senior officer and manager hours worked on State contracts.

*Caucasian Males* represented 232 or 75.08% of the executive/senior officer and managers utilized on State contracts awarded during the study period, representing 94,367 or 79.45% of the executive/senior officer and manager hours worked on State contracts.



**Table 6: Workforce Utilization Data: Executive/Senior Officers and Managers**

<b>Ethnicity</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black Americans	4	1.29%	915	0.77%
Asian Americans	6	1.94%	1,280	1.08%
Hispanic Americans	4	1.29%	1,480	1.25%
Native Americans	1	0.32%	480	0.40%
Caucasian Females	62	20.06%	20,246	17.05%
Causasian Males	232	75.08%	94,367	79.45%
<b>TOTAL</b>	<b>309</b>	<b>100.00%</b>	<b>118,768</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black American Females	2	0.65%	840	0.71%
Black American Males	2	0.65%	75	0.06%
Asian American Females	5	1.62%	760	0.64%
Asian American Males	1	0.32%	520	0.44%
Hispanic American Females	1	0.32%	40	0.03%
Hispanic American Males	3	0.97%	1,440	1.21%
Native American Females	1	0.32%	480	0.40%
Native American Males	0	0.00%	0	0.00%
Caucasian Females	62	20.06%	20,246	17.05%
Causasian Males	232	75.08%	94,367	79.45%
<b>TOTAL</b>	<b>309</b>	<b>100.00%</b>	<b>118,768</b>	<b>100.00%</b>



## 5. Workforce Utilization Data: First/Middle Officers and Managers

Table 7 summarizes the first/middle officer and managers utilized on the State's construction, construction-related services, non-construction related services, and commodities and other services contracts. Minorities performed 14.50% of the first/middle officer and manager hours worked on State contracts; Caucasian females performed 20.34%; and Caucasian males performed 65.16%.

*Black Americans* represented 85 or 4.52% of the first/middle officer and managers utilized on State contracts awarded during the study period, representing 22,090 or 3.47% of the first/middle officer and manager hours worked on State contracts.

*Asian Americans* represented 59 or 3.14% of the first/middle officer and managers utilized on State contracts awarded during the study period, representing 14,777 or 2.32% of the first/middle officer and manager hours worked on State contracts.

*Hispanic Americans* represented 144 or 7.66% of the first/middle officer and managers utilized on State contracts awarded during the study period, representing 53,454 or 8.39% of the first/middle officer and manager hours worked on State contracts.

*Native Americans* represented 8 or 0.43% of the first/middle officer and managers utilized on State contracts awarded during the study period, representing 1,987 or 0.31% of the first/middle officer and manager hours worked on State contracts.

*Caucasian Females* represented 427 or 22.72% of the first/middle officer and managers utilized on State contracts awarded during the study period, representing 129,549 or 20.34% of the first/middle officer and manager hours worked on State contracts.

*Caucasian Males* represented 1,156 or 61.52% of the first/middle officer and managers utilized on State contracts awarded during the study period, representing 414,934 or 65.16% of the first/middle officer and manager hours worked on State contracts.



**Table 7: Workforce Utilization Data: First/Middle Officers and Managers**

<b>Ethnicity</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black Americans	85	4.52%	22,090	3.47%
Asian Americans	59	3.14%	14,777	2.32%
Hispanic Americans	144	7.66%	53,454	8.39%
Native Americans	8	0.43%	1,987	0.31%
Caucasian Females	427	22.72%	129,549	20.34%
Causasian Males	1,156	61.52%	414,934	65.16%
<b>TOTAL</b>	<b>1,879</b>	<b>100.00%</b>	<b>636,791</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black American Females	28	1.49%	6,162	0.97%
Black American Males	57	3.03%	15,928	2.50%
Asian American Females	21	1.12%	2,394	0.38%
Asian American Males	38	2.02%	12,383	1.94%
Hispanic American Females	26	1.38%	7,905	1.24%
Hispanic American Males	118	6.28%	45,549	7.15%
Native American Females	3	0.16%	707	0.11%
Native American Males	5	0.27%	1,280	0.20%
Caucasian Females	427	22.72%	129,549	20.34%
Causasian Males	1,156	61.52%	414,934	65.16%
<b>TOTAL</b>	<b>1,879</b>	<b>100.00%</b>	<b>636,791</b>	<b>100.00%</b>



## 6. Workforce Utilization Data: Laborers and Helpers

Table 8 summarizes the laborers and helpers utilized on the State's construction, construction-related services, non-construction related services, and commodities and other services contracts. Minorities performed 24.88% of the laborer and helper hours worked on State contracts; Caucasian females performed 15.15%; and Caucasian males performed 59.97%.

*Black Americans* represented 403 or 17.73% of the laborer and helpers utilized on State contracts awarded during the study period, representing 55,486 or 14.38% of the laborer and helper hours worked on State contracts.

*Asian Americans* represented 18 or 0.79% of the laborer and helpers utilized on State contracts awarded during the study period, representing 4,475 or 1.16% of the laborer and helper hours worked on State contracts.

*Hispanic Americans* represented 211 or 9.28% of the laborer and helpers utilized on State contracts awarded during the study period, representing 33,739 or 8.74% of the laborer and helper hours worked on State contracts.

*Native Americans* represented 17 or 0.75% of the laborer and helpers utilized on State contracts awarded during the study period, representing 2,290 or 0.59% of the laborer and helper hours worked on State contracts.

*Caucasian Females* represented 245 or 10.78% of the laborer and helpers utilized on State contracts awarded during the study period, representing 58,450 or 15.15% of the laborer and helper hours worked on State contracts.

*Caucasian Males* represented 1,379 or 60.67% of the laborer and helpers utilized on State contracts awarded during the study period, representing 231,379 or 59.97% of the laborer and helper hours worked on State contracts.



**Table 8: Workforce Utilization Data: Laborers and Helpers**

<b>Ethnicity</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black Americans	403	17.73%	55,486	14.38%
Asian Americans	18	0.79%	4,475	1.16%
Hispanic Americans	211	9.28%	33,739	8.74%
Native Americans	17	0.75%	2,290	0.59%
Caucasian Females	245	10.78%	58,450	15.15%
Causasian Males	1,379	60.67%	231,379	59.97%
<b>TOTAL</b>	<b>2,273</b>	<b>100.00%</b>	<b>385,819</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black American Females	10	0.44%	2,646	0.69%
Black American Males	393	17.29%	52,840	13.70%
Asian American Females	5	0.22%	1,678	0.43%
Asian American Males	13	0.57%	2,797	0.72%
Hispanic American Females	17	0.75%	3,364	0.87%
Hispanic American Males	194	8.53%	30,375	7.87%
Native American Females	8	0.35%	1,573	0.41%
Native American Males	9	0.40%	717	0.19%
Caucasian Females	245	10.78%	58,450	15.15%
Causasian Males	1,379	60.67%	231,379	59.97%
<b>TOTAL</b>	<b>2,273</b>	<b>100.00%</b>	<b>385,819</b>	<b>100.00%</b>



## 7. Workforce Utilization Data: Operatives

Table 9 summarizes the operatives utilized on the State's construction, construction-related services, non-construction related services, and commodities and other services contracts. Minorities performed 36.79% of the operative hours worked on State contracts; Caucasian females performed 5.60%; and Caucasian males performed 57.62%.

*Black Americans* represented 445 or 16.65% of the operatives utilized on State contracts awarded during the study period, representing 208,999 or 20.00% of the operative hours worked on State contracts.

*Asian Americans* represented 65 or 2.43% of the operatives utilized on State contracts awarded during the study period, representing 28,332 or 2.71% of the operative hours worked on State contracts.

*Hispanic Americans* represented 356 or 13.32% of the operatives utilized on State contracts awarded during the study period, representing 144,382 or 13.82% of the operative hours worked on State contracts.

*Native Americans* represented 18 or 0.67% of the operatives utilized on State contracts awarded during the study period, representing 2,648 or 0.25% of the operative hours worked on State contracts.

*Caucasian Females* represented 144 or 5.39% of the operatives utilized on State contracts awarded during the study period, representing 58,477 or 5.60% of the operative hours worked on State contracts.

*Caucasian Males* represented 1,644 or 61.53% of the operatives utilized on State contracts awarded during the study period, representing 602,042 or 57.62% of the operative hours worked on State contracts.



**Table 9: Workforce Utilization Data: Operatives**

<b>Ethnicity</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black Americans	445	16.65%	208,999	20.00%
Asian Americans	65	2.43%	28,332	2.71%
Hispanic Americans	356	13.32%	144,382	13.82%
Native Americans	18	0.67%	2,648	0.25%
Caucasian Females	144	5.39%	58,477	5.60%
Causasian Males	1,644	61.53%	602,042	57.62%
<b>TOTAL</b>	<b>2,672</b>	<b>100.00%</b>	<b>1,044,880</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black American Females	56	2.10%	28,014	2.68%
Black American Males	389	14.56%	180,985	17.32%
Asian American Females	13	0.49%	6,373	0.61%
Asian American Males	52	1.95%	21,959	2.10%
Hispanic American Females	76	2.84%	38,263	3.66%
Hispanic American Males	280	10.48%	106,119	10.16%
Native American Females	1	0.04%	192	0.02%
Native American Males	17	0.64%	2,456	0.24%
Caucasian Females	144	5.39%	58,477	5.60%
Causasian Males	1,644	61.53%	602,042	57.62%
<b>TOTAL</b>	<b>2,672</b>	<b>100.00%</b>	<b>1,044,880</b>	<b>100.00%</b>





## 8. Workforce Utilization Data: Professionals

Table 10 summarizes the professionals utilized on the State's construction, construction-related services, non-construction related services, and commodities and other services contracts. Minorities performed 18.38% of the professional hours worked on State contracts; Caucasian females performed 29.09%; and Caucasian males performed 52.53%.

*Black Americans* represented 152 or 5.80% of the professionals utilized on State contracts awarded during the study period, representing 46,590 or 6.03% of the professional hours worked on State contracts.

*Asian Americans* represented 200 or 7.64% of the professionals utilized on State contracts awarded during the study period, representing 58,158 or 7.53% of the professional hours worked on State contracts.

*Hispanic Americans* represented 93 or 3.55% of the professionals utilized on State contracts awarded during the study period, representing 35,115 or 4.55% of the professional hours worked on State contracts.

*Native Americans* represented 9 or 0.34% of the professionals utilized on State contracts awarded during the study period, representing 2,070 or 0.27% of the professional hours worked on State contracts.

*Caucasian Females* represented 812 or 31.00% of the professionals utilized on State contracts awarded during the study period, representing 224,656 or 29.09% of the professional hours worked on State contracts.

*Caucasian Males* represented 1,353 or 51.66% of the professionals utilized on State contracts awarded during the study period, representing 405,679 or 52.53% of the professional hours worked on State contracts.



**Table 10: Workforce Utilization Data: Professionals**

<b>Ethnicity</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black Americans	152	5.80%	46,590	6.03%
Asian Americans	200	7.64%	58,158	7.53%
Hispanic Americans	93	3.55%	35,115	4.55%
Native Americans	9	0.34%	2,070	0.27%
Caucasian Females	812	31.00%	224,656	29.09%
Causasian Males	1,353	51.66%	405,679	52.53%
<b>TOTAL</b>	<b>2,619</b>	<b>100.00%</b>	<b>772,268</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black American Females	45	1.72%	15,650	2.03%
Black American Males	107	4.09%	30,940	4.01%
Asian American Females	63	2.41%	21,200	2.75%
Asian American Males	137	5.23%	36,958	4.79%
Hispanic American Females	35	1.34%	14,307	1.85%
Hispanic American Males	58	2.21%	20,808	2.69%
Native American Females	0	0.00%	0	0.00%
Native American Males	9	0.34%	2,070	0.27%
Caucasian Females	812	31.00%	224,656	29.09%
Causasian Males	1,353	51.66%	405,679	52.53%
<b>TOTAL</b>	<b>2,619</b>	<b>100.00%</b>	<b>772,268</b>	<b>100.00%</b>



## 9. Workforce Utilization Data: Sales Workers

Table 11 summarizes the sales workers utilized on the State's construction, construction-related services, non-construction related services, and commodities and other services contracts. Minorities performed 19.47% of the sales hours worked on State contracts; Caucasian females performed 26.02%; and Caucasian males performed 54.51%.

*Black Americans* represented 126 or 5.92% of the sales workers utilized on State contracts awarded during the study period, representing 57,470 or 8.41% of the sales hours worked on State contracts.

*Asian Americans* represented 31 or 1.46% of the sales workers utilized on State contracts awarded during the study period, representing 12,200 or 1.78% of the sales hours worked on State contracts.

*Hispanic Americans* represented 139 or 6.53% of the sales workers utilized on State contracts awarded during the study period, representing 61,724 or 9.03% of the sales hours worked on State contracts.

*Native Americans* represented 4 or 0.19% of the sales workers utilized on State contracts awarded during the study period, representing 1,726 or 0.25% of the sales hours worked on State contracts.

*Caucasian Females* represented 951 or 44.69% of the sales workers utilized on State contracts awarded during the study period, representing 177,856 or 26.02% of the sales hours worked on State contracts.

*Caucasian Males* represented 877 or 41.21% of the sales workers utilized on State contracts awarded during the study period, representing 372,626 or 54.51% of the sales hours worked on State contracts.



**Table 11: Workforce Utilization Data: Sales Workers**

<b>Ethnicity</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black Americans	126	5.92%	57,470	8.41%
Asian Americans	31	1.46%	12,200	1.78%
Hispanic Americans	139	6.53%	61,724	9.03%
Native Americans	4	0.19%	1,726	0.25%
Caucasian Females	951	44.69%	177,856	26.02%
Causasian Males	877	41.21%	372,626	54.51%
<b>TOTAL</b>	<b>2,128</b>	<b>100.00%</b>	<b>683,602</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black American Females	53	2.49%	23,455	3.43%
Black American Males	73	3.43%	34,015	4.98%
Asian American Females	13	0.61%	5,026	0.74%
Asian American Males	18	0.85%	7,174	1.05%
Hispanic American Females	43	2.02%	19,107	2.80%
Hispanic American Males	96	4.51%	42,617	6.23%
Native American Females	0	0.00%	0	0.00%
Native American Males	4	0.19%	1,726	0.25%
Caucasian Females	951	44.69%	177,856	26.02%
Causasian Males	877	41.21%	372,626	54.51%
<b>TOTAL</b>	<b>2,128</b>	<b>100.00%</b>	<b>683,602</b>	<b>100.00%</b>



## 10. Workforce Utilization Data: Service Workers

Table 12 summarizes the services workers utilized on the State's construction, construction-related services, non-construction related services, and commodities and other services contracts. Minorities performed 46.36% of the service hours worked on State contracts; Caucasian females performed 8.65%; and Caucasian males performed 44.99%.

*Black Americans* represented 200 or 33.17% of the service workers utilized on State contracts awarded during the study period, representing 30,008 or 19.38% of the service hours worked on State contracts.

*Asian Americans* represented 22 or 3.65% of the service workers utilized on State contracts awarded during the study period, representing 6,496 or 4.20% of the service hours worked on State contracts.

*Hispanic Americans* represented 109 or 18.08% of the service workers utilized on State contracts awarded during the study period, representing 33,153 or 21.41% of the service hours worked on State contracts.

*Native Americans* represented 6 or 1.00% of the service workers utilized on State contracts awarded during the study period, representing 2,122 or 1.37% of the service hours worked on State contracts.

*Caucasian Females* represented 58 or 9.62% of the service workers utilized on State contracts awarded during the study period, representing 13,397 or 8.65% of the service hours worked on State contracts.

*Caucasian Males* represented 208 or 34.49% of the service workers utilized on State contracts awarded during the study period, representing 69,663 or 44.99% of the service hours worked on State contracts.



**Table 12: Workforce Utilization Data: Service Workers**

<b>Ethnicity</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black Americans	200	33.17%	30,008	19.38%
Asian Americans	22	3.65%	6,496	4.20%
Hispanic Americans	109	18.08%	33,153	21.41%
Native Americans	6	1.00%	2,122	1.37%
Caucasian Females	58	9.62%	13,397	8.65%
Causasian Males	208	34.49%	69,663	44.99%
<b>TOTAL</b>	<b>603</b>	<b>100.00%</b>	<b>154,839</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black American Females	61	10.12%	10,931	7.06%
Black American Males	139	23.05%	19,077	12.32%
Asian American Females	5	0.83%	963	0.62%
Asian American Males	17	2.82%	5,533	3.57%
Hispanic American Females	43	7.13%	11,472	7.41%
Hispanic American Males	66	10.95%	21,681	14.00%
Native American Females	0	0.00%	0	0.00%
Native American Males	6	1.00%	2,122	1.37%
Caucasian Females	58	9.62%	13,397	8.65%
Causasian Males	208	34.49%	69,663	44.99%
<b>TOTAL</b>	<b>603</b>	<b>100.00%</b>	<b>154,839</b>	<b>100.00%</b>



## 11. Workforce Utilization Data: Technicians

Table 13 summarizes the technicians utilized on the State's construction, construction-related services, non-construction related services, and commodities and other services contracts. Minorities performed 33.24% of the technician hours worked on State contracts; Caucasian females performed 5.59%; and Caucasian males performed 61.17%.

*Black Americans* represented 81 or 10.77% of the technicians utilized on State contracts awarded during the study period, representing 31,012 or 14.91% of the technician hours worked on State contracts.

*Asian Americans* represented 32 or 4.26% of the technicians utilized on State contracts awarded during the study period, representing 14,113 or 6.79% of the technician hours worked on State contracts.

*Hispanic Americans* represented 53 or 7.05% of the technicians utilized on State contracts awarded during the study period, representing 21,928 or 10.54% of the technician hours worked on State contracts.

*Native Americans* represented 4 or 0.53% of the technicians utilized on State contracts awarded during the study period, representing 2,081 or 1.00% of the technician hours worked on State contracts.

*Caucasian Females* represented 90 or 11.97% of the technicians utilized on State contracts awarded during the study period, representing 11,626 or 5.59% of the technician hours worked on State contracts.

*Caucasian Males* represented 492 or 65.43% of the technicians utilized on State contracts awarded during the study period, representing 127,198 or 61.17% of the technician hours worked on State contracts.



**Table 13: Workforce Utilization Data: Technicians**

<b>Ethnicity</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black Americans	81	10.77%	31,012	14.91%
Asian Americans	32	4.26%	14,113	6.79%
Hispanic Americans	53	7.05%	21,928	10.54%
Native Americans	4	0.53%	2,081	1.00%
Caucasian Females	90	11.97%	11,626	5.59%
Causasian Males	492	65.43%	127,198	61.17%
<b>TOTAL</b>	<b>752</b>	<b>100.00%</b>	<b>207,958</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Workers</b>	<b>Percent of Workers</b>	<b>Amount of Hours</b>	<b>Percent of Hours</b>
Black American Females	8	1.06%	3,426	1.65%
Black American Males	73	9.71%	27,586	13.27%
Asian American Females	15	1.99%	6,293	3.03%
Asian American Males	17	2.26%	7,820	3.76%
Hispanic American Females	5	0.66%	2,480	1.19%
Hispanic American Males	48	6.38%	19,448	9.35%
Native American Females	0	0.00%	0	0.00%
Native American Males	4	0.53%	2,081	1.00%
Caucasian Females	90	11.97%	11,626	5.59%
Causasian Males	492	65.43%	127,198	61.17%
<b>TOTAL</b>	<b>752</b>	<b>100.00%</b>	<b>207,958</b>	<b>100.00%</b>





## **B. Workforce Availability Analysis**

### **1. Workforce Availability: All Workers**

Table 14 summarizes the relevant workforce available as enumerated in the Census. Minorities represented 40.46% of the workers available in the State; Caucasian females represented 28.02%; and Caucasian males represented 31.52% of the available workforce.

*Black Americans* represented 961,549 or 15.10% of the relevant workforce available to work on State contracts awarded during the study period

*Asian Americans* represented 428,065 or 6.72% of the relevant workforce available to work on State contracts awarded during the study period

*Hispanic Americans* represented 1,170,274 or 18.38% of the relevant workforce available to work on State contracts awarded during the study period

*Native Americans* represented 16,220 or 0.25% of the relevant workforce available to work on State contracts awarded during the study period

*Caucasian Females* represented 1,784,136 or 28.02% of relevant workforce available to work on State contracts awarded during the study period

*Caucasian Males* represented 2,007,220 or 31.52% of the relevant workforce available to work on State contracts awarded during the study period



**Table 14: Workforce Availability Data: All Workers**

<b>Ethnicity</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black Americans	961,549	15.10%
Asian Americans	428,065	6.72%
Hispanic Americans	1,170,274	18.38%
Native Americans	16,220	0.25%
Caucasian Females	1,784,136	28.02%
Caucasian Males	2,007,220	31.52%
<b>TOTAL</b>	<b>6,367,464</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black American Females	539,804	8.48%
Black American Males	421,745	6.62%
Asian American Females	208,371	3.27%
Asian American Males	219,694	3.45%
Hispanic American Females	535,311	8.41%
Hispanic American Males	634,963	9.97%
Native American Females	8,309	0.13%
Native American Males	7,911	0.12%
Caucasian Females	1,784,136	28.02%
Caucasian Males	2,007,220	31.52%
<b>TOTAL</b>	<b>6,367,464</b>	<b>100.00%</b>



## 2. Workforce Availability Data: Administrative Support Workers

Table 15 summarizes the administrative support workers enumerated in the Census. Minority administrative support workers represented 37.38% of the administrative support workers available in the State; Caucasian females represented 47.99%; and Caucasian males represented 14.64%.

*Black Americans* represented 225,165 or 15.99% of the administrative support workers available to work on State contracts awarded during the study period.

*Asian Americans* represented 79,893 or 5.67% of the administrative support workers available to work on State contracts awarded during the study period.

*Hispanic Americans* represented 218,185 or 15.49% of the administrative support workers available to work on State contracts awarded during the study period.

*Native Americans* represented 3,076 or 0.22% of the administrative support workers available to work on State contracts awarded during the study period.

*Caucasian Females* represented 675,750 or 47.99% of the administrative support workers available to work on State contracts awarded during the study period.

*Caucasian Males* represented 206,110 or 14.64% of the administrative support workers available to work on State contracts awarded during the study period.



**Table 15: Workforce Availability Data: Administrative Support Workers**

<b>Ethnicity</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black Americans	225,165	15.99%
Asian Americans	79,893	5.67%
Hispanic Americans	218,185	15.49%
Native Americans	3,076	0.22%
Caucasian Females	675,750	47.99%
Caucasian Males	206,110	14.64%
<b>TOTAL</b>	<b>1,408,179</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black American Females	70,195	4.98%
Black American Males	154,970	11.00%
Asian American Females	27,664	1.96%
Asian American Males	52,229	3.71%
Hispanic American Females	69,510	4.94%
Hispanic American Males	148,675	10.56%
Native American Females	709	0.05%
Native American Males	2,367	0.17%
Caucasian Females	206,110	14.64%
Caucasian Males	675,750	47.99%
<b>TOTAL</b>	<b>1,408,179</b>	<b>100.00%</b>



### 3. Workforce Availability Data: Craftworkers

Table 16 summarizes the craftworkers enumerated in the Census. Minority craftworkers represented 32.34% of the craftworkers available in the State; Caucasian females represented 2.38%; and Caucasian males represented 65.28%.

*Black Americans* 63,760 or 10.04% of the craftworkers available to work on State contracts awarded during the study period.

*Asian Americans* represented 24,481 or 3.85% of the craftworkers available to work on State contracts awarded during the study period.

*Hispanic Americans* represented 115,008 or 18.11% of the craftworkers available to work on State contracts awarded during the study period.

*Native Americans* represented 2,152 or 0.34% of the craftworkers available to work on State contracts awarded during the study period.

*Caucasian Females* represented 15,142 or 2.38% of the craftworkers available to work on State contracts awarded during the study period.

*Caucasian Males* represented 414,590 or 65.28% of the craftworkers available to work on State contracts awarded during the study period.



**Table 16: Workforce Availability Data: Craftworkers**

<b>Ethnicity</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black Americans	63,760	10.04%
Asian Americans	24,481	3.85%
Hispanic Americans	115,008	18.11%
Native Americans	2,152	0.34%
Caucasian Females	15,142	2.38%
Caucasian Males	414,590	65.28%
<b>TOTAL</b>	<b>635,133</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black American Females	3,465	0.55%
Black American Males	60,295	9.49%
Asian American Females	2,385	0.38%
Asian American Males	22,096	3.48%
Hispanic American Females	4,759	0.75%
Hispanic American Males	110,249	17.36%
Native American Females	119	0.02%
Native American Males	2,033	0.32%
Caucasian Females	15,142	2.38%
Caucasian Males	414,590	65.28%
<b>TOTAL</b>	<b>635,133</b>	<b>100.00%</b>



#### 4. Workforce Availability Data: Executive/Senior Officers and Managers

Table 17 summarizes the executive/senior officer and managers enumerated the Census. Minority executive/senior officers and managers represented 14.71% of the executive/senior officer and managers available in the State; Caucasian females represented 21.39%; and Caucasian males represented 63.90%.

*Black Americans* represented 3,210 or 4.10% of the executive/senior officer and managers available to work on State contracts awarded during the study period.

*Asian Americans* represented 4,705 or 6.01% of the executive/senior officer and managers available to work on State contracts awarded during the study period.

*Hispanic Americans* represented 3,360 or 4.29% of the executive/senior officer and managers available to work on State contracts awarded during the study period.

*Native Americans* represented 240 or 0.31% of the executive/senior officer and managers available to work on State contracts awarded during the study period.

*Caucasian Females* represented 16,745 or 21.39% of the executive/senior officer and managers available to work on State contracts awarded during the study period.

*Caucasian Males* represented 50,015 or 63.90% of the executive/senior officer and managers available to work on State contracts awarded during the study period.



**Table 17: Workforce Availability Data: Executive/Senior Officers and Managers**

<b>Ethnicity</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black Americans	3,210	4.10%
Asian Americans	4,705	6.01%
Hispanic Americans	3,360	4.29%
Native Americans	240	0.31%
Caucasian Females	16,745	21.39%
Caucasian Males	50,015	63.90%
<b>TOTAL</b>	<b>78,275</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black American Females	1,125	1.44%
Black American Males	2,085	2.66%
Asian American Females	1,050	1.34%
Asian American Males	3,655	4.67%
Hispanic American Females	975	1.25%
Hispanic American Males	2,385	3.05%
Native American Females	120	0.15%
Native American Males	120	0.15%
Caucasian Females	16,745	21.39%
Caucasian Males	50,015	63.90%
<b>TOTAL</b>	<b>78,275</b>	<b>100.00%</b>





## 5. Workforce Availability Data: First/Middle Officers and Managers

Table 18 summarizes the first/middle officer and managers enumerated in the Census. Minority first/middle officers and managers represented 25.53% of the first/middle officers and managers available in the State; Caucasian females represented 31.56%; and Caucasian males represented 42.91%.

*Black Americans* represented 48,200 or 9.13% of the first/middle officer and managers available to work on State contracts awarded during the study period.

*Asian Americans* represented 39,524 or 7.49% of the first/middle officer and managers available to work on State contracts awarded during the study period.

*Hispanic Americans* represented 46,375 or 8.78% of the first/middle officer and managers available to work on State contracts awarded during the study period.

*Native Americans* represented 712 or 0.13% of the first/middle officer and managers available to work on State contracts awarded during the study period.

*Caucasian Females* represented 166,635 or 31.56% of the first/middle officer and managers available to work on State contracts awarded during the study period.

*Caucasian Males* represented 226,575 or 42.91% of the first/middle officer and managers available to work on State contracts awarded during the study period.



**Table 18: Workforce Availability Data: First/Middle Officers and Managers**

<b>Ethnicity</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black Americans	48,200	9.13%
Asian Americans	39,524	7.49%
Hispanic Americans	46,375	8.78%
Native Americans	712	0.13%
Caucasian Females	166,635	31.56%
Caucasian Males	226,575	42.91%
<b>TOTAL</b>	<b>528,021</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black American Females	27,180	5.15%
Black American Males	21,020	3.98%
Asian American Females	17,120	3.24%
Asian American Males	22,404	4.24%
Hispanic American Females	22,860	4.33%
Hispanic American Males	23,515	4.45%
Native American Females	379	0.07%
Native American Males	333	0.06%
Caucasian Females	166,635	31.56%
Caucasian Males	226,575	42.91%
<b>TOTAL</b>	<b>528,021</b>	<b>100.00%</b>



## 6. Workforce Availability Data: Laborers and Helpers

Table 19 summarizes the laborers and helpers enumerated in the Census. Minority laborers and helpers represented 46.85% of the laborers and helpers available in the State; Caucasian females represented 5.29%; and Caucasian males represented 47.86%.

*Black Americans* represented 36,335 or 11.30% of the laborers and helpers available to work on State contracts awarded during the study period.

*Asian Americans* represented 12,354 or 3.84% of the laborers and helpers available to work on State contracts awarded during the study period.

*Hispanic Americans* represented 100,900 or 31.38% of the laborers and helpers available to work on State contracts awarded during the study period.

*Native Americans* represented 1,059 or 0.33% of the laborers and helpers available to work on State contracts awarded during the study period.

*Caucasian Females* represented 17,019 or 5.29% of the laborers and helpers available to work on State contracts awarded during the study period.

*Caucasian Males* represented 153,890 or 47.86% of the laborers and helpers available to work on State contracts awarded during the study period.



**Table 19: Workforce Availability Data: Laborers and Helpers**

<b>Ethnicity</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black Americans	36,335	11.30%
Asian Americans	12,354	3.84%
Hispanic Americans	100,900	31.38%
Native Americans	1,059	0.33%
Caucasian Females	17,019	5.29%
Caucasian Males	153,890	47.86%
<b>TOTAL</b>	<b>321,557</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black American Females	4,095	1.27%
Black American Males	32,240	10.03%
Asian American Females	1,010	0.31%
Asian American Males	11,344	3.53%
Hispanic American Females	6,770	2.11%
Hispanic American Males	94,130	29.27%
Native American Females	100	0.03%
Native American Males	959	0.30%
Caucasian Females	17,019	5.29%
Caucasian Males	153,890	47.86%
<b>TOTAL</b>	<b>321,557</b>	<b>100.00%</b>



## 7. Workforce Availability Data: Operatives

Table 20 summarizes the operatives enumerated in the Census. Minority operatives represented 44.06% of the operatives available in the State; Caucasian females represented 12.74%; and Caucasian males represented 43.21%.

*Black Americans* represented 80,969 or 13.02% of the operatives available to work on State contracts awarded during the study period.

*Asian Americans* represented 44,853 or 7.21% of the operatives available to work on State contracts awarded during the study period.

*Hispanic Americans* represented 146,469 or 23.56% of the operatives available to work on State contracts awarded during the study period.

*Native Americans* represented 1,644 or 0.26% of the operatives available to work on State contracts awarded during the study period.

*Caucasian Females* represented 79,195 or 12.74% of the operatives available to work on State contracts awarded during the study period.

*Caucasian Males* represented 268,655 or 43.21% of the operatives available to work on State contracts awarded during the study period.



**Table 20: Workforce Availability Data: Operatives**

<b>Ethnicity</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black Americans	80,969	13.02%
Asian Americans	44,853	7.21%
Hispanic Americans	146,469	23.56%
Native Americans	1,644	0.26%
Caucasian Females	79,195	12.74%
Caucasian Males	268,655	43.21%
<b>TOTAL</b>	<b>621,785</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black American Females	17,859	2.87%
Black American Males	63,110	10.15%
Asian American Females	17,435	2.80%
Asian American Males	27,418	4.41%
Hispanic American Females	46,685	7.51%
Hispanic American Males	99,784	16.05%
Native American Females	563	0.09%
Native American Males	1,081	0.17%
Caucasian Females	79,195	12.74%
Caucasian Males	268,655	43.21%
<b>TOTAL</b>	<b>621,785</b>	<b>100.00%</b>



## 8. Workforce Availability Data: Professionals

Table 21 summarizes the professionals enumerated in the Census. Minority professionals represented 33.08% of the workers available in the State; Caucasian females represented 47.75%; and Caucasian males represented 19.16%.

*Black Americans* represented 46,795 or 13.75% of the professionals available to work on State contracts awarded during the study period.

*Asian Americans* represented 45,284 or 13.31% of the professionals available to work on State contracts awarded during the study period.

*Hispanic Americans* represented 19,912 or 5.85% of the professionals available to work on State contracts awarded during the study period.

*Native Americans* represented 592 or 0.17% of the professionals available to work on State contracts awarded during the study period.

*Caucasian Females* represented 162,505 or 47.75% of the professionals available to work on State contracts awarded during the study period.

*Caucasian Males* represented 65,220 or 19.16% of the professionals available to work on State contracts awarded during the study period.



**Table 21: Workforce Availability Data: Professionals**

<b>Ethnicity</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black Americans	46,795	13.75%
Asian Americans	45,284	13.31%
Hispanic Americans	19,912	5.85%
Native Americans	592	0.17%
Caucasian Females	162,505	47.75%
Caucasian Males	65,220	19.16%
<b>TOTAL</b>	<b>340,308</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black American Females	38,030	11.18%
Black American Males	8,765	2.58%
Asian American Females	29,869	8.78%
Asian American Males	15,415	4.53%
Hispanic American Females	13,462	3.96%
Hispanic American Males	6,450	1.90%
Native American Females	358	0.11%
Native American Males	234	0.07%
Caucasian Females	162,505	47.75%
Caucasian Males	65,220	19.16%
<b>TOTAL</b>	<b>340,308</b>	<b>100.00%</b>





## 9. Workforce Availability Data: Sales Workers

Table 22 summarizes the sales workers enumerated in the Census. Minority sales workers represented 35.38% of the sales workers available in the State; Caucasian females represented 28.77%; and Caucasian males represented 35.86%.

*Black Americans* represented 114,115 or 11.58% of the sales workers available to work on State contracts awarded during the study period.

*Asian Americans* represented 84,894 or 8.62% of the sales workers available to work on State contracts awarded during the study period.

*Hispanic Americans* 147,175 or 14.94% of the sales workers available to work on State contracts awarded during the study period.

*Native Americans* represented 2,381 or 0.24% of the sales workers available to work on State contracts awarded during the study period.

*Caucasian Females* represented 283,450 or 28.77% of the sales workers available to work on State contracts awarded during the study period.

*Caucasian Males* represented 353,290 or 35.86% of the sales workers available to work on State contracts awarded during the study period.



**Table 22: Workforce Availability Data: Sales Workers**

<b>Ethnicity</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black Americans	114,115	11.58%
Asian Americans	84,894	8.62%
Hispanic Americans	147,175	14.94%
Native Americans	2,381	0.24%
Caucasian Females	283,450	28.77%
Caucasian Males	353,290	35.86%
<b>TOTAL</b>	<b>985,305</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black American Females	65,545	6.65%
Black American Males	48,570	4.93%
Asian American Females	37,329	3.79%
Asian American Males	47,565	4.83%
Hispanic American Females	78,890	8.01%
Hispanic American Males	68,285	6.93%
Native American Females	1,532	0.16%
Native American Males	849	0.09%
Caucasian Females	283,450	28.77%
Caucasian Males	353,290	35.86%
<b>TOTAL</b>	<b>985,305</b>	<b>100.00%</b>



## 10. Workforce Availability Data: Service Workers

Table 23 summarizes the service workers enumerated in the Census. Minority service workers represented 59.07% of the workers available in the State; Caucasian females represented 23.16%; and Caucasian males represented 17.76%.

*Black Americans* represented 311,855 or 24.53% of the service workers available to work on State contracts awarded during the study period.

*Asian Americans* represented 78,812 or 6.20% of the service workers available to work on State contracts awarded during the study period.

*Hispanic Americans* represented 356,565 or 28.05% of the service workers available to work on State contracts awarded during the study period.

*Native Americans* represented 3,724 or 0.29% of the service workers available to work on State contracts awarded during the study period.

*Caucasian Females* represented 294,460 or 23.16% of the service workers available to work on State contracts awarded during the study period.

*Caucasian Males* represented 225,775 or 17.76% of the service workers available to work on State contracts awarded during the study period.



**Table 23: Workforce Availability Data: Service Workers**

<b>Ethnicity</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black Americans	311,855	24.53%
Asian Americans	78,812	6.20%
Hispanic Americans	356,565	28.05%
Native Americans	3,724	0.29%
Caucasian Females	294,460	23.16%
Caucasian Males	225,775	17.76%
<b>TOTAL</b>	<b>1,271,191</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black American Females	205,635	16.18%
Black American Males	106,220	8.36%
Asian American Females	42,554	3.35%
Asian American Males	36,258	2.85%
Hispanic American Females	202,365	15.92%
Hispanic American Males	154,200	12.13%
Native American Females	2,341	0.18%
Native American Males	1,383	0.11%
Caucasian Females	294,460	23.16%
Caucasian Males	225,775	17.76%
<b>TOTAL</b>	<b>1,271,191</b>	<b>100.00%</b>



## 11. Workforce Availability Data: Technicians

Table 24 summarizes the technicians enumerated in the Census. Minority technicians represented 34.54% of the technicians available in the State; Caucasian females represented 41.21%; and Caucasian males represented 24.25%.

*Black Americans* represented 31,145 or 17.53% of the technicians available to work on State contracts awarded during the study period.

*Asian Americans* represented 13,265 or 7.46% of the technicians available to work on State contracts awarded during the study period.

*Hispanic Americans* represented 16,325 or 9.19% of the technicians available to work on State contracts awarded during the study period.

*Native Americans* represented 640 or 0.36% of the technicians available to work on State contracts awarded during the study period.

*Caucasian Females* represented 73,235 or 41.21% of the technicians available to work on State contracts awarded during the study period.

*Caucasian Males* represented 43,100 or 24.25% of the technicians available to work on State contracts awarded during the study period.



**Table 24: Workforce Availability Data: Technicians**

<b>Ethnicity</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black Americans	31,145	17.53%
Asian Americans	13,265	7.46%
Hispanic Americans	16,325	9.19%
Native Americans	640	0.36%
Caucasian Females	73,235	41.21%
Caucasian Males	43,100	24.25%
<b>TOTAL</b>	<b>177,710</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Employees</b>	<b>Percent of Employees</b>
Black American Females	21,900	12.32%
Black American Males	9,245	5.20%
Asian American Females	7,390	4.16%
Asian American Males	5,875	3.31%
Hispanic American Females	9,870	5.55%
Hispanic American Males	6,455	3.63%
Native American Females	430	0.24%
Native American Males	210	0.12%
Caucasian Females	73,235	41.21%
Caucasian Males	43,100	24.25%
<b>TOTAL</b>	<b>177,710</b>	<b>100.00%</b>



## **C. Workforce Disparity Analysis**

### **1. Workforce Disparity: All Workers**

The disparity analysis of all workers is described below and shown in Table 25.

*Black Americans* represent 15.10% of the available workforce and worked 10.21% of the hours worked on State contracts.

*Asian Americans* represent 6.72% of the available workforce and worked 3.47% of the hours worked on State contracts.

*Hispanic Americans* represent 18.38% of the available workforce and worked 11.68% of the hours worked on State contracts.

*Native Americans* represent 0.25% of the available workforce and worked 0.37% of the hours worked on State contracts.

*Caucasian Females* represent 28.02% of the available workforce and worked 18.74% of the hours worked on State contracts.

*Caucasian Males* represent 31.52% of the available workforce and worked 55.53% of the hours worked on State contracts.



**Table 25: Disparity Analysis: All Workers,  
January 1, 2016, to December 31, 2016**

<b>Ethnicity</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black Americans	592,614	10.21%	876,813	15.10%	0.68
Asian Americans	201,624	3.47%	390,342	6.72%	0.52
Hispanic Americans	678,387	11.68%	1,067,144	18.38%	0.64
Native Americans	21,497	0.37%	14,791	0.25%	1.45
Caucasian Females	1,088,008	18.74%	1,626,909	28.02%	0.67
Caucasian Males	3,224,202	55.53%	1,830,334	31.52%	1.76
<b>TOTAL</b>	<b>5,806,332</b>	<b>100.00%</b>			
<b>Ethnicity and Gender</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black American Females	115,505	1.99%	492,234	8.48%	0.23
Black American Males	477,109	8.22%	384,579	6.62%	1.24
Asian American Females	60,256	1.04%	190,008	3.27%	0.32
Asian American Males	141,368	2.43%	200,333	3.45%	0.71
Hispanic American Females	129,667	2.23%	488,137	8.41%	0.27
Hispanic American Males	548,720	9.45%	579,007	9.97%	0.95
Native American Females	4,152	0.07%	7,577	0.13%	0.55
Native American Males	17,345	0.30%	7,214	0.12%	2.40
Caucasian Females	1,088,008	18.74%	1,626,909	28.02%	0.67
Caucasian Males	3,224,202	55.53%	1,830,334	31.52%	1.76
<b>TOTAL</b>	<b>5,806,332</b>	<b>100.00%</b>			





## 2. Workforce Disparity: Administrative Support Workers

The disparity analysis of the administrative support workers is described below and shown in Table 26.

*Black Americans* represent 15.99% of the available administrative support workers and worked 9.25% of the administrative support worker hours on State contracts. This group is underutilized.

*Asian Americans* represent 5.67% of the available administrative support worker workforce and worked 4.72% of the administrative support worker hours on State contracts. This group is not underutilized.

*Hispanic Americans* represent 15.49% of the available administrative support worker workforce and worked 24.24% of the administrative support worker hours on State contracts. This group is overutilized.

*Native Americans* represent 0.22% of the available administrative support worker workforce and worked 0.31% of the administrative support worker hours on State contracts. This group is overutilized.

*Caucasian Females* represent 47.99% of the available administrative support worker workforce and worked 35.24% of the administrative support worker hours on State contracts. This group is underutilized.

*Caucasian Males* represent 14.64% of the available administrative support worker workforce and worked 26.24% of the administrative support worker hours on State contracts. This group is overutilized.



**Table 26: Disparity Analysis: Administrative Support Workers,  
January 1, 2016, to December 31, 2016**

<b>Ethnicity</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black Americans	94,759	9.25%	163,766	15.99%	0.58
Asian Americans	48,344	4.72%	58,107	5.67%	0.83
Hispanic Americans	248,273	24.24%	158,689	15.49%	1.56
Native Americans	3,216	0.31%	2,237	0.22%	1.44
Caucasian Females	360,895	35.24%	491,483	47.99%	0.73
Caucasian Males	268,702	26.24%	149,907	14.64%	1.79
<b>TOTAL</b>	<b>1,024,189</b>	<b>100.00%</b>			
<b>Ethnicity and Gender</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black American Females	24,161	2.36%	112,712	11.00%	0.21
Black American Males	70,598	6.89%	51,054	4.98%	1.38
Asian American Females	13,179	1.29%	37,987	3.71%	0.35
Asian American Males	35,165	3.43%	20,120	1.96%	1.75
Hispanic American Females	32,283	3.15%	108,133	10.56%	0.30
Hispanic American Males	215,990	21.09%	50,556	4.94%	4.27
Native American Females	1,096	0.11%	1,722	0.17%	0.64
Native American Males	2,120	0.21%	516	0.05%	4.11
Caucasian Females	360,895	35.24%	491,483	47.99%	0.73
Caucasian Males	268,702	26.24%	149,907	14.64%	1.79
<b>TOTAL</b>	<b>1,024,189</b>	<b>100.00%</b>			



### 3. Workforce Disparity: Craftworkers

The disparity analysis of the craftworkers is described below and shown in Table 27.

*Black Americans* represent 10.04% of the available craftworkers and worked 5.83% of the craftworker hours on State contracts. This group is underutilized.

*Asian Americans* represent 3.85% of the available craftworkers and worked 1.73% of the craftworker hours on State contracts. This group is underutilized.

*Hispanic Americans* represent 18.11% of the available craftworkers and worked 5.81% of the craftworker hours on State contracts. This group is underutilized.

*Native Americans* represent 0.34% of the available craftworkers and worked 0.37% of the craftworker hours on State contracts. This group is overutilized.

*Caucasian Females* represent 2.38% of the available craftworkers and worked 4.23% of the craftworker hours on State contracts. This group is overutilized.

*Caucasian Males* represent 65.28% of the available craftworkers and worked 82.04% of the craftworker hours on State contracts. This group is overutilized.



**Table 27: Disparity Analysis: Craftworkers,  
January 1, 2016, to December 31, 2016**

<b>Ethnicity</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black Americans	45,285	5.83%	78,024	10.04%	0.58
Asian Americans	13,449	1.73%	29,958	3.85%	0.45
Hispanic Americans	45,139	5.81%	140,736	18.11%	0.32
Native Americans	2,877	0.37%	2,633	0.34%	1.09
Caucasian Females	32,856	4.23%	18,529	2.38%	1.77
Caucasian Males	637,612	82.04%	507,338	65.28%	1.26
<b>TOTAL</b>	<b>777,218</b>	<b>100.00%</b>			
<b>Ethnicity and Gender</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black American Females	220	0.03%	4,240	0.55%	0.05
Black American Males	45,065	5.80%	73,784	9.49%	0.61
Asian American Females	2,390	0.31%	2,919	0.38%	0.82
Asian American Males	11,059	1.42%	27,039	3.48%	0.41
Hispanic American Females	446	0.06%	5,824	0.75%	0.08
Hispanic American Males	44,693	5.75%	134,913	17.36%	0.33
Native American Females	104	0.01%	146	0.02%	0.71
Native American Males	2,773	0.36%	2,488	0.32%	1.11
Caucasian Females	32,856	4.23%	18,529	2.38%	1.77
Caucasian Males	637,612	82.04%	507,338	65.28%	1.26
<b>TOTAL</b>	<b>777,218</b>	<b>100.00%</b>			



#### 4. Workforce Disparity: Executive/Senior Officers and Managers

The disparity analysis of the executive/senior officer and manager workforce is described below and shown in Table 28.

*Black Americans* represent 4.10% of the available executive/senior officer and managers and worked 0.77% of the executive/senior officer and manager hours on State contracts. This group is underutilized.

*Asian Americans* represent 6.01% of the available executive/senior officer and managers and worked 1.08% of the executive/senior officer and manager hours on State contracts. This group is underutilized.

*Hispanic Americans* represent 4.29% of the available executive/senior officer and managers and worked 1.25% of the executive/senior officer and manager hours on State contracts. This group is underutilized.

*Native Americans* represent 0.31% of the available executive/senior officer and managers and worked 0.40% of the executive/senior officer and manager hours on State contracts. This group is overutilized.

*Caucasian Females* represent 21.39% of the available executive/senior officer and managers and worked 17.05% of the executive/senior officer and manager hours on State contracts. This group is underutilized.

*Caucasian Males* represent 63.90% of the available executive/senior officer and managers and worked 79.45% of the executive/senior officer and manager hours on State contracts. This group is overutilized.



**Table 28: Disparity Analysis: Executive/Senior Officers and Managers,  
January 1, 2016, to December 31, 2016**

<b>Ethnicity</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black Americans	915	0.77%	4,871	4.10%	0.19
Asian Americans	1,280	1.08%	7,139	6.01%	0.18
Hispanic Americans	1,480	1.25%	5,098	4.29%	0.29
Native Americans	480	0.40%	364	0.31%	1.32
Caucasian Females	20,246	17.05%	25,407	21.39%	0.80
Caucasian Males	94,367	79.45%	75,889	63.90%	1.24
<b>TOTAL</b>	<b>118,768</b>	<b>100.00%</b>			
<b>Ethnicity and Gender</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black American Females	840	0.71%	1,707	1.44%	0.49
Black American Males	75	0.06%	3,164	2.66%	0.02
Asian American Females	760	0.64%	1,593	1.34%	0.48
Asian American Males	520	0.44%	5,546	4.67%	0.09
Hispanic American Females	40	0.03%	1,479	1.25%	0.03
Hispanic American Males	1,440	1.21%	3,619	3.05%	0.40
Native American Females	480	0.40%	182	0.15%	2.64
Native American Males	0	0.00%	182	0.15%	0.00
Caucasian Females	20,246	17.05%	25,407	21.39%	0.80
Caucasian Males	94,367	79.45%	75,889	63.90%	1.24
<b>TOTAL</b>	<b>118,768</b>	<b>100.00%</b>			



## 5. Workforce Disparity: First/Middle Officers and Managers

The disparity analysis of the first/middle officers and managers is described below and shown in Table 29.

**Black Americans** represent 9.13% of the available first/middle officer and managers and worked 3.47% of the first/middle officer and manager hours on State contracts. This group is underutilized.

**Asian Americans** represent 7.49% of the available first/middle officer and managers and worked 2.32% of the first/middle officer and manager hours on State contracts. This group is underutilized.

**Hispanic Americans** represent 8.78% of the available first/middle officer and managers and worked 8.39% of the first/middle officer and manager hours on State contracts. This group is not underutilized.

**Native Americans** represent 0.13% of the available first/middle officer and managers and worked 0.31% of the first/middle officer and manager hours on State contracts. This group is overutilized.

**Caucasian Females** represent 31.56% of the available first/middle officer and managers and worked 20.34% of the first/middle officer and manager hours on State contracts. This group is underutilized.

**Caucasian Males** represent 42.91% of the available first/middle officer and managers and worked 65.16% of the first/middle officer and manager hours on State contracts. This group is overutilized.



**Table 29: Disparity Analysis: First/Middle Officers and Managers,  
January 1, 2016, to December 31, 2016**

<b>Ethnicity</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black Americans	22,090	3.47%	58,129	9.13%	0.38
Asian Americans	14,777	2.32%	47,666	7.49%	0.31
Hispanic Americans	53,454	8.39%	55,928	8.78%	0.96
Native Americans	1,987	0.31%	859	0.13%	2.31
Caucasian Females	129,549	20.34%	200,961	31.56%	0.64
Caucasian Males	414,934	65.16%	273,248	42.91%	1.52
<b>TOTAL</b>	<b>636,791</b>	<b>100.00%</b>			
<b>Ethnicity and Gender</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black American Females	6,162	0.97%	32,779	5.15%	0.19
Black American Males	15,928	2.50%	25,350	3.98%	0.63
Asian American Females	2,394	0.38%	20,647	3.24%	0.12
Asian American Males	12,383	1.94%	27,019	4.24%	0.46
Hispanic American Females	7,905	1.24%	27,569	4.33%	0.29
Hispanic American Males	45,549	7.15%	28,359	4.45%	1.61
Native American Females	707	0.11%	457	0.07%	1.55
Native American Males	1,280	0.20%	402	0.06%	3.19
Caucasian Females	129,549	20.34%	200,961	31.56%	0.64
Caucasian Males	414,934	65.16%	273,248	42.91%	1.52
<b>TOTAL</b>	<b>636,791</b>	<b>100.00%</b>			





## 6. Workforce Disparity: Laborers and Helpers

The disparity analysis of the laborers and helpers workforce is described below and shown in Table 30.

*Black Americans* represent 11.30% of the available laborers and helpers and worked 14.38% of the laborer and helper hours on State contracts. This group is overutilized.

*Asian Americans* represent 3.84% of the available laborers and helpers and worked 1.16% of the laborer and helper hours on State contracts. This group is underutilized.

*Hispanic Americans* represent 31.38% of the available laborers and helpers and worked 8.74% of the laborer and helper hours on State contracts. This group is underutilized.

*Native Americans* represent 0.33% of the available laborers and helpers and worked 0.59% of the laborer and helper hours on State contracts. This group is overutilized.

*Caucasian Females* represent 5.29% of the available laborers and helpers and worked 15.15% of the laborer and helper hours on State contracts. This group is overutilized.

*Caucasian Males* represent 47.86% of the available laborers and helpers and worked 59.97% of the laborer and helper hours on State contracts. This group is overutilized.



**Table 30: Disparity Analysis: Laborers and Helpers,  
January 1, 2016, to December 31, 2016**

<b>Ethnicity</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black Americans	55,486	14.38%	43,596	11.30%	1.27
Asian Americans	4,475	1.16%	14,823	3.84%	0.30
Hispanic Americans	33,739	8.74%	121,064	31.38%	0.28
Native Americans	2,290	0.59%	1,271	0.33%	1.80
Caucasian Females	58,450	15.15%	20,420	5.29%	2.86
Caucasian Males	231,379	59.97%	184,644	47.86%	1.25
<b>TOTAL</b>	<b>385,819</b>	<b>100.00%</b>			
<b>Ethnicity and Gender</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black American Females	2,646	0.69%	4,913	1.27%	0.54
Black American Males	52,840	13.70%	38,683	10.03%	1.37
Asian American Females	1,678	0.43%	1,212	0.31%	1.38
Asian American Males	2,797	0.72%	13,611	3.53%	0.21
Hispanic American Females	3,364	0.87%	8,123	2.11%	0.41
Hispanic American Males	30,375	7.87%	112,942	29.27%	0.27
Native American Females	1,573	0.41%	120	0.03%	13.11
Native American Males	717	0.19%	1,151	0.30%	0.62
Caucasian Females	58,450	15.15%	20,420	5.29%	2.86
Caucasian Males	231,379	59.97%	184,644	47.86%	1.25
<b>TOTAL</b>	<b>385,819</b>	<b>100.00%</b>			



## 7. Workforce Disparity: Operatives

The disparity analysis of the operatives is described below and shown in Table 31.

*Black Americans* represent 13.02% of the available operatives and worked 20.00% of the operative hours on State contracts. This group is overutilized.

*Asian Americans* represent 7.21% of the available operatives and worked 2.71% of the operative hours on State contracts. This group is underutilized.

*Hispanic Americans* represent 23.56% of the available operatives and worked 13.82% of the operative hours on State contracts. This group is underutilized.

*Native Americans* represent 0.26% of the available operatives and worked 0.25% of the operative hours on State contracts. This group is not underutilized.

*Caucasian Females* represent 12.74% of the available operatives and worked 5.60% of the operative hours on State contracts. This group is underutilized.

*Caucasian Males* represent 43.21% of the available operatives and worked 57.62% of the operative hours on State contracts. This group is overutilized.



**Table 31: Disparity Analysis: Operatives,  
January 1, 2016, to December 31, 2016**

<b>Ethnicity</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black Americans	208,999	20.00%	136,065	13.02%	1.54
Asian Americans	28,332	2.71%	75,373	7.21%	0.38
Hispanic Americans	144,382	13.82%	246,134	23.56%	0.59
Native Americans	2,648	0.25%	2,763	0.26%	0.96
Caucasian Females	58,477	5.60%	133,083	12.74%	0.44
Caucasian Males	602,042	57.62%	451,462	43.21%	1.33
<b>TOTAL</b>	<b>1,044,880</b>	<b>100.00%</b>			
<b>Ethnicity and Gender</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black American Females	28,014	2.68%	30,011	2.87%	0.93
Black American Males	180,985	17.32%	106,053	10.15%	1.71
Asian American Females	6,373	0.61%	29,299	2.80%	0.22
Asian American Males	21,959	2.10%	46,075	4.41%	0.48
Hispanic American Females	38,263	3.66%	78,452	7.51%	0.49
Hispanic American Males	106,119	10.16%	167,682	16.05%	0.63
Native American Females	192	0.02%	946	0.09%	0.20
Native American Males	2,456	0.24%	1,817	0.17%	1.35
Caucasian Females	58,477	5.60%	133,083	12.74%	0.44
Caucasian Males	602,042	57.62%	451,462	43.21%	1.33
<b>TOTAL</b>	<b>1,044,880</b>	<b>100.00%</b>			



## 8. Workforce Disparity: Professionals

The disparity analysis of the professionals is described below and shown in Table 32.

*Black Americans* represent 13.75% of the available professionals and worked 6.03% of the professional hours on State contracts. This group is underutilized.

*Asian Americans* represent 13.31% of the available professionals and worked 7.53% of the professional hours on State contracts. This group is underutilized.

*Hispanic Americans* represent 5.85% of the available professionals and worked 4.55% of the professional hours on State contracts. This group is underutilized.

*Native Americans* represent 0.17% of the available professionals and worked 0.27% of the professional hours on State contracts. This group is overutilized.

*Caucasian Females* represent 47.75% of the available professionals and worked 29.09% of the professional hours on State contracts. This group is underutilized.

*Caucasian Males* represent 19.16% of the available professionals and worked 52.53% of the professional hours on State contracts.



**Table 32: Disparity Analysis: Professionals,  
January 1, 2016, to December 31, 2016**

<b>Ethnicity</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black Americans	46,590	6.03%	106,193	13.75%	0.44
Asian Americans	58,158	7.53%	102,764	13.31%	0.57
Hispanic Americans	35,115	4.55%	45,187	5.85%	0.78
Native Americans	2,070	0.27%	1,343	0.17%	1.54
Caucasian Females	224,656	29.09%	368,776	47.75%	0.61
Caucasian Males	405,679	52.53%	148,005	19.16%	2.74
<b>TOTAL</b>	<b>772,268</b>	<b>100.00%</b>			
<b>Ethnicity and Gender</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black American Females	15,650	2.03%	86,302	11.18%	0.18
Black American Males	30,940	4.01%	19,891	2.58%	1.56
Asian American Females	21,200	2.75%	67,782	8.78%	0.31
Asian American Males	36,958	4.79%	34,982	4.53%	1.06
Hispanic American Females	14,307	1.85%	30,550	3.96%	0.47
Hispanic American Males	20,808	2.69%	14,637	1.90%	1.42
Native American Females	0	0.00%	812	0.11%	0.00
Native American Males	2,070	0.27%	531	0.07%	3.90
Caucasian Females	224,656	29.09%	368,776	47.75%	0.61
Caucasian Males	405,679	52.53%	148,005	19.16%	2.74
<b>TOTAL</b>	<b>772,268</b>	<b>100.00%</b>			



## 9. Workforce Disparity: Sales Workers

The disparity analysis of the sales workers is described below and shown in Table 33.

*Black Americans* represent 11.58% of the available sales workers and worked 8.41% of the sales worker hours on State contracts. This group is underutilized.

*Asian Americans* represent 8.62% of the available sales workers and worked 1.78% of the sales worker hours on State contracts. This group is underutilized.

*Hispanic Americans* represent 14.94% of the available sales workers and worked 9.03% of the sales worker hours on State contracts. This group is underutilized.

*Native Americans* represent 0.24% of the available sales workers and worked 0.25% of the sales worker hours on State contracts. This group is overutilized.

*Caucasian Females* represent 28.77% of the available sales workers and worked 26.02% of the sales worker hours on State contracts. This underutilization is not significant.

*Caucasian Males* represent 35.86% of the available sales workers and worked 54.51% of the sales worker hours on State contracts. This group is overutilized.



**Table 33: Disparity Analysis: Sales Workers,  
January 1, 2016, to December 31, 2016**

<b>Ethnicity</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black Americans	57,470	8.41%	79,173	11.58%	0.73
Asian Americans	12,200	1.78%	58,899	8.62%	0.21
Hispanic Americans	61,724	9.03%	102,110	14.94%	0.60
Native Americans	1,726	0.25%	1,652	0.24%	1.04
Caucasian Females	177,856	26.02%	196,657	28.77%	0.90
Caucasian Males	372,626	54.51%	245,112	35.86%	1.52
<b>TOTAL</b>	<b>683,602</b>	<b>100.00%</b>			
<b>Ethnicity and Gender</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black American Females	23,455	3.43%	45,475	6.65%	0.52
Black American Males	34,015	4.98%	33,698	4.93%	1.01
Asian American Females	5,026	0.74%	25,899	3.79%	0.19
Asian American Males	7,174	1.05%	33,000	4.83%	0.22
Hispanic American Females	19,107	2.80%	54,734	8.01%	0.35
Hispanic American Males	42,617	6.23%	47,376	6.93%	0.90
Native American Females	0	0.00%	1,063	0.16%	0.00
Native American Males	1,726	0.25%	589	0.09%	2.93
Caucasian Females	177,856	26.02%	196,657	28.77%	0.90
Caucasian Males	372,626	54.51%	245,112	35.86%	1.52
<b>TOTAL</b>	<b>683,602</b>	<b>100.00%</b>			





## 10. Workforce Disparity: Service Workers

The disparity analysis of the service workers is described below and shown in Table 34.

*Black Americans* represent 24.53% of the available service workers and worked 19.38% of the service worker hours on State contracts. This group is underutilized.

*Asian Americans* represent 6.20% of the available service workers and worked 4.20% of the service worker hours on State contracts. This group is underutilized.

*Hispanic Americans* represent 28.05% of the available service workers and worked 21.41% of the service worker hours on State contracts. This group is underutilized.

*Native Americans* represent 0.29% of the available service workers and worked 1.37% of the service worker hours on State contracts. This group is overutilized.

*Caucasian Females* represent 23.16% of the available service workers and worked 8.65% of the service worker hours on State contracts. This group is underutilized.

*Caucasian Males* represent 17.76% of the available service workers and worked 44.99% of the service worker hours on State contracts. This group is overutilized.



**Table 34: Disparity Analysis: Service Workers,  
January 1, 2016, to December 31, 2016**

<b>Ethnicity</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black Americans	30,008	19.38%	37,986	24.53%	0.79
Asian Americans	6,496	4.20%	9,600	6.20%	0.68
Hispanic Americans	33,153	21.41%	43,432	28.05%	0.76
Native Americans	2,122	1.37%	454	0.29%	4.68
Caucasian Females	13,397	8.65%	35,867	23.16%	0.37
Caucasian Males	69,663	44.99%	27,501	17.76%	2.53
<b>TOTAL</b>	<b>154,839</b>	<b>100.00%</b>			
<b>Ethnicity and Gender</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black American Females	10,931	7.06%	25,048	16.18%	0.44
Black American Males	19,077	12.32%	12,938	8.36%	1.47
Asian American Females	963	0.62%	5,183	3.35%	0.19
Asian American Males	5,533	3.57%	4,416	2.85%	1.25
Hispanic American Females	11,472	7.41%	24,649	15.92%	0.47
Hispanic American Males	21,681	14.00%	18,783	12.13%	1.15
Native American Females	0	0.00%	285	0.18%	0.00
Native American Males	2,122	1.37%	168	0.11%	12.60
Caucasian Females	13,397	8.65%	35,867	23.16%	0.37
Caucasian Males	69,663	44.99%	27,501	17.76%	2.53
<b>TOTAL</b>	<b>154,839</b>	<b>100.00%</b>			



## 11. Workforce Disparity: Technicians

The disparity analysis of the technician workforce is described below and shown in Table 35.

*Black Americans* represent 17.53% of the available technicians and worked 14.91% of the technician hours on State contracts. This group is not underutilized.

*Asian Americans* represent 7.46% of the available technicians and worked 6.79% of the technician hours on State contracts. This group is not underutilized.

*Hispanic Americans* represent 9.19% of the available technicians and worked 10.54% of the technician hours on State contracts. This group is overutilized.

*Native Americans* represent 0.36% of the available technicians and worked 1.00% of the technician hours on State contracts. This group is overutilized.

*Caucasian Females* represent 41.21% of the available technicians and worked 5.59% of the technician hours on State contracts. This group is underutilized.

*Caucasian Males* represent 24.25% of the available technicians and worked 61.17% of the technician hours on State contracts. This group is overutilized.



**Table 35: Disparity Analysis: Technicians,  
January 1, 2016, to December 31, 2016**

<b>Ethnicity</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black Americans	31,012	14.91%	36,446	17.53%	0.85
Asian Americans	14,113	6.79%	15,523	7.46%	0.91
Hispanic Americans	21,928	10.54%	19,104	9.19%	1.15
Native Americans	2,081	1.00%	749	0.36%	2.78
Caucasian Females	11,626	5.59%	85,700	41.21%	0.14
Caucasian Males	127,198	61.17%	50,436	24.25%	2.52
<b>TOTAL</b>	<b>207,958</b>	<b>100.00%</b>			
<b>Ethnicity and Gender</b>	<b>Actual Utilization</b>	<b>Percent of Utilization</b>	<b>Expected Utilization</b>	<b>Percent of Available</b>	<b>Disparity Ratio</b>
Black American Females	3,426	1.65%	25,628	12.32%	0.13
Black American Males	27,586	13.27%	10,819	5.20%	2.55
Asian American Females	6,293	3.03%	8,648	4.16%	0.73
Asian American Males	7,820	3.76%	6,875	3.31%	1.14
Hispanic American Females	2,480	1.19%	11,550	5.55%	0.21
Hispanic American Males	19,448	9.35%	7,554	3.63%	2.57
Native American Females	0	0.00%	503	0.24%	0.00
Native American Males	2,081	1.00%	246	0.12%	8.47
Caucasian Females	11,626	5.59%	85,700	41.21%	0.14
Caucasian Males	127,198	61.17%	50,436	24.25%	2.52
<b>TOTAL</b>	<b>207,958</b>	<b>100.00%</b>			



#### ***D. Disparity Summary***

A disparity is documented for each EEO Job Title for which a minority or female group has a disparity ratio of 0.80 or lower. As indicated in Table 36, disparity was found in administrative support workers for Black Americans and Caucasian females. Disparity was found in craftworkers for Black Americans, Asian Americans, and Hispanic Americans. Disparity was found in executive/senior officers and managers for Black Americans, Asian Americans, Hispanic Americans, and Caucasian females. Disparity was found in first/middle officers and managers for Black Americans, Asian Americans, and Caucasian females. Disparity was found in laborers and helpers for Asian Americans and Hispanic Americans. Disparity was found in operatives for Asian Americans, Hispanic Americans, and Caucasian females. Disparity was found in professionals for Black Americans, Asian Americans, Hispanic Americans, and Caucasian females. Disparity was found in sales workers for Black Americans, Asian Americans, and Hispanic Americans. Disparity was found in service workers for Black Americans, Asian Americans, Hispanic Americans, and Caucasian females. Disparity was found in technicians for Black Americans and Caucasian females.



**Table 36: Disparity Analysis Summary**

<b>Occupation</b>	<b>Black Americans</b>	<b>Asian Americans</b>	<b>Hispanic Americans</b>	<b>Native Americans</b>	<b>Caucasian Females</b>	<b>Caucasian Males</b>
Administrative Support Workers	<i>Disparity</i>	No Disparity	<b>Overutilization</b>	<b>Overutilization</b>	<i>Disparity</i>	<b>Overutilization</b>
Craft Workers	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<b>Overutilization</b>	<b>Overutilization</b>	<b>Overutilization</b>
Executive/Senior Officers and Managers	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<b>Overutilization</b>	<i>Disparity</i>	<b>Overutilization</b>
First/Middle Officers and Managers	<i>Disparity</i>	<i>Disparity</i>	No Disparity	<b>Overutilization</b>	<i>Disparity</i>	<b>Overutilization</b>
Laborers and Helpers	<b>Overutilization</b>	<i>Disparity</i>	<i>Disparity</i>	<b>Overutilization</b>	<b>Overutilization</b>	<b>Overutilization</b>
Operatives	<b>Overutilization</b>	<i>Disparity</i>	<i>Disparity</i>	No Disparity	<i>Disparity</i>	<b>Overutilization</b>
Professionals	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<b>Overutilization</b>	<i>Disparity</i>	<b>Overutilization</b>
Sales Workers	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<b>Overutilization</b>	No Disparity	<b>Overutilization</b>
Service Workers	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<b>Overutilization</b>	<i>Disparity</i>	<b>Overutilization</b>
Technicians	No Disparity	No Disparity	<b>Overutilization</b>	<b>Overutilization</b>	<i>Disparity</i>	<b>Overutilization</b>



## V. *Recommendations*

### A. *Introduction*

The purpose for setting workforce participation goals is to ensure that the demographic composition of the workforce utilized in the performance of the State's contracts is in parity with the availability of minorities and females within the State's workforce. Parity is defined as a disparity ratio greater than 80%. The Study findings support a program in which contractors are required to develop workforce utilization plans to hire minorities and Caucasian females to perform their State contract. The workforce goals should be determined by the availability of the workforce in the job groups with a documented disparity. Each ethnic group and Caucasian females had a disparity in one or more job groups, with the exception of Native Americans.

Native Americans were the only ethnic group determined to be overutilized in each occupation analyzed. This finding is dubious given the social and economic factors that characterize the Native American population. It has been reported by the United States Census Bureau in its post-enumeration survey, "Census Coverage Measurement," that the count of the American Indian and Alaska Native population varies by geography. American Indians and Alaska Natives living on reservations were undercounted by 4.9%.<sup>10</sup> New York State is home to 11 American Indian reservations. Given the acknowledged undercount of American Indians residing on the reservations, the number of Native Americans in the workforce is no doubt higher than the number enumerated in the Census. In addition to being undercounted, Native Americans also experience higher unemployment rates and more long-term unemployment than the overall population and therefore have relatively fewer persons who are eligible to be counted in the labor force.<sup>11</sup>

It is a social imperative that the State include Native Americans in its race-based initiatives. Native Americans continue to experience widespread economic disparity; however, the numbers of Native Americans, when disaggregated from other ethnic minorities, are typically too small to detect a statistical difference. Although there is no reliable statistical evidence to support this position, the inclusion of Native Americans in workforce utilization policies constitutes a compelling government interest.

The following strategies are recommended to support and promote equity in hiring on the State's contracts and to foster long-term employment for the State's minority and Caucasian female residents.



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<sup>10</sup> United States Census Bureau. *Census Bureau Releases Estimates of Undercount and Overcount in the 2010 Census*. May 22, 2012. Accessed April 28, 2017, at [https://www.census.gov/newsroom/releases/archives/2010\\_census/cb12-95.html](https://www.census.gov/newsroom/releases/archives/2010_census/cb12-95.html).

<sup>11</sup> Peralta, Katherine. *Native Americans Left Behind in the Economic Recovery*. November 27, 2014. Accessed April 28, 2017, at <https://www.usnews.com/news/articles/2014/11/27/native-americans-left-behind-in-the-economic-recovery>.

## **B. Programmatic Recommendations**

### **1. Construction Trades**

Minority and female construction trades employment goals should be stipulated in all requests for bids. The goals should be stated in the contract standard provisions as work hours and the goals should apply to the work force of both the prime contractor and any subcontractors.

### **2. Pre-Apprenticeship Programs**

Collaboration with existing local pre-apprentice programs should be required of the prime contractor to provide recruitment, training and retention opportunities for minority and Caucasian female workers in the construction trades. Existing pre-apprentice programs offer a range of training options as well as financial and social support. Creating partnerships with pre-apprentice programs will allow prime contractors to effectively locate workers with the training specifically related to State projects. The affiliation will also support the development of a trained construction workforce. A separate analysis should be conducted to set pre-apprentice goals based on program and workforce availability.

### **3. Post-Employment Retention Strategies**

A reliable and trained workforce is essential for the State to meet its policy objectives and employment needs. Job retention strategies allow for workers to create a long-standing career in their industry and is more cost effective for employers than training new workers due to turnover. The State should encourage its contractors to create and promote a workplace culture that supports inclusion and retention. To this end, it is recommended that the State assign regional workforce specialists the responsibility to oversee and monitor workplace and job-site conditions. A workforce specialist could mitigate any ethnic-, gender-, and age-related tensions to minimize workplace disputes and avoid complaints. Workplace issues can further be mitigated by creating institutional support to resolve conflict and internal dissension as they arise and foster an environment of respect.

## **C. Monitoring and Compliance Standards**

### **1. Monitoring**

DMWBD should initiate the quarterly workforce reporting requirement. All agencies and authorities should require prime contractors and subcontractors to comply. The requirement should be published in every solicitation issued by the State and stipulated in every contract awarded. The State should create a platform to facilitate reporting quarterly workforce utilization reports electronically. The platform should be cloud-based to allow prime contractors and subcontractors to enter the required information from any location, provided they have a secure Internet connection. The current method of reporting requires manual compilation of the records to monitor compliance with the participation goals. Minimally, the cloud-based platform should be accessible to consultants, contractors, and the general public. The key features available would depend on the





level of access granted to the end user. The features should include the ability to submit reports electronically, verify workforce utilization, and monitor compliance with the EEO participation goal on the contract. This system should also offer automated reporting, including a contract compliance dashboard.

## **2. Assess Penalties for Failure to Achieve EEO Participation Goals**

Contractors should have a contract obligation to accurately report workforce information. A contractor who fails to supply accurate information shall be subject to corrective action. The failure to carry out these requirements should be considered a breach of contract, which could result in the termination of prequalification status, or sanctions, as the State deems appropriate. Contractors not in compliance with the goals should receive a notice of non-compliance and be required to submit a Corrective Action Plan within 15 days of the determination. The Corrective Action Plan should contain the efforts the contractor shall make to achieve the goals in a 30-day period.

To ensure compliance with the program, the contractor shall provide payroll records upon request and permit the review of all pertinent records and documents. The contractor should make such records available for inspection and audit within five days of the request. The contractor should cooperate fully with any such inspection or audit and provide full access to all relevant materials.

## **3. Evaluation and Review**

On an annual basis, DMWBD should evaluate the impact of the existing participation goals. The evaluation should determine if the availability of workers in the civilian workforce justifies modifying the goals. Upon completion of the review, a report documenting the findings, determinations, and proposed amendments to participation levels should be furnished. If necessary, any changes and modifications to the employment goals should be made.

