



# **The State of Minority- and Women-Owned Business Enterprise: Evidence from Cleveland**

Prepared for the City of Cleveland

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## About the Project Team

**NERA Economic Consulting** is a global firm of experts dedicated to applying economic, finance, and quantitative principles to complex business and legal challenges. For half a century, NERA's economists have been creating strategies, studies, reports, expert testimony, and policy recommendations for government authorities and the world's leading law firms and corporations. We bring academic rigor, objectivity, and real world industry experience to bear on issues arising from competition, regulation, public policy, strategy, finance, and litigation.

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NERA's employment and labor experts advise clients on a wide range of issues both inside and outside the courtroom. We have provided expert testimony on statistical issues both at the class certification phase (on issues of commonality and typicality) and at the liability phase (for class or pattern-and-practice cases). Our experts have extensive experience examining issues of statistical liability in discrimination and other wrongful termination claims. We also provide detailed statistical analyses of workforce composition to identify potential disparities in hiring, layoffs, promotions, pay, and performance assessments, and have conducted studies on labor union issues and on affirmative action programs for historically disadvantaged business enterprises.

NERA Senior Vice President Dr. Jon Wainwright led the NERA project team for this Study. Dr. Wainwright heads NERA's disparity study practice and is a nationally recognized expert on business discrimination and affirmative action. He has authored books, papers, and numerous research studies on the subject, and has been repeatedly qualified to testify on these and other issues as an expert in state and federal courts. At NERA, Dr. Wainwright directs and conducts economic and statistical studies of discrimination for attorneys, corporations, governments, and non-profit organizations. He also directs and conducts research and provides clients with advice on adverse impact and economic damage matters arising from their hiring, performance assessment, compensation, promotion, termination, or contracting activities.



## About the Project Team

**Abt SRBI** is a New York-based business with a national reputation for excellence in computer assisted telephone interviewing. Abt SRBI provides analysis in the rapidly evolving markets and public policy areas of communications, financial services, utilities, transportation, media, health and business services. The firm was founded in 1981 for the explicit purpose of combining high quality analytic capabilities with in-house control of the research implementation to ensure accurate, timely and actionable research used by decision makers working in rapidly changing environments. Abt SRBI clients include the Eagleton Institute at Rutgers, the Annenberg Institute at the University of Pennsylvania, and the major networks. Abt SRBI has conducted numerous surveys of M/WBEs and non-M/WBEs on behalf of the NERA team. On this assignment, Abt SRBI conducted telephone surveys of race and gender misclassification and of mail survey non-response under the supervision of Abt SRBI Project Manager, Andrew Evans.

**Colette Holt & Associates** is an Oakland, California-based law practice specializing in public sector affirmative action programs. The firm provides legal and consulting services to governments and businesses relating to procurement and contracting; employment discrimination; regulatory compliance; organizational change; program development, evaluation and implementation; and issues relating to inclusion, diversity and affirmative action. On this Study, the firms provided a review of relevant case law, conducted interviews with City of Cleveland officials and with business owners, and drafted selected study findings and recommendations.

**J&D Data Services** is a small business enterprise owned by Mr. Joe Deegan and based in Plano, Texas. After a long career with ScanTron, Mr. Deegan started his own business to offer a solid and proven alternative to the time consuming and expensive job of key data entry long associated with mail surveys. The firm helps its clients conserve their surveying resources by designing and delivering survey instruments that can be electronically and automatically scanned upon return and sent directly to electronic format. J&D Data Services has conducted numerous surveys of M/WBEs and non-M/WBEs on behalf of the NERA team. On this assignment, they provided printing, postage, mail-out and mail-back service for the subcontract data collection, and the mail survey.

**TRIAD Research Group** is a Cleveland-based market research firm. They are well versed in both quantitative and qualitative research techniques, including telephone surveys of public, consumer and business audiences, mail surveys and on-site surveys as well as focus groups and depth interviews both in-person and by telephone. Much of TRIAD work is with state, county, and local government entities; local school districts, community colleges and four-year universities; non-profit organizations; and independent governmental and quasi-governmental authorities, such as public libraries, transit systems, park districts and boards of mental health and mental retardation. TRIAD has been conducting public opinion and community awareness research since 1975. On this assignment, the firm provided outreach and support in publicizing and populating all of the business owner interview sessions.

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## Executive Summary

### A. Introduction

To ensure compliance with constitutional mandates and M/WBE best practices, NERA Economic Consulting was commissioned to examine the past and current status of minority-owned business enterprises (“MBEs”) and women-owned business enterprises (“WBEs”) (collectively “M/WBEs”) in the geographic and product markets for City of Cleveland contracting and procurement. The Study finds both statistical and anecdotal evidence of business discrimination against M/WBEs in the City’s relevant market area.

The results of NERA’s Study provide the evidentiary record necessary for the City’s consideration of whether to implement renewed Minority Business Enterprise (“MBE”), Female Business Enterprise (“FBE”), and Cleveland Area Small Business (“CSB”) policies that comply with the requirements of the courts and to assess the extent to which previous efforts have assisted M/WBEs and CSBs to participate on a fair basis in the City’s contracting and procurement activities. The Study will also assist the City to narrowly tailor existing race- and gender-based measures and any new measures that may be considered.<sup>1</sup>

### B. Legal Standards for Local Government Race- and Gender-Based Affirmative Action Contracting Programs

To be effective, enforceable, and legally defensible, a race- and gender-based program must meet the judicial test of constitutional “strict scrutiny.” Strict scrutiny requires a “compelling interest” in remedying discrimination, which has been defined as a “strong basis in evidence” of the persistence of discrimination, and any remedies adopted must be “narrowly tailored” to address that discrimination. Applying these terms to government affirmative action contracting programs is complex, and cases are quite fact specific. Since 1989, federal appellate and district courts have developed parameters for establishing a state or local government’s compelling interest in remedying discrimination and evaluating whether the remedies adopted to address that discrimination are narrowly tailored. This Study follows the guidelines promulgated by the *National Academy of Sciences*, which the NERA team was proud to develop.<sup>2</sup>

Chapter II of the Study provides a detailed and up-to-date overview of current constitutional standards and case law and outlines the legal and program development issues the City must consider in evaluating its CSB/MBE/FBE Program and any future initiatives, with emphasis on critical issues and evidentiary concerns.

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<sup>1</sup> At the City of Cleveland, the acronym “FBE” includes women-owned business enterprises regardless of race. The more common “WBE” usage includes only nonminority women-owned business enterprises. Both terms appear in this report. The term “FBE” is used primarily referring to program related aspects of the City’s CSB/MBE/FBE Program. In most of the statistical tables and discussion, however, the term “WBE” is used in order to avoid double counting and for consistency with USDOT DBE Program guidelines.

<sup>2</sup> Wainwright, J. and C. Holt (2010), *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*, Transportation Research Board of the National Academies, NCHRP Report, Issue No. 644.

## C. Defining the Relevant Markets

Chapter III describes how the relevant geographic and product markets were defined for this Study, using data from the City's own contracting and procurement records, supplemented with records from the City's prime contractors and vendors.

This database, which we refer to as the Master Contract/Subcontract Database, contains information on 23,874 prime contracts and purchases and 2,635 associated subcontracts awarded between January 2006 and December 2010 (City Fiscal Years 2006-2010). The total award value for these contracts is \$1.16 billion and the total paid value is \$985.8 million (*See Table 3.1A*).

The records in the Master Contract/Subcontract Database were analyzed to determine the geographic radius around the City of Cleveland that accounts for at least 75 percent of aggregate contract and subcontract spending. These records were also analyzed to determine those detailed industry categories that collectively account for over 99 percent of contract and subcontract spending in the City's contracts.

Using the Master Contract/Subcontract Database, we determined that the City's relevant geographic market area was the Cleveland-Elyria-Mentor, OH Metropolitan Statistical Area, consisting of the counties of Cuyahoga, Geauga, Lake, Lorain, and Medina, and the Akron, OH Metropolitan Statistical Area, consisting of the counties of Portage and Summit (*See Table 3.4*).

Using the same database, we determined that the City's product markets included firms in 237 different North American Industrial Classification System (NAICS) industry groups and 561 distinct NAICS Industries. Contract and subcontract spending is not distributed evenly among these industry categories, however. In Construction, just 12 Industry Groups account for more than 90 percent of all spending. In AE-CRS, just one Industry Group accounts for over 90 percent of all spending. In Services, 28 Industry Groups account for 90 percent of all spending, and in Commodities, 27 Industry Groups account for 90 percent of all spending (*See Tables 3.5-3.8*).

The relevant geographic and product markets are used to focus and frame the quantitative and qualitative analyses in the remainder of the Study.

## D. M/WBE Availability in the City of Cleveland's Market Area

Chapter IV estimates the percentage of firms in the City's relevant market area that are owned by minorities and/or women. For each industry category, M/WBE availability is defined as the number of M/WBEs divided by the total number of businesses in the City's contracting market area, weighted by the dollars attributable to each detailed industry category. Determining the total number of businesses in the relevant markets is more straightforward than determining the number of minority-owned or women-owned businesses in those markets. The latter task has three main parts: (1) identifying all listed M/WBEs in the relevant market; (2) verifying the ownership status of listed M/WBEs; and (3) estimating the number of unlisted M/WBEs in the relevant market.

Table A below provides an executive level summary of the current M/WBE availability estimates derived in the Study. Estimates for more detailed industry categories within the construction sector appear in Tables 4.23 through 4.26.<sup>3</sup>

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<sup>3</sup> Certain contracts at the City's Department of Port Control and elsewhere receive U.S. Department of Transportation (USDOT) funding and are therefore subject to the federal Disadvantaged Business Enterprise Program. Throughout the 2012 Study, we present additional tables and statistics relevant to this subset of contracts and subcontracts. For example, aggregate availability estimates pertinent to the DBE Program appear below in Table 4.22, and detailed industry level estimates appear in Tables 4.27 through 4.30.

**Table A. Overall Current Availability—By Major Procurement Category and Overall**

	African American	Hispanic	Asian/ Pacific Islander	Native American	MBE	Non-minority Female	M/WBE	Non-M/WBE
<b>CONSTRUCTION</b>								
AWARD DOLLARS	3.17	1.03	0.11	0.92	5.22	11.99	17.20	82.80
PAID DOLLARS	3.16	1.07	0.10	0.92	5.24	11.77	17.01	82.99
<b>AE-CRS</b>								
AWARD DOLLARS	3.13	1.01	2.38	0.06	6.58	15.50	22.08	77.92
PAID DOLLARS	3.12	1.01	2.38	0.06	6.57	15.51	22.08	77.92
<b>SERVICES</b>								
AWARD DOLLARS	4.13	0.65	0.55	0.34	5.67	18.75	24.42	75.58
PAID DOLLARS	4.02	0.65	0.53	0.36	5.55	18.72	24.27	75.73
<b>COMMODITIES</b>								
AWARD DOLLARS	2.57	0.11	0.77	0.59	4.03	16.62	20.65	79.35
PAID DOLLARS	2.64	0.11	0.75	0.57	4.07	16.80	20.87	79.13

Source and Notes: Table 4.21.

For this study, “Black” or “African American” refers to an individual having origins in any of the Black racial groups of Africa; “Hispanic” refers to an individual of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; “Asian” or “Asian/Pacific Islander” refers to an individual having origins in the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands; “Native American” refers to an individual having origins in any of the original peoples of North America or of Hawai’i.

## **E. Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings**

Chapter V demonstrates that current M/WBE availability levels in the Cleveland market area, as measured in Chapter IV, are substantially lower in most instances than those that we would expect to observe if commercial markets operated in a race- and gender-neutral manner and that these levels are statistically significant.<sup>4</sup> In other words, minorities and women tend to be substantially and significantly less likely to own their own businesses as the result of discrimination than would be expected based upon their observable characteristics, including

<sup>4</sup> Typically, for a given disparity statistic to be considered “statistically significant” there must be a substantial probability that the value of that statistic is unlikely to be due to chance alone. *See also fn. 236.*

age, education, geographic location, and industry. Importantly, we find that these groups suffer substantial and significant earnings disadvantages as well relative to comparable nonminority males, whether they work as employees or as entrepreneurs.

For example, we found that annual average wages for African Americans in 2006–2010 in the construction sector were 34 percent lower in the Cleveland market area than for nonminority males who were otherwise similar in terms of geographic location, industry, age, and education. This difference is large and statistically significant. Large, adverse, and statistically significant wage disparities were also observed for Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting two or more races, and nonminority women. These disparities are consistent with the presence of market-wide discrimination. Observed disparities for these groups ranged from a low of -21 percent for Asians/Pacific Islanders to a high of -35 percent for nonminority women. Similar results were observed when the analysis was restricted to the goods and services sector or expanded to the economy as a whole. That is, large, adverse, and statistically significant wage disparities were observed for all minority groups and for nonminority women. All wage and salary disparity analyses were then repeated to test whether observed disparities in the Cleveland market area were different enough from elsewhere in the country or the economy to alter any of the basic conclusions regarding wage and salary disparities. They were not.

This analysis demonstrates that minorities and women earn substantially and significantly less than their nonminority male counterparts. Such disparities are symptoms of discrimination in the labor force that, in addition to its direct effect on workers, reduce the future availability of M/WBEs by stifling opportunities for minorities and women to progress through precisely those internal labor markets and occupational hierarchies that are most likely to lead to entrepreneurial opportunities. These disparities reflect more than mere “societal discrimination” because they demonstrate the nexus between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. Other things equal, these reduced entrepreneurial opportunities in turn lead to lower M/WBE availability levels than would be observed in a race- and gender-neutral market area.

Next, we analyzed race and gender disparities in business owner earnings. We found, for example that annual earnings for self-employed for African Americans in 2006–2010 in the goods and services sector were 39 percent lower in the Cleveland market area than for nonminority males who were otherwise similar in terms of geographic location, industry, age, and education. This difference is large and statistically significant. Large, adverse, and statistically significant wage disparities were also observed for Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting two or more races, and nonminority women. These disparities, as well, are consistent with the presence of market-wide discrimination. Observed disparities for these groups ranged from a low of -10 percent for Asians/Pacific Islanders to a high of -39 percent for African Americans and nonminority women. Similar results were observed when the analysis was restricted to the construction sector or expanded to the economy as a whole. That is, large, adverse, and statistically significant wage disparities were observed for all minority groups and for nonminority women.<sup>5</sup> As with the wage and salary

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<sup>5</sup> The sole exception was the result for Native Americans in the construction sector, where a relatively small sample size produced an anomalous coefficient.

disparity analysis, we enhanced our basic statistical model to test whether minority and female business owners in the Houston market area differed significantly enough from business owners elsewhere in the U.S. economy to alter any of our basic conclusions regarding disparity. They did not.

As was the case for wage and salary earners, minority and female entrepreneurs earned substantially and significantly less from their efforts than similarly situated nonminority male entrepreneurs. These disparities are a symptom of discrimination in commercial markets that directly and adversely affects M/WBEs. Other things equal, if minorities and women cannot earn remuneration from their entrepreneurial efforts comparable to that of nonminority males, growth rates will slow, business failure rates will increase, and business formation rates may decrease. Combined, these phenomena result in lower M/WBE availability levels than would otherwise be observed in a race- and gender-neutral market area.

Next, we analyzed race and gender disparities in business formation. In many cases we observed large, adverse, and statistically significant disparities consistent with the presence of discrimination in these markets in the overall economy, in the construction sector, and in the goods and services sector. In the construction sector, for example, business formation rates for nonminority women, were almost 15 percentage points lower than for comparable nonminority males. Rates for Asians/Pacific Islanders and Native Americans were 6 and 8 percentage points lower, respectively, than for comparable nonminority males. For African Americans and Hispanics, however, observed business formation rates were higher. These higher business formation rates have not, however, translated into higher business owner earnings. The also appear to be a very recent and possibly transient phenomenon, perhaps related to the recent financial crisis.<sup>6</sup> In the goods and services sector, business formation rates were lower for African Americans, Hispanics, and nonminority females, while rates were higher for Asians/Pacific Islanders and Native Americans. Once again, however, the higher business formation rates for Asians/Pacific Islanders and Native Americans have not translated into higher business owner earnings.

Finally, as a further check on the statistical findings in this Chapter, we examined evidence from the Census Bureau's 2007 *Survey of Business Owners and Self-Employed Persons* (SBO), the most recent data available.<sup>7</sup> These data show large, adverse, and statistically significant disparities between M/WBEs' share of overall revenues and their share of overall firms in the U.S. as a whole, and in the State of Ohio.<sup>8</sup> The size of the disparities facing minority- and women-owned firms in Ohio is striking. For example, although 2.59 percent of all construction firms in Ohio are owned by African Americans, they earned only 1.23 percent of all sales and receipts. Hispanic-owned construction firms are 1.36 percent of all firms in Ohio, yet they earned only 0.566 percent of all sales and receipts. Asian-owned construction firms are 0.39 percent of

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<sup>6</sup> A similar regression analysis performed on the 2006-2008 ACS data set, included in our 2010 study for the Northeast Ohio Regional Sewer District, did not observe this result for African Americans, indicating that it is due to records from the 2009-2010 time period. See NERA (2010, p. 159).

<sup>7</sup> Formerly known as the *Survey of Minority- and Women-Owned Business Enterprises* (SMWOBE).

<sup>8</sup> It is not possible with this particular data source to examine the Cleveland and Akron areas separately from the rest of Ohio.



all construction firms in Ohio, yet earned only 0.30 percent of all sales and receipts. Women own 7.99 percent of all construction firms in Ohio, but earned only 6.18 percent of sales and receipts.

## **F. Statistical Disparities in Credit/Capital Markets**

In Chapter VI, we analyzed current and historical data from the Survey of Small Business Finances (“SSBF”), conducted by the Federal Reserve Board and the U.S. Small Business Administration, along with data from nine customized matching mail surveys we have conducted throughout the nation since 1999. This data examines whether discrimination exists in the small business credit market.

Credit market discrimination can have an important effect on the likelihood that M/WBEs will succeed. Moreover, discrimination in the credit market might even prevent such businesses from opening in the first place. This analysis has been held by the courts to be probative of a public entity’s compelling interest in remedying discrimination. We provide qualitative and quantitative evidence supporting the view that M/WBE firms, particularly African American-owned firms, suffer discrimination in this market.

The SSBF datasets are constructed for the nation as a whole and for nine Census divisions. The City of Cleveland Market Area is part of the East North Central Census division, which includes the states of Ohio, Illinois, Indiana, Michigan, and Wisconsin. To render the results as narrowly tailored as possible, we included indicator variables in our statistical analyses to determine whether the results for the East North Central division were different from those for the nation as a whole. We determined that the national results also apply in general to the East North Central division.

The main results are as follows:

- Minority-owned firms were particularly likely to report that they did not apply for a loan over the preceding three years because they feared the loan would be denied (*See* Tables 6.15, 6.22, 6.29).
- When minority-owned firms did apply for a loan, their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences like firm size and credit history (*See* Tables 6.8, 6.9, 6.18, 6.19, 6.25, 6.26).
- When minority-owned firms did receive a loan they were obligated to pay higher interest rates on the loans than comparable nonminority-owned firms (*See* Tables 6.13, 6.14, 6.21, 6.27).
- Far more minority-owned firms report that credit market conditions are a serious concern than is the case for nonminority-owned firms (*See* Tables 6.3, 6.4, 6.5, 6.6, 6.7, 6.17, 6.24).

- A greater share of minority-owned firms believed that the availability of credit was the most important issue likely to confront the firm in the near future (*See* Tables 6.5, 6.6).
- Judging from the analysis done using data from the SSBF, there is no reason to believe that evidence of discrimination in the market for credit is different in the East North Central division, which includes the City of Cleveland Market Area, than in the nation as a whole. The evidence from NERA's own credit surveys in a variety of states and metropolitan areas across the country is entirely consistent with the results from the SSBF.

We conclude that there is evidence of discrimination against M/WBEs in the Cleveland market area in the small business credit market. This discrimination is particularly acute for African American-owned small businesses where, even after adjusting for differences in assets, liabilities, and creditworthiness, the loan denial rate ranges from 8 to 22 percentage points higher than for nonminority male-owned small businesses.

### **G. M/WBE Public Sector Utilization vs. Availability in the City of Cleveland's Contracting and Procurement Markets, FY 2006–2010**

Chapter VII analyzes the extent to which M/WBEs were utilized by the City of Cleveland and its prime contractors and vendors between FY 2006-2010 and compares this utilization rate to the availability of M/WBEs in the relevant market area. Table B provides a top-level summary of utilization findings for the 2012 Study by industry category and M/WBE type.

**Table B. M/WBE Utilization at the City of Cleveland (All Contracts) (Dollars Paid)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	8.57	5.68	18.88	1.41	8.78
Hispanic	1.99	0.80	2.65	0.49	1.70
Asian/Pacific Islander	2.67	19.29	1.38	0.08	2.43
Native American	1.42	0.00	0.02	0.01	0.72
Minority Total	14.64	25.77	22.92	1.99	13.64
Nonminority female	6.30	4.81	3.04	4.72	5.18
M/WBE Total	20.95	30.57	25.97	6.71	18.82
Non-M/WBE Total	79.05	69.43	74.03	93.29	81.18
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	451,620,259	36,048,885	183,409,966	222,573,611	893,652,721
Number of Prime Contracts	7,505	251	5,184	10,754	23,694
Number of Subcontracts	1,292	274	439	42	2,047

Source: Table 7.2.

We examined M/WBE utilization for several different cross sections of contract and procurement data, including, federally-assisted transportation contracts, locally-funded contracts, prime contracts, major procurements (contracts over \$50,000 in 2010 and over \$10,000 prior to that time), and non-major procurements. We also examined M/WBE utilization both before and after June 2008, when the most recent revisions to the City's M/WBE and CSB ordinance went into effect. These statistics are documented below in Tables 7.1 through 7.20.

Next we compared the City's and its prime contractors' use of or collaboration with M/WBEs to our measure of M/WBE availability levels in the relevant market area. If M/WBE utilization is lower than measured availability in a given category we report this result as a disparity.

Table C provides a top-level summary of our disparity findings for the 2012 Study for Construction, AE-CRS, Services, and Commodities. We find significant evidence of disparity in the City's contracting and procurement activity in a number of categories, despite the operation of the M/WBE Program between 2006 and 2010 and the CSB Program between June 2008 and 2010.

**Table C. Utilization, Availability, and Disparity Results for City of Cleveland Contracting, Overall and by Contracting Category (All Funds) (Dollars Paid)**

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	8.57	3.16	
Hispanic	1.99	1.07	
Asian/Pacific Islander	2.67	0.10	
Native American	1.42	0.92	
Minority-owned	14.64	5.24	
Nonminority female	6.30	11.77	53.6 ***
M/WBE total	20.95	17.01	
AE-CRS			
African American	5.68	3.12	
Hispanic	0.80	1.01	79.7
Asian/Pacific Islander	19.29	2.38	
Native American	0.00	0.06	0.0 ***
Minority-owned	25.77	6.57	
Nonminority female	4.81	15.51	31.0 ***
M/WBE total	30.57	22.08	
Services			
African American	18.88	4.02	
Hispanic	2.65	0.65	
Asian/Pacific Islander	1.38	0.53	
Native American	0.02	0.36	5.3 ***
Minority-owned	22.92	5.55	
Nonminority female	3.04	18.72	16.3 ***
M/WBE total	25.97	24.27	
Commodities			
African American	1.41	2.64	53.5 **
Hispanic	0.49	0.11	
Asian/Pacific Islander	0.08	0.75	10.2 ***
Native American	0.01	0.57	1.7 ***
Minority-owned	1.99	4.07	48.9 ***
Nonminority female	4.72	16.80	28.1 ***
M/WBE total	6.71	20.87	32.2 ***

Source: Table 7.22.

Notes: (1) “\*” indicates an adverse disparity that is statistically significant at the 10% level or better (90% confidence). “\*\*” indicates the disparity is significant at a 5% level or better (95% confidence). “\*\*\*” indicates significance at a 1% level or better (99% confidence). (2) An empty cell in the Disparity Ratio column indicates that no adverse disparity was observed for that category.

Finally, Chapter VII compares current levels of M/WBE availability for the City of Cleveland with what we would expect to observe in a race- and gender-neutral marketplace. If there is perfect parity in the relevant marketplace, then the expected M/WBE availability rate (that is, the

M/WBE availability level that would be observed in a non-discriminatory marketplace) will be equal to the actual current M/WBE availability rate, because the disparity ratio will equal 100.

If there are adverse disparities facing M/WBEs in the relevant market area, however, as documented in Chapters V, VI, VII, and VIII of this Study, then expected availability will *exceed* actual current availability, because the disparity ratio is less than 100. Expected availability percentages for the City's overall contracting and by major procurement category are presented below in Table D. Expected availability exceeds actual current availability in 20 of 28 cases examined.

**Table D. Current Availability and Expected Availability for City of Cleveland Contracting (All Funds)**

Contracting Category/ M/WBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability (%)	Expected Availability (%)	Current Availability (%)	Expected Availability (%)
CONSTRUCTION				
African American	3.17	3.17	3.16	3.16
Hispanic	1.03	1.03	1.07	1.03
Asian/Pacific Islander	0.11	0.13	0.10	0.12
Native American	0.92	1.37	0.92	1.37
Minority	5.22	5.22	5.24	5.24
Nonminority female	11.99	27.13	11.77	26.63
M/WBE total	17.20	25.49	17.01	25.20
AE-CRS				
African American	3.13	3.13	3.12	3.12
Hispanic	1.01	1.01	1.01	1.01
Asian/Pacific Islander	2.38	2.85	2.38	2.85
Native American	0.06	0.09	0.06	0.09
Minority	6.58	6.58	6.57	6.58
Nonminority female	15.50	35.08	15.51	35.10
M/WBE total	22.08	32.72	22.08	32.72
SERVICES				
African American	4.13	8.16	4.02	7.94
Hispanic	0.65	1.08	0.65	1.08
Asian/Pacific Islander	0.55	0.55	0.53	0.53
Native American	0.34	0.34	0.36	0.36
Minority	5.67	8.26	5.55	8.08
Nonminority female	18.75	27.83	18.72	27.79
M/WBE total	24.42	37.70	24.27	37.47
COMMODITIES				
African American	2.57	5.08	2.64	5.22
Hispanic	0.11	0.18	0.11	0.18
Asian/Pacific Islander	0.77	0.77	0.75	0.75

Contracting Category/ M/WBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability (%)	Expected Availability (%)	Current Availability (%)	Expected Availability (%)
Native American	0.59	0.59	0.57	0.57
Minority	4.03	5.87	4.07	5.93
Nonminority female	16.62	24.67	16.80	24.94
M/WBE total	20.65	31.88	20.87	32.22

Source: Table 7.31.

## **H. Anecdotal Evidence**

We found that M/WBEs that have been hired in the past by non-M/WBE prime contractors to work on public sector contracts with M/WBE goals are rarely hired—or even solicited—by these prime contractors to work on projects without M/WBE goals. The relative lack of M/WBE hiring and, moreover, the relative lack of solicitation of M/WBEs in the absence of affirmative efforts by the City of Cleveland and other public entities in the Cleveland market area shows that business discrimination continues to fetter M/WBE business opportunities in the City’s relevant markets.

We found that M/WBEs in the City’s market area report suffering business-related discrimination in large numbers and with statistically significantly greater frequency than non-M/WBEs. These differences remain statistically significant when firm size and other “capacity-related” owner characteristics are held constant. We also find that M/WBEs in these markets are more likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it harder for them to conduct their businesses, less likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it easier for them to conduct their businesses.

Chapter VIII also presents the results from a series of in-depth personal interviews conducted with business owners regarding their experiences with discrimination in the Cleveland market area. Similar to the survey responses, the interviews suggest that minorities and women continue to suffer discriminatory barriers to full and fair access to City of Cleveland, other public sector, and private sector contracts and associated subcontracts. Participants reported discriminatory attitudes and negative perceptions of M/WBE competence; exclusion from industry and information networks; barriers to obtaining public sector contracts on an equal basis; barriers to obtaining work as prime vendors; and barriers to obtaining surety bonds.

We conclude that these anecdotal accounts of contemporary business discrimination are consistent with the statistical evidence presented in this Study.

The results of the surveys and the personal interviews are the types of anecdotal evidence that, especially in conjunction with the Study’s extensive statistical evidence, the courts have found to be highly probative of whether, without affirmative interventions, the City of Cleveland would be a passive participant in a discriminatory local market area. It is also highly relevant for narrowly tailoring any future M/WBE goals.

## **I. City of Cleveland’s CSB, MBE, and FBE Program: Overview and Feedback Interviews**

Chapter IX provides an overview of the City of Cleveland’s CSB, MBE, and FBE Program, and a discussion of the operations of the current efforts. Cleveland adopted a revised CSB/MBE/FBE Program in 2008, based on the results of a Subcontractor Disparity Analysis report. The programs are summarized, including eligibility standards; program responsibilities; program remedies such as contract goals, bid discounts and evaluation credits; contract award procedures;

contract performance compliance and monitoring procedures; and the Small Subcontractor Rotation Program.

We interviewed over 150 business owners and representatives to solicit their feedback regarding the programs. Chapter IX presents a summary of our interviews, which covered the following subjects:

- **Perceptions of the Program’s overall effectiveness**

Overall, M/WBEs reported that the Program was essential to their survival.

- **Access to prime contract awards**

Many minority and women owners who want to do prime contract work were frustrated at not being permitted to count their own participation towards meeting contract goals. Some large general contractors agreed that it is important to count M/FBE prime participation to grow firms’ capacities.

- **Contract size and complexity**

There was almost universal support regardless of firm ownership, size or industry for “unbundling” or disaggregating contracts.

- **Payments**

Another universal challenge was slow payments. Subcontractors felt that prime contractors hold their payments and general contractors felt that the City pays too slowly and creates unnecessary and burdensome paperwork.

- **Certification standards and processes**

In general, M/WBEs reported the certification process is usually rigorous.

- **Meeting M/FBE goals at contract award**

The goal setting process and meeting contract goals elicited many comments. Overall, most prime vendors reported they were able to meet the M/FBE goals, and could easily meet the CSB goals. Some construction general contractors and goods and services providers found it hard to meet goals. Professional services firms, particularly in engineering and architecture, reported difficulties in meeting goals with meaningful participation. The inability to obtain bonding was also recognized as an impediment to small firms working as prime contractors or even as subcontractors on larger projects. One explanation offered by non-M/WBEs for the difficulty of meeting goals was that minorities and women often lack the skills to manage their businesses. One recommendation from larger, non-M/WBEs was for the City to rate or pre-qualify certified firms.



While M/WBEs' experiences often differed markedly from non-M/WBEs, one area of agreement was the need to thoroughly eradicate the use of "front" firms or "passthrough" firms to create the appearance of participation.

- **Waivers of Goals**

In response to these issues, several participants stated that they had been able to obtain waivers of goals based upon having made good faith efforts to meet them.

- **Contract Performance Monitoring and Enforcement**

Finally, concerns were raised about how the City monitors and enforces compliance with M/FBE requirements. M/WBEs and even some non-M/WBEs were concerned about the strength of the post-award monitoring process. Several certified firms reported that while they had been listed on the bid documents, they were substituted later or did not receive full payment.

- **Mentor-Protégé Initiatives**

There was significant support among general contractors for mentor-protégé initiatives.

- **CSB Set-asides**

Many participants, both M/FBEs and non-certified firm owners, supported the concept of setting aside some smaller contracts for bidding solely by CSBs.

## **J. Conclusion**

As summarized above, and based on the detailed findings below, we conclude that there is strong evidence of large, adverse, and frequently statistically significant disparities between minority and female participation in business enterprise activity in the City of Cleveland's relevant market area and the actual current availability of those businesses. We further conclude that these disparities cannot be explained solely, or even mostly, by differences between M/WBE and non-M/WBE business populations in factors untainted by discrimination, and that these differences therefore give rise to a strong inference of the presence of discrimination.

## I. Introduction

The City of Cleveland commissioned this study to evaluate whether M/WBEs in the City's market area have full and fair opportunities to compete for its prime contracts and associated subcontracts. The Study will assist the City in evaluating whether its M/WBE initiatives are still necessary to remedy discrimination, and to narrowly tailor any existing or new measures.

Like many local governments, the City of Cleveland has a long record of commitment to including M/WBEs in its contracting and procurement activities. As will be documented in this Study, from fiscal years 2006 through 2010, the City has continued to be a strong source of demand in the regional economy for the products and services provided by M/WBEs—demand that, in general, is found to be lacking in the private sector of the regional economy.

As documented below in Chapter VII, the City's prior efforts have produced positive results—M/WBEs earned approximately 19 percent of the City's contracting and purchasing dollars between 2006 and 2010. The courts have made it clear, however, that in order to implement a race- and gender-based program that is effective, enforceable and legally defensible, the City must meet the judicial test of constitutional “strict scrutiny” to determine the legality of such initiatives. Strict scrutiny requires current “strong evidence” of the persistence of discrimination, and “narrowly tailored” measures to remedy that discrimination. These legal principles guide and inform our work for the City.

### A. Study Outline

To ensure compliance with constitutional mandates and M/WBE best practices, the City of Cleveland commissioned NERA to examine the past and current status of M/WBEs in its geographic and product markets for Construction, AE-CRS, Services, and Commodities. The results of this Study provide the evidentiary record necessary for the City's consideration of whether to implement renewed M/WBE policies that comply with the requirements of the courts and to assess the extent to which previous efforts have assisted M/WBEs to participate on a fair basis in Cleveland's contracting activity and that of its subrecipients.

This Study finds both statistical and anecdotal evidence of business discrimination against M/WBEs in the private sector of the Cleveland market area. As a check on our statistical findings, we surveyed the contracting experiences and credit access experiences of M/WBEs and non-M/WBEs in the market area and we also conducted a series of in-depth personal interviews with local business enterprises, both M/WBE and non-M/WBE. Statistical analyses of Cleveland's public sector contracting behavior appear below in Chapters III, IV and VII.

The Study is presented in nine chapters, and is designed to answer the following questions:

Chapter I: Introduction

Chapter II: What are the current constitutional standards and case law governing strict scrutiny review of race- and gender-conscious government efforts in public contracting?

- Chapter III: What is the relevant geographic market for Cleveland and how is it defined? What are the relevant product markets for Cleveland and how are they defined?
- Chapter IV: What percentage of all businesses in the Cleveland's market area are owned by minorities and/or women? How are these availability estimates constructed?
- Chapter V: Do minority and/or female wage and salary earners earn less than similarly situated nonminority males? Do minority and/or female business owners earn less from their businesses than similarly situated nonminority males? Are minorities and/or women in the Cleveland market area less likely to be self-employed than similarly situated nonminority males? How do the findings in the Cleveland market area differ from the national findings on these questions? How have these findings changed over time?
- Chapter VI: Do minorities and/or women face discrimination in the market for commercial capital and credit compared to similarly-situated nonminority males? How, if at all, do findings locally differ from findings nationally?
- Chapter VII: To what extent have M/WBEs been utilized by Cleveland on contracts awarded from FY 2006 through 2010, and how does this utilization compare to the availability of M/WBEs in the relevant market area?
- Chapter VIII: How many M/WBEs experienced disparate treatment in the study period? What types of discriminatory experiences are most frequently encountered by M/WBEs? How do the experiences of M/WBEs differ from those of similar non-M/WBEs regarding difficulties in obtaining prime contracts and subcontracts?
- Chapter IX: What general policies and procedures govern Cleveland's CSB/MBE/FBE program? What were some of the most frequently encountered comments from M/WBEs and non-M/WBEs concerning Cleveland's contracting affirmative action programs?

In assessing these questions, we present in Chapters III through VIII a series of quantitative and qualitative analyses that compare minority and/or female outcomes to nonminority male outcomes in all of these business-related areas. The Executive Summary, above, provides a brief overview of our key findings and conclusions.

## **II. Legal Standards for Government Affirmative Action Contracting Programs**

### **A. General Overview of Strict Scrutiny**

#### **1. Summary of Constitutional Standards**

To be effective, enforceable, and legally defensible, a race-based program must meet the judicial test of constitutional “strict scrutiny.” Strict scrutiny is the highest level of judicial review and consists of two elements:

- The government must establish its “compelling interest” in remedying race discrimination by current “strong evidence” of the persistence of discrimination. Such evidence may consist of the entity’s “passive participation” in a system of racial exclusion.
- Any remedies adopted must be “narrowly tailored” to that discrimination, that is the program must be directed at the types and depth of discrimination identified.<sup>9</sup>

The compelling interest prong has been met through two types of proof:

- Statistical evidence of the underutilization of minority firms compared to their availability in the jurisdiction’s market area, known as disparity indices, comparable to the type of “disparate impact” analysis used in employment discrimination cases.
- Anecdotal evidence of race-based barriers to the full and fair participation of minority firms in the market area and in seeking contracts with the agency, comparable to the “disparate treatment” analysis used in employment discrimination cases.<sup>10</sup>

The narrow tailoring prong has been met through the satisfaction of five factors to ensure that the remedy “fits” the evidence:

- The efficacy of race-neutral remedies at overcoming identified discrimination.
- The relationship of numerical benchmarks for government spending to the availability of minority- and women-owned firms and to subcontracting goal setting procedures.
- The congruence between the remedies adopted and the beneficiaries of those remedies.
- Any adverse impact of the relief on third parties.
- The duration of the program.<sup>11</sup>

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<sup>9</sup> *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).

<sup>10</sup> *Croson*, 488 U.S. at 509; *Scott*, 199 F.3d at 218).

In *Adarand v. Peña*,<sup>12</sup> the Court extended the analysis of strict scrutiny to race-based federal enactments such as the DBE program. Just as in the local government context, the national government must have a compelling interest for the use of race and the remedies adopted must be narrowly tailored to the evidence relied upon.

In general, courts have subjected preferences for Women-Owned Business Enterprises (“WBEs”) to “intermediate scrutiny:” gender-based classifications must be supported by an “exceedingly persuasive justification” and “substantially related” to the objective.<sup>13</sup> However, the Sixth Circuit has applied strict scrutiny to female contracting preferences,<sup>14</sup> and appellate courts reviewing the constitutionality of the Disadvantaged Business Enterprise program for federally-assisted transportation contracts have applied strict scrutiny to the gender-based presumption of social disadvantage.<sup>15</sup>

Below is a detailed discussion of the parameters for establishing Cleveland’s compelling interest in remedying discrimination in its contracting and geographic market areas and the legal and program development issues the City should consider in evaluating any race- and gender-conscious initiatives for locally-funded contracts..

### **2. City of Richmond v. J.A. Croson**

*City of Richmond v. J.A. Croson Co.*<sup>16</sup> established the constitutional contours of permissible race-based public contracting programs. Reversing long established law, the Supreme Court for the first time extended the highest level of judicial examination from measures designed to limit the rights and opportunities of minorities to legislation that benefits these historic victims of discrimination. Strict scrutiny requires that a government entity prove both its “compelling interest” in remedying identified discrimination based upon “strong evidence,” and that the measures adopted to remedy that discrimination are “narrowly tailored” to that evidence. However benign the government’s motive, race is always so suspect a classification that its use must pass the highest constitutional test of “strict scrutiny.”

The Court struck down the City of Richmond’s Minority Business Enterprise Plan that required prime contractors awarded City construction contracts to subcontract at least 30 percent of the project to MBEs. A business located anywhere in the country which was at least 51 percent owned and controlled by “Black, Spanish-speaking, Oriental, Indian, Eskimo, or Aleut” citizens was eligible to participate. The Plan was adopted after a public hearing at which no direct evidence was presented that the City had discriminated on the basis of race in awarding contracts or that its prime contractors had discriminated against minority subcontractors. The only

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<sup>11</sup> *United States v. Paradise*, 480 U.S. 149, 171 (1987); see *Scott*, 199 F.3d at 219 (the City should have adopted “particularized findings” of discrimination and set goals accordingly).

<sup>12</sup> 515 U.S. 200 (1995) (*Adarand III*).

<sup>13</sup> *Cf. United States v. Virginia*, 518 U.S. 515 (1996).

<sup>14</sup> *Brunet City of Columbus*, 1 F.3d 390, 404 (6th Cir. 1993).

<sup>15</sup> *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715, 720 (7<sup>th</sup> Cir. 2007).

<sup>16</sup> 488 U.S. 469 (1989).

evidence before the City Council was: (a) Richmond's population was 50 percent African American, yet less than one percent of its prime construction contracts had been awarded to minority businesses; (b) local contractors' associations were virtually all White; (c) the City Attorney's opinion that the Plan was constitutional; and (d) general statements describing widespread racial discrimination in the local, Virginia, and national construction industries.

In affirming the Court of Appeals' determination that the Plan was unconstitutional, Justice Sandra Day O'Connor's plurality opinion rejected the extreme positions that local governments either have *carte blanche* to enact race-based legislation or must prove their own illegal conduct:

[A] state or local subdivision...has the authority to eradicate the effects of private discrimination within its own legislative jurisdiction.... [Richmond] can use its spending powers to remedy private discrimination, if it identifies that discrimination with the particularity required by the Fourteenth Amendment.... [I]f the City could show that it had essentially become a "passive participant" in a system of racial exclusion...[it] could take affirmative steps to dismantle such a system.<sup>17</sup>

Strict scrutiny of race-based remedies is required to determine whether racial classifications are in fact motivated by either notions of racial inferiority or blatant racial politics. This highest level of judicial review "smokes out" illegitimate uses of race by assuring that the legislative body is pursuing a goal important enough to warrant use of a highly suspect tool.<sup>18</sup> It further ensures that the means chosen "fit" this compelling goal so closely that there is little or no possibility that the motive for the classification was illegitimate racial prejudice or stereotype. The Court made clear that strict scrutiny seeks to expose racial stigma; racial classifications are said to create racial hostility if they are based on notions of racial inferiority.<sup>19</sup>

Race is so suspect a basis for government action that more than "societal" discrimination is required to restrain racial stereotyping or pandering. The Court provided no definition of "societal" discrimination or any guidance about how to recognize the ongoing realities of history and culture in evaluating race-conscious programs. The Court simply asserted that:

[w]hile there is no doubt that the sorry history of both private and public discrimination in this country has contributed to a lack of opportunities for black entrepreneurs, this observation, standing alone, cannot justify a rigid racial quota in the awarding of public contracts in Richmond, Virginia.... [A]n amorphous claim that there has been past discrimination in a particular industry cannot justify the use of an unyielding racial quota.

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<sup>17</sup> *Id.* at 491-92.

<sup>18</sup> See also *Grutter v. Bollinger*, 539 U.S. 306, 327 (2003) ("Not every decision influenced by race is equally objectionable, and strict scrutiny is designed to provide a framework for carefully examining the importance and the sincerity of the reasons advanced by the governmental decision maker for the use of race in that particular context.").

<sup>19</sup> 488 U.S. at 493.

It is sheer speculation how many minority firms there would be in Richmond absent past societal discrimination.<sup>20</sup>

Richmond's evidence was found to be lacking in every respect. The City could not rely upon the disparity between its utilization of MBE prime contractors and Richmond's minority population because not all minority persons would be qualified to perform construction projects; general population representation is irrelevant. No data were presented about the availability of MBEs in either the relevant market area or their utilization as subcontractors on City projects. According to Justice O'Connor, the extremely low MBE membership in local contractors' associations could be explained by "societal" discrimination or perhaps African Americans' lack of interest in participating as business owners in the construction industry. To be relevant, the City would have to demonstrate statistical disparities between eligible MBEs and actual membership in trade or professional groups. Further, Richmond presented no evidence concerning enforcement of its own anti-discrimination ordinance. Finally, Richmond could not rely upon Congress' determination that there has been nationwide discrimination in the construction industry. Congress recognized that the scope of the problem varies from market to market, and in any event it was exercising its powers under Section Five of the Fourteenth Amendment, whereas a local government is further constrained by the Amendment's Equal Protection Clause.<sup>21</sup>

In the case at hand, the City has not ascertained how many minority enterprises are present in the local construction market nor the level of their participation in City construction projects. The City points to no evidence that qualified minority contractors have been passed over for City contracts or subcontracts, either as a group or in any individual case. Under such circumstances, it is simply impossible to say that the City has demonstrated "a strong basis in evidence for its conclusion that remedial action was necessary."<sup>22</sup>

The foregoing analysis was applied only to African Americans. The Court then emphasized that there was "absolutely no evidence" against other minorities. "The random inclusion of racial groups that, as a practical matter, may have never suffered from discrimination in the construction industry in Richmond, suggests that perhaps the City's purpose was not in fact to remedy past discrimination."<sup>23</sup>

Having found that Richmond had not presented evidence in support of its compelling interest in remedying discrimination—the first prong of strict scrutiny—the Court went on to make two observations about the narrowness of the remedy—the second prong of strict scrutiny. First, Richmond had not considered race-neutral means to increase MBE participation. Second, the 30 percent quota had no basis in evidence, and was applied regardless of whether the individual

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<sup>20</sup> *Id.* at 499.

<sup>21</sup> *Id.* at 504; *but see Adarand v. Peña*, 515 U.S. 200 (1995) ("*Adarand III*") (applying strict scrutiny to Congressional race-conscious contracting measures).

<sup>22</sup> 488 U.S. at 510.

<sup>23</sup> *Id.*

MBE had suffered discrimination.<sup>24</sup> Further, Justice O'Connor rejected the argument that individualized consideration of Plan eligibility is too administratively burdensome.

Apparently recognizing that the opinion might be misconstrued to categorically eliminate all race-conscious contracting efforts, Justice O'Connor closed with these admonitions:

Nothing we say today precludes a state or local entity from taking action to rectify the effects of identified discrimination within its jurisdiction. If the City of Richmond had evidence before it that non-minority contractors were systematically excluding minority businesses from subcontracting opportunities, it could take action to end the discriminatory exclusion. Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise. Under such circumstances, the City could act to dismantle the closed business system by taking appropriate measures against those who discriminate based on race or other illegitimate criteria. In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion....Moreover, evidence of a pattern of individual discriminatory acts can, if supported by appropriate statistical proof, lend support to a local government's determination that broader remedial relief is justified.<sup>25</sup>

While much has been written about *Croson*, it is worth stressing what evidence was and was not before the Court. First, Richmond presented *no* evidence regarding the availability of MBEs to perform as prime contractors or subcontractors and *no* evidence of the utilization of minority-owned subcontractors on City contracts.<sup>26</sup> Nor did Richmond attempt to link the remedy it imposed to any evidence specific to the Program; it used the general population of the City rather than any measure of business availability. The "city has not ascertained how many minority enterprises are present in the local construction industry nor the level of their participation in city construction projects. The city points to no evidence that qualified minority contractors have been passed over for city contracts or subcontracts, either as a group or in any individual case."<sup>27</sup>

Some commentators have taken this dearth of any particularized proof and argued that only the most particularized proof can suffice in all cases. They leap from the Court's rejection of Richmond's reliance on only the percentage of African Americans in the City's population to a requirement that only firms that bid or have the "capacity" or "willingness" to bid on a particular

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<sup>24</sup> See *Grutter*, 529 U.S. at 336-337 (quotas are not permitted; race must be used in a flexible, non-mechanical way).

<sup>25</sup> *Croson*, 488 U.S. at 509 (citations omitted).

<sup>26</sup> *Id.* at 502.

<sup>27</sup> *Id.* at 510.



contract at a particular time can be considered in determining whether discrimination against African American businesses infects the local economy.<sup>28</sup>

This contention has been rejected explicitly by some courts. For example, in denying the plaintiff firm's summary judgment motion to enjoin the City of New York's M/WBE construction ordinance, the court stated that:

[I]t is important to remember what the *Croson* plurality opinion did and did not decide. The Richmond program, which the *Croson* Court struck down, was insufficient because it was based on a comparison of the minority population in its entirety in Richmond, Virginia (50%) with the number of contracts awarded to minority businesses (.67%). There were no statistics presented regarding number of minority-owned contractors in the Richmond area, *Croson*, 488 U.S. at 499, and the Supreme Court was concerned with the gross generality of the statistics used in justifying the Richmond program. There is no indication that the statistical analysis performed by [the consultant] in the present case, which does contain statistics regarding minority contractors in New York City, is not sufficient as a matter of law under *Croson*.<sup>29</sup>

Further, Richmond made no attempt to narrowly tailor a goal for the procurement at issue that reflected the reality of the project. Arbitrary quotas, and the unyielding application of those quotas, did not support the stated objective of ensuring equal access to City contracting opportunities. The *Croson* Court said nothing about the constitutionality of flexible subcontracting goals based upon the availability of MBEs to perform the scopes of the contract in the government's local market area. The federal Disadvantaged Business Enterprise ("DBE") Program, as discussed below, avoids these pitfalls. Part 26 "provides for a flexible system of contracting goals that contrasts sharply with the rigid quotas invalidated in *Croson*."<sup>30</sup>

While strict scrutiny is designed to require clear articulation of the evidentiary basis for race-based decision-making and careful adoption of remedies to address discrimination, it does not, as Justice O'Connor stressed, have to be an impossible test that no proof can meet. Strict scrutiny need not be "fatal in fact."<sup>31</sup>

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<sup>28</sup> See, e.g., *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715, 723 (7<sup>th</sup> Cir. 2007) ("*Northern Contracting III*").

<sup>29</sup> *North Shore Concrete and Associates, Inc. v. City of New York*, 1998 U.S. Dist. Lexis 6785, \*28-29 (E.D. N.Y. 1998); see also *Harrison & Burrowes Bridge Constructors, Inc. v. Cuomo*, 981 F.2d 50, 61-62 (2<sup>nd</sup> Cir. 1992) ("*Croson* made only broad pronouncements concerning the findings necessary to support a state's affirmative action plan"); cf. *Concrete Works of Colorado, Inc. v. City and County of Denver* 36 F.3d 1513, 1528 (10<sup>th</sup> Cir. 1994) ("*Concrete Works II*") (City may rely on "data reflecting the number of MBEs and WBEs in the marketplace to defeat the challenger's summary judgment motion").

<sup>30</sup> *Western States Paving Co., Inc. v. Washington Department of Transportation*, 407 F.3d 983, 994 (9<sup>th</sup> Cir. 2005), cert. denied, 546 U.S. 1170 (2006).

<sup>31</sup> See *Adarand III*, 515 U.S. at 237.

## **B. Strict Scrutiny as Applied to Federal Enactments**

In *Adarand v. Peña*,<sup>32</sup> the Court again overruled long settled law and extended the analysis of strict scrutiny under the Due Process Clause of the Fourteenth Amendment to federal enactments. Just as in the local government context, when evaluating federal legislation and regulations:

[t]he strict scrutiny test involves two questions. The first is whether the interest cited by the government as its reason for injecting the consideration of race into the application of law is sufficiently compelling to overcome the suspicion that racial characteristics ought to be irrelevant so far as treatment by the government is concerned. The second is whether the government has narrowly tailored its use of race, so that race-based classifications are applied only to the extent absolutely required to reach the proffered interest. The strict scrutiny test is thus a recognition that while classifications based on race may be appropriate in certain limited legislative endeavors, such enactments must be carefully justified and meticulously applied so that race is determinative of the outcome in only the very narrow circumstances to which it is truly relevant.<sup>33</sup>

### **1. U.S. Department of Transportation's Disadvantaged Business Enterprise Program**

To comply with *Adarand*, Congress reviewed and revised the Disadvantaged Business Enterprise (DBE) Program statute<sup>34</sup> and implementing regulations<sup>35</sup> for federal-aid contracts in the transportation industry. To date, every court that has considered the issue has found the regulations to be constitutional on their face.<sup>36</sup> While not directly controlling for Cleveland's consideration of race- and gender-conscious measures for its locally-funded contracts, they are highly instructive about the legal parameters likely to be applied to a local M/WBE program. While binding strictly only upon the DBE Program, these cases provide important guidance to the City about the types of evidence necessary to establish its compelling interest in adopting a local a program and how to narrowly tailor it, and the City would be wise to meet these standards. For example, the Fourth Circuit noted with approval that North Carolina's M/WBE program for state-funded contracts largely mirrored Part 26.<sup>37</sup>

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<sup>32</sup> 515 U.S. 200 (1995) (*Adarand III*).

<sup>33</sup> *Adarand Constructors, Inc. v. Peña*, 965 F. Supp. 1556, 1569-1570 (D. Colo. 1997), *rev'd*, 228 F.3d 1147 (2000) ("*Adarand IV*"); *see also Adarand III*, 515 U.S. at 227.

<sup>34</sup> Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), Pub. L. No. 105-178 (b)(1), 112 Stat. 107, 113.

<sup>35</sup> 49 C.F.R. Part 26.

<sup>36</sup> *See, e.g., Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147 (10<sup>th</sup> Cir. 2000) ("*Adarand VII*"), *cert. granted then dismissed as improvidently granted*, 532 U.S. 941, 534 U.S. 103 (2001); *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2004 U.S. Dist. LEXIS 3226 at \*64 (N.D. Ill., Mar. 3, 2004) ("*Northern Contracting I*").

<sup>37</sup> *H.B. Rowe Co. v. Tippet*, 615 F.3d 233, 236 (4<sup>th</sup> Cir. 2010).

**a. Challenges to the Facial Constitutionality of the Disadvantaged Business Enterprise Regulations**

All courts have held that Congress had strong evidence of widespread race discrimination in the construction industry.<sup>38</sup> Relevant evidence before Congress included:

- Disparities between the earnings of minority-owned firms and similarly situated non-minority-owned firms;
- Disparities in commercial loan denial rates between African American business owners compared to similarly situated non-minority business owners;
- The large and rapid decline in minorities' participation in the construction industry when affirmative action programs were struck down or abandoned; and
- Various types of overt and institutional discrimination by prime contractors, trade unions, business networks, suppliers and sureties against minority contractors.<sup>39</sup>

The Eighth Circuit Court of Appeals took a “hard look” at the evidence Congress considered, and concluded that the legislature had:

[S]pent decades compiling evidence of race discrimination in government highway contracting, of barriers to the formation of minority-owned construction businesses, and of barriers to entry. In rebuttal, [the plaintiffs] presented evidence that the data were susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.<sup>40</sup>

Next, the regulations were facially narrowly tailored. Unlike the prior program,<sup>41</sup> Part 26 provides that:

- The overall goal must be based upon demonstrable evidence of the number of DBEs ready, willing, and able to participate on the recipient's federally assisted contracts.

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<sup>38</sup> See also *Western States*, 407 F.3d at 993 (“In light of the substantial body of statistical and anecdotal material considered at the time of TEA-21’s enactment, Congress had a strong basis in evidence for concluding that—in at least some parts of the country—discrimination within the transportation contracting industry hinders minorities’ ability to compete for federally funded contracts.”).

<sup>39</sup> See *id.*, 407 F.3d at 992-93.

<sup>40</sup> *Sherbrooke*, 345 F.3d at 970; see also *Adarand VII*, 228 F.3d at 1175 (Plaintiff has not met its burden “of introducing credible, particularized evidence to rebut the government’s initial showing of the existence of a compelling interest in remedying the nationwide effects of past and present discrimination in the federal construction procurement subcontracting market.”).

<sup>41</sup> 49 C.F.R. Part 23.

## Legal Standards for Government Affirmative Action Contracting Programs

- The goal may be adjusted to reflect the availability of DBEs but for the effects of the DBE Program and of discrimination.
- The recipient must meet the maximum feasible portion of the goal through race-neutral measures as well as estimate that portion of the goal it predicts will be met through such measures.
- The use of quotas and set-asides is limited to only those situations where there is no other remedy.
- The goals are to be adjusted during the year to remain narrowly tailored.
- Absent bad faith administration of the Program, a recipient cannot be penalized for not meeting its goal.
- The presumption of social disadvantage for racial and ethnic minorities and women is rebuttable, “wealthy minority owners and wealthy minority firms are excluded, and certification is available to persons who are not presumptively disadvantaged but can demonstrate actual social and economic disadvantage.”
- Exemptions and waivers from any or all Program requirements are available.<sup>42</sup>

These elements have led the courts to conclude that the program is narrowly tailored on its face. First, the regulations place strong emphasis on the use of race-neutral means to achieve minority and women participation. Relying upon *Grutter v. Bollinger*, the Eighth Circuit held that while “[n]arrow tailoring does not require the exhaustion of every conceivable race-neutral alternative...it does require serious, good faith consideration of workable race-neutral alternatives.”<sup>43</sup>

The DBE Program is also flexible. Eligibility is limited to small firms owned by persons whose net worth is less than \$750,000. There are built-in Program time limits, and the recipient may terminate race-conscious contract goals if it meets its annual overall goal through race-neutral means for two consecutive years. Moreover, the authorizing legislation is subject to Congressional reauthorization that will ensure periodic public debate.

The court next held that the goals are tied to the relevant labor market. “Though the underlying estimates may be inexact, the exercise requires the States to focus on establishing realistic goals for DBE participation in the relevant contracting markets. This stands in stark contrast to the program struck down in *Croson*...”<sup>44</sup>

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<sup>42</sup> *Sherbrooke*, 345 F.3d. at 973.

<sup>43</sup> *Id.* at 972.

<sup>44</sup> *Id.*

Finally, Congress has taken significant steps to minimize the race-conscious nature of the Program. “[W]ealthy minority owners and wealthy minority-owned firms are excluded, and certification is available to persons who are not presumptively [socially] disadvantaged but can demonstrate actual social and economic disadvantage. Thus, race is made relevant in the program, but it is not a determinative factor.”<sup>45</sup>

### **b. Challenges to the Application of the Disadvantaged Business Enterprise Regulations**

DBE programs based upon a methodology similar to that for this Study for Cleveland, including the availability analysis and the examination of disparities in the business formation rates and business earnings of minorities and women compared to similarly situated non-minority males, have been held to be narrowly tailored in their application of Part 26.

#### **i. *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation***

In this case, the Eight Circuit Court of Appeals, which governs Missouri, held that Congress had a compelling interest in enacting the DBE program legislation, the regulations implementing the statute were constitutional, and the Minnesota Department of Transportation’s (MnDOT) DBE Program was sufficiently narrowly tailored.

After holding that Part 26 is facially narrowly tailored, the court turned to MnDOT’s implementation of the regulations.

MnDOT had relied upon a NERA availability study to set its DBE goal that applied the approach used for this Report. The Study first determined that DBEs comprise 11.4 percent of highway construction prime contractors, of which 0.6 percent were minority-owned and 10.8 percent were women-owned. Based upon the analysis of business formation statistics, the Study next estimated that the number of participating minority-owned firms would be 34 percent higher in a race-neutral market. Therefore, DBE availability figure was adjusted from 11.4 percent to 11.6 percent, which MnDOT adopted as its overall goal for fiscal year 2001. MnDOT predicted that it would meet 9 percent of its goal through race-conscious measures, based upon the drop from 10.25 percent DBE participation in 1998 to 2.25 percent participation in 1999, when its previous program was enjoined in *Sherbrooke I*. USDOT approved this goal.

The Eighth Circuit opined that while plaintiff:

[P]resented evidence attacking the reliability of NERA’s data, it failed to establish that better data was [sic] available or that Mn/DOT was otherwise unreasonable in undertaking this thorough analysis and in relying on its results. The precipitous drop in DBE participation in 1999, when no race-conscious methods were employed, supports Mn/DOT’s conclusion that a substantial portion of its 2001 overall goal could not be met with race-neutral measures, and there is no evidence that Mn/DOT failed to adjust its use

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<sup>45</sup> *Id.* at 973.

of race-conscious and race-neutral methods as the year progressed, as the DOT regulations require.<sup>46</sup>

### **ii. *Northern Contracting, Inc. v. Illinois Department of Transportation***

Likewise, the Seventh Circuit Court of Appeals in a highly detailed opinion relying in part on the MnDOT case affirmed the district court's trial verdict that the Illinois Department of Transportation's application of Part 26 was narrowly tailored based in large part upon NERA's Availability Study and expert trial testimony.<sup>47</sup> IDOT had a compelling interest in remedying discrimination in the market area for federally-funded highway contracts, and its DBE Plan was narrowly tailored to that interest and in conformance with the regulations.

To determine whether IDOT met its constitutional and regulatory burdens, the court reviewed the evidence of discrimination against minority and women construction firms in the Illinois area. IDOT had commissioned a NERA Availability Study to meet Part 26's requirements. Similar to this Study, the IDOT Study included a custom census of the availability of DBEs in IDOT's market area, weighted by the location of IDOT's contractors and the types of goods and services IDOT procures. NERA estimated that DBEs comprised 22.77 percent of IDOT's available firms.<sup>48</sup> The IDOT Study next examined whether and to what extent there are disparities between the rates at which DBEs form businesses relative to similarly situated non-minority men, and the relative earnings of those businesses. If disparities are large and statistically significant, then the inference of discrimination can be made. Controlling for numerous variables such as the owner's age, education, and the like, the Study found that in a race- and gender-neutral market area the availability of DBEs would be approximately 20.8 percent higher, for an estimate of DBE availability "but for" discrimination of 27.51 percent.

In addition to the IDOT Study, the court also relied upon:

- A NERA Availability Study conducted for Metra, the Chicago-area commuter rail agency;
- Expert reports relied upon by an earlier trial court in holding that the City of Chicago had a compelling interest in its minority and women business program for construction contracts;<sup>49</sup>
- Expert reports and anecdotal testimony presented to the Chicago City Council in support of the City's revised M/WBE Procurement Program ordinance;

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<sup>46</sup> *Id.*

<sup>47</sup> *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7<sup>th</sup> Cir. 2007) (7<sup>th</sup> Cir. 2007) ("*Northern Contracting III*"). Dr. Wainwright testified as IDOT's expert witness at the trial. Ms. Holt authored IDOT's DBE goal submission and testified about that document at the trial..

<sup>48</sup> This baseline figure of DBE availability is the "step 1" estimate U.S. DOT grant recipients must make pursuant to 49 CFR §26.45.

<sup>49</sup> *BAGC v. Chicago*, 298 F. Supp.2d 725 (N.D. Ill. 2003).

- Anecdotal evidence gathered at IDOT's public hearings on the DBE program;
- Data on DBE involvement in construction projects in markets without DBE goals;<sup>50</sup> and
- IDOT's "zero goal" experiment, where DBEs received approximately 1.5 percent of the total value of the contracts. This was designed to test the results of "race-neutral" contracting policies, that is, the utilization of DBEs on contracts without goals.

Based upon this record, the court of appeals agreed with the trial court's judgment that the Program was narrowly tailored. IDOT's plan was based upon sufficient proof of discrimination such that race-neutral measures alone would be inadequate to assure that DBEs operate on a "level playing field" for government contracts.

The stark disparity in DBE participation rates on goals and non-goals contracts, when combined with the statistical and anecdotal evidence of discrimination in the relevant marketplaces, indicates that IDOT's 2005 DBE goal represents a "plausible lower-bound estimate" of DBE participation in the absence of discrimination.... Plaintiff presented no persuasive evidence contravening the conclusions of IDOT's studies, or explaining the disparate usage of DBEs on goals and non-goals contracts.... IDOT's proffered evidence of discrimination against DBEs was not limited to alleged discrimination by prime contractors in the award of subcontracts. IDOT also presented evidence that discrimination in the bonding, insurance, and financing markets erected barriers to DBE formation and prosperity. Such discrimination inhibits the ability of DBEs to bid on prime contracts, thus allowing the discrimination to indirectly seep into the award of prime contracts, which are otherwise awarded on a race- and gender-neutral basis. This indirect discrimination is sufficient to establish a compelling governmental interest in a DBE program.... Having established the existence of such discrimination, a governmental entity has a compelling interest in assuring that public dollars, drawn from the tax contributions of all citizens, do not serve to finance the evil of private prejudice.<sup>51</sup>

## 2. U.S. Department of Defense's Small Disadvantaged Business Program

In 2008, the Federal Circuit Court of Appeals struck down the Department of Defense (DOD) program for Small Disadvantaged Businesses (SDBs) in *Rothe Development Corporation v. U.S. Department of Defense*.<sup>52</sup> The program set an overall annual goal of five percent for DOD contracting with SDBs and authorized various race-conscious measures to meet the goal.

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<sup>50</sup> *Northern Contracting III*, 473 F.3d at 719 ("Also of note, IDOT examined the system utilized by the Illinois State Toll Highway Authority, which does not receive federal funding; though the Tollway has a DBE goal of 15 percent, this goal is completely voluntary -- the average DBE usage rate in 2002 and 2003 was 1.6 percent. On the basis of all of this data, IDOT adopted 22.77 percent as its Fiscal Year 2005 DBE goal.").

<sup>51</sup> *Northern Contracting II*, at \*82 (internal citations omitted); see *Croson*, 488 U.S. at 492.

<sup>52</sup> *Rothe Development Corporation v. U.S. Department of Defense*, 545 F.3d 1023 (Fed. Cir. 2008). We note that the jurisdiction of the Court of Appeals for the Federal Circuit is limited to the jurisdiction described in 28 U.S.C. §§ 1292 (c) and (d) and 1295. Pursuant to 28 U.S.C. § 1295(a)(2), jurisdiction in *Rothe* was based upon

In *Rothe VII*<sup>53</sup>, the appeals court held that the DOD program violated strict scrutiny because Congress did not have a “strong basis in evidence” upon which to conclude that DOD was a passive participant in racial discrimination in relevant markets across the country. The six local disparity studies upon which the DOD primarily relied for evidence of discrimination did not meet the compelling interest requirement, and its other statistical and anecdotal evidence did not rise to meet the heavy constitutional burden.

Of particular relevance to this Study, the primary focus of the court’s analysis was the six disparity studies. The court reaffirmed that such studies are relevant to the compelling interest analysis.<sup>54</sup> It then rejected *Rothe*’s argument that data more than five years old must be discarded, stating “We decline to adopt such a *per se* rule here.... [The government] should be able to rely on the most recently available data so long as that data is reasonably up-to-date.”<sup>55</sup>

In the absence of expert testimony about accepted econometric models of discrimination, the court was troubled by the failure of five of the studies to account for size differences and “qualifications” of the minority firms in the denominator of the disparity analysis, or as the court labeled it, “relative capacity.”<sup>56</sup> The court was concerned about the studies’ inclusion of possibly “unqualified” minority firms and the failure to account for whether a firm can perform more than one project at a time in two of the studies.<sup>57</sup> In the court’s view, the combination of these perceived deficits rendered the studies insufficiently probative to meet Congress’ burden.

The appellate court ignored the analyses in the cases upholding the USDOT Disadvantaged Business Enterprise Program and the City of Denver’s local affirmative action contracting program where the fallacy of “capacity” was debunked, all of which were cited extensively by the district court. It relied instead on a report from the USCCR, which adopts the views of anti-affirmative action writers, including those of *Rothe*’s consultant.<sup>58</sup>

However, the court was careful to limit the reach of its review to the facts of the case:

To be clear, we do *not* hold that the defects in the availability and capacity analyses in these six disparity studies render the studies wholly unreliable for any purpose. Where the calculated disparity ratios are low enough, we do not foreclose the possibility that an inference of discrimination might still be permissible for *some* of the minority groups in

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the plaintiff’s claim under the Tucker Act, 28 U.S.C. § 1346(a)(2), which governs contract claims against the United States.

<sup>53</sup> This opinion was the latest iteration of an 11-year-old challenge by a firm owned by a White female to the DOD’s award of a contract to an Asian American-owned business despite the fact that plaintiff was the lowest bidder.

<sup>54</sup> *Rothe*, 545 F.3d at 1037-1038.

<sup>55</sup> *Id.* at 1038-1039.

<sup>56</sup> *Id.* at 1042.

<sup>57</sup> *Ibid.*

<sup>58</sup> U.S. Commission on Civil Rights, *Disparity Studies as Evidence of Discrimination in Federal Contracting* (May 2006): 79.



*some* of the studied industries in *some* of the jurisdictions. And we recognize that a minority owned firm's capacity and qualifications may themselves be affected by discrimination. But we hold that the defects we have noted detract dramatically from the probative value of these six studies, and, in conjunction with their limited geographic coverage, render the studies insufficient to form the statistical core of the "strong basis in evidence" required to uphold the statute.<sup>59</sup>

The Federal Circuit concluded its analysis of compelling interest by "stress[ing] that [its] holding is grounded in the particular terms of evidence offered by DOD and relied on by the district court in this case, and should not be construed as stating blanket rules, for example, about the reliability of disparity studies."<sup>60</sup>

Given the holding that Congress lacked a strong basis in evidence for the DOD program, the court did not rule on whether its provisions were narrowly tailored. The court did note, however, in its prior rulings that the program is flexible, limited in duration, and not unduly burdensome to third parties, and that the program has tended to narrow the reach of its remedies over time.<sup>61</sup>

### C. Gender-Conscious Programs

Whether affirmative action procurement programs that benefit women are subject to the lesser constitutional standard of "intermediate scrutiny" has yet to be settled by the Supreme Court.<sup>62</sup> Most courts have applied intermediate scrutiny to preferences for women and then upheld or struck down the female preference under that standard.<sup>63</sup> However, the Sixth Circuit, which governs Ohio, has applied strict scrutiny to gender preferences.<sup>64</sup>

### D. Burdens of Production and Proof

Unlike most legal challenges, the defendant has the initial burden of producing "strong evidence" in support of the program.<sup>65</sup> The plaintiff must then proffer evidence to rebut the government's case, and bears the ultimate burden of production and persuasion that the affirmative action program is unconstitutional.<sup>66</sup> "[W]hen the proponent of an affirmative action plan produces sufficient evidence to support an inference of discrimination, the plaintiff must rebut that

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<sup>59</sup> *Rothe*, 545 F.3d at 1045.

<sup>60</sup> *Id.* at 1049.

<sup>61</sup> *Id.* at 1049.

<sup>62</sup> *Cf. United States v. Virginia*, 518 U.S. 515 (1996) (applying standard of "exceedingly persuasive justification" in striking down Virginia Military Institute's males only admissions policy).

<sup>63</sup> *See, e.g., Northern Contracting I*, at \*44 (women's status as presumptively socially disadvantaged passes intermediate scrutiny); *Scott*, 199 F.3d at 215 n.9; *Engineering Contractors II*, 122 F.3d at 907-910; *Concrete Works II*, 36 F.3d at 1519; *Philadelphia II*, 6 F.3d at 1009; *Coral Construction Co. v. King County*, 941 F.2d 910, 930-931 (9<sup>th</sup> Cir. 1991); *Baltimore I*, 83 F.Supp 2d at 613.

<sup>64</sup> *Brunet City of Columbus*, 1 F.3d 390, 404 (6<sup>th</sup> Cir. 1993).

<sup>65</sup> *Aiken v. City of Memphis*, 37 F.3d 1155, 1162 (6<sup>th</sup> Cir. 1994).

<sup>66</sup> *Adarand VII*, 228 F.3d at 1166.

inference in order to prevail.”<sup>67</sup> A plaintiff “cannot meet its burden of proof through conjecture and unsupported criticism of [the government’s] evidence.”<sup>68</sup> For example, in the challenge to the Minnesota and Nebraska DBE programs, plaintiffs<sup>69</sup> “presented evidence that the data was susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.”<sup>70</sup>

There is no requirement of formal legislative findings,<sup>71</sup> nor “an ultimate judicial finding of discrimination before [a local government] can take affirmative steps to eradicate discrimination.”<sup>72</sup> When the statistical information is sufficient to support the inference of discrimination, the plaintiff must prove that the statistics are flawed.<sup>73</sup> A plaintiff cannot rest upon general criticisms of studies or other evidence; it must carry the case that the government’s proof is inadequate to meet strict scrutiny, rendering the legislation or governmental program illegal.<sup>74</sup>

### **E. Establishing a “Strong Basis in Evidence” for a Race-Conscious Contracting Program for Locally-Funded Contracts**

The *Denver* and *Chicago* decisions provide the most detailed analysis of the evidence necessary to establish that Cleveland would be a passive participant in a discriminatory marketplace in the absence of race-based remedies for its locally-funded contracts. These cases upheld programs based upon the types and quality of evidence, and the methodologies, applied in this Report.

#### **1. Concrete Works, Inc. v. City and County of Denver**

In 2003, the City and County of Denver’s M/WBE Program was upheld using the “law and economics approach” to disparity studies (in addition to trial testimony of discrimination), the approach applied in this Report.<sup>75</sup> The defense relied primarily on expert reports and testimony derived from an economic model of business discrimination. The court of appeals recognized

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<sup>67</sup> *Engineering Contractors II*, 122 F.3d at 916; see also *West Tennessee Chapter of Associated Builders and Contractors, Inc. v. City of Memphis*, 302 F.Supp.2d 860, 864 (W.D. Tenn. 2004).

<sup>68</sup> *Concrete Works IV*, 321 F.3d at 989; see also *H.B. Rowe*, 2008 U.S. Dist. Lexis at \*27.

<sup>69</sup> The plaintiffs in both cases were represented by the same counsel and attempted to rely upon the same consultant.

<sup>70</sup> *Sherbrooke*, 345 F.3d at 970.

<sup>71</sup> *Webster*, 51 F.Supp.2d at 1364.

<sup>72</sup> *Concrete Works II*, 36 F.3d at 1522.

<sup>73</sup> *Engineering Contractors II*, 122 F.3d at 916; *Coral Construction*, 941 F.2d at 921.

<sup>74</sup> *Adarand VII*, 228 F.3d at 1166; *Engineering Contractors II*, 122 F.3d at 916; *Philadelphia III*, 91 F.3d at 597; *Concrete Works II*, 36 F.3d at 1522-1523; *Webster*, 51 F. Supp. 2d at 1364; see also *Wygant*, 476 U.S. at 277-278.

<sup>75</sup> *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950 (10<sup>th</sup> Cir. 2003), cert. denied, 540 U.S. 1027 (2003) (“*Concrete Works IV*”).

that the proper inquiry is not only whether disparities remain despite the operation of its affirmative action program (a statistical question to which many disparity studies, then and now, continue to limit themselves) but also whether disparities remain when remedial intervention is not present in the marketplace, as reflected by M/WBE participation on contracts without affirmative action goals, in the public sector, the private sector, or both.

The law and economics model applies accepted social science principles of data collection, statistical analyses and anecdotal inquiries within rigorous frameworks to the questions relevant to whether the agency has a strong basis in evidence of the continuing effects of discrimination, and if so, what responses are supportable, even where remedial efforts have been undertaken: Are there disparities in the overall market outside the agency's projects that support the inference of the market failure of discrimination, such that the agency needs to continue to take action to ensure that it does not passively participate in such discrimination? What additional market factors outside the agency's direct control affect the entrepreneurial opportunities of M/WBEs that perpetuate discrimination and disparate impacts?

The law and economics model's analysis of disparities in the rates at which M/WBEs in the government's markets form businesses compared to similar non-M/WBEs, their earnings from such businesses, and their access to capital markets has been held to be highly relevant to the determination whether the market functions properly for all firms regardless of the race or gender of their ownership. These analyses contributed to the successful defense of local race- and gender-conscious construction programs,<sup>76</sup> as well as the DBE program for federally-assisted transportation contracts.<sup>77</sup> As explained by the Tenth Circuit, the evidence

demonstrates the existence of two kinds of discriminatory barriers to minority subcontracting enterprises, both of which show a strong link between racial disparities in the federal government's disbursements of public funds for construction contracts and the channeling of those funds due to private discrimination. The first discriminatory barriers are to the formation of qualified minority subcontracting enterprises due to private discrimination, precluding from the outset competition for public construction contracts by minority enterprises. The second discriminatory barriers are to fair competition between minority and non-minority subcontracting enterprises, again due to private discrimination, precluding existing minority firms from effectively competing for public construction contracts. The government also presents further evidence in the form of local disparity studies of minority subcontracting and studies of local subcontracting markets after the removal of affirmative action programs.... The government's evidence

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<sup>76</sup> *Builders Association of Greater Chicago v. City of Chicago*, 298 F.Supp.2d 725 (N.D. Ill. 2003) (holding that City of Chicago's M/WBE program for local construction contracts met compelling interest using this framework).

<sup>77</sup> *Western States Paving*, 407 F.3d at 992-93; *Sherbrooke Turf*, 345 F.3d at 970 (in the face of evidence of "barriers to the formation of minority-owned construction businesses, and of barriers to entry... [plaintiffs] failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts"); *Northern Contracting I*, LEXIS 3226 at \*113, 122.

is particularly striking in the area of the race-based denial of access to capital, without which the formation of minority subcontracting enterprises is stymied.<sup>78</sup>

Denver adopted an ordinance in 1990 that provided for annual goals of 16 percent for MBEs and 12 percent for WBEs in construction contracts, and 10 percent for both MBEs and WBEs in professional design and construction services contracts. Bidders were to meet contract specific goals or make good faith efforts to do so. To comply with *Croson*, the City commissioned a study to assess the propriety of the Program. The 1990 Study found large disparities between the availability and utilization of M/WBEs on City projects without goals. It likewise found large disparities on private sector projects without goals. Interviews and testimony revealed continuing efforts by nonminority male contractors to circumvent the goals. A 1991 study of goods, services and remodeling industries also found large disparities for City contracts not subject to goals.

When the Tenth Circuit reversed and remanded for trial in *Concrete Works II*<sup>79</sup>, the City commissioned another study. The 1995 Study used U.S. Census Bureau data to determine MBE and WBE availability and utilization in the construction and design industries in the Denver Metropolitan Statistical Area (MSA). It calculated separate disparity indices for firms with and without employees. Census data were also used to examine average revenues per employee and rates of self-employment. Disparities in self-employment rates persisted even after holding education and length of work experience constant. A telephone survey to determine the availability and utilization of M/WBEs in the Denver MSA showed large disparities in the construction and professional design industries. The 1995 Study included discussion of a 1993 Study for the Denver Housing Authority which found disparities for M/WBEs in some areas in some years, including those when it implemented an affirmative action program, and a 1992 Study for the Regional Transportation District that found large disparities for both prime and subcontracting in the Denver market area. Based upon this evidence, the City enacted the 1996 Ordinance.

In 1997, Denver commissioned another study of discrimination in construction projects of the type undertaken by the City. The court found this Study used a “more sophisticated” method<sup>80</sup> to calculate availability by: (1) specifically determining the City’s geographic and procurement market area; (2) using Dun & Bradstreet data to obtain the total number of available firms and numerous directories to determine the number of M/WBEs; (3) conducting surveys to adjust for possible misclassification of the race and gender of firms; and (4) presenting a final result of

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<sup>78</sup> *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1168-69 (10<sup>th</sup> Cir. 2000) (“*Adarand VII*”), cert. granted then dismissed as improvidently granted, 532 U.S. 941, 534 U.S. 103 (2001).

<sup>79</sup> *Concrete Works of Colorado, Inc.*, a construction firm owned by a white male, sued the City in 1992, alleging that it had been denied three contracts for failure to meet the goals or to make good faith efforts and seeking injunctive relief and money damages. The district court granted the City’s motion for summary judgment. *Concrete Works of Colorado, Inc. v. City & County of Denver*, 823 F.Supp. 821 (D. Colo. 1993) (“*Concrete Works I*”). The Tenth Circuit reversed, holding that genuine issues of material fact precluded summary judgment. *Concrete Works of Colorado, Inc. v. City & County of Denver*, 36 F.3d 1513 (10<sup>th</sup> Cir. 1994) (“*Concrete Works II*”). The district court, after a bench trial, held the ordinance to be unconstitutional. *Concrete Works of Colorado, Inc. v. City & County of Denver*, 86 F.Supp. 2d 1042 (D. Colo. 2000) (“*Concrete Works III*”). Denver appealed.

<sup>80</sup> *Concrete Works IV*, 321 F.3d at 966.

weighted averages of availability for each racial group and women for both prime and subcontracts.

The 1997 Study then compared M/WBE availability and utilization in the Colorado construction industry. It also examined 1987 Census data from the Survey of Minority-Owned Business and the Survey of Women-Owned Businesses, the most current then available. All comparisons yielded large and statistically significant disparities. The 1997 Study also found that the potential availability of M/WBEs, as measured by the rates at which similarly situated nonminority males form businesses, was significantly greater than their actual availability. The Study next examined whether minorities and women in the construction industry earned less than nonminority males with similar characteristics. Large and statistically significant disparities were found for all groups except Asian-Americans. A mail survey was conducted to obtain anecdotal evidence of the experiences of MBEs and WBEs and non-M/WBEs in the construction industry. Again, with the exception of Asian-Americans, minorities and women with similar characteristics experienced much greater difficulties than did their nonminority male counterparts. A follow up telephone survey indicated that the disparities were even greater than first indicated.

Based upon the 1997 Study, and additional surveys and hearings, the City enacted the 1998 Ordinance. It reduced the annual goals for both MBEs and WBEs in construction contracts to 10 percent and prohibited M/WBE prime contractors from counting self-performed work towards the goals.

Concrete Works' challenge finally came to trial in 1999. In addition to the statistical evidence in prior studies and expert reports prepared for the litigation, Denver introduced evidence of its contracting activities dating back to the early 1970s. This consisted of reports of federal investigations into the utilization and experiences of local MBEs and of the City's early affirmative action efforts. M/WBE participation dramatically increased when the City adopted its first MBE ordinance in 1984. The City also introduced additional, comprehensive anecdotal evidence. M/WBEs testified that they experienced difficulties in prequalifying for private sector jobs; their low bids were rejected; they were paid more slowly than non-M/WBEs; they were charged more for materials than non-M/WBEs; they were often required to do additional work not required of nonminority males; and there were barriers to joining trade unions and associations. There was extensive testimony detailing the difficulties M/WBEs suffered in obtaining lines of credit. The "most poignant" testimony involved blatant harassment suffered at work sites, including physical assaults.

The trial court found for the plaintiff.

The Tenth Circuit reversed and directed the entry of judgment for Denver. The district court's legal framework "misstate[d] controlling precedent and Denver's burden at trial."<sup>81</sup>

First, the government need not prove that the statistical inferences of discrimination are "correct." Strong evidence supporting the government's determination that remedial action is necessary need not be "irrefutable or definitive" proof of discrimination. Statistical evidence

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<sup>81</sup> *Id.* at 970.

creating inferences of discriminatory motivations is sufficient and therefore evidence of market area discrimination can be used to meet strict scrutiny.<sup>82</sup> It is the plaintiff who must prove by a preponderance of the evidence that such proof does not support those inferences.

*Croson* does not require that each group included in the ordinance suffer equally from discrimination. In contrast to Richmond, Denver introduced evidence of bias against each group; that is sufficient.<sup>83</sup>

Nor must Denver demonstrate that the “ordinances will *change* discriminatory practices and policies” in the local market area; such a test would be “illogical” because firms could defeat the remedial efforts simply by refusing to cease discriminating.<sup>84</sup>

Next, a municipality need not prove that:

[P]rivate firms directly engaged in any discrimination in which Denver passively participates do so intentionally, with the purpose of disadvantaging minorities and women.... Denver’s only burden was to introduce evidence which raised the inference of discriminatory exclusion in the local construction industry and link its spending to that discrimination.... Denver was under no burden to identify any specific practice or policy that resulted in discrimination. Neither was Denver required to demonstrate that the purpose of any such practice or policy was to disadvantage women or minorities. To impose such a burden on a municipality would be tantamount to requiring proof of discrimination and would eviscerate any reliance the municipality could place on statistical studies and anecdotal evidence.<sup>85</sup>

Similarly, the trial court was wrong to reject the statistical evidence because such evidence cannot identify the individuals responsible for the discrimination.<sup>86</sup>

Contrary to the district court’s conclusion, the burden of compliance need not be placed only upon those firms directly responsible for the discrimination. The proper focus is whether the burden on third parties is “too intrusive” or “unacceptable.”<sup>87</sup>

*Croson*’s admonition that “mere societal” discrimination is not enough to meet strict scrutiny<sup>88</sup> does not apply where the government presents evidence of discrimination in the industry targeted by the program. “If such evidence is presented, it is immaterial for constitutional purposes whether the industry discrimination springs from widespread discriminatory attitudes shared by society or is the product of policies, practices, and attitudes unique to the industry.... The genesis

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<sup>82</sup> *Id.* at 975.

<sup>83</sup> *Id.* at 976.

<sup>84</sup> *Id.* at 973 (emphasis in the original).

<sup>85</sup> *Id.* at 971.

<sup>86</sup> *Id.* at 973.

<sup>87</sup> *Id.*

<sup>88</sup> *See* 488 U.S. at 497.

of the identified discrimination is irrelevant.” The trial court was wrong to require Denver to “show the existence of specific discriminatory policies and that those policies were more than a reflection of societal discrimination.”<sup>89</sup>

The Tenth Circuit further rejected the notion that a municipality must prove that it is itself guilty of discrimination to meet its burden. Denver can show its compelling interest by “evidence of private discrimination in the local construction industry coupled with evidence that it has become a passive participant in that discrimination...[by] linking its spending practices to the private discrimination.”<sup>90</sup> Denver further linked its award of public dollars to discriminatory conduct through the testimony of M/WBEs that identified general contractors who used them on City projects with M/WBE goals but refused to use them on private projects without goals.

The court then turned to the evidence of discrimination against M/WBEs in the market for commercial credit. The lending discrimination studies and business formation studies are relevant and probative because they show a strong link between the disbursement of public funds and the channeling of those funds due to private discrimination. “Evidence that private discrimination results in barriers to business formation is relevant because it demonstrates that M/WBEs are precluded *at the outset* from competing for public construction contracts. Evidence of barriers to fair competition is also relevant because it again demonstrates that *existing* M/WBEs are precluded from competing for public contracts.”<sup>91</sup> Plaintiff failed to present evidence to rebut the lending discrimination data, instead resting on its belief that such evidence is irrelevant. Contrary to the trial court’s ruling, the business formation studies were not flawed because they did not control for “quality of education,” “culture” and “religion.” Plaintiff failed not only to define such vague terms but also to conduct its own study controlling for these factors or to produce expert testimony that to do so would eliminate the disparities.<sup>92</sup>

The district court also erred in rejecting the disparity studies because they did not control for firm size, area of specialization, and whether the firm had bid on City projects. The circuit court agreed with Denver’s experts that, while it may be true that M/WBEs are smaller in general than nonminority male firms, most construction firms are small and can expand and contract to meet their bidding opportunities. Importantly, Denver established that size and experience are not race- and gender-neutral variables: “M/WBE construction firms are generally smaller and less experienced *because* of discrimination.”<sup>93</sup> Further, plaintiff failed to conduct any study showing that the disparities disappear when such variables are held constant. Likewise, it presented no evidence that controlling for firm specialization explained the disparities. “Additionally, we do not read *Croson* to require disparity studies that measure whether construction firms are able to perform a *particular contract*.”<sup>94</sup>

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<sup>89</sup> *Concrete Works IV*, 321 F.3d at 976.

<sup>90</sup> *Id.* at 977.

<sup>91</sup> *Id.*

<sup>92</sup> *Id.* at 979.

<sup>93</sup> *Id.* at 983 (emphasis in the original).

<sup>94</sup> *Id.* at 987-88 (emphasis in the original).

That M/WBEs were overutilized on City projects with goals goes only to the weight of the evidence because it reflects the effects of a remedial program. Denver presented evidence that goals and non-goals projects were similar in purpose and scope and that the same pool of contractors worked on both types. “Particularly persuasive” was evidence that M/WBE participation declined significantly when the program was amended in 1989. The “utilization of M/WBEs on City projects has been affected by the affirmative action programs that have been in place in one form or another since 1977. Thus, the non-goals data is the better indicator of discrimination in public contracting” and supports the position that discrimination existed before the enactment of the ordinances.<sup>95</sup>

There is no requirement that anecdotal testimony be verified. “Denver was not required to present corroborating evidence and CWC was free to present its own witnesses to either refute the incidents described by Denver’s witnesses or to relate their own perceptions on discrimination in the Denver construction industry.”<sup>96</sup> This “failure” of the legislative body to somehow verify testimony had been a favorite shibboleth of plaintiffs in other cases.<sup>97</sup>

Finally, as for the narrow tailoring requirement of strict scrutiny, the court held that because plaintiff had waived its claim that the ordinances were not narrowly tailored at an earlier stage in this litigation, the district court’s holding in *Concrete Works I* that the ordinances satisfy the other prong of strict scrutiny was affirmed.

## 2. Builders Association of Greater Chicago v. City of Chicago

The City of Chicago employed economic analyses similar to those upheld in *Concrete Works* in its successful defense of its compelling interest in remedying discrimination against African American-, Hispanic- and women-owned construction firms.<sup>98</sup> However, the program as implemented in 2003, which had not been reviewed since its inception in 1990, was not sufficiently narrowly tailored to meet strict constitutional scrutiny. The court stayed the final order against operation of the Program for construction contracts for six months, to permit the City to review the ruling and adopt a new program.<sup>99</sup>

The opinion first reviews the historical proof of discrimination against minorities, particularly African Americans, in the Chicago construction industry. While not legally mandated, Chicago

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<sup>95</sup> *Id.*

<sup>96</sup> *Id.* at 989.

<sup>97</sup> See, e.g., *Builders Association of Greater Chicago v. County of Cook*, 123 F.Supp.2d 1087 (N.D. Ill. 2000). (“*BAGC v. Cook*”).

<sup>98</sup> *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725 (N.D. Ill. 2003), *aff’d*, 256 F.3d 642 (7th Cir. 2001) (“*BAGC v. Chicago*”).

<sup>99</sup> A similar suit was filed against Cook County’s Program, which was declared unconstitutional in 2000. *Builders Association of Greater Chicago v. County of Cook*, 123 F.Supp.2d 1087 (N.D. Ill. 2000); *aff’d*, 256 F.3d 642 (7th Cir. 2001) (“*BAGC v. Cook*”). In contrast to the City of Chicago, Cook County presented very little statistical evidence and none directed towards establishing M/WBE availability, utilization, economy-wide evidence of disparities, or other proof beyond anecdotal testimony. It also provided no evidence related to narrow tailoring.



was a segregated city and “City government was implicated in that history.” After the election of Harold Washington as the first African American mayor, several reports focused on the exclusion of minorities and women from City procurement opportunities as well as pervasive employment discrimination by City departments. Mayor Washington imposed an executive order mandating that at least 25 percent of City contracts be awarded to minority-owned businesses and 5 percent to women-owned businesses.

In response to *Croson*, Chicago commissioned a Blue Ribbon Panel to recommend an effective program that would survive constitutional challenge. Based upon the Panel’s Report, and 18 days of hearings with over 40 witnesses and 170 exhibits, Chicago adopted a new program in 1990 that retained the 25 percent MBE and 5 percent WBE goals; added a Target Market, wherein contracts were limited to bidding only by M/WBEs; and provided that larger construction contracts could have higher goals.

The court held that the playing field for minorities and women in the Chicago area construction industry in 2003 was still not level. The City presented a great amount of statistical evidence. Despite the plaintiff’s attacks about over-aggregation and disaggregation of data and which firms were included in the analyses, “a reasonably clear picture of the Chicago construction industry emerged.... While the size of the disparities was disputed, it is evident that minority firms, even after adjustment for size, earn less and work less, and have less sales compared to other businesses.”

That does not mean, however, that speculation about the greater number of M/WBEs that did exist in the absence of discrimination is sufficient to support a current race-based remedy. At the same time, that there was perhaps overutilization of M/WBEs on City projects was not sufficient to abandon remedial efforts, as that result is “skewed by the program itself.”

Further, while it is somewhat unclear whether disparities for Asians and Hispanics result from discrimination or the language and cultural barriers common to immigrants, there were two areas “where societal explanations do not suffice.” The first is the market failure of prime contractors to solicit M/WBEs for non-goals work. Chicago’s evidence was consistent with that presented of the effects of the discontinuance or absence of race-conscious programs throughout the country. Not only did the plaintiff fail to present credible alternative explanations for this universal phenomenon but also this result “follows as a matter of economics.... [P]rime contractors, without any discriminatory intent or bias, are still likely to seek out the subcontractors with whom they have had a long and successful relationship.... [T]he vestiges of past discrimination linger on to skew the marketplace and adversely impact M/WBEs disproportionately as more recent entrants to the industry.... [T]he City has a compelling interest in preventing its tax dollars from perpetuating a market so flawed by past discrimination that it restricts existing M/WBEs from unfettered competition in that market.”<sup>100</sup>

The judge also relied upon the City’s evidence of discrimination against minorities in the market for commercial loans. Even the plaintiff’s experts were forced to concede that, at least as to

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<sup>100</sup> *BAGC v. Chicago*, 298 F. Supp.2d at 738.

African Americans, credit availability appeared to be a problem. Plaintiff's expert also identified discrimination against nonminority females in one data set.

After finding that Chicago met the compelling interest prong, the court held that the City's program was not narrowly tailored to address these market distortions and barriers because:

- There was no meaningful individualized review of M/WBEs' eligibility;
- There was no sunset date for the ordinance or any means to determine a date;
- The graduation threshold of \$27.5M was very high and few firms have graduated;
- There was no personal net worth limit;
- The percentages operated as quotas unrelated to the number of available firms;
- Waivers were rarely granted;
- No efforts were made to impact private sector utilization of M/WBEs; and
- Race-neutral measures had not been promoted, such as linked deposit programs, quick pay, contract downsizing, restricting prime contractors' self-performance, reducing bonds and insurance requirements, local bid preferences for subcontractors and technical assistance.

Chicago is the only city ever to have received a stay to permit revision of its program to meet narrow tailoring. It amended its ordinance to meet the court's 2004 deadline and continues to implement M/WBE subcontracting goals without interruption.

### **3. Cleveland's Compelling Interest in Remedying Identified Discrimination in Its Contracting Market Area**

As just described, much of the discussion in the case law has revolved around what type of evidence is sufficiently "strong" to establish the continuing existence and effects of economic discrimination against minorities resulting in diminished opportunities to do business with the government. Proof of the disparate impacts of economic factors on M/WBEs and the disparate treatment of such firms by actors critical to their success is necessary to meet strict scrutiny. Discrimination must be shown using statistics and economic models to examine the effects of systems or markets on different groups, as well as by evidence of personal experiences with discriminatory conduct, policies or systems.<sup>101</sup> Specific evidence of discrimination or its absence may be direct or circumstantial, and should include economic factors and opportunities in the private sector affecting the success of M/WBEs.<sup>102</sup>

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<sup>101</sup> *Adarand VII*, 228 F.3d at 1166 ("statistical and anecdotal evidence are appropriate").

<sup>102</sup> *Id.*

The following are factors Cleveland must consider to determine whether it has a strong basis in evidence to adopt a M/WBE program for its locally-funded contracts.

### **a. Definition of Cleveland's Market Area**

*Croson* counsels that a state or local government may only remedy discrimination within its own contracting market area. Richmond was specifically faulted for including minority contractors from across the country in its program.<sup>103</sup> This Study empirically establishes the geographic and product dimensions of the City's contracting and procurement market area in order to ensure that the evidence is narrowly tailored.<sup>104</sup>

### **b. Examining Disparities between M/WBE Availability and Utilization**

Next, statistical examination of the availability of minorities and women to participate in Cleveland's projects and the history of utilizing M/WBEs as prime contractors and as subcontractors by the City and its prime contractors is required as part of this Study.<sup>105</sup> Simple disparities between an area's overall minority population and its prime contractors' utilization of minority- and women-owned firms are not enough.<sup>106</sup> The primary inquiry is whether there are statistically significant disparities between the availability of M/WBEs and the utilization of such firms.

Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise.... In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion.<sup>107</sup>

This is known as the "disparity ratio" or "disparity index." A disparity ratio measures the participation of a group in the agency's contracting dollars by dividing that group's contract dollar percentage by the related bidder or awardee percentage, and multiplying that result by 100%. Courts, including the Fifth Circuit, have looked to disparity indices in determining whether *Croson's* evidentiary foundation is satisfied.<sup>108</sup> An index less than 100 percent indicates

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<sup>103</sup> *Croson*, 488 U.S. at 508.

<sup>104</sup> *Concrete Works II*, 36 F.3d at 1520 (to confine data to strict geographic boundaries would ignore "economic reality").

<sup>105</sup> An availability study is a subset of a disparity study, in that statistical evidence of disparities between the difference of availability of M/WBEs and their utilization as prime contractors and subcontractors is not included.

<sup>106</sup> *Croson*, 488 U.S. at 501-02; *Drabik II*, 214 F.3d at 736.

<sup>107</sup> *Croson*, 488 U.S. at 509; see *Webster*, 51 F.Supp.2d at 1363, 1375.

<sup>108</sup> *Scott*, 199 F.3d at 218, n11 ("we [do not] attempt to craft a precise mathematical formula to assess the quantum of evidence that rises to the *Croson* "strong basis in evidence" benchmark. The sufficiency of a municipality's findings of discrimination in a local industry must be evaluated on a case-by-case basis"); see also *Concrete*

that a given group is being utilized less than would be expected based on its availability, and courts have adopted the Equal Employment Opportunity Commission's "80 percent" rule, that is, that a ratio less than 80 percent presents a *prima facie* case of discrimination.<sup>109</sup>

Calculations of the availability of minority- and women-owned firms are therefore the crucial foundation for examining the government's compelling interest in pursuing affirmative action in contracting.<sup>110</sup> In addition to creating the disparity ratio, correct measures of availability are necessary to determine whether discriminatory barriers depress the formation of firms by minorities and women, and the success of such firms in doing business in both the private and public sectors.<sup>111</sup>

Cleveland need not prove that the statistical inferences of discrimination are "correct." In upholding Denver's M/WBE Program, the Tenth Circuit noted that strong evidence supporting Denver's determination that remedial action was necessary need not have been based upon "irrefutable or definitive" proof of discrimination. Statistical evidence creating inferences of discriminatory motivations was sufficient and therefore evidence of market area discrimination was properly used to meet strict scrutiny. It is the plaintiff who must prove by a preponderance of the evidence that such proof does not support those inferences.<sup>112</sup>

It is also the case that if M/WBEs are "overutilized" because of the entity's program, that does not end the inquiry. Where the government has been implementing affirmative action remedies, M/WBE utilization reflects those efforts; it does not signal the end of discrimination. For example, the Tenth Circuit held that Denver's overutilization of M/WBEs on City projects with goals went only to the weight of the evidence because it reflected the effects of a remedial program. Denver presented evidence that goals and non-goals projects were similar in purpose and scope and that the same pool of contractors worked on both types. "Particularly persuasive" was evidence that M/WBE participation declined significantly when the program was amended in 1989. "The utilization of M/WBEs on City projects has been affected by the affirmative action programs that have been in place in one form or another since 1977. Thus, the non-goals data is

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*Works II*, 36 F.3d at 1526-1527; *O'Donnell*, 963 F.2d at 426; *Cone Corp. v. Hillsborough County*, 908 F.2d 908, 916 (11th Cir. 1990), *cert. denied*, 498 U.S. 983 (1990).

<sup>109</sup> *Engineering Contractors II*, 122 F.3d at 914; see 29 C.F.R. § 1607.4(D) ("A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact.").

<sup>110</sup> *Philadelphia III*, 91 F.3d at 603; *Webster*, 51 F.Supp.2d at 1372 (no explanation for the source nor any indicia of the accuracy or reliability of availability figures).

<sup>111</sup> *Webster*, 51 F.Supp.2d at 1372; see *Northern Contracting II*, at \*70 (IDOT's custom census approach was supportable because "discrimination in the credit and bonding markets may artificially reduce the number of M/WBEs").

<sup>112</sup> *Concrete Works IV*, 321 F.3d at 971.

[sic] the better indicator of discrimination in public contracting” and supports the position that discrimination was present before the enactment of the ordinances.<sup>113</sup>

### c. Unremediated Markets Data

It is also useful to measure M/WBE participation in the absence of affirmative action goals, if such evidence is available. Evidence of race and gender discrimination in relevant “unremediated”<sup>114</sup> markets provides an important indicator of what level of actual M/WBE participation can be expected in the absence of government mandated affirmative efforts to contract with M/WBEs.<sup>115</sup> This is particularly relevant for an agency such as the City which has not applied race- and gender-conscious remedies to all its locally-funded contracts. As the Eleventh Circuit has acknowledged, “the program at issue may itself be masking discrimination that might otherwise be occurring in the relevant market.”<sup>116</sup> The courts, including the Sixth Circuit, are clear that the government has a compelling interest in not financing the evil of private prejudice with public dollars.<sup>117</sup> If M/WBE utilization is below availability in unremediated markets, an inference of discrimination may be supportable. The virtual disappearance of M/WBE participation after programs have been enjoined or abandoned strongly indicates substantial barriers to minority subcontractors, “raising the specter of racial discrimination.”<sup>118</sup> Unremediated markets analysis addresses whether the government has been and continues to be a “passive participant” in such discrimination, in the absence of affirmative action remedies.<sup>119</sup> The results of non-goals contracts can help to demonstrate that, but for the interposition of remedial affirmative action measures, discrimination would lead to disparities in government contracting. The “dramatic decline in the use of M/WBEs when an affirmative action program is terminated, and the paucity of use of such firms when no affirmative action program was ever initiated,” has been held to be proof of the government’s compelling interest in employing race- and gender-conscious measures.<sup>120</sup> Evidence of unremediated markets “sharpens the picture of local market conditions for MBEs and WBEs.”<sup>121</sup>

### d. Anecdotal Evidence

Anecdotal evidence of experiences with discrimination in contracting opportunities is relevant because it goes to the question of whether observed statistical disparities are due to

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<sup>113</sup> *Id.* at 987-988.

<sup>114</sup> “Unremediated market” means “markets that do not have race- or gender-conscious subcontracting goals in place to remedy discrimination.” *Northern Contracting II*, at \*36.

<sup>115</sup> *See, e.g., Western States*, 407 F.3d at 992 (Congress properly considered evidence of the “significant drop in racial minorities’ participation in the construction industry” after state and local governments removed affirmative action provisions).

<sup>116</sup> *Engineering Contractors II*, 122 F.3d at 912.

<sup>117</sup> *See, e.g., Drabik II*, 214 F.3d at 734-735.

<sup>118</sup> *Adarand VII*, 228 F.3d at 1174.

<sup>119</sup> *See also Philadelphia III*, 91 F.3d at 599-601.

<sup>120</sup> *BAGC v. Chicago*, 298 F. Supp.2d at 737; *see also Concrete Works IV*, 321 F.3d at 987-988.

<sup>121</sup> *Concrete Works II*, 36 F.3d at 1529.

discrimination and not to some other non-discriminatory cause or causes.<sup>122</sup> As observed by the Supreme Court, anecdotal evidence presented in a pattern or practice discrimination case can be persuasive because it “brought the cold [statistics] convincingly to life.”<sup>123</sup> Testimony about discrimination by prime contractors, unions, bonding companies, suppliers, and lenders has been found relevant regarding barriers both to minority firms’ business formation and to their success on governmental projects.<sup>124</sup> While anecdotal evidence is insufficient standing alone, “[p]ersonal accounts of actual discrimination or the effects of discriminatory practices may, however, vividly complement empirical evidence. Moreover, anecdotal evidence of a [government’s] institutional practices that exacerbate discriminatory market conditions are [sic] often particularly probative.”<sup>125</sup> “[W]e do not set out a categorical rule that every case must rise or fall entirely on the sufficiency of the numbers. To the contrary, anecdotal evidence might make the pivotal difference in some cases; indeed, in an exceptional case, we do not rule out the possibility that evidence not reinforced by statistical evidence, as such, will be enough.”<sup>126</sup>

Most recently, the Fourth Circuit found anecdotal evidence from a telephone survey, personal interviews and focus groups to be relevant and probative of whether North Carolina met its burden. A telephone survey conducted by the consultant resulted in strong evidence of discriminatory treatment of both African American and Native American firms including: discriminatory “good old boy networks;” double standards applied to both qualifications and performance; changes in bids when not required to use minority firms; and dropping minority subcontractors after winning contracts. Focus group and interview results confirmed these findings. As the court summarized:

The surveys in the 2004 study exposed an informal, racially exclusive network that systemically disadvantaged minority subcontractors. The State could conclude with good reason that such networks exert a chronic and pernicious influence on the marketplace that calls for remedial action.... [P]rime contractors have higher standards for minority subcontractors, view minority subcontractors as being less competent than nonminority businesses, change their bidding practices when not required to hire minority subcontractors, and drop minority subcontractors after winning contracts. Together, these responses suggest strongly that the underutilization of African American and Native American subcontractors is more than a mere byproduct of misguided yet color-blind cronyism.<sup>127</sup>

The *Rowe* court specifically rejected the notion that anecdotal testimony must be “verified” or corroborated, as befits the role of evidence in legislative decision-making as opposed to judicial proceedings. “Plaintiff offers no rationale as to why a fact finder could not rely on the State’s ‘unverified’ anecdotal data. Indeed, a fact finder could very well conclude that anecdotal

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<sup>122</sup> *Webster*, 51 F.Supp.2d at 1363, 1379.

<sup>123</sup> *International Brotherhood of Teamsters v. United States*, 431 U.S. 324, 399 (1977).

<sup>124</sup> *Adarand VII*, 228 F.3d at 1168-1172.

<sup>125</sup> *Concrete Works II*, 36 F.3d at 1520, 1530.

<sup>126</sup> *Engineering Contractors II*, 122 F.3d at 926.

<sup>127</sup> *Rowe*, 615 F.3d at 251.

evidence need not—indeed cannot—be verified because it ‘is nothing more than a witness’ narrative of an incident told from the witness’ perspective and including the witness’ perception.’<sup>128</sup> Likewise, the Tenth Circuit held that “Denver was not required to present corroborating evidence and [plaintiff] was free to present its own witnesses to either refute the incidents described by Denver’s witnesses or to relate their own perceptions on discrimination in the Denver construction industry.”<sup>129</sup>

### **F. Narrowly Tailoring a Race-Conscious Local Program**

Even if the City has a strong basis in evidence to believe that race-based measures are needed to remedy identified discrimination in its local contract market, the program must be narrowly tailored to that evidence. The courts have repeatedly examined the following factors in determining whether race-based remedies are narrowly tailored to achieve their purpose:

- The efficacy of race-neutral remedies at overcoming identified discrimination;
- The relationship of numerical benchmarks for government spending to the availability of minority- and women-owned firms and to subcontracting goal setting procedures;
- The flexibility of the program requirements, including the provision for good faith efforts to meet goals and contract specific goal setting procedures;
- The congruence between the remedies adopted and the beneficiaries of those remedies;
- Any adverse impact of the relief on third parties; and
- The duration of the program.<sup>130</sup>

The Fourth Circuit Court of Appeals has described the narrow tailoring requirements as follows:

The preferences may remain in effect only so long as necessary to remedy the discrimination at which they are aimed; they may not take on a life of their own. The numerical goals must be waivable if qualified minority applications are scarce, and such goals must bear a reasonable relation to minority percentages in the relevant qualified labor pool, not in the population as a whole. Finally, the preferences may not supplant race-neutral alternatives for remedying the same discrimination.<sup>131</sup>

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<sup>128</sup> *Id.* at 249.

<sup>129</sup> *Concrete Works IV*, 321 F.3d at 989.

<sup>130</sup> *United States v. Paradise*, 480 U.S. 149, 171 (1987); *Drabik II*, 214 F.3d at 737-738.

<sup>131</sup> *Maryland Troopers Association, Inc. v. Evans*, 993 F.2d 1072, 1076-77 (4<sup>th</sup> Cir. 1993) (citations omitted).

It is imperative that remedies not operate as fixed quotas.<sup>132</sup> Firms that fail to meet the subcontracting goals but make good faith efforts to do so must be eligible for contract awards.<sup>133</sup> Further, firms that meet the goals cannot be favored over those who made good faith efforts. In *Croson*, the Court refers approvingly to the contract-by-contract waivers used in the USDOT's DBE program.<sup>134</sup> This feature has been central to the holding that the DBE program meets the narrow tailoring requirement, and is necessary for a local program.<sup>135</sup>

The over- or under-inclusiveness of those persons to be included in the program is an additional consideration, and goes to whether the remedies truly target the evil identified.<sup>136</sup> The “fit” between the problem and the remedy manifests in three ways: which groups to include, how to define those groups, and which persons will be eligible to be included within those groups.

First, the determination of presumptive social disadvantage of each racial and ethnic group must be based upon the evidence.<sup>137</sup> In striking down the District of Columbia's MBE program, the court noted that there were no “findings with respect to discrimination in the construction industry against Hispanic Americans, Asian Americans, Pacific Islander Americans, or Native Americans, all of whom are included in the Act's definition of ‘minority.’”<sup>138</sup> The “random inclusion” of groups that may never have experienced discrimination in the entity's marketplace may indicate impermissible “racial politics.”<sup>139</sup> Similarly, the Seventh Circuit, in striking down Cook County's program, remarked that a “state or local government that has discriminated just against blacks may not by way of remedy discriminate in favor of blacks and Asian-Americans and women.”<sup>140</sup>

However, at least one court has held that some quantum of evidence of discrimination for each group is sufficient. The Tenth Circuit held that *Croson* does not require that each group included in the ordinance suffer equally from discrimination.<sup>141</sup>

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<sup>132</sup> See 49 C.F.R. 26.43 (quotas are not permitted and set-aside contracts may be used only in limited and extreme circumstances “when no other method could be reasonably expected to redress egregious instances of discrimination”).

<sup>133</sup> See, e.g., *BAGC v. Chicago*, 298 F. Supp.2d at 740 (“Waivers are rarely or never granted...The City program is a rigid numerical quota...formulistic percentages cannot survive strict scrutiny.”).

<sup>134</sup> 488 U.S. at 508; see also *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1181 (10<sup>th</sup> Cir. 2000), cert. granted then dismissed as improvidently granted, 532 U.S. 941, 534 U.S. 103 (2001) (“*Adarand VII*”).

<sup>135</sup> See, e.g., *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d. 964, 972 (8<sup>th</sup> Cir. 2003), cert. denied, 541 U.S. 1041 (2004).

<sup>136</sup> *Association for Fairness in Business, Inc. v. New Jersey*, 82 F.Supp.2d 353, 360 (D.N.J. 2000).

<sup>137</sup> *Contractors Association of Eastern Pennsylvania v. City of Philadelphia*, 6 F.3d 990, 1007 (3rd Cir. 1993) (“*Philadelphia II*”) (strict scrutiny requires data for each minority group; data was insufficient to include Hispanics, Asians or Pacific Islanders or Native Americans); cf. *Northeastern Florida Chapter of the AGC v. Jacksonville*, 508 U.S. 656, 660-661 (1993) (new ordinance narrowed to Blacks and women).

<sup>138</sup> *O'Donnell v. District of Columbia*, 963 F.2d at 427.

<sup>139</sup> *Webster*, 51 F.Supp.2d at 1380–1381.

<sup>140</sup> *BAGC v. Cook County*, 256 F.3d at 646 (no evidence of discrimination against any group other than Blacks).

<sup>141</sup> *Concrete Work IV*, 321 F.3d at 9761.



Next, the level of specificity at which to define beneficiaries must be addressed. The State of Ohio's Program was specifically faulted for lumping together all "minorities," with the court questioning the legitimacy of forcing African American contractors to share relief with recent Asian immigrants.<sup>142</sup>

Third, program remedies should be limited to those firms that have a nexus to the harms sought to be ameliorated. Some courts have held that state and local programs must provide proof that the individual owner of a firm seeking to benefit from the program has suffered discrimination.<sup>143</sup>

Failure to make "neutral" changes to contracting and procurement policies and procedures that disadvantage all small businesses may result in a finding that the program unduly burdens non-M/WBEs.<sup>144</sup> However, "innocent" parties can be made to share some of the burden of the remedy for eradicating racial discrimination.<sup>145</sup> To hold otherwise "would be to render strict scrutiny effectively fatal, in contravention of Justice O'Connor's clear statements to the contrary."<sup>146</sup>

Race-based programs must have duration limits.<sup>147</sup> A race-based remedy must "not last longer than the discriminatory effects it is designed to eliminate."<sup>148</sup> As held by the Sixth Circuit, "[n]arrow tailoring also implies some sensitivity to the possibility that a program might someday have satisfied its purposes."<sup>149</sup> One of the factors leading to the court's holding that the City of Chicago's M/WBE Program was no longer narrowly tailored was the lack of a sunset

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<sup>142</sup> *Drabik II*, 214 F.3d at 737.

<sup>143</sup> See, e.g., *Associated General Contractors of Ohio, Inc. v. Drabik*, 50 F.Supp.2d 741, 766 (S.D. Ohio 1999) ("*Drabik I*") (no "consideration given to whether the particular MBE seeking a racial preference has suffered from the effects of past discrimination by the state or prime contractors."); *Main Line Paving Co., Inc. v. Board of Education*, 725 F.Supp. 1349, 1362 (E.D. Penn. 1989) ("program contains no provisions to identify those who were victims of past discrimination and to limit the program's benefits to them").

<sup>144</sup> See *Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Dade County*, 943 F.Supp. 1546, 1581-1582 (S.D. Fla. 1996) ("*Engineering Contractors I*") (County chose not to change its procurement system).

<sup>145</sup> *Concrete Works IV*, 321 F.3d at 973; *Wygant v. Jackson Board of Education*, 476 U.S. 267, 280-281 (1986); *Adarand VII*, 228 F.3 at 1183 ("While there appears to be no serious burden on prime contractors, who are obviously compensated for any additional burden occasioned by the employment of DBE subcontractors, at the margin, some non-DBE subcontractors such as *Adarand* will be deprived of business opportunities"); cf. *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2005 U.S. Dist. LEXIS 19868, \*5 (Sept. 8, 2005) ("*Northern Contracting II*") ("Plaintiff has presented little evidence that it [sic] has suffered anything more than minimal revenue losses due to the program."); *Western States*, 407 F.3d at 995.

<sup>146</sup> *Adarand VII*, 228 F.3 at 1183 (citing *Adarand III*, 515 U.S. at 237).

<sup>147</sup> *Drabik I*, 50 F.Supp.2d at 766 ("The 1980 MBE Act is unlimited in duration.... There is no evidence that, at any time during the nearly two decades the Act has been in effect, the General Assembly has ever reconsidered whether a compelling state interest exists which would justify the continuation of a race-based remedy.").

<sup>148</sup> *Adarand*, 515 U.S. at 238.

<sup>149</sup> *Drabik II*, 214 F.3d at 737.

provision.<sup>150</sup> In contrast, the USDOT DBE Program's periodic review by Congress has been repeatedly held to provide adequate durational limits.<sup>151</sup>

This means that affirmative action programs must be regularly reviewed to ensure that a strong basis in evidence remains to use the highly suspect tool of race in government decision making. Very old studies will not suffice to support current programs.<sup>152</sup> The City of Augusta, Georgia's program failed to meet strict scrutiny, because "the [M/WBE] Program is still in place 13 years after the [Disparity] Study was compiled without any further investigation into the underlying reasons for creating a program, and without any sunset or expiration provision."<sup>153</sup> Likewise, Chicago's program was based on 14-year-old information, which while it supported the program adopted in 1990, no longer was sufficient standing alone to justify the City's efforts in 1994.<sup>154</sup> How old is too old is not definitively answered,<sup>155</sup> but governments would be wise to analyze data at least once every five or six years.<sup>156</sup>

### 1. Race- and Gender-Neutral Remedies

Race- and gender-neutral approaches are a necessary component of a defensible and effective M/W/DBE program.<sup>157</sup> The failure to seriously consider race- and gender-neutral remedies has been fatal to M/WBE programs.<sup>158</sup> Such measures include unbundling of contracts into smaller units, providing technical support, and addressing issues of financing, bonding, and insurance

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<sup>150</sup> *BAGC v. Chicago*, 298 F.Supp.2d at 739; see also *O'Donnell*, 963 F.2d at 428 (the District "reenacted the law in 1980 and deleted the sunset provision. Fifteen years have now passed since the District put its minority contracting program into effect. The District has not suggested that an end is in sight."). *Webster*, 51 F. Supp. 2d at 1382 (telling disqualifier was that the County had been implementing a "quota" program since 1979 with no contemplation of program expiration).

<sup>151</sup> See *Western States*, 407 F.3d at 995.

<sup>152</sup> See, e.g., *Baltimore I*, 83 F.Supp.2d at 620 (10-year-old evidence to justify 1999 goals is equivalent to no evidence).

<sup>153</sup> *Thompson. v. Augusta*, at \*9.

<sup>154</sup> *BAGC v. Chicago*, 298 F.Supp.2d at 739.

<sup>155</sup> This question has been presented more than once in Sixth Circuit cases. See, e.g., *Drabik I*, 50 F.Supp.2d at 745, 750 ("A program of race-based benefits cannot be supported by evidence of discrimination which is now over twenty years old.... The state conceded that it had no additional evidence of discrimination against minority contractors, and admitted that during the nearly two decades the Act has been in effect, it has made no effort to determine whether there is a continuing need for a race-based remedy."); *Brunet*, 1 F.3d at 409 (fourteen-year-old evidence of discrimination "too remote to support a compelling governmental interest.").

<sup>156</sup> Cf. *F.Buddie v. Cuyahoga Community College*, 31 F.Supp.2d 571, 584 (among other deficiencies, 15 year old data could not support a program).

<sup>157</sup> *Id.* (no consideration of race-neutral remedies); *Croson*, 488 U.S. at 507 (Richmond considered no alternatives to race-based quota); *Drabik II*, 214 F.3d at 738; *Philadelphia III*, 91 F.3d at 609 (City's failure to consider race-neutral alternatives was particularly telling); *Webster*, 51 F.Supp.2d at 1380 (for over 20 years County never seriously considered race-neutral remedies); cf. *Aiken*, 37 F.3d at 1164 (failure to consider race-neutral method of promotions suggested a political rather than a remedial purpose).

<sup>158</sup> See, e.g., *Florida A.G.C. Council, Inc. v. State of Florida*, Case No.: 4:03-CV-59-SPM at 10 (N. Dist. Fla. 2004) ("There is absolutely no evidence in the record to suggest that the Defendants contemplated race-neutral means to accomplish the objectives" of the statute.); *Engineering Contractors II*, 122 F.3d at 928.

important to all small and emerging businesses.<sup>159</sup> Difficulty in accessing procurement opportunities, restrictive bid specifications, excessive experience requirements, and overly burdensome insurance and/or bonding requirements, for example, might be addressed by the City without resorting to the use of race or gender in its decision-making. Further, governments have a duty to ferret out and punish discrimination against minorities and women by their contractors, staff, lenders, bonding companies or others.<sup>160</sup> At a minimum, agencies must track the utilization of M/WBE firms as a measure of their success in the bidding process, including as subcontractors.<sup>161</sup>

However, strict scrutiny does not require that every race-neutral approach must be implemented and then proven ineffective before race-conscious remedies may be utilized.<sup>162</sup> While an entity must give good faith consideration to race-neutral alternatives, “strict scrutiny does not require exhaustion of every possible such alternative...however irrational, costly, unreasonable, and unlikely to succeed such alternative might be.... [S]ome degree of practicality is subsumed in the exhaustion requirement.”<sup>163</sup>

## 2. Targeted Goal Setting

Numerical goals or benchmarks for M/WBE participation must be substantially related to their availability in the relevant market.<sup>164</sup> Goals can be set at various levels of particularity and participation. The entity may set an overall, aspirational goal for its annual, aggregate spending.

One unanswered question is whether goals or benchmarks for overall agency contracting may be set higher than estimates of actual current availability. To freeze the goals at current head counts would set the results of discrimination—depressed M/WBE availability—as the marker of the elimination of discrimination. It therefore should be reasonable for the government to seek to attempt to level the racial and gender playing field by setting targets somewhat higher than current headcount. In upholding the DBE regulations, the Tenth Circuit stated that:

[B]ecause Congress has evidence that the effects of past discrimination have excluded minorities from the construction industry and that the number of available minority subcontractors reflects that discrimination, the *existing* percentage of minority-owned businesses is not necessarily an absolute cap on the percentage that a remedial program might legitimately seek to achieve. Absolute proportionality to overall demographics is an unreasonable goal. However, *Croson* does not prohibit setting an aspirational goal above the current percentage of minority-owned businesses that is substantially below the

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<sup>159</sup> See 49 CFR § 26.51.0.

<sup>160</sup> *Croson*, 488 U.S. at 503 n.3; *Webster*, 51 F.Supp.2d at 1380.

<sup>161</sup> See, e.g., *Virdi*, at n.8.

<sup>162</sup> *Grutter*, 529 U.S. at 339.

<sup>163</sup> *Coral Construction*, 941 F.2d at 923.

<sup>164</sup> *Webster*, 51 F.Supp.2d at 1379, 1381 (statistically insignificant disparities are insufficient to support an unexplained goal of 35 percent M/WBE participation in County contracts); see also *Baltimore I*, 83 F.Supp.2d at 621.

percentage of minority persons in the population as a whole. This aspirational goal is reasonably construed as narrowly tailored to remedy past discrimination that has resulted in homogenous ownership within the industry. It is reasonable to conclude that allocating more than 95% of all federal contracts to enterprises owned by non-minority persons, or more than 90% of federal transportation contracts to enterprises owned by non-minority males, is in and of itself a form of passive participation in discrimination that Congress is entitled to seek to avoid. *See Croson*, 488 U.S. at 492 (Op. of O'Connor, J.).<sup>165</sup>

At least one court has recognized that goal setting is not an absolute science. In holding the DBE regulations to be narrowly tailored, the Eighth Circuit noted that “[t]hrough the underlying estimates may be inexact, the exercise requires the States to focus on establishing realistic goals for DBE participation in the relevant contracting markets. This stands in stark contrast to the program struck down in *Croson*. ”<sup>166</sup> “On the other hand, sheer speculation cannot form the basis for an enforceable measure.”<sup>167</sup>

It is settled case law that goals for a particular solicitation should reflect the particulars of the contract, not reiterate annual aggregate targets; goals must be contract specific. Contract goals must be based upon availability of M/W/DBEs to perform the anticipated scopes of subcontracting. Not only is this legally mandated,<sup>168</sup> but this approach also reduces the need to conduct good faith efforts reviews as well as the temptation to create “front” companies and sham participation to appear to meet unreasonable contract goals. While this is more labor intensive than defaulting to the annual, overall goals, there is no option to avoid meeting the test of narrow tailoring because to do so would be more burdensome. The detailed availability estimates in Chapter IV can form the starting point for Cleveland’s development of contract goals.

### 3. Flexibility of Goals and Requirements

It is imperative that remedies not operate as fixed quotas. A M/WBE program must provide for contract awards to firms who fail to meet the subcontracting goals but make good faith efforts to do so. Further, firms who meet the goals cannot be favored over those who made good faith efforts. In *Croson*, the Court refers approvingly to the contract-by-contract waivers used in the USDOT’s DBE program.<sup>169</sup> This feature has been central to the holding that the DBE program is narrowly tailored.<sup>170</sup>

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<sup>165</sup> *Adarand VII*, 228 F.3d at 1181 (emphasis in the original).

<sup>166</sup> *Sherbrooke*, 345 F.3d at 972.

<sup>167</sup> *Id.* (complete absence of evidence for 12-15 percent DBE goal); *see also BAGC v. Chicago*, 298 F.Supp.2d at 740 (City’s MBE and WBE goals were “formulistic” percentages not related to the availability of firms).

<sup>168</sup> *See Sherbrooke*, 345 F.3d at 972; *Coral Construction*, 941 F.2d at 924.

<sup>169</sup> *Croson*, 488 U.S. at 508; *see also Adarand VII*, 228 F.3d at 1181.

<sup>170</sup> *See, e.g., Sherbrooke*, 345 F.3d at 972.

#### 4. Program Over-inclusiveness and Under-inclusiveness

The over- or under-inclusiveness of those persons to be included in a program is an additional consideration, and goes to whether the remedies truly target the evil identified.<sup>171</sup> The “fit” between the problem and the remedy manifests in three ways: which groups to include, how to define those groups, and which persons will be eligible to be included within those groups.

The groups to include must be based upon the evidence.<sup>172</sup> One deficiency noted by the court in its determination that Cuyahoga Community College’s program was too broad was the lack of findings of discrimination against all the included racial and ethnic groups and any economic disadvantage eligibility requirement.<sup>173</sup> The “random inclusion” of ethnic or racial groups that may never have experienced discrimination in the entity’s market area may indicate impermissible “racial politics.”<sup>174</sup> Similarly, the Seventh Circuit, in striking down Cook County’s program, remarked that a “state or local government that has discriminated just against blacks may not by way of remedy discriminate in favor of blacks and Asian-Americans and women.”<sup>175</sup> However, some quantum of evidence of discrimination for each group is sufficient; *Croson* does not require that each group included in the ordinance suffer equally from discrimination.<sup>176</sup>

Therefore, remedies should be limited to those firms that have suffered actual harm. Goals should be set only for those groups shown to have suffered discrimination in the market area; a program that limits relief to the racial or ethnic groups that have suffered discrimination in the agency’s market area and have been adversely affected in their ability to obtain agency contracts will meet this element of narrow tailoring.<sup>177</sup> Similarly, the DBE Program’s rebuttable presumptions of social and economic disadvantage have been central to the courts’ holdings that it is narrowly tailored,<sup>178</sup> and anyone can challenge the disadvantaged status of any firm.<sup>179</sup>

The level of specificity at which to define beneficiaries is a policy question. Approaches range from a single M/WBE or DBE goal that includes all racial and ethnic minorities and nonminority

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<sup>171</sup> See *Association for Fairness in Business, Inc. v. New Jersey*, 82 F.Supp.2d 353, 360 (D.N.J. 2000).

<sup>172</sup> *Philadelphia II*, 6 F.3d at 1007-1008 (strict scrutiny requires data for each minority group; data was insufficient to include Hispanics, Asians or Pacific Islanders or Native Americans).

<sup>173</sup> *F.Buddie*, 31 F.Supp.2d at 583.

<sup>174</sup> *Webster*, 51 F.Supp.2d at 1380-1381.

<sup>175</sup> *BAGC v. Cook*, 256 F.3d at 646.

<sup>176</sup> *Concrete Work IV*, 321 F.3d at 971.

<sup>177</sup> *Rowe*, 615 F.3d at 254 (“[T]he statute contemplates participation goals only for those groups shown to have suffered discrimination. As such, North Carolina’s statute differs from measures that have failed narrow tailoring for overinclusiveness.”).

<sup>178</sup> *Sherbrooke*, 345 F.3d at 973; see also *Grutter*, 539 U.S. at 341; *Adarand VII*, 228 F.3d at 1183-1184 (personal net worth limit is element of narrow tailoring); cf. *Associated General Contractors v. City of New Haven*, 791 F.Supp. 941, 948 (D. Conn. 1992), *vacated on other grounds*, 41 F.3d 62 (2nd Cir. 1992) (definition of “disadvantage” was vague and unrelated to goal).

<sup>179</sup> 49 C.F.R. §26.87.

women,<sup>180</sup> to separate goals for each minority group and women.<sup>181</sup> We note, however, that Ohio's Program was specifically faulted for lumping together all "minorities," with the court questioning the legitimacy of forcing African American contractors to share relief with recent Asian immigrants.<sup>182</sup>

### 5. Sharing of the Burden by Third Parties

Failure to make "neutral" changes to contracting and procurement policies and procedures that disadvantage M/WBEs and other small businesses may result in a finding that the program unduly burdens non-M/WBEs.<sup>183</sup> However, "innocent" parties can be made to share some of the burden of the remedy for eradicating racial discrimination.<sup>184</sup> Burdens must be proven, and cannot constitute mere speculation by a plaintiff.<sup>185</sup> "Implementation of the race-conscious contracting goals for which TEA-21 provides will inevitably result in bids submitted by non-DBE firms being rejected in favor of higher bids from DBEs. Although this places a very real burden on non-DBE firms, this fact alone does not invalidate TEA-21. If it did, all affirmative action programs would be unconstitutional because of the burden upon non-minorities."<sup>186</sup>

Narrow tailoring does permit certified firms acting as prime contractors to count their self-performance towards meeting contract goals. The program is not limited to just the subcontracting markets. The DBE program regulations provide this remedy for discrimination against DBEs seeking prime work,<sup>187</sup> and the regulations do not limit the application of the program to only subcontracts.<sup>188</sup> The trial court explicitly recognized that barriers to subcontracting opportunities affect the ability of DBEs to compete for prime work on a fair basis in finding that Illinois' DBE program was narrowly tailored.

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<sup>180</sup> See 49 C.F.R. §26.45(h) (overall goal must not be subdivided into group-specific goals).

<sup>181</sup> See *Engineering Contractors II*, 122 F.3d at 900 (separate goals for Blacks, Hispanics and women).

<sup>182</sup> *Drabik*, 214 F.3d at 737; see also *Western States*, 407 F.3d at 998 ("We have previously expressed similar concerns about the haphazard inclusion of minority groups in affirmative action programs ostensibly designed to remedy the effects of discrimination.").

<sup>183</sup> See *Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Dade County* ("Engineering Contractors I"), 943 F.Supp. 1546, 1581-1582 (S.D. Fla. 1996) (County chose not to change its procurement system).

<sup>184</sup> *Concrete Works IV*, 321 F.3d at 973; *Wygant*, 476 U.S. at 280-281; *Adarand VII*, 228 F.3 at 1183 ("While there appears to be no serious burden on prime contractors, who are obviously compensated for any additional burden occasioned by the employment of DBE subcontractors, at the margin, some non-DBE subcontractors such as *Adarand* will be deprived of business opportunities"); cf. *Northern Contracting II*, at \*5 ("Plaintiff has presented little evidence that is [sic] has suffered anything more than minimal revenue losses due to the program.").

<sup>185</sup> *Rowe*, 615 F.3d at 254 (prime bidder had no need for additional employees to perform program compliance and need not subcontract work it can self-perform).

<sup>186</sup> *Western States*, 407 F.3d at 995.

<sup>187</sup> 49 C.F.R. § 26.53(g) ("In determining whether a DBE bidder/offeree for a prime contract has met the contract goal, count the work the DBE has committed to perform with its own forces as well as the work that it has committed to be performed by DBE subcontractors and suppliers.").

<sup>188</sup> 49 C.F.R. § 26.45(a)(1).

This requirement that goals be applied to the value of the entire contract, not merely the subcontracted portion(s), is not altered by the fact that prime contracts are, by law, awarded to the lowest bidder. While it is true that prime contracts are awarded in a race- and gender-neutral manner, the Regulations nevertheless mandate application of goals based on the value of the entire contract. Strong policy reasons support this approach. Although laws mandating award of prime contracts to the lowest bidder remove concerns regarding direct discrimination at the level of prime contracts, [n30] the indirect effects of discrimination may linger. The ability of DBEs to compete successfully for prime contracts may be indirectly affected by discrimination in the subcontracting market, or in the bonding and financing markets. Such discrimination is particularly burdensome in the construction industry, a highly competitive industry with tight profit margins, considerable hazards, and strict bonding and insurance requirements.<sup>189</sup>

### 6. Duration and Review of Programs

As noted by the Sixth Circuit, “[n]arrow tailoring also implies some sensitivity to the possibility that a program might someday have satisfied its purposes.”<sup>190</sup> The USDOT DBE Program’s periodic review by Congress has been repeatedly held to provide adequate durational limits.<sup>191</sup> “[T]wo facts [were] particularly compelling in establishing that [North Carolina’s M/WBE program] was narrowly tailored: the statute’s provisions (1) setting a specific expiration date and (2) requiring a new disparity study every 5 years.”<sup>192</sup> In contrast, one of many factors in the court’s holding that Cuyahoga Community College’s program was not narrowly tailored was the lack of any durational limit.<sup>193</sup>

Conversely, it was the unlimited duration and lack of review that led to the City of Augusta, Georgia’s DBE program being enjoined,<sup>194</sup> as well as one factor in the court’s holding that the City of Chicago’s M/WBE Program was no longer narrowly tailored.<sup>195</sup>

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<sup>189</sup> *Northern Contracting II*, 2005 U.S. Dist. LEXIS 19868 at 74.

<sup>190</sup> *Drabik*, 214 F.3d at 737.

<sup>191</sup> *See Western States*, 407 F.3d at 995.

<sup>192</sup> *Rowe*, 615 F.3d at 253.

<sup>193</sup> *F.Buddie*, 31 F.Supp.2d 583.

<sup>194</sup> *Thompson Building Wrecking Co., Inc. v. City of Augusta, Georgia*, 2007 U.S. Dist. Lexis 27127 (S.D. Ga. 2007) at \*22-23.

<sup>195</sup> *BAGC v. Chicago*, 298 F.Supp.2d at 739; *see also Webster*, 51 F. Supp. 2d at 1382 (one of Fulton County’s telling disqualifiers was that it had been implementing a “quota” program since 1979 with no contemplation of program expiration); *see also Virdi*, at \*18 (“unlimited duration of the [District’s] racial goals also demonstrates a lack of narrow tailoring.... While the District’s effort to avoid unintentional discrimination should certainly be ongoing, its reliance on racial classifications should not.”).

## **G. Table of Authorities**

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*Adarand Constructors, Inc. v. Peña*, 965 F.Supp. 1556 (D. Colo. 1997), *rev’d*, 228 F.3d 1147 (2000) (“*Adarand IV*”).

*Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147 (10<sup>th</sup> Cir. 2000), *cert. granted then dismissed as improvidently granted*, 532 U.S. 941, 534 U.S. 103 (2001) (“*Adarand VII*”).

*Aiken v. City of Memphis*, 37 F.3d 1155 (6<sup>th</sup> Cir. 1994).

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*Associated General Contractors of Ohio, Inc. v. Drabik*, 50 F.Supp.2d 741 (S.D. Ohio 1999) (“*Drabik I*”).

*Associated General Contractors of Ohio v. Drabik*, 214 F.3d 730 (6<sup>th</sup> Cir. 2000) (“*Drabik II*”).

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*Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, cert. denied, 540 U.S. 1027 (2003) (10<sup>th</sup> Cir. 2003) (“Concrete Works IV”).

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*Contractors Association of Eastern Pennsylvania v. City of Philadelphia*, 91 F.3d 586 (3rd Cir. 1996) (“Philadelphia IIP”).

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*Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Dade County*, 943 F.Supp. 1546 (S.D. Fla. 1996) (“Engineering Contractors I”).

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*International Brotherhood of Teamsters v. United States*, 431 U.S. 324, 399 (1977).

*Main Line Paving Co., Inc. v. Board of Education*, 725 F.Supp. 1349, 1362 (E.D. Penn. 1989).

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*W.H. Scott Construction Co., Inc. v. City of Jackson*, 199 F.3d 206 (5<sup>th</sup> Cir. 1999).

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*Western States Paving Co., Inc. v. Washington Department of Transportation*, 407 F.3d 983 (9<sup>th</sup> Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).

*Wygant v. Jackson Board of Education*, 476 U.S. 267 (1986).

## 2. Statutes

*Transportation Equity Act for the 21st Century* (“TEA-21”), Pub. L. No. 105-178 (b)(1), 112 Stat. 107, 113.

## 3. Regulations

49 C.F.R. Part 26.

### III. Defining the Relevant Markets

#### A. Introduction

The U.S. Supreme Court in *Croson* indicated that the U.S. Congress' national findings of minority business discrimination in construction and related industries were not geographically specific enough, or "narrowly tailored" enough, standing alone, to support a MBE program in the City of Richmond. The first step in our evaluation of M/WBE availability and participation for the City of Cleveland must therefore be to define the relevant market area for its contracting and procurement activities. Markets have both a geographic dimension and a product, or industry, dimension, both of which are considered.<sup>196</sup> For this Study, we define Cleveland's market area based on its own historical contracting and subcontracting records. We define the geographic market dimension by calculating from zip code data where the majority of Cleveland's contractors and subcontractors are located.

Narrow tailoring also applies to product markets. The extent of disparity may differ from industry to industry just as it does among geographic locations.<sup>197</sup> Documenting the specific industries that comprise the City's contracting and procurement activities and the relative importance of each to contract and subcontract spending is important because it allows for: (1) implementation of more narrowly tailored availability estimation methods, (2) contract-level goal-setting, and (3) overall M/WBE availability estimates and annual goals that are a weighted average of underlying industry-level availability estimates, rather than a simple average. The weights used are the proportion of dollars awarded or paid within each industry and allow the overall availability measure to be influenced more heavily by availability in those industries where more contracting dollars are spent, and less heavily by availability in those industries where relatively fewer contracting dollars are spent.

We define the product market dimension by estimating which North American Industrial Classification System (NAICS) codes best describe each identifiable contractor, subcontractor, subconsultant, or supplier in those records.<sup>198</sup> In both cases, the definitions are weighted according to how many dollars were spent with firms from each zip code or NAICS code, respectively, so that locations and industries, respectively, receiving relatively more contracting dollars receive relatively more weight in the estimation of M/WBE availability. Once the geographic and industry parameters of Cleveland's market area have been defined, we can restrict our subsequent analyses to business enterprises and other phenomena within this market area. Restricting our analyses in this manner narrowly tailors our findings to Cleveland's specific market area and contracting circumstances.

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<sup>196</sup> See, for example, Areeda, P., L. Kaplow, and A. Edlin (2004).

<sup>197</sup> See Wainwright (2000), documenting that, in general, the similarities in the amount of discrimination present in different industries and geographic locations significantly outweigh the differences.

<sup>198</sup> Executive Office of the President, Office of Management and Budget (2007).

## **B. Preparing the Master Contract/Subcontract Database**

### **1. Contracts and Purchase Orders**

With assistance from the City, NERA collected prime contract and purchase order records for all contracts and purchases spanning City Fiscal Years 2006 through 2010.<sup>199</sup> These data were retrieved primarily from the City's PeopleSoft and Advantage financial information software systems.

For each prime contract and purchase order from the study period, we identified the prime contractor or vendor business name and address, contract or purchase order description, contract or purchase order number, start date, initial award amount, and total current paid amount. Additionally, we cross-referenced contractor business names and addresses with City of Cleveland vendor lists and lists of certified M/WBE and DBE firms to obtain contractor race and gender information.

Prime contract and purchase order data was classified into one of four major procurement categories which were (1) Construction, (2) Construction-Related Professional Services ("AE-CRS") such as architectural, engineering, surveying, and testing services, (3) Other Professional and General Services ("Services"), and (4) Commodities, Supplies and Equipment ("Commodities").

In this manner, a total of 24,181 prime contracts and purchase orders (hereafter "prime contracts" or "contracts") during the study period were identified from City of Cleveland records. Collectively, these contracts had an award value of \$1.3 billion and a paid to date value of \$1.07 billion.

Not all of these contracts were likely to have subcontract opportunities, however. In particular, contracts for commodities, supplies, and equipment rarely have subcontract opportunities; nor do contracts valued at less than \$50,000.

We identified 1,059 contracts in the City of Cleveland files valued at \$50,000 or more in the categories of Construction, AE-CRS, and Services.<sup>200</sup> These 1,059 contracts, although less than 5 percent of all contracts in the study universe, collectively accounted for more than \$826 million in contract awards and \$683 million in contract payments, or over 63 percent of all dollars in the universe. We conducted a careful review of the available subcontract data for these 1,059 records. As a result of this review, we determined that the available subcontract records were incomplete. In consultation with the City, NERA developed a plan to directly contact the prime contractors and vendors associated with these contracts in order to verify the existing data and supplement it with additional subcontract records where appropriate. As noted above, prime contracts and purchases valued at \$50,000 or greater in Construction, AE-CRS, and Services were included in this data collection effort. Prime contracts and purchases of Commodities,

<sup>199</sup> That is, January 1, 2006 through December 31, 2010.

<sup>200</sup> A portion of these contracts, originally categorized as Services based on City records, were re-classified as Commodities upon further review.

Supplies, and Equipment, or in amounts less than \$50,000 were not, due to the limited opportunities for subcontracting in these areas. These contracts did, however, remain in the overall study universe.

With the City's support and assistance, of the 1,059 prime contracts for which we sought to collect subcontract information, we were ultimately able to obtain the requested data for over 71 percent of the contracts and 85 percent of the contract dollars. These percentages are sufficiently large to be considered representative for statistical purposes. In all, a total of 752 prime contracts and 2,556 associated subcontracts were collected from prime contractors, with a total paid value (as reported by prime contractors) of \$650.2 million. Of this, Construction accounted for \$383.8 million, or 59.0 percent of the total; AE-CRS accounted for \$45.9 million, or 7.1 percent of the total; Services accounted for \$168.1 million, or 25.9 percent of the total, and Commodities accounted for \$52.3 million, or 8.0 percent of the total.<sup>201</sup>

These 752 prime contracts and 2,556 associated subcontracts were then combined with the 23,122 prime contracts and purchases without significant subcontracting opportunities. Together, as shown below in Tables 3.1A through 3.1C and Table 3.2, these prime contracts and subcontracts comprise the Master Contract/Subcontract Database compiled for this Study.

Table 3.1A and 3.1B show the total number of prime contracts, subcontracts, dollars awarded, and dollars paid, by major procurement category. Table 3.1A shows all contracts, while Table 3.1B shows federally-assisted Department of Port Control contracts.<sup>202</sup> Table 3.2 shows the total number of prime contracts awarded during each year of the study period and total dollar awards and payments associated with those contracts, by major procurement category. Table 3.3. shows a similar distribution among major City departments during the study period.

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<sup>201</sup> See fn. 200.

<sup>202</sup> The City of Cleveland Department of Port Control manages the Cleveland Hopkins International Airport as well as the Cleveland Burke Lakefront Airport. Federally-assisted contracts at the Department of Port Control are subject to the U.S. Department of Transportation's Disadvantaged Business Enterprise (DBE) Program. Regulations governing the DBE Program are at 49 C.F.R. §26. Of the 1,037 prime contracts in the Master Contract/Subcontract Database belonging to the Department of Port Control, 151 had initial award amounts of \$50,000 or greater. These 151 contracts, while accounting for only 14.6 percent of all Port Control contracts, accounted for 96.3% of all contract award dollars and 97.2 percent of all contract payments. Of these 151 contracts, 31 had federal-assistance. Although these federal-aid contracts represent only 20.5 percent of all Department of Port Control contracts of \$50,000 or more, they account for 48.3 percent of dollars awarded and 49.6 percent of dollars paid. Another 25 Port Control contracts valued at less than \$50,000 also had federal-assistance. At various points throughout the Study, we will present statistical results that are restricted to federally-assisted Department of Port Control contracts. This information is relevant to the City in meeting its regulatory obligations under 49 C.F.R. §26.

**Table 3.1A. Summary of Master Contract/Subcontract Database: Prime Contracts and Subcontracts by Procurement Category, FY 2006-2010, All Contracts**

<b>CONTRACT CATEGORY</b>	<b>NUMBER OF CONTRACTS</b>	<b>DOLLARS AWARDED (\$)</b>	<b>DOLLARS PAID (\$)</b>
<i>CONSTRUCTION</i>		573,514,795	505,509,350
<i>Prime Contracts</i>	7,546	357,840,568	308,493,590
<i>Subcontracts</i>	1,608	215,674,227	197,015,759
<i>AE-CRS</i>		59,840,167	47,179,055
<i>Prime Contracts</i>	283	37,919,551	29,388,033
<i>Subcontracts</i>	394	21,920,616	17,791,022
<i>SERVICES</i>		231,961,053	203,738,228
<i>Prime Contracts</i>	5,251	181,973,492	157,525,325
<i>Subcontracts</i>	591	49,987,561	46,212,903
<i>COMMODITIES</i>		295,797,167	229,338,154
<i>Prime Contracts</i>	10,794	289,928,166	223,444,982
<i>Subcontracts</i>	42	5,869,001	5,893,172
<i>GRAND TOTAL</i>		1,161,113,182	985,764,787
<i>Prime Contracts</i>	23,874	867,661,777	718,851,930
<i>Subcontracts</i>	2,635	293,451,405	266,912,856

Source: NERA calculations from Master Contract/Subcontract Database.

Note: Prime Contract dollar amounts are net of subcontract amounts.

**Table 3.1B. Summary of Master Contract/Subcontract Database: Prime Contracts and Subcontracts by Procurement Category, FY 2006-2010, Federally-Assisted Department of Port Control Contracts Only**

CONTRACT CATEGORY	NUMBER OF CONTRACTS	DOLLARS AWARDED (\$)	DOLLARS PAID (\$)
<i>CONSTRUCTION</i>		74,361,544	71,047,492
<i>Prime Contracts</i>	16	37,757,535	34,753,597
<i>Subcontracts</i>	148	36,604,009	36,293,895
<i>AE-CRS</i>		9,175,726	6,190,907
<i>Prime Contracts</i>	11	6,229,841	3,733,648
<i>Subcontracts</i>	60	2,945,885	2,457,258
<i>SERVICES</i>		4,986,902	4,281,930
<i>Prime Contracts</i>	6	3,020,517	3,102,984
<i>Subcontracts</i>	28	1,966,385	1,178,946
<i>COMMODITIES</i>		1,204,185	999,385
<i>Prime Contracts</i>	1	753,724	548,924
<i>Subcontracts</i>	12	450,462	450,462
<i>GRAND TOTAL</i>		89,728,357	82,519,714
<i>Prime Contracts</i>	34	47,761,617	42,139,153
<i>Subcontracts</i>	248	41,966,740	40,380,561

Source and Notes: See Table 3.1A.

Table 3.2 shows the total number of prime contracts awarded during each year of the study period and total dollar payments associated with those contracts, by major procurement category.

**Table 3.2. Summary of Master Contract/Subcontract Database: Prime Contracts by FY, All Contracts**

<b>PROCUREMENT CATEGORY &amp; FFY</b>	<b>NUMBER OF PRIME CONTRACTS</b>	<b>DOLLARS AWARDED (\$)</b>	<b>DOLLARS PAID (\$)</b>
<i>CONSTRUCTION</i>			
2006	1412	87,726,430	83,554,207
2007	1539	156,100,518	147,450,779
2008	1673	131,690,627	122,249,608
2009	2022	97,932,413	84,377,505
2010	900	100,064,806	67,877,250
TOTAL	7546	573,514,795	505,509,350
<i>AE-CRS</i>			
2006	70	12,188,263	11,119,458
2007	53	14,461,490	13,943,468
2008	52	14,390,019	11,929,962
2009	67	12,490,655	8,183,550
2010	41	6,309,739	2,002,618
TOTAL	283	59,840,167	47,179,055
<i>SERVICES</i>			
2006	1048	64,766,967	64,874,903
2007	1245	44,997,855	40,956,146
2008	1153	42,821,454	38,581,309
2009	1216	46,930,921	37,342,840
2010	589	33,153,563	21,983,030
TOTAL	5251	232,670,760	203,738,228



**Table 3.2. Summary of Master Contract/Subcontract Database: Prime Contracts by FY, All Contracts (cont'd)**

<b>PROCUREMENT CATEGORY &amp; FFY</b>	<b>NUMBER OF PRIME CONTRACTS</b>	<b>DOLLARS AWARDED (\$)</b>	<b>DOLLARS PAID (\$)</b>
<i>COMMODITIES</i>			
2006	2,592	63,592,305	55,322,550
2007	2,622	81,999,631	71,852,220
2008	2,233	72,141,071	60,099,522
2009	2,435	52,941,407	30,614,891
2010	912	26,304,542	11,448,971
<b>TOTAL</b>	<b>10,794</b>	<b>296,978,956</b>	<b>229,338,154</b>
<i>GRAND TOTAL</i>			
2006	5,122	228,273,965	214,871,119
2007	5,459	297,559,495	274,202,613
2008	5,111	261,043,172	232,860,401
2009	5,740	210,295,397	160,518,786
2010	2,442	165,832,651	103,311,868
<b>TOTAL</b>	<b>23,874</b>	<b>1,163,004,678</b>	<b>985,764,787</b>

Source: NERA calculations from Master Contract/Subcontract Database.

**Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts and Purchase Orders by City of Cleveland Department**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
<i><b>CONSTRUCTION</b></i>	7,546	573,514,795	505,509,350
CITY PLANNING	21	667,324	650,178
CIVIL SERVICE COMMISSION	4	17,974	16,474
COMMUNITY DEVELOPMENT	3,055	81,936,758	79,982,691
DEPARTMENT OF BUILDING & HOUSING	3,613	30,924,420	27,361,933
DEPARTMENT OF PORT CONTROL	118	97,533,850	90,836,041
DEPARTMENT OF PUBLIC HEALTH	36	535,262	454,042
DEPARTMENT OF PUBLIC SAFETY	107	4,421,031	4,048,049
ECONOMIC DEVELOPMENT	25	2,014,012	1,978,264
FINANCE-ADMINISTRATION	17	755,416	752,909
FINANCE-IT	3	32,562	32,062
LAW	2	90,087	90,087
PARKS & RECREATION	126	28,171,382	24,823,656
PROPERTY MANAGEMENT	39	3,123,838	2,020,745
PUBLIC UTILITIES	260	276,675,516	235,641,854
PUBLIC WORKS	120	46,615,365	36,820,365

**Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts and Purchase Orders by City of Cleveland Department, cont'd**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
<i><b>AE-CRS</b></i>	283	59,840,167	47,179,055
CITY PLANNING	4	336,106	280,707
CIVIL SERVICE COMMISSION	2	36,990	15,479
COMMUNITY DEVELOPMENT	58	578,900	400,091
DEPARTMENT OF BUILDING & HOUSING	53	227,104	153,354
DEPARTMENT OF PORT CONTROL	26	15,483,826	11,437,938
DEPARTMENT OF PUBLIC HEALTH	10	120,735	97,573
DEPARTMENT OF PUBLIC SAFETY	11	169,158	115,318
ECONOMIC DEVELOPMENT	4	801,092	711,409
FINANCE-ADMINISTRATION	3	28,962	22,895
LAW	2	40,000	26,243
PARKS & RECREATION	15	3,189,680	2,826,915
PROPERTY MANAGEMENT	16	355,349	305,560
PUBLIC UTILITIES	46	31,714,277	24,898,186
PUBLIC WORKS	33	6,757,989	5,887,386

**Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts and Purchase Orders by City of Cleveland Department, cont'd**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
<b><i>SERVICES</i></b>	5,251	231,961,053	203,738,228
AGING	21	175,307	109,792
CITY PLANNING	161	13,149,947	11,670,624
CIVIL SERVICE COMMISSION	96	3,196,474	2,062,089
COMMUNITY DEVELOPMENT	488	6,621,091	5,348,913
CONSUMER AFFAIRS	2	487	487
DEPARTMENT OF BUILDING & HOUSING	1,059	8,167,940	7,405,962
DEPARTMENT OF PORT CONTROL	204	45,250,231	41,364,716
DEPARTMENT OF PUBLIC HEALTH	463	11,168,552	10,192,819
DEPARTMENT OF PUBLIC SAFETY	662	17,806,791	15,617,306
ECONOMIC DEVELOPMENT	140	5,554,476	3,679,009
FINANCE-ADMINISTRATION	157	13,974,018	13,175,854
FINANCE-IT	123	15,291,334	11,544,769
LAW	58	2,818,848	3,431,596
PARKS & RECREATION	303	9,948,546	8,834,647
PERSONNEL & HUMAN RESOURCES	8	450,856	390,816
PROPERTY MANAGEMENT	135	9,232,389	8,208,701
PUBLIC UTILITIES	753	38,703,707	28,482,709
PUBLIC WORKS	418	30,450,059	32,217,420

**Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts and Purchase Orders by City of Cleveland Department, cont'd**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
<b>COMMODITIES</b>	10,794	295,797,167	229,338,154
AGING	28	266,023	227,178
CITY PLANNING	453	2,991,363	1,804,042
CIVIL SERVICE COMMISSION	56	2,663,357	1,817,752
COMMUNITY DEVELOPMENT	392	3,651,891	3,507,636
CONSUMER AFFAIRS	7	2,600	2,543
DEPARTMENT OF BUILDING & HOUSING	95	900,961	859,059
DEPARTMENT OF PORT CONTROL	689	27,719,848	22,355,398
DEPARTMENT OF PUBLIC HEALTH	929	3,769,797	2,912,194
DEPARTMENT OF PUBLIC SAFETY	2,256	54,646,346	38,615,363
ECONOMIC DEVELOPMENT	41	417,304	298,175
FINANCE-ADMINISTRATION	371	4,986,282	3,322,577
FINANCE-IT	77	9,952,045	8,742,052
LAW	11	10,417	10,072
PARKS & RECREATION	894	6,849,116	6,097,168
PERSONNEL & HUMAN RESOURCES	13	6,991	4,945
PROPERTY MANAGEMENT	540	6,906,989	4,520,420
PUBLIC UTILITIES	2,806	95,220,120	71,021,602
PUBLIC WORKS	1,136	74,835,718	63,219,978

**Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts and Purchase Orders by City of Cleveland Department, cont'd**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
<b>OVERALL</b>	23,874	1,161,113,182	985,764,787
AGING	49	441,329	336,970
CITY PLANNING	639	17,144,739	14,405,551
CIVIL SERVICE COMMISSION	158	5,914,795	3,911,794
COMMUNITY DEVELOPMENT	3,993	92,788,639	89,239,331
CONSUMER AFFAIRS	9	3,087	3,030
DEPARTMENT OF BUILDING & HOUSING	4,820	40,220,425	35,780,308
DEPARTMENT OF PORT CONTROL	1,037	185,987,755	165,994,094
DEPARTMENT OF PUBLIC HEALTH	1,438	15,594,346	13,656,628
DEPARTMENT OF PUBLIC SAFETY	3,036	77,043,325	58,396,036
ECONOMIC DEVELOPMENT	210	8,786,885	6,666,857
FINANCE-ADMINISTRATION	548	19,744,678	17,274,235
FINANCE-IT	203	25,275,941	20,318,884
LAW	73	2,959,353	3,558,000
PARKS & RECREATION	1,338	48,158,724	42,582,386
PERSONNEL & HUMAN RESOURCES	21	457,847	395,761
PROPERTY MANAGEMENT	730	19,618,565	15,055,426
PUBLIC UTILITIES	3,865	442,313,620	360,044,351
PUBLIC WORKS	1,707	158,659,130	138,145,149

Source: See Table 3.1.

### C. Geographic Market Definition for Contracting and Procurement

To determine the geographic dimension of the City of Cleveland's contracting and procurement markets, we used the Master Contract/Subcontract Database, as described in the previous section, to obtain the zip codes and thereby the county and state for each contractor and subcontractor establishment identified in the database. Using this location information, we then calculated the percentage of City contract and subcontract dollars awarded to establishments by state and county during the study period.

As discussed above, the geographic market area is defined as that region which accounts for approximately 75 percent of overall contracting and procurement spending by a given government entity. Contractors located in the Cleveland-Elyria-Mentor, OH Metropolitan

Statistical Area (MSA) and the Akron, OH MSA account for the large majority of contracting and procurement expenditures by the City of Cleveland during the study period. The Cleveland-Elyria-Mentor, Ohio MSA includes the counties of Cuyahoga, Geauga, Lake, Lorain, and Medina. The Akron, OH MSA includes the counties of Portage and Summit.

As shown in Table 3.4, the overall share of payments made to establishments located in either the Cleveland-Elyria-Mentor MSA or the Akron MSA (hereafter, the Cleveland Market Area or CLEVMA) is 82.6 percent. The share is highest in AE-CRS (91.9 percent) and lowest in Commodities (64.2 percent).

For purposes of this Study, therefore, we define the primary geographic market area to be the Cleveland-Elyria-Mentor, OH MSA and the Akron, OH MSA. The City of Cleveland also expends substantial funds within the State of Ohio as a whole, as can be seen from the bottom panel of Table 3.4.

**Table 3.4. Distribution of Contracting Dollars by Geographic Location**

<b>Location</b>	<b>Construction (%)</b>	<b>AE-CRS (%)</b>	<b>Services (%)</b>	<b>Commodities (%)</b>	<b>Total (%)</b>
<i>Dollars Awarded</i>					
Inside Cleveland Market Area	91.4	91.8	77.2	62.9	81.3
Outside Cleveland Market Area	8.6	8.2	22.8	37.1	18.7
<i>Dollars Paid</i>					
Inside Cleveland Market Area	91.4	91.9	79.6	64.2	82.6
Outside Cleveland Market Area	8.6	8.1	20.4	35.8	17.4
<i>Dollars Awarded</i>					
Inside Ohio	95.9	93.8	86.2	73.2	88.1
Outside Ohio	4.1	6.2	13.8	62.8	11.9
<i>Dollars Paid</i>					
Inside Ohio	95.9	94.0	87.7	71.7	88.5
Outside Ohio	4.1	6.0	12.3	28.3	11.5

Source: NERA calculations from Master Contract/Subcontract Database.

Outside of the Cleveland Market Area, counties with a significant amount of spending activity (in decreasing order of importance) were as follows.<sup>203</sup>

In Construction:

<sup>203</sup> We define “significant” here, somewhat arbitrarily, as counties that accounted for more than 0.50 percent of total award and paid dollars among three or more establishments.

- Franklin County, OH (Columbus)

In AE-CRS:

- Franklin County, OH (Columbus)

In Services:

- Stark County, OH (Canton)
- Franklin County, OH (Columbus)
- San Mateo, CA (San Francisco)
- Baltimore City, MD (Baltimore)
- Montgomery County, OH (Dayton)
- Hamilton County, OH (Cincinnati)
- Los Angeles County, CA (Los Angeles)
- Cook County, IL (Chicago)
- Philadelphia County, PA (Philadelphia)

In Commodities:

- Franklin County, OH (Columbus)
- Cook County, IL (Chicago)
- Duval County, FL (Jacksonville)
- Morris County, NJ (Morristown)
- Gaston County, NC (Gastonia)
- King County, WA (Seattle)
- Marion County, IN (Indianapolis)
- Clermont County, OH (Cincinnati)



## D. Product Market Definition for Contracting and Procurement

Using the major procurement categories for each prime contract and the primary NAICS codes assigned by NERA to each prime contractor and subcontractor in the Master Contract/Subcontract Database, we identified the most important Industry Groups within each contracting and procurement category, as measured by total dollars expended. The relevant NAICS codes and their associated dollar weights appear below in Tables 3.5 through 3.8 for Construction, AE-CRS, Services, and Commodities, respectively.

Each Industry Group (four-digit NAICS) identified in Tables 3.5 through 3.8 consists of several more detailed Industries (five-digit and six-digit NAICS). Overall, City of Cleveland contracting expenditures occur in 237 NAICS Industry Groups and 561 NAICS Industries. In Construction, City contract spending occurs across 97 NAICS Industry Groups and 171 NAICS Industries. In AE-CRS, spending occurs across 38 NAICS Industry Groups and 63 NAICS Industries. In Services, spending occurs across 152 NAICS Industry Groups and 293 NAICS Industries. In Commodities, spending occurs across 120 NAICS Industry Groups and 291 NAICS Industries.

Although numerous Industry Groups and Industries play a role in the City of Cleveland's contracting activities, it is clear from Tables 3.5 through 3.8 that actual contracting and subcontracting opportunities are not distributed evenly among them. The distribution of contract expenditures is, in fact, highly skewed.

In Construction, for example, we see from Table 3.5 that just four Industry Groups alone (NAICS 2389, 2382, 2361, and 2362) account for more than half of all contract spending, six Groups account for over 75 percent, 12 Groups account for more than 90 percent, and the remaining amount distributed among 85 additional Industry Groups.

**Table 3.5. Distribution of Contract and Subcontract Dollars Paid by Industry Group: Construction**

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
2389	Other Specialty Trade Contractors	16.23	16.23
2382	Building Equipment Contractors	15.35	31.58
2361	Residential Building Construction	12.62	44.20
2362	Nonresidential Building Construction	11.57	55.77
2371	Utility System Construction	11.26	67.03
2381	Foundation, Structure, and Building Exterior Contractors	8.51	75.54
2373	Highway, Street, and Bridge Construction	7.31	82.85
2383	Building Finishing Contractors	2.72	85.57
3273	Cement and Concrete Product Manufacturing	2.21	87.78

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
2379	Other Heavy and Civil Engineering Construction	1.25	89.02
4233	Lumber and Other Construction Materials Merchant Wholesalers	0.94	89.96
3339	Other General Purpose Machinery Manufacturing	0.93	90.89
2211	Electric Power Generation, Transmission and Distribution	0.89	91.78
5413	Architectural, Engineering, and Related Services	0.87	92.65
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	0.82	93.47
4841	General Freight Trucking	0.73	94.20
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	0.58	94.77
5617	Services to Buildings and Dwellings	0.50	95.28
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	0.45	95.73
3323	Architectural and Structural Metals Manufacturing	0.42	96.15
4441	Building Material and Supplies Dealers	0.24	96.39
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	0.24	96.63
3219	Other Wood Product Manufacturing	0.24	96.87
4236	Electrical and Electronic Goods Merchant Wholesalers	0.23	97.10
3324	Boiler, Tank, and Shipping Container Manufacturing	0.20	97.30
4239	Miscellaneous Durable Goods Merchant Wholesalers	0.17	97.47
4539	Other Miscellaneous Store Retailers	0.16	97.63
5616	Investigation and Security Services	0.16	97.79
2123	Nonmetallic Mineral Mining and Quarrying	0.15	97.94
3261	Plastics Product Manufacturing	0.15	98.09
4232	Furniture and Home Furnishing Merchant Wholesalers	0.14	98.22
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	0.13	98.36
5629	Remediation and Other Waste Management Services	0.12	98.48
4842	Specialized Freight Trucking	0.11	98.59
3399	Other Miscellaneous Manufacturing	0.11	98.70
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	0.10	98.79
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	0.09	98.88
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	0.08	98.96

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
5416	Management, Scientific, and Technical Consulting Services	0.08	99.05
3315	Foundries	0.08	99.12
3329	Other Fabricated Metal Product Manufacturing	0.07	99.19
5619	Other Support Services	0.07	99.26
3353	Electrical Equipment Manufacturing	0.06	99.32
2372	Land Subdivision	0.06	99.38
5612	Facilities Support Services	0.05	99.43
5419	Other Professional, Scientific, and Technical Services	0.05	99.48
4242	Drugs and Druggists' Sundries Merchant Wholesalers	0.05	99.52
	Balance of industries (50 industry groups)	0.48	100.00

Source: NERA calculations from Master Contract/Subcontract Database.

In AE-CRS (Table 3.6), we see an even more concentrated pattern—one Industry Group (NAICS 5413) alone accounts for 91 percent of all contract spending, with the balance distributed among seven additional groups.

**Table 3.6. Distribution of Contract and Subcontract Dollars Paid by Industry Group: AE-CRS**

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
5413	Architectural, Engineering, and Related Services	91.21	91.21
5416	Management, Scientific, and Technical Consulting Services	1.81	93.02
2389	Other Specialty Trade Contractors	1.28	94.31
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1.26	95.57
5415	Computer Systems Design and Related Services	0.64	96.21
2381	Foundation, Structure, and Building Exterior Contractors	0.54	96.74
7139	Other Amusement and Recreation Industries	0.39	97.13
5414	Specialized Design Services	0.38	97.52
2382	Building Equipment Contractors	0.38	97.89
3231	Printing and Related Support Activities	0.31	98.21
2362	Nonresidential Building Construction	0.29	98.50
5112	Software Publishers	0.26	98.75
5617	Services to Buildings and Dwellings	0.17	98.92
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	0.11	99.04
2383	Building Finishing Contractors	0.11	99.14
4841	General Freight Trucking	0.10	99.24
4511	Sporting Goods, Hobby, and Musical Instrument Stores	0.09	99.34
4239	Miscellaneous Durable Goods Merchant Wholesalers	0.09	99.42
5242	Agencies, Brokerages, and Other Insurance Related Activities	0.08	99.50
	Balance of industries (19 industry groups)	0.50	100.00

Source: See Table 3.5.

In Services (Table 3.7), five Groups account for more than half of all contract spending, 13 Groups account for 75 percent of spending, 29 Groups together account for 90 percent of spending, and the remaining amount is distributed among 123 additional Industry Groups.

**Table 3.7. Distribution of Contract and Subcontract Dollars Paid by Industry Group: Services**

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
5622	Waste Treatment and Disposal	15.36	15.36
5416	Management, Scientific, and Technical Consulting Services	11.23	26.60
5613	Employment Services	11.16	37.76
4841	General Freight Trucking	7.11	44.88
5415	Computer Systems Design and Related Services	6.65	51.53
8129	Other Personal Services	5.44	56.97
5112	Software Publishers	4.22	61.20
5617	Services to Buildings and Dwellings	3.12	64.32
5179	Other Telecommunications	2.82	67.14
2382	Building Equipment Contractors	2.46	69.61
5616	Investigation and Security Services	2.24	71.85
5242	Agencies, Brokerages, and Other Insurance Related Activities	1.87	73.72
5411	Legal Services	1.85	75.57
5418	Advertising, Public Relations, and Related Services	1.67	77.25
8133	Social Advocacy Organizations	1.57	78.81
5413	Architectural, Engineering, and Related Services	1.53	80.35
5629	Remediation and Other Waste Management Services	1.47	81.82
5171	Wired Telecommunications Carriers	1.08	82.90
8111	Automotive Repair and Maintenance	0.99	83.89
5621	Waste Collection	0.90	84.79
6241	Individual and Family Services	0.80	85.59
5619	Other Support Services	0.73	86.32
5241	Insurance Carriers	0.72	87.04
7223	Special Food Services	0.66	87.69
4239	Miscellaneous Durable Goods Merchant Wholesalers	0.66	88.35
8139	Business, Professional, Labor, Political, and Similar Organizations	0.61	88.96
8134	Civic and Social Organizations	0.60	89.56
2361	Residential Building Construction	0.56	90.13

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
8112	Electronic and Precision Equipment Repair and Maintenance	0.55	90.68
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	0.53	91.20
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	0.47	91.67
2389	Other Specialty Trade Contractors	0.43	92.10
2373	Highway, Street, and Bridge Construction	0.41	92.51
6117	Educational Support Services	0.37	92.88
1151	Support Activities for Crop Production	0.31	93.20
5313	Activities Related to Real Estate	0.30	93.50
6219	Other Ambulatory Health Care Services	0.30	93.80
5614	Business Support Services	0.28	94.08
6214	Outpatient Care Centers	0.24	94.32
5417	Scientific Research and Development Services	0.24	94.55
5414	Specialized Design Services	0.22	94.77
4931	Warehousing and Storage	0.22	94.99
5172	Wireless Telecommunications Carriers (except Satellite)	0.21	95.21
4842	Specialized Freight Trucking	0.21	95.41
4471	Gasoline Stations	0.20	95.62
5191	Other Information Services	0.20	95.82
5111	Newspaper, Periodical, Book, and Directory Publishers	0.19	96.01
8123	Drycleaning and Laundry Services	0.19	96.19
5611	Office Administrative Services	0.18	96.38
5419	Other Professional, Scientific, and Technical Services	0.18	96.56
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.16	96.73
8114	Personal and Household Goods Repair and Maintenance	0.16	96.89
4884	Support Activities for Road Transportation	0.16	97.04
5322	Consumer Goods Rental	0.15	97.19
5311	Lessors of Real Estate	0.14	97.34
5312	Offices of Real Estate Agents and Brokers	0.14	97.48
3222	Converted Paper Product Manufacturing	0.14	97.62
5151	Radio and Television Broadcasting	0.13	97.75

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
6113	Colleges, Universities, and Professional Schools	0.12	97.87
6211	Offices of Physicians	0.11	97.98
8122	Death Care Services	0.11	98.09
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	0.10	98.19
6216	Home Health Care Services	0.09	98.28
3273	Cement and Concrete Product Manufacturing	0.09	98.37
6115	Technical and Trade Schools	0.08	98.45
7139	Other Amusement and Recreation Industries	0.08	98.53
8131	Religious Organizations	0.07	98.60
4233	Lumber and Other Construction Materials Merchant Wholesalers	0.07	98.67
3231	Printing and Related Support Activities	0.07	98.74
4883	Support Activities for Water Transportation	0.06	98.80
6243	Vocational Rehabilitation Services	0.06	98.86
7224	Drinking Places (Alcoholic Beverages)	0.06	98.92
6114	Business Schools and Computer and Management Training	0.05	98.97
2381	Foundation, Structure, and Building Exterior Contractors	0.05	99.02
4885	Freight Transportation Arrangement	0.05	99.07
3364	Aerospace Product and Parts Manufacturing	0.04	99.11
2383	Building Finishing Contractors	0.04	99.15
5121	Motion Picture and Video Industries	0.04	99.18
7221	Full-Service Restaurants	0.03	99.22
3339	Other General Purpose Machinery Manufacturing	0.03	99.25
5223	Activities Related to Credit Intermediation	0.03	99.28
6221	General Medical and Surgical Hospitals	0.03	99.31
5182	Data Processing, Hosting, and Related Services	0.03	99.34
6215	Medical and Diagnostic Laboratories	0.03	99.37
7115	Independent Artists, Writers, and Performers	0.03	99.40
5612	Facilities Support Services	0.03	99.43
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	0.03	99.45
3323	Architectural and Structural Metals Manufacturing	0.03	99.48
8132	Grantmaking and Giving Services	0.03	99.50

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
	Balance of industries (63 industry groups)	0.50	100.00

Source: See Table 3.5.



In Commodities (Table 3.8), six Groups account for over half of all spending, 14 Groups together account for 75 percent of spending, 27 Groups together account for 90 percent of spending, and the remaining amount is distributed among 93 additional Industry Groups.

**Table 3.8. Distribution of Contract and Subcontract Dollars Paid by Industry Group: Commodities**

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
4236	Electrical and Electronic Goods Merchant Wholesalers	13.48	13.48
4247	Petroleum and Petroleum Products Merchant Wholesalers	10.55	24.03
4246	Chemical and Allied Products Merchant Wholesalers	8.75	32.78
4411	Automobile Dealers	7.06	39.84
3342	Communications Equipment Manufacturing	6.19	46.04
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	6.19	52.23
3251	Basic Chemical Manufacturing	3.85	56.08
3341	Computer and Peripheral Equipment Manufacturing	3.79	59.87
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	3.15	63.02
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	3.04	66.05
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	2.88	68.93
4441	Building Material and Supplies Dealers	2.44	71.37
3331	Agriculture, Construction, and Mining Machinery Manufacturing	2.32	73.69
3361	Motor Vehicle Manufacturing	1.99	75.68
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	1.95	77.63
4413	Automotive Parts, Accessories, and Tire Stores	1.77	79.41
4239	Miscellaneous Durable Goods Merchant Wholesalers	1.48	80.89
4241	Paper and Paper Product Merchant Wholesalers	1.25	82.14
4431	Electronics and Appliance Stores	1.22	83.36
3259	Other Chemical Product and Preparation Manufacturing	1.19	84.55
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	1.15	85.70
3231	Printing and Related Support Activities	0.84	86.54
4539	Other Miscellaneous Store Retailers	0.81	87.35
3262	Rubber Product Manufacturing	0.75	88.10
3329	Other Fabricated Metal Product Manufacturing	0.73	88.83

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
4233	Lumber and Other Construction Materials Merchant Wholesalers	0.70	89.53
4511	Sporting Goods, Hobby, and Musical Instrument Stores	0.62	90.15
4442	Lawn and Garden Equipment and Supplies Stores	0.55	90.69
4232	Furniture and Home Furnishing Merchant Wholesalers	0.54	91.23
3391	Medical Equipment and Supplies Manufacturing	0.54	91.77
3353	Electrical Equipment Manufacturing	0.51	92.28
4244	Grocery and Related Product Merchant Wholesalers	0.51	92.79
3261	Plastics Product Manufacturing	0.50	93.29
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	0.48	93.77
3399	Other Miscellaneous Manufacturing	0.48	94.24
3255	Paint, Coating, and Adhesive Manufacturing	0.40	94.64
3241	Petroleum and Coal Products Manufacturing	0.39	95.03
3339	Other General Purpose Machinery Manufacturing	0.35	95.37
4242	Drugs and Druggists' Sundries Merchant Wholesalers	0.32	95.69
2382	Building Equipment Contractors	0.27	95.97
3351	Electric Lighting Equipment Manufacturing	0.26	96.23
3362	Motor Vehicle Body and Trailer Manufacturing	0.25	96.48
4422	Home Furnishings Stores	0.22	96.70
4412	Other Motor Vehicle Dealers	0.22	96.92
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	0.21	97.13
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	0.19	97.33
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	0.18	97.51
3333	Commercial and Service Industry Machinery Manufacturing	0.18	97.69
3363	Motor Vehicle Parts Manufacturing	0.16	97.85
4532	Office Supplies, Stationery, and Gift Stores	0.14	97.98
3149	Other Textile Product Mills	0.13	98.11
3211	Sawmills and Wood Preservation	0.12	98.23
3343	Audio and Video Equipment Manufacturing	0.11	98.34
3315	Foundries	0.11	98.46
3274	Lime and Gypsum Product Manufacturing	0.11	98.57
3253	Pesticide, Fertilizer, and Other Agricultural Chemical	0.11	98.67

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
	Manufacturing		
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	0.10	98.77
3254	Pharmaceutical and Medicine Manufacturing	0.09	98.85
3372	Office Furniture (including Fixtures) Manufacturing	0.08	98.94
3359	Other Electrical Equipment and Component Manufacturing	0.08	99.01
3115	Dairy Product Manufacturing	0.07	99.08
4451	Grocery Stores	0.07	99.15
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	0.07	99.21
3323	Architectural and Structural Metals Manufacturing	0.06	99.27
3118	Bakeries and Tortilla Manufacturing	0.06	99.33
4481	Clothing Stores	0.06	99.39
3344	Semiconductor and Other Electronic Component Manufacturing	0.04	99.43
3332	Industrial Machinery Manufacturing	0.04	99.48
2381	Foundation, Structure, and Building Exterior Contractors	0.04	99.51
	Balance of industries (51 industry groups)	0.49	100.00

Source: See Table 3.5.

The resulting percentage weights from all NAICS Industries are used below in Chapter IV to calculate average M/WBE availability figures for Construction, AE-CRS, Services, and Commodities for the City of Cleveland's relevant market area.<sup>204</sup>

Now that the geographic and industry parameters of the City of Cleveland's contracting market area has been established, we will restrict our subsequent analyses, in Chapter IV and beyond, to business enterprises and other phenomena within this market area so as to narrowly tailor our findings to the City's specific contracting circumstances.

<sup>204</sup> After re-normalizing the percentage weights to sum to 100.

## IV. M/WBE Availability in the City of Cleveland's Market Area

### A. Introduction

Estimates of M/WBE availability are an important element of a disparity study since they provide benchmarks for assessing the effectiveness of the City of Cleveland's efforts to encourage M/WBE participation in public contracting and procurement. Furthermore, they provide a means by which to establish goals for M/WBE participation that are tailored to the City's relevant market area.

Many approaches to estimating availability suffer from internal inconsistency since the data employed to construct the availability numerator (i.e., the total number of M/WBE establishments in the market area) are measured differently than the data employed to construct the availability denominator (i.e., the total number of establishments in the market area). For example, the numerator might be drawn from an agency's internal list of certified M/WBEs while the denominator might be drawn from Census data. Since the methods used to identify and certify firms as M/WBEs are different from the methods used by the Census Bureau to count business establishments, such approaches inevitably compare "apples to oranges."

In this Study, we employ a method for measuring availability that ensures an "apples to apples" comparison between the availability numerator and denominator. This "Custom Census" method was pioneered by NERA and has been favorably reviewed by each court that has examined it to date. The Tenth Circuit found the custom census approach to be "a more sophisticated method to calculate availability than the earlier studies."<sup>205</sup> Likewise, this method was successful in the defense of the DBE programs for Minnesota DOT<sup>206</sup> and Illinois DOT,<sup>207</sup> as well as the M/WBE construction program for the City of Chicago.<sup>208</sup>

In addition to its favorable reception in the courts, when properly executed, the Custom Census method is superior to other approaches for at least three reasons. First, it provides an internally consistent and rigorous "apples to apples" comparison between establishments in the availability numerator and those in the denominator. Second, it comports with the remedial nature of most M/WBE policies by measuring overall M/WBE availability in the relevant market area as opposed to only those businesses currently certified by an agency.<sup>209</sup> Third, when properly

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<sup>205</sup> *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 966 (10<sup>th</sup> Cir. 2003) ("*Concrete Works IV*"), *cert. denied*, 540 U.S. 1027 (2003).

<sup>206</sup> *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964 (8<sup>th</sup> Cir. 2003), *cert. denied*, 541 U.S. 1041 (2004).

<sup>207</sup> *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7<sup>th</sup> Cir. 2007).

<sup>208</sup> *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725 (N.D. Ill. 2003).

<sup>209</sup> *See Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 at 723 (7<sup>th</sup> Cir. 2007) ("We agree with the district court that the remedial nature of the federal scheme militates in favor of a method of DBE availability calculation that casts a broader net").

executed, the Custom Census is less likely to be tainted by the effects of past and present discrimination than other methods.<sup>210</sup>

The Custom Census method has seven steps. These are:

1. Create a database of representative and recent City of Cleveland contracts in Construction, AE-CRS, Services, and Commodities;
2. Identify the City's relevant geographic market from this database;
3. Identify the City's relevant product market from this database;
4. Count all business establishments in the relevant market area;
5. Identify listed M/WBE establishments in the relevant market area;
6. Verify the ownership status of listed M/WBEs; and
7. Verify the ownership status of all other firms in the relevant market area.

Steps 1-3 were described in Chapter III. Steps 4-7 are described in more detail below.<sup>211</sup>

### **B. Identifying Business Establishments in the Relevant Markets**

M/WBE availability (unweighted) is defined as the number of M/WBEs divided by the total number of business establishments in the City of Cleveland's contracting market area—what we will refer to as the Baseline Business Universe.<sup>212</sup> Determining the total number of business establishments in the market area, however, is more straightforward than determining the number of minority- or women-owned establishments in those markets. The latter task has three main parts: (1) identify all listed M/WBEs in the relevant market; (2) verify the ownership status of listed M/WBEs; and (3) estimate the number of unlisted M/WBEs in the relevant market. This section describes how these tasks were accomplished for the City of Cleveland.

It is important to note that NERA's availability analysis is free from variables tainted by discrimination. Our approach recognizes that discrimination may impact many of the variables that contribute to a firm's success in obtaining work as a prime or a subcontractor. Factors such as firm size, time in business, qualifications, and experience are all adversely affected by discrimination if it is present in the market area. Despite the obvious relationship, some commentators argue that disparities should only be assessed between firms with similar "capacities."<sup>213</sup> However, most courts have properly refused to make the results of discrimination

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<sup>210</sup> See Section B.5., below, for further discussion of this point.

<sup>211</sup> For additional discussion of the Custom Census availability method and its advantages relative to other availability estimation methods see Wainwright and Holt (2010, pp. 30-48).

<sup>212</sup> To yield a percentage, the resulting figure is multiplied by 100.

<sup>213</sup> See, e.g., La Noue (2006). Most of La Noue's expert report in *Gross Seed Company v. Nebraska Department of Roads*, No. 02-3016 (D. Neb. 2002), including his views on "capacity," was rejected by the court on the basis

the benchmark for non-discrimination.<sup>214</sup> They have acknowledged that M/WBEs may be smaller, newer, and otherwise less competitive than non-M/WBEs because of the very discrimination sought to be remedied by race-conscious contracting programs. Racial and gender differences in these “capacity” factors are the *outcomes* of discrimination and it is therefore inappropriate as a matter of economics and statistics to use them as “control” variables in a disparity study.<sup>215</sup>

### 1. Estimate the Total Number of Business Establishments in the Market

We used data supplied by Dun & Bradstreet to determine the total number of business establishments operating in the relevant geographic and product markets (these markets were discussed in the previous chapter). Dun & Bradstreet produces the most comprehensive publicly available database of business establishments in the U.S. This database contains over 20 million records and is updated continuously. Each record in Dun & Bradstreet represents a business establishment and includes the business name, address, telephone number, NAICS code, SIC code, business type, DUNS Number (a unique number assigned to each establishment by Dun & Bradstreet), and other descriptive information. Dun & Bradstreet gathers and verifies information from many different sources. These sources include, among others, annual management interviews, payment experiences, bank account information, filings for suits, liens, judgments and bankruptcies, news items, the U.S. Postal Service, utility and telephone service, business registrations, corporate charters, Uniform Commercial Code filings, and records of the Small Business Administration and other governmental agencies.

We used the Dun & Bradstreet database to identify the total number of businesses in each NAICS code that was identified as part of the City of Cleveland product market. Table 4.1 shows the number of businesses identified in each NAICS Industry Group within the Construction category, along with the associated industry weight according to dollars awarded. Table 4.2 shows the same information along with the associated industry weight according to dollars paid. Comparable data for AE-CRS, Services, and Commodities appear in Tables 4.3 through 4.8.<sup>216</sup>

Although numerous industries play a role in the City of Cleveland's Baseline Business Universe, contracting and subcontracting opportunities are not distributed evenly among them. The distribution of contract expenditures is, in fact, highly skewed, as documented above in Chapter III.

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that it was legal opinion and not expert analysis. According to the court, “[legal analysis] is an issue solely for the Court and not for the presentation of expert testimony....” (see Defendants-Appellees’ Brief, *Gross Seed Company v. Nebraska Department of Roads*, on appeal to the Eighth Circuit Court of Appeals).

<sup>214</sup> *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 981, 983 (10<sup>th</sup> Cir. 2003), *cert. denied*, 124 S.Ct. 556 (2003) (emphasis in the originals) (“MWBE construction firms are generally smaller and less experienced *because* of discrimination.... Additionally, we do not read *Croson* to require disparity studies that measure whether construction firms are able to perform a *particular contract*.”).

<sup>215</sup> *Concrete Works*, 321 F.3d at 981 (emphasis in the original). See also Wainwright and Holt (2010), Appendix B “Understanding Capacity,” and Section B.5, below.

<sup>216</sup> Analogous sets of weights, restricted to federally-assisted contracts, were also produced. They are not published here due to space considerations.

# M/WBE Availability in the City of Cleveland's Market Area

**Table 4.1. Construction—Number of Business Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
2389	Other Specialty Trade Contractors	1,558	16.49	16.49
2382	Building Equipment Contractors	2,622	14.87	31.37
2371	Utility System Construction	95	12.46	43.83
2361	Residential Building Construction	5,529	12.22	56.05
2362	Nonresidential Building Construction	696	11.88	67.93
2381	Foundation, Structure, and Building Exterior Contractors	1,743	8.70	76.63
2373	Highway, Street, and Bridge Construction	210	7.73	84.36
2383	Building Finishing Contractors	1,851	2.97	87.33
3273	Cement and Concrete Product Manufacturing	75	1.97	89.30
2379	Other Heavy and Civil Engineering Construction	35	1.11	90.41
4233	Lumber and Other Construction Materials Merchant Wholesalers	496	0.86	91.27
5413	Architectural, Engineering, and Related Services	2,096	0.85	92.11
3339	Other General Purpose Machinery Manufacturing	27	0.81	92.92
2211	Electric Power Generation, Transmission and Distribution	12	0.78	93.70
4841	General Freight Trucking	1,583	0.76	94.46
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	396	0.71	95.17
5617	Services to Buildings and Dwellings	2,692	0.59	95.76
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	54	0.52	96.28
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	888	0.41	96.69
3323	Architectural and Structural Metals Manufacturing	190	0.31	97.00
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	397	0.26	97.26
3324	Boiler, Tank, and Shipping Container Manufacturing	2	0.20	97.47
4236	Electrical and Electronic Goods Merchant Wholesalers	297	0.20	97.66
3219	Other Wood Product Manufacturing	13	0.19	97.86
4441	Building Material and Supplies Dealers	297	0.19	98.05
4539	Other Miscellaneous Store Retailers	1,435	0.15	98.19
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	60	0.14	98.33
2123	Nonmetallic Mineral Mining and Quarrying	21	0.13	98.46
5616	Investigation and Security Services	156	0.13	98.60
3261	Plastics Product Manufacturing	237	0.13	98.73
4239	Miscellaneous Durable Goods Merchant Wholesalers	491	0.12	98.85
4232	Furniture and Home Furnishing Merchant Wholesalers	120	0.12	98.98
5629	Remediation and Other Waste Management Services	19	0.11	99.09
4842	Specialized Freight Trucking	105	0.10	99.19
3399	Other Miscellaneous Manufacturing	218	0.09	99.28

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	595	0.09	99.36
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	8	0.07	99.44
3315	Foundries	8	0.07	99.51
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	44	0.07	99.57
5416	Management, Scientific, and Technical Consulting Services	2,470	0.07	99.64
2372	Land Subdivision	286	0.06	99.70
5619	Other Support Services	380	0.06	99.76
3353	Electrical Equipment Manufacturing	47	0.05	99.81
4242	Drugs and Druggists' Sundries Merchant Wholesalers	86	0.05	99.86
5612	Facilities Support Services	37	0.05	99.91
5419	Other Professional, Scientific, and Technical Services	1,453	0.05	99.96
8112	Electronic and Precision Equipment Repair and Maintenance	373	0.04	100.00

Source: Dun & Bradstreet; M/WBE business directory information compiled by NERA; Master Contract/Subcontract Database.

Notes: (1) Results are shown for the top 99 percent of contract dollars awarded. (2) Weights were renormalized so as to sum to 100.



## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.2. Construction—Number of Business Establishments and Industry Weight (Dollars Paid), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
2389	Other Specialty Trade Contractors	1,558	17.84	17.84
2382	Building Equipment Contractors	2,622	15.37	33.21
2361	Residential Building Construction	5,529	13.44	46.65
2362	Nonresidential Building Construction	696	12.18	58.83
2371	Utility System Construction	95	9.72	68.55
2381	Foundation, Structure, and Building Exterior Contractors	1,743	7.89	76.44
2373	Highway, Street, and Bridge Construction	210	7.19	83.64
2383	Building Finishing Contractors	1,851	2.69	86.33
3273	Cement and Concrete Product Manufacturing	75	2.08	88.41
2379	Other Heavy and Civil Engineering Construction	35	1.41	89.82
2211	Electric Power Generation, Transmission and Distribution	12	0.99	90.81
4233	Lumber and Other Construction Materials Merchant Wholesalers	496	0.98	91.78
3339	Other General Purpose Machinery Manufacturing	27	0.93	92.72
5413	Architectural, Engineering, and Related Services	2,096	0.87	93.59
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	396	0.84	94.43
4841	General Freight Trucking	1,157	0.74	95.17
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	54	0.63	95.80
5617	Services to Buildings and Dwellings	2,692	0.54	96.35
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	888	0.42	96.76
3323	Architectural and Structural Metals Manufacturing	190	0.39	97.16
3219	Other Wood Product Manufacturing	13	0.25	97.40
4236	Electrical and Electronic Goods Merchant Wholesalers	297	0.24	97.64
4441	Building Material and Supplies Dealers	297	0.23	97.88
3324	Boiler, Tank, and Shipping Container Manufacturing	2	0.23	98.11
4539	Other Miscellaneous Store Retailers	1,435	0.18	98.28
5616	Investigation and Security Services	156	0.17	98.45
2123	Nonmetallic Mineral Mining and Quarrying	21	0.17	98.62
4239	Miscellaneous Durable Goods Merchant Wholesalers	491	0.15	98.78
4232	Furniture and Home Furnishing Merchant Wholesalers	120	0.14	98.92
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	397	0.13	99.05
3261	Plastics Product Manufacturing	237	0.12	99.18
3399	Other Miscellaneous Manufacturing	218	0.11	99.29
5629	Remediation and Other Waste Management Services	19	0.10	99.39
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	8	0.09	99.48
3315	Foundries	8	0.08	99.57
4842	Specialized Freight Trucking	105	0.08	99.65
5324	Commercial and Industrial Machinery and Equipment	44	0.08	99.73

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
	Rental and Leasing			
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	595	0.08	99.81
3353	Electrical Equipment Manufacturing	47	0.07	99.88
2372	Land Subdivision	286	0.06	99.94
5612	Facilities Support Services	37	0.06	100.00

Source and Notes: See Table 4.1.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.3. AE-CRS—Number of Business Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
5413	Architectural, Engineering, and Related Services	2,552	91.46	91.46
5416	Management, Scientific, and Technical Consulting Services	4,269	2.26	93.72
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	429	1.76	95.48
2389	Other Specialty Trade Contractors	1,026	0.95	96.43
5415	Computer Systems Design and Related Services	1,095	0.82	97.25
2382	Building Equipment Contractors	2,595	0.51	97.76
2381	Foundation, Structure, and Building Exterior Contractors	427	0.40	98.16
5414	Specialized Design Services	447	0.31	98.47
7139	Other Amusement and Recreation Industries	117	0.31	98.78
3231	Printing and Related Support Activities	33	0.28	99.05
2362	Nonresidential Building Construction	557	0.24	99.29
5611	Office Administrative Services	263	0.17	99.46
5112	Software Publishers	139	0.17	99.63
5617	Services to Buildings and Dwellings	1,641	0.14	99.77
4841	General Freight Trucking	1,157	0.08	99.85
2383	Building Finishing Contractors	236	0.08	99.93
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	349	0.07	100.00

Source and Notes: See Table 4.1.

**Table 4.4. AE-CRS—Number of Business Establishments and Industry Weight (Dollars Paid), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
5413	Architectural, Engineering, and Related Services	2,552	90.88	90.88
2389	Other Specialty Trade Contractors	1,558	1.70	92.58
5416	Management, Scientific, and Technical Consulting Services	4,269	1.69	94.27
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	429	1.52	95.79
2381	Foundation, Structure, and Building Exterior Contractors	427	0.66	96.45
7139	Other Amusement and Recreation Industries	117	0.51	96.96
5414	Specialized Design Services	447	0.51	97.47
2362	Nonresidential Building Construction	557	0.38	97.86
5112	Software Publishers	139	0.34	98.19
2382	Building Equipment Contractors	952	0.33	98.52

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
5415	Computer Systems Design and Related Services	718	0.30	98.83
3231	Printing and Related Support Activities	33	0.24	99.06
5617	Services to Buildings and Dwellings	1,641	0.23	99.29
4841	General Freight Trucking	1,157	0.14	99.42
2383	Building Finishing Contractors	236	0.13	99.55
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	349	0.12	99.67
4511	Sporting Goods, Hobby, and Musical Instrument Stores	443	0.12	99.80
4239	Miscellaneous Durable Goods Merchant Wholesalers	94	0.10	99.90
5242	Agencies, Brokerages, and Other Insurance Related Activities	2,169	0.10	100.00

Source and Notes: See Table 4.1.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.5. Services—Number of Business Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
5622	Waste Treatment and Disposal	85	12.36	12.36
5416	Management, Scientific, and Technical Consulting Services	5,401	12.28	24.64
5613	Employment Services	630	10.33	34.97
4841	General Freight Trucking	1,583	7.10	42.08
5415	Computer Systems Design and Related Services	1,129	6.32	48.40
8129	Other Personal Services	3,168	4.86	53.26
5112	Software Publishers	139	4.36	57.62
5617	Services to Buildings and Dwellings	2,867	3.29	60.91
5179	Other Telecommunications	378	3.07	63.98
5418	Advertising, Public Relations, and Related Services	730	2.26	66.24
5616	Investigation and Security Services	449	2.23	68.47
2382	Building Equipment Contractors	2,622	2.18	70.65
5171	Wired Telecommunications Carriers	10	2.06	72.71
5413	Architectural, Engineering, and Related Services	2,544	1.73	74.43
5242	Agencies, Brokerages, and Other Insurance Related Activities	2,169	1.68	76.11
8133	Social Advocacy Organizations	117	1.61	77.72
8111	Automotive Repair and Maintenance	2,989	1.56	79.28
5411	Legal Services	3,652	1.49	80.77
5629	Remediation and Other Waste Management Services	261	1.42	82.19
5621	Waste Collection	33	1.37	83.56
5619	Other Support Services	380	0.92	84.48
6241	Individual and Family Services	1,114	0.80	85.28
5241	Insurance Carriers	173	0.72	86.00
7223	Special Food Services	288	0.72	86.72
8139	Business, Professional, Labor, Political, and Similar Organizations	736	0.71	87.42
4239	Miscellaneous Durable Goods Merchant Wholesalers	585	0.70	88.12
8112	Electronic and Precision Equipment Repair and Maintenance	515	0.69	88.81
8134	Civic and Social Organizations	1,315	0.66	89.47
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	393	0.59	90.07
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	1,374	0.55	90.62
2373	Highway, Street, and Bridge Construction	210	0.53	91.15
2361	Residential Building Construction	5,518	0.43	91.58
6117	Educational Support Services	80	0.43	92.02
6219	Other Ambulatory Health Care Services	884	0.37	92.38
2389	Other Specialty Trade Contractors	1,558	0.37	92.75
5614	Business Support Services	4,533	0.37	93.12
5172	Wireless Telecommunications Carriers (except Satellite)	287	0.30	93.42
5417	Scientific Research and Development Services	129	0.28	93.70

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
1151	Support Activities for Crop Production	17	0.28	93.98
5313	Activities Related to Real Estate	23	0.27	94.25
5312	Offices of Real Estate Agents and Brokers	2,381	0.27	94.52
5111	Newspaper, Periodical, Book, and Directory Publishers	266	0.26	94.78
4881	Support Activities for Air Transportation	68	0.25	95.04
5414	Specialized Design Services	521	0.24	95.27
5611	Office Administrative Services	263	0.22	95.50
4884	Support Activities for Road Transportation	194	0.22	95.72
8123	Drycleaning and Laundry Services	175	0.22	95.93
6214	Outpatient Care Centers	277	0.22	96.15
5419	Other Professional, Scientific, and Technical Services	1,547	0.21	96.35
5191	Other Information Services	60	0.20	96.56
4931	Warehousing and Storage	328	0.20	96.76
4842	Specialized Freight Trucking	191	0.19	96.95
4471	Gasoline Stations	784	0.18	97.13
8114	Personal and Household Goods Repair and Maintenance	566	0.17	97.30
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	155	0.17	97.48
5321	Automotive Equipment Rental and Leasing	215	0.17	97.65
5311	Lessors of Real Estate	2,665	0.17	97.82
5322	Consumer Goods Rental	154	0.17	97.99
6113	Colleges, Universities, and Professional Schools	197	0.13	98.12
5151	Radio and Television Broadcasting	130	0.13	98.25
3222	Converted Paper Product Manufacturing	1	0.12	98.37
6211	Offices of Physicians	3,371	0.12	98.49
7139	Other Amusement and Recreation Industries	858	0.11	98.60
6115	Technical and Trade Schools	68	0.11	98.71
8122	Death Care Services	418	0.10	98.81
6216	Home Health Care Services	370	0.09	98.90
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	675	0.08	98.98
8131	Religious Organizations	4,091	0.08	99.06
3273	Cement and Concrete Product Manufacturing	44	0.08	99.13
6243	Vocational Rehabilitation Services	125	0.07	99.21
7224	Drinking Places (Alcoholic Beverages)	1,038	0.07	99.28
4921	Couriers and Express Delivery Services	59	0.06	99.34
4883	Support Activities for Water Transportation	7	0.05	99.39
5223	Activities Related to Credit Intermediation	39	0.05	99.45
6114	Business Schools and Computer and Management Training	27	0.05	99.49
5152	Cable and Other Subscription Programming	75	0.05	99.54
7221	Full-Service Restaurants	2,863	0.05	99.59
4885	Freight Transportation Arrangement	238	0.04	99.63
3231	Printing and Related Support Activities	397	0.04	99.67
6215	Medical and Diagnostic Laboratories	111	0.04	99.71

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
3364	Aerospace Product and Parts Manufacturing	14	0.04	99.75
7115	Independent Artists, Writers, and Performers	196	0.03	99.78
6221	General Medical and Surgical Hospitals	174	0.03	99.82
5182	Data Processing, Hosting, and Related Services	222	0.03	99.85
3339	Other General Purpose Machinery Manufacturing	3	0.03	99.88
5612	Facilities Support Services	37	0.03	99.91
4233	Lumber and Other Construction Materials Merchant Wholesalers	133	0.02	99.93
2381	Foundation, Structure, and Building Exterior Contractors	282	0.02	99.95
8132	Grantmaking and Giving Services	13	0.02	99.98
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	127	0.02	100.00

Source and Notes: See Table 4.1.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.6. Services—Number of Business Establishments and Industry Weight (Dollars Paid), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
5622	Waste Treatment and Disposal	85	16.85	16.85
5613	Employment Services	630	12.45	29.30
5416	Management, Scientific, and Technical Consulting Services	5,401	10.77	40.07
5415	Computer Systems Design and Related Services	1,129	7.22	47.30
4841	General Freight Trucking	1,583	6.17	53.46
8129	Other Personal Services	47	5.96	59.42
5112	Software Publishers	139	4.49	63.91
5179	Other Telecommunications	378	3.11	67.02
5617	Services to Buildings and Dwellings	2,867	2.91	69.93
2382	Building Equipment Contractors	2,622	2.71	72.64
5616	Investigation and Security Services	449	2.44	75.08
5242	Agencies, Brokerages, and Other Insurance Related Activities	2,169	2.05	77.13
5411	Legal Services	3,496	1.88	79.01
8133	Social Advocacy Organizations	117	1.62	80.63
5629	Remediation and Other Waste Management Services	261	1.61	82.24
5413	Architectural, Engineering, and Related Services	1,427	1.39	83.62
8111	Automotive Repair and Maintenance	2,599	1.02	84.64
6241	Individual and Family Services	1,114	0.82	85.46
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	1,374	0.76	86.23
5241	Insurance Carriers	173	0.71	86.94
7223	Special Food Services	288	0.66	87.60
8139	Business, Professional, Labor, Political, and Similar Organizations	980	0.65	88.26
2361	Residential Building Construction	5,518	0.62	88.88
5418	Advertising, Public Relations, and Related Services	772	0.62	89.49
8134	Civic and Social Organizations	1,315	0.55	90.04
4239	Miscellaneous Durable Goods Merchant Wholesalers	585	0.52	90.56
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	393	0.52	91.08
8112	Electronic and Precision Equipment Repair and Maintenance	515	0.49	91.57
5619	Other Support Services	380	0.45	92.02
2389	Other Specialty Trade Contractors	1,558	0.45	92.47
5417	Scientific Research and Development Services	129	0.41	92.88
5419	Other Professional, Scientific, and Technical Services	1,547	0.38	93.25
6117	Educational Support Services	80	0.37	93.63
1151	Support Activities for Crop Production	17	0.34	93.97
6219	Other Ambulatory Health Care Services	884	0.33	94.30
5313	Activities Related to Real Estate	23	0.32	94.62
5614	Business Support Services	4,448	0.27	94.89
6214	Outpatient Care Centers	277	0.26	95.15



## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
5414	Specialized Design Services	521	0.24	95.39
4931	Warehousing and Storage	328	0.24	95.63
5172	Wireless Telecommunications Carriers (except Satellite)	287	0.24	95.87
4842	Specialized Freight Trucking	191	0.23	96.10
4471	Gasoline Stations	784	0.22	96.32
5191	Other Information Services	60	0.22	96.54
5611	Office Administrative Services	263	0.20	96.74
8123	Drycleaning and Laundry Services	164	0.18	96.93
5111	Newspaper, Periodical, Book, and Directory Publishers	195	0.18	97.11
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	155	0.18	97.29
4884	Support Activities for Road Transportation	194	0.17	97.46
5322	Consumer Goods Rental	154	0.16	97.62
5171	Wired Telecommunications Carriers	10	0.16	97.78
8114	Personal and Household Goods Repair and Maintenance	566	0.16	97.94
5312	Offices of Real Estate Agents and Brokers	2,381	0.15	98.09
5311	Lessors of Real Estate	2,665	0.15	98.24
5151	Radio and Television Broadcasting	130	0.14	98.38
6113	Colleges, Universities, and Professional Schools	197	0.13	98.51
6211	Offices of Physicians	3,371	0.12	98.64
8122	Death Care Services	418	0.12	98.76
6216	Home Health Care Services	370	0.10	98.86
8131	Religious Organizations	4,091	0.08	98.94
3273	Cement and Concrete Product Manufacturing	44	0.08	99.02
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	246	0.07	99.09
6115	Technical and Trade Schools	68	0.07	99.16
2373	Highway, Street, and Bridge Construction	210	0.07	99.23
7139	Other Amusement and Recreation Industries	858	0.07	99.30
4883	Support Activities for Water Transportation	7	0.07	99.37
6243	Vocational Rehabilitation Services	125	0.06	99.43
7224	Drinking Places (Alcoholic Beverages)	1,038	0.06	99.50
4885	Freight Transportation Arrangement	238	0.05	99.55
3364	Aerospace Product and Parts Manufacturing	14	0.05	99.60
7221	Full-Service Restaurants	2,863	0.04	99.63
3339	Other General Purpose Machinery Manufacturing	3	0.04	99.67
5223	Activities Related to Credit Intermediation	39	0.04	99.71
6221	General Medical and Surgical Hospitals	174	0.03	99.74
6215	Medical and Diagnostic Laboratories	111	0.03	99.77
5182	Data Processing, Hosting, and Related Services	222	0.03	99.80
7115	Independent Artists, Writers, and Performers	196	0.03	99.83
5612	Facilities Support Services	37	0.03	99.86
2381	Foundation, Structure, and Building Exterior Contractors	282	0.03	99.89

## M/WBE Availability in the City of Cleveland's Market Area

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Industry Weight (Cumulative)</b>
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	127	0.03	99.92
8132	Grantmaking and Giving Services	13	0.03	99.95
6114	Business Schools and Computer and Management Training	27	0.03	99.97
4853	Taxi and Limousine Service	66	0.03	100.00

Source and Notes: See Table 4.1.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.7. Commodities—Number of Business Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
4236	Electrical and Electronic Goods Merchant Wholesalers	607	13.75	13.75
4247	Petroleum and Petroleum Products Merchant Wholesalers	107	9.36	23.11
4246	Chemical and Allied Products Merchant Wholesalers	196	9.08	32.20
4411	Automobile Dealers	974	8.97	41.17
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1,673	6.21	47.37
3342	Communications Equipment Manufacturing	41	4.90	52.27
3251	Basic Chemical Manufacturing	99	4.02	56.29
3341	Computer and Peripheral Equipment Manufacturing	55	3.31	59.60
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	739	3.23	62.83
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	213	2.76	65.60
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	418	2.65	68.24
4441	Building Material and Supplies Dealers	794	2.34	70.58
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	419	2.34	72.92
3331	Agriculture, Construction, and Mining Machinery Manufacturing	44	2.13	75.06
4413	Automotive Parts, Accessories, and Tire Stores	385	1.53	76.59
3361	Motor Vehicle Manufacturing	5	1.43	78.02
3259	Other Chemical Product and Preparation Manufacturing	70	1.34	79.35
4239	Miscellaneous Durable Goods Merchant Wholesalers	585	1.31	80.66
4241	Paper and Paper Product Merchant Wholesalers	238	1.22	81.88
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	96	1.17	83.05
3231	Printing and Related Support Activities	485	1.15	84.21
4431	Electronics and Appliance Stores	725	1.12	85.32
4244	Grocery and Related Product Merchant Wholesalers	347	1.02	86.35
4539	Other Miscellaneous Store Retailers	1,435	0.93	87.28
4442	Lawn and Garden Equipment and Supplies Stores	249	0.83	88.11
3329	Other Fabricated Metal Product Manufacturing	14	0.75	88.87
3262	Rubber Product Manufacturing	3	0.72	89.59
4511	Sporting Goods, Hobby, and Musical Instrument Stores	838	0.64	90.23
4233	Lumber and Other Construction Materials Merchant Wholesalers	496	0.64	90.87
3391	Medical Equipment and Supplies Manufacturing	125	0.63	91.50
4232	Furniture and Home Furnishing Merchant Wholesalers	120	0.61	92.11
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	123	0.50	92.61
3255	Paint, Coating, and Adhesive Manufacturing	57	0.43	93.05
3333	Commercial and Service Industry Machinery	51	0.43	93.48

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
	Manufacturing			
3261	Plastics Product Manufacturing	237	0.42	93.90
3399	Other Miscellaneous Manufacturing	417	0.42	94.31
3353	Electrical Equipment Manufacturing	19	0.38	94.69
3339	Other General Purpose Machinery Manufacturing	25	0.37	95.07
4242	Drugs and Druggists' Sundries Merchant Wholesalers	86	0.37	95.43
3241	Petroleum and Coal Products Manufacturing	18	0.34	95.77
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	36	0.22	96.00
2382	Building Equipment Contractors	2,595	0.21	96.21
3362	Motor Vehicle Body and Trailer Manufacturing	8	0.20	96.41
4412	Other Motor Vehicle Dealers	107	0.19	96.60
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	595	0.19	96.79
4451	Grocery Stores	908	0.17	96.96
4422	Home Furnishings Stores	348	0.17	97.13
3363	Motor Vehicle Parts Manufacturing	84	0.16	97.29
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	397	0.16	97.45
3351	Electric Lighting Equipment Manufacturing	11	0.15	97.60
3315	Foundries	8	0.14	97.75
3274	Lime and Gypsum Product Manufacturing	4	0.11	97.86
4532	Office Supplies, Stationery, and Gift Stores	90	0.11	97.97
3149	Other Textile Product Mills	20	0.11	98.08
3343	Audio and Video Equipment Manufacturing	24	0.09	98.17
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	6	0.09	98.26
3211	Sawmills and Wood Preservation	11	0.08	98.35
3254	Pharmaceutical and Medicine Manufacturing	50	0.08	98.43
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	54	0.08	98.51
3372	Office Furniture (including Fixtures) Manufacturing	8	0.07	98.58
3115	Dairy Product Manufacturing	2	0.06	98.64
3118	Bakeries and Tortilla Manufacturing	26	0.06	98.70
4481	Clothing Stores	230	0.05	98.75
3359	Other Electrical Equipment and Component Manufacturing	40	0.05	98.80
4421	Furniture Stores	360	0.05	98.85
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	19	0.05	98.90
3332	Industrial Machinery Manufacturing	60	0.04	98.94
3273	Cement and Concrete Product Manufacturing	31	0.04	98.98
3344	Semiconductor and Other Electronic Component Manufacturing	75	0.04	99.01
3323	Architectural and Structural Metals Manufacturing	92	0.03	99.04
3324	Boiler, Tank, and Shipping Container Manufacturing	8	0.03	99.08
2381	Foundation, Structure, and Building Exterior	527	0.03	99.11

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
	Contractors			
4529	Other General Merchandise Stores	346	0.03	99.13
3272	Glass and Glass Product Manufacturing	11	0.02	99.16

Source and Notes: See Table 4.1.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.8. Commodities—Number of Business Establishments and Industry Weight (Dollars Paid), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
4236	Electrical and Electronic Goods Merchant Wholesalers	607	12.16	12.16
4247	Petroleum and Petroleum Products Merchant Wholesalers	107	10.98	23.13
4246	Chemical and Allied Products Merchant Wholesalers	196	9.11	32.24
4411	Automobile Dealers	974	7.35	39.59
3342	Communications Equipment Manufacturing	41	6.45	46.04
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1,673	6.19	52.23
3251	Basic Chemical Manufacturing	99	4.00	56.24
3341	Computer and Peripheral Equipment Manufacturing	55	3.94	60.17
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	213	3.26	63.44
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	739	3.16	66.60
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	418	3.00	69.59
4441	Building Material and Supplies Dealers	794	2.50	72.09
3331	Agriculture, Construction, and Mining Machinery Manufacturing	44	2.40	74.50
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	419	1.89	76.38
4413	Automotive Parts, Accessories, and Tire Stores	385	1.82	78.20
4239	Miscellaneous Durable Goods Merchant Wholesalers	585	1.53	79.73
4241	Paper and Paper Product Merchant Wholesalers	238	1.30	81.03
3361	Motor Vehicle Manufacturing	5	1.26	82.29
4431	Electronics and Appliance Stores	725	1.25	83.54
3259	Other Chemical Product and Preparation Manufacturing	70	1.22	84.76
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	96	1.20	85.96
4539	Other Miscellaneous Store Retailers	1,435	0.84	86.80
3262	Rubber Product Manufacturing	3	0.78	87.58
3329	Other Fabricated Metal Product Manufacturing	14	0.72	88.30
4233	Lumber and Other Construction Materials Merchant Wholesalers	496	0.71	89.01
4511	Sporting Goods, Hobby, and Musical Instrument Stores	838	0.64	89.64
3231	Printing and Related Support Activities	485	0.58	90.22
3391	Medical Equipment and Supplies Manufacturing	125	0.56	90.78
4232	Furniture and Home Furnishing Merchant Wholesalers	120	0.56	91.33
4244	Grocery and Related Product Merchant Wholesalers	347	0.52	91.86
3353	Electrical Equipment Manufacturing	19	0.50	92.36
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	123	0.48	92.84
3261	Plastics Product Manufacturing	237	0.47	93.32
3399	Other Miscellaneous Manufacturing	199	0.44	93.75

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Establishments	Industry Weight	Industry Weight (Cumulative)
4442	Lawn and Garden Equipment and Supplies Stores	249	0.43	94.18
3255	Paint, Coating, and Adhesive Manufacturing	57	0.41	94.59
3241	Petroleum and Coal Products Manufacturing	18	0.38	94.97
2382	Building Equipment Contractors	2,595	0.28	95.26
3351	Electric Lighting Equipment Manufacturing	30	0.27	95.53
3362	Motor Vehicle Body and Trailer Manufacturing	8	0.26	95.79
4412	Other Motor Vehicle Dealers	107	0.22	96.02
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	36	0.22	96.23
4422	Home Furnishings Stores	348	0.22	96.45
4242	Drugs and Druggists' Sundries Merchant Wholesalers	86	0.20	96.65
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	397	0.19	96.84
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	595	0.18	97.02
3339	Other General Purpose Machinery Manufacturing	25	0.17	97.19
3363	Motor Vehicle Parts Manufacturing	84	0.17	97.35
3333	Commercial and Service Industry Machinery Manufacturing	51	0.16	97.51
3149	Other Textile Product Mills	20	0.13	97.65
4532	Office Supplies, Stationery, and Gift Stores	90	0.13	97.78
3343	Audio and Video Equipment Manufacturing	24	0.12	97.90
3315	Foundries	8	0.12	98.01
3274	Lime and Gypsum Product Manufacturing	4	0.11	98.13
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	6	0.11	98.24
3211	Sawmills and Wood Preservation	11	0.11	98.35
3372	Office Furniture (including Fixtures) Manufacturing	8	0.09	98.44
3254	Pharmaceutical and Medicine Manufacturing	43	0.07	98.51
3115	Dairy Product Manufacturing	2	0.07	98.58
3359	Other Electrical Equipment and Component Manufacturing	40	0.07	98.65
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	19	0.06	98.71
4451	Grocery Stores	908	0.06	98.77
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	54	0.06	98.83
3118	Bakeries and Tortilla Manufacturing	26	0.05	98.88
3323	Architectural and Structural Metals Manufacturing	92	0.04	98.92
4481	Clothing Stores	230	0.04	98.97
3332	Industrial Machinery Manufacturing	60	0.04	99.01
2381	Foundation, Structure, and Building Exterior Contractors	527	0.04	99.05
3273	Cement and Concrete Product Manufacturing	31	0.04	99.09
3344	Semiconductor and Other Electronic Component Manufacturing	75	0.04	99.13
3272	Glass and Glass Product Manufacturing	11	0.03	99.16

## M/WBE Availability in the City of Cleveland's Market Area

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Industry Weight (Cumulative)</b>
4471	Gasoline Stations	784	0.03	99.19

Source and Notes: See Table 4.1.



## 2. Identify Listed M/WBEs

While extensive, Dun & Bradstreet does not sufficiently identify all businesses owned by minorities or women. Although many such businesses *are* correctly identified in Dun & Bradstreet, experience has demonstrated that many are also missed. For this reason, several additional steps were required to identify the appropriate percentage of M/WBEs in the relevant market.

First, NERA completed an intensive regional search for information on minority-owned and woman-owned businesses in Cleveland and the surrounding area. Beyond the information already in Dun & Bradstreet/Hoover's, NERA collected lists of M/WBEs from the City of Cleveland and other public and private entities. Specifically, directories were included from: American Indian Search, Black Pages Ohio, Business Research Services Inc., the City of Akron, the City of Canton, the City of Cincinnati, the City of Columbus, the City of Ft. Wayne, the City of Springfield, Diversity Information Resources, DiversityBusiness.com, Greater Cincinnati African American Chamber of Commerce, Green County, Indiana Department of Administration, Indo-American Chamber of Commerce, Japan/America Society of Kentucky, Michigan Department of Transportation, the National Center for American Indian Enterprise Development, Native American Business Alliance, New York State Department of Economic Development, New York State Unified Certification Program, Northeast Ohio Regional Sewer District, Ohio Department of Administrative Services, Ohio Department of Development, Ohio Unified Certification Program, Pennsylvania Department of General Services, Pennsylvania Unified Certification Program, Small Business Administration, Summit County, U.S. Department of Commerce, United States Women's Chamber of Commerce, Women Business Enterprise National Council and MWBE.com.<sup>217</sup>

If the listed M/WBEs identified in Tables 4.9–4.20 are in fact *all* M/WBEs and are the *only* M/WBEs among all of the businesses identified in Tables 4.1–4.8, then an estimate of “listed” M/WBE availability is simply the number of listed M/WBEs (taken from Tables 4.9–4.20, respectively) divided by the total number of businesses in the relevant market (taken from Tables 4.1–4.8, respectively). However, as we shall see below, neither of these two conditions holds true in practice and this is therefore *not* an appropriate method for measuring M/WBE availability.

There are two reasons for this. First, it is likely that some proportion of the M/WBEs listed in the tables is not actually minority-owned or women-owned. Second, it is likely that there are additional “unlisted” M/WBEs among all of the businesses included in Tables 4.1–4.8. Such businesses do not appear in any of the directories we gathered and are therefore not included as M/WBEs in Tables 4.9–4.20. Additional steps are required to test these two conditions and to arrive at a more accurate representation of M/WBE availability within the Baseline Business Universe. We discuss these steps in Sections 3.A and 3.B below.

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<sup>217</sup> We also obtained information from certain entities that was duplicative of either Dun & Bradstreet or one or more of the other sources listed above. These entities are listed below in Appendix B. We were unable to obtain relevant lists or directories from a number of entities. The reasons for this include: (1) the entity did not have a list or the entity's list did not include race and sex information; (2) the entity was unresponsive to repeated attempts at contacts; or, (3) the entity simply declined to provide us the list. These entities, as well, are listed in Appendix B.

**Table 4.9. Construction—Number of Listed M/WBEs and Industry Weight (Dollars Awarded), by NAICS Code**

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Industry Weight (Cumulative)</b>
2389	Other Specialty Trade Contractors	120	16.49	16.49
2382	Building Equipment Contractors	180	14.87	31.37
2371	Utility System Construction	8	12.46	43.83
2361	Residential Building Construction	207	12.22	56.05
2362	Nonresidential Building Construction	81	11.88	67.93
2381	Foundation, Structure, and Building Exterior Contractors	116	8.70	76.63
2373	Highway, Street, and Bridge Construction	21	7.73	84.36
2383	Building Finishing Contractors	132	2.97	87.33
3273	Cement and Concrete Product Manufacturing	10	1.97	89.30
2379	Other Heavy and Civil Engineering Construction	3	1.11	90.41
4233	Lumber and Other Construction Materials Merchant Wholesalers	18	0.86	91.27
5413	Architectural, Engineering, and Related Services	145	0.85	92.11
3339	Other General Purpose Machinery Manufacturing	1	0.81	92.92
2211	Electric Power Generation, Transmission and Distribution	2	0.78	93.70
4841	General Freight Trucking	118	0.76	94.46
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	19	0.71	95.17
5617	Services to Buildings and Dwellings	226	0.59	95.76
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	10	0.52	96.28
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	46	0.41	96.69
3323	Architectural and Structural Metals Manufacturing	20	0.31	97.00
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	32	0.26	97.26
3324	Boiler, Tank, and Shipping Container Manufacturing	0	0.20	97.47
4236	Electrical and Electronic Goods Merchant Wholesalers	23	0.20	97.66
3219	Other Wood Product Manufacturing	2	0.19	97.86
4441	Building Material and Supplies Dealers	22	0.19	98.05
4539	Other Miscellaneous Store Retailers	84	0.15	98.19
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	3	0.14	98.33
2123	Nonmetallic Mineral Mining and Quarrying	1	0.13	98.46
5616	Investigation and Security Services	5	0.13	98.60
3261	Plastics Product Manufacturing	15	0.13	98.73
4239	Miscellaneous Durable Goods Merchant Wholesalers	28	0.12	98.85
4232	Furniture and Home Furnishing Merchant Wholesalers	12	0.12	98.98
5629	Remediation and Other Waste Management Services	3	0.11	99.09
4842	Specialized Freight Trucking	11	0.10	99.19
3399	Other Miscellaneous Manufacturing	18	0.09	99.28

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	48	0.09	99.36
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	3	0.07	99.44
3315	Foundries	0	0.07	99.51
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	0	0.07	99.57
5416	Management, Scientific, and Technical Consulting Services	275	0.07	99.64
2372	Land Subdivision	15	0.06	99.70
5619	Other Support Services	68	0.06	99.76
3353	Electrical Equipment Manufacturing	3	0.05	99.81
4242	Drugs and Druggists' Sundries Merchant Wholesalers	16	0.05	99.86
5612	Facilities Support Services	6	0.05	99.91
5419	Other Professional, Scientific, and Technical Services	68	0.05	99.96
8112	Electronic and Precision Equipment Repair and Maintenance	19	0.04	100.00

Source and Notes: See Table 4.1.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.10. Construction—Number of Listed M/WBEs and Industry Weight (Dollars Paid), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
2389	Other Specialty Trade Contractors	120	17.84	17.84
2382	Building Equipment Contractors	180	15.37	33.21
2361	Residential Building Construction	207	13.44	46.65
2362	Nonresidential Building Construction	81	12.18	58.83
2371	Utility System Construction	8	9.72	68.55
2381	Foundation, Structure, and Building Exterior Contractors	116	7.89	76.44
2373	Highway, Street, and Bridge Construction	21	7.19	83.64
2383	Building Finishing Contractors	132	2.69	86.33
3273	Cement and Concrete Product Manufacturing	10	2.08	88.41
2379	Other Heavy and Civil Engineering Construction	3	1.41	89.82
2211	Electric Power Generation, Transmission and Distribution	2	0.99	90.81
4233	Lumber and Other Construction Materials Merchant Wholesalers	18	0.98	91.78
3339	Other General Purpose Machinery Manufacturing	1	0.93	92.72
5413	Architectural, Engineering, and Related Services	145	0.87	93.59
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	19	0.84	94.43
4841	General Freight Trucking	76	0.74	95.17
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	10	0.63	95.80
5617	Services to Buildings and Dwellings	226	0.54	96.35
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	46	0.42	96.76
3323	Architectural and Structural Metals Manufacturing	20	0.39	97.16
3219	Other Wood Product Manufacturing	2	0.25	97.40
4236	Electrical and Electronic Goods Merchant Wholesalers	23	0.24	97.64
4441	Building Material and Supplies Dealers	22	0.23	97.88
3324	Boiler, Tank, and Shipping Container Manufacturing	0	0.23	98.11
4539	Other Miscellaneous Store Retailers	84	0.18	98.28
5616	Investigation and Security Services	5	0.17	98.45
2123	Nonmetallic Mineral Mining and Quarrying	1	0.17	98.62
4239	Miscellaneous Durable Goods Merchant Wholesalers	28	0.15	98.78
4232	Furniture and Home Furnishing Merchant Wholesalers	12	0.14	98.92
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	32	0.13	99.05
3261	Plastics Product Manufacturing	15	0.12	99.18
3399	Other Miscellaneous Manufacturing	18	0.11	99.29
5629	Remediation and Other Waste Management Services	3	0.10	99.39
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	3	0.09	99.48
3315	Foundries	0	0.08	99.57
4842	Specialized Freight Trucking	11	0.08	99.65
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	0	0.08	99.73

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	48	0.08	99.81
3353	Electrical Equipment Manufacturing	3	0.07	99.88
2372	Land Subdivision	15	0.06	99.94
5612	Facilities Support Services	6	0.06	100.00

Source and Notes: See Table 4.1.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.11. AE-CRS—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Industry Weight (Cumulative)</b>
5413	Architectural, Engineering, and Related Services	183	91.46	91.46
5416	Management, Scientific, and Technical Consulting Services	465	2.26	93.72
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	41	1.76	95.48
2389	Other Specialty Trade Contractors	83	0.95	96.43
5415	Computer Systems Design and Related Services	150	0.82	97.25
2382	Building Equipment Contractors	180	0.51	97.76
2381	Foundation, Structure, and Building Exterior Contractors	38	0.40	98.16
5414	Specialized Design Services	182	0.31	98.47
7139	Other Amusement and Recreation Industries	12	0.31	98.78
3231	Printing and Related Support Activities	8	0.28	99.05
2362	Nonresidential Building Construction	65	0.24	99.29
5611	Office Administrative Services	11	0.17	99.46
5112	Software Publishers	9	0.17	99.63
5617	Services to Buildings and Dwellings	86	0.14	99.77
4841	General Freight Trucking	76	0.08	99.85
2383	Building Finishing Contractors	12	0.08	99.93
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	6	0.07	100.00

Source and Notes: See Table 4.1.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.12. AE-CRS—Number of Listed M/WBE Establishments and Industry Weight (Dollars Paid), by NAICS Code**

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Industry Weight (Cumulative)</b>
5413	Architectural, Engineering, and Related Services	183	90.88	90.88
2389	Other Specialty Trade Contractors	120	1.70	92.58
5416	Management, Scientific, and Technical Consulting Services	465	1.69	94.27
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	41	1.52	95.79
2381	Foundation, Structure, and Building Exterior Contractors	38	0.66	96.45
7139	Other Amusement and Recreation Industries	12	0.51	96.96
5414	Specialized Design Services	182	0.51	97.47
2362	Nonresidential Building Construction	65	0.38	97.86
5112	Software Publishers	9	0.34	98.19
2382	Building Equipment Contractors	94	0.33	98.52
5415	Computer Systems Design and Related Services	106	0.30	98.83
3231	Printing and Related Support Activities	8	0.24	99.06
5617	Services to Buildings and Dwellings	86	0.23	99.29
4841	General Freight Trucking	76	0.14	99.42
2383	Building Finishing Contractors	12	0.13	99.55
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	6	0.12	99.67
4511	Sporting Goods, Hobby, and Musical Instrument Stores	13	0.12	99.80
4239	Miscellaneous Durable Goods Merchant Wholesalers	7	0.10	99.90
5242	Agencies, Brokerages, and Other Insurance Related Activities	144	0.10	100.00

Source and Notes: See Table 4.1.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.13. Services—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
5622	Waste Treatment and Disposal	3	12.36	12.36
5416	Management, Scientific, and Technical Consulting Services	640	12.28	24.64
5613	Employment Services	105	10.33	34.97
4841	General Freight Trucking	118	7.10	42.08
5415	Computer Systems Design and Related Services	155	6.32	48.40
8129	Other Personal Services	147	4.86	53.26
5112	Software Publishers	9	4.36	57.62
5617	Services to Buildings and Dwellings	237	3.29	60.91
5179	Other Telecommunications	12	3.07	63.98
5418	Advertising, Public Relations, and Related Services	120	2.26	66.24
5616	Investigation and Security Services	29	2.23	68.47
2382	Building Equipment Contractors	180	2.18	70.65
5171	Wired Telecommunications Carriers	0	2.06	72.71
5413	Architectural, Engineering, and Related Services	183	1.73	74.43
5242	Agencies, Brokerages, and Other Insurance Related Activities	144	1.68	76.11
8133	Social Advocacy Organizations	1	1.61	77.72
8111	Automotive Repair and Maintenance	79	1.56	79.28
5411	Legal Services	231	1.49	80.77
5629	Remediation and Other Waste Management Services	20	1.42	82.19
5621	Waste Collection	5	1.37	83.56
5619	Other Support Services	68	0.92	84.48
6241	Individual and Family Services	14	0.80	85.28
5241	Insurance Carriers	17	0.72	86.00
7223	Special Food Services	48	0.72	86.72
8139	Business, Professional, Labor, Political, and Similar Organizations	3	0.71	87.42
4239	Miscellaneous Durable Goods Merchant Wholesalers	35	0.70	88.12
8112	Electronic and Precision Equipment Repair and Maintenance	33	0.69	88.81
8134	Civic and Social Organizations	3	0.66	89.47
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	6	0.59	90.07
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	141	0.55	90.62
2373	Highway, Street, and Bridge Construction	21	0.53	91.15
2361	Residential Building Construction	207	0.43	91.58
6117	Educational Support Services	16	0.43	92.02
6219	Other Ambulatory Health Care Services	21	0.37	92.38
2389	Other Specialty Trade Contractors	120	0.37	92.75
5614	Business Support Services	209	0.37	93.12
5172	Wireless Telecommunications Carriers (except Satellite)	9	0.30	93.42
5417	Scientific Research and Development Services	17	0.28	93.70



## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
1151	Support Activities for Crop Production	1	0.28	93.98
5313	Activities Related to Real Estate	0	0.27	94.25
5312	Offices of Real Estate Agents and Brokers	211	0.27	94.52
5111	Newspaper, Periodical, Book, and Directory Publishers	32	0.26	94.78
4881	Support Activities for Air Transportation	1	0.25	95.04
5414	Specialized Design Services	129	0.24	95.27
5611	Office Administrative Services	11	0.22	95.50
4884	Support Activities for Road Transportation	14	0.22	95.72
8123	Drycleaning and Laundry Services	19	0.22	95.93
6214	Outpatient Care Centers	14	0.22	96.15
5419	Other Professional, Scientific, and Technical Services	83	0.21	96.35
5191	Other Information Services	9	0.20	96.56
4931	Warehousing and Storage	18	0.20	96.76
4842	Specialized Freight Trucking	23	0.19	96.95
4471	Gasoline Stations	22	0.18	97.13
8114	Personal and Household Goods Repair and Maintenance	19	0.17	97.30
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	6	0.17	97.48
5321	Automotive Equipment Rental and Leasing	7	0.17	97.65
5311	Lessors of Real Estate	80	0.17	97.82
5322	Consumer Goods Rental	5	0.17	97.99
6113	Colleges, Universities, and Professional Schools	1	0.13	98.12
5151	Radio and Television Broadcasting	5	0.13	98.25
3222	Converted Paper Product Manufacturing	0	0.12	98.37
6211	Offices of Physicians	229	0.12	98.49
7139	Other Amusement and Recreation Industries	69	0.11	98.60
6115	Technical and Trade Schools	11	0.11	98.71
8122	Death Care Services	29	0.10	98.81
6216	Home Health Care Services	49	0.09	98.90
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	81	0.08	98.98
8131	Religious Organizations	4	0.08	99.06
3273	Cement and Concrete Product Manufacturing	5	0.08	99.13
6243	Vocational Rehabilitation Services	4	0.07	99.21
7224	Drinking Places (Alcoholic Beverages)	82	0.07	99.28
4921	Couriers and Express Delivery Services	4	0.06	99.34
4883	Support Activities for Water Transportation	0	0.05	99.39
5223	Activities Related to Credit Intermediation	0	0.05	99.45
6114	Business Schools and Computer and Management Training	5	0.05	99.49
5152	Cable and Other Subscription Programming	1	0.05	99.54
7221	Full-Service Restaurants	237	0.05	99.59
4885	Freight Transportation Arrangement	25	0.04	99.63
3231	Printing and Related Support Activities	36	0.04	99.67
6215	Medical and Diagnostic Laboratories	7	0.04	99.71

## M/WBE Availability in the City of Cleveland's Market Area

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Industry Weight (Cumulative)</b>
3364	Aerospace Product and Parts Manufacturing	3	0.04	99.75
7115	Independent Artists, Writers, and Performers	55	0.03	99.78
6221	General Medical and Surgical Hospitals	3	0.03	99.82
5182	Data Processing, Hosting, and Related Services	36	0.03	99.85
3339	Other General Purpose Machinery Manufacturing	1	0.03	99.88
5612	Facilities Support Services	6	0.03	99.91
4233	Lumber and Other Construction Materials Merchant Wholesalers	6	0.02	99.93
2381	Foundation, Structure, and Building Exterior Contractors	26	0.02	99.95
8132	Grantmaking and Giving Services	1	0.02	99.98
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	9	0.02	100.00

Source and Notes: See Table 4.1.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.14. Services—Number of Listed M/WBE Establishments and Industry Weight (Dollars Paid), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
5622	Waste Treatment and Disposal	3	16.85	16.85
5613	Employment Services	105	12.45	29.30
5416	Management, Scientific, and Technical Consulting Services	640	10.77	40.07
5415	Computer Systems Design and Related Services	155	7.22	47.30
4841	General Freight Trucking	118	6.17	53.46
8129	Other Personal Services	-	5.96	59.42
5112	Software Publishers	9	4.49	63.91
5179	Other Telecommunications	12	3.11	67.02
5617	Services to Buildings and Dwellings	237	2.91	69.93
2382	Building Equipment Contractors	180	2.71	72.64
5616	Investigation and Security Services	29	2.44	75.08
5242	Agencies, Brokerages, and Other Insurance Related Activities	144	2.05	77.13
5411	Legal Services	207	1.88	79.01
8133	Social Advocacy Organizations	1	1.62	80.63
5629	Remediation and Other Waste Management Services	20	1.61	82.24
5413	Architectural, Engineering, and Related Services	134	1.39	83.62
8111	Automotive Repair and Maintenance	68	1.02	84.64
6241	Individual and Family Services	14	0.82	85.46
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	141	0.76	86.23
5241	Insurance Carriers	17	0.71	86.94
7223	Special Food Services	48	0.66	87.60
8139	Business, Professional, Labor, Political, and Similar Organizations	5	0.65	88.26
2361	Residential Building Construction	207	0.62	88.88
5418	Advertising, Public Relations, and Related Services	124	0.62	89.49
8134	Civic and Social Organizations	3	0.55	90.04
4239	Miscellaneous Durable Goods Merchant Wholesalers	35	0.52	90.56
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	6	0.52	91.08
8112	Electronic and Precision Equipment Repair and Maintenance	33	0.49	91.57
5619	Other Support Services	68	0.45	92.02
2389	Other Specialty Trade Contractors	120	0.45	92.47
5417	Scientific Research and Development Services	17	0.41	92.88
5419	Other Professional, Scientific, and Technical Services	83	0.38	93.25
6117	Educational Support Services	16	0.37	93.63
1151	Support Activities for Crop Production	1	0.34	93.97
6219	Other Ambulatory Health Care Services	21	0.33	94.30
5313	Activities Related to Real Estate	-	0.32	94.62
5614	Business Support Services	162	0.27	94.89
6214	Outpatient Care Centers	14	0.26	95.15

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
5414	Specialized Design Services	129	0.24	95.39
4931	Warehousing and Storage	18	0.24	95.63
5172	Wireless Telecommunications Carriers (except Satellite)	9	0.24	95.87
4842	Specialized Freight Trucking	23	0.23	96.10
4471	Gasoline Stations	22	0.22	96.32
5191	Other Information Services	9	0.22	96.54
5611	Office Administrative Services	11	0.20	96.74
8123	Drycleaning and Laundry Services	17	0.18	96.93
5111	Newspaper, Periodical, Book, and Directory Publishers	18	0.18	97.11
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	6	0.18	97.29
4884	Support Activities for Road Transportation	14	0.17	97.46
5322	Consumer Goods Rental	5	0.16	97.62
5171	Wired Telecommunications Carriers	-	0.16	97.78
8114	Personal and Household Goods Repair and Maintenance	19	0.16	97.94
5312	Offices of Real Estate Agents and Brokers	211	0.15	98.09
5311	Lessors of Real Estate	80	0.15	98.24
5151	Radio and Television Broadcasting	5	0.14	98.38
6113	Colleges, Universities, and Professional Schools	1	0.13	98.51
6211	Offices of Physicians	229	0.12	98.64
8122	Death Care Services	29	0.12	98.76
6216	Home Health Care Services	49	0.10	98.86
8131	Religious Organizations	4	0.08	98.94
3273	Cement and Concrete Product Manufacturing	5	0.08	99.02
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	40	0.07	99.09
6115	Technical and Trade Schools	11	0.07	99.16
2373	Highway, Street, and Bridge Construction	21	0.07	99.23
7139	Other Amusement and Recreation Industries	69	0.07	99.30
4883	Support Activities for Water Transportation	-	0.07	99.37
6243	Vocational Rehabilitation Services	4	0.06	99.43
7224	Drinking Places (Alcoholic Beverages)	82	0.06	99.50
4885	Freight Transportation Arrangement	25	0.05	99.55
3364	Aerospace Product and Parts Manufacturing	3	0.05	99.60
7221	Full-Service Restaurants	237	0.04	99.63
3339	Other General Purpose Machinery Manufacturing	1	0.04	99.67
5223	Activities Related to Credit Intermediation	-	0.04	99.71
6221	General Medical and Surgical Hospitals	3	0.03	99.74
6215	Medical and Diagnostic Laboratories	7	0.03	99.77
5182	Data Processing, Hosting, and Related Services	36	0.03	99.80
7115	Independent Artists, Writers, and Performers	55	0.03	99.83
5612	Facilities Support Services	6	0.03	99.86
2381	Foundation, Structure, and Building Exterior Contractors	26	0.03	99.89

## M/WBE Availability in the City of Cleveland's Market Area

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Industry Weight (Cumulative)</b>
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	9	0.03	99.92
8132	Grantmaking and Giving Services	1	0.03	99.95
6114	Business Schools and Computer and Management Training	5	0.03	99.97
4853	Taxi and Limousine Service	4	0.03	100.00

Source and Notes: See Table 4.1.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.15. Commodities—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
4236	Electrical and Electronic Goods Merchant Wholesalers	46	13.75	13.75
4247	Petroleum and Petroleum Products Merchant Wholesalers	9	9.36	23.11
4246	Chemical and Allied Products Merchant Wholesalers	23	9.08	32.20
4411	Automobile Dealers	28	8.97	41.17
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	136	6.21	47.37
3342	Communications Equipment Manufacturing	5	4.90	52.27
3251	Basic Chemical Manufacturing	7	4.02	56.29
3341	Computer and Peripheral Equipment Manufacturing	5	3.31	59.60
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	79	3.23	62.83
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	17	2.76	65.60
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	19	2.65	68.24
4441	Building Material and Supplies Dealers	43	2.34	70.58
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	19	2.34	72.92
3331	Agriculture, Construction, and Mining Machinery Manufacturing	3	2.13	75.06
4413	Automotive Parts, Accessories, and Tire Stores	20	1.53	76.59
3361	Motor Vehicle Manufacturing	0	1.43	78.02
3259	Other Chemical Product and Preparation Manufacturing	5	1.34	79.35
4239	Miscellaneous Durable Goods Merchant Wholesalers	35	1.31	80.66
4241	Paper and Paper Product Merchant Wholesalers	34	1.22	81.88
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	16	1.17	83.05
3231	Printing and Related Support Activities	49	1.15	84.21
4431	Electronics and Appliance Stores	53	1.12	85.32
4244	Grocery and Related Product Merchant Wholesalers	36	1.02	86.35
4539	Other Miscellaneous Store Retailers	84	0.93	87.28
4442	Lawn and Garden Equipment and Supplies Stores	21	0.83	88.11
3329	Other Fabricated Metal Product Manufacturing	1	0.75	88.87
3262	Rubber Product Manufacturing	0	0.72	89.59
4511	Sporting Goods, Hobby, and Musical Instrument Stores	73	0.64	90.23
4233	Lumber and Other Construction Materials Merchant Wholesalers	18	0.64	90.87
3391	Medical Equipment and Supplies Manufacturing	13	0.63	91.50
4232	Furniture and Home Furnishing Merchant Wholesalers	12	0.61	92.11
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	7	0.50	92.61
3255	Paint, Coating, and Adhesive Manufacturing	2	0.43	93.05
3333	Commercial and Service Industry Machinery	3	0.43	93.48

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
	Manufacturing			
3261	Plastics Product Manufacturing	15	0.42	93.90
3399	Other Miscellaneous Manufacturing	41	0.42	94.31
3353	Electrical Equipment Manufacturing	1	0.38	94.69
3339	Other General Purpose Machinery Manufacturing	1	0.37	95.07
4242	Drugs and Druggists' Sundries Merchant Wholesalers	16	0.37	95.43
3241	Petroleum and Coal Products Manufacturing	1	0.34	95.77
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	6	0.22	96.00
2382	Building Equipment Contractors	180	0.21	96.21
3362	Motor Vehicle Body and Trailer Manufacturing	1	0.20	96.41
4412	Other Motor Vehicle Dealers	6	0.19	96.60
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	48	0.19	96.79
4451	Grocery Stores	64	0.17	96.96
4422	Home Furnishings Stores	23	0.17	97.13
3363	Motor Vehicle Parts Manufacturing	3	0.16	97.29
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	32	0.16	97.45
3351	Electric Lighting Equipment Manufacturing	2	0.15	97.60
3315	Foundries	0	0.14	97.75
3274	Lime and Gypsum Product Manufacturing	1	0.11	97.86
4532	Office Supplies, Stationery, and Gift Stores	12	0.11	97.97
3149	Other Textile Product Mills	3	0.11	98.08
3343	Audio and Video Equipment Manufacturing	3	0.09	98.17
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	0	0.09	98.26
3211	Sawmills and Wood Preservation	0	0.08	98.35
3254	Pharmaceutical and Medicine Manufacturing	0	0.08	98.43
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	10	0.08	98.51
3372	Office Furniture (including Fixtures) Manufacturing	1	0.07	98.58
3115	Dairy Product Manufacturing	0	0.06	98.64
3118	Bakeries and Tortilla Manufacturing	7	0.06	98.70
4481	Clothing Stores	55	0.05	98.75
3359	Other Electrical Equipment and Component Manufacturing	1	0.05	98.80
4421	Furniture Stores	35	0.05	98.85
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	0	0.05	98.90
3332	Industrial Machinery Manufacturing	4	0.04	98.94
3273	Cement and Concrete Product Manufacturing	5	0.04	98.98
3344	Semiconductor and Other Electronic Component Manufacturing	7	0.04	99.01
3323	Architectural and Structural Metals Manufacturing	7	0.03	99.04
3324	Boiler, Tank, and Shipping Container Manufacturing	0	0.03	99.08
2381	Foundation, Structure, and Building Exterior	20	0.03	99.11

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
	Contractors			
4529	Other General Merchandise Stores	13	0.03	99.13
3272	Glass and Glass Product Manufacturing	4	0.02	99.16

Source and Notes: See Table 4.1.



## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.16. Commodities—Number of Listed M/WBE Establishments and Industry Weight (Dollars Paid), by NAICS Code**

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
4236	Electrical and Electronic Goods Merchant Wholesalers	46	12.16	12.16
4247	Petroleum and Petroleum Products Merchant Wholesalers	9	10.98	23.13
4246	Chemical and Allied Products Merchant Wholesalers	23	9.11	32.24
4411	Automobile Dealers	28	7.35	39.59
3342	Communications Equipment Manufacturing	5	6.45	46.04
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	136	6.19	52.23
3251	Basic Chemical Manufacturing	7	4.00	56.24
3341	Computer and Peripheral Equipment Manufacturing	5	3.94	60.17
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	17	3.26	63.44
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	79	3.16	66.60
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	19	3.00	69.59
4441	Building Material and Supplies Dealers	43	2.50	72.09
3331	Agriculture, Construction, and Mining Machinery Manufacturing	3	2.40	74.50
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	19	1.89	76.38
4413	Automotive Parts, Accessories, and Tire Stores	20	1.82	78.20
4239	Miscellaneous Durable Goods Merchant Wholesalers	35	1.53	79.73
4241	Paper and Paper Product Merchant Wholesalers	34	1.30	81.03
3361	Motor Vehicle Manufacturing	-	1.26	82.29
4431	Electronics and Appliance Stores	53	1.25	83.54
3259	Other Chemical Product and Preparation Manufacturing	5	1.22	84.76
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	16	1.20	85.96
4539	Other Miscellaneous Store Retailers	84	0.84	86.80
3262	Rubber Product Manufacturing	-	0.78	87.58
3329	Other Fabricated Metal Product Manufacturing	1	0.72	88.30
4233	Lumber and Other Construction Materials Merchant Wholesalers	18	0.71	89.01
4511	Sporting Goods, Hobby, and Musical Instrument Stores	73	0.64	89.64
3231	Printing and Related Support Activities	49	0.58	90.22
3391	Medical Equipment and Supplies Manufacturing	13	0.56	90.78
4232	Furniture and Home Furnishing Merchant Wholesalers	12	0.56	91.33
4244	Grocery and Related Product Merchant Wholesalers	36	0.52	91.86
3353	Electrical Equipment Manufacturing	1	0.50	92.36
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	7	0.48	92.84
3261	Plastics Product Manufacturing	15	0.47	93.32
3399	Other Miscellaneous Manufacturing	23	0.44	93.75

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
4442	Lawn and Garden Equipment and Supplies Stores	21	0.43	94.18
3255	Paint, Coating, and Adhesive Manufacturing	2	0.41	94.59
3241	Petroleum and Coal Products Manufacturing	1	0.38	94.97
2382	Building Equipment Contractors	180	0.28	95.26
3351	Electric Lighting Equipment Manufacturing	5	0.27	95.53
3362	Motor Vehicle Body and Trailer Manufacturing	1	0.26	95.79
4412	Other Motor Vehicle Dealers	6	0.22	96.02
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	6	0.22	96.23
4422	Home Furnishings Stores	23	0.22	96.45
4242	Drugs and Druggists' Sundries Merchant Wholesalers	16	0.20	96.65
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	32	0.19	96.84
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	48	0.18	97.02
3339	Other General Purpose Machinery Manufacturing	1	0.17	97.19
3363	Motor Vehicle Parts Manufacturing	3	0.17	97.35
3333	Commercial and Service Industry Machinery Manufacturing	3	0.16	97.51
3149	Other Textile Product Mills	3	0.13	97.65
4532	Office Supplies, Stationery, and Gift Stores	12	0.13	97.78
3343	Audio and Video Equipment Manufacturing	3	0.12	97.90
3315	Foundries	-	0.12	98.01
3274	Lime and Gypsum Product Manufacturing	1	0.11	98.13
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	-	0.11	98.24
3211	Sawmills and Wood Preservation	-	0.11	98.35
3372	Office Furniture (including Fixtures) Manufacturing	1	0.09	98.44
3254	Pharmaceutical and Medicine Manufacturing	-	0.07	98.51
3115	Dairy Product Manufacturing	-	0.07	98.58
3359	Other Electrical Equipment and Component Manufacturing	1	0.07	98.65
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	-	0.06	98.71
4451	Grocery Stores	64	0.06	98.77
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	10	0.06	98.83
3118	Bakeries and Tortilla Manufacturing	7	0.05	98.88
3323	Architectural and Structural Metals Manufacturing	7	0.04	98.92
4481	Clothing Stores	55	0.04	98.97
3332	Industrial Machinery Manufacturing	4	0.04	99.01
2381	Foundation, Structure, and Building Exterior Contractors	20	0.04	99.05
3273	Cement and Concrete Product Manufacturing	5	0.04	99.09
3344	Semiconductor and Other Electronic Component Manufacturing	7	0.04	99.13
3272	Glass and Glass Product Manufacturing	4	0.03	99.16

## M/WBE Availability in the City of Cleveland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumulative)
4471	Gasoline Stations	22	0.03	99.19

Source and Notes: See Table 4.1.

### 3. Verify Listed M/WBEs

#### a. Introduction

It is likely that information on M/WBEs from Dun & Bradstreet and other M/WBE directories is not correct in all instances. Phenomena such as ownership changes, associate or mentor status, recording errors, or even outright misrepresentation, will lead to businesses being listed as M/WBEs in a particular directory even though they may actually be owned by nonminority males. Other things equal, this type of error would cause our availability estimate to be biased upward from the actual availability number.

The second likelihood that must be addressed is that not all M/WBE businesses are necessarily listed—either in Dun & Bradstreet or in any of the other directories we collected. Such phenomena as geographic relocation, ownership changes, directory compilation errors, fear of stigmatization, and limitations in M/WBE outreach, could all lead to M/WBEs being unlisted. Other things equal, this type of error would cause our availability estimate to be biased downward from the actual availability number.

In our experience, we have found that both types of bias are not uncommon. For this Study, we corrected for the effect of these biases using statistical sampling procedures. We surveyed a large, stratified random sample of 6283 establishments drawn from the Baseline Business Universe and measured how often they were misclassified (or unclassified) by race and/or gender.<sup>218</sup>

Strata were defined according to NAICS sectors and listed M/WBE status.<sup>219</sup> In the telephone survey, up to 10 attempts were made to reach each business and speak with an appropriate respondent. Attempts were scheduled for a mix of day and evening, weekdays and weekends, and appointments were scheduled for callbacks when necessary. Of the 6,587 firms in our sample, 3,202 (48.6%) were listed M/WBEs and 3,385 (51.4%) were unclassified by race or gender. Of these 6,587 firms, however, 745 (11.3%) were excluded as “unable to contact.”

<sup>218</sup> A similar method was employed by the Federal Reserve Board to deal with similar problems in designing and implementing the National Survey of Small Business Finances for 1993 and 1998. See Haggerty, C., K. Grigorian, R. Harter and J. D. Wolken (2000).

<sup>219</sup> Eighteen separate industry strata were created based on NAICS code. All 18 strata were then split according to listed M/WBE status to create a total of 36 strata. Generally, listed M/WBEs were sampled at a higher rate than unclassified establishments.

Exclusions resulted primarily from firms that were no longer in business.<sup>220</sup> Of the remaining 5,842 firms, 2,894 (49.5%) were listed M/WBEs and the remaining 2,948 establishments (50.5%) were unclassified.

The first part of the survey tested whether our sample of listed M/WBEs was correctly classified by race and/or gender. The second part of the survey tested whether the unclassified firms (that is, firms putatively owned by nonminority males) could all be properly classified as non-M/WBEs. Both elements of the survey are described in more detail below.<sup>221</sup>

## b. Survey of Listed M/WBEs

We selected a stratified random sample of 3,202 listed M/WBEs to verify the race and gender status of their owner(s). Of these, 308 (9.6%) were excluded as “unable to contact.” Of the 2,894 remaining establishments, we obtained complete interviews from 1,480, for a response rate of 51.1 percent.

**Table 4.17. Listed M/WBE Survey—Amount of Misclassification, by Putative M/WBE Type**

<b>Putative Race/Gender</b>	<b>Misclassification (Percentage Nonminority Male)</b>	<b>Misclassification (Percentage Other M/WBE Type)</b>	<b>Percentage Correctly Classified</b>	<b>Number of Businesses Interviewed</b>
African American (either gender)	6.40	1.60	92.00	268
Hispanic (either gender)	41.24	20.62	38.14	46
Asian/Pacific Islander (either gender)	27.64	15.45	56.91	81
Native American (either gender)	46.15	23.08	30.77	22
Nonminority Female	19.72	6.40	73.88	1,063
All M/WBE Types	20.00	7.57	72.43	1,480

Source: NERA telephone surveys.

Notes: (1) Figures are rounded. Rounding was performed subsequent to any mathematical calculations. (2) Similar calculations, not shown here, were performed within each stratum.

Of the 1,480 establishments interviewed, 296 (20.0 percent) were actually owned by nonminority males. Misclassification varied by putative race and gender, as shown in Table 4.17. Misclassification was highest among putative Native American-owned firms, followed by

<sup>220</sup> Putative M/WBEs were not more likely to be affected by this than putative non-M/WBEs.

<sup>221</sup> By “putative,” we mean the race and gender that we initially assigned to each firm based on the information provided by the City of Cleveland, by Dun & Bradstreet, by our master DBE directory, and from other sources.

## M/WBE Availability in the City of Cleveland's Market Area

putative nonminority Hispanic-owned firms, Asian/Pacific Islander-owned firms, nonminority female-owned firms, and, finally, African American-owned firms.<sup>222</sup> Misclassification was also observed in every NAICS stratum, ranging from 0.0 percent to 36.6 percent as shown in Table 4.18.

**Table 4.18. Listed M/WBE Survey—Amount of Misclassification, by Industry Grouping**

Listed M/WBE By NAICS Code Grouping	Misclassification (Percentage Nonminority Male)	Percentage Actually M/WBE-owned	Number of Businesses Interviewed
NAICS 236-A	24.44	75.56	135
NAICS 237-A	36.36	63.64	33
NAICS 238-A	23.08	76.92	195
NAICS 3 OR 42-A	25.58	74.42	129
NAICS 48 OR 49-A	16.67	83.33	108
NAICS 44 OR 45-A	21.05	78.95	95
NAICS 54-A	11.44	88.56	201
NAICS 5 BUT NOT NAICS 54-A	18.68	81.32	91
NAICS 6 OR 7-A	19.59	80.41	97
NAICS 8-A	27.91	72.09	86
NAICS 11 OR 22-A	0.00	100.00	3
NAICS 1 OR 2-B	16.00	84.00	25
NAICS 3 OR 42-B	27.27	72.73	44
NAICS 44 OR 45-B	19.67	80.33	61
NAICS 48 OR 49-B	30.00	70.00	10
NAICS 5-B	11.11	88.89	36
NAICS 6 OR 7-B	19.64	80.36	56
NAICS 8-B	8.00	92.00	75
All NAICS Codes	20.00	80.00	1,480

Source: See NERA telephone surveys.

Notes: (1) Figures are rounded. Rounding was performed subsequent to any mathematical calculations; (2) Two groupings of strata, A and B, were created. NAICS codes reflecting approximately 90 percent of all contract and subcontract spending were stratified into group A with the balance stratified into group B.

<sup>222</sup> For this study, “Black” or “African American” refers to an individual having origins in any of the Black racial groups of Africa; “Hispanic” refers to an individual of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; “Asian” or “Asian/Pacific Islander” refers to an individual having origins in the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands; “Native American” refers to an individual having origins in any of the original peoples of North America or of Hawai’i.

The race and gender status of the listed M/WBEs responding to the survey was changed, if necessary, according to the survey results. For example, if a business originally listed as African American-owned was actually nonminority male-owned, then that business was counted as nonminority male-owned for purposes of calculating M/WBE availability. But what about the remaining putatively African American-owned establishments that we did not interview? For these businesses, we estimate the race and gender of their ownership based on the amount of misclassification we observed among the putatively African American-owned firms that we did interview. In this example, our interviews show that 92.0 percent of these firms are indeed actually African American-owned, 6.4 percent are actually nonminority male-owned, and 1.6 percent are actually nonminority female-owned (see Table 4.17). Therefore, we assign each of the remaining putative African American-owned firms a 92.0 percent probability of actually being African American-owned, a 6.4 percent probability of actually being nonminority male-owned, and a 1.6 percent chance of being nonminority female-owned. We repeat this procedure within each sample stratum and for all putative race and gender categories.

#### 4. Verify Putative Non-M/WBEs

##### a. Survey of Unclassified Businesses

In the same manner as our survey of listed M/WBEs, we also examined unclassified businesses, i.e., any business that was not originally identified as a M/WBE, either in Dun & Bradstreet or in one or more of the other directories, and that would otherwise appear to be a non-M/WBE.

We selected a stratified random sample of 3,385 unclassified businesses from the Baseline Business Universe to verify the race and gender status of their owner(s). Of these, 437 (12.9%) were excluded as “unable to contact.” Of the 2,948 remaining establishments, we obtained 1,195 complete interviews, for a response rate of 40.5 percent.

**Table 4.19. Unclassified Businesses Survey—By Race and Gender**

Verified Race/Gender	Number of Businesses Interviewed	Percentage of Total
Nonminority male	971	81.26
Nonminority female	175	14.64
African American (either gender)	28	2.34
Hispanic (either gender)	7	0.59
Asian/Pacific Islander (either gender)	6	0.50
Native American (either gender)	8	0.67
TOTAL	1,195	100.00

Source and Notes: See Table 4.17.

## M/WBE Availability in the City of Cleveland's Market Area

As shown in Table 4.19, of the 1,195 establishments interviewed, 971 (81.3 percent) were owned by nonminority males. Clearly, a large majority of unclassified businesses in the Baseline Business Universe are nonminority male-owned. Nevertheless, the survey results indicate that 18.7 percent are *not* nonminority male-owned. Among the latter, the largest group was nonminority female-owned (14.6 percent), with descending size shares accounted for by African American-owned (2.3 percent), Native American-owned (0.67 percent), Hispanic-owned (0.59 percent), and Asian/Pacific Islander-owned (0.50 percent). As in the survey of Listed M/WBEs, misclassification was also observed within each industry stratum, as shown in Table 4.20.

**Table 4.20. Unclassified Businesses Survey—By Industry Grouping**

Listed M/WBE By NAICS Grouping	Percentage Actually Nonminority Male-owned	Percentage M/WBE	Number of Businesses Interviewed
NAICS 236-A	90.26	9.74	121
NAICS 237-A	88.37	11.63	172
NAICS 238-A	82.47	17.53	154
NAICS 3 OR 42-A	81.16	18.84	69
NAICS 48 OR 49-A	75.38	24.62	65
NAICS 44 OR 45-A	89.53	10.47	86
NAICS 54-A	82.91	17.09	158
NAICS 5 BUT NOT NAICS 54-A	79.07	20.93	43
NAICS 6 OR 7-A	69.57	30.43	46
NAICS 8-A	71.01	28.99	69
NAICS 11 OR 22-A	78.95	21.05	19
NAICS 1 OR 2-B	65.22	34.78	23
NAICS 3 OR 42-B	75.68	24.32	37
NAICS 44 OR 45-B	65.22	34.78	23
NAICS 48 OR 49-B	80.95	19.05	21
NAICS 5-B	72.22	27.78	36
NAICS 6 OR 7-B	81.25	18.75	32
NAICS 8-B	52.38	47.62	21
All NAICS Codes	81.26	18.74	1,195

Source and Notes: See Table 4.18.

As with the survey of listed M/WBEs, the race and gender status of unclassified businesses was changed, if necessary, according to the survey results. For example, if an interviewed business that was originally unclassified indicated that it was actually nonminority male-owned, then that

business was counted as nonminority male-owned for purposes of the M/WBE availability calculation. If it indicated it was nonminority female-owned, it was counted as nonminority female, and so on. For unclassified businesses that were not interviewed, we assigned probability values (probability actually nonminority male-owned, probability actually nonminority female-owned, probability actually African American-owned, etc.) based on the interview responses. We again carried out the probability assignment procedure within each stratum.

### 5. Understanding “Capacity”

As noted in the beginning of this chapter, some observers, primarily opponents of efforts to address discrimination in contracting, have argued that, in order to be accurate, availability estimates must be adjusted for “capacity.” These assertions are rarely accompanied by specific suggestions about how such adjustments could be made consistent with professional social science standards. This Study does adjust for certain appropriate characteristics of firms related to capacity (such as industry affiliation, geographic location, owner labor market experience, and educational attainment); however, we are careful to not adjust for capacity factors that are themselves likely to be influenced by discrimination. In our view, all of the “capacity” indicators recommended by program opponents (e.g., firm age, annual individual firm revenues, number of employees, largest contract received, bonding limits) are subject to the impact of discrimination.

Further, the reality is that large, adverse statistical disparities between minority-owned or women-owned businesses and nonminority male-owned businesses have been documented in numerous research studies and reports since *Croson*.<sup>223</sup> Business outcomes, however, can be influenced by multiple factors, and it is important that disparity studies examine the likelihood of whether discrimination is an important contributing factor to observed disparities.

Moreover, terms such as “capacity,” “qualifications,” and “ability,” are not well defined in any statistical sense. Does “capacity” mean the level of annual individual firm revenues, employment size, bonding limits, or number of contracts bid or awarded? Does “qualified” or “able” mean possession of a business license, certain amounts of training, types of work experience, or the number of contracts a firm can perform at a given moment? What mix of business attributes properly reflects “capacity”? Does the meaning of such terms differ from industry to industry, locality to locality, or through time? Where and how might such data be reliably gathered? Even if capacity is well-defined and adequate data are gathered, when measuring the existence of discrimination, the statistical method used should not improperly limit the availability measure by incorporating factors that are themselves impacted by discrimination, such as firm age, annual individual firm revenues, bonding limits, or numbers of employees.

Consider an extreme example where discrimination has prevented the emergence of any minority owned firms. Suppose that racial discrimination was ingrained in a state’s construction market. As a result, few minority construction employees are given the opportunity to gain managerial experience in the business; minorities who do end up starting construction firms are denied the opportunity to work as subcontractors for nonminority prime contractors; and nonminority prime contractors place pressure on unions not to work with minority firms and on bonding companies

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<sup>223</sup> See Enchautegui, et al. (1996).



and banks to prevent minority owned construction firms from securing bonding and capital. In this example, discrimination has prevented the emergence of a minority highway construction industry with “capacity.” Those M/WBEs that exist at all will be smaller and less experienced and have lower revenues, bonding limits, and employees— that is, “capacity”— because of discrimination than firms that have benefited from the exclusionary system.

Using annual individual firm revenues as the measure of qualifications illustrates the point. If M/WBEs are subject to market area discrimination, their annual individual firm revenues will be smaller than nonminority, male-owned businesses because they will be less successful at obtaining work. Annual individual firm revenues measure the extent to which a firm has succeeded in the market area, perhaps in spite of discrimination—it does not measure the ability to succeed in the absence of discrimination and should not be used to evaluate the effects of discrimination.

Therefore, focusing on the “capacity” of businesses in terms of employment, annual individual firm revenues, bonding limits, number of trucks, and so forth, is simply wrong as a matter of economics because it can obscure the existence of discrimination. A truly “effective” discriminatory system would lead to a finding of no “capacity,” and under the “capacity” approach, a finding of no discrimination. Excluding firms from an availability measure based on their “capacity” in a discriminatory market merely affirms the results of discrimination rather than ameliorating them. A capacity requirement could preclude the City of Cleveland from doing anything to rectify its passive participation through public dollars in a clearly discriminatory system. The capacity argument fails to acknowledge that discrimination has obstructed the emergence of “qualified, willing, and able” minority firms. Without such firms, there can be no statistical disparity.

Further, in dynamic business environments, and especially in the construction sector, such “qualifications” or “capacity” can be obtained relatively easily. It is well known that small construction companies can expand rapidly as needs arise by hiring workers and renting equipment, and many general contractors subcontract the majority of a project. Firms grow quickly when demand increases and shrink quickly when demand decreases. Subcontracting is one important source of this elasticity, as has been noted by several academic studies.<sup>224</sup> Other industry sectors, especially in this era of Internet commerce and independent contractors, can also quickly grow or shrink in response to demand.

Finally, even where “capacity”-type factors have been controlled for in statistical analyses, results consistent with business discrimination are still typically observed. For example, large and statistically significant differences in commercial loan denial rates between minority and nonminority firms are evident throughout the country, even when detailed balance sheet and creditworthiness measures are held constant.<sup>225</sup> Similarly, economists using decennial census data have demonstrated that statistically significant disparities in business formation and business owner earnings between minorities and nonminorities remain even after controlling for a host of additional relevant factors, including educational achievement, labor market experience,

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<sup>224</sup> See Bourdon and Levitt (1980); *see also* Eccles (1981); and Gould (1980).

<sup>225</sup> See Wainwright (2008).

marital status, disability status, veteran status, interest and dividend income, labor market attachment, industry, geographic location, and local labor market variables such as the unemployment rate, population growth rate, government employment rate, or per capita income.<sup>226</sup>

To summarize, the statistical analysis of the availability of minority firms compared to nonminority firms to examine the existence and effects of discrimination in disparity studies should not adjust for inappropriate “capacity” factors because:

- “Capacity” has been ill-defined; and reliable data for measurement are generally unavailable;
- Small firms, particularly in the construction industry, are highly elastic with regard to ability to perform;
- Many disparity studies have shown that even when “capacity” and “qualifications”-type factors are held constant in statistical analyses, evidence of disparate impact against M/WBE firms persists; and
- Most important, identifiable indicators of “capacity” are themselves impacted by discrimination.

### **C. Estimates of M/WBE and DBE Availability by Detailed Race, Gender, and Industry**

Top-level estimates of M/WBE availability appear below in Table 4.21. Two sets of weighted availability measures are provided for each of the four major procurement categories of Construction, AE-CRS, Services, and Commodities. The first set is based on award dollars for all contracts and the second set is based on paid dollars for all contracts. In general, both weighting procedures yield similar results.

Table 4.22 provides comparable DBE availability estimates applicable to federally-assisted USDOT contracts awarded by the Department of Port Control.

As shown in Table 4.21, overall M/WBE availability in the construction sector is between 17.01 and 17.20 percent. Non-M/WBE availability is between 82.80 and 82.99 percent. Among M/WBEs, availability of African American-owned businesses is between 3.16 and 3.17 percent, availability of Hispanic-owned businesses is between 1.03 and 1.07 percent, availability of Asian/Pacific Islander-owned businesses is between 0.10 and 0.11 percent, and availability of Native American-owned businesses is 0.92 percent. Availability of minority-owned businesses as a group is between 5.22 and 5.24 percent. Availability of nonminority female-owned businesses is between 11.77 and 11.99 percent.

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<sup>226</sup> Wainwright (2000).

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.21. Overall Estimated M/WBE Availability Percentages**

	African American	Hispanic	Asian/ Pacific Islander	Native American	MBE	Non-minority Female	M/WBE	Non-M/WBE
<b>CONSTRUCTION</b>								
AWARD DOLLARS	3.17	1.03	0.11	0.92	5.22	11.99	17.20	82.80
PAID DOLLARS	3.16	1.07	0.10	0.92	5.24	11.77	17.01	82.99
<b>AE-CRS</b>								
AWARD DOLLARS	3.13	1.01	2.38	0.06	6.58	15.50	22.08	77.92
PAID DOLLARS	3.12	1.01	2.38	0.06	6.57	15.51	22.08	77.92
<b>SERVICES</b>								
AWARD DOLLARS	4.13	0.65	0.55	0.34	5.67	18.75	24.42	75.58
PAID DOLLARS	4.02	0.65	0.53	0.36	5.55	18.72	24.27	75.73
<b>COMMODITIES</b>								
AWARD DOLLARS	2.57	0.11	0.77	0.59	4.03	16.62	20.65	79.35
PAID DOLLARS	2.64	0.11	0.75	0.57	4.07	16.80	20.87	79.13

Sources Dun & Bradstreet; M/WBE business directory information compiled by NERA; Master Contract/Subcontract Database.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

Overall, M/WBE availability in the AE-CRS sector is 22.08 percent. Non-DBE availability is 77.92 percent. Among M/WBEs, availability of African American-owned businesses is between 3.12 and 3.13 percent, availability of Hispanic-owned businesses is 1.01 percent, availability of Asian/Pacific Islander-owned businesses is 2.38 percent, and availability of Native American-owned businesses is 0.06 percent. Availability of minority-owned businesses as a group is between 6.57 and 6.58 percent. Availability of nonminority female-owned businesses is between 15.50 and 15.51 percent.

Overall, M/WBE availability in the Services sector is between 24.27 and 24.42 percent. Non-M/WBE availability is between 75.58 and 75.73 percent. Among M/WBEs, availability of African American-owned businesses is between 4.02 and 4.13 percent, availability of Hispanic-owned businesses is 0.65 percent, availability of Asian/Pacific Islander-owned businesses is between 0.53 and 0.55 percent, and availability of Native American-owned businesses is between 0.34 and 0.36 percent. Availability of minority-owned businesses as a group is between 5.55 and 5.67 percent. Availability of nonminority female-owned businesses is between 18.72 and 18.75 percent.

## M/WBE Availability in the City of Cleveland's Market Area

Overall, M/WBE availability in the Commodities sector is between 20.65 and 20.87 percent. Non-M/WBE availability is between 79.13 and 79.35 percent. Among M/WBEs, availability of African American-owned businesses between 2.57 and 2.64 percent, availability of Hispanic-owned businesses is 0.11 percent, availability of Asian/Pacific Islander-owned businesses is between 0.75 and 0.77 percent, and availability of Native American-owned businesses is between 0.57 and 0.59 percent. Availability of minority-owned businesses as a group is between 4.03 and 4.07 percent. Availability of nonminority female-owned businesses is between 16.62 and 16.80 percent.

**Table 4.22. Overall Estimated DBE Availability Percentages for USDOT Federally-Assisted Contracts**

	African American	Hispanic	Asian/ Pacific Islander	Native American	MBE	Non- minority Female	DBE	Non- DBE
<b>CONSTRUCTION</b>								
AWARD DOLLARS	4.07	0.94	0.25	0.95	6.22	14.05	20.27	79.73
PAID DOLLARS	4.10	0.94	0.26	0.95	6.25	14.10	20.35	79.65
<b>AE-CRS</b>								
AWARD DOLLARS	3.13	1.03	2.46	0.03	6.65	15.53	22.18	77.82
PAID DOLLARS	3.12	1.04	2.49	0.03	6.69	15.48	22.17	77.83
<b>SERVICES</b>								
AWARD DOLLARS	3.56	0.89	0.97	0.05	5.47	17.52	22.99	77.01
PAID DOLLARS	3.58	0.88	0.89	0.05	5.41	17.74	23.15	76.85
<b>COMMODITIES</b>								
AWARD DOLLARS	3.08	0.12	0.15	1.13	4.49	15.90	20.39	79.61
PAID DOLLARS	3.09	0.13	0.15	1.17	4.54	15.83	20.37	79.63

Source and Notes: See Table 4.21.

Tables 4.23 through 4.30 present detailed estimates of M/WBE and DBE availability in the City of Cleveland's relevant market area for Construction, AE-CRS, Services, and Commodities. The first four tables are for all City contracting, the second four tables are for federally-assisted contracts subject to the USDOT DBE Program, primarily at the Department of Port Control.

# M/WBE Availability in the City of Cleveland's Market Area

**Table 4.23. Detailed M/WBE Availability Percentages—Construction**

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	6.64	0.00	1.88	0.00	16.04	24.56	75.44
Electric Power Generation, Transmission and Distribution (NAICS 2211)	2.19	0.00	2.19	0.00	27.05	31.43	68.57
Residential Building Construction (NAICS 2361)	2.76	1.65	0.02	0.81	8.26	13.50	86.50
Nonresidential Building Construction (NAICS 2362)	4.80	2.00	0.17	0.92	11.10	18.99	81.01
Utility System Construction (NAICS 2371)	1.45	0.00	0.00	0.00	12.24	13.68	86.32
Land Subdivision (NAICS 2372)	2.13	0.52	0.00	0.00	10.82	13.48	86.52
Highway, Street, and Bridge Construction (NAICS 2373)	5.91	0.95	0.00	0.00	11.73	18.59	81.41
Other Heavy and Civil Engineering Construction (NAICS 2379)	3.31	0.00	0.00	0.00	11.49	14.81	85.19
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	2.91	0.13	0.00	1.69	17.37	22.10	77.90
Building Equipment Contractors (NAICS 2382)	3.38	0.15	0.23	1.27	15.99	21.02	78.98
Building Finishing Contractors (NAICS 2383)	2.96	0.12	0.00	1.20	16.53	20.82	79.18
Other Specialty Trade Contractors (NAICS 2389)	2.77	0.19	0.03	1.19	16.25	20.44	79.56
Other Wood Product Manufacturing (NAICS 3219)	2.38	0.00	0.18	0.00	25.66	28.22	71.78
Plastics Product Manufacturing (NAICS 3261)	3.05	0.00	0.24	0.00	20.40	23.69	76.31
Cement and Concrete Product Manufacturing (NAICS 3273)	4.57	0.12	0.09	0.00	22.40	27.18	72.82
Foundries (NAICS 3315)	2.82	0.00	0.00	0.00	16.90	19.72	80.28
Architectural and Structural Metals Manufacturing (NAICS 3323)	2.92	0.16	0.99	0.00	20.65	24.71	75.29
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)	1.41	0.00	0.00	0.00	8.45	9.86	90.14
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	2.92	0.34	0.49	0.00	20.10	23.85	76.15
Other General Purpose Machinery Manufacturing (NAICS 3339)	2.53	0.00	0.00	0.00	22.22	24.74	75.26

## M/WBE Availability in the City of Cleveland's Market Area

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	1.76	0.00	0.45	0.00	38.24	40.45	59.55
Electrical Equipment Manufacturing (NAICS 3353)	4.76	2.13	0.03	0.00	17.39	24.31	75.69
Other Miscellaneous Manufacturing (NAICS 3399)	3.02	0.00	0.08	0.00	20.89	23.99	76.01
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	4.20	0.00	0.10	0.00	21.36	25.66	74.34
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	2.72	0.02	0.58	0.00	18.43	21.74	78.26
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	2.81	0.58	0.74	0.00	19.76	23.88	76.12
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	3.59	0.14	0.38	0.00	19.31	23.42	76.58
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	2.71	0.25	0.31	0.00	20.08	23.36	76.64
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	3.42	0.04	0.18	0.00	18.84	22.49	77.51
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	3.29	0.20	0.38	0.00	19.18	23.05	76.95
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	2.30	0.00	0.22	0.00	27.44	29.96	70.04
Building Material and Supplies Dealers (NAICS 4441)	0.74	0.20	1.31	1.24	14.06	17.55	82.45
Other Miscellaneous Store Retailers (NAICS 4539)	0.69	0.14	1.36	1.26	13.38	16.83	83.17
General Freight Trucking (NAICS 4841)	7.74	0.29	0.17	0.03	18.68	26.91	73.09
Specialized Freight Trucking (NAICS 4842)	8.04	0.00	0.00	0.06	20.63	28.72	71.28
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	2.38	0.00	0.00	0.00	21.34	23.73	76.27
Architectural, Engineering, and Related Services (NAICS 5413)	2.88	1.03	2.27	0.03	15.15	21.36	78.64

## M/WBE Availability in the City of Cleveland's Market Area

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Facilities Support Services (NAICS 5612)	2.89	0.00	1.35	0.63	25.43	30.30	69.70
Investigation and Security Services (NAICS 5616)	4.97	0.00	0.00	0.03	19.32	24.31	75.69
Services to Buildings and Dwellings (NAICS 5617)	3.87	0.13	0.07	0.23	21.29	25.58	74.42
Remediation and Other Waste Management Services (NAICS 5629)	16.79	0.00	0.00	0.00	17.48	34.27	65.73

Source and Notes: See Table 4.21.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.24. Detailed M/WBE Availability Percentages—AE-CRS**

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Nonresidential Building Construction (NAICS 2362)	4.87	1.96	0.18	0.92	11.07	18.99	81.01
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	3.69	0.28	0.00	1.17	15.68	20.82	79.18
Building Equipment Contractors (NAICS 2382)	3.84	0.18	0.32	1.26	16.83	22.42	77.58
Building Finishing Contractors (NAICS 2383)	2.12	0.23	0.00	1.22	16.34	19.91	80.09
Other Specialty Trade Contractors (NAICS 2389)	3.40	0.21	0.18	1.18	16.34	21.31	78.69
Printing and Related Support Activities (NAICS 3231)	2.13	0.00	0.25	0.00	31.49	33.88	66.12
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	3.74	0.57	0.24	0.00	20.54	25.09	74.91
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	2.55	0.00	0.08	0.00	19.99	22.62	77.38
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)	0.04	0.04	1.31	1.27	12.25	14.90	85.10
General Freight Trucking (NAICS 4841)	7.74	0.29	0.17	0.03	18.68	26.91	73.09
Software Publishers (NAICS 5112)	3.32	0.00	0.36	0.24	21.63	25.54	74.46
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	2.93	0.11	0.00	0.27	22.15	25.45	74.55
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	2.48	0.10	0.00	0.07	20.08	22.73	77.27
Architectural, Engineering, and Related Services (NAICS 5413)	3.11	1.03	2.49	0.03	15.28	21.93	78.07
Specialized Design Services (NAICS 5414)	2.66	1.08	0.45	0.51	40.35	45.05	54.95
Computer Systems Design and Related Services (NAICS 5415)	3.39	0.91	2.03	0.07	19.39	25.79	74.21
Management, Scientific, and Technical Consulting Services (NAICS 5416)	3.12	0.78	0.89	0.07	17.81	22.68	77.32
Services to Buildings and Dwellings (NAICS 5617)	3.47	0.08	0.06	0.20	21.00	24.81	75.19
Other Amusement and Recreation Industries (NAICS 7139)	0.55	1.87	0.00	0.18	24.89	27.49	72.51

Source and Notes: See Table 4.21.



## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.25. Detailed M/WBE Availability Percentages—Services**

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Support Activities for Crop Production (NAICS 1151)	1.86	0.00	1.86	0.00	26.83	30.55	69.45
Residential Building Construction (NAICS 2361)	2.84	1.67	0.01	0.83	8.42	13.76	86.24
Highway, Street, and Bridge Construction (NAICS 2373)	5.91	0.95	0.00	0.00	11.73	18.59	81.41
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	3.23	0.12	0.00	1.16	17.84	22.35	77.65
Building Equipment Contractors (NAICS 2382)	3.51	0.16	0.25	1.27	16.27	21.46	78.54
Other Specialty Trade Contractors (NAICS 2389)	3.07	0.20	0.10	1.19	16.29	20.85	79.15
Printing and Related Support Activities (NAICS 3231)	4.03	1.86	0.00	0.00	24.27	30.16	69.84
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)	2.68	0.71	0.73	0.00	17.52	21.65	78.35
Cement and Concrete Product Manufacturing (NAICS 3273)	4.77	0.00	0.08	0.00	22.29	27.14	72.86
Other General Purpose Machinery Manufacturing (NAICS 3339)	1.88	0.00	0.00	0.00	44.60	46.48	53.52
Aerospace Product and Parts Manufacturing (NAICS 3364)	9.36	0.00	0.09	0.00	25.69	35.14	64.86
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	2.60	0.34	0.40	0.00	20.54	23.87	76.13
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	4.51	0.41	0.60	0.00	24.73	30.25	69.75
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	3.19	0.18	0.34	0.00	19.29	22.99	77.01
Gasoline Stations (NAICS 4471)	0.28	0.08	1.29	1.27	11.60	14.52	85.48
General Freight Trucking (NAICS 4841)	7.72	0.29	0.17	0.04	18.70	26.92	73.08
Specialized Freight Trucking (NAICS 4842)	7.84	0.00	0.00	0.06	21.79	29.69	70.31
Taxi and Limousine Service (NAICS 4853)	12.04	0.00	3.46	3.89	9.89	29.28	70.72
Support Activities for Water Transportation (NAICS 4883)	5.66	0.00	0.00	0.00	16.98	22.64	77.36
Support Activities for Road Transportation (NAICS 4884)	6.96	1.00	0.00	0.05	19.31	27.32	72.68
Freight Transportation Arrangement (NAICS 4885)	6.51	0.42	0.84	0.09	21.95	29.82	70.18

## M/WBE Availability in the City of Cleveland's Market Area

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Warehousing and Storage (NAICS 4931)	5.93	0.00	0.00	0.04	20.07	26.04	73.96
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	4.82	0.00	0.00	0.33	22.48	27.62	72.38
Software Publishers (NAICS 5112)	3.32	0.00	0.36	0.24	21.63	25.54	74.46
Radio and Television Broadcasting (NAICS 5151)	4.28	0.00	0.00	0.21	21.30	25.79	74.21
Wired Telecommunications Carriers (NAICS 5171)	2.44	0.00	0.00	0.00	19.51	21.95	78.05
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)	3.07	0.00	0.00	0.11	20.68	23.87	76.13
Other Telecommunications (NAICS 5179)	2.93	0.00	0.00	0.11	20.86	23.91	76.09
Data Processing, Hosting, and Related Services (NAICS 5182)	4.43	0.60	1.13	0.57	24.70	31.42	68.58
Other Information Services (NAICS 5191)	4.57	0.00	0.00	0.62	25.54	30.74	69.26
Activities Related to Credit Intermediation (NAICS 5223)	2.44	0.00	0.00	0.00	19.51	21.95	78.05
Insurance Carriers (NAICS 5241)	4.62	0.96	0.00	0.28	22.56	28.42	71.58
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	2.93	0.11	0.00	0.27	22.15	25.45	74.55
Lessors of Real Estate (NAICS 5311)	2.62	0.02	0.08	0.15	20.44	23.30	76.70
Offices of Real Estate Agents and Brokers (NAICS 5312)	4.03	0.06	0.02	0.33	22.98	27.41	72.59
Activities Related to Real Estate (NAICS 5313)	2.44	0.00	0.00	0.00	19.51	21.95	78.05
Consumer Goods Rental (NAICS 5322)	2.57	0.00	0.00	0.18	21.23	23.98	76.02
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	2.40	0.01	0.00	0.01	21.16	23.58	76.42
Legal Services (NAICS 5411)	1.47	0.76	0.63	0.03	16.48	19.37	80.63
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	2.21	0.69	0.56	0.06	18.87	22.40	77.60
Architectural, Engineering, and Related Services (NAICS 5413)	3.37	0.93	2.17	0.03	15.55	22.05	77.95
Specialized Design Services (NAICS 5414)	3.69	0.73	0.72	0.16	28.30	33.60	66.40
Computer Systems Design and Related Services (NAICS 5415)	3.26	0.87	1.99	0.07	19.02	25.22	74.78

## M/WBE Availability in the City of Cleveland's Market Area

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Management, Scientific, and Technical Consulting Services (NAICS 5416)	3.41	0.89	0.98	0.07	18.66	24.00	76.00
Scientific Research and Development Services (NAICS 5417)	1.57	0.58	1.48	0.04	16.18	19.84	80.16
Advertising, Public Relations, and Related Services (NAICS 5418)	2.92	0.97	1.13	0.10	21.53	26.66	73.34
Other Professional, Scientific, and Technical Services (NAICS 5419)	1.40	0.59	1.34	0.10	23.44	26.88	73.12
Office Administrative Services (NAICS 5611)	3.22	0.00	0.38	0.09	20.73	24.42	75.58
Facilities Support Services (NAICS 5612)	2.89	0.00	1.35	0.63	25.43	30.30	69.70
Employment Services (NAICS 5613)	5.18	0.36	0.05	0.59	25.50	31.68	68.32
Business Support Services (NAICS 5614)	3.87	0.02	0.05	0.16	20.74	24.85	75.15
Investigation and Security Services (NAICS 5616)	5.35	0.00	0.00	0.11	20.11	25.57	74.43
Services to Buildings and Dwellings (NAICS 5617)	4.15	0.17	0.08	0.25	21.49	26.13	73.87
Other Support Services (NAICS 5619)	3.46	0.35	0.00	0.74	27.47	32.03	67.97
Waste Treatment and Disposal (NAICS 5622)	3.38	0.00	0.00	0.00	19.33	22.71	77.29
Remediation and Other Waste Management Services (NAICS 5629)	15.64	0.01	0.01	0.03	17.98	33.68	66.32
Colleges, Universities, and Professional Schools (NAICS 6113)	0.51	2.07	0.00	0.00	18.65	21.24	78.76
Business Schools and Computer and Management Training (NAICS 6114)	0.99	1.70	0.00	0.33	29.83	32.85	67.15
Technical and Trade Schools (NAICS 6115)	6.06	1.75	0.00	0.16	24.12	32.09	67.91
Educational Support Services (NAICS 6117)	1.79	1.64	0.00	0.18	31.37	34.98	65.02
Offices of Physicians (NAICS 6211)	0.60	1.91	0.65	0.22	22.09	25.47	74.53
Outpatient Care Centers (NAICS 6214)	0.31	1.96	0.00	0.10	22.41	24.78	75.22
Medical and Diagnostic Laboratories (NAICS 6215)	1.19	1.95	0.00	0.10	21.81	25.05	74.95
Home Health Care Services (NAICS 6216)	1.92	1.81	0.20	0.21	25.40	29.54	70.46
Other Ambulatory Health Care Services (NAICS 6219)	0.53	2.03	0.00	0.03	19.89	22.48	77.52

## M/WBE Availability in the City of Cleveland's Market Area

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
General Medical and Surgical Hospitals (NAICS 6221)	0.09	2.01	0.00	0.03	19.46	21.59	78.41
Individual and Family Services (NAICS 6241)	0.73	2.06	0.10	0.01	18.78	21.67	78.33
Vocational Rehabilitation Services (NAICS 6243)	2.12	2.00	0.00	0.81	18.63	23.57	76.43
Independent Artists, Writers, and Performers (NAICS 7115)	1.55	1.43	0.00	0.35	36.40	39.73	60.27
Other Amusement and Recreation Industries (NAICS 7139)	0.50	1.92	0.00	0.13	23.45	25.99	74.01
Full-Service Restaurants (NAICS 7221)	0.65	1.94	1.05	0.17	22.03	25.84	74.16
Special Food Services (NAICS 7223)	2.91	1.73	0.07	0.30	26.53	31.54	68.46
Drinking Places (Alcoholic Beverages) (NAICS 7224)	0.64	1.91	0.07	0.12	23.16	25.91	74.09
Automotive Repair and Maintenance (NAICS 8111)	9.17	1.61	0.12	3.09	14.87	28.87	71.13
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	9.80	1.89	0.10	2.91	16.40	31.09	68.91
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	9.45	1.52	0.03	2.96	15.79	29.75	70.25
Personal and Household Goods Repair and Maintenance (NAICS 8114)	9.19	1.66	0.02	2.97	15.38	29.22	70.78
Death Care Services (NAICS 8122)	11.40	1.53	0.31	2.90	15.70	31.84	68.16
Drycleaning and Laundry Services (NAICS 8123)	16.34	1.51	0.42	2.63	17.57	38.48	61.52
Other Personal Services (NAICS 8129)	9.23	1.54	0.00	3.08	13.85	27.69	72.31
Religious Organizations (NAICS 8131)	9.26	1.54	0.00	3.07	13.89	27.76	72.24
Grantmaking and Giving Services (NAICS 8132)	8.83	1.63	0.10	2.94	17.87	31.38	68.62
Social Advocacy Organizations (NAICS 8133)	10.66	1.51	0.00	3.02	13.61	28.81	71.19

Source and Notes: See Table 4.21.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.26. Detailed M/WBE Availability Percentages—Commodities**

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	2.28	0.00	0.00	1.43	14.71	18.42	81.58
Building Equipment Contractors (NAICS 2382)	3.53	0.16	0.26	1.27	16.31	21.52	78.48
Dairy Product Manufacturing (NAICS 3115)	1.41	0.00	0.00	0.00	8.45	9.86	90.14
Bakeries and Tortilla Manufacturing (NAICS 3118)	2.06	0.00	1.88	0.00	30.94	34.88	65.12
Other Textile Product Mills (NAICS 3149)	2.25	2.14	0.12	0.00	20.90	25.42	74.58
Sawmills and Wood Preservation (NAICS 3211)	2.82	0.00	0.00	0.00	16.90	19.72	80.28
Printing and Related Support Activities (NAICS 3231)	2.26	0.01	0.26	0.00	29.48	32.01	67.99
Petroleum and Coal Products Manufacturing (NAICS 3241)	2.66	0.00	0.07	0.00	20.06	22.79	77.21
Basic Chemical Manufacturing (NAICS 3251)	5.93	0.00	0.62	0.00	18.59	25.14	74.86
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)	2.82	0.00	0.00	0.00	16.90	19.72	80.28
Pharmaceutical and Medicine Manufacturing (NAICS 3254)	2.82	0.00	0.00	0.00	16.90	19.72	80.28
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)	2.72	0.00	0.04	0.00	18.90	21.66	78.34
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)	3.30	0.00	0.03	0.00	18.46	21.79	78.21
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	2.58	0.00	0.07	0.00	19.67	22.31	77.69
Plastics Product Manufacturing (NAICS 3261)	3.05	0.00	0.24	0.00	20.40	23.69	76.31
Rubber Product Manufacturing (NAICS 3262)	2.82	0.00	0.00	0.00	16.90	19.72	80.28
Glass and Glass Product Manufacturing (NAICS 3272)	1.79	0.00	4.22	0.00	32.18	38.20	61.80
Cement and Concrete Product Manufacturing (NAICS 3273)	2.36	1.38	0.15	0.00	23.70	27.60	72.40
Lime and Gypsum Product Manufacturing (NAICS 3274)	2.11	0.00	0.30	0.00	31.13	33.54	66.46
Foundries (NAICS 3315)	2.82	0.00	0.00	0.00	16.90	19.72	80.28
Architectural and Structural Metals Manufacturing (NAICS 3323)	2.60	0.00	1.00	0.00	19.94	23.54	76.46

## M/WBE Availability in the City of Cleveland's Market Area

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	2.92	0.34	0.49	0.00	20.10	23.85	76.15
Other Fabricated Metal Product Manufacturing (NAICS 3329)	2.62	0.00	0.09	0.00	20.97	23.67	76.33
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	4.90	0.00	0.03	0.00	17.43	22.35	77.65
Industrial Machinery Manufacturing (NAICS 3332)	2.63	0.00	0.08	0.00	20.70	23.40	76.60
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	2.66	0.00	1.95	0.00	18.75	23.35	76.65
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)	2.82	0.00	0.00	0.00	16.90	19.72	80.28
Other General Purpose Machinery Manufacturing (NAICS 3339)	2.14	0.00	0.00	0.00	37.00	39.14	60.86
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	5.88	0.00	0.08	0.00	20.10	26.06	73.94
Communications Equipment Manufacturing (NAICS 3342)	6.05	0.00	0.12	0.00	20.20	26.37	73.63
Audio and Video Equipment Manufacturing (NAICS 3343)	10.80	0.00	0.05	0.00	17.86	28.71	71.29
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	3.89	1.14	0.06	0.00	19.26	24.35	75.65
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	2.21	0.04	0.45	0.00	29.01	31.71	68.29
Electric Lighting Equipment Manufacturing (NAICS 3351)	2.33	0.00	2.74	0.00	23.18	28.25	71.75
Electrical Equipment Manufacturing (NAICS 3353)	3.33	0.00	1.97	0.00	17.99	23.29	76.71
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	2.75	0.00	0.03	0.00	18.32	21.10	78.90
Motor Vehicle Manufacturing (NAICS 3361)	2.82	0.00	0.00	0.00	16.90	19.72	80.28
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	2.46	0.00	0.15	0.00	24.01	26.63	73.37
Motor Vehicle Parts Manufacturing (NAICS 3363)	2.84	0.00	0.25	0.00	17.73	20.82	79.18
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	3.95	0.00	0.05	0.00	20.27	24.28	75.72
Office Furniture (including Fixtures) Manufacturing	2.46	0.00	0.15	0.00	24.01	26.63	73.37

## M/WBE Availability in the City of Cleveland's Market Area

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
(NAICS 3372)							
Medical Equipment and Supplies Manufacturing (NAICS 3391)	2.62	0.14	0.14	0.00	21.14	24.04	75.96
Other Miscellaneous Manufacturing (NAICS 3399)	2.98	0.22	0.19	0.00	21.54	24.93	75.07
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	2.81	0.00	0.08	0.00	18.49	21.37	78.63
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	4.20	0.00	0.10	0.00	21.36	25.66	74.34
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	2.76	0.03	0.50	0.00	18.41	21.69	78.31
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	3.73	0.51	0.66	0.00	20.82	25.72	74.28
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	2.81	0.58	0.74	0.00	19.76	23.88	76.12
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	3.51	0.15	0.38	0.00	19.42	23.46	76.54
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	2.65	0.25	0.31	0.00	19.96	23.17	76.83
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	3.85	0.20	0.36	0.00	20.41	24.83	75.17
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	3.10	0.15	0.30	0.00	19.39	22.94	77.06
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	5.69	0.00	0.34	0.00	23.85	29.88	70.12
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)	2.29	0.00	0.21	0.00	27.79	30.29	69.71
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)	2.30	0.00	0.28	0.00	27.52	30.09	69.91
Grocery and Related Product Merchant Wholesalers (NAICS 4244)	3.61	0.41	0.26	0.00	21.36	25.65	74.35
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	5.23	0.00	0.64	0.00	21.17	27.03	72.97
Petroleum and Petroleum	2.86	0.00	0.00	0.00	16.99	19.84	80.16

## M/WBE Availability in the City of Cleveland's Market Area

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Products Merchant Wholesalers (NAICS 4247)							
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	2.30	0.00	0.22	0.00	27.44	29.96	70.04
Automobile Dealers (NAICS 4411)	0.90	0.01	1.27	1.44	10.71	14.32	85.68
Other Motor Vehicle Dealers (NAICS 4412)	0.06	0.06	1.59	1.35	13.08	16.14	83.86
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)	0.55	0.04	1.71	1.75	12.89	16.93	83.07
Home Furnishings Stores (NAICS 4422)	1.21	0.29	1.39	1.27	12.98	17.13	82.87
Electronics and Appliance Stores (NAICS 4431)	1.59	0.63	1.64	1.33	12.49	17.68	82.32
Building Material and Supplies Dealers (NAICS 4441)	0.68	0.17	1.31	1.30	13.90	17.36	82.64
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	0.19	0.03	1.32	1.21	15.30	18.07	81.93
Grocery Stores (NAICS 4451)	0.62	0.29	1.47	1.40	13.62	17.39	82.61
Gasoline Stations (NAICS 4471)	0.28	0.08	1.29	1.27	11.60	14.52	85.48
Clothing Stores (NAICS 4481)	0.19	0.36	2.40	1.13	25.01	29.10	70.90
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)	0.06	0.05	1.32	1.27	12.74	15.44	84.56
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	1.23	0.12	1.36	1.23	18.40	22.35	77.65
Other Miscellaneous Store Retailers (NAICS 4539)	0.69	0.14	1.36	1.26	13.38	16.83	83.17

Source and Notes: See Table 4.21.



# M/WBE Availability in the City of Cleveland's Market Area

**Table 4.27. Detailed DBE Availability Percentages—Construction**

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	DBE	Non-DBE
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	6.64	0.00	1.88	0.00	16.04	24.56	75.44
Support Activities for Mining (NAICS 2131)	4.41	0.00	0.00	0.11	25.97	30.49	69.51
Residential Building Construction (NAICS 2361)	2.50	1.59	0.00	0.82	8.26	13.18	86.82
Nonresidential Building Construction (NAICS 2362)	4.87	1.96	0.18	0.92	11.07	18.99	81.01
Highway, Street, and Bridge Construction (NAICS 2373)	5.91	0.95	0.00	0.00	11.73	18.59	81.41
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	3.69	0.28	0.00	1.17	15.68	20.82	79.18
Building Equipment Contractors (NAICS 2382)	3.70	0.17	0.29	1.26	16.59	22.02	77.98
Building Finishing Contractors (NAICS 2383)	3.23	0.15	0.00	1.20	16.55	21.13	78.87
Other Specialty Trade Contractors (NAICS 2389)	2.72	0.19	0.02	1.19	16.25	20.37	79.63
Other Wood Product Manufacturing (NAICS 3219)	2.38	0.00	0.18	0.00	25.66	28.22	71.78
Cement and Concrete Product Manufacturing (NAICS 3273)	4.77	0.00	0.08	0.00	22.29	27.14	72.86
Architectural and Structural Metals Manufacturing (NAICS 3323)	6.07	1.74	0.00	0.00	19.49	27.29	72.71
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	2.71	0.02	0.59	0.00	18.43	21.75	78.25
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	2.75	0.00	0.03	0.00	18.27	21.05	78.95
Building Material and Supplies Dealers (NAICS 4441)	0.74	0.20	1.31	1.24	14.06	17.55	82.45
General Freight Trucking (NAICS 4841)	7.74	0.29	0.17	0.03	18.68	26.91	73.09
Couriers and Express Delivery Services (NAICS 4921)	8.38	0.00	0.00	0.00	18.36	26.73	73.27
Architectural, Engineering, and Related Services (NAICS 5413)	2.90	1.03	2.29	0.03	15.16	21.40	78.60
Facilities Support Services (NAICS 5612)	2.89	0.00	1.35	0.63	25.43	30.30	69.70
Services to Buildings and Dwellings (NAICS 5617)	3.47	0.08	0.06	0.20	21.00	24.81	75.19

Source and Notes: See Table 4.21.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.28. Detailed DBE Availability Percentages—AE-CRS**

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	DBE	Non-DBE
Architectural, Engineering, and Related Services (NAICS 5413)	3.17	1.07	2.51	0.03	15.26	22.04	77.96
Specialized Design Services (NAICS 5414)	2.66	1.08	0.45	0.51	40.35	45.05	54.95
Management, Scientific, and Technical Consulting Services (NAICS 5416)	3.31	0.75	1.04	0.10	18.19	23.38	76.62

Source and Notes: See Table 4.21.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.29. Detailed DBE Availability Percentages—Services**

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	DBE	Non-DBE
Aerospace Product and Parts Manufacturing (NAICS 3364)	9.36	0.00	0.09	0.00	25.69	35.14	64.86
Architectural, Engineering, and Related Services (NAICS 5413)	3.70	0.90	1.64	0.03	15.20	21.46	78.54
Specialized Design Services (NAICS 5414)	3.69	0.73	0.72	0.16	28.30	33.60	66.40
Management, Scientific, and Technical Consulting Services (NAICS 5416)	3.59	0.88	0.86	0.05	17.61	22.99	77.01
Advertising, Public Relations, and Related Services (NAICS 5418)	4.59	6.62	0.19	0.00	22.03	33.42	66.58
Employment Services (NAICS 5613)	2.44	0.00	0.00	0.00	19.51	21.95	78.05

Source and Notes: See Table 4.21.

## M/WBE Availability in the City of Cleveland's Market Area

**Table 4.30. Detailed DBE Availability Percentages—Commodities**

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	DBE	Non-DBE
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	2.28	0.00	0.00	1.43	14.71	18.42	81.58
Building Equipment Contractors (NAICS 2382)	3.26	0.16	0.20	1.27	15.86	20.75	79.25
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	2.75	0.00	0.03	0.00	18.27	21.05	78.95
General Freight Trucking (NAICS 4841)	7.74	0.29	0.17	0.03	18.68	26.91	73.09
Remediation and Other Waste Management Services (NAICS 5629)	16.79	0.00	0.00	0.00	17.48	34.27	65.73

Source and Notes: See Table 4.21.

## V. Market-Based Disparities in Business Formation and Business Owner Earnings

### A. Introduction

In this chapter, we examine disparities in business formation and earnings principally in the private sector, where contracting activities are generally *not* subject to M/WBE or other affirmative action requirements. Statistical examination of disparities in the private sector of the relevant geographic market area is important for several reasons. First, to the extent that discriminatory practices by contractors, suppliers, insurers, lenders, customers, and others limit the ability of M/WBEs to compete, those practices will impact the larger private sector as well as the public sector. Second, examining the utilization of M/WBEs in the private sector provides an indicator of the extent to which M/WBEs are used in the absence of race- and gender-conscious efforts, since few firms in the private sector make such efforts. Third, the Supreme Court in *Croson* and other courts acknowledged that state and local governments have a constitutional duty not to contribute to the perpetuation of discrimination in the private sector of their relevant geographic and product markets.

After years of comparative neglect, research on the economics of entrepreneurship—especially upon self-employment—has expanded in the last 20 years.<sup>227</sup> As a result, there is now a good deal of agreement in the literature on the microeconomic correlates of self-employment.<sup>228</sup> In the U.S., it appears that self-employment rises with age, is higher among men than women, and higher among non-minorities than minorities. The least educated have the highest probability of being self-employed. However, evidence is also found in the U.S. that the most highly educated also have relatively high probabilities. On average, however, increases in educational attainment are generally found to lead to increases in the probability of being self-employed. A higher number of children in the family increases the likelihood of (male) self-employment. Workers in agriculture and construction are also especially likely to be self-employed.

There has been relatively less work on how institutional factors influence self-employment. Such work that has been conducted includes examining the role of minimum wage legislation (Blau, 1987), immigration (Fairlie and Meyer, 1998 and 2003; Olson, Zuiker and Montalto, 2000; Mora

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<sup>227</sup> Microeconometric work includes Fuchs (1982), Borjas and Bronars (1989), Evans and Jovanovic (1989), Evans and Leighton (1989), Fairlie and Meyer (1996, 1998), Reardon (1998), Fairlie (1999), Wainwright (2000), Blanchflower and Wainwright (2005), and Blanchflower (2009) for the United States; Rees and Shah (1986), Pickles and O’Farrell (1987), Blanchflower and Oswald (1990, 1998), Meager (1992), Taylor (1996), Robson (1998a, 1998b), and Blanchflower and Shadforth (2007) for the UK; DeWit and van Winden (1990) for the Netherlands; Alba-Ramirez (1994) for Spain; Bernhardt (1994), Schuetze (1998), Arai (1997), Lentz and Laband (1990), and Kuhn and Schuetze (1998) for Canada; Laferrere and McEntee (1995) for France; Blanchflower and Meyer (1994) and Kidd (1993) for Australia; and Foti and Vivarelli (1994) for Italy. There are also several theoretical papers including Kihlstrom and Laffont (1979), Kanbur (1990), Holmes and Schmitz (1990), Coate and Tennyson (1992), and Cagetti and DeNardi (2006), plus a few papers that draw comparisons across countries, i.e., Schuetze (1998) for Canada and the U.S., Blanchflower and Meyer (1994) for Australia and the U.S., Alba-Ramirez (1994) for Spain and the United States, and Acs and Evans (1994), Blanchflower (2000), Blanchflower, Oswald, and Stutzer (2001), and Blanchflower and Oswald (2008) for many countries.

<sup>228</sup> Parker (2004) and Aronson (1991) provide good overviews.

and Davila, 2006; Robles and Cordero-Gúzman, 2007),<sup>229</sup> immigration policy (Borjas and Bronars, 1989), and retirement policies (Quinn, 1980). Studies by Long (1982), Blau (1987), and Schuetze (1998), have considered the role of taxes.<sup>230</sup> A number of other studies have also considered the cyclical aspects of self-employment and in particular how movements of self-employment are correlated with movements in unemployment. Meager (1992) provides a useful summary of much of this work.<sup>231</sup>

Blanchflower, Oswald and Stutzer (2001) found that there is a strikingly large latent desire to own a business. There exists frustrated entrepreneurship on a huge scale in the U.S. and other Organization for Economic Co-operation and Development (OECD) countries.<sup>232</sup> In the U.S., 7 out of 10 people say they would prefer to be self-employed. This compares to an actual proportion of self-employed people in 2001 of 7.3 percent of the civilian labor force, which also shows that the proportion of the labor force that is self-employed has declined steadily since 1990 following a small increase in the rate from 1980 to 1990. This raises an important question. Why do so few individuals in the U.S. and OECD countries manage to translate their preferences into action? Lack of start-up capital is one likely explanation. This factor is commonly cited by small-business managers themselves (Blanchflower and Oswald, 1998). There is also econometric evidence that confirms this barrier. Holding other influences constant, people who

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<sup>229</sup> Fairlie and Meyer (1998) found that immigration had no statistically significant impact at all on African American self-employment. In a subsequent paper, Fairlie and Meyer (2003) found that self-employed immigrants did displace self-employed native non-African Americans. They found that immigration has a large negative effect on the probability of self-employment among native non-African Americans, although, surprisingly, they found that immigrants increase native self-employment earnings.

<sup>230</sup> In an interesting study pooling individual level data for the U.S. and Canada from the Current Population Survey and the Survey of Consumer Finances, respectively, Schuetze (1998) finds that increases in income taxes have large and positive effects on the male self-employment rate. He found that a 30 percent increase in taxes generated a rise of 0.9 to 2.0 percentage points in the male self-employment rate in Canada compared with a rise of 0.8 to 1.4 percentage points in the U.S. over 1994 levels.

<sup>231</sup> Evans and Leighton (1989) found that nonminority men who are unemployed are nearly twice as likely as wage workers to enter self-employment. Bogenhold and Staber (1991) also find evidence that unemployment and self-employment are positively correlated. Blanchflower and Oswald (1990) found a strong negative relationship between regional unemployment and self-employment for the period 1983-1989 in the U.K. using a pooled cross-section time-series data set. Blanchflower and Oswald (1998) confirmed this result, finding that the log of the county unemployment rate entered negatively in a cross-section self-employment model for young people age 23 in 1981 and for the same people aged 33 in 1991. Taylor (1996) confirmed this result using data from the British Household Panel Study of 1991, showing that the probability of being self-employed rises when expected self-employment earnings increase relative to employee earnings, i.e., when unemployment is low. Acs and Evans (1994) found evidence from an analysis of a panel of countries that the unemployment rate entered negatively in a fixed effect and random effects formulation. However, Schuetze (1998) found that for the U.S. and Canada the elasticity of the male self-employment rate with respect to the unemployment rate was considerably smaller than found for the effect from taxes discussed above. The elasticity of self-employment associated with the unemployment rate is about 0.1 in both countries using 1994 figures. A decrease of 5 percentage points in the unemployment rate in the U.S. (about the same decline occurred from 1983-1989) leads to about a 1 percentage point decrease in self-employment. Blanchflower (2000) found that there is generally a negative relationship between the self-employment rate and the unemployment rate. It does seem then that there is some disagreement in the literature on whether high unemployment acts to discourage self-employment because of the lack of available opportunities or encourage it because of the lack of viable alternatives.

<sup>232</sup> The OECD is an international organization of those developed countries that accept the principles of representative democracy and a free market economy. There are currently 30 full members.

inherit cash, who win the lottery, or who have large family assets, are all more likely both to set up and sustain a lasting small business. By contrast, childhood personality test-scores turn out to have almost no predictive power about which persons will be running their own businesses as adults (Blanchflower and Oswald, 1998).

One primary impediment to entrepreneurship among minorities is lack of capital. In work based on U.S. micro data at the level of the individual, Evans and Leighton (1989), and Evans and Jovanovic (1989), have argued formally that entrepreneurs face liquidity constraints. The authors use the National Longitudinal Survey of Young Men for 1966-1981, and the Current Population Surveys for 1968-1987. The key test shows that, all else remaining equal, people with greater family assets are more likely to switch to self-employment from employment. This asset variable enters econometric equations significantly and with a quadratic form. Although Evans and his collaborators draw the conclusion that capital and liquidity constraints bind, this claim is open to the objection that other interpretations of their correlation are feasible. One possibility, for example, is that inherently acquisitive individuals both start their own businesses and forego leisure to build up family assets. In this case, there would be a correlation between family assets and movement into self-employment even if capital constraints did not exist. A second possibility is that the correlation between family assets and the movement to self-employment arises because children tend to inherit family firms. Blanchflower and Oswald (1998), however, find that the probability of self-employment depends positively upon whether the individual ever received an inheritance or gift.<sup>233</sup> Moreover, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Work by Holtz-Eakin, Joulfaian and Harvey (1994a, 1994b) drew similar conclusions using different methods on U.S. data, examining flows into and out of self-employment and finding that inheritances both raise entry and slow exit. In contrast, Hurst and Lusardi (2004), citing evidence from the U.S. *Panel Study of Income Dynamics*, claim to show that wealth is not a significant determinant of entry into self-employment. In response, however, Fairlie and Krashinsky (2006) have demonstrated that when the sample is split into two segments—those who enter self-employment after job loss and those who do not—the strong correlation between assets and rate of entry business formation is evident in both segments.

The work of Black, et al. (1996) for the United Kingdom discovers an apparently powerful role for house prices (through its impact on equity withdrawal) in affecting the supply of small new firms. Cowling and Mitchell (1997) find a similar result. Again, these are both suggestive of capital constraints. Finally, Lindh and Ohlsson (1996) adopt the Blanchflower-Oswald procedure and provide complementary evidence for Sweden. Bernhardt (1994), in a study for Canada using data from the 1981 Social Change in Canada Project, also found evidence that capital constraints appear to bind. Using the 1991 French Household Survey of Financial Assets, LaFerrere and McEntee (1995) examined the determinants of self-employment using data on intergenerational transfers of wealth, education, informal human capital, and a range of demographic variables.

They also find evidence of the importance played by the family in the decision to enter self-employment. Intergenerational transfers of wealth, familial transfers of human capital, and the

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<sup>233</sup> This emerges from British data, the National Child Development Study; a birth cohort of children born in March 1958 who have been followed for the whole of their lives.

structure of the family, were found to be determining factors in the decision to move from wage work into entrepreneurship. Broussard, et al. (2003) found that the self-employed have between 0.2 and 0.4 more children compared to the non-self-employed. The authors argue that having more children can increase the likelihood that an inside family member will be a good match at running the business. One might also think that the existence of family businesses, which are particularly prevalent in construction and in agriculture, is a further way to overcome the existence of capital constraints. Transfers of firms within families will help to preserve the status quo and will work against the interests of African Americans, in particular, who do not have as strong a history of business ownership as indigenous non-minorities. Analogously, Hout and Rosen (2000) and Fairlie and Robb (2007a) found that the offspring of self-employed parents are more likely than others to become self-employed and argued that the historically low rates of self-employment among African Americans and Latinos may contribute to their low contemporary rates. Fairlie and Robb (2007b), using data from the U.S. *Characteristics of Business Owners Survey*, and Dunn and Holtz-Eakin (2000), using data from the U.S. *National Longitudinal Surveys*, show that the transmission of positive effects of family on self-employment operates through two channels, intergenerational transmission of entrepreneurial preferences and wealth, and the acquisition of general and specific human capital.

A continuing puzzle in the literature has been why, nationally, the self-employment rate of African American males is one-third of that of nonminority males and has remained roughly constant since 1910. Fairlie and Meyer (2000) rule out a number of explanations for the difference. They found that trends in demographic factors, including the Great Migration and the racial convergence in education levels, “did not have large effects on the trend in the racial gap in self-employment” (p. 662). They also found that an initial lack of business experience “cannot explain the current low levels of black self-employment.” Further, they found that “the lack of traditions in business enterprise among blacks that resulted from slavery cannot explain a substantial part of the current racial gap in self-employment” (p. 664).

Fairlie (1999) and Wainwright (2000) have shown that a considerable part of the explanation of the differences between the African American and nonminority self-employment rate can be attributed to discrimination. Using the 5 percent Public Use Microdata Sample data (“PUMS”) from the 1990 Census, Wainwright (2000) demonstrated that these disparities tend to persist even when factors such as geography, industry, occupation, age, education and assets are held constant.

Bates (1989) finds strong supporting evidence that racial differences in levels of financial capital have significant effects upon racial patterns in business failure rates. Fairlie (1999, 2006) demonstrates, for example, that the African American exit rate from self-employment is twice as high as that of non-minorities. An example will help to make the point. Two baths are being filled with water. In the first scenario, both have the plug in. Water flows into bath A at the same rate as it does into bath B—that is, the inflow rate is the same. When we return after ten minutes the amount of water (the stock) will be the same in the two baths as the inflow rates were the same. In the second scenario, we take out the plugs and allow for the possibility that the outflow rates from the two baths are different. Bath A (the African American firms) has a much larger drain and hence the water flows out more quickly than it does from bath B (the nonminority firms). When we return after 10 minutes, even though the inflow rates are the same there is much



less water in bath A than there is in bath B. A lower exit rate for nonminority-owned firms than is found for minority-owned firms is perfectly consistent with the observed fact that minority-owned firms are younger and smaller than nonminority-owned firms. The extent to which that will be true is a function of the relative sizes of the inflow and the outflow rates.

### **B. Race and Gender Disparities in Earnings**

In this section, we examine earnings to determine whether minority and female entrepreneurs earn less from their businesses than do their nonminority male counterparts. Other things equal, if minority and female business owners as a group cannot achieve comparable earnings from their businesses as similarly-situated nonminorities because of discrimination, then failure rates for M/WBEs will be higher and M/WBE formation rates will be lower than would be observed in a race- and gender-neutral market area. Both phenomena would contribute directly to lower levels of minority and female business ownership.

Below, we first examine earnings disparities among wage and salary employees, that is, non-business owners. It is helpful to examine this segment of the labor force since a key source of new entrepreneurs in any given industry is the pool of experienced wage and salary workers in similar or related industries (Blanchflower 2000 and 2004). Employment discrimination that adversely impacts the ability of minorities or women to succeed in the labor force directly shrinks the available pool of potential M/WBEs. In almost every instance examined, a statistically significant adverse impact on wage and salary earnings is observed—in both the economy at large and also in the construction and construction-related professional services sector.<sup>234</sup>

We then turn to an examination of differences in earnings among the self-employed, that is, among business owners. Here too, among the pool of minorities and women who have formed businesses despite discrimination in both employment opportunities and business opportunities, statistically significant adverse impacts are observed in the vast majority of cases in construction and construction-related professional services (hereafter, “construction”), and other sectors of the economy.

In the remainder of this Chapter, we discuss the methods and data we employed and present the specific findings.

#### **1. Methods**

We used the statistical technique of linear regression analysis to estimate the effect of each of a set of observable characteristics, such as education and age, on an outcome variable of interest. In this case, the outcome variable of interest is earnings and we used regression to compare

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<sup>234</sup> There is a growing body of evidence that discriminatory constraints in the capital market prevent minority-owned businesses from obtaining business loans. Furthermore, even when they are able to obtain them, there is evidence that these loans are not obtained on equal terms: minority-owned firms have to pay higher interest rates, other things being equal. This is another form of discrimination with an obvious and direct impact on the ability of racial minorities to form businesses and to expand or grow previously formed businesses. *See* Chapter VI, *infra*.

earnings among individuals in similar geographic and product markets at similar points in time and with similar years of education and potential labor market experience and see if any adverse race or gender differences remain. In a discrimination free market area, one would not expect to observe significant differences in earnings by race or gender among such similarly situated observations.

Regression also allows us to narrowly tailor our statistical tests to the City of Cleveland's relevant geographic market, and assess whether disparities in that market are statistically significantly different from those observed elsewhere in the nation. Starting from an economy-wide data set, we first estimated the basic model of earnings differences just described and also included an indicator variable for the City of Cleveland Market Area (CLEVMA), which is comprised of the Cleveland-Elyria-Mentor, OH Metropolitan Statistical Area (MSA) and the Akron, OH MSA. This variable estimates the differential effect of location in the CLEVMA relevant to the rest of the country. This model appears as Specification 1 in Tables 5.1 through 5.6. Next, we estimated Specification 2, which is the same model as Specification 1 but with the addition of indicator variables that interact race and gender with the CLEVMA indicator. These variables estimate the differential effect of location in the CLEVMA *and* membership in the given race or gender group. Specification 3 represents our ultimate specification, which includes all the variables from the basic model as well as any of the interaction terms from Specification 2 that were statistically significant.<sup>235</sup>

Any negative and statistically significant differences by race or gender that remain in Specification 3 after holding all of these other factors constant—time, age, education, geography, and industry—are consistent with what would be observed in a market suffering from business-related discrimination.<sup>236</sup>

## 2. Data

The analyses undertaken in this Study require individual-level data (i.e., “microdata”) with relevant information on business ownership status and other key socioeconomic characteristics.

The data source used is the American Community Survey (ACS) Public Use Microdata Sample (PUMS) for 2006–2010. The Census Bureau's ACS is an ongoing survey covering the same type of information collected in the decennial census. The ACS is sent to approximately 3 million addresses annually, including housing units in all counties in the 50 states and the District of Columbia. The PUMS file from the ACS contains records for a subsample of the full ACS. The data used here are the multi-year estimates combining the 2006 through 2010 ACS PUMS records. The combined file contains over six million person-level records. Released in early 2012, the ACS PUMS provides the full range of population and housing information collected in the annual ACS and in the decennial census. Business ownership status is identified in the ACS

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<sup>235</sup> If none of these terms is significant then Specification 3 reduces to Specification 1.

<sup>236</sup> Typically, a given test statistic is considered to be statistically significant if there is a reasonably low probability that the value of the statistic is due to random chance alone. Unless otherwise indicated, in this and subsequent chapters, we employ three levels of statistical significance, corresponding to 10 percent, 5 percent, and 1 percent probabilities that results were the result of random chance.

PUMS through the “class of worker” variable, which distinguishes the unincorporated and incorporated self-employed from others in the labor force. The presence of the class of worker variable allows us to construct a detailed cross-sectional sample of individual business owners and their associated earnings.

### **3. Findings: Race and Gender Disparities in Wage and Salary Earnings**

Tables 5.1, 5.2 and 5.3 report results from our regression analyses of annual earnings among wage and salary workers. Table 5.1 focuses on the economy as a whole, Table 5.2 on the construction sector, and Table 5.3 on the goods and services sector. The numbers shown in each table indicate the percentage difference in that sector between the average annual wages of a given race/gender group and comparable nonminority males.

#### **a. Specification 1 - the Basic Model**

For example, in Table 5.1 Specification 1, the estimated percentage difference in average annual wages between African Americans (both genders) and nonminority males in 2006–2010 was -32.0 percent. That is, average annual wages among African Americans were 32.0 percent lower than for nonminority males who were otherwise similar in terms of geographic location, industry, age, and education. The number in parentheses below each percentage difference is the t-statistic, which indicates whether the estimated percentage difference is statistically significant or not. In Tables 5.1 through 5.6, a t-statistic of 1.99 or larger indicates statistical significance at a 95 percent confidence level or better.<sup>237</sup> In the example just used, the t-statistic of 214.27 indicates that the result is statistically significant.

Specification 1 in Table 5.1 shows adverse and statistically significant wage disparities for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting in multiple race categories, and nonminority women, consistent with the presence of discrimination in these markets. Observed disparities are large as well, ranging from -22.5 percent for Hispanics to -32.0 percent for African Americans.

Specification 1 in Table 5.2 shows similar results when the basic analysis is restricted to the construction sector. In this sector, large, adverse, and statistically significant wage disparities are once again observed for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting in multiple race categories, and nonminority women, consistent with the presence of discrimination in these markets. Observed disparities are large as well, ranging from -19.8 percent for Hispanics to -34.8 percent for nonminority women.

Similarly, Specification 1 in Table 5.3 for the goods and services sector also shows large, adverse, and statistically significant wage disparities for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting in multiple race categories, and nonminority women, consistent with the presence of discrimination in these markets. Observed disparities are large as well, ranging from -22.7 percent for Hispanics to -31.7 percent for African Americans.

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<sup>237</sup> From a two-tailed test.

A comparison of Tables 5.1 and 5.2 shows that for Hispanics and Asians, the disparities in the construction sector are somewhat smaller than those observed in the economy as a whole. For African Americans and nonminority women, they are somewhat larger. Disparities for Native Americans are about the same in both tables.

### **b. Specifications 2 and 3 - the Full Model Including CLEVMA-Specific Interaction Terms**

Next, we turn to Specifications 2 and 3 in Tables 5.1 through 5.3. In each of these Tables, Specification 2 is the basic regression model with a set of interaction terms added, designed to test whether minorities and women in the CLEVMA differ significantly from those elsewhere in the U.S. economy. Specification 2 in Table 5.1, for example, shows a -31.9 percent wage difference that estimates the direct effect of being African American in 2006–2010, as well as a statistically significant 4.9 percent wage decrement that captures the indirect effect of residing in the CLEVMA and being African American. That is, wages for African Americans in the CLEVMA, on average, were 4.9 percent lower than for African Americans in the nation as a whole and 36.8 percent lower (-31.9 percent minus 4.9 percent) than for nonminority males in the CLEVMA.

Specification 3 simply repeats Specification 2, dropping any CLEVMA interactions that are not statistically significant. In Table 5.1, for example, interaction terms were included in the final specification for African Americans and persons reporting two or more races. The net result of Specification 3 in Table 5.1 is evidence of large, adverse, and statistically significant wage disparities for all minority groups and for nonminority women consistent with the presence of discrimination in these markets. The same is true for the construction sector (Table 5.2) as well as for the goods and services sector (Table 5.3).

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**Table 5.1. Annual Wage Earnings Regressions, All Industries, 2006–2010**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.320 (214.27)	-0.319 (212.21)	-0.319 (212.29)
Hispanic	-0.225 (156.84)	-0.225 (156.40)	-0.225 (156.79)
Asian/Pacific Islander	-0.258 (138.19)	-0.258 (137.77)	-0.258 (138.16)
Native American	-0.303 (59.07)	-0.304 (59.02)	-0.303 (59.06)
Two or more races	-0.265 (82.71)	-0.264 (82.17)	-0.264 (82.17)
Nonminority Female	-0.316 (359.46)	-0.316 (357.31)	-0.316 (359.47)
Age	0.181 (720.77)	0.181 (720.76)	0.181 (720.76)
Age <sup>2</sup>	-0.002 (628.05)	-0.002 (628.04)	-0.002 (628.04)
CLEVMA	-0.003 (0.63)	-0.001 (0.18)	0.002 (0.49)
CLEVMA*African American		-0.049 (3.59)	-0.052 (3.97)
CLEVMA*Hispanic		-0.048 (1.93)	n/a
CLEVMA*Asian/Pacific Islander		-0.009 (0.31)	n/a
CLEVMA*Native American		0.097 (0.89)	n/a
CLEVMA*Two or more races		-0.077 (2.00)	-0.080 (2.09)
CLEVMA*Nonminority female		0.010 (1.24)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	4205873	4205873	4205873
Adj. R <sup>2</sup>	.4494	.4494	.4494

Source: NERA calculations from the 2006-2010 ACS Public Use Microdata Sample.

Notes: (1) See above, section B.3.(a)-(b) for a description of Specifications 1 through 3; (2) Universe is all private sector wage and salary workers between the ages of 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (3) Reported number is the percentage difference in annual wages between a given group and nonminority men; (4) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (5) Geography is defined based on place of residence; (6) “CLEVMA” is shorthand for “the City of Cleveland Market Area,” which includes the Cleveland-Elyria-Mentor, OH Metropolitan Statistical Area (MSA) and the Akron, OH MSA; (7) “n/a” in Specification 3 means that the category was not included in the regression because it was not statistically significant in Specification 2, as described above in section B.3.b.

## Market-Based Disparities in Business Formation and Business Owner Earnings

**Table 5.2. Annual Wage Earnings Regressions, Construction and Related Industries, 2006–2010**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.340 (51.84)	-0.340 (51.40)	-0.340 (51.84)
Hispanic	-0.198 (45.68)	-0.198 (45.61)	-0.198 (45.68)
Asian/Pacific Islander	-0.211 (23.27)	-0.211 (23.23)	-0.211 (23.27)
Native American	-0.300 (20.12)	-0.300 (20.12)	-0.300 (20.12)
Two or more races	-0.220 (18.96)	-0.219 (18.74)	-0.220 (18.96)
Nonminority Female	-0.348 (94.88)	-0.348 (94.20)	-0.348 (94.88)
Age	0.144 (162.28)	0.144 (162.27)	0.144 (162.28)
Age <sup>2</sup>	-0.001 (139.61)	-0.001 (139.60)	-0.001 (139.61)
CLEVMA	-0.008 (0.45)	0.005 (0.26)	-0.008 (0.45)
CLEVMA*African American		-0.109 (1.49)	n/a
CLEVMA*Hispanic		0.002 (0.02)	n/a
CLEVMA*Asian/Pacific Islander		0.014 (0.07)	n/a
CLEVMA*Native American		0.432 (0.61)	n/a
CLEVMA*Two or more races		-0.238 (1.74)	n/a
CLEVMA*Nonminority female		-0.045 (1.13)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	351443	351443	351443
Adj. R <sup>2</sup>	.2572	.2572	.2572

Source and Notes: See Table 5.1.

## Market-Based Disparities in Business Formation and Business Owner Earnings

**Table 5.3. Annual Wage Earnings Regressions, Goods and Services Industries, 2006–2010**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.317 (205.78)	-0.316 (203.76)	-0.316 (203.86)
Hispanic	-0.227 (149.71)	-0.227 (149.26)	-0.227 (149.67)
Asian/Pacific Islander	-0.259 (135.41)	-0.259 (134.97)	-0.259 (135.38)
Native American	-0.302 (55.34)	-0.303 (55.28)	-0.302 (55.34)
Two or more races	-0.267 (79.98)	-0.266 (79.48)	-0.267 (79.97)
Nonminority Female	-0.312 (341.20)	-0.312 (339.10)	-0.312 (341.21)
Age	0.183 (699.99)	0.183 (699.98)	0.183 (699.99)
Age <sup>2</sup>	-0.002 (610.22)	-0.002 (610.22)	-0.002 (610.22)
CLEVMA	-0.002 (0.41)	-0.000 (0.05)	0.002 (0.53)
CLEVMA*African American		-0.048 (3.43)	-0.050 (3.79)
CLEVMA*Hispanic		-0.046 (1.80)	n/a
CLEVMA*Asian/Pacific Islander		-0.012 (0.40)	n/a
CLEVMA*Native American		0.089 (0.81)	n/a
CLEVMA*Two or more races		-0.065 (1.62)	n/a
CLEVMA*Nonminority female		0.010 (1.19)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	3854430	3854430	3854430
Adj. R <sup>2</sup>	.4604	.4604	.4604

Source and Notes: See Table 5.1.

### c. Conclusions

Clearly, minorities and women earn substantially and significantly less from their labor than do their similarly situated nonminority male counterparts—in the City of Cleveland Market Area just as in the nation as a whole. Such disparities are symptoms of discrimination in the labor force that, in addition to its direct effect on workers, reduces the future availability of M/WBEs by stifling opportunities for minorities and women to progress through precisely those internal labor markets and occupational hierarchies that are most likely to lead to acquiring the skills, experience and contacts necessary to take advantage of entrepreneurial opportunities. They also demonstrate that discrimination results in less opportunity for minorities and women to accumulate and save business start-up capital through their work as employees. These disparities reflect more than mere “societal discrimination” because they demonstrate the nexus between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. Other things equal, these reduced entrepreneurial opportunities in turn lead to lower M/WBE availability levels than would be observed in a race- and gender-neutral market area.

### 4. Findings: Race and Gender Disparities in Business Owner Earnings

The patterns of discrimination that affect minority and female wage earners affect minority and female entrepreneurs as well. We turn next to the analysis of race and gender disparities in business owner earnings. Table 5.4 focuses on the economy as a whole, Table 5.5 on the construction sector, and Table 5.6 on the goods and services sector. The numbers shown in each table indicate the percentage difference in that sector between the average annual self-employment earnings of a given race/gender group and comparable nonminority males.

#### a. Specification 1 - the Basic Model<sup>238</sup>

Specification 1 in Table 5.4 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting multiple races, and nonminority women, consistent with the presence of discrimination in these markets. The measured difference for African Americans is 39.0 percent lower than for comparable nonminority males; for Hispanics, 22.5 percent lower; for Asians, 10.3 percent lower; for Native Americans, 38.7 percent lower; for persons reporting two or more races, 36.7 percent lower; and for nonminority women, 39.4 percent lower.

Turning to the construction sector, Specification 1 in Table 5.5 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting multiple races, and nonminority women, consistent with the presence of discrimination in these markets. The measured difference for African Americans is 41.6 percent lower than for comparable nonminority males; for Hispanics, 17.4 percent lower; for Asians/Pacific Islanders, 16.5 percent lower; for Native Americans, 31.7 percent lower; for persons reporting two or more races, 28.6 percent lower; and for nonminority women, 44.8 percent lower.

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<sup>238</sup> See above, section B.3.a., for a detailed description of Specification 1.



For the Goods and Services sector, Specification 1 in Table 5.6 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting multiple races, and nonminority women consistent with the presence of discrimination in these markets. The measured difference for African Americans is 38.7 percent lower than for comparable nonminority males; for Hispanics, 24.1 percent lower; for Asians/Pacific Islanders, 10.0 percent lower; for Native Americans, 40.3 percent lower; for persons reporting two or more races, 38.1 percent lower; and for nonminority women, 39.4 percent lower.

### **b. Specifications 2 and 3 - the Full Model Including CLEVMA-Specific Interaction Terms<sup>239</sup>**

Next, we turn to Specifications 2 and 3 in Tables 5.4 through 5.6. Specification 2 is the basic regression model enhanced by a set of interaction terms to test whether minorities and women in the CLEVMA differ significantly from those elsewhere in the U.S. economy. Specification 3 drops any CLEVMA interaction terms that are not statistically significant.

For the economy as a whole in 2006-2010, Table 5.4 shows that none of the CLEVMA interaction terms for minorities or women are statistically significant, indicating that disparities are, on average, no better or worse in the CLEVMA than in the nation as a whole.

For the construction sector in 2006–2010, Table 5.5 shows that, with two exceptions, the estimates for the CLEVMA are in agreement with results for the nation as a whole; that is, disparities in the CLEVMA are no better or worse than in the nation as a whole. For persons reporting two or more races, disparities in the CLEVMA are significantly worse than in the nation as a whole. For Native Americans, they are significantly better.<sup>240</sup>

For the goods and services sector in 2006–2010, Table 5.6 shows that none of the CLEVMA interaction terms for minorities or women are statistically significant, indicating that disparities are, on average, no better or worse in the CLEVMA than in the nation as a whole.

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<sup>239</sup> See above, section B.3.b., for a detailed description of Specifications 2 and 3.

<sup>240</sup> The coefficient on the Native American indicator is, however, of a size that indicates a small sample may be skewing the result.

## Market-Based Disparities in Business Formation and Business Owner Earnings

**Table 5.4. Annual Business Owner Earnings Regressions, All Industries, 2006–2010**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.390 (39.38)	-0.391 (39.23)	-0.390 (39.38)
Hispanic	-0.225 (25.83)	-0.224 (25.73)	-0.225 (25.83)
Asian/Pacific Islander	-0.103 (8.33)	-0.103 (8.29)	-0.103 (8.33)
Native American	-0.387 (14.07)	-0.388 (14.10)	-0.387 (14.07)
Two or more races	-0.367 (21.49)	-0.365 (21.28)	-0.367 (21.49)
Nonminority Female	-0.394 (81.57)	-0.394 (81.02)	-0.394 (81.57)
Age	0.167 (102.77)	0.167 (102.78)	0.167 (102.77)
Age <sup>2</sup>	-0.002 (90.40)	-0.002 (90.41)	-0.002 (90.40)
CLEVMA	-0.001 (0.03)	0.032 (0.90)	-0.001 (0.03)
CLEVMA*African American		0.104 (0.94)	n/a
CLEVMA*Hispanic		-0.102 (0.60)	n/a
CLEVMA*Asian/Pacific Islander		0.021 (0.11)	n/a
CLEVMA*Native American		1.051 (1.10)	n/a
CLEVMA*Two or more races		-0.316 (1.51)	n/a
CLEVMA*Nonminority female		-0.095 (1.95)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	458462	458462	458462
Adj. R <sup>2</sup>	.1629	.1629	.1629

Source: NERA calculations from the 2006-2010 ACS Public Use Microdata Sample.

Notes: (1) See above, section B.4.(a)-(b) for a description of specifications 1 through 3; (2) Universe is all persons in the private sector with positive business earnings between the ages of 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (3) Reported number is the percentage difference in annual business earnings between a given group and nonminority men; (4) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (5) Geography is defined based on place of residence; (6) “CLEVMA” is shorthand for “the City of Cleveland Market Area,” which includes the Cleveland-Elyria-Mentor, OH Metropolitan Statistical Area (MSA) and the Akron, OH MSA; (7) “n/a” in Specification 3 means that the category was not included in the regression because it was not statistically significant in Specification 2, as described above in section B.4.b.

# Market-Based Disparities in Business Formation and Business Owner Earnings

**Table 5.5. Business Owner Earnings Regressions, Construction and Related Industries, 2006–2010**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.416 (16.64)	-0.419 (16.66)	-0.416 (16.64)
Hispanic	-0.174 (9.90)	-0.175 (9.94)	-0.174 (9.90)
Asian/Pacific Islander	-0.165 (4.23)	-0.166 (4.25)	-0.164 (4.22)
Native American	-0.317 (5.66)	-0.321 (5.75)	-0.321 (5.75)
Two or more races	-0.286 (7.06)	-0.273 (6.67)	-0.273 (6.66)
Nonminority female	-0.448 (27.28)	-0.449 (27.26)	-0.448 (27.28)
Age	0.131 (35.57)	0.131 (35.57)	0.131 (35.58)
Age <sup>2</sup>	-0.001 (32.21)	-0.001 (32.22)	-0.001 (32.22)
CLEVMA	0.065 (1.07)	0.046 (0.72)	0.083 (1.34)
CLEVMA*African American		0.387 (1.19)	n/a
CLEVMA*Hispanic		0.305 (0.80)	n/a
CLEVMA*Asian/Pacific Islander		2.005 (0.79)	n/a
CLEVMA*Native American		17.707 (2.09)	17.066 (2.07)
CLEVMA*Two or more races		-0.816 (3.59)	-0.822 (3.67)
CLEVMA*Nonminority Female		0.274 (1.18)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	74811	74811	74811
Adj. R <sup>2</sup>	.0509	.0511	.0511

Source and Notes: See Table 5.4.

## Market-Based Disparities in Business Formation and Business Owner Earnings

**Table 5.6. Business Owner Earnings Regressions, Goods and Services Industries, 2006–2010**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.387 (35.77)	-0.388 (35.62)	-0.387 (35.77)
Hispanic	-0.241 (24.37)	-0.240 (24.27)	-0.241 (24.37)
Asian/Pacific Islander	-0.100 (7.56)	-0.100 (7.53)	-0.100 (7.56)
Native American	-0.403 (12.94)	-0.404 (12.94)	-0.403 (12.94)
Two or more races	-0.381 (20.28)	-0.381 (20.20)	-0.381 (20.28)
Nonminority female	-0.394 (76.17)	-0.394 (75.66)	-0.394 (76.17)
Age	0.174 (96.07)	0.174 (96.07)	0.174 (96.07)
Age <sup>2</sup>	-0.002 (84.16)	-0.002 (84.16)	-0.002 (84.16)
CLEVMA	-0.017 (0.54)	0.017 (0.42)	-0.017 (0.54)
CLEVMA*African American		0.088 (0.73)	n/a
CLEVMA*Hispanic		-0.181 (0.96)	n/a
CLEVMA*Asian/Pacific Islander		0.025 (0.12)	n/a
CLEVMA*Native American		0.367 (0.43)	n/a
CLEVMA*Two or more races		-0.023 (0.08)	n/a
CLEVMA*Nonminority Female		-0.089 (1.65)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	383651	383651	383651
Adj. R <sup>2</sup>	.1724	.1724	.1724

Source and Notes: See Table 5.4.

### c. Conclusions

As was the case for wage and salary earners, minority and female entrepreneurs earn substantially and significantly less from their efforts than similarly situated nonminority male entrepreneurs. The situation, in general, differs little in the City of Cleveland Market Area from what is observed for the nation as a whole. These disparities are consistent with the presence of discrimination in commercial markets that adversely affects M/WBEs. Other things equal, if minorities and women are prevented by discrimination from earning remuneration from their entrepreneurial efforts comparable to that of similarly situated nonminority males, then capital reinvestment and growth rates may slow, business failure rates may increase and, as demonstrated in the next section, business formation rates may decrease. Combined, these phenomena result in lower M/WBE availability levels than would be observed in a race- and gender-neutral market area. As this chapter demonstrates, discrimination depresses business owner earnings for women and minority entrepreneurs. Business owner earnings, however, are often directly related to whether an owner has the capital to reinvest (firm size), how long a firm survives (firm age), and how much money a firm takes in (individual firm revenues). These observations illustrate why employment size, years in business, and individual firm revenues are especially inappropriate factors to consider in any sort of “capacity” type analysis.

### C. Race and Gender Disparities in Business Formation

As discussed in the two previous sections, discrimination that affects the wages and entrepreneurial earnings of minorities and women will ultimately affect the number of businesses formed by these groups as well. In this section of this chapter, we turn to the analysis of race and gender disparities in business formation.<sup>241</sup> We compare self-employment rates by race and gender to determine whether minorities or women are as likely to enter the ranks of entrepreneurs as are similarly-situated nonminority males. We find that in most cases they are not as likely to do so, and that minority and female business formation rates in most cases would likely be substantially and significantly higher if markets operated in a race- and gender-neutral manner.

Discrimination in the labor market, symptoms of which are evidenced in Section B.3 above, might cause wage and salary workers to turn to self-employment in hopes of encountering less discrimination from customers and suppliers than from employers and co-workers. Other things equal, and assuming minority and female workers did not believe that discrimination pervaded commercial markets as well, this would lead minority and female business formation rates to be higher than would otherwise be expected.

On the other hand, discrimination in the labor market prevents minorities and women from acquiring the very skills, experience, and positions that are often observed among those who leave the ranks of the wage and salary earners to start their own businesses. Many construction contracting concerns have been formed by individuals who were once employed as foremen for other contractors, fewer by those who were employed instead as laborers. Similarly, discrimination in commercial capital and credit markets, as well as asset and wealth distribution,

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<sup>241</sup> We use the phrases “business formation rates” and “self-employment rates” interchangeably in this Study.

prevents minorities and women from acquiring the financial credit and capital that are so often prerequisites to starting or expanding a business. Other things being equal, these phenomena would lead minority and female business formation rates to be lower than otherwise would be expected.

Further, discrimination by commercial customers and suppliers against M/WBEs, symptoms of which are evidenced in Section B.4 above and elsewhere, operates to increase input prices and lower output prices for M/WBEs. This discrimination leads to higher rates of failure for some minority- and women-owned firms, lower rates of profitability and growth for others, and prevents some minorities and women from ever starting businesses at all.<sup>242</sup> All of these phenomena, other things equal, would contribute directly to relatively lower observed rates of minority and female self-employment.

### 1. Methods and Data

To see if minorities or nonminority women are as likely to be business owners as are comparable nonminority males, we use a statistical technique known as Probit regression. Probit regression is used to determine the relationship between a categorical variable—one that can be characterized in terms of a “yes” or a “no” response as opposed to a continuous number—and a set of characteristics that are related to the outcome of the categorical variable. Probit regression produces estimates of the extent to which each characteristic is positively or negatively related to the likelihood that the categorical variable will be a yes or no. For example, Probit regression is used by statisticians to estimate the likelihood that an individual participates in the labor force, retires this year, or contracts a particular disease—these are all variables that can be categorized by a response of “yes” (for example, she is in the labor force) or “no” (for example, she is not in the labor force)—and the extent to which certain factors are positively or negatively related to the likelihood (for example, the more education she has, the more likely that she is in the labor force). Probit regression is one of several techniques that can be used to examine qualitative outcomes. Generally, other techniques such as Logit regression yield similar results.<sup>243</sup> In the present case, Probit regression is used to examine the relationship between the choice to own a business (yes or no) and the other demographic and socioeconomic characteristics in our basic model. The underlying data for this section is once again the 2006–2010 ACS PUMS.

### 2. Findings: Race and Gender Disparities in Business Formation

As a point of reference for what follows, Tables 5.7 and 5.8 provide a summary of business ownership rates in 2006–2010 by race and gender. A striking feature of both tables is how much higher, in general, business ownership rates are for nonminority males than for other groups.

Table 5.7, for example, shows a 6.79 percentage point difference between the overall self-employment rate of African Americans and nonminority males in the CLEVMA ( $11.18 - 4.39 = 10.78$ ). As shown in the rightmost column, this 6.79 percentage point gap translates into an

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<sup>242</sup> See also the materials cited at fn. 227 *supra*.

<sup>243</sup> For a detailed discussion, see G.S. Maddala (1983). Probit analysis is performed here using the “dprobit” command in the statistical program STATA.

African American business formation rate in the CLEVMA that is 60.7 percent lower than the nonminority male business formation rate (i.e.,  $4.39 - 11.18 \div 11.18 \approx -60.7\%$ ). For Hispanics, the business formation rate is 47.0 percent lower. For Asians/Pacific Islanders, it is 4.8 percent lower. For Native Americans, it is 27.5 percent lower. For persons reporting two or more races, it is 28.6 percent lower. For minorities as a group, it is 50.4 percent lower. For nonminority women, it is 47.2 percent lower; and for M/WBEs overall, it is 48.2 percent lower.

Table 5.8 provides similar information for the construction sector and the goods and services sector. Large deficits are observed in construction for all groups except Hispanics and Asians/Pacific Islanders. With the sole exception of Asians/Pacific Islanders, large deficits are observed in the goods and services sector as well.

There is no doubt that a portion of the group differences documented in Tables 5.7 and 5.8 are associated with differences in the distribution of individual productivity characteristics and preferences between minorities, women, and nonminority males. It is well known, for example, that earnings tend to increase with age (i.e., labor market experience). It is also true that the propensity toward self-employment increases with labor market experience.<sup>244</sup> Since most minority populations in the United States have a lower median age than the nonminority population, it is important to test whether the disparities in business ownership evidenced in Tables 5.7 and 5.8 can be explained by differences in the age distribution or other factors such as education, geographic location, or industry preferences of minorities and nonminority women compared to nonminority males.

To do this, the remainder of this section presents a series of regression analyses that test whether large, adverse, and statistically significant race and gender disparities for minorities and women remain when these other factors are held constant. Table 5.9 focuses on the economy as a whole and Tables 5.10 and 5.11 focus on the construction sector and the goods and services sector, respectively. The numbers shown in each of these tables indicate the percentage point difference between the probability of self-employment for a given race/gender group compared to similarly-situated nonminority males.

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<sup>244</sup> Wainwright (2000), p. 86.

## Market-Based Disparities in Business Formation and Business Owner Earnings

**Table 5.7. Self-Employment Rates in 2006–2010 for Selected Race and Gender Groups: United States and the City of Cleveland Market Area, All Industries**

<b>Race/Gender</b>	<b>U.S. (%)</b>	<b>City of Cleveland Market Area (%)</b>	<b>Percent Difference from Nonminority Male in Column (2)</b>
	(1)	(2)	(3)
African American	5.37	4.39	-60.7
Hispanic	8.54	5.92	-47.0
Asian/Pacific Islander	10.27	10.64	-4.8
Native American	8.69	8.10	-27.5
Two or more races	8.90	7.98	-28.6
Minority	7.88	5.54	-50.4
Nonminority female	8.59	5.90	-47.2
M/WBE	8.25	5.79	-48.2
Nonminority male	13.97	11.18	

Source: NERA calculations from the 2006-2010 ACS Public Use Microdata Sample.



## Market-Based Disparities in Business Formation and Business Owner Earnings

**Table 5.8. Self-Employment Rates in 2006–2010 for Selected Race and Gender Groups: United States and the City of Cleveland Market Area, Construction Sector and Goods and Services Sectors**

Race/Gender	U.S. (%)	City of Cleveland Market Area (%)	Percent Difference from Nonminority Male in Column (2)
	(1)	(2)	(3)
<i>Construction Sector</i>			
African American	16.86	23.14	-15.2
Hispanic	15.34	38.67	41.8
Asian/Pacific Islander	17.39	29.93	9.7
Native American	18.32	15.91	-41.7
Two or more races	20.22	12.62	-53.7
Minority	16.02	25.84	-5.3
Nonminority female	14.97	11.64	-57.3
M/WBE	15.75	18.08	-33.7
Nonminority male	26.25	27.28	-15.2
<i>Goods and Services Sectors</i>			
African American	4.81	3.69	-57.8
Hispanic	7.51	4.05	-53.7
Asian/Pacific Islander	9.97	10.25	17.1
Native American	7.38	7.89	-9.8
Two or more races	7.90	7.56	-13.6
Minority	7.10	4.71	-46.2
Nonminority female	8.41	5.78	-33.9
M/WBE	7.79	5.46	-37.6
Nonminority male	11.75	8.75	

Source: NERA calculations from the 2006-2010 ACS Public Use Microdata Sample.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

### a. Specification 1 - the Basic Model<sup>245</sup>

Specification 1 in Table 5.9 shows large, adverse, and statistically significant business formation disparities for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting multiple races, and nonminority women consistent with the presence of discrimination in these markets. Specification 1 in Tables 5.10 and 5.11 shows large, negative, and statistically significant business formation disparities for each of these groups in the construction sectors as well as in the goods and services sector.

<sup>245</sup> See above, section C.2.a., for a detailed description of Specification 1.

**b. Specifications 2 and 3 - the Full Model Including CLEVMA-Specific Interaction Terms<sup>246</sup>**

Several of the CLEVMA interaction terms included in Specification 2 were significant. The final results are shown in Specification 3 for Tables 5.9 through 5.11.

To summarize for the economy-wide results (Table 5.9):

- For African Americans, business formation rates are 4.0 percentage points lower than what would be expected in a race- and gender-neutral market area.<sup>247</sup>
- For Hispanics, business formation rates are 1.2 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians/Pacific Islanders, business formation rates are 1.0 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 7.0 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For persons reporting two or more races, business formation rates are 0.8 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 3.6 percentage points lower than what would be expected in a race- and gender-neutral market area.

To summarize for the construction sector results (Table 5.10):

- For African Americans, business formation rates are 2.3 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 17.1 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For Asians/Pacific Islanders, business formation rates are 5.9 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 7.8 percentage points lower than what would be expected in a race- and gender-neutral market area.

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<sup>246</sup> See above, section C.2.b., for a detailed description of Specifications 2 and 3.

<sup>247</sup> Recall that the net business formation rate is equal to the value direct coefficient (on the African American indicator variable in this case) plus the value of the statistically significant coefficient on the CLEVMA\*African American interaction term.

## Market-Based Disparities in Business Formation and Business Owner Earnings

- For persons reporting two or more races, business formation rates are 3.5 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 14.7 percentage points lower than what would be expected in a race- and gender-neutral market area.

To summarize for the Goods and Services sector results (Table 5.11):

- For African Americans, business formation rates are 3.6 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 2.7 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians/Pacific Islanders, business formation rates are 1.5 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 7.1 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For persons reporting two or more races, business formation rates are 1.9 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 2.8 percentage points lower than what would be expected in a race- and gender-neutral market area.

# Market-Based Disparities in Business Formation and Business Owner Earnings

**Table 5.9. Business Formation Regressions, All Industries, 2006–2010**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.040 (93.84)	-0.040 (93.41)	-0.040 (93.84)
Hispanic	-0.031 (82.60)	-0.031 (82.56)	-0.031 (82.54)
Asian/Pacific Islander	-0.018 (34.44)	-0.018 (34.53)	-0.018 (34.52)
Native American	-0.027 (19.46)	-0.027 (19.55)	-0.027 (19.54)
Two or more races	-0.018 (19.70)	-0.018 (19.78)	-0.018 (19.78)
Nonminority Female	-0.027 (100.47)	-0.027 (99.57)	-0.027 (99.55)
Age	0.010 (143.19)	0.010 (143.20)	0.010 (143.19)
Age <sup>2</sup>	-0.000 (98.95)	-0.000 (98.96)	-0.000 (98.96)
CLEVMA	-0.001 (0.53)	0.001 (0.56)	0.002 (1.03)
CLEVMA*African American		0.008 (1.66)	n/a
CLEVMA*Hispanic		0.020 (2.19)	0.019 (2.10)
CLEVMA*Asian/Pacific Islander		0.029 (3.19)	0.028 (3.10)
CLEVMA*Native American		0.099 (2.51)	0.097 (2.48)
CLEVMA*Two or more races		0.027 (2.01)	0.026 (1.95)
CLEVMA*Nonminority Female		-0.008 (3.74)	-0.009 (4.10)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	4481708	4481708	4481708
Pseudo R <sup>2</sup>	.2170	.2170	.2170

Source: NERA calculations from the 2006-2010 ACS Public Use Microdata Sample.

Notes: (1) See above, section C.2.(a)-(b) for a description of specifications 1 through 3; (2) Universe is all private sector labor force participants between the ages of 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (3) Reported number represents the percentage point probability difference in business ownership rates between a given group and nonminority men, evaluated at the mean business ownership rate for the estimation sample; (4) Number in parentheses is the absolute value of the associated z-statistic. Using a two-tailed test, z-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (5) Geography is defined based on place of residence; (6) “CLEVMA” is shorthand for “the City of Cleveland Market Area,” which includes the Cleveland-Elyria-Mentor, OH Metropolitan Statistical Area (MSA) and the Akron, OH MSA; (7) “n/a” in Specification 3 indicates that the category was not included in the regression because it was not statistically significant in Specification 2, as described above in section C.2.b.

## Market-Based Disparities in Business Formation and Business Owner Earnings

**Table 5.10. Business Formation Regressions, Construction and Related Industries, 2006–2010**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.089 (26.43)	-0.090 (26.58)	-0.090 (26.58)
Hispanic	-0.071 (32.42)	-0.071 (32.55)	-0.071 (32.56)
Asian/Pacific Islander	-0.059 (12.41)	-0.059 (12.39)	-0.059 (12.42)
Native American	-0.078 (10.40)	-0.078 (10.41)	-0.078 (10.40)
Two or more races	-0.035 (5.91)	-0.034 (5.81)	-0.035 (5.91)
Nonminority Female	-0.097 (47.52)	-0.097 (47.02)	-0.097 (47.02)
Age	0.023 (55.29)	0.023 (55.31)	0.023 (55.31)
Age <sup>2</sup>	-0.000 (37.80)	-0.000 (37.82)	-0.000 (37.83)
CLEVMA	0.023 (2.98)	0.022 (2.61)	0.021 (2.54)
CLEVMA*African American		0.112 (3.06)	0.113 (3.08)
CLEVMA*Hispanic		0.242 (4.22)	0.242 (4.24)
CLEVMA*Asian/Pacific Islander		-0.051 (0.42)	n/a
CLEVMA*Native American		0.183 (0.65)	n/a
CLEVMA*Two or more races		-0.070 (0.98)	n/a
CLEVMA*Nonminority female		-0.051 (2.42)	-0.050 (2.39)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	418213	418213	418213
Pseudo R <sup>2</sup>	.0770	.0770	.0770

Source and Notes: See Table 5.9.

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**Table 5.11. Business Formation Regressions, Goods and Services Industries, 2006–2010**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.036 (88.94)	-0.036 (88.51)	-0.036 (88.95)
Hispanic	-0.027 (74.86)	-0.027 (74.79)	-0.027 (74.83)
Asian/Pacific Islander	-0.015 (32.22)	-0.015 (32.36)	-0.015 (32.34)
Native American	-0.022 (16.28)	-0.022 (16.38)	-0.022 (16.37)
Two or more races	-0.016 (18.91)	-0.017 (19.06)	-0.017 (19.05)
Nonminority Female	-0.023 (91.09)	-0.023 (90.39)	-0.023 (90.38)
Age	0.009 (131.62)	0.009 (131.62)	0.009 (131.62)
Age <sup>2</sup>	-0.000 (90.97)	-0.000 (90.98)	-0.000 (90.98)
CLEVMA	-0.002 (1.89)	-0.002 (1.10)	-0.001 (0.71)
CLEVMA*African American		0.006 (1.18)	n/a
CLEVMA*Hispanic		0.006 (0.74)	n/a
CLEVMA*Asian/Pacific Islander		0.031 (3.67)	0.030 (3.58)
CLEVMA*Native American		0.094 (2.51)	0.093 (2.48)
CLEVMA*Two or more races		0.037 (2.77)	0.036 (2.71)
CLEVMA*Nonminority female		-0.005 (2.13)	-0.005 (2.51)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	4178050	4178050	4178050
Pseudo R <sup>2</sup>	.2266	.2266	.2266

Source and Notes: See Table 5.9.

### c. Conclusions

This section has demonstrated that observed business formation rates for minorities and nonminority women in the City of Cleveland Market Area are, in most cases, substantially and statistically significantly lower than those that would be expected to be observed if commercial markets operated in a race- and gender-neutral manner. With some exceptions (see below), this is true in the construction sector and the goods and services sector as well as in the economy as a whole. Minorities and women tend to be substantially and significantly less likely to own their own businesses than would be expected based upon their observable characteristics including age, education, geographic location, industry, and trends over time. Moreover, as demonstrated in previous sections, these groups also suffer substantial and significant earnings disadvantages relative to comparable nonminority males whether they work as employees or as entrepreneurs. These findings are consistent with results expected to be observed in a discriminatory market area.

### D. Expected Business Formation Rates—Implications for Current M/WBE Availability<sup>248</sup>

In Table 5.12, the Probit regression results from Tables 5.9, 5.10 and 5.11 for the overall economy in the City of Cleveland market area, the construction sector, and the goods and services sector, respectively, are combined with weighted average self-employment rates by race and gender from the 2006–2010 ACS PUMS (Tables 5.7 and 5.8) to determine the disparity between baseline availability and expected availability in a race- and gender-neutral market area. These figures appear in column (3) of each panel in Table 5.12.

The business formation rate in the CLEVMA for M/WBEs in the construction sector is 18.08 percent (see middle panel of Table 5.12, bottom row). According to the regression specification underlying Table 5.10, however, that rate would be 26.79 percent, or 48.2 percent higher, in a race- and gender-neutral market area. Put differently, the disparity ratio of the actual business formation rate to the expected business formation rate for M/WBEs is 67.49. Disparity indices are adverse and statistically significant in construction for Asian/Pacific Islanders, Native Americans, persons reporting two or more races, nonminority females, and M/WBEs as a group.

African Americans and Hispanics in the CLEVMA construction sector actually had higher business formation rates than expected. This increased business formation rate, however, has not translated into increased earnings for these business owners, as shown in Table 5.5, where African American business owners earnings lag those of comparable nonminority males by almost 42 percent and Hispanic business owner earnings lag by over 17 percent.

Given the large disparities observed for many presumptive groups, goal-setters might consider adjusting baseline estimates of M/WBE availability upward to account for the continuing effects of discrimination. The business formation rate disparities documented in Table 5.12 can be combined with the estimates of current M/WBE availability documented in Table 4.21 and

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<sup>248</sup> This exercise also addresses the requirements of 49 C.F.R. 26.45 (“Step 2”) for the USDOT DBE Program.

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elsewhere to provide estimates of expected availability. These estimates appear below in Tables 7.31 and 7.32.

**Table 5.12. Actual and Potential Business Formation Rates in the City of Cleveland Market Area**

<b>Race/Gender</b>	<b>Business Formation Rate (%)</b>	<b>Expected Business Formation Rate (%)</b>	<b>Disparity Ratio</b>
<i>All Industries</i>	(1)	(2)	(3)
African American	4.39	8.39	52.32
Hispanic	5.92	7.12	83.15
Asian/Pacific Islander	10.64	9.64	
Native American	8.10	1.10	
Two or more races	7.98	7.18	
Minority	5.54	7.88	70.30
Nonminority female	5.90	9.50	62.11
M/WBE	5.79	9.06	63.91
<i>Construction Sector</i>	(1)	(2)	(3)
African American	23.14	20.84	
Hispanic	38.67	21.57	
Asian/Pacific Islander	29.93	35.83	83.53
Native American	15.91	23.71	67.10
Two or more races	12.62	16.12	78.29
Minority	25.84	22.91	
Nonminority female	11.64	26.34	44.19
M/WBE	18.08	26.79	67.49
<i>Goods and Services Sectors</i>	(1)	(2)	(3)
African American	3.69	7.29	50.62
Hispanic	4.05	6.75	60.00
Asian/Pacific Islander	10.25	8.75	
Native American	7.89	0.79	
Two or more races	7.56	5.66	
Minority	4.71	6.86	68.66
Nonminority female	5.78	8.58	67.37
M/WBE	5.46	8.43	64.77

Source: 2006–2010 ACS Public Use Microdata Sample. See Tables 5.7 through 5.11.

Notes: (A) Figures are rounded. Rounding was performed subsequent to any mathematical calculations. (B) Figures in column (1) are average self-employment rates weighted using ACS population-based person weights, as also shown in Tables 5.7 and 5.8. (C) Figures in column (2), top, middle, and bottom panels, are derived by combining the figure in column (1) with the corresponding result from the regression reported in Table 5.9, 5.10 or 5.11, respectively. Minority and M/WBE figures were derived from similar regression analyses, not reported separately. (D) Column (3) is the figure in column (1) divided by the figure in column (2), with the result multiplied by 100. (E) An empty cell in the Disparity Ratio column indicates that no adverse disparity was observed for that category.



## E. Evidence from the Survey of Business Owners

As a final check on the statistical findings in this Chapter, we present evidence from a Census Bureau data collection effort dedicated to M/WBEs. The Census Bureau's *Survey of Business Owners and Self-Employed Persons* (SBO), formerly known as the *Survey of Minority- and Women-Owned Business Enterprises* (SMWOBE), collects and disseminates data on the number, sales, employment, and payrolls of businesses owned by women and members of racial and ethnic minority groups. This survey has been conducted every five years since 1972 as part of the *Economic Census* program. Data from the 2007 SBO, the most recent, were released in 2011.

The SBO estimates are created by matching data collected from income tax returns by the Internal Revenue Service with Social Security Administration data on race and ethnicity, and supplementing this information using statistical sampling methods. The unique field for conducting this matching is the Social Security Number (SSN) or the Employer Identification Number (EIN), as reported on the tax return.<sup>249</sup>

The SBO covers women and five groups of minorities: (1) African Americans, (2) Hispanics, (3) Asians, (4) Native Hawaiians and Pacific Islanders, and (5) American Indians and Alaskan Natives. The 2007 SBO also includes comparative information for nonminority male-owned firms.<sup>250</sup>

The SBO provides aggregate estimates of the number of minority-owned and women-owned firms and their annual sales and receipts. The SBO distinguishes employer firms (i.e., firms with one or more paid employees) from nonemployer firms, and for the former also includes estimates of aggregate annual employment and payroll.

Compared to the ACS PUMS, the SBO is more limited in the scope of industrial and geographic detail it provides. Nonetheless, it contains a wealth of information on the character of minority and female business enterprise in the U.S as a whole as well as in the State of Ohio.<sup>251</sup> In the remainder of this section, we present SBO statistics for the United States as a whole and in Ohio and calculate disparity indices from them. We find that results in the SBO regarding disparities are consistent with our findings above using the ACS PUMS.

Tables 5.13 and 5.14 contain data for all industries combined. Table 5.13 is for the U.S. as a whole, Table 5.14 is for the State of Ohio. Panel A in these two tables summarizes the SBO results for each race and/or gender grouping. For example, Panel A of Table 5.13 shows a total of 26.29 million firms in the U.S. in 2007 (column 1) with overall sales and receipts of \$10.949

<sup>249</sup> Prior to 2002, "C" corporations were not included in the SMWOBE universe due to technical difficulties. This has been rectified in the 2002 SBO. For more information, consult the discussion of SBO survey methodology at <http://www.census.gov/econ/sbo/>.

<sup>250</sup> In the ACS PUMS data, discussed above, the unit of analysis is the business owner, or self-employed person. In the SBO data the unit of analysis is the business rather than the business owner. Furthermore, unlike most other business statistics, including the other components of the *Economic Census*, the unit of analysis in the SBO is the firm, rather than the establishment.

<sup>251</sup> It is, in general, not possible with the SBO dataset to examine geographic divisions below the state level.

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trillion (column 2). Of these 26.29 million firms, 5.19 million had one or more employees (column 3) and these 5.19 million firms had overall sales and receipts of \$10.015 trillion (column 4). Column (5) shows a total of 56.63 million employees on the payroll of these 5.19 million firms and a total annual payroll expense of \$1.941 trillion (column 6).

The remaining rows in Panel A provide comparable statistics for nonminority male-owned, women-owned, and minority-owned firms. For example, Table 5.13 shows that there were 1.9 million African American-owned firms counted in the SBO, and that these 1.9 million firms registered \$135.7 billion in sales and receipts. It also shows that 106,566 of these African American-owned firms had one or more employees, and that they employed a total of 909,552 workers with an annual payroll total of \$23.33 billion.

Panel A of Table 5.14 provides comparable information for Ohio. The SBO counted 869,343 firms in Ohio, of which 443,907 were nonminority male-owned, 249,180 were female-owned; 52,136 were African American-owned; 9,722 were Hispanic-owned; 18,198 were Asian-owned; and 2,989 were Native American-owned.

Panel B in each Table converts the figures in Panel A to percentage distributions within each column. For example, Column (1) in Panel B of Table 5.14 shows that nonminority male-owned firms were 51.06 percent of all firms in Ohio, female-owned firms were 28.66 percent, and African American-owned firms were 6.00 percent. Additionally, 1.12 percent of firms were Hispanic-owned, 2.09 percent were Asian-owned, and 0.34 percent were Native American-owned.

Column (2) in Panel B provides the same percentage distribution for overall sales and receipts. Table 5.14, for example, shows that although nonminority male-owned firms were 51.06 percent of all firms, they accounted for 78.03 percent of all sales and receipts. African American-owned firms, in contrast, were 6.00 percent of all firms in Ohio, but they accounted for only 1.22 percent of all sales and receipts. Similarly, women accounted for 28.66 percent of all firms in Ohio but earned only 10.64 percent of sales and receipts.

Similar results are obtained when the survey results are restricted to firms with one or more paid employees. Column (3) in Table 5.14, for example, shows that nonminority male-owned firms accounted for 63.19 percent of all employer firms but earned 79.42 percent of all sales and receipts. African American-owned employer firms accounted for 1.69 percent of all employer firms but only 1.05 percent of all sales and receipts. Women-owned employer firms accounted for 16.16 percent of all employer firms but only 10.12 percent of all sales and receipts.

Large disparities between the fraction of firms that are minority- or women-owned and their fraction of sales and receipts in Ohio are observed not only for African Americans and women, but also for Hispanic-owned firms, Asian-owned firms, and Native American-owned firms.

The disparity indices are presented in Panel C of each table. Disparity indices of approximately 80 percent or less indicate disparate impact consistent with business discrimination (0 percent being complete disparity and 100 percent being full parity). In Ohio (Table 5.14), the sales and receipts disparity indices (in columns 2 and 4) fall at or beneath the 80 percent threshold in 9 out

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of 10 cases. All of these disparity indices are statistically significant within a 95 percent confidence interval.

**Table 5.13. Disparity Ratios from the 2007 Survey of Business Owners, United States, All Industries**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A. Levels</b>						
All Firms	26,294,860	10,949,461,874	5,189,968	10,015,142,962	56,626,554	1,940,572,944
Nonminority Male	10,943,636	7,725,275,376	2,753,871	7,255,760,511	37,138,139	1,386,782,737
Female	7,792,115	1,196,608,004	909,661	1,014,366,348	7,520,121	214,673,400
African American	1,921,864	135,739,834	106,566	97,144,898	909,552	23,334,792
Hispanic	2,260,269	350,661,243	248,852	279,920,707	1,908,161	54,295,508
Asian	1,549,559	506,047,751	397,426	453,574,194	2,807,771	79,230,459
Native Hawaiian/Pac. Islander	37,687	6,319,357	4,151	5,250,301	37,801	1,217,138
Am. Indian & Alaska Native	236,691	34,353,842	23,662	27,494,075	185,037	5,930,247
<b>Panel B. Column Percentages</b>						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	41.62%	70.55%	53.06%	72.45%	65.58%	71.46%
Female	29.63%	10.93%	17.53%	10.13%	13.28%	11.06%
African American	7.31%	1.24%	2.05%	0.97%	1.61%	1.20%
Hispanic	8.60%	3.20%	4.79%	2.79%	3.37%	2.80%
Asian	5.89%	4.62%	7.66%	4.53%	4.96%	4.08%
Native Hawaiian/Pac. Islander	0.14%	0.06%	0.08%	0.05%	0.07%	0.06%
Am. Indian & Alaska Native	0.90%	0.31%	0.46%	0.27%	0.33%	0.31%
<b>Panel C. Disparity Ratios</b>						
	(2) vs. (1)			(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male	169.52			136.54	123.60	134.68
Female	36.88			57.79	75.77	63.12
African American	16.96			47.24	78.23	58.56
Hispanic	37.26			58.29	70.28	58.35
Asian	78.43			59.14	64.75	53.32
Native Hawaiian/Pac. Islander	40.27			65.54	83.46	78.42
Am. Indian & Alaska Native	34.86			60.21	71.67	67.03

Source: NERA calculations using 2007 SBO.

Notes: (A) Figures are rounded. Rounding was performed subsequent to any mathematical calculations. (B) Excludes publicly-owned, foreign-owned, and not-for-profit firms. (C) "n/a" indicates that data were not disclosed due to confidentiality or other publication restrictions.

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**Table 5.14. Disparity Ratios from the 2007 Survey of Business Owners, State of Ohio, All Industries**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A. Levels</b>						
All Firms	869,343	383,389,434	170,738	355,599,669	2,164,602	67,624,806
Nonminority Male	443,907	299,159,376	107,893	282,414,103	1,577,451	52,995,579
Female	249,180	40,803,123	27,584	35,991,869	286,158	7,163,586
African American	52,136	4,690,810	2,881	3,729,452	33,298	807,569
Hispanic	9,722	2,258,522	1,339	1,947,951	11,562	371,084
Asian	18,198	6,756,316	6,278	6,192,510	51,478	1,371,005
Native Hawaiian/Pac. Islander	n/a	n/a	n/a	n/a	n/a	n/a
Am. Indian & Alaska Native	2,989	577,542	340	491,134	4,273	102,551
<b>Panel B. Column Percentages</b>						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	51.06%	78.03%	63.19%	79.42%	72.87%	78.37%
Female	28.66%	10.64%	16.16%	10.12%	13.22%	10.59%
African American	6.00%	1.22%	1.69%	1.05%	1.54%	1.19%
Hispanic	1.12%	0.59%	0.78%	0.55%	0.53%	0.55%
Asian	2.09%	1.76%	3.68%	1.74%	2.38%	2.03%
Native Hawaiian/Pac. Islander	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Am. Indian & Alaska Native	0.34%	0.15%	0.20%	0.14%	0.20%	0.15%
<b>Panel C. Disparity Ratios</b>						
Nonminority Male		152.81%		125.68%	115.32%	124.01%
Female		37.13%		62.65%	81.83%	65.57%
African American		20.40%		62.15%	91.16%	70.77%
Hispanic		52.68%		69.85%	68.11%	69.97%
Asian		84.19%		47.36%	64.68%	55.14%
Native Hawaiian/Pac. Islander		n/a		n/a	n/a	n/a
Am. Indian & Alaska Native		43.81%		69.36%	99.13%	76.15%

Source and Notes: See Table 5.13.

Table 5.15 shows comparable SBO data for the construction sector in the U.S. as a whole. Here, large disparities are evident for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders, and women. For example, although African Americans account for 3.75 percent of all firms in construction, they earn only 0.88 percent of all sales and receipts in that sector. Hispanics account for 10.16 percent of firms but only 3.79 percent of receipts. For Asians, the figures are 2.11 percent and 1.24 percent, respectively. For Native Americans, the figures are 1.12 percent and 0.56 percent, respectively. For women, disparities are not as acute as for minorities but are still fairly large. Women account for 8.01 percent of all construction firms but earned only 6.46 percent of construction sales and receipts.

Among firms with paid employees, large disparities are observed for African Americans, Hispanics, and Native Americans. Overall, disparities in this category appear somewhat less acute than among firms as a whole. However, they remain far larger than comparable figures for nonminority male-owned firms. This is evident in that the fraction of employer firms compared to the fraction of all firms is far higher among nonminority males than among other race and gender groups. In Table 5.15, for example, nonminority males represent 62.52 percent of all firms but 66.27 percent of employer firms. For all other groups, the direction of this ratio is reversed. That is, each group's fraction among employer firms is smaller than its fraction among firms as a whole, whereas for nonminority males it is larger.

Table 5.16 shows comparable results for the construction sector in Ohio. Among all firms in construction, large disparities are observed for African Americans, Hispanics, Asians, Native Americans, and women. Among firms with paid employees, large disparities are observed for Hispanics and women. As in Table 5.15, nonminority males have a much higher ratio of employer firms to firms as a whole than do minorities.

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**Table 5.15. Disparity Ratios from the 2007 Survey of Business Owners, United States, Construction**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A. Levels</b>						
All Firms	3,353,169	1,499,596,401	752,350	1,345,891,690	6,250,139	272,620,302
Nonminority Male	2,096,431	1,140,441,771	498,581	1,041,607,378	4,523,906	205,558,987
Female	268,668	96,889,179	54,067	87,883,713	492,327	21,126,808
African American	125,818	13,188,433	9,605	9,808,001	56,088	1,976,639
Hispanic	340,770	56,769,929	38,319	41,512,416	260,420	8,918,859
Asian	70,722	18,664,077	10,542	16,005,420	77,302	3,353,304
Native Hawaiian/Pac. Islander	4,991	1,555,430	847	1,354,435	5,993	284,022
Am. Indian & Alaska Native	37,693	8,449,654	5,178	7,026,449	37,722	1,529,180
<b>Panel B. Column Percentages</b>						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	62.52%	76.05%	66.27%	77.39%	72.38%	75.40%
Female	8.01%	6.46%	7.19%	6.53%	7.88%	7.75%
African American	3.75%	0.88%	1.28%	0.73%	0.90%	0.73%
Hispanic	10.16%	3.79%	5.09%	3.08%	4.17%	3.27%
Asian	2.11%	1.24%	1.40%	1.19%	1.24%	1.23%
Native Hawaiian/Pac. Islander	0.15%	0.10%	0.11%	0.10%	0.10%	0.10%
Am. Indian & Alaska Native	1.12%	0.56%	0.69%	0.52%	0.60%	0.56%
<b>Panel C. Disparity Ratios</b>						
		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		121.64		116.78	109.22	113.78
Female		80.64		90.86	109.61	107.84
African American		23.44		57.08	70.29	56.79
Hispanic		37.25		60.56	81.81	64.23
Asian		59.01		84.87	88.27	87.78
Native Hawaiian/Pac. Islander		69.69		89.39	85.17	92.54
Am. Indian & Alaska Native		50.13		75.85	87.69	81.50

Source and Notes: See Table 5.13.

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**Table 5.16. Disparity Ratios from the 2007 Survey of Business Owners, State of Ohio, Construction**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A. Levels</b>						
All Firms	119,458	43,884,899	23,100	39,133,177	186,920	8,160,957
Nonminority Male	88,019	35,949,267	16,919	32,449,087	148,790	6,658,695
Female	9,542	2,713,637	2,050	2,430,963	15,478	613,524
African American	3,091	540,398	267	477,376	1,849	83,179
Hispanic	1,624	245,407	134	150,817	838	31,790
Asian	464	132,967	53	115,177	424	17,595
Native Hawaiian/Pac. Islander	n/a	n/a	n/a	n/a	n/a	n/a
Am. Indian & Alaska Native	466	127,052	43	113,181	359	17,124
<b>Panel B. Column Percentages</b>						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	73.68%	81.92%	73.24%	82.92%	79.60%	81.59%
Female	7.99%	6.18%	8.87%	6.21%	8.28%	7.52%
African American	2.59%	1.23%	1.16%	1.22%	0.99%	1.02%
Hispanic	1.36%	0.56%	0.58%	0.39%	0.45%	0.39%
Asian	0.39%	0.30%	0.23%	0.29%	0.23%	0.22%
Native Hawaiian/Pac. Islander	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Am. Indian & Alaska Native	0.39%	0.29%	0.19%	0.29%	0.19%	0.21%
<b>Panel C. Disparity Ratios</b>						
Nonminority Male		111.18%		113.21%	108.68%	111.40%
Female		77.41%		70.00%	93.31%	84.71%
African American		47.59%		105.54%	85.58%	88.18%
Hispanic		41.13%		66.44%	77.29%	67.15%
Asian		78.01%		128.28%	98.87%	93.97%
Native Hawaiian/Pac. Islander		n/a		n/a	n/a	n/a
Am. Indian & Alaska Native		74.22%		155.37%	103.18%	112.72%

Source and Notes: See Table 5.13.

## VI. Statistical Disparities in Capital Markets

### A. Introduction

Discrimination occurs whenever the terms of a transaction are affected by personal characteristics of the participants that are not relevant to the transaction. Among such characteristics, the most commonly considered are race, ethnicity and gender. In labor markets, this might translate into equally productive workers in similar jobs being paid different salaries because of their race, ethnicity or gender. In credit markets, it might translate into loan approvals differing across racial or gender groups with otherwise similar financial backgrounds.

In this Chapter, we examine whether there is evidence consistent with the presence of discrimination in the small business credit market against minority-owned or women-owned small businesses. Discrimination in the credit market against such businesses can have an important effect on the likelihood that they will succeed. Moreover, discrimination in the credit market might even prevent businesses from opening in the first place, might negatively impact the size a firm could obtain, and/or shorten its longevity in the market.<sup>252</sup>

In our analysis, we use data from the Federal Reserve Board to examine the existence or otherwise of discrimination in the small business credit market for 1993, 1998 and 2003. These surveys are based on a large representative sample of firms with fewer than 500 employees and are administered by the Federal Reserve Board and the U.S. Small Business Administration. The 1993 and 1998 surveys deliberately oversampled minority-owned firms but the 2003 survey did not.<sup>253</sup>

These data provide qualitative and quantitative evidence consistent with the presence of discrimination against minorities in the credit market for small businesses. For example, we find that African American-owned firms are much more likely to report being seriously concerned with credit market problems and report being less likely to apply for credit because they fear the loan would be denied. Moreover, after controlling for a large number of characteristics of the firms, we find that African American-owned firms, Hispanic-owned firms, and to a lesser extent other minority-owned firms, are substantially and statistically significantly more likely to be denied credit than are nonminority-owned firms. We find some evidence that women are discriminated against in this market as well. The principal results are as follows:

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<sup>252</sup> Again, as noted in Chapter V, these factors also illustrate why, in a disparity study intended to answer the question of whether discrimination is present in business enterprise, adjusting availability for “capacity” factors such as firm age, firm size or firm revenues, is not a legitimate practice when there is evidence that suggests that these factors themselves are tainted by discrimination. To do so would be to inappropriately introduce one or more endogenous variables into the analysis.

<sup>253</sup> The 2003 survey took other steps, however, to increase the likelihood that minority-owned and women-owned firms were captured in the sampling frame. For more details, see National Opinion Research Center (2005), p. 11.



- Minority-owned firms were more likely to report that they did not apply for a loan over the preceding three years because they feared the loan would be denied (see Tables 6.15, 6.22, 6.29).
- When minority-owned firms applied for a loan, their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences like firm size and credit history (see Tables 6.8, 6.9, 6.18, 6.19, 6.25, 6.26).
- When minority-owned firms *did* receive a loan, they were obligated to pay higher interest rates on the loans than comparable nonminority-owned firms (see Tables 6.13, 6.14, 6.21, 6.27).
- A larger proportion of minority-owned firms than nonminority-owned firms report that credit market conditions are a serious concern (see Tables 6.3, 6.4, 6.5, 6.6, 6.7, 6.17, 6.24).
- A larger share of minority-owned firms than nonminority-owned firms believes that the availability of credit is the most important issue likely to confront them in the upcoming year (see Tables 6.5, 6.6).
- There is no evidence that discrimination in the market for credit is significantly different in the East North Central census division or in the construction and construction-related professional services industries than it is in the nation or the economy as a whole (various tables).
- There is no evidence that the level of discrimination in the market for credit has diminished between 1993 and 2003 (various tables).

The structure of this Chapter is as follows. First, we outline the main theories of discrimination and discuss how they might be tested. Second, we examine the evidence on the existence of capital/liquidity constraints facing individuals in the mortgage market, households in the non-mortgage loan market, and for small businesses in the commercial credit market. Third, we describe the data files used in the remainder of the Chapter and then examine in more detail problems faced by minority-owned firms in obtaining credit. Fourth, we provide a series of answers to criticisms. Finally, we present our conclusions.

We begin with the 1993 dataset and continue chronologically through the 2003 dataset and then to evidence from NERA's own comparable surveys conducted in various geographies between 1999 and 2007. This chronological progression allows the reader to see the consistency of the main findings over time. This approach serves as well to demonstrate the value of over-sampling minority and female small business owners, as was the case in the 1993 and 1998 surveys, but not the 2003 survey. Unfortunately, the much anticipated 2008 survey results never materialized because the Federal Reserve cancelled this important survey effort.<sup>254</sup>

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<sup>254</sup> For more on this, see fn. 295 below.

## B. Theoretical Framework and Review of the Literature

Most modern economic studies of discrimination draw on the analyses contained in Gary Becker's (1957) *The Economics of Discrimination*. Becker's main contribution was to translate the notion of discrimination into financial terms. Discrimination, in this view, results from the desire of owners, workers, or customers to avoid contact with certain groups. This being the case, transactions with the undesired groups would require more favorable terms than those that occur with a desired group. Assume that the primary objective of a financial institution is to maximize their expected profits. The expected return on a loan will depend on the interest rate charged and the likelihood that a borrower defaults. The financial institution would approve any loan for which the expected return on the loan exceeded the cost of the funds to the institution. Discrimination would then result in either (a) higher interest rates being charged to undesired groups having otherwise similar characteristics to the desired group, or (b) requiring better characteristics (i.e., a lower expected default rate) from the undesired group at any given interest rate. In other words, applicants from the disadvantaged group might either be appraised more rigorously or be given less favorable terms on the loan.

A similar connection between the likelihood of loan approval and the race, ethnicity or gender of the applicant might also be found if lenders employ statistical discrimination—meaning that lenders use personal characteristics such as race, ethnicity or gender to infer the likelihood of default on the loan. If experience has suggested that certain groups of individuals are on average more or less likely to default, then the lender may use this information to economize on the costs of gathering more directly relevant information. Hence, discrimination would not reflect the preferences of the owner but would rather reflect an attempt to minimize costs. Empirically, the racial, ethnic or gender characteristics of the applicant could proxy for unobserved characteristics of their creditworthiness.

There has been an active debate about whether banks discriminate against minority applicants for mortgages. In particular, banks were often accused of “redlining”—that is, not granting loans for properties located in certain areas. To analyze that issue, the Home Mortgage Disclosure Act was passed to require lenders to disclose information on the geographic location of their home mortgage loans. These data, however, were not sufficient to assess whether or not there was discrimination in the market for mortgage loans.

In 1992, researchers at the Federal Reserve Bank of Boston collected additional information from mortgage lenders (Munnell, et al., 1996). In particular, they tried to collect any information that might be deemed economically relevant to whether a loan would be approved. In the raw data, non-minorities had 10 percent of their loans rejected whereas rejection rates were 28 percent for both African Americans and Hispanics. Even after the creditworthiness of the borrowers (including the amount of the debt, debt-to-income ratio, credit history, loan characteristics, etc.) were controlled for, African Americans were still found to be 7 percentage points less likely to be granted the loan. A variety of criticisms have been launched at this study (see, for example, Horne, 1994; Day and Liebowitz, 1998; Harrison, 1998). Responses to these criticisms are found in Browne and Tootell (1995).

In addition to the type of statistical analysis done in the Munnell, et al. (1996) study, two other approaches have been used to measure discrimination in mortgage markets. First, Federal Reserve regulators can examine a lending institution's files to try to identify any cases where a loan rejection looks suspicious. Second, audit studies have been used with paired "identical" applicants. Such studies have also found evidence of discrimination (*c.f.* Cloud and Galster, 1993) although the audit approach is not without its critics (Heckman, 1998).

Another relevant literature is concerned with the severity of liquidity constraints affecting consumers in non-mortgage credit markets. A consumer is said to be liquidity-constrained when lenders refuse to make the household a loan or offer the household less than they wished to borrow (Ferri and Simon, 1997). Many studies have suggested that roughly twenty percent of U.S. families are liquidity-constrained (*c.f.* Hall and Mishkin, 1982; and Jappelli, 1990). As might be expected, liquidity-constrained households are typically younger, with less wealth and accumulated savings (Hayashi, 1985; and Jappelli, 1990). The research shows minority households to be substantially more likely to be liquidity-constrained even when a variety of financial characteristics of households are controlled for (Jappelli, 1990; and Ferri and Simon, 1997).

We now turn to the more directly relevant evidence on liquidity constraints facing small businesses. Just like individuals and households, businesses can also face liquidity constraints.<sup>255</sup> Liquidity constraints can be a problem in starting a business as well as in running it. Discrimination in the credit market against minority-owned small businesses can have a devastating effect on the success of such businesses, and even prevent them from opening in the first place. Evidence of the latter effect is provided in the economics literature on self-employment.<sup>256</sup>

In his 2003 report for *Builders Association of Greater Chicago v. the City of Chicago*,<sup>257</sup> Bates argued that "from its origins, the black-business community has been constrained by limited access to credit, limited opportunities for education and training, and nonminority stereotypes about suitable roles for minorities in society" (Bates, 1989; Bates, 1993; Bates, 1973). Indeed, as Bates points out, Gunnar Myrdal observed,

<sup>255</sup> Evans and Leighton (1989) and Evans and Jovanovic (1989) have argued formally that entrepreneurs face difficulties borrowing money. As in the discussion above, such individuals are labeled liquidity constrained by economists. Using data from the National Longitudinal Survey of Youth from 1966-1981 and the Current Population Surveys from 1968-1987, these authors found that, all else equal, people with greater family assets are more likely to switch to self-employment from employment. Blanchflower and Oswald (1998) studied the probability that an individual reports him or herself as self-employed. Consistent with the existence of capital constraints on potential entrepreneurs, their econometric estimates imply that the probability of being self-employed depends positively upon whether the individual ever received an inheritance or gift. Additionally, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Holtz-Eakin, et al. (1994a, 1994b) examine flows in and out of self-employment and find that inheritances both raise entry and slow exit. Black, de Meza and Jeffreys (1996) find that housing equity plays an important role in shaping the supply of entrepreneurs. Lindh and Ohlsson (1996) suggest that the probability of being self-employed increases when people receive windfall gains in the form of lottery winnings and inheritances.

<sup>256</sup> See Chapter V.

<sup>257</sup> 298 F.Supp.2d 725 (N.D. Ill. 2003).

The Negro businessman ... encounters greater difficulties than whites in securing credit. This is partly due to the marginal position of Negro business. It is also partly due to prejudicial opinions among whites concerning business ability and personal reliability of Negroes. In either case a vicious circle is in operation keeping Negro business down.”<sup>258</sup>

Bates goes on to argue that commercial banks lend most easily to nonminority males who possess significant amounts of equity capital to invest in their businesses (Bates, 1991a). Apart from banks, an important source of debt capital for small business is likely to be family and friends, but the low wealth of African American households reduces the availability of debt capital that family and friends could invest in small business operations (Bates, 1993; Bates, 1991b).

Additional evidence indicates that capital constraints for African American-owned businesses are particularly large. For instance, Bates (1989) finds that racial differences in levels of financial capital do have a significant effect upon racial patterns in business failure rates. Fairlie and Meyer (1996) find that racial groups with higher levels of unearned income have higher levels of self-employment. In an important paper, Fairlie (1999) uses data from the 1968-1989 Panel Study of Income Dynamics to examine why African American men are one-third as likely to be self-employed as nonminority men. The author finds that the large discrepancy is due to an African American transition rate into self-employment that is approximately one half the nonminority rate and an African American transition rate out of self-employment that is twice the nonminority rate. He finds that capital constraints—measured by interest income and lump-sum cash payments—significantly reduce the flow into self-employment from wage/salary work, with this effect being nearly seven times larger for self-employed African Americans than for nonminority self-employed persons. Fairlie then attempts to decompose the racial gap in the transition rate into self-employment into a part due to differences in the distributions of individual characteristics and a part due to differences in the processes generating the transitions. He finds that differences in the distributions of characteristics between African Americans and non-minorities explain only a part of the racial gap in the transition rate into self-employment. In addition, racial differences in specific variables, such as levels of assets and the likelihood of having a self-employed father provide important contributions to the gap. He concludes, however, that “the remaining part of the gap is large and is due to racial differences in the coefficients. Unfortunately, we know much less about the causes of these differences. They may be partly caused by lending or consumer discrimination against blacks” (1999, p. 14).

There is also research into racial differences in access to credit among small businesses. Cavalluzzo and Cavalluzzo (1998) use data from the 1988-1989 National Survey of Small Business Finances (NSSBF), conducted by the Board of Governors of the Federal Reserve System, to analyze differences in application rates, denial rates, and other outcomes by race, ethnicity and gender in a manner similar to the econometric models reported in this Study. This paper documents that a large discrepancy exists in credit access between non-minorities and minority-owned firms that cannot be explained by a handful of firm characteristics. Unfortunately, the earlier NSSBF data did not over-sample minority-owned firms and included limited information on a firm’s credit history and that of its owner, reducing the ability to

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<sup>258</sup> G. Myrdal (1944, p. 308).

provide a powerful test of the causal impact of race, ethnicity or gender on loan decisions. In an unpublished paper, Cole (1998) uses the 1993 NSSBF and estimates models of loan denials similar in nature to those discussed in this Study.

The present analysis takes advantage of the 1993 NSSBF data, the 1998 Survey of Small Business Finances (SSBF) data, and the 2003 SSBF data. All three datasets have better information on creditworthiness than did the earlier NSSBF data, and the 1993 and 1998 surveys have a larger sample of minority-owned firms than did the earlier NSSBF data. These datasets are also used to conduct an extensive set of specification checks designed to weigh the possibility that our results are subject to alternative interpretations.

## C. Empirical Framework and Description of the Data

### 1. Introduction

Disputes about discrimination typically originate in differences in the average outcomes for two groups. To determine whether a difference in the loan denial rate for African American-owned firms compared to nonminority-owned firms is consistent with discrimination, it is necessary to compare African American- and nonminority-owned firms that have similar risks of default; that is, the fraction of the African American firms' loans that would be approved if they had the same creditworthiness as the nonminority-owned firms. A standard approach to this problem is to statistically control for firms' characteristics relevant to the loan decision. If African American-owned firms with the same likelihood of default as nonminority-owned firms are less likely to be approved, then it is appropriate to attribute such a difference to discrimination.

Following Munnell, et al. (1996) we estimated the following loan denial equation:

$$(1) \quad \text{Prob}(D_i = 1) = \Phi(\beta_0 + \beta_1 CW_i + \beta_2 X_i + \beta_3 R_i),$$

where  $D_i$  represents an indicator variable for loan denial for firm  $i$  (that is, 1 if the loan is denied and 0 if accepted),  $CW$  represents measures of creditworthiness,  $X$  represents other firm characteristics,  $R$  represents the race, ethnicity or gender of the firm's ownership, and  $\Phi$  is the cumulative normal probability distribution.<sup>259</sup> This econometric model can be thought of as a reduced form version of a structural model that incorporates firms' demand for and financial institutions' supply of loan funds as a function of the interest rate and other factors.<sup>260</sup> Within the

<sup>259</sup> Additional discussion of Probit regression appears in Chapter V, Section C.1.

<sup>260</sup> Maddala and Trost (1994) describe two variants of such a model, one in which the interest rate is exogenous and another in which the interest rate is endogenously determined, but is capped so that some firms' loan applications are approved and others are rejected. If the interest rate is exogenous, they show that a reduced form model which controls for the loan amount, such as we report below, uniquely identifies supply-side differences in the treatment of African American-owned firms. If the interest rate is endogenous, a reduced form approach requires an assumption that the determinants of demand for nonminority and African American-owned firms are identical, other things being equal. The main alternative empirical strategy is to estimate a structural supply and demand model, in which proper identification generally is not feasible. Any characteristic of the borrower that affects his/her expected rate of return on the investment will affect his/her ability to repay and should be taken into consideration by the lender as well. For instance, in their structural model of mortgage decisions, Maddala

framework of this model, a positive estimate of  $\beta_3$  is consistent with the presence of discrimination.<sup>261</sup>

## 2. 1993 NSSBF Data

The 1993 NSSBF data contain substantial information regarding credit availability on a nationally representative target sample of for-profit, non-farm, non-financial business enterprises with fewer than 500 employees. The survey was conducted during 1994 and 1995 for the Board of Governors of the Federal Reserve System and the U.S. Small Business Administration; the data relate to the years 1992 and 1993. The data file used here contains 4,637 firms.<sup>262</sup> In this NSSBF file, minority-owned firms were over-sampled, but sampling weights are provided to generate nationally representative estimates. Of the firms surveyed, 9.5 percent were owned by African Americans, 6.4 percent were owned by Hispanics, and 7.4 percent were owned by individuals of other races (i.e., Asians/Pacific Islanders, Native Americans).<sup>263</sup>

Table 6.1 presents population-weighted sample means from these data for all firms in the sample that applied for credit. The estimates indicate that African American-owned firms are almost 2.5 times more likely to have a loan application rejected as are non-Hispanic Nonminority-owned firms (65.9 percent versus 26.9 percent).<sup>264</sup> Other minority groups are denied at rates higher than nonminorities as well, but the magnitude of the African American/ nonminority differential is especially striking.

Minority-owned firms, however, do have characteristics that are different from those of nonminority-owned firms, and such differences may contribute to the gap in loan denial rates. For instance, minority-owned firms were younger, smaller (whether measured in terms of sales or employment), more likely to be located in urban areas, and more likely to have an owner with fewer years of experience than their nonminority counterparts. Minority firms were also less creditworthy, on average, than their nonminority counterparts, as measured by whether (a) the owner had legal judgments against him or her over the previous three years, (b) the firm had been delinquent for more than 60 days on business obligations over the preceding three years, or (c) the owner had been delinquent for more than 60 days on personal obligations over the prior three years. Additionally, compared to nonminority-owned firms, African American-owned

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and Trost (1994) impose questionable exclusion restrictions, like omitting marital status from the loan supply equation.

<sup>261</sup> The Equal Credit Opportunity Act prohibits discrimination in access to credit by race and would apply to both Becker-type and statistical discrimination.

<sup>262</sup> The median size of firms in the sample was 5.5 and mean size was 31.6 full-time equivalent employees; 440 firms out of 4,637 had 100 or more full-time equivalent employees.

<sup>263</sup> There were also two firms in the “Other race” category in 1993 that reported multiple or mixed race.

<sup>264</sup> Cavalluzzo and Cavalluzzo (1998) examined these outcomes using the 1987 NSSBF and similarly found that denial rates (weighted) are considerably higher for minorities. Nonminority-owned firms had a denial rate for loans of 22 percent compared with 56 percent for African Americans, 36 percent for Hispanics, and 24 percent for other races, which are broadly similar to the differences reported here. These estimates for minority groups are estimated with less precision, however, because of the smaller number of minority-owned firms in the 1987 sample.

firms were also more likely, on average, to have owners who had declared bankruptcy over the preceding seven years.

Minority-owned firms also sought smaller amounts of credit than nonminority-owned firms. This was particularly true for African American-owned firms, who requested loans that were, on average, about 60 percent smaller than those requested by nonminority-owned firms, and Hispanic-owned firms, who requested loans about 42 percent smaller than those requested by nonminority-owned firms.

The NSSBF database does not identify the specific city or state where the firm is located; instead, data are reported for four census regions, nine census divisions, and urban or rural location. Table 6.2 presents evidence for the East North Central division (ENC), which includes the State of Ohio and four surrounding states.<sup>265</sup> The ENC sample includes the owners of 748 firms, of which 359 owners (48.0%) said that they had applied for a loan over the preceding three-year period.

The overall denial rate in the ENC is lower than the national rate reported in Table 6.1. The difference in the denial rates between African American-owned firms and nonminority-owned firms, however, is no different in the ENC (40.1 percentage points) than in the nation as a whole (39.0 percentage points). On balance, the weighted sample means are not significantly different in the ENC than in the nation as a whole—either overall or by race, ethnicity or gender.

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<sup>265</sup> The ENC includes Ohio, Illinois, Indiana, Michigan, and Wisconsin.

**Table 6.1. Selected Population-Weighted Sample Means of Loan Applicants from 1993 NSSBF Data**

	All	Non-minority	African American	Hispanic	Other Races
% of Firms Denied in the Last Three Years	28.8	26.9	65.9	35.9	39.9
<i>Credit History of Firm/Owners</i>					
% Owners with Judgments Against Them	4.8	4.1	16.9	5.2	15.2
% Firms Delinquent in Business Obligations	24.2	23.1	49.0	25.1	31.6
% Owners Delinquent on Personal Obligations	14.0	12.6	43.4	14.8	24.5
% Owners Declared Bankruptcy in Past 7yrs	2.4	2.4	5.3	2.0	0.8
<i>Other Firm Characteristics</i>					
% Female-Owned	17.9	18.1	18.2	9.7	23.1
Sales (in 1,000s of 1992 \$)	1795.0	1870.6	588.6	1361.3	1309.1
Profits (in 1,000s of 1992 \$)	86.7	84.5	59.9	189.5	54.0
Assets (in 1,000s of 1992 \$)	889.4	922.5	230.3	745.6	747.3
Liabilities (in 1,000s of 1992 \$)	547.4	572.8	146.2	308.6	486.0
Owner's Years of Experience	18.3	18.7	15.3	15.9	14.9
Owner's Share of Business	77.1	76.5	86.4	83.9	77.1
% ≤ 8 <sup>th</sup> Grade Education	0.8	0.7	0.0	3.4	1.0
% 9 <sup>th</sup> -11 <sup>th</sup> Grade Education	2.2	2.2	3.7	1.8	1.2
% High School Graduate	19.6	19.7	12.8	27.7	14.9
% Some College	28.0	28.3	36.0	20.6	19.8
% College Graduate	29.2	29.2	28.0	24.1	36.5
% Postgraduate Education	20.2	19.9	19.5	22.3	26.6
% Line of credit	48.7	49.1	35.8	52.8	43.7
Total Full-time Employment in 1990	11.4	11.8	6.8	9.3	8.8
Total Full-time Employment in 1992	13.6	13.9	8.3	10.8	12.3
Firm age, in years	13.4	13.6	11.5	13.3	9.3
% New Firm Since 1990	9.4	9.4	13.0	6.4	9.5
% Firms Located in MSA	76.5	75.1	91.2	90.7	85.7
% Sole Proprietorship	32.8	32.3	48.6	38.2	24.2
% Partnership	7.8	7.8	7.7	6.7	7.9
% S Corporation	26.1	27.1	11.7	13.7	27.1
% C Corporation	33.4	32.8	32.1	41.4	40.8
% Existing Relationship with Lender	24.6	24.7	12.8	29.6	25.7
% Firms with Local Sales Market	54.1	54.7	42.9	55.0	47.4
<i>Characteristics of Loan Application</i>					
Amount Requested (in 1,000s of 1992 \$)	300.4	310.8	126.5	179.1	310.5
% Loans to be Used for Working Capital	8.4	8.8	4.9	4.6	5.5
% Loans to be Used for Equipment/Machinery	2.3	2.4	1.7	0.2	0.6
% Loans to be Used for Land/Buildings	0.4	0.4	0.9	0.0	0.0
% Loan to be Backed by Real Estate	28.3	28.6	24.7	26.2	24.7
Sample Size (unweighted)	2,007	1,648	170	96	93

Source: NERA calculations from 1993 NSSBF.

Notes: (1) Sample weights are used to provide statistics that are nationally representative of all small businesses.

(2) Sample restricted to firms that applied for a loan over the preceding three years.



**Table 6.2. Selected Sample Means of Loan Applicants—ENC**

	All	Non-minority	African American	Hispanic	Other Races
% of Firms Denied in the Last Three Years	19.8	18.6	58.7	0.0	23.0
<i>Credit History of Firm/Owners</i>					
% Owners with Judgments Against Them	4.5	4.5	6.7	0.0	0.0
% Firms Delinquent in Business Obligations	20.2	19.9	40.0	0.0	10.4
% Owners Delinquent on Personal Obligations	12.3	11.7	42.3	0.0	0.4
% Owners Declared Bankruptcy in Past 7yrs	2.8	2.8	8.0	0.0	0.0
<i>Other Firm Characteristics</i>					
% Female-Owned	16.9	16.8	20.6	65.6	6.3
Sales (in 1,000s of 1992 \$)	2422.6	2533.1	479.2	213.8	789.6
Profits (in 1,000s of 1992 \$)	169.5	178.3	58.1	92.6	-41.9
Assets (in 1,000s of 1992 \$)	1087.4	1137.9	179.7	58.7	371.9
Liabilities (in 1,000s of 1992 \$)	673.8	703.8	123.4	18.9	273.2
Owner's Years of Experience	18.9	19.0	16.0	9.2	19.9
Owner's Share of Business	76.5	76.5	92.2	65.6	54.0
% ≤ 8 <sup>th</sup> Grade Education	1.2	1.2	0.0	0.0	0.0
% 9 <sup>th</sup> -11 <sup>th</sup> Grade Education	1.9	1.7	0.0	31.2	5.1
% High School Graduate	27.3	27.8	14.6	0.0	30.4
% Some College	24.2	23.1	53.3	34.4	30.4
% College Graduate	27.6	28.5	10.4	34.4	10.4
% Postgraduate Education	17.8	17.7	21.8	0.0	23.7
% Line of credit	49.3	50.3	34.7	34.4	26.8
Total Full-time Employment in 1990	12.2	12.7	4.4	2.4	5.7
Total Full-time Employment in 1992	14.5	14.9	5.1	4.3	9.9
Firm age, in years	14.4	14.7	10.6	7.4	6.1
% New Firm Since 1990	10.1	9.3	15.6	0.0	36.3
% Firms Located in MSA	77.7	76.4	100.0	100.0	100.0
% Sole Proprietorship	32.2	32.4	45.0	31.2	5.6
% Partnership	10.4	9.9	9.2	0.0	36.5
% S Corporation	20.3	20.6	10.0	68.8	13.7
% C Corporation	37.1	37.2	35.8	0.0	44.2
% Existing Relationship with Lender	25.1	24.5	17.2	34.4	60.8
% Firms with Local Sales Market	55.9	56.7	47.5	100.0	23.7
<i>Characteristics of Loan Application</i>					
Amount Requested (in 1,000s of 1992 \$)	320.0	333.4	54.8	21.3	171.9
% Loans to be Used for Working Capital	7.1	7.3	4.8	0.0	0.0
% Loans to be Used for Equipment/Machinery	1.9	2.0	0.0	0.0	0.0
% Loans to be Used for Land/Buildings	0.1	0.1	0.0	0.0	0.0
% Loan to be Backed by Real Estate	32.8	33.2	15.2	34.4	42.1
Total Sample Size (unweighted)	359	317	28	3	11

Source: See Table 6.1.

Notes: (1) Sample weights are used to provide statistics that are nationally representative of all small businesses. (2) Some variable means are computed from slightly smaller samples because of missing values. (3) "Other Races" are not reported separately due to small sample size.

## D. Qualitative Evidence

Before moving on to the results of our multivariate analysis, we first report on what business owners themselves say are their main problems. While this evidence is not conclusive in determining whether discrimination exists, it highlights firms' perceptions regarding discrimination in obtaining credit. That African American-owned firms and other minorities report greater difficulty in obtaining credit than do nonminority-owned firms, but report other types of problems no more frequently, suggests either that discrimination takes place or that perceptions of discrimination exist that are unwarranted. It therefore complements the econometric analysis provided subsequently, which can distinguish between these two hypotheses.

Table 6.3 summarizes, for the U.S. as a whole, responses to specific questions about problems that firms confronted over the 12-month period before the date of response. In the top panel, respondents were asked to what extent credit market conditions had been a problem. African Americans and Hispanics were much more likely to say that it had been a “serious” problem (31.3 percent and 22.9 percent, respectively) than nonminorities (12.7 percent). The bottom panel of the table reports the results for eight other designated problem areas: (1) training costs; (2) worker’s compensation costs; (3) health insurance costs; (4) IRS regulation or penalties; (5) environmental regulations; (6) The American with Disabilities Act; (7) the Occupational Safety and Health Act; and (8) The Family and Medical Leave Act. Differences between African American-owned firms and Hispanic-owned firms, on the one hand, and nonminority-owned firms, on the other, are much less pronounced in these eight areas than they are in relation to credit market conditions.<sup>266</sup> The finding that minority-owned firms are largely indistinguishable from nonminority-owned firms in reporting a variety of problems, except for the case of credit, indicates that these firms perceive credit availability to be a particular problem for them.

Results are similar in Table 6.4 for the ENC division—with African American-owned firms and Hispanic-owned firms being far more likely than nonminority-owned firms to say that credit market conditions had been a serious problem in the preceding 12 months.

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<sup>266</sup> We also estimated a series of ordered Logit equations (not reported) to control for differences across firms in their creditworthiness, location, industry, size, and the like. It is apparent from these regressions that African American-owned firms were more likely to report that credit market conditions were especially serious.

**Table 6.3. Problems Firms Experienced During Preceding 12 Months—USA**

	All	Non-minority	African American	Hispanic	Other Races
<i>Credit Market Conditions</i>					
Percent reporting not a problem	66.2	67.3	43.1	58.9	65.8
Percent reporting somewhat of a problem	20.1	19.9	25.6	18.2	21.3
Percent reporting serious problem	13.7	12.7	31.3	22.9	12.9
<i>Other Potential Problems (% reporting problem is serious)</i>					
Training costs	6.5	6.6	7.2	6.3	4.3
Worker's compensation costs	21.7	21.0	19.3	30.6	28.7
Health insurance costs	32.5	31.6	38.1	44.3	35.0
IRS regulation or penalties	12.3	11.8	17.1	17.9	13.2
Environmental regulations	8.5	8.5	5.6	7.4	11.0
Americans with Disabilities Act	2.7	2.6	3.6	2.7	3.9
Occupational Safety and Health Act	4.5	4.5	3.9	3.6	6.2
Family and Medical Leave Act	2.7	2.5	4.5	3.1	4.8
Number of observations (unweighted)	2,007	1,648	170	96	93

Source: See Table 6.1.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

**Table 6.4. Problems Firms Experienced During Preceding 12 Months—ENC**

	All	Non-minority	African American	Hispanic	Other Races
<i>Credit Market Conditions</i>					
Percent reporting not a problem	71.9	73.1	45.6	65.8	64.0
Percent reporting somewhat of a problem	18.7	18.1	27.7	22.8	27.9
Percent reporting serious problem	9.4	8.8	26.7	11.4	8.1
<i>Other Potential Problems (% reporting problem is serious)</i>					
Training costs	6.5	6.5	9.9	7.6	0.0
Worker's compensation costs	16.2	16.4	17.8	3.8	15.3
Health insurance costs	30.8	30.3	38.3	44.2	31.3
IRS regulation or penalties	7.9	7.9	7.8	10.6	6.3
Environmental regulations	6.0	6.2	5.5	3.1	0.0
Americans with Disabilities Act	2.7	2.6	2.7	3.8	4.0
Occupational Safety and Health Act	3.4	3.1	4.6	0.0	13.3
Family and Medical Leave Act	1.8	1.7	5.7	7.6	0.0
Number of observations (unweighted)	748	625	74	17	32

Source: See Table 6.1.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

Tables 6.5 and 6.6 report the views of NSSBF respondents for the U.S. as a whole and the ENC division, respectively, on the most important issues businesses expected to face over the next 12 months. Nationally, credit availability and cash flow again appear to be more important issues for African American-owned firms than for nonminority-owned firms. Nonminority-owned firms were especially worried about health care costs. Hispanic and other minority-owned firms were especially worried about general business conditions.

In the ENC, credit availability and cash flow are far more important issues for African American-owned firms than for nonminority-owned firms. Four times as many African American-owned firms than nonminority-owned firms reported credit availability as the most important issue affecting them, and almost twice as many reported cash flow as the most important. Almost three times as many Asian-owned and Native American-owned firms reported credit availability as the most important issue than nonminority-owned firms.<sup>267</sup>

**Table 6.5. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months—USA**

	All	Non-minority	African American	Hispanic	Other Races
Credit availability	5.9	5.5	20.5	5.3	4.3
Health care, health insurance	21.1	22.1	12.3	13.7	14.8
Taxes, tax policy	5.7	5.7	2.6	8.7	3.3
General U.S. business conditions	11.8	11.5	8.9	14.4	17.4
High interest rates	5.4	5.7	1.8	3.5	3.4
Costs of conducting business	3.3	3.3	3.8	3.8	3.6
Labor force problems	3.5	3.3	3.9	5.5	3.6
Profits, cash flow, expansion, sales	10.3	9.9	20.3	9.8	11.9
Number of observations (unweighted)	4,388	3,383	424	262	319

Source: See Table 6.1.

**Table 6.6. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months—ENC**

	All	Non-minority	African American	Hispanic	Other Races
Credit availability	5.4	4.7	18.8	5.1	13.4
Health care, health insurance	20.8	21.5	13.3	9.0	8.3
Taxes, tax policy	5.4	5.4	3.3	5.1	6.7
General U.S. business conditions	10.7	10.6	10.0	30.1	6.6
High interest rates	5.0	4.9	0.0	3.2	14.8
Costs of conducting business	3.8	4.0	2.8	0.0	0.0
Labor force problems	4.3	4.3	4.5	5.1	2.4
Profits, cash flow, expansion, sales	12.9	12.5	23.0	9.4	15.7
Number of observations (unweighted)	705	591	74	14	26

Source: See Table 6.1.

Acute credit availability problems for minorities have been reported in surveys other than the NSSBF. In the 1992 Characteristics of Business Owners (CBO) Survey, conducted by the

<sup>267</sup> These two groups are combined together in the “Other Races” category.

Census Bureau, for example, when owners were asked to identify the impact of various issues on their firm's profitability, 27.0 percent of African American-owned firms reporting an answer indicated that lack of financial capital had a strong negative impact—compared to only 17.3 percent among nonminority male-owned firms. Hispanic-owned firms and other minority-owned firms also reported higher percentages than nonminority male-owned firms—21.3 percent and 19.7 percent, respectively. Further, owners who had recently discontinued their business because it was unsuccessful were asked in the CBO survey to identify the reasons why. African American-owned firms, and to a lesser degree Hispanic-owned firms, other minority-owned firms, and women-owned firms, were much more likely than nonminority male-owned firms to report that the reason was due to lack of access to business or personal loans or credit. For unsuccessful firms that were discontinued, 7.3 percent of firms owned by nonminority males reported it was due to lack of access to business loans or credit compared to 15.5 percent for firms owned by African Americans, 8.8 percent for Hispanics, 6.1 percent for Other minorities, and 9.3 percent for women. Another 2.7 percent of nonminority males said it was due to lack of personal loans or credit compared to 8.4 percent for firms owned by African Americans, 5.8 percent for Hispanics, 6.4 percent for Other minorities, and 3.3 percent for women.<sup>268</sup>

A later study published by the U.S. Chamber of Commerce (2005) is also consistent with these findings from the 1993 NSSBF and the 1992 CBO.<sup>269</sup> The Chamber of Commerce survey was conducted in March and April 2005 and detailed the financing problems experienced by small business owners, 95 percent of whom had less than 100 employees. Over 1,000 business owners were interviewed. This survey showed that minority-owned businesses rely heavily on credit cards to fund their businesses; often do not apply for credit, even though they need it, for fear of being denied; and were especially likely to need working capital. In particular, as shown in Table 6.7, minority-owned firms report that availability of credit is their top problem. The biggest difference in responses between minorities and nonminority men and women was availability of credit: 19 percent of nonminority males report credit as their top problem compared with 54 percent for minority males. There was a 15 percentage point difference between minority women and nonminority women. In no other category is there more than a 10 percentage point difference for men or women.

<sup>268</sup> Bureau of the Census (1997), Table 5a, p. 46, Table 1, p. 21.

<sup>269</sup> Although the CBO is part of the Economic Census, it was not published in 1997. In 2002, the name was changed to the Survey of Business Owners (SBO). Unfortunately, questions relating to the importance of access to financial loans and credit to business success were not included in the 2002 survey.

**Table 6.7. Types of Problems Facing Your Business, by Race and Gender**

	<b>Non-minority Male</b>	<b>Non-minority Female</b>	<b>Minority Male</b>	<b>Minority Female</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian/Pacific Islander</b>
Availability of credit	19	23	54	38	46	52	34
Rising health care costs	60	49	50	41	31	42	66
Excessive tax burden	49	46	48	42	46	34	51
Lack of qualified workers	37	28	33	17	22	20	34
Rising energy costs	37	35	36	35	29	34	44
Rising costs of materials	44	47	36	47	53	42	32
Legal reform	21	15	15	12	11	10	17
Number of firms	415	356	80	81	55	50	41

Source: U.S. Chamber of Commerce (2005), Appendix tables, page 55, downloadable at [http://www.uschamber.com/publications/reports/access\\_to\\_capital.htm](http://www.uschamber.com/publications/reports/access_to_capital.htm) (viewed 3 July 2012).

Notes: (1) Percentages may total to more than 100% because respondents had the option to select multiple choices. (2) "Minority" also includes 14 firms owned by Native Americans.

In summary, African American-owned and to a lesser extent other minority-owned firms and women-owned firms report that they had problems with the availability of credit in the past and expected that such difficulties would continue into the future. Whether or not these perceptions are consistent with the presence of discrimination can be discerned from the econometric analyses to follow.

## **E. Differences in Loan Denial Rates by Race, Ethnicity or Gender**

Evidence presented to this point indicates that minority-owned firms are more likely to be denied loans and report that their lack of access to credit significantly impairs their business. Can these differences be explained by such things as differences in size, creditworthiness, location, or other factors as some have suggested in the literature on discrimination in mortgage lending (Horne, 1994; Bauer and Cromwell, 1994; and Yezer, Phillips, and Trost, 1994)? To address this question, we turn to an econometric examination of whether the loan requests made by minority-owned firms are more likely to be denied, holding constant important differences among firms.

In Table 6.8 and Table 6.9, we report the results from a series of loan denial Probit regressions of the form specified in Equation (1) using data from the 1993 NSSBF for the U.S. and the ENC division.<sup>270</sup> As indicated earlier, the 1993-2003 datasets have the particular advantage that they

<sup>270</sup> Firms owned 50-50 by minorities and non-minorities are excluded from this and all subsequent analyses, as are nonminority firms owned 50-50 by women and men.

include information that can be used to proxy an applicant's creditworthiness. We report estimates from these models that can be interpreted as changes or differences in loan denial probabilities depending on the type of variables considered. For indicator variables, such as race, ethnicity, and gender indicators, estimates show differences in loan denial probabilities between the indicated group and the base group.<sup>271</sup> In Column (1) of Table 6.8 (in which the regression model contains only race and gender indicators), the estimated coefficient of 0.443 on the African American indicator can be interpreted as indicating that the denial rate for African American-owned businesses is 44.3 percentage points higher than that for nonminority male-owned firms.<sup>272</sup>

The remainder of Table 6.8 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race, ethnicity or gender.<sup>273</sup> In Column (2) a number of controls are included that distinguish the creditworthiness of the firm and the owner. Many are statistically significant on a two-tailed test at conventional levels of significance with the expected signs. For instance, having been bankrupt or had legal judgments against the firm or owner raises the probability of denial; stronger sales lower this probability. Even after controlling for these differences in creditworthiness, however, African American-owned firms remain 29 percentage points more likely than nonminority-owned firms to have their loan request denied.

The models reported in Columns (3) through (5) of Table 6.8 control for an array of additional characteristics of firms. Column (3) adds 39 additional characteristics of the firm and the loan application, including such factors as level of employment, change in employment, the size of the loan request, and the use of the loan. Column (4) includes variables to control for differences across regions of the country and major industry groups. Column (5) adds variables indicating the month and year in which the loan was requested and the type of financial institution to which

<sup>271</sup> For "continuous" variables, such as profits and sales, estimates can be thought of as changes in loan denial probability when the continuous variable changes by one unit. For example, in Column (2) of Table 6.8, the estimated coefficient of -0.003 on owner's years of experience indicates that one additional year of owner's experience is related to -0.3 percentage point reduction in loan denial rate.

<sup>272</sup> This estimate largely replicates the raw difference in denial rates between African American-owned and nonminority-owned businesses reported in Table 6.1. The raw differential observed there ( $0.659 - 0.269 = 0.39$ ) differs slightly from the 0.443 differential reported here because this specification also controls for whether the business is owned by a White Female and because the regressions are unweighted whereas the descriptive statistics are weighted using the sample weights. When a full set of explanatory control variables are included, the unweighted estimates are insignificantly different from the weighted estimates, hence in Table 6.8 and subsequent tables we report only unweighted estimates.

<sup>273</sup> In preliminary analyses, these models were also estimated separately, focusing specifically on the differences in coefficient estimates between nonminorities and African Americans. The F-Test conducted to determine whether parameter estimates were the same for African Americans and nonminorities rejected this null hypothesis. Next, the estimates obtained by estimating the model separately by race were used to conduct an Oaxaca (1973) decomposition. The results from this analysis were similar to those obtained by restricting the coefficients to be the same between African Americans and nonminorities and using the coefficient on the African Americans indicator variable to measure the gap between groups. In this Chapter, all the results are reported in this simpler format for ease of exposition and interpretation.

the firm applied.<sup>274</sup> In total, these three columns add 176 variables to the more parsimonious specification reported in Column (2).<sup>275</sup> Nevertheless, the estimated disadvantage experienced by African American-owned firms in obtaining credit remains large and statistically significant. The estimate from each of the three additional columns indicates that African American-owned firms are 24 percentage points more likely than nonminority male-owned firms to have their loan application denied even after controlling for the multitude of factors we have taken into consideration.

The results also indicate that Asians/Pacific Islanders had significantly higher denial rates than nonminority males—12 percentage points. There is little evidence in the 1993 national data, however, that denial rates for firms owned by Native Americans or Hispanics were significantly different from the denial rates of firms owned by nonminorities; or that denial rates for firms owned by nonminority women were significantly different from those for firms owned by nonminority men.<sup>276</sup>

In Table 6.9, we see results for the ENC division similar to those reported in Table 6.8 for the nation as a whole. The table shows that the results of our loan denial model in the ENC are not substantially different from the nationwide results reported in Table 6.8. The indicator variable for the ENC division is negative and significant, indicating that denial rates, on average, are lower in the ENC than in the nation as a whole, but its significance decreases as more control variables are included in the model. None of interaction terms between race, ethnicity or gender and the ENC division indicator are statistically significant.<sup>277</sup>

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<sup>274</sup> Approximately four out of five (80.5%) of the firms who required a loan applied to a commercial bank. Overall, seventeen different types of financial institutions were tabulated, although only the following accounted for more than 1% of the (weighted) total: Finance Companies (4.9%); Savings Banks (2.5%); Savings & Loans (2.3%); Leasing Companies (2.1%); and Credit Unions (2.0%).

<sup>275</sup> One piece of information to which we did not have access in the 1993 NSSBF or the 1998 SSBF because of confidentiality concerns was each firm's credit rating. A working paper by Cavalluzzo, Cavalluzzo, and Wolken (1999) was able to incorporate Dun & Bradstreet credit ratings for each firm because the authors' connection to the Federal Reserve Board enabled them to access the confidential firm identifiers. They added these credit rating variables in a model comparable to that reported here and found the results insensitive to the inclusion. The 2003 SSBF includes Dun & Bradstreet credit ratings for each firm. Below, we discuss the impact of incorporating them into a model similar to that presented in Table 6.8 (see Tables 6.27 and 6.28).

<sup>276</sup> It would be a mistake to interpret a lack of statistical significance (as opposed to substantive significance) in any of the Tables in Chapter 6 as a lack of adverse disparity. While tests for statistical significance are very useful for assessing whether chance can explain disparities that we observe, they do have important limitations. First, the fact that a disparity is not statistically significant does not mean that it *is* due to chance. It merely means that we cannot rule out chance. Second, there are circumstances under which tests for statistical significance are not helpful for distinguishing disparities due to chance from disparities due to other reasons (e.g., discrimination). In the particular statistical application presented in this chapter, the chance that a test for statistical significance will incorrectly attribute to chance disparities that are due to discrimination becomes greater when relatively small sample sizes are present for an affected group.

<sup>277</sup> The number of Native Americans and Hispanics in the ENC sample was too small to yield statistical results.



**Table 6.8. Determinants of Loan Denial Rates—USA**

	(1)	(2)	(3)	(4)	(5)
African American	0.443 (11.21)	0.288 (6.84)	0.237 (5.57)	0.235 (5.22)	0.241 (5.13)
Asian/Pacific Islander	0.225 (4.21)	0.171 (3.18)	0.140 (2.56)	0.121 (2.15)	0.119 (2.07)
Native American	-0.016 (0.11)	-0.141 (1.06)	-0.097 (0.71)	-0.052 (0.35)	-0.083 (0.56)
Hispanic	0.129 (2.62)	0.070 (1.42)	0.067 (1.36)	0.035 (0.70)	0.031 (0.63)
Nonminority female	0.088 (2.65)	0.048 (1.45)	0.047 (1.45)	0.036 (1.06)	0.033 (0.94)
Judgments		0.143 (2.84)	0.129 (2.56)	0.124 (2.40)	0.121 (2.29)
Firm delinquent		0.176 (6.50)	0.178 (6.43)	0.195 (6.77)	0.208 (7.00)
Personally delinquent		0.161 (4.45)	0.128 (3.56)	0.124 (3.38)	0.119 (3.17)
Bankrupt past 7 years		0.208 (3.11)	0.179 (2.68)	0.162 (2.37)	0.167 (2.33)
\$1992 profits (*10 <sup>8</sup> )		-0.000 (0.89)	-0.000 (1.64)	-0.000 (1.78)	-0.000 (1.83)
\$1992 sales (*10 <sup>8</sup> )		-0.000 (3.08)	-0.000 (3.38)	-0.000 (3.28)	-0.000 (3.38)
\$1992 assets (*10 <sup>8</sup> )		0.000 (0.51)	0.000 (0.60)	0.000 (0.40)	0.000 (0.37)
\$1992 liabilities (*10 <sup>8</sup> )		0.000 (0.61)	0.000 (1.11)	0.000 (1.04)	0.000 (1.17)
Owner years of experience		-0.003 (2.59)	-0.001 (1.30)	-0.002 (1.55)	-0.002 (1.72)
Owner share of business		0.001 (1.91)	0.000 (0.71)	0.000 (0.26)	0.000 (0.30)
Owner Education (5 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (13 variables)	No	No	Yes	Yes	Yes
Geographic Division (8 indicator variables)	No	No	No	Yes	Yes
Industry (60 indicator variables)	No	No	No	Yes	Yes
Month/Year of Application (51 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (16 indicator vars.)	No	No	No	No	Yes
N	2,007	2,007	2,006	1,985	1,973
Pseudo R <sup>2</sup>	.0608	.1412	.2276	.2539	.2725
Chi <sup>2</sup>	143.6	333.4	537.3	595.4	635.8
Log likelihood	-1108.8	-1013.8	-911.6	-874.8	-848.7

Source: See Table 6.1.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. (2) “Other firm characteristics” include variables indicating whether the firm had a line of credit, 1990 employment, firm age, metropolitan area, a new firm since 1990, legal form of organization (sole proprietorship, partnership, S-corporation, or C-corporation), 1990-1992 employment change, existing long run relation with lender, geographic scope of market (local, regional, national or international), the value of the firm’s inventory, the level of wages and salaries paid to workers, the firm’s cash holdings, and the value of land held by the firm. (3) “Characteristics of the loan” include the size of the loan applied for, a variable indicating whether the loan was backed by real estate, and twelve variables indicating the intended use of the loan.

**Table 6.9. Determinants of Loan Denial Rates—ENC Division**

	(1)	(2)	(3)	(4)	(5)
African American	0.441 (10.15)	0.288 (6.28)	0.237 (5.14)	0.235 (4.83)	0.241 (4.77)
Asian/Pacific Islander	0.205 (3.65)	0.149 (2.65)	0.122 (2.14)	0.101 (1.72)	0.091 (1.53)
Native American	0.029 (0.18)	-0.123 (0.84)	-0.083 (0.57)	-0.025 (0.15)	-0.059 (0.37)
Hispanic	0.129 (2.57)	0.071 (1.42)	0.067 (1.33)	0.043 (0.86)	0.041 (0.79)
Nonminority female	0.097 (2.64)	0.058 (1.59)	0.050 (1.37)	0.037 (0.97)	0.032 (0.83)
African American*ENC	0.007 (0.08)	-0.002 (0.03)	-0.003 (0.04)	0.002 (0.02)	-0.001 (0.01)
Asian/Pacific Islander*ENC	0.135 (0.78)	0.170 (0.97)	0.105 (0.62)	0.176 (0.98)	0.251 (1.30)
Native American*ENC	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
Hispanic*ENC	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
Nonminority female*ENC	-0.041 (0.53)	-0.048 (0.61)	-0.012 (0.15)	-0.002 (0.02)	0.004 (0.05)
ENC division	-0.053 (1.71)	-0.044 (1.40)	-0.046 (1.47)	-0.064 (1.29)	-0.096 (2.00)
Creditworthiness Controls (4 variables)	No	Yes	Yes	Yes	Yes
Owner Education (5 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (13 variables)	No	No	Yes	Yes	Yes
Geographic Division (7 indicator variables)	No	No	No	Yes	Yes
Industry (60 indicator variables)	No	No	No	Yes	Yes
Month/Year of Application (51 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (16 indicator vars.)	No	No	No	No	Yes
N	2,002	2,002	2,001	1,980	1,968
Pseudo R <sup>2</sup>	0.0632	0.1431	0.2292	0.2543	0.2735
Chi <sup>2</sup>	149.06	337.45	540.27	595.50	637.24
Log likelihood	-1104.4	-1010.2	-908.5	-873.1	-846.4

Source: See Table 6.1.

Note: Creditworthiness controls are those used in Table 6.8 above.

The results provided so far strongly indicate that financial institutions treat African American-owned and nonminority male-owned small businesses differently in lending. Other considerations, however, may limit our ability to interpret this finding as discrimination; in particular the possibility that we may not have adequately controlled for differences in the creditworthiness of firms. If African American-owned firms are less creditworthy and we have failed to sufficiently capture those differences, then we would be inadvertently attributing the racial difference in loan denial rates to discrimination. On the other hand, if financial institutions discriminate against African American-owned firms, then the greater likelihood of denial for African Americans in earlier years is likely to hurt the performance of these firms and appear to make them look less creditworthy. Therefore, controlling for creditworthiness will likely understate the presence of discrimination.

As a check on the foregoing results, therefore, our first approach was to identify the types of information that financial institutions collect in order to evaluate a loan application and compare that with the information available to us in the NSSBF. First, a selection of small business loan applications was collected from various banks. An Internet search of web sites that provide general business advice to small firms was also conducted. Such sites typically include descriptions of the loan application process and list the kinds of information typically requested of applicants.<sup>278</sup>

Bank loan applications typically request detailed information about both the firm and its owner(s). Regarding the firm, banks typically request information on: (a) type of business, (b) years in business, (c) number of full-time employees, (d) annual sales, (e) organization type (corporation or proprietorship), (f) owner share(s), (g) assets and liabilities, (h) whether the business is a party to any lawsuit, and (i) whether any back taxes are owed. Regarding the owner's personal finances, banks typically ask for: (a) assets and liabilities, (b) sources and levels of income, and (c) whether the owner has any contingent liabilities. Some applications ask explicitly if the firm qualifies as a minority-owned enterprise for the purposes of certain government loan guarantee programs. The race of the applicant, however, would be readily identifiable even in the absence of such a question since most of these loans would be originated through face-to-face contact with a representative of the financial institution.

These criteria seem to match quite closely the information available in the 1993 NSSBF. The particular strength of the NSSBF is the detail available on the firm, which covers much of the information typically requested on loan application forms. The only shortcoming that we have identified in the 1993 NSSBF data is that less detail is available on the finances of the owner of the firm, as opposed to the firm itself.<sup>279</sup> Although our creditworthiness measures enable us to identify those owners who have had serious financial problems (like being delinquent on personal obligations), we have no direct information regarding the owner's assets, liabilities, and income (as opposed to those of the firm). These factors would be necessary to identify whether the business owner has sufficient personal resources to draw upon should the business encounter

<sup>278</sup> An example of a typical application form is presented as Appendix B in Blanchflower, Levine, and Zimmerman (2003).

<sup>279</sup> This is remedied in the 1998 SSBF and the 2003 SSBF, discussed below, both of which contain information on the owner's home equity, and personal net worth excluding home equity and business equity.

difficulties and to determine the personal collateral available should the firm default on its obligation. We do have measures of the owner's human capital in the form of education and experience, which likely capture at least some of the differential in available personal wealth across firm owners. Nevertheless, our potentially incomplete characterization of the business owner's personal financial condition in the 1993 NSSBF dataset may introduce a bias into our analysis if African American business owners have fewer resources than nonminority business owners. As we will see below, however, and as noted in the previous footnote, this deficiency is rectified in the 1998 and 2003 SSBF datasets, with little change in the main findings.

To assess the potential impact of this problem on our results, we separately examined groups of firms who differ in the degree to which personal finances should influence the loan decision and compare the estimated disadvantage experienced by African American-owned firms in different groups. First, we examine proprietorships and partnerships separately from corporations since owners of incorporated businesses are at least somewhat shielded from incurring the costs of a failed business. Second, we divide firms according to size.<sup>280</sup> Both larger small businesses and those that have been in existence for some time are more likely to rely on the business's funds, rather than the owner's, to repay its obligations. Third, we consider firms that have applied for loans to obtain working capital separately from those firms that seek funds for other purposes (mainly to purchase vehicles, machinery and equipment, and buildings or land). Loans made for one of these other purposes are at least partially collateralized because the financial institution could sell them, albeit at a potentially somewhat reduced rate, should the small business default.<sup>281</sup>

Results from these analyses provide no indication that omitting the owner's personal wealth substantially biases the results presented above in Tables 6.8 and 6.9. Estimates presented in row numbers 1 through 8 of Table 6.10 indicate that African American-owned small businesses are significantly more likely to have their loan applications rejected regardless of the category of firm considered. In particular, when samples are restricted to corporations, larger firms, and firms seeking credit for uses other than working capital, African American-owned firms are 21, 20, and 15 percentage points more likely, respectively, to have their loan application rejected even though personal resources should be less important in these categories. Moreover, in each group where there are two types of firms (large and small, etc.), the estimates for the two types of firms are not significantly different from each other.

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<sup>280</sup> As reported earlier, the mean and median size of firms is 5.5 and 31.6 full-time equivalent workers, respectively. Fourteen percent of firms have one or fewer employees and 27 percent have two or fewer employees. In the ENC, the mean and median size of firms is 6.0 and 34.3 full-time equivalent workers, respectively. Twelve percent of firms have one or fewer employees and 26 percent have two or fewer employees.

<sup>281</sup> As indicated earlier, greater personal wealth may improve a small business's chances of obtaining credit because it provides collateral should the loan go bad and because wealthy owners can use their own resources to weather bad times, improving the likelihood of repayment. Our separate analysis of corporations and proprietorships and of large and small firms does not account for this second reason because corporations and large businesses may still need to draw on the owner's personal wealth to help it survive short-term shocks. Businesses that have been in existence for several years, however, are less likely to experience these shocks, making them less likely to require infusions from the owner's personal wealth. A loan used to purchase equipment that can be sold if the firm defaults similarly insulates the bank from the need to seek repayment directly from the owner.

Another issue is whether the racial differences in loan denial rates among firms with similar characteristics can be attributed to differences in the geographic location of African American- and nonminority-owned firms. If, for example, African American-owned firms are more likely to be located in the central city, and a central city location is negatively correlated with profitability and the ability to repay debt, then financial institutions may be acting optimally in rejecting the loan applications of African American-owned firms at a higher rate. As indicated earlier, this type of behavior is labeled “statistical discrimination.” In the subsequent text and tables, we present a limited analysis to address whether or not this type of behavior takes place.<sup>282</sup>

To identify whether lenders’ behavior is consistent with this hypothesis, we distinguish those firms that self-classified their sales market as being local rather than regional, national, or international. A central city location should have a greater impact on future profit expectations for those firms that operate on a local level. If minority-owned firms are more likely to locate in the central city, racial differences in loan approval rates should be greater in the firms that sell in the local market area. The results of this test, reported in row numbers 9 and 10 of Table 6.10, reject the hypothesis that differences in loan denial rates are attributable to different propensities to locate in the center of a city. Estimates for the nation as a whole indicate that African American-owned firms that sell to the local market are 21 percentage points more likely to have their loan applications denied compared to a 19 percent excess denial rate for firms selling primarily to regional, national, or international markets. These two figures are not significantly different. In the ENC, the figures are statistically indistinguishable from those in the nation as a whole.

In order to determine whether the findings for the ENC division were different from those for the nation, in the second column of Table 6.10 we also report the coefficient and t-statistics on an interaction term between the ENC division and African American ownership. In only one of 14 cases was the estimated coefficient on this interaction significant. There is, therefore, little evidence that the figures for the ENC are significantly different from those in the nation as a whole.

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<sup>282</sup> A strong test to distinguish between statistical discrimination and “Becker-Type” discrimination (referring to the standard economic model of discrimination first expounded by University of Chicago economist Gary Becker) would require a tremendous amount of detail about the specific location of the firm, characteristics of its surrounding area, characteristics of neighboring firms, and the like, which were unavailable to us. As indicated earlier, both forms of discrimination are illegal and this Chapter applies a definition that incorporates both.

**Table 6.10. Alternative Models of Loan Denials**

Specification	African American	African American* ENC	Asian/Pacific Islander	Hispanic	Non-minority Female	Sample Size
All	0.237 (5.14)	-0.003 (0.04)	0.122 (2.14)	0.067 (1.33)	0.050 (1.37)	2,001
<i>Organization Type</i>						
1) Proprietorships and Partnerships	0.262 (3.05)	0.027 (0.15)	0.213 (1.86)	0.033 (0.38)	0.034 (0.47)	533
2) Corporations	0.210 (3.80)	-0.017 (0.15)	0.099 (1.47)	0.070 (1.08)	0.047 (1.09)	1,455
<i>Age of Firm</i>						
3) 12 Years or Under	0.258 (3.91)	0.069 (0.47)	0.210 (2.61)	0.029 (0.36)	0.043 (0.74)	1,069
4) Over 12 Years	0.229 (3.33)	-0.087 (0.83)	-0.077 (1.03)	0.108 (1.55)	0.072 (1.36)	924
<i>1993 Firm Size</i>						
5) Fewer than 10 Employees	0.239 (3.71)	-0.001 (0.01)	0.128 (1.49)	0.040 (0.56)	0.003 (0.06)	864
6) 10 or More Employees	0.199 (2.82)	0.147 (0.82)	0.099 (1.21)	0.110 (1.39)	0.108 (2.01)	1,132
<i>Intended Use of Loan</i>						
7) Working Capital	0.274 (4.61)	-0.042 (0.41)	0.049 (0.68)	-0.007 (0.12)	0.058 (1.13)	1,086
8) Other Use	0.149 (2.04)	0.118 (0.57)	0.250 (2.66)	0.165 (2.04)	0.047 (0.91)	912
<i>Scope of Sales Market</i>						
9) Local	0.214 (2.81)	-0.130 (1.20)	0.169 (2.13)	0.011 (0.16)	0.052 (0.97)	872
10) Regional, National, or International	0.188 (4.44)	0.205 (1.60)	0.030 (0.57)	0.093 (1.74)	0.036 (1.12)	1,127
<i>Creditworthiness</i>						
11) No Past Problems	0.244 (4.15)	-0.041 (0.41)	0.185 (3.06)	0.034 (0.72)	0.069 (1.93)	1,383
12) One Past Problem	0.254 (2.34)	0.075 (0.34)	-0.102 (0.61)	0.190 (1.34)	0.007 (0.07)	376
13) More Than One Problem	0.309 (2.91)	-0.033 (0.11)	0.251 (1.65)	0.051 (0.29)	-0.010 (0.06)	231

Source: See Table 6.1.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. (2) Each line of this table represents a separate regression with the same control variables as Column 3 of Table 6.8. (3) The dependent variable in all specifications represents an indicator for whether or not a loan application was denied. (4) Control for ENC also included.

We also estimate models that address a potential weakness in the specific functional form with which we control for differences in credit history across firms. As shown in Tables 6.1 and 6.2,

African American-owned firms are considerably more likely to have had troubles in the past in the form of judgments against them, late payments by the firm or its owner, or past bankruptcies. The model specifications reported in Tables 6.8 and 6.9 implicitly assume that these past problems are additive in their effect on loan denials and one might suspect the marginal impact would rise as past problems rise. Therefore, in the final three rows of Table 6.10, we separated firms by the number of past problems experienced. In Rows 11 through 13, we restricted the sample to those firms that have never had any past credit problems, those firms that reported one problem only, and those firms that reported more than one of these problems, respectively. The results indicate that even African American-owned firms with clean credit histories are at a significant disadvantage in getting their loans approved, holding constant their other characteristics. In fact, the estimated differential in loan approval rates between African American- and nonminority-owned firms is statistically indistinguishable within each of these groups. Asian/Pacific Islander-owned firms and nonminority female-owned firms with clean credit histories are also at a significant disadvantage relative to nonminority-male owned firms.

Finally, we considered whether African American-owned firms are treated differently from nonminority-owned firms when requesting credit from other sources. The source of credit we examined is credit cards. Such an analysis provides a unique advantage because credit card applications are more likely to be filled out and mailed in, so it is more likely that the race of the applicant is unknown to the financial institution, at least in the case of African American-owned firms and Native American-owned firms, where surname is unlikely to provide any signal about minority status. On the other hand, for Asian/Pacific Islander and Hispanic applicants, it is possible that surname does provide such a signal, albeit a somewhat noisy one. The 1993 NSSBF asked respondents whether they used either a business or personal credit card for business purposes. Although our analysis of use of credit cards does not condition on application, a finding that African American- and nonminority-owned small businesses are equally likely to use credit cards may still provide evidence supporting discrimination in small-business lending. In fact, if financial institutions discriminate against African Americans in providing small business loans, we may even expect to see African Americans use credit cards more often than nonminorities since they have fewer alternatives. Even though many institutions may offer both types of credit, they may only be aware of the race of the applicant in a small business loan.<sup>283</sup>

In Tables 6.11 and 6.12, we examine the probability that a firm uses either a business credit card (Row 1) or a personal credit card (Row 2) to finance business expenses holding constant other differences across firms.<sup>284</sup> There is no evidence, either for the U.S. as a whole or for the ENC, that African American-owned firms are less likely to access either business or personal credit

<sup>283</sup> It appears that race may also rarely be known to those institutions that issue credit ratings. As we mentioned above, Cavalluzzo, Cavalluzzo, and Wolken (1999) show that Dun & Bradstreet Credit Ratings are not helpful in explaining racial disparities in loan denials. Although we are not privy to Dun & Bradstreet's methodology for establishing its credit ratings, we do know from long experience that the good indicators of ownership by race are lacking in Dun & Bradstreet's master business identifier file. Indeed, this is the reason why NERA's availability estimation methodology requires us to create a master directory of disadvantaged, minority, and women-owned businesses for merging with Dun & Bradstreet's data.

<sup>284</sup> On average, 29 percent of all firms use business credit cards and 41 percent use personal credit cards for business use; these levels vary only modestly by race and ethnicity. In the ENC division, the figures are 27 percent and 38 percent, respectively.

cards for business expenses. On the other hand, there is evidence in the ENC and in the nation as a whole that Asian-/Pacific Islander-owned firms are less likely to access business credit cards. Credit card use for financing business expenses may be an area where further research is warranted. Unfortunately, available data on this subject is quite limited.

**Table 6.11. Models of Credit Card Use–USA**

Specification	African American	Asian/ Pacific Islander	Native American	Hispanic	Non-minority Female	Sample Size
1) Business Credit Card	0.035 (1.35)	-0.096 (3.23)	0.085 (1.00)	0.024 (0.79)	0.018 (0.83)	4,633
2) Personal Credit Card	0.019 (0.74)	-0.019 (0.63)	0.019 (0.23)	-0.042 (1.40)	0.028 (1.28)	4,633

Source: See Table 6.1.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. (2) Each line of this table represents a separate regression with the same control variables as Column 3 of Table 6.8 but excluding the loan characteristics. (3) The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. (4) In all specifications, the sample size is all firms. (5) Other races are excluded due to sample size limitations.

**Table 6.12. Models of Credit Card Use–ENC**

Specification	African American	Asian/ Pacific Islander	Native American	Hispanic	Non-minority Female	Sample Size
1) Business Credit Card	0.042 (1.49)	-0.102 (3.31)	0.096 (1.08)	0.018 (0.58)	0.026 (1.09)	4,633
2) Personal Credit Card	0.024 (0.84)	-0.023 (0.74)	0.036 (0.41)	-0.058 (1.87)	0.019 (0.78)	4,633

Source: See Table 6.1.

Notes: See Table 6.11. Control for ENC included.

## F. Differences in Interest Rates Charged on Approved Loans

Although most of our analysis has addressed whether minority- and nonminority-owned firms are treated equally in terms of their probability of loan denial, another way that differential treatment may emerge is through the interest rate charged for approved loans. Discrimination may be apparent if banks approve loans to equally creditworthy minority- and nonminority-owned firms, but charge the minority-owned firms a higher interest rate. Therefore, we estimated model specifications analogous to those reported previously for loan denials, but now the dependent variable represents the interest rate charged for firms whose loans were approved and the set of explanatory variables includes characteristics of the loan. More formally, the model we estimated takes the form:



$$(2) \quad I_i = \beta_0 + \beta_1 CW_i + \beta_2 X_i + \beta_3 R_i + \beta_4 LC_i + \varepsilon_i,$$

where  $I$  represents the interest rate charged on the loan,  $LC$  represents characteristics of the loan (see the notes to Table 6.8 for a full list of the variables included in this set),  $\varepsilon_i$  is a term capturing random factors, and all other notations are the same as in equation (1).

An important consideration is whether the interest rate may be treated as exogenous, as our reduced form model assumes. In the context of small business loans, in which it is possible that the loan terms may be negotiated in the determination process, this assumption may not be valid. As such, a model that simultaneously estimates the interest rate and the loan decision might be appropriate, except that the interest rate that would be charged to firms whose loans were denied is not available in our data. Alternatively, one could estimate an interest rate model alone for those firms whose loan was approved, adjusting for the potential bias brought about by sample selection. To properly identify such a model, however, a variable is required that is linked to the loan denial decision, but unrelated to the level of interest charged on approved loans; no such variable exists in the data.

Nevertheless, one would expect these considerations to impose a downward bias on the estimated differential in interest rates charged on loans to African American-owned firms. Those firms whose loans were rejected would have been charged higher interest rates than those approved. Since African American-owned businesses were considerably more likely to be rejected holding constant differences in creditworthiness, one would expect any differential in interest rate to be even greater if those firms were included in the sample. We overlook this implication in the results reported below, but its impact should be kept in mind.

The results obtained from estimating equation (2) are reported in Row 1 of Table 6.13, which includes the complete set of control variables comparable to those in Column 5 of Table 6.8. Estimates indicated that African American-owned firms pay rates of interest that are roughly one percent (100 basis points) higher than similarly situated nonminority-owned firms. Row 2 shows that even African American-owned firms with good credit histories are charged higher interest rates relative to nonminority-owned firms.<sup>285</sup> There is some evidence of this phenomenon affecting Hispanic-owned firms as well.

The remainder of the table presents similar specification checks to those reported in Table 6.10. Recall that most of these models identify firms for which the firm's own history is likely to be a more important contributor to its creditworthiness. The specifications by sales market are designed to distinguish the impact of central city location. Unfortunately, sample sizes are smaller in these specifications and reduce the power of the analysis. Nevertheless, we still find that regardless of organization type and firm age, African American-owned firms face statistically significantly higher interest rates. Overall, the evidence presented indicates that African Americans, and to a lesser extent Hispanics and Asians/Pacific Islanders, face disadvantages in the market for small business credit that do not appear to be attributable to differences in geography or creditworthiness.

<sup>285</sup> Estimates from firms that have had past credit problems are not presented since the higher likelihood of their being denied credit restricts the size of the sample and limits the ability to provide a powerful test of the interest rates charged if they are approved.

**Table 6.13. Models of Interest Rate Charged—USA**

Specification	African American	Asian/Pacific Islander	Native American	Hispanic	Non-minority Female	Sample Size
1) All loans (controls as in Column 5, Table 6.8)	1.034 (3.72)	0.413 (1.37)	-0.427 (0.63)	0.517 (1.97)	0.025 (0.14)	1,454
<i>Creditworthiness</i>						
2) No credit problems	1.187 (3.27)	0.485 (1.33)	0.910 (1.07)	0.435 (1.48)	0.129 (0.66)	1,137
<i>Organization Type</i>						
3) Proprietorships and Partnerships	1.735 (2.57)	0.826 (1.03)	2.589 (0.90)	1.008 (1.74)	-0.239 (0.53)	364
4) Corporations	0.660 (2.04)	0.359 (1.07)	-0.585 (0.86)	0.491 (1.53)	0.127 (0.66)	1,090
<i>1993 Firm Size</i>						
5) Fewer than 10 Employees	1.200 (2.58)	-0.247 (0.41)	-0.010 (0.01)	0.783 (1.75)	-0.311 (1.02)	574
6) 10 or More Employees	0.450 (1.15)	0.446 (1.21)	-0.197 (0.25)	0.515 (1.37)	0.164 (0.77)	880
<i>Scope of Sales Market</i>						
7) Local	0.751 (1.55)	-0.073 (0.13)	1.773 (1.12)	0.805 (2.05)	0.324 (1.08)	633
8) Regional, National, or International	1.544 (4.26)	1.185 (2.93)	-1.368 (1.85)	0.392 (0.96)	-0.163 (0.73)	821

Source: See Table 6.1.

Notes: (1) Reported estimates are Ordinary Least Squares (OLS) coefficients, t-statistics in parentheses. (2) Each line of this table represents a separate regression with all of the control variables as Column 5 of Table 6.8 (except where specified) as well as: an indicator variable for whether the loan request was for a fixed interest rate loan, the length of the loan, the size of the loan, whether the loan was guaranteed, whether the loan was secured by collateral, and 7 variables identifying the type of collateral used if the loan was secured. (3) The sample consists of firms that had applied for a loan and had their application approved. (4) “No credit problems” means that neither the firm nor the owner had been delinquent on payments over 60 days, no judgments against the owner for the preceding 3 years, and the owner had not been bankrupt in the preceding 7 years.

Table 6.14 shows results for the ENC. Findings are similar to those observed for the nation as a whole.

**Table 6.14. Models of Interest Rate Charged—ENC**

Specification	African American	African American * ENC	Asian/Pacific Islander	Native American	Hispanic	Non-minority Female	Sample Size
1) All loans (controls as in Column 5, Table 6.8)	0.763 (2.51)	1.576 (2.29)	0.446 (1.40)	-0.801 (1.02)	0.609 (2.26)	0.023 (0.12)	1,454
<i>Creditworthiness</i>							
2) No credit problems	1.121 (2.80)	0.576 (0.65)	0.550 (1.43)	0.539 (0.56)	0.564 (1.87)	0.143 (0.64)	1,137
<i>Organization Type</i>							
3) Proprietorships and Partnerships	1.786 (2.35)	0.735 (0.49)	0.748 (0.90)	2.008 (0.70)	1.103 (1.92)	-0.276 (0.57)	364
4) Corporations	0.423 (1.23)	1.684 (1.93)	0.413 (1.15)	-0.828 (1.13)	0.635 (1.93)	0.166 (0.75)	1,090
<i>1993 Firm Size</i>							
5) Fewer than 10 Employees	0.728 (1.38)	1.925 (1.85)	-0.316 (0.51)	-0.899 (0.61)	0.801 (1.75)	-0.394 (1.20)	574
6) 10 or More Employees	0.467 (1.18)	0.168 (0.11)	0.519 (1.37)	-0.437 (0.48)	0.613 (1.63)	0.238 (0.92)	880
<i>Scope of Sales Market</i>							
7) Local	0.486 (0.88)	1.607 (1.57)	-0.133 (0.23)	1.404 (0.89)	0.971 (2.40)	0.329 (1.01)	633
8) Regional, National, or International	1.345 (3.51)	1.395 (1.27)	1.298 (3.05)	-1.844 (2.04)	0.493 (1.21)	-0.217 (0.82)	821

Source: See Table 6.1.

Notes: See Table 6.13.

## G. Loan Approval Rates and Access to Credit

The results presented so far may be biased toward finding too small a disparity between nonminority- and African American-owned firms because those minority-owned firms that actually apply for credit may represent a selected sample of the most creditworthy. More marginal minority-owned firms whose loans may have been accepted had they been owned by nonminorities may not even be among the pool of loan applicants. First, these firms may have gone out of business or may not have had the opportunity to commence operations because of their inability to obtain capital. Second, some existing firms may have chosen not to apply for credit because they were afraid their application would be rejected due to prejudice.

Although we have no direct evidence regarding the first proposition, data from the 1993 NSSBF provide some evidence for the second: African American- and Hispanic-owned firms are much

more likely to report that they did not apply for a loan, even though they needed credit, because they thought they would be rejected. Table 6.15 reports estimates from Probit models in which the dependent variable is an indicator variable representing failure to apply for a loan fearing denial for all firms. The first row presents racial differences without controlling for any other characteristics of firms, and the results indicate that African American- and Hispanic-owned firms are 41 and 24 percentage points more likely than nonminority-owned firms to withhold an application fearing denial.

Of course, some of this difference may be attributable to differences in creditworthiness across firms since firms that are bad credit risks should be afraid that their loan would be denied. To adjust for this, the second row of Table 6.15 reports comparable models that control for differences in creditworthiness and other characteristics of firms. The results from this specification show that the greater fear of rejection among minority-owned firms can partially be explained by these differences. Nevertheless, a gap of 26, 5, and 16 percentage points still exists for African American-owned, Asian/Pacific Islander-owned, and Hispanic-owned firms relative to nonminority-owned firms with similar characteristics. In fact, when asked directly why they were afraid to apply for loans, African American-owned firms and Hispanic-owned firms were far more likely to report prejudice as the reason (19 percent and 8 percent, respectively, compared to 3 percent for nonminority-owned firms).<sup>286</sup> Results obtained in section (b) of Table 6.15 for the ENC division are very similar to those found for the nation as a whole. As section (c) of Table 6.15 shows, African American-owned firms in construction also appear to be fearful of applying because of the possibility of their application being turned down.<sup>287</sup>

If these minority-owned firms had applied for credit and were rejected because of discrimination, estimates of racial disparities based only upon loan applicants (as in Tables 6.8 and 6.9) would be understated. The perception of prejudice among these firms, however, does not necessarily imply that selection bias is present. Those firms that failed to apply because they feared rejection may have had similar loan denial rates as other minority-owned firms with comparable levels of creditworthiness that did apply. If those firms chose to apply for a loan, differences by race in the combined denial rate of the actual and potential applicants would be the same as what we have estimated for the observed sample of applicants.

More formally, suppose that loan denial rates for equally creditworthy nonminority- and minority-owned firms that applied for credit are  $\theta^W$  and  $\theta^M$ , respectively; the measure of discrimination employed in the previous analysis is  $\theta^M - \theta^W$ . Now suppose that firms that are equally creditworthy, but chose not to apply for a loan because they feared rejection, would have been denied at the rates  $\theta^W$  and  $\psi^M$  for nonminority- and minority-owned firms, respectively. Among the nonminority-owned firms, the denial rate is identical regardless of whether the firm chose to apply or not, conditional upon creditworthiness. Among minority-owned firms, however, those who were afraid to apply may have been denied at a higher rate (perhaps because of their greater propensity to locate in the central city or other factors that are related to their race, but unrelated to creditworthiness) compared with other minority-owned firms. Then the

<sup>286</sup> Other reasons given, including “too little collateral,” “poor credit history,” and “poor balance sheet,” are comparable across groups. Firms could report more than one reason.

<sup>287</sup> It was not possible to report separate construction results in earlier tables because of small sample sizes.

correct representation of the disadvantage faced by minority-owned firms is  $[\eta\theta^m + (1-\eta)\psi^m] - \theta^w$ , where  $\eta$  represents the share of minority-owned firms desiring credit that submitted an application. Our earlier findings are biased if  $\theta^m$  is not equal to  $\psi^m$ .

**Table 6.15. Racial Differences in Failing to Apply for Loans Fearing Denial**

Specification	African American	Asian/Pacific Islander	Native American	Hispanic	Non-minority Female
<b>a) USA</b>					
No Other Control Variables (n=4,637)	0.405 (16.65)	0.099 (3.61)	0.134 (1.72)	0.235 (8.28)	0.031 (1.54)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=4,633)	0.257 (10.02)	0.054 (1.98)	0.019 (0.27)	0.164 (5.69)	-0.008 (0.38)
<b>b) ENC</b>					
No Other Control Variables, except for WNC dummy and race*WNC interactions (n=4,637)	0.399 (14.98)	0.081 (2.82)	0.096 (1.17)	0.218 (7.45)	0.019 (0.84)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=4,633)	0.254 (9.09)	0.038 (1.33)	-0.007 (0.09)	0.148 (5.01)	-0.018 (0.84)
<b>c) Construction</b>					
No Other Control Variables (n=781)	0.350 (6.74)	0.109 (1.27)	-0.087 (0.54)	0.150 (2.22)	-0.007 (0.12)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=781)	0.181 (3.67)	0.064 (0.78)	-0.132 (1)	0.039 (0.65)	-0.063 (1.32)

Source: See Table 6.1.

Notes: (1) Reported estimates are Probit derivatives, t-statistics in parentheses. (2) Sample consists of all firms. (3) Dependent variable equals one if the firm said they did not apply for a loan fearing denial, zero otherwise.

One approach that is frequently employed to address such a problem is to estimate a “Heckman-correction” that would formally model the application process in conjunction with the loan outcome for those who applied. The difficulty with this methodology in the present context is that it is only correctly implemented when some variable is present that is correlated with a firm’s decision to apply for a loan, but is independent of the financial institution’s decision to approve or deny the request. Unfortunately, the NSSBF data do not appear to contain any variables that would satisfy these conditions, so we are unable to implement this methodology.<sup>288</sup>

<sup>288</sup> The only variable that potentially could meet these conditions in the NSSBF data is the distance between a firm and the nearest financial institution. If greater distance reduced a firm’s information regarding the availability of funds, it might be related to the decision to apply for a loan. On the other hand, the creditworthiness of the firm should be independent of its location and should be unlikely to enter into the approval process. Unfortunately, we did not find a direct relationship between distance to the nearest financial institution and the probability of applying for a loan. This may be due to the fact that few firms are located more than a very short distance from the nearest financial institution.

As an alternative that answers a different, but related, question, we consider the ability of firms to get credit among those who desired it, regardless of whether or not they applied. This amounts to analyzing access to credit rather than loan approval and includes in the denominator those firms that needed credit but did not apply because they feared rejection. If differences by race in this rate among all firms who needed credit are greater than differences by race in the rate of denial among loan applicants, then this would indicate that African American- and other minority-owned firms have even less access to credit than an analysis of loan applicants would indicate.

To test this proposition, we estimate a regression model comparable to the one reported in Table 6.10 for the sample of firms that applied for a loan, except that this analysis considers all firms seeking credit and treats those who did not apply for fear of rejection as denials. The sample excludes firms that did not need additional credit in the preceding three years. The results, reported in Table 6.16, are consistent with the previous analysis; we find that selection is not much of an issue for African American-owned firms nationally, Asian/Pacific Islander-owned firms nationally, or in the ENC division. Regardless of whether we consider denial rates among applicants or denial rates among firms that desired additional credit, African American-owned firms are 20-30 percentage points less likely to obtain credit once control variables are included and even higher than that when they are not. For Hispanic-owned firms, however, some selection bias is evident. Among the pool of loan applicants, Hispanic-owned firms are not statistically significantly more likely to be denied than other firms with the same characteristics (see, e.g., Table 6.8, Column 5). Among the pool of firms seeking additional credit, however, Hispanic-owned firms are 17 percentage points more likely to be denied access to credit, and 14 percentage points more likely in the ENC, and these differences are statistically significant.

**Table 6.16. Models of Failure to Obtain Credit Among Firms that Desired Additional Credit**

Specification	African American	Asian/Pacific Islander	Native American	Hispanic	Non-minority Female
<b>a) USA</b>					
No Other Control Variables (n=2,647)	0.455 (14.85)	0.299 (6.83)	0.188 (1.57)	0.297 (7.77)	0.126 (4.01)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=2,644)	0.276 (6.93)	0.180 (3.42)	-0.009 (0.06)	0.165 (3.51)	0.049 (1.38)
<b>b) ENC</b>					
No Other Control Variables (n=2,647)	0.449 (13.29)	0.278 (5.96)	0.209 (1.58)	0.275 (6.88)	0.122 (3.50)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=2,644)	0.269 (6.17)	0.157 (2.84)	0.011 (0.07)	0.141 (2.88)	0.037 (0.95)

Source: See Table 6.1.

Notes: (1) Reported estimates are Probit derivatives, t-statistics in parentheses. (2) The sample consists of all firms that applied for loans along with those who needed credit, but did not apply for fear of refusal. (3) Failure to obtain credit includes those firms that were denied and those that did not apply for fear of refusal. (4) Dependent variable is set to one if the firm failed to obtain credit and to zero if the firm applied for credit and had their loan application approved.

## H. Analysis of Credit Market Discrimination in the U.S. in 1998

We turn next to an examination of the extent to which discrimination in the credit market has changed since 1993 using data from the 1998 SSBF conducted by the Board of Governors of the Federal Reserve System.<sup>289</sup> This section updates the estimates obtained above using the 1993 NSSBF. Two complications are that the overall sample size is smaller and a number of the questions have been changed. However, the result is still clear—African American-owned firms face discrimination in the credit market. In addition, there is evidence of discrimination in the credit market against other minority-owned firms as well. We present four sections of evidence, all of which are consistent with our findings from the 1993 survey.

<sup>289</sup> The target population of the survey was for-profit businesses with fewer than 500 employees that were either a single establishment or the headquarters of a multiple establishment company, and were not agricultural firms, financial institutions, or government entities. These firms also had to be in business during December 1998. Data were collected for fiscal year-end 1998. Like its 1993 counterpart, the purpose of this survey was to gather information about small business financial behavior and the use of financial services and financial service providers by these firms. The objectives of the survey were to collect information that can inform researchers and policy makers on the availability of credit to small businesses; the location of the sources of financial services; the types of financial services used, including checking accounts, savings accounts, various types of credit, credit cards, trade credit, and equity injections; as well as the firm's recent credit acquisition experiences. The survey also investigated the level of debt held by these firms and their accessibility to credit. Additionally, the survey collected information on firm and owner demographics, as well as the firm's recent income statement and balance sheet.

## 1. Qualitative Evidence

Consistent with the 1993 survey, African American-owned firms in the 1998 survey report that the biggest problem their firm currently faces is “financing and interest rates.” (Table 6.17). In the 1993 survey, respondents were asked to report problems in the preceding 12 months (Tables 6.3 and 6.4) and over the next 12 months (Tables 6.5 and 6.6). Interestingly, even though credit availability was by far the most important category for African Americans (21 percent in Table 6.5), interest rates were relatively unimportant (2 percent). The 1998 SSBF, however, did not report separate categories.

**Table 6.17. What is the Most Important Problem Facing Your Business Today?**

	Non-minority Male	African American	Other	Hispanic	Non-minority Female	Total
Financing and interest rates	5.8%	18.2%	10.6%	8.1%	6.2%	6.8%
Taxes	7.7%	1.9%	5.3%	3.1%	6.6%	6.9%
Inflation	0.4%	0.6%	0.0%	1.0%	0.4%	0.4%
Poor sales	7.0%	5.9%	11.6%	7.0%	8.3%	7.5%
Cost/availability of labor	3.9%	3.3%	2.4%	3.5%	4.5%	3.9%
Government regulations/red tape	7.1%	3.0%	4.8%	8.1%	6.5%	6.8%
Competition (from larger firms)	11.1%	10.7%	10.6%	18.4%	10.2%	11.3%
Quality of labor	14.4%	11.0%	9.4%	8.7%	9.1%	12.6%
Cost and availability of insurance	2.6%	1.0%	0.8%	0.0%	2.3%	2.2%
Other	11.4%	10.0%	8.3%	16.0%	12.7%	11.7%
Cash flow	4.6%	10.9%	6.3%	3.5%	3.3%	4.6%
Capital other than working capital	1.1%	1.7%	4.1%	0.8%	1.3%	1.3%
Acquiring and retaining new customers	3.1%	3.9%	5.0%	1.8%	3.3%	3.2%
Growth of firm/industry	0.9%	1.0%	1.2%	0.1%	0.4%	0.8%
Overcapacity of firm/industry	0.1%	0.0%	0.0%	0.3%	0.0%	0.1%
Marketing/advertising	2.1%	3.9%	2.5%	2.8%	3.6%	2.5%
Technology	1.4%	1.2%	1.6%	2.6%	1.3%	1.5%
Costs, other than labor	2.7%	1.8%	2.5%	3.6%	3.8%	2.9%
Seasonal/cyclical issues	1.3%	1.2%	0.7%	0.4%	0.7%	1.1%
Bill collection	2.8%	2.2%	2.4%	2.6%	2.8%	2.8%
Too much work/not enough time	3.6%	2.2%	4.3%	1.4%	5.7%	3.9%
No problems	4.6%	4.3%	5.6%	5.8%	6.4%	5.1%
Not ascertainable	0.4%	0.0%	0.0%	0.0%	0.7%	0.4%

Source: NERA calculations from the 1998 SSBF (n=3,561).

Note: Results are weighted.



## 2. Differences in Loan Denial Rates by Race/Ethnicity

In 1998 as in 1993, in comparison with firms owned by nonminority males, minority- and female-owned firms were less creditworthy, more likely to have their loan applications turned down, more likely not to apply for a loan for fear of being denied, and consistently smaller and younger. Moreover, their owners had lower amounts of both home and non-home equity. Minority-owned firms in general, and African American-owned firms in particular, were much less likely to be classified as having a “low risk” credit rating by Dun & Bradstreet.<sup>290</sup>

In the 1993 survey, respondents were asked “During the last three years has the firm applied for credit or asked for the renewal of terms on an existing loan?” In 1998, a narrower question limited to new loans was asked—“Did the firm apply for new loans in the last three years?” In 1993, 43 percent answered the question in the affirmative compared with 27 percent in 1998. Despite the fact that in 1993 the question was broader, the pattern of denials by race and gender is similar across the years. As can be seen below, minority-owned firms were especially likely to have their loan applications denied.

Percentage of Loan Applications Denied		
	1993	1998
Nonminority males	26.2%	24.4%
African Americans	65.9%	62.3%
Asian/Pacific Islanders, Native Americans, etc.	39.9%	47.0%
Hispanics	35.9%	49.9%
Nonminority females	30.1%	23.5%
Overall	28.8%	28.6%

Similarly, the proportion of firms reporting that they did not apply for fear of being denied is similar by race, ethnicity, and gender across the two survey years. More than half of African American owners did not apply for a loan for fear of being denied compared with only one out of five nonminority males.

Percentage Not Applying for Fear of Denial		
	1993	1998
Nonminority males	22.5%	20.2%
African Americans	60.7%	53.9%
Asian/Pacific Islanders, Native Americans, etc.	27.5%	23.1%
Hispanics	41.5%	34.3%
Nonminority females	22.7%	24.2%
Overall	24.7%	23.3%

In the 1998 SSBF survey, respondents who were denied loans were asked if they believed there were reasons other than the official ones provided by their financial institution as to why their loan applications were turned down. Among numerous options provided were the following:

- a) Prejudice on a racial/ethnic basis.

<sup>290</sup> Information on home and non-home equity or on the Dun & Bradstreet credit rating was not available in the 1993 survey.

- b) Prejudice against women.
- c) Prejudice against the business location.
- d) Prejudice against the business type.
- e) Prejudice or discrimination (not-specified or other).

Among firm owners who had applied for credit within the last three years and were denied, 34.1 percent believed there were reasons for their denial beyond the official explanation provided by the financial institution. Among nonminorities, 7.7 percent suspected some sort of prejudice. By contrast, the figure among minorities was 25.8 percent. Among owners who needed credit but did not apply for fear of denial, a similar pattern was observed. Only 1.7 percent of nonminorities stated prejudice was the reason, whereas among minorities the figure was 6.8 percent.

In Tables 6.8 and 6.9, the determinants of loan denial rates were estimated using data from the 1993 NSSBF. African American-owned firms were found to be almost twice as likely to have their loans denied than nonminority male-owned firms, even after controlling for a host of variables included primarily to control for the possibility that minority-owned firms were smaller and less creditworthy than those owned by nonminority men.

A similar exercise is performed below in Tables 6.18 and 6.19 using data from the 1998 SSBF. Column 1 in Table 6.18 shows that African American-owned firms in 1998 had a 42.2 percentage point higher probability of denial than nonminority male-owned firms before taking account of creditworthiness of the firm or any other characteristics. For 1993, the comparable figure was 44.3 percentage points. The addition of a large number of controls reduces the percentage point differential for African Americans to 21.8 in column 5 as the full set of controls is added. For 1993, the comparable figure was 24.1 percentage points.

The main difference between 1993 and 1998 is that now we find evidence that the probability of denial is significantly higher for Hispanic-owned firms as well. In Table 6.18, Column 5, Hispanic-owned firms have a 17.1 percentage point higher probability of being denied than nonminority male-owned firms. In Table 6.8, by contrast, denial probabilities for Hispanic-owned firms were not significantly different from those of nonminority male-owned firms. If anything, discrimination in the small business credit market appears to have expanded during the late 1990s.

**Table 6.18. Determinants of Loan Denial Rates—USA**

	(1)	(2)	(3)	(4)	(5)
African American	0.422 (7.94)	0.254 (5.36)	0.217 (5.05)	0.192 (4.52)	0.218 (4.74)
Asian/Pacific Islander	0.148 (2.54)	0.129 (2.52)	0.049 (1.25)	0.023 (0.65)	0.028 (0.77)
Hispanic	0.353 (6.44)	0.269 (5.37)	0.211 (4.69)	0.183 (4.21)	0.171 (4.00)
Nonminority female	0.087 (2.22)	0.049 (1.55)	0.024 (0.96)	0.016 (0.66)	0.011 (0.44)
Judgments		0.272 (4.28)	0.249 (4.32)	0.272 (4.47)	0.262 (4.20)
Firm delinquent		0.081 (2.88)	0.115 (4.20)	0.103 (3.88)	0.111 (4.01)
Personally delinquent		0.092 (2.85)	0.039 (1.59)	0.042 (1.69)	0.045 (1.76)
Bankrupt past 7 years		0.504 (4.48)	0.406 (3.83)	0.392 (3.67)	0.395 (3.64)
\$1998 sales (*10 <sup>8</sup> )		-0.000 (2.47)	-0.000 (0.26)	0.000 (0.02)	0.000 (0.03)
\$1998 firm equity (*10 <sup>8</sup> )		0.000 (1.40)	0.000 (0.46)	0.000 (0.20)	0.000 (0.06)
Owner home equity (*10 <sup>8</sup> )		0.000 (0.52)	0.000 (1.47)	0.000 (0.96)	0.000 (0.90)
Owner net worth (*10 <sup>8</sup> )		-0.000 (1.25)	-0.000 (1.28)	-0.000 (1.19)	-0.000 (1.24)
Owner years of experience		-0.002 (1.42)	-0.001 (0.49)	-0.000 (0.34)	-0.000 (0.21)
Owner share of business		0.000 (0.75)	-0.000 (0.12)	0.000 (0.03)	-0.000 (0.33)
Dun & Bradstreet credit ratings (4 variables)	No	Yes	Yes	Yes	Yes
Owner Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Geographic Division (8 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	924	924	924	924	905
Pseudo R <sup>2</sup>	.1061	.2842	.3714	.3910	.4015
Chi <sup>2</sup>	90.0	241.1	315.1	331.8	337.8
Log likelihood	-379.3	-303.7	-266.7	-258.3	-251.7

Source: See Table 6.17.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. (2) “Other firm characteristics” include variables indicating whether the firm had a line of credit, 1998 full time equivalent employment, firm age, metropolitan area, legal form of organization (sole proprietorship, partnership, LLP, S-corporation, C-corporation, or LLC), existing long run relation with lender, geographic scope of market (regional, national, foreign or international), the value of the firm’s inventory, the firm’s cash holdings, and the value of land held by the firm. (3) “Characteristics of the loan” includes the size of the loan applied for.

**Table 6.19. Determinants of Loan Denial Rates—ENC**

	(1)	(2)	(3)	(4)	(5)
African American	0.406 (7.35)	0.243 (4.98)	0.205 (4.67)	0.189 (4.26)	0.214 (4.48)
Asian/Pacific Islander	0.155 (2.57)	0.124 (2.40)	0.045 (1.17)	0.025 (0.70)	0.031 (0.82)
Hispanic	0.344 (6.20)	0.257 (5.09)	0.206 (4.51)	0.193 (4.27)	0.181 (4.07)
Nonminority Female	0.079 (1.97)	0.042 (1.30)	0.018 (0.70)	0.016 (0.63)	0.010 (0.39)
African American*ENC	0.082 (0.53)	0.000 (0)	0.017 (0.17)	0.016 (0.17)	0.029 (0.27)
Asian/Pacific Islander*ENC	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
Hispanic*ENC	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
Nonminority female*ENC	0.017 (0.11)	0.000 (0)	0.023 (0.19)	0.020 (0.17)	0.030 (0.23)
ENC division	-0.057 (1.25)	-0.053 (1.50)	-0.039 (1.41)	-0.047 (1.27)	-0.046 (1.24)
Creditworthiness Controls (8 variables)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Geographic Division (7 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	919	919	919	919	900
Pseudo R <sup>2</sup>	0.1099	0.2892	0.3757	0.3912	0.4021
Chi <sup>2</sup>	93.04	244.81	318.10	331.23	337.46
Log likelihood	-376.8	-300.9	-264.3	-257.7	-250.9

Source: See Table 6.17.

Notes: (1) t-statistics in parentheses. (2) Other creditworthiness controls are the four other variables included in Column 2 of Table 6.18.

Table 6.19 focusing on the ENC division yields similar results—showing significantly larger denial probabilities for African American- and Hispanic-owned firms (21.4 percent and 18.1 percentage points, respectively) than for nonminority male-owned firms. The ENC indicator was not significant in Table 6.19. None of the interaction terms between ENC and race, ethnicity or gender were significant either, indicating that the loan denial results for the ENC are not significantly different than for the nation as a whole.

Although tempered by the smaller sample size available, the quality of the experiment is somewhat better using the 1998 data than it was using the 1993 data due to the availability of an

improved set of controls for the creditworthiness of the firm and its owner. In 1998, three new variables are included regarding the financial viability of the firm:

- a) The value of the equity, if any, in the owner's home.
- b) The owner's net worth excluding home equity and equity in the firm.
- c) The firm's Dun & Bradstreet credit rating in five categories (low, moderate, average, significant and high) indicating the likelihood of loan default.<sup>291</sup>

Despite the fact that these new variables do help to predict loan denials,<sup>292</sup> the estimated race differences including these variables are unchanged from those reported above.<sup>293</sup> This suggests that the large estimated differences in the denial probabilities that were estimated in 1993 were not biased significantly upwards by the fact that these variables were unavailable.

### 3. Effect of 1998 Survey Design Changes on Differences in Loan Denial Rates

The question we used to examine the 1998 data was somewhat narrower than the question used in the 1993 survey because it was changed by the survey designers. The 1998 question asked about new loans over the preceding three years, whereas the 1993 question covered all loans, including renewals. Responses in 1998 were as follows:

Applied for New Loans Last Three Years	Number	Percent
Did not apply	2,599	73.0%
Always approved	713	20.0%
Always denied	166	4.7%
Sometimes approved/sometimes denied	83	2.3%
Total	3,561	100.0%

The dependent variable used in Tables 6.18 and 6.19 was set to one if the loan application was always denied and was set to zero if the application was always approved or sometimes approved/sometimes denied. An alternative dependent variable—*denylast*—is set to one if the application is always denied, set to zero if always approved. Those responding “sometimes approved/sometimes denied” are excluded from the analysis. Column (1) of Table 6.20 replicates Column 1 of Table 6.18 using *denylast* as the dependent variable with the smaller sub-sample. African Americans, Hispanics, Asians/Pacific Islanders, and nonminority females are all confirmed to face higher denial rates than nonminority males using this specification. For

<sup>291</sup> The D&B Commercial Credit Score Report predicts the likelihood of a company paying in a delinquent manner (90+ days past terms) during the next 12 months based on the information in D&B's file. The score is intended to help firms decide quickly whether to accept or reject accounts, adjust terms or credit limits, or conduct a more extensive review based on the report D&B provides. Firms can also determine the company's relative ranking among other businesses in the D&B database.

<sup>292</sup> The coefficients and t-statistics on the credit score variables when they were included alone in a U.S. loan denial model was as follows: moderate risk = .228 (2.45); average risk = .295 (3.25); significant risk = .319 (3.28); high risk = .391 (3.53);  $n=924$ ; pseudo  $r^2=.0253$ . Excluded category “low risk.” Results were essentially the same when a control for ENC was also included.

<sup>293</sup> This confirms the findings of Cavalluzzo, Cavalluzzo and Wolken (1999) who performed a similar exercise with the 1993 data.

African Americans and Hispanics, the difference is 46 and 36 percentage points, respectively. For Asians/Pacific Islanders, the difference is 19 percentage points, and for nonminority females, 8 percentage points.

**Table 6.20. More Loan Denial Probabilities**

	(1)	(2)	(3)	(4)
	<i>Denylast</i>	<i>Denylast</i>	<i>Denylast</i>	<i>Denylast</i>
African American	0.457 (8)	0.246 (4.76)	0.447 (7.47)	0.257 (4.63)
Asian/Pacific Islander	0.185 (2.81)	0.027 (0.65)	0.200 (2.90)	0.031 (0.72)
Hispanic	0.360 (6.28)	0.171 (3.67)	0.353 (6.06)	0.182 (3.75)
Nonminority female	0.083 (2)	0.005 (0.20)	0.076 (1.79)	0.006 (0.20)
African American*ENC			0.043 (0.28)	-0.037 (0.47)
Asian/Pacific Islander*ENC			0.000 (0.00)	0.000 (0.00)
Hispanic*ENC			0.000 (0.00)	0.000 (0.00)
Nonminority female*ENC			0.008 (0.05)	0.025 (0.20)
ENC			-0.058 (1.17)	-0.041 (0.88)
Creditworthiness Controls	No	Yes	No	Yes
Owner's Education	No	Yes	No	Yes
Other Firm Characteristics	No	Yes	No	Yes
Characteristics of the Loan	No	Yes	No	Yes
Geographic Division	No	Yes	No	Yes
Industry	No	Yes	No	Yes
N	846	846	841	841
Pseudo R <sup>2</sup>	0.1112	0.4265	0.1155	0.4265
Chi <sup>2</sup>	90.94	348.71	94.17	347.85
Log likelihood	-363.3	-234.5	-360.7	-233.8

Source: See Table 6.18.

Results consistent with discrimination are confirmed for African American-owned firms and Hispanic-owned firms in Column (2) of Table 6.20 when a host of demographic and financial characteristics and geographic and industry indicators are included. When interaction terms for the ENC division are added to the model as in Columns (3) and (4), results for African Americans and Hispanics remain statistically significant. Moreover, the results for Asian/Pacific Islander-owned firms and nonminority female-owned firms become significant in Column (3),

though not in Column (4). The ENC indicator is not significant in any of the specifications, nor are the interaction terms between ENC and race, ethnicity, or gender.

#### **4. Differences in Interest Rates, Credit Card Use, and Failure to Apply for Fear of Denial**

Tables 6.21 through 6.23 provide confirmation from the 1998 survey of a number of other results from the 1993 survey reported above.

Table 6.21, which is similar to Tables 6.13 and 6.14, finds that conditional on obtaining a loan, African American-owned firms are charged a higher price for their credit—on average 1.06 percentage points nationally. However, African Americans in the ENC appear to pay less for their loans than African Americans nationally.

Table 6.22, which is similar to Table 6.15, shows that African American-owned firms are much more likely not to apply for a loan for fear that they will be denied. Based on all of the foregoing evidence, this is perhaps a sensible decision—if and when they do apply they are almost twice as likely as nonminority male-owned firms to have their application rejected. This is evident in the ENC as well and also in the construction and construction-related industries. There is some evidence of this phenomenon for Hispanics nationally as well.

Finally, Table 6.23, which is comparable to Tables 6.11 and 6.12, suggests that when the financial institution does not know the race or ethnicity of the applicant—as is often the case in an application for a credit card—there are no differences by race or ethnicity in the usage for business purposes of either business or personal credit cards. There was also no evidence of race effects in the use of credit cards in the ENC division (rows 3 and 4) or in construction (results not reported here).

Our confidence in the strength of our findings from the 1993 NSSBF survey is elevated by these findings from the 1998 SSBF survey, which strongly confirm the earlier results. Unfortunately, African Americans continue to be discriminated against in the market for small business credit. By 1998, this discrimination appeared to be on the increase for African Americans and to be expanding to impact other minority groups, such as Hispanics, as well. This is an important market failure, and one that governments such as the City of Cleveland cannot ignore if they are to avoid passive participation in a discriminatory market area.

**Table 6.21. Models of Interest Rate Charged**

Specification	African American	African American* ENC	Asian/Pacific Islander	Hispanic	Non-minority Female
1a) All Loans (as in Column 5 of Table 6.18) n=765	1.064 (2.66)	—	0.559 (1.49)	-0.088 (0.23)	-0.501 (1.93)
1b) All Loans (as in Column 5 of Table 6.19) n=765	1.234 (2.69)	-2.199 (1.53)	0.576 (1.31)	0.136 (0.30)	-0.302 (1.06)

Source: See Table 6.18.

Notes: (1) Each line of this table represents a separate regression with all of the control variables. (2) The sample consists of firms that had applied for a loan and had their application approved.

**Table 6.22. Racial Differences in Failing to Apply for Loans Fearing Denial**

Specification	African American	Asian/Pacific Islander	Hispanic	Non-minority Female
<b>a) U.S.</b>				
No Other Control Variables (n=3,448)	0.353 (11.90)	0.046 (1.48)	0.173 (5.77)	0.051 (2.55)
Full Set of Control Variables (n=3,448)	0.208 (7.04)	-0.012 (0.43)	0.052 (1.87)	0.011 (0.59)
<b>b) ENC division</b>				
No Other Control Variables (n=565)	0.252 (3.05)	0.018 (0.21)	0.342 (2.16)	-0.003 (0.05)
Full Set of Control Variables (n=560)	0.015 (0.59)	0.018 (0.60)	0.059 (0.93)	0.009 (0.51)
<b>c) Construction</b>				
No Other Control Variables (n=613)	0.371 (5.06)	0.117 (1.43)	0.020 (0.26)	0.122 (2.08)
Full Set of Control Variables (n=609)	0.273 (3.69)	0.099 (1.32)	-0.062 (1.13)	0.038 (0.74)

Source: See Table 6.18.

Notes: (1) Reported estimates are Probit derivatives with t-statistics in parentheses. (2) Full set of control variables as in Column 5 of Table 6.18, except for loan amount, year of application, and type of lender.



**Table 6.23. Models of Credit Card Use**

Specification	African American	Asian/ Pacific Islander	Hispanic	Nonminority Female	Sample Size
1) Business Credit Card	-0.001 (0.02)	-0.038 (1.00)	-0.014 (0.38)	-0.018 (0.72)	3,561
2) Personal Credit Card	-0.018 (0.54)	0.016 (0.44)	-0.050 (1.42)	0.012 (0.52)	3,561
3) Business Credit Card ENC	-0.140 (1.21)	-0.078 (0.64)	0.205 (0.98)	-0.005 (0.06)	485
4) Personal Credit Card ENC	0.105 (0.92)	0.077 (0.65)	-0.088 (0.45)	-0.037 (0.50)	485
3) Business Credit Card Construction & related	0.056 (0.62)	-0.074 (0.70)	0.087 (0.86)	-0.025 (0.35)	624
4) Personal Credit Card Construction & related	0.003 (0.04)	0.047 (0.46)	-0.092 (1.01)	-0.073 (0.99)	624

Source: See Table 6.18.

Notes: (1) Each line of this table represents a separate regression with the same control variables as Column 5 of Table 6.18, except for loan amount, year of application, and type of lender. (2) The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. (3) In all specifications, the sample size includes all firms. (4) Reported estimates are Probit derivatives with t-statistics in parentheses.

## I. Analysis of Credit Market Discrimination in the U.S. in 2003

The most recent wave of the Survey of Small Business Finances was made available by the Board of Governors of the Federal Reserve System in 2007.<sup>294</sup> This is the fourth and final survey of U.S. small businesses conducted by the Board of Governors since 1987.<sup>295</sup> The survey gathered data from 4,072 firms selected to be representative of small businesses operating in the U.S. at the end of 2003. The survey covered a nationally representative sample of U.S. for profit, non-financial, non-subsidiary, nonagricultural, and nongovernmental businesses with fewer than 500 employees that were in operation at year-end 2003 and at the time of interview. Most interviews took place between June 2004 and January 2005. The sample was drawn from the Dun & Bradstreet Market Identifier file. The number of employees varied from zero to 486 with a weighted median of 3.0 and weighted mean of 8.6.

<sup>294</sup> See [www.federalreserve.gov/pubs/oss/oss3/ssbf03/ssbf03home.html](http://www.federalreserve.gov/pubs/oss/oss3/ssbf03/ssbf03home.html).

<sup>295</sup> The Federal Reserve Board cancelled the SSBF subsequent to the completion of the 2003 wave, ostensibly for financial reasons. See Robb (2010).

Unfortunately, the 2003 SSBF did not over-sample minority-owned firms, as in the first three survey waves. According to survey staff, this was due to concerns that doing so would delay the survey timeline and reduce the overall response rate.<sup>296</sup>

In 1998, almost 8 percent of survey respondents were African American, compared to slightly more than 3 percent in 2003. Hispanics were almost 7 percent in 1998 but less than 4 percent in 2003. Other minorities were 6.5 percent in 1998 but only 5.4 percent in 2003.<sup>297</sup> Although the population weights were adjusted to accommodate these changes, even these weighted percentages are significantly smaller for minorities in 2003 than in 1998.<sup>298</sup>

Mach and Wolken (2006) reported using these data that 13.1 percent of firms were owned by nonminority or Hispanic individuals; the share is statistically lower than in 1998 (14.6 percent). The shares for African Americans and Asians/Pacific Islanders each held roughly constant at 4 percent; the share of American Indians and Alaska natives held at roughly 1 percent. However, the share of Hispanics fell a statistically significant amount from 5.6 percent to 4.2 percent, which is somewhat surprising given the evidence that Hispanics are a growing share of the U.S. population—up from 12.5 percent in 2000 to 14.5 percent in 2005 (Table 4). The percentage of firms owned by females also declined from 72.0 percent to 64.8 percent.

Despite these drawbacks, our analysis of the 2003 SSBF yields results that are strongly consistent with those obtained from the 1993 and 1998 survey waves. The remainder of this section presents our findings from this analysis.<sup>299</sup>

## 1. Qualitative Evidence

Table 6.24 reports the results of asking business owners for the most important problem currently facing their firm. Consistent with the 1993 and 1998 surveys, firms owned by minority and women-owned firms were more likely to say that their most important problem was “financing and interest rates.” Once again, the African American-nonminority difference was most pronounced—only slightly more than 5 percent of nonminority male business owners reported this as their major problem compared to almost 21 percent of African American business owners.

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<sup>296</sup> See fn. 253, above.

<sup>297</sup> The impact on women was not as pronounced. Females were 23.3 percent in 1998 and 20.9 percent in 2003. For nonminority females, the figures are 17.8 percent in 1998 and 18.2 percent in 2003.

<sup>298</sup> Mach and Wolken (2006, Table 2) report that weighted figures for Blacks were 4.1 percent in 1998 and 3.7 percent in 2003. Hispanics were 5.6 and 4.2 percent, respectively; Asians and Pacific Islanders were 4.4 and 4.2 percent, respectively; Native Americans were 0.8 and 1.3 percent, respectively; and women were 24.3 and 22.4 percent, respectively.

<sup>299</sup> The data file provided by the Board of Governors includes five separate observations per firm. That is to say, there are 4240\*5=21,200 observations. These so-called multiple imputations are done via a randomized regression model, and are included because where there are missing observations several alternative estimates are provided. Where values are not missing the values for each of the five imputations are identical. We make use of the data from the first imputation: the results presented here are essentially identical whichever imputation is used. Overall, only 1.8 percent of observations in the data file were missing.

**Table 6.24. What is the Most Important Problem Facing Your Business Today?**

	<b>Non-minority Male</b>	<b>African American</b>	<b>Other</b>	<b>Hispanic</b>	<b>Non-minority Female</b>	<b>Total</b>
Financing and interest rates	5.4%	20.7%	9.1%	5.7%	5.8%	6.3%
Taxes	6.3%	2.4%	4.9%	7.7%	4.3%	5.7%
Inflation	2.7%	1.0%	2.3%	0.5%	1.4%	2.3%
Poor sales or profitability	17.8%	38.5%	28.9%	30.0%	22.5%	20.6%
Cost/availability of labor	1.5%	0.0%	0.6%	1.5%	1.5%	1.4%
Government regulations/red tape	4.7%	1.0%	5.4%	9.6%	2.5%	4.5%
Competition from larger firms	4.0%	2.7%	2.7%	3.6%	3.6%	3.8%
Quality of labor	7.9%	6.9%	5.0%	3.8%	6.5%	7.2%
Cost and availability of insurances	10.3%	1.8%	3.1%	5.2%	6.4%	8.6%
Other	2.6%	1.9%	4.0%	2.8%	1.6%	2.5%
None	5.3%	3.4%	9.4%	4.1%	8.6%	6.0%
Cash flow	6.2%	5.1%	4.6%	7.1%	6.8%	6.3%
Growth	0.9%	2.7%	0.4%	1.1%	0.8%	1.0%
Foreign competition	1.3%	0.0%	1.0%	0.1%	0.7%	1.0%
Competition - other	1.6%	0.8%	1.8%	0.1%	1.1%	1.4%
Availability of materials/resources	0.8%	0.8%	0.6%	1.6%	1.2%	0.9%
Labor problems other than cost or quality	1.2%	2.2%	0.2%	0.0%	1.3%	1.1%
Internal management/administrative problems	4.2%	2.5%	4.3%	1.0%	6.1%	4.4%
Environmental constraints	1.4%	0.7%	1.6%	2.3%	2.0%	1.6%
Advertising and public awareness	2.2%	1.8%	2.4%	1.8%	3.3%	2.4%
Market/economic/industry factors	4.9%	1.9%	4.0%	2.3%	6.2%	4.8%
Health care cost and availability	1.5%	0.0%	0.7%	0.8%	1.4%	1.4%
Energy costs	1.5%	0.0%	0.7%	3.7%	1.2%	1.4%
Costs other than health care and energy	2.2%	1.0%	0.1%	3.6%	1.0%	1.9%
Owner's personal problems	0.3%	0.0%	0.0%	0.0%	0.8%	0.4%
Technology	0.4%	0.0%	0.7%	0.0%	0.5%	0.4%
Dealing with insurance companies	0.3%	0.4%	0.0%	0.0%	0.4%	0.3%
War and September 11th	0.2%	0.0%	1.3%	0.0%	0.5%	0.3%

Source: NERA calculations from the 2003 SSBF (n=4,072).

Note: Results are weighted.

## 2. Differences in Loan Denial Rates by Race/Ethnicity

Tables 6.25 and 6.26 present estimates of loan denial probabilities for the nation as a whole and for the ENC using a regression model comparable to that used with the 1993 and 1998 survey waves.<sup>300</sup>

Column (1) in Table 6.25 (comparable to Table 6.8 for 1993 and 6.18 for 1998) shows that African American-owned firms in 2003 had a 45.9 percentage point higher probability of denial than nonminority male-owned firms before taking into account the creditworthiness of the firm or any other characteristics. The addition of a large number of controls reduces the percentage point differential for African Americans to 9.4 in Column (5) as the full set of controls is added. The coefficients in Column (5) for nonminority females and other minority groups are not significant, however.

Table 6.26 (comparable to Table 6.9 for 1993 and 6.19 for 1998) focuses on the ENC division and yields similar results—showing significantly larger denial probabilities for African American-owned firms than for nonminority male-owned firms, persisting even after the addition of all of the control variables.

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<sup>300</sup> In 2003, the credit application question was changed from 1998 to once again include requests for renewals as well as new loans, making it comparable to the 1993 version.

**Table 6.25. Determinants of Loan Denial Rates—USA**

	(1)	(2)	(3)	(4)	(5)
African American	0.459 (8.38)	0.136 (5.47)	0.105 (4.80)	0.091 (5.04)	0.094 (4.95)
Asian/Pacific Islander	0.055 (1.51)	0.020 (1.59)	0.009 (1.01)	0.002 (0.49)	0.001 (0.18)
Hispanic	0.067 (1.74)	0.008 (0.83)	0.004 (0.58)	0.001 (0.30)	0.001 (0.25)
Native American and Other	0.184 (2.22)	0.061 (1.95)	0.032 (1.47)	0.021 (1.43)	0.021 (1.49)
Nonminority female	0.043 (2.17)	0.003 (0.70)	0.002 (0.49)	0.001 (0.57)	0.002 (0.76)
Judgments against owner		0.007 (0.66)	0.003 (0.35)	0.003 (0.54)	0.006 (0.90)
Judgments against firm		0.005 (1.16)	0.005 (1.42)	0.001 (0.54)	0.001 (0.64)
Firm delinquent		0.032 (3.78)	0.021 (3.23)	0.019 (3.89)	0.021 (4.08)
Personally delinquent		-0.007 (0.69)	-0.006 (1.02)	-0.003 (0.82)	-0.002 (0.58)
Owner Bankrupt past 7 years		0.046 (1.36)	0.041 (1.35)	0.052 (1.81)	0.044 (1.66)
Firm Bankrupt past 7 years		0.000 (0.03)	0.003 (0.37)	0.001 (0.17)	-0.001 (0.38)
\$1998 sales (*10 <sup>8</sup> )		-0.000 (1.68)	0.000 (0.04)	0.000 (0.29)	0.000 (0.51)
\$1998 firm equity (*10 <sup>8</sup> )		-0.000 (2.23)	-0.000 (1.03)	-0.000 (1.62)	-0.000 (1.63)
Owner home equity (*10 <sup>8</sup> )		0.000 (0.28)	0.000 (0.02)	-0.000 (0.45)	-0.000 (0.26)
Owner net worth (*10 <sup>8</sup> )		-0.000 (2.97)	-0.000 (2.92)	-0.000 (3.06)	-0.000 (3.26)
Owner years of experience		0.000 (0.31)	0.000 (1.00)	0.000 (0.82)	0.000 (0.62)
Owner share of business		0.000 (0.08)	0.000 (0.61)	0.000 (0.38)	0.000 (0.47)
Dun & Bradstreet credit ratings (4 variables)	No	Yes	Yes	Yes	Yes
Owner Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Geographic Division (8 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	1,664	1,655	1,655	1,655	1,605
Pseudo R <sup>2</sup>	.0850	.2267	.2901	.3336	.3681
Chi <sup>2</sup>	74.1	192.9	246.8	283.8	310.3
Log likelihood	-399.1	-328.9	-301.9	-283.4	-266.4

Source: See Table 6.24. Notes: (1) “Other firm characteristics” include variables indicating whether the firm had a line of credit, 2003 total employment, firm age, metropolitan area, legal form of organization (sole proprietorship, partnership, LLP, S-corporation, C-corporation, or LLC), existing long run relation with lender, geographic scope of market (local, regional, national, foreign or international), the value of the firm’s inventory, the firm’s cash holdings, the value of land held by the firm, and total salaries and wages paid. (2) “Characteristics of the loan” includes the size of the loan applied for.

**Table 6.26. Determinants of Loan Denial Rates—ENC**

	(1)	(2)	(3)	(4)	(5)
African American	0.522 (8.45)	0.174 (5.66)	0.134 (4.92)	0.122 (5.23)	0.126 (5.13)
Asian/Pacific Islander	0.071 (1.79)	0.022 (1.70)	0.011 (1.14)	0.003 (0.68)	0.001 (0.34)
Hispanic	0.090 (2.08)	0.014 (1.25)	0.009 (1.04)	0.004 (0.82)	0.003 (0.74)
Native and Other	0.187 (2.22)	0.062 (2.01)	0.034 (1.55)	0.024 (1.55)	0.022 (1.59)
Nonminority female	0.061 (2.74)	0.006 (1.19)	0.004 (0.95)	0.003 (1.13)	0.003 (1.33)
African American*ENC	-0.063 (1.92)	-0.011 (1.68)	-0.008 (1.44)	-0.004 (1.58)	-0.003 (1.51)
Asian/Pacific Islander*ENC	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
Hispanic-Other*ENC	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
Native-Other*ENC	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
Nonminority female*ENC	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
ENC division	0.004 (0.19)	-0.000 (0.09)	0.000 (0.03)	-0.001 (0.20)	-0.002 (0.58)
Creditworthiness (4 variables)	No	Yes	Yes	Yes	Yes
Dun & Bradstreet credit ratings (4 variables)	No	Yes	Yes	Yes	Yes
Balance Sheet (4 indicator variables)	No	Yes	Yes	Yes	Yes
Owner Experience (1 indicator variable)	No	Yes	Yes	Yes	Yes
Owner's Share of Business (1 indicator variable)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Geographic Division (7 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	1,618	1,609	1,609	1,609	1,559
Pseudo R <sup>2</sup>	0.0939	0.2344	0.2966	0.3389	0.3736
Chi <sup>2</sup>	81.27	197.80	250.24	285.90	312.32
Log likelihood	-392.0	-323.0	-296.7	-278.9	-261.8

Source: See Table 6.24.

Notes: (1) t-statistics in parentheses. (2) Creditworthiness controls include presence of legal judgments against the firm during the previous 3 years, more than 60 days delinquent on any personal obligations of the firm's owner during the previous 3 years, more than 60 days delinquent on any business obligations of the firm during the previous 3 years, and declaration of owner of firm bankruptcy during the previous 7 years. (3) Balance sheet variables include firm sales in 1998, firm equity in 1998, owner's home equity in 1998, and owner's personal net worth (exclusive of firm equity and home equity) in 1998. (4) For other variables, see notes for Table 6.25.

### 3. Differences in Interest Rates, Credit Card Use, and Failure to Apply for Fear of Denial

Table 6.27 models the interest rate charged for those minority-owned and nonminority female-owned firms that were able to successfully obtain a loan (comparable to Tables 6.13 and 6.14 for 1993 and Table 6.21 for 1998). As was found in earlier surveys, African American business owners are hurt here as well since they have to pay, on average, 1.05 percentage points more for their loans than nonminority male business owners with identical characteristics. Hispanic business owners, as well, pay 0.99 percentage points more than their nonminority male counterparts.

Table 6.27 shows that the loan price differential is present for African American and Hispanic business owners in the ENC as well. Table 6.27 shows that Hispanic business owners in the ENC may pay 1.44 percentage points more for their loans, on average, than comparable nonminority male business owners. For African American business owners, the differential is 0.83 percentage points but is not strongly significant.

Table 6.28 reports the results of estimating a model where the dependent variable is whether a business or personal credit card is used to pay business expenses (comparable to Tables 6.11 and 6.12 for 1993 and Table 6.23 for 1998). As noted above, the application procedure for business and personal credit cards is usually automated and not conducted face-to-face. If there were missing variables such as creditworthiness or some such characteristic unobserved to the econometrician, then the race and ethnicity indicator variables should enter significantly in these equations. Unlike earlier years, there is some evidence that African Americans are less likely to use personal credit cards for business expenses. However, this result is not observed for business credit cards, nor is it observed in the ENC.

**Table 6.27. Models of Interest Rate Charged**

Specification	African American	Asian/Pacific Islander	Hispanic	Native and Other	Non-minority Female
1a) All Loans (as in Column 5 of Table 6.25) n=1,537	1.046 (2.02)	0.430 (1.20)	0.991 (2.72)	0.260 (0.35)	-0.148 (0.75)
1b) All Loans (as in Column 5 of Table 6.26) n=1,537	0.833 (1.39)	0.330 (0.78)	1.440 (3.22)	0.475 (0.51)	-0.332 (1.47)

Source: See Table 6.24.

Notes: (1) Each line of this table represents a separate regression with all of the control variables as indicated. (2) Additionally, controls were included for whether the loan required a co-signer or guarantor, whether collateral was required and, if so, the type of collateral required. (3) The sample consists of firms that had applied for a loan and had their application approved.

**Table 6.28. Models of Credit Card Use**

Specification	African American	Asian/ Pacific Islander	Hispanic	Native American and Other	Non- minority Female	Sample Size
1) Business Credit Card	-0.060 (1.13)	0.040 (0.91)	0.004 (0.08)	-0.001 (0.01)	0.002 (0.07)	3,676
2) Personal Credit Card	-0.132 (2.68)	0.036 (0.84)	-0.080 (1.77)	-0.040 (0.48)	0.036 (1.56)	3,676
3) Business Credit Card, ENC	0.211 (1.44)	-0.034 (0.20)	0.105 (0.75)	—	-0.127 (0.44)	557
4) Personal Credit Card, ENC	-0.220 (1.55)	0.111 (0.76)	-0.004 (0.03)	-0.092 (0.39)	0.101 (1.55)	562

Source: See Table 6.24.

Notes: (1) Each line of this table represents a separate regression with the same control variables as Column 5 of Table 6.27, except for loan amount, year of application, and type of lender. (2) The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. (3) In all specifications, the sample size is all firms. (4) Reported estimates are Probit derivatives with t-statistics in parentheses.

Finally, consistent with earlier results, Table 6.29 (comparable to Tables 6.15 for 1993 and 6.22 for 1998) shows that African American owners are much more likely not to apply for a loan fearing they will be denied. Even after controlling for a host of demographic, financial, geographic, and industry factors, African American business owners are still almost 17 percentage points more likely to fail to apply for loans for fear of denial—even though they need the credit. In the ENC the phenomenon is evident as well—African American business owners are 17 percentage points more likely to fail to apply for fear of denial. In construction and related industries, the trend is even more pronounced at 30 percentage points. There is evidence of this phenomenon for nonminority female business owners as well in the nation as a whole and to a lesser extent in the ENC.



**Table 6.29. Racial Differences in Failing to Apply for Loans Fearing Denial**

Specification	African American	Asian/Pacific Islander	Hispanic	Native American and Other	Non-minority Female
<b>a) USA</b>					
No Other Control Variables (n=3,704)	0.385 (9.48)	0.059 (1.95)	0.138 (4.01)	0.138 (2.14)	0.072 (4.47)
Full Set of Control Variables (n=3,676)	0.166 (4.73)	0.038 (1.40)	0.050 (1.82)	0.052 (1.01)	0.035 (2.46)
<b>b) ENC division</b>					
No Other Control Variables (n=3,694)	0.392 (9.11)	0.061 (1.94)	0.150 (4.14)	0.128 (1.90)	0.060 (3.50)
Full Set of Control Variables (n=3,666)	0.170 (4.55)	0.037 (1.33)	0.061 (2.09)	0.049 (0.93)	0.026 (1.73)
<b>c) Construction</b>					
No Other Control Variables (n=705)	0.492 (4.34)	-0.022 (0.29)	0.090 (1.22)	0.258 (2.17)	0.026 (0.64)
Full Set of Control Variables (n=695)	0.303 (3.16)	0.002 (0.04)	-0.009 (0.34)	0.137 (1.65)	-0.002 (0.11)

Source: See Table 6.24.

Notes: (1) Reported estimates are Probit derivatives with t-statistics in parentheses. (2) Full set of control variables as in Column 5 of Table 6.27, except for loan amount, year of application, and type of lender. (3) In Panel (b), interaction terms between race, gender, and ENC were all insignificant.

## **J. Further Analysis of Credit Market Discrimination: NERA Surveys 1999-2007**

NERA has conducted local credit market surveys at nine other times and places since 1999. These include the Chicago metropolitan area in 1999, the State of Maryland in 2000, the Jacksonville, Florida metropolitan area in 2002, the Baltimore-Washington, DC metropolitan area in 2003, the St. Louis metropolitan area in 2004, the Denver metropolitan area in 2005, the State of Maryland (again) in 2005, the State of Massachusetts in 2005, and the Memphis, TN-MS-AR metropolitan area in 2007. The Chicago, Jacksonville, Baltimore, St. Louis, and Denver surveys focused on construction and construction-related industries, while the two Maryland surveys, the Massachusetts surveys, and the Memphis surveys, included other goods and services as well.

Our Chicago, Maryland I, and Jacksonville survey questionnaires followed the format of the 1993 NSSBF, while our Baltimore, St. Louis, Denver, Maryland II, Massachusetts, and Memphis surveys followed the format of the 1998 SSBF questionnaire.

As a final check on our findings in this chapter, we combined the results of these nine NERA surveys together in a consistent format and re-estimated the basic loan denial model on this larger file. These results appear below in Table 6.30, and are remarkably similar to results seen in Tables 6.8-6.9, 6.18-6.19, and 6.25-6.26. Denial probabilities for African American-owned firms compared to nonminority male-owned firms are 29 percentage points higher—even when creditworthiness controls, other firm and owner characteristics, and interaction terms are included.

Moreover, the NERA surveys found statistically significant loan denial disparities for Hispanic-owned firms and nonminority female-owned firms as well. Denial rates were 18-24 percentage points higher for Hispanic-owned firms and 5-9 percentage points higher for nonminority female-owned firms than for their nonminority male-owned counterparts. Significant loan denial disparities were also observed for Native American-owned firms in some cases (9-19 percentage points higher).

Finally, as shown in Table 6.31, we modeled the rate of interest charged, conditional upon receiving loan approval, using our nine-jurisdiction dataset. Results are very similar to that observed in Tables 6.13-6.14, 6.21 and 6.27. African Americans pay almost 170 basis points more, on average, for their business credit than do nonminority males, declining to 150 basis points when creditworthiness and other firm and owner controls are accounted for.

On the basis of the foregoing, we conclude that the evidence of credit discrimination from NERA's nine local credit market surveys conducted throughout the nation between 1999-2007 is entirely consistent with the results obtained using data from the 1993 NSSBF, the 1998 SSBF, and the 2003 SSBF.

**Table 6.30. Determinants of Loan Denial Rates—Nine Jurisdictions**

	(1)	(2)
	<i>Most Recent Application</i>	<i>Last Three Years</i>
African American	0.289 (8.2)	0.293 (7.60)
Hispanic	0.178 (3.86)	0.244 (4.59)
Native American	0.087 (1.69)	0.188 (3.29)
Asian/Pacific Islander	0.042 (0.72)	0.003 (0.05)
Other race	0.313 (3.07)	0.364 (3.15)
Nonminority female	0.046 (1.83)	0.086 (2.96)
Judgments	0.051 (1.23)	0.119 (2.24)
Firm delinquent	0.022 (2.7)	0.057 (5.90)
Personally delinquent	0.076 (7.38)	0.077 (6.03)
Bankrupt past 3 years	0.228 (3.99)	0.328 (4.74)
N	1,855	1,855
Pseudo R <sup>2</sup>	.1905	.1721
Chi <sup>2</sup>	336.0	363.3
Log likelihood	-714.1	-873.7

Source: NERA Credit Market Surveys, 1999-2007.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. (2) Indicator variables are also included for the various jurisdictions.

**Table 6.31. Determinants of Interest Rates—Nine Jurisdictions**

	(1)	(2)
African American	1.683 (3.44)	1.491 (2.98)
Asian/Pacific Islander	1.221 (2.16)	0.789 (1.34)
Hispanic	0.820 (1.48)	0.895 (1.56)
Native American	1.241 (1.52)	1.008 (1.24)
Other race	-1.115 (0.63)	-1.072 (0.61)
Nonminority female	0.046 (0.16)	0.018 (0.06)
Judgments		0.537 (0.85)
Firm delinquent		-0.041 (0.36)
Personally delinquent		0.644 (3.65)
Bankrupt past 3 years		1.184 (1.13)
Creditworthiness, Firm, and Owner Characteristics	No	Yes
Loan Characteristics	Yes	Yes
N	1,490	1,463
Adjusted R <sup>2</sup>	.0831	.1046
F	11.4	11.05

Source: See Table 6.30.

Notes: (1) Reported estimates are OLS regression models, t-statistics are in parentheses. (2) Five indicators for primary owner's education level, four indicators for legal form of organization, loan amount applied for, loan amount granted, and month and year of loan application were included. (3) Seven additional indicators for jurisdiction were also included.

## K. Conclusions

The results presented in this chapter indicate that African American-owned firms face serious obstacles in obtaining credit that are unrelated to their creditworthiness, industry, or geographic location. In a number of cases this is true as well for Hispanic-owned firms, Asian/Pacific Islander-owned firms, Native American-owned firms, and nonminority female-owned firms.

As in any regression-based study, our analysis hinges upon the proposition that all of the factors that are related to loan denial rates have been included in our statistical model. If, for example, African American business owners possess some unobservable characteristic that makes them less creditworthy, then our statistical finding would overstate the difference in loan denial rates. To check on this possibility, the models we have estimated include an extensive array of factors that could conceivably affect loan decisions. Additionally, we have also estimated several alternative specifications that could potentially identify the impact of such a bias. Moreover, we have conducted our own surveys on numerous occasions and in numerous places across the U.S. Throughout, we have consistently found that African Americans are disadvantaged in the small business credit market and that our specification tests support the interpretation of discrimination.

Another potential criticism is that this study has examined loan denial rates rather than loan default rates; some have claimed that the latter provides a more appropriate strategy for identifying discrimination. For example, if banks only approve loans for relatively good African American firms then African American firms should exhibit relatively low default rates. Such an approach has several significant shortcomings that are detailed in Browne and Tootell (1995) and Ladd (1998). For instance, one problem is that it relies on the distribution of default probabilities being similar for African American and nonminority applicants meeting the acceptance standard used for nonminority firms. A further problem is that it assumes that the loan originators know with a high degree of precision what determines defaults; however, little hard information exists on what causes default. Additionally, it would be hard to disentangle the factors associated with differences in default rates between nonminority- and African American-owned firms given the fact that the African American-owned firms that obtain credit are typically charged higher interest rates, as we have demonstrated. Finally, such an analysis would require longitudinal data, tracking firms for several years following loan origination. Such data do not exist. While we have highlighted the potential limitations of such an analysis, we believe that it would be fruitful for this sort of longitudinal data collection to take place and for future research to investigate this question more fully.

In addition, many of the criticisms levied against the home mortgage loan discrimination study of Munnell, et al. (1996) could perhaps be used here as well. Yet these criticisms appear to have been effectively countered by, for example, Browne and Tootell (1995) and Tootell (1996). What is important to keep in mind in reference to this work compared with Munnell, et al. (1996), is the magnitude of the estimated racial disparity. The absolute size of the raw racial differences found in the mortgage study are considerably smaller than those observed in this study regarding business credit.<sup>301</sup>

The magnitude of the racial difference in small business loan approval rates is substantial, even after controlling for observed differences in creditworthiness, and considerably larger than that found in the analysis of discrimination in mortgage markets. Why do the results for small

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<sup>301</sup> In the Boston Fed study, 10 percent of White mortgage applications were rejected compared with 28 percent for African Americans. Loan denial rates (weighted) for business credit in this study ranged from 8.3 to 26.2 percent for White males and between 50.0 and 65.9 percent for African American-owned firms (depending on which NSSBF or SSBF survey is used).

business loans differ so markedly from those obtained from mortgage loans? First, many mortgages are sold in the secondary market and a substantial fraction of mortgage lenders have little intention of keeping the loans they make. This added “distance” in the transaction might reduce the likelihood of discrimination. As Day and Liebowitz (1998, p. 6) point out, “economic self-interest, therefore, should reduce racial discrimination in this market more completely than in many others.” A highly sophisticated secondary market for loans to small firms does not exist. Second, the presence of special programs and regulatory incentives to encourage banks and others to increase their mortgage lending to minorities gives these groups some advantages in obtaining a mortgage.

Clearly, a portion of the difference in denial rates between nonminority males and other groups in both types of studies appears to be due to differences in the characteristics of the applicants. Even after controlling for these differences, however, the gap in denial rates in the small business credit market is considerably larger than that found in the mortgage market.<sup>302</sup>

Our analysis finds significant evidence that African American-owned businesses face impediments to obtaining credit that go beyond observable differences in their creditworthiness. These firms are more likely to report that credit availability was a problem in the past and expect it to be a problem in the future. In fact, these concerns prevented more African American-owned firms from applying for loans because they feared being turned down due to prejudice or discrimination. We also found that loan denial rates are significantly higher for African American-owned firms than for nonminority male-owned firms even after taking into account differences in an extensive array of measures of creditworthiness and other characteristics. This result appears to be largely insensitive to geographic location or to changes in econometric specification. Comparable findings are observed for other minority business owners and for nonminority women as well, although not with as much consistency as the findings for African Americans.

Overall, the evidence is consistent that African American-owned firms and other M/WBE firms face large and statistically significant disadvantages in the market for small business credit. The larger size and significance of the effects found in our analyses (compared to mortgage market analyses) significantly reduces the possibility that the observed differences can be explained away by some quirk of the econometric estimation procedure and, instead, strongly suggests that the observed differences are due to discrimination.

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<sup>302</sup> The gap in denial rates between African Americans and nonminorities with similar characteristics is between 34-46 percentage points in the small business credit market compared with 7 percentage points in the mortgage market.

## **VII. M/WBE Utilization and Disparity in City of Cleveland Contracting Activity**

### **A. Introduction**

The *Croson* decision and its progeny have held that statistical evidence of race-based or gender-based disparities in business enterprise activity is a requirement for any state or local entity that desires to establish or maintain race-conscious or gender-conscious requirements for M/WBE participation in contracting and procurement. Chapters V and VI documented the extent of disparity facing minority- and women-owned firms in the private sector of the City of Cleveland's market area, where contracting and procurement activity is typically *not* subject to such requirements. In this Chapter, we combined the evidence from Chapter IV, which estimates M/WBE availability in the City of Cleveland's Market Area, with the Master Contract/Subcontract Database described in Chapter III in order to examine whether there is statistical evidence of disparities in public sector construction and consulting contracting activities supported by the City of Cleveland.

The statistical evidence reported in Chapter III has already established from which specific industries the City of Cleveland procures construction and consulting services as well as from which geographic areas it draws the majority of its prime contractors and subcontractors. In addition, the statistical evidence reported in Chapter IV has established what percentage of all firms in the City's geographic and product markets are M/WBEs.

This Chapter will document:

- To what extent have M/WBEs been utilized in the contracting and subcontracting activities of the City of Cleveland during the study period. Utilization is examined overall and by procurement category, for locally-funded contracts versus federally-funded contracts subject to the USDOT DBE Program, and for large versus small contracts.
- How M/WBE utilization has changed since June 2008 when the revisions to Chapter 187 of the Codified Ordinances of Cleveland, adopting the Cleveland Area Small Business (CSB) program and ceasing to set race-conscious and gender-conscious goals on contracts other than for vertical construction, went into effect.
- Whether M/WBEs have been utilized to the extent that they are available in the relevant market area.

Below, we report the M/WBE utilization results using two measures—dollars awarded and dollars paid. We report this information for Construction, AE-CRS, Services, and Commodities. We also report results separately for federally-assisted contracts and for locally-funded contracts. Further, we report results for major procurements (subject to Board of Control approval) and non-major procurements. All results are reported by race and gender as well as for all M/WBEs combined, and cover the entire 2006 to 2010 study period, as well as examining the periods both before and after the current revisions to Chapter 187 of the Codified Ordinances of Cleveland went into effect in June 2008.

## B. M/WBE Utilization

For this Study, we examined 23,874 prime contracts and 2,635 associated subcontracts awarded during the FY 2006-2010 time period. These contracts have a total award value of \$1.16 billion and a total payment value of \$893.7 million.<sup>303</sup> Of these, 34 prime contracts and 248 associated subcontracts had federal assistance and were subject to USDOT DBE Program. These contracts had a total award value of \$89.7 million and a total paid value of \$76.1 million. The balance of the contracts were locally-funded (See also Tables 3.1A-3.1C).

NAICS codes, M/WBE status, and detailed race and gender status for the prime contractors and subcontractors included in the Master Contract/Subcontract Database were established through extensive computer-assisted cross-referencing of firms in our database with firms in (a) the City of Cleveland's directory of certified MBEs and FBEs, (b) the master directory of M/WBEs assembled for this study, (c) Dun & Bradstreet, (d) company profiles drawn from American Business Information, Hoover's, Standard & Poors, and other sources, and (e) the results of our race/gender misclassification/non-classification surveys.

During the study period, as a group, we found that M/WBEs were awarded 21.57 percent and paid 20.95 percent of all contract and subcontract dollars in construction; awarded 32.21 percent and paid 30.57 percent of all contract and subcontract dollars in AE-CRS; awarded 24.52 percent and paid 25.97 percent of all contract and subcontract dollars in Services; and awarded 7.83 percent and paid 6.71 percent of all contract and subcontract dollars in Commodities. Altogether, M/WBEs were awarded 19.21 percent and paid 18.82 percent of all contract and subcontract dollars during the study period. Among M/WBEs, firms owned by African Americans earned the largest fraction of contracting and subcontracting dollars, followed in descending order by firms owned by nonminority females, Asians/Pacific Islanders, Hispanics, and Native Americans (see Tables 7.1 and 7.2).

Restricting the data to federally-assisted contracts and associated subcontracts, we found that DBEs were awarded 16.78 percent and paid 16.49 percent of contract and subcontract dollars in construction; awarded 25.57 percent and paid 23.88 percent of contract and subcontract dollars in AE-CRS; awarded 25.49 percent and paid 22.25 percent of contract and subcontract dollars in Services; and awarded 21.88 percent and paid 26.36 percent of contract and subcontract dollars in Commodities.<sup>304</sup> Altogether, DBEs were awarded 18.23 percent and paid 17.03 percent of all federally-assisted contract and subcontract dollars during the study period. Among DBEs, firms owned by nonminority females earned the largest fraction of contracting and subcontracting dollars, followed in descending order by firms owned by Asians/Pacific Islanders, African Americans, Hispanics, and Native Americans (see Tables 7.3 and 7.4).

Restricting the data to locally-funded contracts and associated subcontracts, we found that M/WBEs were awarded 22.29 percent and paid 21.77 percent of contract and subcontract dollars in construction; awarded 33.41 percent and paid 31.06 percent of contract and subcontract

<sup>303</sup> Payments on contracts that were not substantially complete at the time of the Study data collection were excluded from the paid dollar totals.

<sup>304</sup> Only one contract in the Commodities category had federal-assistance.



dollars in AE-CRS; awarded 24.50 percent and paid 26.01 percent of contract and subcontract dollars in Services; and awarded 7.77 percent and paid 6.63 percent of contract and subcontract dollars in Commodities. Altogether, M/WBEs were awarded 19.29 percent and paid 18.99 percent of all locally-funded contract and subcontract dollars during the study period. Among M/WBEs, firms owned by African Americans earned the largest fraction of contracting and subcontracting dollars, followed in descending order by firms owned by nonminority females, Asians/Pacific Islanders, Hispanics, and Native Americans (see Tables 7.5 and 7.6).

It is evident from Tables 7.1 through 7.6 that M/WBE participation is far lower in the Commodities category, where subcontracting opportunities are practically nonexistent, than in the other three categories, where subcontracting goals can be used to facilitate increased M/WBE participation. When M/WBE participation in prime contracting is examined, therefore, it tends to be far lower than when subcontract opportunities are included. This is true for the other three procurement categories as well as in Commodities. Restricting the data to prime contracts, we found that M/WBEs were awarded 6.63 percent and paid 6.65 percent of prime contract dollars in construction; awarded 19.08 percent and paid 19.78 percent of prime contract dollars in AE-CRS; awarded 13.06 percent and paid 14.28 percent of prime contract dollars in Services; and 7.07 7.77 percent and paid 5.74 percent of prime contract dollars in Commodities. Altogether, M/WBEs were awarded 8.67 percent and paid 8.52 percent of prime contract dollars during the study period. Among M/WBEs, firms owned by African Americans earned the largest fraction of contracting and subcontracting dollars, followed in descending order by firms owned by nonminority females, Asians/Pacific Islanders, and Hispanics. Native American participation was virtually non-existent (see Tables 7.7 and 7.8).

Tables 7.9 through 7.12 examine M/WBE utilization on major procurements and non-major procurements. Prior to 2010 the City's threshold for major procurements (i.e. contracts that must be approved by the Board of Control before award) was \$10,000. In 2010, that threshold was increased to \$50,000. According to the City's Office of Equal Opportunity, CSB/MBE/FBE goals are applied only to major procurements.

For major procurements, we found that M/WBEs were awarded 22.25 percent and paid 21.68 percent of contract and subcontract dollars in construction; awarded 32.19 percent and paid 30.58 percent of contract and subcontract dollars in AE-CRS; awarded 24.43 percent and paid 25.76 percent of contract and subcontract dollars in Services; and awarded 7.85 percent and paid 6.54 percent of contract and subcontract dollars in Commodities. Altogether, M/WBEs were awarded 19.69 percent and paid 19.22 percent of contract and subcontract dollars on major procurements during the study period. Among M/WBEs, firms owned by African Americans earned the largest fraction of contracting and subcontracting dollars, followed in descending order by firms owned by nonminority females, Asians/Pacific Islanders, Hispanics, and Native Americans (see Tables 7.9 and 7.10).

For non-major procurements, we found that M/WBEs were awarded 10.88 percent and paid 10.60 percent of contract and subcontract dollars in construction; awarded 34.15 percent and paid 30.21 percent of contract and subcontract dollars in AE-CRS; awarded 25.61 percent and paid 28.50 percent of contract and subcontract dollars in Services; and awarded 7.65 percent and paid 8.35 percent of contract and subcontract dollars in Commodities. Altogether, M/WBEs were

awarded 13.14 percent and paid 13.77 percent of contract and subcontract dollars on non-major procurements during the study period. Among M/WBEs, firms owned by African Americans earned the largest fraction of contracting and subcontracting dollars, followed in descending order by firms owned by nonminority females, Hispanics, Asians/Pacific Islanders, and Native Americans (see Tables 7.11 and 7.12).

Overall and in Construction, M/WBE utilization is significantly higher in major procurements than in non-major procurements, reflecting in part the positive impact of CBS/MBE/FBE goals. Overall M/WBE utilization on non-major procurements was 13.14 percent of award dollars compared to 19.69 percent for major procurements. In Construction, M/WBE utilization on non-major procurements was 10.88 percent of award dollars compared to 22.25 percent for major procurements.

Tables 7.13 through 7.20 examine M/WBE utilization on major and non-major procurements for the time periods before and after the most recent revisions to the City Chapter 187 that went into effect on June 3, 2008. Those revisions established the CSB Program and eliminated MBE and FBE goals on all but vertical construction projects. Prior to the current revisions to Chapter 187 of the Codified Ordinances of Cleveland, MBE goals ranged from 15 to 30 percent and FBE goals ranged from 5 to 20 percent. Under the current Chapter 187, the goals for horizontal construction are 30 percent CSB. The goals for vertical construction are 15 percent MBE, 7 percent FBE, and 8 percent CSB. The goals for professional services are 10 percent CSB, and the goals for other contracts are 20 percent CSB.<sup>305</sup>

Overall, M/WBE utilization has increased somewhat in the period since June 3, 2008. For major procurements, M/WBE utilization was 18.64 percent of award dollars and 18.97 percent of paid dollars prior to June 3, 2008 and 20.98 percent and 19.66 percent, respectively, subsequent to June 3, 2008 (Comparing Tables 7.13 and 7.14 to Tables 7.15 and 7.16). For non-major procurements, M/WBE utilization was 11.49 percent of award dollars and 11.88 percent of paid dollars prior to June 3, 2008 and 14.39 percent and 15.68 percent, respectively, subsequent to June 3, 2008 (Comparing Tables 7.17 and 7.18 to Tables 7.19 and 7.20).

In conclusion, we find evidence that M/WBE utilization is significantly higher in Construction, AE-CRS, and Services—categories with significant scope for the use of subcontracting goals—than it is in Commodities, where subcontract opportunities are limited or non-existent. Moreover, we find evidence that M/WBE utilization in Construction and Overall is significantly higher on major procurements—where the City’s Ordinance 187 is directed—than on non-major procurements. Finally, we find evidence that, on balance, the revisions to Ordinance 187 that went into effect in June 2008 have had a positive impact on M/WBE utilization.

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<sup>305</sup> It should be noted that most certified CSBs are also certified MBEs or FBEs. According to the City’s registry of certified firms from October 2010, 85.0 percent of certified CSBs were also certified as MBEs or FBEs. This percentage appears to be trending downward, however. According to the City’s current registry of certified firms (accessed 6 August 2012), 80.9 percent of certified CSBs are also certified as MBEs or FBEs.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.1. M/WBE Utilization at the City of Cleveland (All Contracts) (Dollars Awarded)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	9.71	6.14	17.68	1.18	8.94
Hispanic	2.01	0.51	2.33	0.41	1.59
Asian/Pacific Islander	2.55	19.75	1.24	0.06	2.54
Native American	1.12	0.00	0.05	0.01	0.56
Minority Total	15.39	26.41	21.30	1.66	13.64
Nonminority female	6.19	5.81	3.22	6.17	5.57
M/WBE Total	21.57	32.21	24.52	7.83	19.21
Non-M/WBE Total	78.43	67.79	75.48	92.17	80.79
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	573,514,795	59,840,167	231,961,053	295,797,167	1,161,113,182
Number of Prime Contracts	7,546	283	5,251	10,794	23,874
Number of Subcontracts	1,608	394	591	42	2,635

Source: NERA Master Contract/Subcontract Database, FY 2006-2010.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

**Table 7.2. M/WBE Utilization at the City of Cleveland (All Contracts) (Dollars Paid)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	8.57	5.68	18.88	1.41	8.78
Hispanic	1.99	0.80	2.65	0.49	1.70
Asian/Pacific Islander	2.67	19.29	1.38	0.08	2.43
Native American	1.42	0.00	0.02	0.01	0.72
Minority Total	14.64	25.77	22.92	1.99	13.64
Nonminority female	6.30	4.81	3.04	4.72	5.18
M/WBE Total	20.95	30.57	25.97	6.71	18.82
Non-M/WBE Total	79.05	69.43	74.03	93.29	81.18
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	451,620,259	36,048,885	183,409,966	222,573,611	893,652,721
Number of Prime Contracts	7,505	251	5,184	10,754	23,694
Number of Subcontracts	1,292	274	439	42	2,047

Source and Notes: See Table 7.1.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.3. M/WBE Utilization at the City of Cleveland (Federally-Assisted Contracts) (Dollars Awarded)**

DBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	3.45	2.61	15.40	0.86	3.99
Hispanic	1.10	0.00	0.00	11.62	1.07
Asian/Pacific Islander	5.18	13.20	6.92	3.81	6.08
Native American	0.07	0.00	0.00	0.00	0.06
Minority Total	9.80	15.81	22.33	16.30	11.20
Nonminority female	6.98	9.77	3.16	5.58	7.04
DBE Total	16.78	25.57	25.49	21.88	18.23
Non-DBE Total	83.22	74.43	74.51	78.12	81.77
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	74,361,544	9,175,726	4,986,902	1,204,185	89,728,357
Number of Prime Contracts	16	11	6	1	34
Number of Subcontracts	148	60	28	12	248

Source and Notes: See Table 7.1.

**Table 7.4. M/WBE Utilization at the City of Cleveland (Federally-Assisted Contracts) (Dollars Paid)**

DBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	3.65	0.51	13.79	1.04	3.82
Hispanic	1.13	0.00	0.00	14.00	1.23
Asian/Pacific Islander	5.48	14.92	4.63	4.59	5.74
Native American	0.06	0.00	0.00	0.00	0.06
Minority Total	10.32	15.43	18.42	19.64	10.86
Nonminority female	6.16	8.46	3.83	6.72	6.17
DBE Total	16.49	23.88	22.25	26.36	17.03
Non-DBE Total	83.51	76.12	77.75	73.64	82.97
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	70,396,866	2,434,886	2,301,741	999,385	76,132,878
Number of Prime Contracts	15	4	3	1	23
Number of Subcontracts	147	27	13	12	199

Source and Notes: See Table 7.1.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.5. M/WBE Utilization at the City of Cleveland (Locally-Funded Contracts) (Dollars Awarded)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	10.64	6.79	17.73	1.18	9.36
Hispanic	2.14	0.61	2.38	0.36	1.63
Asian/Pacific Islander	2.16	20.94	1.12	0.05	2.25
Native American	1.27	0.00	0.05	0.01	0.61
Minority Total	16.22	28.33	21.28	1.60	13.84
Nonminority female	6.07	5.09	3.22	6.18	5.45
M/WBE Total	22.29	33.41	24.50	7.77	19.29
Non-M/WBE Total	77.71	66.59	75.50	92.23	80.71
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	499,153,251	50,664,441	226,974,151	294,592,982	1,071,384,825
Number of Prime Contracts	7,530	272	5,245	10,793	23,849
Number of Subcontracts	1,460	334	563	30	2,387

Source and Notes: See Table 7.1.

**Table 7.6. M/WBE Utilization at the City of Cleveland (Locally-Funded Contracts) (Dollars Paid)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	9.48	6.05	18.94	1.42	9.25
Hispanic	2.14	0.86	2.68	0.43	1.75
Asian/Pacific Islander	2.15	19.60	1.34	0.06	2.12
Native American	1.67	0.00	0.02	0.01	0.79
Minority Total	15.44	26.52	22.98	1.91	13.90
Nonminority female	6.33	4.54	3.03	4.71	5.09
M/WBE Total	21.77	31.06	26.01	6.63	18.99
Non-M/WBE Total	78.23	68.94	73.99	93.37	81.01
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	381,223,394	33,613,999	181,108,225	221,574,226	817,519,843
Number of Prime Contracts	7,490	247	5,181	10,753	23,671
Number of Subcontracts	1,145	247	426	30	1,848

Source and Notes: See Table 7.1.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.7. M/WBE Utilization at the City of Cleveland (Prime Contracts Only) (Dollars Awarded)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	3.61	2.21	8.93	0.56	3.82
Hispanic	0.32	0.34	0.14	0.35	0.29
Asian/Pacific Islander	0.52	15.38	1.58	0.05	1.37
Native American	0.00	0.00	0.05	0.01	0.01
Minority Total	4.44	17.93	10.69	0.96	5.49
Nonminority female	2.19	1.16	2.37	6.11	3.18
M/WBE Total	6.63	19.08	13.06	7.07	8.67
Non-M/WBE Total	93.37	80.92	86.94	92.93	91.33
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	573,514,795	59,840,167	232,670,760	296,978,956	1,163,004,678
Number of Prime Contracts	7,546	283	5,251	10,794	23,874

Source and Notes: See Table 7.1.

**Table 7.8. M/WBE Utilization at the City of Cleveland (Prime Contracts Only) (Dollars Paid)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	3.60	3.05	9.95	0.59	4.13
Hispanic	0.37	0.54	0.16	0.41	0.34
Asian/Pacific Islander	0.55	15.16	1.99	0.06	1.31
Native American	0.00	0.00	0.02	0.01	0.01
Minority Total	4.52	18.75	12.12	1.07	5.79
Nonminority female	2.14	1.03	2.16	4.67	2.73
M/WBE Total	6.65	19.78	14.28	5.74	8.52
Non-M/WBE Total	93.35	80.22	85.72	94.26	91.48
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	451,620,259	36,048,885	183,409,966	222,573,611	893,652,721
Number of Prime Contracts	7,505	251	5,184	10,754	23,694

Source and Notes: See Table 7.1.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.9. M/WBE Utilization at the City of Cleveland (Major Procurement) (Dollars Awarded)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	9.95	5.78	17.43	1.17	9.05
Hispanic	2.00	0.52	2.49	0.34	1.61
Asian/Pacific Islander	2.71	20.02	1.34	0.03	2.73
Native American	1.19	0.00	0.04	0.00	0.60
Minority Total	15.85	26.32	21.30	1.54	13.99
Nonminority female	6.39	5.87	3.13	6.31	5.70
M/WBE Total	22.25	32.19	24.43	7.85	19.69
Non-M/WBE Total	77.75	67.81	75.57	92.15	80.31
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	539,665,182	59,027,768	213,354,209	264,366,357	1,076,413,516
Number of Prime Contracts	1,929	112	897	1,347	4,285
Number of Subcontracts	1,608	394	590	42	2,634

Source and Notes: See Table 7.1.

**Table 7.10. M/WBE Utilization at the City of Cleveland (Major Procurement) (Dollars Paid)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	8.78	5.30	18.42	1.42	8.82
Hispanic	1.96	0.82	2.84	0.43	1.72
Asian/Pacific Islander	2.86	19.60	1.48	0.04	2.61
Native American	1.52	0.00	0.00	0.00	0.78
Minority Total	15.12	25.72	22.74	1.89	13.92
Nonminority female	6.56	4.86	3.02	4.65	5.30
M/WBE Total	21.68	30.58	25.76	6.54	19.22
Non-M/WBE Total	78.32	69.42	74.24	93.46	80.78
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	421,548,039	35,480,813	169,669,346	201,085,244	827,783,442
Number of Prime Contracts	1,888	80	832	1,307	4,107
Number of Subcontracts	1,292	274	439	42	2,047

Source and Notes: See Table 7.1.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.11. M/WBE Utilization at the City of Cleveland (Non-Major Procurements) (Dollars Awarded)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	5.79	32.92	20.55	1.23	7.60
Hispanic	2.12	0.00	0.48	1.02	1.33
Asian/Pacific Islander	0.02	0.00	0.11	0.32	0.15
Native American	0.00	0.00	0.19	0.07	0.07
Minority Total	7.93	32.92	21.33	2.65	9.15
Nonminority female	2.94	1.23	4.28	5.01	3.99
M/WBE Total	10.88	34.15	25.61	7.65	13.14
Non-M/WBE Total	89.12	65.85	74.39	92.35	86.86
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	33,849,613	812,399	18,606,844	31,430,810	84,699,666
Number of Prime Contracts	5,617	171	4,354	9,447	19,589

Source and Notes: See Table 7.1.

**Table 7.12. M/WBE Utilization at the City of Cleveland (Non-Major Procurements) (Dollars Paid)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	5.55	28.97	24.50	1.33	8.32
Hispanic	2.32	0.00	0.29	1.05	1.46
Asian/Pacific Islander	0.03	0.00	0.14	0.43	0.18
Native American	0.00	0.00	0.25	0.10	0.09
Minority Total	7.90	28.97	25.18	2.91	10.06
Nonminority female	2.70	1.24	3.32	5.44	3.71
M/WBE Total	10.60	30.21	28.50	8.35	13.77
Non-M/WBE Total	89.40	69.79	71.50	91.65	86.23
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	30,072,221	568,073	13,740,620	21,488,367	65,869,280
Number of Prime Contracts	5,617	171	4,352	9,447	19,587

Source and Notes: See Table 7.1.



## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.13. M/WBE Utilization at the City of Cleveland (Major Procurements, Before June 2008) (Dollars Awarded)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	9.06	7.15	17.44	1.75	8.55
Hispanic	0.96	0.32	3.94	0.12	1.28
Asian/Pacific Islander	2.71	19.70	0.81	0.05	2.56
Native American	2.33	0.00	0.00	0.00	1.07
Minority Total	15.05	27.17	22.20	1.92	13.45
Nonminority female	5.77	6.66	2.15	6.11	5.20
M/WBE Total	20.82	33.83	24.35	8.03	18.64
Non-M/WBE Total	79.18	66.17	75.65	91.97	81.36
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	273,242,819	34,578,096	118,938,457	169,484,365	596,243,738
Number of Prime Contracts	1,069	50	459	689	2,267
Number of Subcontracts	689	203	210	28	1,130

Source and Notes: See Table 7.1.

**Table 7.14. M/WBE Utilization at the City of Cleveland (Major Procurements, Before June 2008) (Dollars Paid)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	9.09	6.19	16.94	1.95	8.63
Hispanic	1.04	0.39	4.31	0.14	1.44
Asian/Pacific Islander	2.74	21.69	0.63	0.05	2.54
Native American	2.57	0.00	0.00	0.00	1.21
Minority Total	15.44	28.27	21.88	2.15	13.82
Nonminority female	6.36	4.48	2.58	5.17	5.16
M/WBE Total	21.80	32.76	24.46	7.32	18.97
Non-M/WBE Total	78.20	67.24	75.54	92.68	81.03
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	248,432,932	27,033,989	109,356,922	143,619,781	528,443,624
Number of Prime Contracts	1,052	44	434	665	2,195
Number of Subcontracts	635	175	144	28	982

Source and Notes: See Table 7.1.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.15. M/WBE Utilization at the City of Cleveland (Major Procurements, After June 2008) (Dollars Awarded)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	10.87	3.83	17.41	0.14	9.67
Hispanic	3.07	0.81	0.65	0.72	2.02
Asian/Pacific Islander	2.72	20.48	2.01	0.00	2.95
Native American	0.02	0.00	0.08	0.00	0.03
Minority Total	16.67	25.11	20.16	0.86	14.66
Nonminority female	7.03	4.74	4.36	6.67	6.32
M/WBE Total	23.71	29.86	24.52	7.52	20.98
Non-M/WBE Total	76.29	70.14	75.48	92.48	79.02
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	266,422,363	24,449,672	94,415,752	94,881,992	480,169,779
Number of Prime Contracts	860	62	438	658	2,018
Number of Subcontracts	919	191	380	14	1,504

Source and Notes: See Table 7.1.

**Table 7.16. M/WBE Utilization at the City of Cleveland (Major Procurements, After June 2008) (Dollars Paid)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	8.34	2.45	21.10	0.10	9.16
Hispanic	3.28	2.18	0.17	1.16	2.22
Asian/Pacific Islander	3.02	12.90	3.01	0.00	2.72
Native American	0.03	0.00	0.00	0.00	0.02
Minority Total	14.67	17.53	24.29	1.26	14.11
Nonminority female	6.85	6.08	3.82	3.33	5.55
M/WBE Total	21.53	23.61	28.11	4.59	19.66
Non-M/WBE Total	78.47	76.39	71.89	95.41	80.34
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	173,115,107	8,446,824	60,312,424	57,465,463	299,339,818
Number of Prime Contracts	836	36	398	642	1,912
Number of Subcontracts	657	99	295	14	1,065

Source and Notes: See Table 7.1.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.17. M/WBE Utilization at the City of Cleveland (Non-Major Procurements Before June 2008) (Dollars Awarded)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	6.94	32.24	12.31	0.93	5.68
Hispanic	3.47	0.00	0.26	0.85	1.66
Asian/Pacific Islander	0.06	0.00	0.04	0.47	0.23
Native American	0.00	0.00	0.00	0.11	0.05
Minority Total	10.48	32.24	12.62	2.36	7.62
Nonminority female	2.91	3.27	2.30	5.43	3.87
M/WBE Total	13.39	35.51	14.92	7.79	11.49
Non-M/WBE Total	86.61	64.49	85.08	92.21	88.51
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	13,075,954	305,532	7,536,934	15,665,129	36,583,550
Number of Prime Contracts	2,392	92	2,248	5,442	10,174

Source and Notes: See Table 7.1.

**Table 7.18. M/WBE Utilization at the City of Cleveland (Non-Major Procurements Before June 2008) (Dollars Paid)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	6.98	37.06	13.41	0.94	6.07
Hispanic	3.46	0.00	0.30	0.92	1.77
Asian/Pacific Islander	0.06	0.00	0.04	0.53	0.25
Native American	0.00	0.00	0.00	0.13	0.05
Minority Total	10.51	37.06	13.75	2.52	8.14
Nonminority female	2.71	2.65	2.21	5.51	3.74
M/WBE Total	13.21	39.71	15.96	8.03	11.88
Non-M/WBE Total	86.79	60.29	84.04	91.97	88.12
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	12,745,109	264,968	6,684,413	13,406,409	33,100,898
Number of Prime Contracts	2,392	92	2,248	5,442	10,174

Source and Notes: See Table 7.1.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.19. M/WBE Utilization at the City of Cleveland (Non-Major Procurements After June 2008) (Dollars Awarded)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	5.07	33.33	26.16	1.53	9.06
Hispanic	1.27	0.00	0.63	1.19	1.08
Asian/Pacific Islander	0.00	0.00	0.15	0.18	0.09
Native American	0.00	0.00	0.32	0.04	0.08
Minority Total	6.33	33.33	27.26	2.93	10.32
Nonminority female	2.96	0.00	5.63	4.58	4.08
M/WBE Total	9.29	33.33	32.90	7.51	14.39
Non-M/WBE Total	90.71	66.67	67.10	92.49	85.61
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	20,773,659	506,867	11,069,909	15,765,681	48,116,116
Number of Prime Contracts	3,225	79	2,106	4,005	9,415

Source and Notes: See Table 7.1.

**Table 7.20. M/WBE Utilization at the City of Cleveland (Non-Major Procurements After June 2008) (Dollars Paid)**

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	Commodities (%)	Overall (%)
African American	4.49	21.91	35.00	1.97	10.60
Hispanic	1.49	0.00	0.29	1.26	1.16
Asian/Pacific Islander	0.00	0.00	0.24	0.26	0.11
Native American	0.00	0.00	0.49	0.06	0.12
Minority Total	5.98	21.91	36.02	3.55	12.00
Nonminority female	2.70	0.00	4.37	5.33	3.68
M/WBE Total	8.68	21.91	40.39	8.88	15.68
Non-M/WBE Total	91.32	78.09	59.61	91.12	84.32
Total (%)	100.00	100.00	100.00	100.00	100.00
Total (\$)	17,327,112	303,105	7,056,207	8,081,958	32,768,382
Number of Prime Contracts	3,225	79	2,104	4,005	9,413

Source and Notes: See Table 7.1.

## C. Disparity Analysis

### 1. Results by Major Procurement Category

The City of Cleveland has a longstanding policy encouraging the inclusion of M/WBEs in its contracting and procurement activities. Given this, the City's own data may not show evidence of underutilization, even if such underutilization exists in the private sector of Cleveland's market area. Instead, the City's own data, in our view, is most useful for examining the effectiveness of its M/WBE policies during the study period. On the other hand, if actual M/WBE utilization on City contracts and subcontracts turns out to be significantly less than M/WBE availability in certain contracting categories, then the City's data will provide evidence of adverse disparities as well.

In this section, we compare our estimates of M/WBE utilization in the City of Cleveland's contracting and subcontracting activities to our estimates of M/WBE availability in the City's geographic and product market area. Tables 7.21 and 7.22 present the results of this comparison using dollars awarded and dollars paid, respectively, as the metric of utilization. These two tables include all funding sources, both federal and local. Tables 7.23 and 7.24 are restricted to federally-assisted contracts, and Tables 7.25 and 7.26 are restricted to locally-funded contracts. Tables 7.27 and 7.28 are restricted to major procurements, and Tables 7.29 and 7.30 are restricted to minor procurements.

In each table, the figures in the utilization column include both prime contract and subcontract dollars and were derived as described above in this chapter. The figures in the availability column were derived as described in Chapter IV. The disparity ratio, which appears in the final column of Tables 7.21 through 7.30, is derived by dividing utilization by availability and then multiplying the result by 100. A disparity ratio below 100 indicates that M/WBEs are not participating in Cleveland's contracting and subcontracting activities at a level consistent with their estimated availability in the City's market area. A disparity ratio of 80 or lower is considered to be large, or substantively, significant. A disparity ratio is said to be statistically significant if it is unlikely to be caused by chance alone. In the tables below, statistical significance is indicated by one or more asterisks to the right of the disparity ratio.

In Construction, large and statistically significant disparities were observed in most cases for firms owned by nonminority females and in some cases for firms owned by Asians/Pacific Islanders, Native Americans, and M/WBEs as a group. On federally-assisted contracts subject to the USDOT DBE Program, disparities were also observed for firms owned by African Americans, Native Americans, and DBEs as a group.

In AE-CRS, large and statistically significant disparities were observed in most cases for firms owned by nonminority females and Native Americans. Large disparities were also observed in many cases for firms owned by Hispanics, and in some cases for firms owned by African Americans and Asians/Pacific Islanders.

In Services, large and statistically significant disparities were observed in most cases for firms owned by nonminority females and by Native Americans. Large and statistically significant

disparities were also observed in some cases for firms owned by Hispanics and by Asians/Pacific Islanders.

In Commodities, large and statistically significant disparities were observed in most cases for firms owned by African Americans, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority females, and M/WBEs as a group.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.21. Utilization, Availability, and Disparity Results for City of Cleveland Contracting, Overall and by Contracting Category (All Funds) (Dollars Awarded)**

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	9.71	3.17	
Hispanic	2.01	1.03	
Asian/Pacific Islander	2.55	0.11	
Native American	1.12	0.92	
Minority-owned	15.39	5.22	
Nonminority female	6.19	11.99	51.6 ***
M/WBE total	21.57	17.20	
AE-CRS			
African American	6.14	3.13	
Hispanic	0.51	1.01	50.7
Asian/Pacific Islander	19.75	2.38	
Native American	0.00	0.06	0.0 ***
Minority-owned	26.41	6.58	
Nonminority female	5.81	15.50	37.5 ***
M/WBE total	32.21	22.08	
Services			
African American	17.68	4.13	
Hispanic	2.33	0.65	
Asian/Pacific Islander	1.24	0.55	
Native American	0.05	0.34	14.5 ***
Minority-owned	21.30	5.67	
Nonminority female	3.22	18.75	17.2 ***
M/WBE total	24.52	24.42	
Commodities			
African American	1.18	2.57	45.9 ***
Hispanic	0.41	0.11	
Asian/Pacific Islander	0.06	0.77	7.9 ***
Native American	0.01	0.59	1.3 ***
Minority-owned	1.66	4.03	41.1 ***
Nonminority female	6.17	16.62	37.1 ***
M/WBE total	7.83	20.65	37.9 ***

Source: Calculations from NERA Master Contract/Subcontract Database and NERA Baseline Business Universe.

Notes: (1) “\*” indicates an adverse disparity that is statistically significant at the 10% level or better (90% confidence). “\*\*” indicates the disparity is significant at a 5% level or better (95% confidence). “\*\*\*” indicates significance at a 1% level or better (99% confidence). (2) An empty cell in the Disparity Ratio column indicates that no adverse disparity was observed for that category.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.22. Utilization, Availability, and Disparity Results for City of Cleveland Contracting, Overall and by Contracting Category (All Funds) (Dollars Paid)**

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	8.57	3.16	
Hispanic	1.99	1.07	
Asian/Pacific Islander	2.67	0.10	
Native American	1.42	0.92	
Minority-owned	14.64	5.24	
Nonminority female	6.30	11.77	53.6 ***
M/WBE total	20.95	17.01	
AE-CRS			
African American	5.68	3.12	
Hispanic	0.80	1.01	79.7
Asian/Pacific Islander	19.29	2.38	
Native American	0.00	0.06	0.0 ***
Minority-owned	25.77	6.57	
Nonminority female	4.81	15.51	31.0 ***
M/WBE total	30.57	22.08	
Services			
African American	18.88	4.02	
Hispanic	2.65	0.65	
Asian/Pacific Islander	1.38	0.53	
Native American	0.02	0.36	5.3 ***
Minority-owned	22.92	5.55	
Nonminority female	3.04	18.72	16.3 ***
M/WBE total	25.97	24.27	
Commodities			
African American	1.41	2.64	53.5 **
Hispanic	0.49	0.11	
Asian/Pacific Islander	0.08	0.75	10.2 ***
Native American	0.01	0.57	1.7 ***
Minority-owned	1.99	4.07	48.9 ***
Nonminority female	4.72	16.80	28.1 ***
M/WBE total	6.71	20.87	32.2 ***

Source and Notes: See Table 7.21.



# M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.23. Utilization, Availability, and Disparity Results for City of Cleveland Contracting, Overall and by Contracting Category (Federally-Assisted Contracts) (Dollars Awarded)**

Contracting Category & DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	3.45	4.07	84.6
Hispanic	1.10	0.94	
Asian/Pacific Islander	5.18	0.25	
Native American	0.07	0.95	7.1
Minority-owned	9.80	6.22	
Nonminority female	6.98	14.05	49.7
DBE total	16.78	20.27	82.8
AE-CRS			
African American	2.61	3.13	83.2
Hispanic	0.00	1.03	0.0 ***
Asian/Pacific Islander	13.20	2.46	
Native American	0.00	0.03	0.0
Minority-owned	15.81	6.65	
Nonminority female	9.77	15.53	62.9
DBE total	25.57	22.18	
Services			
African American	15.40	3.56	
Hispanic	0.00	0.89	0.0 ***
Asian/Pacific Islander	6.92	0.97	
Native American	0.00	0.05	0.0
Minority-owned	22.33	5.47	
Nonminority female	3.16	17.52	18.0 ***
DBE total	25.49	22.99	
Commodities			
African American	0.86	3.08	28.0
Hispanic	1.62	0.12	
Asian/Pacific Islander	3.81	0.15	
Native American	0.00	1.13	0.0 ***
Minority-owned	16.30	4.49	
Nonminority female	5.58	15.90	35.1 *
DBE total	21.88	20.39	

Source and Notes: See Table 7.21.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.24. Utilization, Availability, and Disparity Results for City of Cleveland Contracting, Overall and by Contracting Category (Federally-Assisted Contracts) (Dollars Paid)**

Contracting Category & DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Construction			
African American	3.65	4.10	89.0
Hispanic	1.13	0.94	
Asian/Pacific Islander	5.48	0.26	
Native American	0.06	0.95	6.8
Minority-owned	10.32	6.25	
Nonminority female	6.16	14.10	43.7
DBE total	16.49	20.35	81.0
AE-CRS			
African American	0.51	3.12	16.2
Hispanic	0.00	1.04	0.0 ***
Asian/Pacific Islander	14.92	2.49	
Native American	0.00	0.03	0.0
Minority-owned	15.43	6.69	
Nonminority female	8.46	15.48	54.6
DBE total	23.88	22.17	
Services			
African American	13.79	3.58	
Hispanic	0.00	0.88	0.0 ***
Asian/Pacific Islander	4.63	0.89	
Native American	0.00	0.05	0.0
Minority-owned	18.42	5.41	
Nonminority female	3.83	17.74	21.6 ***
DBE total	22.25	23.15	96.1
Commodities			
African American	1.04	3.09	33.6
Hispanic	4.00	0.13	
Asian/Pacific Islander	4.59	0.15	
Native American	0.00	1.17	0.0 ***
Minority-owned	19.64	4.54	
Nonminority female	6.72	15.83	42.5
DBE total	26.36	20.37	

Source and Notes: See Table 7.21.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.25. Utilization, Availability, and Disparity Results for City of Cleveland Contracting, Overall and by Contracting Category (Locally-Funded Contracts) (Dollars Awarded)**

Contracting Category & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Construction			
African American	10.64	3.08	
Hispanic	2.14	1.04	
Asian/Pacific Islander	2.16	0.09	
Native American	1.27	0.91	
Minority-owned	16.22	5.12	
Nonminority female	6.07	11.78	51.5 ***
M/WBE total	22.29	16.90	
AE-CRS			
African American	6.79	3.13	
Hispanic	0.61	1.01	60.1
Asian/Pacific Islander	20.94	2.37	
Native American	0.00	0.06	0.0 ***
Minority-owned	28.33	6.57	
Nonminority female	5.09	15.49	32.9 ***
M/WBE total	33.41	22.05	
Services			
African American	17.73	4.16	
Hispanic	2.38	0.63	
Asian/Pacific Islander	1.12	0.53	
Native American	0.05	0.36	14.2 ***
Minority-owned	21.28	5.68	
Nonminority female	3.22	18.81	17.1 ***
M/WBE total	24.50	24.49	
Commodities			
African American	1.18	2.56	46.1 ***
Hispanic	0.36	0.11	
Asian/Pacific Islander	0.05	0.78	5.9 ***
Native American	0.01	0.59	1.4 ***
Minority-owned	1.60	4.03	39.6 ***
Nonminority female	6.18	16.63	37.1 ***
M/WBE total	7.77	20.66	37.6 ***

Source and Notes: See Table 7.21.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.26. Utilization, Availability, and Disparity Results for City of Cleveland Contracting, Overall and by Contracting Category (Locally-Funded Contracts) (Dollars Paid)**

Contracting Category & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Construction			
African American	9.48	3.05	
Hispanic	2.14	1.08	
Asian/Pacific Islander	2.15	0.09	
Native American	1.67	0.91	
Minority-owned	15.44	5.13	
Nonminority female	6.33	11.51	55.0 ***
M/WBE total	21.77	16.64	
AE-CRS			
African American	6.05	3.12	
Hispanic	0.86	1.01	85.6
Asian/Pacific Islander	19.60	2.37	
Native American	0.00	0.07	0.0 ***
Minority-owned	26.52	6.57	
Nonminority female	4.54	15.51	29.3 ***
M/WBE total	31.06	22.07	
Services			
African American	18.94	4.03	
Hispanic	2.68	0.64	
Asian/Pacific Islander	1.34	0.52	
Native American	0.02	0.37	5.2 ***
Minority-owned	22.98	5.55	
Nonminority female	3.03	18.76	16.2 ***
M/WBE total	26.01	24.31	
Commodities			
African American	1.42	2.64	53.7 **
Hispanic	0.43	0.11	
Asian/Pacific Islander	0.06	0.76	7.4 ***
Native American	0.01	0.57	1.8 ***
Minority-owned	1.91	4.07	47.0 ***
Nonminority female	4.71	16.81	28.0 ***
M/WBE total	6.63	20.88	31.7 ***

Source and Notes: See Table 7.21.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.27. Utilization, Availability, and Disparity Results for City of Cleveland Contracting, Overall and by Contracting Category (Major Procurements) (Dollars Awarded)**

Contracting Category & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Construction			
African American	9.95	3.17	
Hispanic	2.00	1.03	
Asian/Pacific Islander	2.71	0.11	
Native American	1.19	0.92	
Minority-owned	15.85	5.22	
Nonminority female	6.39	11.99	53.3 ***
M/WBE total	22.25	17.20	
AE-CRS			
African American	5.78	3.13	
Hispanic	0.52	1.01	51.4
Asian/Pacific Islander	20.02	2.38	
Native American	0.00	0.06	0.0 ***
Minority-owned	26.32	6.58	
Nonminority female	5.87	15.50	37.9 ***
M/WBE total	32.19	22.08	
Services			
African American	17.43	4.13	
Hispanic	2.49	0.65	
Asian/Pacific Islander	1.34	0.55	
Native American	0.04	0.34	11.0 ***
Minority-owned	21.30	5.67	
Nonminority female	3.13	18.75	16.7 ***
M/WBE total	24.43	24.42	
Commodities			
African American	1.17	2.57	45.7 ***
Hispanic	0.34	0.11	
Asian/Pacific Islander	0.03	0.77	3.8 ***
Native American	0.00	0.59	0.0 ***
Minority-owned	1.54	4.03	38.1 ***
Nonminority female	6.31	16.62	38.0 ***
M/WBE total	7.85	20.65	38.0 ***

Source and Notes: See Table 7.21.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.28. Utilization, Availability, and Disparity Results for City of Cleveland Contracting, Overall and by Contracting Category (Major Procurements) (Dollars Paid)**

Contracting Category & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Construction			
African American	8.78	3.16	
Hispanic	1.96	1.07	
Asian/Pacific Islander	2.86	0.10	
Native American	1.52	0.92	
Minority-owned	15.12	5.24	
Nonminority female	6.56	11.77	55.7 ***
M/WBE total	21.68	17.01	
AE-CRS			
African American	5.30	3.12	
Hispanic	0.82	1.01	81.0
Asian/Pacific Islander	19.60	2.38	
Native American	0.00	0.06	0.0 ***
Minority-owned	25.72	6.57	
Nonminority female	4.86	15.51	31.4 ***
M/WBE total	30.58	22.08	
Services			
African American	18.42	4.02	
Hispanic	2.84	0.65	
Asian/Pacific Islander	1.48	0.53	
Native American	0.00	0.36	0.0 ***
Minority-owned	22.74	5.55	
Nonminority female	3.02	18.72	16.1 ***
M/WBE total	25.76	24.27	
Commodities			
African American	1.42	2.64	53.9 **
Hispanic	0.43	0.11	
Asian/Pacific Islander	0.04	0.75	5.2 ***
Native American	0.00	0.57	0.0 ***
Minority-owned	1.89	4.07	46.5 ***
Nonminority female	4.65	16.80	27.7 ***
M/WBE total	6.54	20.87	31.3 ***

Source and Notes: See Table 7.21.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.29. Utilization, Availability, and Disparity Results for City of Cleveland Contracting, Overall and by Contracting Category (Minor Procurements) (Dollars Awarded)**

Contracting Category & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Construction			
African American	5.79	3.17	
Hispanic	2.12	1.03	
Asian/Pacific Islander	0.02	0.11	21.5 ***
Native American	0.00	0.92	0.0 ***
Minority-owned	7.93	5.22	
Nonminority female	2.94	11.99	24.5 ***
M/WBE total	10.88	17.20	63.2 ***
AE-CRS			
African American	32.92	3.13	
Hispanic	0.00	1.01	0.0 ***
Asian/Pacific Islander	0.00	2.38	0.0 ***
Native American	0.00	0.06	0.0 ***
Minority-owned	32.92	6.58	
Nonminority female	1.23	15.50	7.9 ***
M/WBE total	34.15	22.08	
Services			
African American	20.55	4.13	
Hispanic	0.48	0.65	74.7 ***
Asian/Pacific Islander	0.11	0.55	19.3 ***
Native American	0.19	0.34	55.0 ***
Minority-owned	21.33	5.67	
Nonminority female	4.28	18.75	22.8 ***
M/WBE total	25.61	24.42	
Commodities			
African American	1.23	2.57	47.8 ***
Hispanic	1.02	0.11	
Asian/Pacific Islander	0.32	0.77	42.1 ***
Native American	0.07	0.59	12.6 ***
Minority-owned	2.65	4.03	65.6 ***
Nonminority female	5.01	16.62	30.1 ***
M/WBE total	7.65	20.65	37.0 ***

Source and Notes: See Table 7.21.

## M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.30. Utilization, Availability, and Disparity Results for City of Cleveland Contracting, Overall and by Contracting Category (Minor Procurements) (Dollars Paid)**

Contracting Category & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Construction			
African American	5.55	3.16	
Hispanic	2.32	1.07	
Asian/Pacific Islander	0.03	0.10	25.0 ***
Native American	0.00	0.92	0.0 ***
Minority-owned	7.90	5.24	
Nonminority female	2.70	11.77	23.0 ***
M/WBE total	10.60	17.01	62.3 ***
AE-CRS			
African American	28.97	3.12	
Hispanic	0.00	1.01	0.0 ***
Asian/Pacific Islander	0.00	2.38	0.0 ***
Native American	0.00	0.06	0.0 ***
Minority-owned	28.97	6.57	
Nonminority female	1.24	15.51	8.0 ***
M/WBE total	30.21	22.08	
Services			
African American	24.50	4.02	
Hispanic	0.29	0.65	45.5 ***
Asian/Pacific Islander	0.14	0.53	26.7 ***
Native American	0.25	0.36	70.9 **
Minority-owned	25.18	5.55	
Nonminority female	3.32	18.72	17.7 ***
M/WBE total	28.50	24.27	
Commodities			
African American	1.33	2.64	50.2 ***
Hispanic	1.05	0.11	
Asian/Pacific Islander	0.43	0.75	57.2 ***
Native American	0.10	0.57	17.9 ***
Minority-owned	2.91	4.07	71.4 ***
Nonminority female	5.44	16.80	32.4 ***
M/WBE total	8.35	20.87	40.0 ***

Source and Notes: See Table 7.21.

## 2. Detailed Industry Level Results

Utilization, availability, and disparity results comparable to those presented above in Tables 7.21 through 7.30 have also been produced according to detailed Industry Groups. In the interest of space, these tables are presented below in Appendix C.



#### **D. Current Availability versus Expected Availability**

Finally, Tables 7.31 and 7.32, for all contracting and federally-assisted contracting subject to the USDOT DBE Program, respectively, provide a comparison between current levels of M/W/DBE availability for the City of Cleveland and levels that we would expect to observe in a race- and gender-neutral market area. The latter, referred to as “expected availability,” is derived by dividing the current availability figures, as documented in Tables 4.21 and 4.22, by the disparity ratios documented in column (3) of Table 5.12. If no disparity is present in the relevant market area, the disparity ratio will be equal to 100 and expected availability will be equivalent to current availability. In cases where adverse disparities are present in the relevant market area, the disparity ratio will be less than 100 and, consequently, expected availability will exceed current availability.

With the exception of firms owned by Asians/Pacific Islanders and Native Americans, expected M/W/DBE availability in the City of Cleveland’s market area exceeds current M/W/DBE availability by substantial margins.

# M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.31. Current Availability and Expected Availability for City of Cleveland Contracting (All Funds)**

Contracting Category/ M/WBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability (%)	Expected Availability (%)	Current Availability (%)	Expected Availability (%)
CONSTRUCTION				
African American	3.17	3.17	3.16	3.16
Hispanic	1.03	1.03	1.07	1.03
Asian/Pacific Islander	0.11	0.13	0.10	0.12
Native American	0.92	1.37	0.92	1.37
Minority	5.22	5.22	5.24	5.24
Nonminority female	11.99	27.13	11.77	26.63
M/WBE total	17.20	25.49	17.01	25.20
AE-CRS				
African American	3.13	3.13	3.12	3.12
Hispanic	1.01	1.01	1.01	1.01
Asian/Pacific Islander	2.38	2.85	2.38	2.85
Native American	0.06	0.09	0.06	0.09
Minority	6.58	6.58	6.57	6.58
Nonminority female	15.50	35.08	15.51	35.10
M/WBE total	22.08	32.72	22.08	32.72
SERVICES				
African American	4.13	8.16	4.02	7.94
Hispanic	0.65	1.08	0.65	1.08
Asian/Pacific Islander	0.55	0.55	0.53	0.53
Native American	0.34	0.34	0.36	0.36
Minority	5.67	8.26	5.55	8.08
Nonminority female	18.75	27.83	18.72	27.79
M/WBE total	24.42	37.70	24.27	37.47
COMMODITIES				
African American	2.57	5.08	2.64	5.22
Hispanic	0.11	0.18	0.11	0.18
Asian/Pacific Islander	0.77	0.77	0.75	0.75
Native American	0.59	0.59	0.57	0.57
Minority	4.03	5.87	4.07	5.93
Nonminority female	16.62	24.67	16.80	24.94
M/WBE total	20.65	31.88	20.87	32.22

Source: See Tables 4.21 and 5.12.

# M/WBE Utilization and Disparity in City of Cleveland Contracting Activity

**Table 7.32. Current Availability and Expected Availability for City of Cleveland Contracting (Federally-Assisted Contracts)**

Contracting Category/ DBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability (%)	Expected Availability (%)	Current Availability (%)	Expected Availability (%)
CONSTRUCTION				
African American	4.07	4.07	4.10	4.10
Hispanic	0.94	0.94	0.94	0.94
Asian/Pacific Islander	0.25	0.30	0.26	0.31
Native American	0.95	1.42	0.95	1.42
Minority	6.22	6.22	6.25	6.25
Nonminority female	14.05	31.79	14.10	31.91
DBE total	20.27	30.03	20.35	30.10
AE-CRS				
African American	3.13	3.13	3.12	3.12
Hispanic	1.03	1.03	1.04	1.04
Asian/Pacific Islander	2.46	2.95	2.49	2.98
Native American	0.03	0.05	0.03	0.05
Minority	6.65	6.65	6.69	6.69
Nonminority female	15.53	35.14	15.48	35.03
DBE total	22.18	32.86	22.17	32.89
SERVICES				
African American	3.56	7.03	3.58	7.07
Hispanic	0.89	1.48	0.88	1.47
Asian/Pacific Islander	0.97	0.97	0.89	0.89
Native American	0.05	0.05	0.05	0.05
Minority	5.47	7.97	5.41	7.88
Nonminority female	17.52	26.01	17.74	26.33
DBE total	22.99	35.49	23.15	35.74
COMMODITIES				
African American	3.08	6.08	3.09	6.10
Hispanic	0.12	0.20	0.13	0.22
Asian/Pacific Islander	0.15	0.15	0.15	0.15
Native American	1.13	1.13	1.17	1.17
Minority	4.49	6.54	4.54	6.61
Nonminority female	15.90	23.60	15.83	23.50
DBE total	20.39	31.48	20.37	31.45

Source: See Tables 4.22 and 5.12.

## **VIII. Anecdotal Evidence of Disparities in the City of Cleveland's Market Area**

### **A. Introduction**

We have presented a variety of economic and statistical findings above that are consistent with and indicative of the presence of business discrimination against minorities and women in the geographic and product markets that are relevant to the City's contracting and procurement activities. Chapters V and VI in particular have documented large and statistically significant adverse disparities in the City's relevant markets impacting minority and female entrepreneurs. Commercial loan denial rates are higher, the cost of credit is higher, business formation rates are lower, and business owner earnings are lower—even when comparisons are restricted to similarly situated businesses and business owners.

As a further check on these findings, we investigated anecdotal evidence of disparities in the City's market area. First, we conducted a large scale survey of business establishments in these markets—both M/WBE and non-M/WBE—and asked owners directly about their experiences, if any, with contemporary business-related acts of discrimination. We find that M/WBEs in the City's markets report suffering business-related discrimination in large numbers and with statistically significantly greater frequency than non-M/WBEs. These differences remain statistically significant even when firm size and owner characteristics are held constant. We also find that M/WBEs in these markets are more likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it harder for them to conduct their businesses, less likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it easier for them to conduct their businesses, and that these differences are statistically significant in many cases. Additionally, we find that M/WBE firms that have been hired in the past by non-M/WBE prime contractors to work on public sector contracts with M/WBE goals are rarely hired—or even solicited—by these prime contractors to work on projects without M/WBE goals. The relative lack of M/WBE hiring and, even more tellingly, the relative lack of solicitation of M/WBEs in the absence of affirmative efforts by the City and other public entities in the City's market area shows that business discrimination continues to fetter M/WBE business opportunities in the City's relevant markets. We conclude that the statistical evidence presented in this report is consistent with these anecdotal accounts of contemporary business discrimination.

Next, we conducted in-depth personal interviews with minority, women and majority business owners about their experiences in seeking and performing contracts in the City's marketplace. These focus groups confirmed the results of the statistical evidence and the mail surveys: minorities and women encounter significant barriers to the success of their firms in seeking public and private sector work, and these barriers are often the result of discrimination.

The remainder of this Chapter is organized as follows. We first discuss the mail survey results in Section A. In Section A.1, we discuss the survey questionnaire, sample frame, and response rate. Section A.2 presents evidence on willingness of firms to do business with the public sector. Section A.3 presents the key findings from the M/WBE and non-M/WBE respondents concerning disparate treatment. Section A.4 documents disparities in firm experience and size

among M/WBE and non-M/WBE respondents. Section A.5 presents the key findings concerning the impact of the regular business environment on M/WBEs' ability to conduct their businesses. Section A.6 presents key findings to our questions concerning whether prime contractors solicit or hire M/WBEs for work on public or private contracts without M/WBE goals. Section A.7 then examines whether M/WBEs and non-M/WBEs that responded to the mail surveys are representative of all M/WBEs and non-M/WBEs in the relevant markets. To do so, we surveyed a random sample of M/WBEs and non-M/WBEs that did not respond to our mail survey, and then compared their responses to key questions with those of our survey respondents.

Finally, Section B describes the results of the business experience group interviews. Responses are grouped under the headings of the most common cited barriers and issues facing M/WBEs and non-M/WBEs.

### **B. Business Experience Surveys**

#### **1. Survey Questionnaire, Sample, and Responses**

The survey questionnaires asked whether and with what frequency firms had experienced discrimination in a wide variety of likely business dealings in the previous five years. The survey also inquired about the influence of specific aspects of the everyday business environment, such as bonding and insurance requirements, on each firm's ability to do business in the City's relevant markets. We also asked about the relative frequency with which firms that have been used as subcontractors, subconsultants, or suppliers by prime contractors on contracts *with* M/WBE goals have been hired to work, or even solicited to bid, on similar contracts *without* M/WBE goals. Finally, we posed questions about the characteristics of the firm, including firm age, owner's education, employment size, and revenue size to facilitate comparisons of similarly situated firms.

The mail survey sample was stratified by industry and drawn directly from the Master M/WBE Directory and the Baseline Business Universe compiled for this study. Firms were sampled randomly within strata. M/WBE firms were oversampled to facilitate statistical comparisons with non-M/WBEs.<sup>306</sup> Of 9,094 businesses that received the questionnaire,<sup>307</sup> 685 (7.5 percent) provided usable responses.<sup>308</sup> The distribution of total responses according to the race and sex of the business owner, by major procurement category, appears in Table 8.1.

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<sup>306</sup> See Chapter III for a discussion of how the product and geographic markets were defined. See Chapter IV for discussion of how the Master M/WBE Directory and the Baseline Business Universe were assembled.

<sup>307</sup> These figures exclude surveys that were returned undelivered or were otherwise undeliverable.

<sup>308</sup> The total number of valid responses to any particular survey question, however, was sometimes lower than this due to item non-response.

**Table 8.1. Race, Sex and Procurement Category of Mail Survey Respondents**

<b>Group</b>	<b>Construction</b>	<b>CRS</b>	<b>Services</b>	<b>Commodities</b>	<b>Total</b>
African American	16	10	40	5	71
Hispanic	6	3	6	1	16
Asian	4	4	7	2	17
Native American	1	0	5	1	7
Minorities with Unknown Race/Ethnicity	1	0	0	1	2
Non-minority Women	61	21	148	68	298
Total M/WBE	89	38	206	78	411
Non-minority Men	64	20	83	107	274
Total	153	58	289	185	685

Source: NERA mail surveys.

## **2. Willingness of Firms to Contract with the Public Sector**

The probative value of anecdotal evidence of discrimination increases when it comes from active businesses in the relevant geographic and procurement markets. The value of such evidence increases further when it comes from firms that have actually worked or attempted to work for the public sector within those markets. Such is the present case.

As shown below in Table 8.2, there is a strong linkage between the firms responding to our mail survey and the public sector of the Northeast Ohio economy. All respondents operate establishments in the relevant geographic and product markets. Moreover, significant numbers of survey respondents have worked or attempted to do work for the City or other public entities in the market area in the last five years. This is observed for virtually all types of M/WBEs and non-M/WBEs in all procurement categories. Overall, more than half of M/WBEs and non-M/WBEs have worked or attempted to work for the City or some other public entity in the market area in the previous five years. This phenomenon is especially apparent for M/WBEs and non-M/WBEs in Construction and CRS.

## Anecdotal Evidence of Disparities in the City of Cleveland's Market Area

**Table 8.2. Survey Respondents Indicating They Had Worked or Attempted to Work for Public Sector Agencies in the Last Five Years**

<b>Worked or Attempted to Work, Last Five Years</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>Total Minority</b>	<b>Non-minority Female</b>	<b>Total M/WBEs</b>	<b>Non-minority Male</b>
ALL INDUSTRIES								
With any Public Entity in Market Area	83.1%	68.8%	58.8%	85.7%	77.5%	42.2%	51.8%	54.0%
	(71)	(16)	(17)	(7)	(111)	(296)	(407)	(274)
CONSTRUCTION								
With any Public Entity in Market Area	81.3%	100.0%	75.0%	100.0%	85.2%	57.4%	65.9%	56.3%
	(16)	(6)	(4)	(1)	(27)	(61)	(88)	(64)
CRS								
With any Public Entity in Market Area	90.0%	66.7%	100.0%	-	88.2%	71.4%	78.9%	65.0%
	(10)	(3)	(4)	(0)	(17)	(21)	(38)	(20)
OTHER SERVICES								
With any Public Entity in Market Area	80.0%	33.3%	42.9%	80.0%	70.7%	29.9%	41.5%	44.6%
	(40)	(6)	(7)	(5)	(58)	(147)	(205)	(83)
COMMODITIES								
With any Public Entity in Market Area	100.0%	100.0%	0.0%	100.0%	77.8%	46.3%	50.0%	57.9%
	(5)	(1)	(2)	(1)	(9)	(67)	(76)	(107)

Source: NERA calculations from mail surveys.

Note: Total number of valid responses in parentheses.

### 3. Experiences of Disparate Treatment in Business Dealings

The survey included questions about instances of disparate treatment based on race and/or sex experienced in various business dealings during the past five years. As shown in the last row of Table 8.3, 39 percent of M/WBE firms said they had experienced at least one instance of disparate treatment in one or more areas of business dealings identified on the survey. Reports of disparate treatment were substantially and statistically significantly higher for minorities and nonminority women than for nonminority males, casting doubt on claims of widespread “reverse discrimination.” Reports were highest among African Americans, with an overall rate over 67 percent, and Hispanics, with an overall rate of almost 44 percent. Similar patterns were observed when the results were disaggregated by procurement category.

The balance of Table 8.3 shows results for each of 14 distinct types of disparate treatment inquired about in the survey. In all categories, the difference in reported amounts of disparate treatment between M/WBEs and non-M/WBEs is substantial. In having to perform inappropriate or extra work not required of non-M/WBEs, M/WBE firms reported disparate treatment more than seven times as frequently as non-M/WBEs. In hiring workers from union hiring halls, the ratio was almost five times higher. In applying for commercial loans,<sup>309</sup> applying for surety bonds, applying for commercial or professional insurance, obtaining price quotes from suppliers, and having to meet quality, inspection, or performance standards not required of comparable non-M/WBEs, the ratio was more than three times higher. Even where differences are smallest, M/WBEs report being discriminated against roughly 1.2 to 2.4 times more frequently as non-M/WBEs.

Evidence of the impact of public sector M/WBE programs is seen in that the smallest differences between M/WBEs and non-M/WBEs appear in the categories of working or attempting to work on public sector prime contracts (1.25 times higher) and subcontracts (1.2 times higher). Comparable ratios on private sector prime contracts and private sector subcontracts were 2.2 times and 1.9 times higher, respectively.

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<sup>309</sup> Discrimination in access to commercial credit and capital is the most widely and commonly cited problem facing minority-owned firms. See Chapter VI for an extensive discussion of the theory and analysis of the evidence behind this phenomenon.



## Anecdotal Evidence of Disparities in the City of Cleveland's Market Area

**Table 8.3. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Sex While Participating in Business Dealings**

Business Dealings	African American	Hispanic	Asian	Native American	Total Minority	Non-minority Female	Total M/WBEs	Non-minority male
Applying for commercial loans	<b>45.0%</b>	11.1%	0.0%	20.0%	<b>32.8%</b>	<b>13.5%</b>	<b>19.0%</b>	5.8%
	<b>(40)</b>	(9)	(7)	(5)	<b>(61)</b>	<b>(155)</b>	<b>(216)</b>	(138)
Applying for surety bonds	<b>42.3%</b>	11.1%	0.0%	20.0%	<b>28.3%</b>	7.8%	<b>13.7%</b>	4.3%
	<b>(26)</b>	(9)	(6)	(5)	<b>(46)</b>	(115)	<b>(161)</b>	(117)
Applying for commercial or professional insurance	<b>13.6%</b>	7.7%	9.1%	0.0%	<b>10.8%</b>	3.2%	<b>5.3%</b>	1.7%
	<b>(44)</b>	(13)	(11)	(6)	<b>(74)</b>	(189)	<b>(263)</b>	(173)
Hiring workers from union hiring halls	<b>19.0%</b>	10.0%	0.0%	0.0%	<b>12.5%</b>	2.6%	6.0%	1.2%
	<b>(21)</b>	(10)	(4)	(5)	<b>(40)</b>	(76)	(116)	(82)
Obtaining price quotes from suppliers	<b>50.0%</b>	14.3%	18.2%	0.0%	<b>33.3%</b>	7.8%	<b>14.7%</b>	4.9%
	<b>(36)</b>	(14)	(11)	(5)	<b>(66)</b>	(179)	<b>(245)</b>	(164)
Working or attempting to obtain work on public-sector prime contracts	<b>49.0%</b>	27.3%	18.2%	20.0%	<b>39.5%</b>	12.0%	21.6%	17.3%
	<b>(49)</b>	<i>(11)</i>	(11)	(5)	<b>(76)</b>	(142)	(218)	(139)
Working or attempting to obtain work on public-sector subcontracts	<b>50.0%</b>	30.8%	18.2%	20.0%	<b>40.3%</b>	16.3%	24.8%	20.6%
	<b>(48)</b>	(13)	(11)	(5)	<b>(77)</b>	(141)	(218)	(141)
Working or attempting to obtain work on private-sector prime contracts	<b>52.2%</b>	21.4%	16.7%	20.0%	<b>39.0%</b>	15.0%	<b>22.8%</b>	10.3%
	<b>(46)</b>	(14)	(12)	(5)	<b>(77)</b>	(160)	<b>(237)</b>	(155)
Working or attempting to obtain work on private-sector subcontracts	<b>42.2%</b>	21.4%	18.2%	20.0%	<b>33.3%</b>	15.0%	<b>21.1%</b>	10.8%
	<b>(45)</b>	(14)	(11)	(5)	<b>(75)</b>	(153)	<b>(228)</b>	(157)
Receiving timely payment for work performed	<b>52.1%</b>	21.4%	23.1%	40.0%	<b>41.3%</b>	17.5%	24.5%	17.5%
	<b>(48)</b>	(14)	(13)	(5)	<b>(80)</b>	(189)	(269)	(177)
Functioning without hindrance or harassment on the work site	<b>27.3%</b>	22.2%	9.1%	0.0%	<b>21.7%</b>	<b>13.6%</b>	<b>16.0%</b>	6.7%
	<b>(44)</b>	(9)	(11)	(5)	<b>(69)</b>	<b>(169)</b>	<b>(238)</b>	(149)
Joining or dealing with construction trade associations	<b>20.8%</b>	14.3%	0.0%	0.0%	<b>14.3%</b>	5.9%	8.1%	3.5%
	<b>(24)</b>	(7)	(7)	(4)	<b>(42)</b>	(119)	(161)	(113)
Having to do inappropriate or extra work not required of comparable non-M/WBEs	<b>42.9%</b>	7.7%	8.3%	20.0%	<b>29.2%</b>	<b>9.1%</b>	<b>15.5%</b>	2.1%
	<b>(42)</b>	(13)	(12)	(5)	<b>(72)</b>	<b>(154)</b>	<b>(226)</b>	(144)
Double standards not required of comparable non-M/WBEs	<b>30.8%</b>	<b>23.1%</b>	8.3%	0.0%	<b>23.2%</b>	9.3%	<b>13.4%</b>	4.5%
	<b>(39)</b>	<b>(13)</b>	(12)	(5)	<b>(69)</b>	(162)	<b>(231)</b>	(157)
In any one of the business dealings listed above	<b>67.2%</b>	43.8%	21.4%	28.6%	<b>53.7%</b>	32.1%	<b>38.6%</b>	26.6%
	<b>(58)</b>	(16)	(14)	(7)	<b>(95)</b>	(224)	<b>(319)</b>	(207)

Source: See Table 8.2 Note: Total number of valid responses in parentheses. Figures in **boldface** type are statistically significantly different from non-M/WBEs using a conventional two-tailed Fisher's Exact Test and within a 95% or better confidence interval. Figures in **boldface italicized** type are significant within a 90% confidence interval.

## Anecdotal Evidence of Disparities in the City of Cleveland's Market Area

**Table 8.4. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Sex While Participating in Business Dealings (Rankings)**

<b>Business Dealings</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>Total Minority</b>	<b>Non-minority Female</b>	<b>Total M/WBEs</b>
<b>Applying for commercial loans</b>	6	5	6	7	6	8	6
<b>Applying for surety bonds</b>	12	9	8	–	10	11	11
<b>Applying for commercial or professional insurance</b>	14	12	12	10	13	13	13
<b>Hiring workers from union hiring halls</b>	11	13	14	–	14	14	14
<b>Obtaining price quotes from suppliers or subs</b>	8	11	10	9	11	10	10
<b>Working or attempting to obtain work on public sector prime contracts</b>	4	2	2	4	1	2	2
<b>Working or attempting to obtain work on private sector prime contracts</b>	2	1	4	5	2	3	3
<b>Working or attempting to obtain work on public sector subcontracts</b>	1	7	3	2	3	4	4
<b>Working or attempting to obtain work on private sector subcontracts</b>	3	3	5	3	5	5	5
<b>Receiving timely payment for work performed</b>	5	4	1	6	4	1	1
<b>Functioning without hindrance or harassment on the work site</b>	9	10	9	8	9	7	8
<b>Joining or dealing with trade associations</b>	10	14	13	–	12	12	12
<b>Having to do extra work not required of others</b>	13	6	7	1	7	6	7
<b>Having to meet quality or performance standards not required of others</b>	7	8	11	–	8	9	9

Source: See Table 8.2.

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Table 8.4 represents the same disparate treatment information as in Table 8.3, but with the frequency percentages replaced by relative rankings. That is, the 14 kinds of disparate treatment are ranked by each group according to the frequency with which disparate treatment was reported, with “1” representing the most frequent and “14” representing the least frequent.

The most frequently reported issue overall for M/WBEs was receiving timely payment for work performed. This was followed closely by working or attempting to work on public sector prime contracts, working or attempting to work on private sector prime contracts, and working or attempting to work on public sector subcontracts.

**Table 8.5. Prevalence of Disparate Treatment Facing M/WBEs**

	(1)	(2)	(3)	(4)	(5)	(6)
M/WBE	0.115 (2.66)	0.090 (1.91)				
Minority			0.263 (4.21)	0.220 (3.31)		
Non-minority Female			0.060 (1.26)	0.037 (0.72)	0.061 (1.28)	0.041 (0.79)
African American					0.403 (5.27)	0.365 (4.39)
Hispanic					0.154 (1.21)	0.091 (0.68)
Asian/Pacific Islanders					(0.071) (-0.52)	(0.046) (-0.32)
Native American					0.031 (0.16)	0.002 (0.01)
Owner's Education (3 indicator variables)	No	Yes	No	Yes	No	Yes
Firm Age (4 indicators)	No	Yes	No	Yes	No	Yes
Employment size bracket (6 indicators)	No	Yes	No	Yes	No	Yes
Sales/revenue size bracket (4 indicators)	No	Yes	No	Yes	No	Yes
Industry category (3 indicators)	Yes	Yes	Yes	Yes	Yes	Yes
N	528.00	501.00	528.00	501.00	528.00	501.00
Pseudo R <sup>2</sup>	0.03	0.06	0.05	0.07	0.06	0.09
Chi <sup>2</sup>	19.49	39.30	30.72	47.51	43.89	57.31
Log likelihood	(328.38)	(301.28)	(322.76)	(297.18)	(316.18)	(292.28)

Source: See Table 8.2.

Note: Reported estimates are derivatives from Probit models, t-statistics are in parentheses. T-statistics of 2.58 (1.96) (1.64) or larger indicate that the result is significant within a 99 (95) (90) percent confidence interval.

Some courts and other observers have asserted that findings such as those in Tables 8.3 and 8.4 tell us nothing about discrimination against M/WBEs since, even though they are current, even though they come directly from the businesses alleging disparate treatment, even though they are restricted to the relevant geographic and product markets, even though they are disaggregated by procurement category, and even though they are disaggregated by race and sex, they still do not compare firms of similar size, qualifications, or experience. We have argued elsewhere against such flawed logic (and economics) since size, qualifications, and experience are *precisely* the factors that are adversely impacted by discrimination.<sup>310</sup> Nevertheless, if disparities are still observed even when such “capacity” factors are held constant, the case becomes even more compelling. The results reported below in Table 8.5 show that even when levels of size, qualifications, and experience are held constant across firms, measures of disparate treatment of minority-owned businesses are still large, adverse, and statistically significant.

In Table 8.5, we report the results from a series of Probit regressions using the mail survey data on disparate treatment.<sup>311</sup> As indicated earlier, the survey questionnaire collected data related to each firm's size, qualifications, and experience. The reported estimates from these models can be interpreted as changes or differences in the probability of disparate treatment conditional on the control variables. The estimates in the table show large differences in disparate treatment probabilities between M/WBEs and non-M/WBEs. In column (1) of Table 8.5 (in which the regression model contains only M/WBE status and procurement category indicators), the estimated coefficient of 0.115 on the M/WBE indicator indicates that the likelihood of experiencing disparate treatment for M/WBE firms is 11.5 percentage points higher than that for non-M/WBE firms.<sup>312</sup> This difference is statistically significant within a 99 percent confidence interval or better. Column (2) of Table 8.5 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race or sex, including the owner's education, the age of the firm, and the size of the firm measured by employment and by sales. Even after controlling for these differences, however, M/WBE firms remain 9.0 percentage points more likely than non-M/WBE firms to experience disparate treatment. This difference is also statistically significant within a 99 percent confidence interval. Firm size and other characteristics account for little of the disparate treatment reported by M/WBEs in the Cleveland market area.

The exercise is repeated in columns (3) and (4). The only difference is that the M/WBE indicator is separated into two components—one for minority-owned firms and one for nonminority-female owned firms. The results in column (3) indicate that minority-owned firms in the City's market area are 26.3 percentage points more likely to experience disparate treatment than nonminority firms. When controls are added in column (4), this difference falls to 22.0 percentage points. Non-minority female-owned firms are 6.0 percentage points and 3.7

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<sup>310</sup> Wainwright and Holt (2010, 65-67) and Wainwright (2000, 86-87).

<sup>311</sup> See Chapter V for a description of Probit regression.

<sup>312</sup> This estimate largely replicates the raw difference in disparate treatment rates between M/WBE and non-M/WBE firms reported in the last row of Table 8.3. The raw differential observed there ( $44.4\% - 23.3\% = 21.2\%$ ) differs slightly from the 22.1% differential reported here since the regression specification also controls for industry category.

percentage points higher than for nonminority males, respectively; however these differences are not statistically significant.

The exercise is repeated again in columns (5) and (6) with separate indicators for each type of M/WBE. The results for nonminority females are nearly identical to those in columns (3) and (4). For African American-owned firms, the differential is 40.3 percentage points in column (5), falling to 36.5 percentage points once controls are added. Both results are highly statistically significant. The results for other minority groups, though suggesting a greater prevalence of disparate treatment for Hispanics, Asians, and Native Americans, are not statistically significant due most likely to the relatively small sample sizes involved. For Hispanic-owned firms, the differentials are 15.4 and 9.1 percentage points, respectively. For Asian-owned firms, the differentials are 7.1 and 4.6 percentage points, respectively. For Native American-owned firms, the differentials are 3.1 and 0.2 percentage points, respectively.

The regression models reported in Table 8.5 used as their dependent variable an indicator of whether or not a survey respondent reported having been treated less favorably in any of the 14 different types of business dealings described in the first column of Table 8.3.<sup>313</sup> We re-estimated the regression model reported in Column (2) of Table 8.5 separately using as the dependent variable, in turn, each of the 14 types of business dealings and report those results in Table 8.6. As Table 8.6 shows, African American-owned firms in particular experience a wide variety of disparate treatment compared to non-M/WBEs. In 12 of the 14 categories the differences for African American-owned firms are both large and statistically significant. For nonminority female-owned firms, it is true in 3 of 14 cases. For M/WBEs as a group it is true in 10 of the 14 cases.

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<sup>313</sup> Our disparate treatment question also allowed respondents to indicate the quantity of disparate treatment experienced (never, 1-5 times, 6-20 times, more than 20-times). Although not reported here, we also ran regressions using a dependent variable measuring high frequency of disparate treatment (6 or more times) during the prior five years. Results were more limited due to smaller sample sizes but were qualitatively similar to those obtained in Tables 8.5 and 8.6.

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**Table 8.6. Prevalence of Disparate Treatment Facing M/WBEs, by Type of Business Dealing**

Business Dealings	African American	Hispanic	Asian	Native American	Total Minority	Non-minority Female	Total M/WBEs
Applying for commercial loans	<b>44.6%</b> <b>(4.71)</b>	4.6% (0.37)	0.0% (0.00)	22.5% (1.15)	<b>29.7%</b> <b>(4.08)</b>	<b>9.0%</b> <b>(1.93)</b>	<b>11.9%</b> <b>(2.99)</b>
Applying for surety bonds	<b>43.5%</b> <b>(4.36)</b>	15.8% (1.11)	0.0% (0.00)	21.3% (1.30)	<b>28.6%</b> <b>(3.92)</b>	2.7% (0.74)	<b>7.9%</b> <b>(2.23)</b>
Applying for commercial or professional insurance	<b>11.5%</b> <b>(2.44)</b>	19.6% (1.61)	<b>26.8%</b> <b>(1.79)</b>	0.0% (0.00)	<b>13.6%</b> <b>(2.98)</b>	1.0% (0.43)	<b>4.0%</b> <b>(1.75)</b>
Hiring workers from union hiring halls	0.0% (0.00)	100.0% (0.00)	0.0% (0.00)	0.0% (0.00)	<b>0.1%</b> <b>(1.88)</b>	0.0% (1.24)	<b>0.1%</b> <b>(1.85)</b>
Obtaining price quotes from suppliers or subcontracts	<b>34.1%</b> <b>(5.59)</b>	4.9% (1.05)	10.4% (1.58)	0.0% (0.00)	<b>14.3%</b> <b>(4.59)</b>	1.6% (1.18)	<b>4.1%</b> <b>(2.82)</b>
Working or attempting to obtain work on public sector prime contracts	<b>23.7%</b> <b>(2.94)</b>	-3.0% (-0.26)	-4.7% (-0.44)	0.4% (0.02)	<b>13.5%</b> <b>(2.16)</b>	-10.4% (-2.02)	-0.9% (-0.19)
Working or attempting to obtain work on public sector subcontracts	<b>22.3%</b> <b>(2.58)</b>	1.1% (0.09)	-8.1% (-0.66)	-4.7% (-0.25)	<b>11.9%</b> <b>(1.76)</b>	-10.0% (-1.78)	-1.9% (-0.36)
Working or attempting to obtain work on private sector prime contract	<b>42.2%</b> <b>(4.79)</b>	8.4% (0.73)	17.3% (1.26)	12.3% (0.67)	<b>29.6%</b> <b>(4.31)</b>	4.7% (0.97)	<b>11.1%</b> <b>(2.61)</b>
Working or attempting to obtain work on private sector subcontracts	<b>23.8%</b> <b>(3.07)</b>	7.9% (0.70)	15.0% (1.12)	10.1% (0.56)	<b>19.4%</b> <b>(3.11)</b>	3.3% (0.69)	<b>7.9%</b> <b>(1.91)</b>
Receiving timely payment for work performed	<b>29.7%</b> <b>(3.60)</b>	-1.1% (-0.09)	11.5% (0.84)	17.0% (0.87)	<b>19.2%</b> <b>(3.00)</b>	-3.1% (-0.64)	3.8% (0.86)
Functioning without hindrance or harassment on the work site	<b>21.7%</b> <b>(2.97)</b>	16.0% (1.22)	3.5% (0.30)	0.0% (0.00)	<b>15.2%</b> <b>(2.62)</b>	<b>8.1%</b> <b>(2.02)</b>	<b>8.3%</b> <b>(2.47)</b>
Joining or dealing with construction trade associations	0.7% (1.26)	0.3% (0.50)	0.0% (0.00)	0.0% (0.00)	0.1% (0.66)	0.0% (0.08)	0.0% (0.34)
Having to do inappropriate or extra work not required of comparable non-M/WBEs	<b>44.2%</b> <b>(4.85)</b>	14.0% (1.29)	13.0% (1.11)	<b>33.3%</b> <b>(1.70)</b>	<b>30.2%</b> <b>(4.34)</b>	<b>7.6%</b> <b>(2.18)</b>	<b>9.3%</b> <b>(3.25)</b>
Having to meet quality, inspection, or performance standards not required of comparable non-M/WBEs	<b>12.6%</b> <b>(3.22)</b>	4.7% (1.00)	5.4% (0.98)	0.0% (0.00)	<b>7.9%</b> <b>(2.88)</b>	2.2% (1.40)	<b>2.7%</b> <b>(2.21)</b>
In any one of the business dealings listed above	<b>36.5%</b> <b>(4.39)</b>	9.1% (0.68)	-4.6% (-0.32)	0.2% (0.01)	<b>22.0%</b> <b>(3.31)</b>	3.7% (0.72)	<b>9.0%</b> <b>(1.91)</b>

Source: See Table 8.2.

Note: Reported estimates are derivatives from Probit models with specification such as in Table 8.5, columns (2). T-statistics are in parentheses. T-statistics of 1.96 (1.64) or larger indicate that the result is significant within a 95 (90) percent confidence interval. Adverse results with T-statistics of 1.96 or higher are **boldfaced**. Adverse results with T-statistics of 1.64 or higher are **boldfaced italicized**.

#### **4. Impact of Current Business Environment on Ability to Win Contracts**

The survey asked questions about some common features of the business environment to determine which factors were perceived by M/WBEs as serious impediments to obtaining contracts.

As Table 8.7 makes clear, substantial percentages of both M/WBEs and non-M/WBEs report that certain factors, such as “Late notice of bid/proposal deadlines,” “Large project sizes,” and “Bonding requirements” make it harder or impossible for firms to obtain contracts. Among non-M/WBEs, for example, 42.7 percent reported that late notice of bid/proposal deadlines made it harder or impossible for them to win contracts, 32.3 percent reported that large project sizes made it harder or impossible for them to win contracts, and 31.3 percent reported that bonding requirements made it harder or impossible to win contracts. The comparable figures for M/WBEs, however, at 58.9, 46.5, and 45.6 percent, respectively, are much greater than for non-M/WBEs. Indeed, as Table 8.7 shows, M/WBEs reported more difficulty on 7 out of the 9 factors about which they were polled.

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**Table 8.7. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Sample Differences**

Business Environment	African American	Hispanic	Asian	Native American	Total Minority	Non-minority Female	Total M/WBEs	Non-M/WBEs
<b>Bonding Requirements</b>	41.7% (36)	45.5% (11)	0.0% (4)	<b>100.0%</b> (4)	<b>43.6%</b> (55)	<b>46.6%</b> (103)	<b>45.6%</b> (158)	31.3% (115)
<b>Insurance Requirements</b>	16.3% (43)	<b>36.4%</b> (11)	11.1% (9)	<b>60.0%</b> (5)	<b>22.1%</b> (68)	16.9% (136)	<b>18.6%</b> (204)	11.8% (144)
<b>Previous Experience Requirements</b>	12.5% (48)	16.7% (12)	18.2% (11)	16.7% (6)	14.3% (77)	9.2% (142)	11.0% (219)	12.9% (163)
<b>Cost of Bidding or Proposing</b>	18.0% (50)	36.4% (11)	30.0% (10)	40.0% (5)	23.7% (76)	25.9% (135)	25.1% (211)	26.8% (164)
<b>Large Project Sizes</b>	36.2% (47)	40.0% (10)	<b>77.8%</b> (9)	50.0% (6)	<b>43.1%</b> (72)	<b>48.4%</b> (128)	<b>46.5%</b> (200)	32.3% (155)
<b>Price of Supplies or Materials</b>	18.6% (43)	27.3% (11)	37.5% (8)	20.0% (5)	22.4% (67)	<b>27.3%</b> (132)	<b>25.6%</b> (199)	18.2% (159)
<b>Obtaining Working Capital</b>	<b>42.2%</b> (45)	36.4% (11)	14.3% (7)	33.3% (6)	<b>37.7%</b> (69)	<b>44.0%</b> (125)	<b>41.8%</b> (194)	21.5% (149)
<b>Late Notice of Bid/Proposal Deadlines</b>	<b>58.1%</b> (43)	<b>72.7%</b> (11)	<b>70.0%</b> (10)	<b>83.3%</b> (6)	<b>64.3%</b> (70)	<b>55.7%</b> (115)	<b>58.9%</b> (185)	42.7% (143)
<b>Prior Dealings with Owner</b>	12.5% (48)	0.0% (13)	8.3% (12)	0.0% (6)	8.9% (79)	7.9% (139)	8.3% (218)	6.6% (166)

Source: See Table 8.2.

Note: Total number of valid responses in parentheses. Figures in **boldface** type are statistically significantly different from non-M/WBEs using a conventional two-tailed Fisher's Exact Test and within a 95% or better confidence interval. Figures in **boldface italicized** type are significant within a 90% confidence interval.



To control for firm and owner characteristics, we used a regression technique known as ordered Probit.<sup>314</sup> Ordered Probit regression is used when the dependent variable is discrete and ordinal (and hence can be ranked). We use ordered Probit to model the ordinal ranking—helps me (1), no effect (2), makes it harder (3), and makes it impossible (4)—of the aspect of procurement under consideration. The firm characteristics used as control variables consist of the age of the firm, the number of employees, the size of revenues, the education level of the primary owner of the firm, and the major industry group. To report results from ordered Probit analysis, we use a “+” to indicate that M/WBEs had more difficulty than non-M/WBEs with similar firm characteristics, and a “–” to indicate that M/WBEs had less difficulty than non-M/WBEs with similar firm characteristics.

Table 8.8 reports the sign and statistical significance from the ordered Probit analysis. We find that when observable firm characteristics are controlled for, six of the nine factors we inquired about prove to be greater difficulties for M/WBEs than for non-M/WBEs (as indicated by the “+” sign). In particular, the disparities for “late notice of bid/proposal deadlines” are statistically significant with respect to non-M/WBEs.

**Table 8.8. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Regression Results**

Business Environment	M/WBEs
Bonding Requirements	+
Insurance Requirements	+
Previous Experience Requirements	–
Cost of Bidding or Proposing	–
Large Project Sizes	+
Price of Supplies or Materials	+
Obtaining Working Capital	+
Late Notice of Bid/Proposal Deadlines	+ <sup>†</sup>
Prior Dealings with Owner	–

Source: See Table 8.2.

Note: A plus (+) indicates that a group is more likely than non-M/WBEs to report difficulty with business environment factors. A minus (–) indicates that a group is less likely than non-M/WBEs to experience difficulty. An asterisk (\*) indicates that the disparity is statistically significant within a 95% or better confidence interval. A dagger (†) indicates that the disparity is statistically significant within a 90% or better confidence interval.

<sup>314</sup> For a textbook discussion of ordered Probit, see, for example, Greene (1997).

## 5. Solicitation and Use of M/WBEs on Public and Private Projects Without Affirmative Action Goals

Our second to last survey question asked, “How often do prime contractors who use your firm as a subcontractor on public-sector projects with requirements for minority, women and/or disadvantaged businesses also hire your firm on projects (public or private) *without* such goals or requirements?” As Table 8.9 shows, 69 percent of African American-owned firms, 50 percent of Hispanic-owned firms, 73 percent of Asian-owned firms, 67 percent of Native American-owned firms, and 59 percent of nonminority female-owned firms responded that this seldom or never occurs. Similar results were observed in each major procurement category as well, though for Hispanics in Construction the incidence was substantially lower than for other groups or in other procurement categories.

At least one court has held that the failure of prime contractors to even *solicit* qualified minority- and women-owned firms is a “market failure” that serves to establish a government’s compelling interest in remedying that failure.<sup>315</sup> Among the evidence relied upon for this holding was a NERA survey similar to the current one in which approximately 50 percent of the respondents reported that they were seldom or never solicited for non-goals work.<sup>316</sup>

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<sup>315</sup> *Builders Association of Greater Chicago v. Authority of Chicago*, 298 F.Supp.2d 725, 737 (N.D. Ill. 2003).

<sup>316</sup> *Id.*

**Table 8.9. Percent of M/WBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with M/WBE Goals Seldom or Never Hire Them on Projects without Such Goals**

M/WBE Group	All Industries	Construction	CRS	Services	Commodities
<b>African American</b>	68.9% (45)	76.9% (13)	71.4% (7)	60.9% (23)	100.0% (2)
<b>Hispanic</b>	50.0% (10)	16.7% (6)	100.0% (1)	100.0% (2)	100.0% (1)
<b>Asian</b>	72.7% (11)	50.0% (2)	100.0% (3)	60.0% (5)	100.0% (1)
<b>Native American</b>	66.7% (3)	- (0)	- (0)	66.7% (3)	- (0)
<b>Total Minority</b>	66.2% (71)	54.5% (22)	81.8% (11)	63.6% (33)	100.0% (5)
<b>Non-minority Female</b>	59.0% (134)	47.4% (38)	37.5% (8)	67.2% (58)	63.3% (30)
<b>Total M/WBE</b>	61.5% (205)	50.0% (60)	63.2% (19)	65.9% (91)	68.6% (35)

Source: See Table 8.2.

Note: Total number of valid responses in parentheses.

Our final survey question therefore asked “How often do prime contractors who use your firm as a subcontractor on public-sector projects with requirements for minority, women and/or disadvantaged businesses *solicit* your firm on projects (public or private) without such goals or requirements?” Responses to this question are tabulated in Table 8.10, which shows the same pattern as in Table 8.9. In Table 8.10, 67 percent of African American-owned firms, more than 46 percent of Hispanic-owned firms, 88 percent of Asian-owned firms, 67 percent of Native American-owned firms, and 61 percent of nonminority female-owned firms responded that this seldom or never occurs. Similar results were observed in each major procurement category as well, though for Hispanics in Construction the incidence was substantially lower than for other groups or in other procurement categories.

## Anecdotal Evidence of Disparities in the City of Cleveland's Market Area

**Table 8.10. Percent of M/WBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with M/WBE Goals Seldom or Never *Solicit* Them on Projects without Such Goals**

<b>M/WBE Group</b>	<b>All Industries</b>	<b>Construction</b>	<b>CRS</b>	<b>Services</b>	<b>Commodities</b>
<b>African American</b>	66.7% (45)	69.2% (13)	71.4% (7)	66.7% (24)	0.0% (1)
<b>Hispanic</b>	45.5% (11)	16.7% (6)	50.0% (2)	100.0% (2)	100.0% (1)
<b>Asian</b>	87.5% (8)	50.0% (2)	100.0% (3)	100.0% (2)	100.0% (1)
<b>Native American</b>	66.7% (3)	- (0)	- (0)	66.7% (3)	- (0)
<b>Total Minority</b>	65.2% (69)	50.0% (22)	75.0% (12)	71.0% (31)	75.0% (4)
<b>Non-minority Female</b>	60.8% (125)	52.8% (36)	25.0% (8)	74.5% (51)	56.7% (30)
<b>Total M/WBE</b>	62.4% (194)	51.7% (58)	55.0% (20)	73.2% (82)	58.8% (34)

Source: See Table 8.2.

Note: Total number of valid responses in parentheses.

## **C. Business Owner Interviews**

To explore additional anecdotal evidence of possible discrimination against minorities and women in the City of Cleveland's market area, we conducted three group interviews. We met with 110 minority and female business owners from a broad cross section of the industries from which the City purchases construction services and goods, construction-related professional services such as engineering and architecture, and other goods and services.<sup>317</sup> Firms ranged from decades-old family-owned firms to new start-ups. Owners' backgrounds included individuals with extensive experience in their fields and entrepreneurs beginning their careers. We sought to explore their experiences in seeking and performing prime contracts and subcontracts with the City, other public agencies and in the private sector.

This effort gathered individual perspectives to augment the statistical information from the business experience surveys. In general, interviewees' individual experiences mirrored the responses to the business experience surveys. We also elicited recommendations for improvements to Cleveland's current M/FBE and CSB Programs, described in Chapter X.

The following are summaries of the issues discussed. Quotations are indented, and are representative of the views expressed by many participants. Some have been shortened for readability.

### **1. Discriminatory Attitudes and Negative Perceptions of Competence**

Many owners still experience discriminatory attitudes and behaviors. Minorities and women repeatedly discussed their struggles with negative perceptions and attitudes of their capabilities within their industries. The stereotypes about minorities' and women's of lack of competence infect all aspects of their attempts to obtain contracts and subcontracts, and to be treated equally in performing contract work. This was true across a very wide swath of industries.

If they see you as an MBE, that's all you are.... [Which] happens is not only from the prime standpoint but also the city or the agency standpoint. Because now the perception is, we need him only on these projects [with goals].

If you mention MBE or if you mention minority business, it turned into a negative, it turned into, I don't want to hear this.... Especially with Barack Obama being in, it seems like that perception now has become a, hey, we don't want to hear that sort of stuff.

I'm reluctant to bid as a minority contractor because we do so much majority work. But in the same token, you know, you got to have a chance.

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<sup>317</sup> 48 non-M/FBE owners participated in the interviews, discussed in Chapter X containing the review of the City's M/FBE and CSB Programs, but provided no feedback about race- and gender-based barriers to the participation of minorities and women.

It's hard to tell in services when discrimination is happening. Because when you go in and you try to get some work, you know, it's not blatant. But when you're in construction and you're a female it's blatant so you can see it much better.

[Discrimination is] very obvious when you're dealing with hardcore construction guys who come on the job and you're a lady and I was young then. So, you're a young lady and you're talking about you do trucking. So their reaction to you is blatant.... The guys just are very chauvinist. You know, it's not as bad as it used to be.... It was constant every day, the chauvinism. Why are you in this industry? I go to buy tires for my truck. What do you need these tires for?... And after ten years it kind of just wore me down.

The perception is that we are looked at as an entitlement, as a premium ... as liability.

The perception of minority companies over the years has been, we don't take care of business, we don't get our bills in on time, so they already have that fear. And you're asking me to cover them under my bond, you know what I mean? So, it's a tricky thing because I really understand where generals are coming from. Because this is my job. You're going to come in and tell me I got to give 30 percent of my job to somebody I don't know?

When a minority may perform on a job in many cases, many cases, you're eliminated because of someone else's performance. Instead of saying X company did a bad job or didn't perform or was. They will say, a Black company.... There are some prime contractors out here that if you do the job, if you provide your paperwork, if you perform like they don't think you're going to perform ... [they] will continue to utilize your service.

When we did the preconstruction meeting, I was called into the job trailer and the construction manager blatantly said, well, you know, you're here because you're an FBE but we expect you to perform as a normal contractor. And I said, excuse me? I said I've been in business for twenty years, I am a normal contractor. That's their expectation.

There are some prime contractors out here that if you do the job, if you provide your paperwork, if you perform like they don't think you're going to perform ... [they] will continue to utilize your service.... It's different [for Blacks] ... they won't say, Midtown Trucking truckers, driver of truck number twenty did this. What they're going to say is, the black truckers.

## **2. Exclusion from Industry and Information Networks**

Minorities and women from across the spectrum of industries recounted their exclusion from the industry and information networks necessary for success. Both discrimination and the long-standing nature of industry networks operate to the disadvantage of groups historically excluded from business opportunities.

Construction is a very male dominated world.

Networking is the key. If we know that there is work coming up. Not everyone will have the time to go and sit in Council meetings. There's got to be a way of streamlining and letting the community in construction know ... that there is something in works.... So, that we have enough time to establish these teams. Especially with design-build.... When the project is posted, these teams are already established.

You have to team and get to know the people on the other side of the equation because people do business with people they know, like, trust and have commonality with.

After my years in business, you begin to realize that people do business with people they are comfortable with.

### **3. Barriers to Obtaining Public Sector Contracts**

Overall, there was near universal agreement that the race- and gender-conscious programs remains necessary to reduce these types of barriers and open up opportunities on City contracts and subcontracts. Without affirmative action goals, minorities and women believe their firms would suffer or even close.

The goals are helpful. I worked on projects where we were hired for a couple of projects but not to meet a goal, because of our design ability. And then we were hired on another project because of a goal. The one where there was no goal we had very difficulty getting paid. We didn't get our name on the drawings. We were kept from the clients in terms of we weren't invited to any of the meetings. They didn't want us to sort of be known as helping them with the design. Versus the one with goals we were right there front and center with the clients. We were able to get a letter of recommendation from the City, you know, at the end of the process, etc. So I would say having the goal, having the, that, that rule, it's helpful.

The goals are good because we have bid as prime, and we get beat out by the national companies. What happens is they have to bring us on board because we're a minority. And we are local. And then they run into issues that only local people understand. And what ends up happening is that small piece of the pie that we were supposed to get, gets bigger and bigger and bigger.

If they didn't have the goals, we wouldn't get any work.

I'm prime on certain projects and then there's other times I go as a RSB, a registered small business. And an MBE. And as far as my marketing as an MBE, I get no response.

We're only being called because they need to fill a quota.... A lot of our clients only work on the City and State projects and they know to call us because we're EDGE certified, we're City of Cleveland certified, we're Sewer District certified. You know, we're certified with everybody. But they're only calling us because they have to fill the quota. A lot of architects would do what we do themselves if they [didn't need to meet the goal].

It's too bad we have to have an MBE program, but we do.

There's a reason that there is a minority program. It's because everybody deals with their friend.... It's a necessity that you legislate so that everybody has a fair playing field.

After that study [for the Northeast Ohio Regional Sewer District and the agency's resumption of race- and gender-conscious remedies] we have been getting more opportunities to bid.

Some prime firms just go through the motions about using M/WBEs.

[The general contractors] send you out a bid where the bid is due tomorrow. We don't have no price, we don't have nothing.... And they do that because as the gentleman said over here, they're filling their quotas.

#### **4. Barriers to Obtaining Work as Prime Vendors**

A particularly difficult challenge, especially for professional services and other services firms, is obtaining access to prime contracting opportunities. M/WBEs would much prefer to perform as direct vendors to the City and other clients, yet the barriers of discriminatory attitudes, stereotypes about their capabilities, and longstanding networks often keep them pigeonholed into sub-vendor roles.

[City staff can say] we went with the big firm, so that's that cover your back thing.

Minorities [need to] become primes.

The only way to do it is to go as the prime. I mean I think we've had much more success going after a job as a prime than ever getting anything from a MBE [program]. [The resumption by many City staffers] is that if you're certified you're going to bid the sub work only.... You're constantly in overcome mode just to be at a level playing field, and that's problematic.

Because I'm a minority-owned business, why do you automatically assume that I want to be a subcontractor?

Most participants agreed that the City should count the participation of M/FBEs serving as prime vendors towards the contract goals.

It's horrible [that the City does not count prime M/FBE participation].

Recognize an MBE as a prime.... That will help the City to move forward and show that there are real and substantial opportunities going to MBE firms. It's important for MBEs to come out of the sub only or the sub mostly category and earn their way to elevation.



## Anecdotal Evidence of Disparities in the City of Cleveland's Market Area

There was overwhelming support for some sort of small business set-aside to assist M/FBEs and other small firms to compete for prime contracting opportunities.

Some form of set aside.... So that you're not always at the mercy of the prime contractor choosing the firms.

To the extent that firm size is relevant to the ability to perform, there was close to universal support for disaggregating contracts into separate scopes of work or putting together smaller packages of scopes.

They group an entire contract under a certain umbrella. And that umbrella says that contract is eight million dollars. The [industry] portion may be three hundred thousand which bonding is not that difficult to get. But because they group it like that you have to get an eight million dollar bond and they send you through all kinds of [hoops] to try to get that. And we've asked that the contract be broken up.... [The Northeast Ohio Regional Sewer District is now unbundling contracts and] it's going to be a marked difference in, in firms getting in minority and otherwise.

Breaking the contracts up into smaller portions is ... the easiest thing.... It's more work for [the City].... I understand where they're coming from to manage all these little contracts. but you can get a project manager just like you're paying them over there to manage the project for you. So that minorities can get a piece of the pie. We're not asking for them to give us something.

Unbundling. Unbundling.... Then I compete on my own terms.

They used to put them out in bits and pieces. But ... you've got to go to the City Council to get approval, which is not the easiest thing in the world. So, if I have a project and I've got to go to the Council eight times to get approval [that's a huge disincentive]. And what happens if six of them get approved and two don't? Now the whole project's shot. So now what they do is they put it all together in this huge project. And then they bid it out at once.

Unbundling, dividing the contracts [into what's need to crate prime contract opportunities].

We've been in the City of Cleveland schools. They broke the projects down. We were doing the [type of work]. So, what they did was instead of putting a site plan all together they broke the packages down, interior, exterior ... make it affordable for the MBEs, SBEs, whoever can get on these jobs.

### **5. Barriers to Obtaining Surety Bonds**

Access to surety bonds on an equal basis remains a significant barrier.

## Anecdotal Evidence of Disparities in the City of Cleveland's Market Area

[To reduce the barrier to bonding, the City should say] we're going to accept your bid, but before you can perform this job you got to hand us a performance bond.... Now I have the [award]. I go to a bonding company, the bonding company's going to check me out. If they're not going to give me the bond I can't do the job. So all it does is fall to the next person.

Our Mayor made it where \$500,000 and under you don't need a performance bond. It's those kind of initiatives that we need.

That Cleveland requires bonding on contracts beyond construction projects was noted by several firm owners as a special and unnecessary barrier.

The City of Cleveland requires a bid bond, a performance bond that you need just to submit the bid [for commodities]. And like this gentleman said, if you had it when it came time to perform it there'd be no problem because then you would have the contract. The State doesn't do that. It, it just boggles my mind how the City would do it but the State doesn't do it.

### **D. Conclusion**

The anecdotal interview information strongly suggests that M/WBEs across many industries continue to suffer discriminatory barriers to full and fair access to the City of Cleveland's prime contracts and associated subcontracts and private sector opportunities. This evidence includes the continued existence of discriminatory attitudes and perceptions of minority and women incompetence; exclusion from industry and information networks; barriers to obtaining public sector contracts; barriers to obtaining work as prime vendors; and barriers to obtaining surety bonding. These results are the type of anecdotal evidence that, in conjunction with statistical evidence, the courts have found to be highly probative of whether the City would be a passive participant in a discriminatory market area without affirmative interventions and whether race- and gender-conscious remedies are necessary to address that discrimination.

## **IX. The City of Cleveland's Cleveland Small Business, Minority Business Enterprise, and Female Business Enterprise Program: Overview and Feedback Interviews**

This Chapter describes the City of Cleveland's Cleveland Small Business (CSB), Minority Business Enterprise (MBE), and Female Business Enterprise (FBE) Program, followed by a summary of business owner experiences with these policies and procedures.

### **A. MBE, FBE, and CSB Program Overview**

#### **1. Subcontractor Disparity Analysis Study**

The City obtained a Subcontractor Disparity Analysis in 2007 that examined contracts with overall values between \$10,000 (the City's informal limit) and \$500,000. The report did not find disparities for subcontractors in any industry for any racial or ethnic group or nonminority females. Based on these results, the City amended its race- and gender-conscious program and adopted the current program, discussed below.

#### **2. CSB, MBE, and FBE Program Elements**

The new programs were adopted in 2008. The ordinance provide for preferences for CSBs, MBEs, and FBEs, including contract goals, bid discounts and evaluation credits.

##### **a. Program Eligibility**

A business can be certified as a MBE, a FBE, *and* a CSB. All businesses certified by the City were "grandfathered" into the new programs for 18 months. Thereafter, they are required to be re-certified by application.

##### **i. Minority Business Enterprise Eligibility**

To be eligible for certification as a MBE, a Business Enterprise must be owned, operated, and controlled by one or more Minority Persons who have at least 51 percent ownership. The Minority Person(s) must have operational and managerial Control, interest in capital, and earnings commensurate with the percentage of ownership. To qualify as a Minority Business Enterprise, the enterprise shall be located and doing business in the Cleveland Contracting Market.

##### **ii. Female Business Enterprise Eligibility**

To be eligible for certification as a FBE, a Business Enterprise must be owned, operated, and controlled by one or more Females who have at least 51 percent ownership. The one or more Females must have operational and managerial Control, interest in capital, and earnings commensurate with the percentage of Female ownership. To qualify as a Female Business

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Enterprise, the Business Enterprise shall be located and doing business in the Cleveland Contracting Market.

### **iii. Cleveland Area Small Business Eligibility**

To be eligible, a firm must:

- Meet the size standards of the U.S. Small Business Administration;<sup>318</sup>
- Have its principal business office located in Cuyahoga County; and
- Maintain the offices of its CEO and highest level managers and perform their managerial functions in the Cleveland Market Area.<sup>319</sup>

First preference is given to City of Cleveland Small Businesses (CCSBs), with second preference given to Regional Cleveland Small Businesses (RCSBs).

Firms that were certified as MBEs or FBEs as of June 3, 2008– the adoption date of the CSB Program– were automatically certified as CSBs until either their MBE or FBE certifications expired or November 2, 2009 , the sunset for the “grandfathered” period of CSB certification. Firms that were certified as MBEs or FBEs that were located outside Cuyahoga County became ineligible for CSB certification upon the sunset date.

### **3. Program Responsibilities**

#### **a. Office of Equal Opportunity**

The mission of the Office of Equal Opportunity (OEO) is to advance equal economic participation by all Cleveland residents. The Office is responsible for the administration, monitoring and enforcement of the City’s minority- and female-owned business enterprise programs, the programs for Cleveland Area Small Businesses, and Fannie M. Lewis Cleveland Resident Employment Law programs. The programs provide for participation as prime and sub-contractors on City related contracts, for development efforts for targeted companies, and for employment of Cleveland residents on certain construction projects.<sup>320</sup>

Major functions of the Office include:

- Certification of businesses as local, minority, or female owned.
- Evaluation of the participation on City contracts of minority and female businesses, employees, and local companies.

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<sup>318</sup> 13 C.F.R. Part 121, as amended.

<sup>319</sup> C.O. § 187.03(a).

<sup>320</sup> C. O. § 123.08.

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- Determination of goals and requirements for City Contracts.
- Monitoring compliance with various contract requirements.
- Providing training and information to contractors and potential contractors.
- Serving as liaison with economic development organizations and agencies which support the development of M/FBEs and CSBs in the community
- Conducting investigations and imposing penalties for failure to comply with OEO programs.
- Development of and technical support for target businesses.

Monitoring is a major function of the Office. Tasks include:

- Conducting pre-bid and pre-construction meetings;
- Communicating all requirements and expectations;
- Creating and distributes most correspondence;
- Collecting and data entering required contractor information; and
- Issuing the bi-monthly report to all interested parties.

The enforcement arm of the Office is primarily responsible for addressing all compliance issues, ranging from comprehensive reviews of particular project problems to investigations and penalty assessment and imposition. Regular project reviews and spot audits are conducted by project investigators with the support of analysts. In addition to the quarterly and annual reporting duties, the enforcement unit develops program protocols and policy manuals.

### **b. Contracting Departments**

The Commissioner of Purchases and Supplies and each Contracting Department shall:

- Endeavor to maximize the participation of CSBs, MBEs, and FBEs in contracts of \$10,000 or less;
- Develop lists of CSBs, MBEs, and FBEs experienced in the various types of services, products, or property for which the City typically contracts;
- Report to the Director quarterly not later than 30 calendar days after the end of the previous quarter specifying, with respect to contracts and subcontracts:

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- The means by which it intends to meet the program's goals in the forthcoming quarter;
- The percentage and dollar amount of those contracts and subcontracts awarded in the previous quarter to CSBs, MBEs, and FBEs;
- For each Contracting Department, the degree to which it has met the program's goals, any past and current activities undertaken and being undertaken to meet the goals and, if applicable, a detailed explanation of why it has not met the goals; and
- Other information the Director may request; and
- Appoint one or more members of each Contracting Department to serve as a liaison between the Contracting Department and the OEO, and to nominate a member of the contracting department or division to serve on the Review and Evaluation Committee.<sup>321</sup>

### **c. Review and Evaluation Committee<sup>322</sup>**

The Director serves as chairperson of a Review and Evaluation Committee comprised of at least one member from each Contracting Department, one liaison from the Division of Purchases and Supplies, and one member of Council or its representative nominated by the President of Council. Except for the member nominated by the President of Council, the members may be appointed by the Mayor from among nominees presented to him by the Contracting Departments and shall serve at the discretion of the Mayor. The Committee meets as necessary to fulfill the following responsibilities:

- Review and monitor each Contracting Department's performance under the Cleveland Area Business Program;
- Assist the Director in preparing annual reports to the Mayor on the progress of the Cleveland Area Business Program;
- Recommend changes in the regulations promulgated under the applicable City Code;
- Assist, as appropriate, in the implementation of the Code;
- Prepare, review and make recommendations concerning the directory of certified CSBs, MBEs, and FBEs;
- Assist in preparing a Business Enterprise monthly awards report; and

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<sup>321</sup> C.O. § 187.12.

<sup>322</sup> C.O. § 187.23.

## The City of Cleveland's Cleveland Small Business, Minority Business Enterprise, and Female Business Enterprise Program: Overview and Feedback Interviews

- Carry out such other oversight or coordination functions as may be requested by the Director.

### **4. Program Remedies**

#### **a. CSB Goals of Contracting Departments<sup>323</sup>**

This race- and gender-neutral program was adopted in 2008 based on the findings of the 2007 Disparity Study. The annual City-wide goal for CSB participation for contracts greater than \$10,000.00 is 30 percent in Public Improvement Contracts; 10 percent in Professional Services Contracts; and 20 percent for all other contracts or such other goal fixed by the OEO Director for a particular Contract.

CSB participation will be counted towards meeting the goals as follows:

- 100 percent of expenditures to CSBs that perform Commercially Useful Functions in implementation or performance of a Contract;
- 100 percent of expenditures to CSB manufacturers (i.e., suppliers that produce goods from raw materials or the product of raw materials and add value by substantially altering them before resale); and
- 60 percent of expenditures to CSB suppliers that are not manufacturers, provided that the CSB supplier performs a Commercially Useful Function in the supply process.

If a CSB subcontractor further subcontracts its participation a non-CSB subcontractor, only the work or supplies actually performed or furnished by the CSB subcontractor will be counted towards meeting the goals.

No credit is given for a contractor's or a subcontractor's contract(s) for the purchase of materials, equipment, services, or supplies that are incident to the performance of services under the contract or for the general operation of its business and not attributable exclusively to the particular subcontract.

A percentage of the total dollar value of the contract with a CSB Joint Venture equal to the percentage of CSB's participation in the Joint Venture will be counted towards meeting the goal. The CSB must be responsible for performance of a clearly defined portion of the work to be performed, equal in proportion to its share in the ownership, control, management, responsibility, risk, and profits of the Joint Venture.

Contractors must use CSBs to perform a Commercially Useful Function during the implementation or performance of the contract. Failure to do so will be a material breach of the

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<sup>323</sup> C.O. § 187.06.

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contract, and may subject the contractor to criminal prosecution, decertification, and other sanctions.

Credit towards the CSB subcontractor participation goals is not available for participation under any contract in a calendar year by any CSB subcontractor that has contracted more than a maximum annual dollar amount per CSB fixed by the Director in the Regulations from time to time, except that the Director may apply credit toward the goals upon written request of a bidder or contractor attesting that no other certified CSBs are available to perform the work or supply the materials required for the contract, or in an emergency, or for such other reasons that the Director determines require use of that CSB.<sup>324</sup>

### **b. MBE/FBE Goals of Contracting Departments**

Each Contracting Department is to use its best efforts to utilize certified MBEs and FBEs as contractors or subcontractors for all contracts in excess of \$10,000, where applicable. The Director may determine the appropriate annual City-wide goal for MBE and FBE participation for each type of Contract, including, but not limited to, construction, non-professional and professional services, supplies, and concessions, and for each type of work to be performed under a particular contract, based on the availability of certified MBEs and FBEs as to which past or present discrimination has been demonstrated.

The 2007 Disparity Study found sufficient evidence of discrimination to support goals for MBEs and FBEs in vertical construction. The current goals are 15 percent for MBEs, 7 percent for FBEs and 8 percent for CSBs.

The Director fixes the goals for MBE and FBE participation in a particular contract in consultation with the Contracting Department, based upon the annual City-wide goals for each type of contract and for each type of work to be performed in the contract and the availability of certified MBEs and FBEs. The Director may fix the goals for a particular contract at a level exceeding the annual City-wide goals to assist a Contracting Department in meeting the annual City-wide goal for the particular type of contract to be awarded.

Contracting Departments consider use of certified MBEs and FBEs when recommending a lowest and best or lowest responsible bid to meet the specified annual goals and may apply a Bid Discount. However, these goals are not quotas.

MBE and FBE participation will be counted towards meeting the goals as follows:

- 100 percent of expenditures to MBEs and FBEs that perform Commercially Useful Functions in implementation or performance of a Contract;

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<sup>324</sup> C.O. 187.04 (e).



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- 100 percent of expenditures to MBE and FBE manufacturers (i.e., suppliers that produce goods from raw materials or the product of raw materials and add value by substantially altering them before resale); and
- 60 percent of expenditures to MBE and FBE suppliers that are not manufacturers, provided that the MBE or FBE supplier performs a Commercially Useful Function in the supply process.

### c. Bid Discounts

Contracting Departments may apply bid discounts to bids received from CSB prime contractors. “Bid Discount” means the application of a percentage discount to the total amount of a bid solely for the purpose of bid comparisons when evaluating the lowest and best bid, or lowest responsible bid. The use of a Bid Discount for bid comparison does not alter the total amount of the bid submitted by a bidder or the contract executed based on a bid. The maximum cumulative dollar amount of all Bid Discounts to a Bidder is \$50,000.00.

Bid Discounts are applied in the following manner:

- A Bid Discount of five percent (5%) for bids received from CCSBs.
- A Bid Discount of five percent (5%) for bids received from RCSBs, provided no bids are received from CCSBs.<sup>325</sup>

Contracting Departments may apply a Bid Discount to bids received for a Public Improvement Contract in the amount of 5 percent of the portion of the total amount of labor and materials that the bidder represents it will subcontract to one or more CSBs.

- If a Contracting Department applies the Bid Discounts to the bid of a bidder that would not have otherwise been the lowest and the bidder is awarded the Public Improvement Contract, the City retains additional retainage equal to the total dollar amount by which the bid was adjusted for bid comparison in addition to the retainage required under Section 185.41 of the Codified Ordinances.
- If a contractor uses CSB subcontractors in an amount equal to or greater than offered in the bid, the City pays the contractor any additional retainage upon the Contracting Department director's acceptance of the contract work. If a contractor uses CSB subcontractors in an amount less than represented in its bid, the contractor forfeits the amount of the additional retainage equal to the amount of shortfall in its CSB usage, in addition to any other sanctions or penalties applicable under the program or the contract.

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<sup>325</sup> C.O. § 187.03 (b).

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- If a Contracting Department applies the Bid Discount to the bid of a bidder that would not have otherwise been the lowest and the bidder is awarded the Contract, the Contract terms shall prohibit the contractor from deducting the amount of the additional retainage from progress payments to the CSB subcontractors.<sup>326</sup>

Contracting Departments may apply a Bid Discount of 5 percent for bids received from certified MBE and FBE prime contractors.<sup>327</sup>

### **d. Evaluation Credits**

Contracting Departments may apply an Evaluation Credit of 5 percent of the total points awarded for proposals received from MBE and FBE prime contractors.<sup>328</sup> “Evaluation Credit” means a predetermined number of points in the evaluation of proposals to be added solely for the purpose of proposal comparison when evaluating competing proposals. The use of Evaluation Credits does not alter the amount of the proposal or the contract executed based on the proposal.

Departments may apply Evaluation Credits as follows for proposals received from CSB prime contractors:

- An Evaluation Credit of 5 percent of the total points awarded for proposals received from CCSBs.
- An Evaluation Credit of 5 percent of the total points awarded for proposals received from RCSBs, provided no proposals are received from CCSBs.<sup>329</sup>

## **5. Contract Award Procedures**

Each Bidder for a contract must make a “good faith effort” to utilize certified CSBs, MBEs, and FBEs in a percentage that equals or exceeds the applicable goal. Each bidder whose bid includes participation by CSBs, MBEs, or FBEs must demonstrate that the Bidder:

- Has reached a specific written agreement with each participating CSB, MBE, and FBE subcontractor;
- Has accurately and fully represented the essence of their agreement in the bid documents; and
- Is using CSBs, MBEs, and FBEs in a way that complies with the Code and the Regulations.

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<sup>326</sup> C.O. 187.03 (d).

<sup>327</sup> C.O. 187.05 (c).

<sup>328</sup> C.O. 187.05 (d).

<sup>329</sup> C.O. § 187.03 (c).

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CSBs, MBEs, and FBEs must be certified under the program provisions. Contractors seeking to use certified CSBs, MBEs, and FBEs must ensure that all forms and related materials required for certification are submitted to the Director in a timely fashion.

For each Bid invitation, request for proposals and other solicitation, the bidder must complete and submit with its bid or proposal the representations, documentation, and schedules the Director specifies for the bidder to identify its efforts to utilize CSBs, MBEs, and FBEs in a percentage that equals or exceeds the applicable goal. The bidder must keep such records of its efforts as the Director specifies are adequate to permit determination of a successful bidder's compliance with this section.

If a bid invitation or request for proposals contains alternates, the percentage of CSB, MBE, and FBE participation will be computed upon the total dollar amount of the contract as awarded, including the cost of alternates the Contracting Department recommends for award.

If a Bidder is unable to achieve the goal for CSB, MBE, or FBE utilization for a particular contract, the bidder may request an exception to the goal.<sup>330</sup> The request for exception must include documentation specified by the Director that demonstrates the bidder's good-faith effort to use CSBs, MBEs, and FBEs to achieve the applicable goal.

To be considered lowest and best or lowest responsible, a bidder must disclose with its bid or proposal such information as the Director requires to demonstrate the extent to which, in contracts not within the purview of this Chapter, the bidder has awarded subcontracts to CSBs, MBEs, and FBEs.

If the Administrator has made a finding of noncompliance by a bidder and the bidder disputes the finding, the City may reject the bid until such dispute is resolved.

Prior to execution of a contract, a bidder must submit to the City such additional documents as the Director may specify to identify the particular CSBs, MBEs, and FBEs and other subcontractors it will use under the contract, and to specify the dollar and percentage value of each subcontractor's participation, the type of work or services to be performed, and such other information as the Director may reasonably require to determine whether the bidder meets the applicable CSB, MBE, and FBE participation goals.

All contracts shall require the contractor to:

- Use certified CSBs, MBEs, and FBEs in performing the contract according to the participation identified in its bid or proposal, subject only to any approved substitution and waiver.
- Make a good-faith effort to maintain and increase the use of CSBs, MBEs, and FBEs during performance of the contract.

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<sup>330</sup> C.O. § 187.13.

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- Maintain such records as the Director requires that demonstrate compliance with the program and the contract's requirements relating to CSB, MBE, and FBE participation.
- Comply with all provisions of the program. Any failure of the contractor or any subcontractor to comply with applicable provisions shall constitute a material breach.

### **6. Contract Performance Compliance and Monitoring Procedures**

#### **a. Reporting Procedures**

OEO is responsible for monitoring a contractor's compliance with the terms of the contract and the requirements of the program. The Director and the Administrator may require such reports, information and documentation from contractors, bidders, contracting Departments, and other City personnel necessary to determine compliance.

Contracting Departments are to maintain accurate records for each contract awarded, including the dollar value, the nature of the goods and services to be provided, the name of the contractor, the efforts it employed to solicit bids from CSBs, MBEs, and FBEs, and all subcontracts awarded by the contractor, including dollar value, the nature of the goods or services provided, and the name of each subcontractor.

#### **b. Data Collection Procedures**

Cleveland has implemented an electronic contract compliance system that provides a City-wide, end-to-end system to manage contracts, concessions, and CSB, MBE and FBE certifications, plus sets project-specific goals and tracks bids and utilization plans. It further notifies the small business community of relevant opportunities and events. The City has installed the B2GNow system's following functionality:

- Contract compliance with multi-tier subcontractor tracking;
- Vendor management, including aggregation of all vendor information into a single profile reference point, with contact information, key employees, applicable certifications, registration data, prime/sub contracts, bid participation, non-contract payments, etc.;
- CSB, MBE and FBE certification management;
- CSB, MBE and FBE online application information and forms; and
- Interfaces with the City's existing financial system.

**c. Subcontractor Substitutions**

If, after a contract is awarded, a contractor is unable to utilize a CSB, MBE, or FBE identified in the contractor's bid or proposal, it must make a good-faith effort to identify and propose, and request the Director's approval of, a substitute CSB, MBE, or FBE, respectively, to fulfill its utilization commitment. If, after good-faith effort, the contractor is unable to find a substitute, it may request that the Director waive its utilization commitment and provide appropriate documentation.

Whenever a contract is amended/modified, any change order is issued, or subsidiary agreement authorized, the MBE/FBE/CSB goal in the original bid or proposal must be maintained.<sup>331</sup>

**d. Enforcement**

If the Director determines that there is cause to believe that a contractor or a subcontractor has failed to comply, the Administrator shall notify the contractor, which shall have a right to a review and appeal.<sup>332</sup> If the Administrator finds that a contractor is not in compliance or is in default with respect to any representation it made, then the Administrator may rescind or withdraw the relevant certificate or approval prior to its expiration. All certificates must be renewed on forms provided by the OEO.

Any person having knowledge of facts tending to show that a contractor has obtained or is seeking certification or approval by false or inaccurate representations to the OEO may initiate administrative procedures.

If the Administrator has reason to believe that a contractor is in default with respect to any representation, and on which a certification or contract was awarded, the Administrator will:

- Send the contractor written notice by certified mail or personal delivery of any apparent noncompliance;
- Give the contractor 10 days from receipt of the notice, or other specified reasonable opportunity to submit records or offer other information in support of its continued certification and compliance with the provisions of the Code. The Administrator may consider the contractor's failure to submit records or other information timely, or promptly when requested by the Administrator, as agreement to the conditions and circumstances of the noncompliance specified in the Administrator's notice to the Contractor; and
- If, after reviewing the information submitted, the Administrator determines that the contractor is not in compliance, then the Administrator will issue a written finding of

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<sup>331</sup> C.O. § 187.08 (c)(5).

<sup>332</sup> C.O. § 187.18 and § 187.20.

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noncompliance or default, stating the basis for that finding and notifying the contractor of its right to object.

Any contractor taking exception to a finding of the Administrator may attempt to reconcile the differences through informal methods of conciliation and persuasion and/or file a written objection by an appeal, with reasons for the objection, to the Administrator by certified mail within 10 days after receipt of the Administrator's written finding. The Administrator may recommend a settlement agreement regarding the finding. If a written objection is filed, the Administrator will forward the objection to the Director within five days of its receipt, along with all materials relating to the determination, together with any recommendations of appropriate remedial action.

If the Administrator finds a contractor is in default with respect to any representation, and if the contractor fails to attempt timely reconciliation, the Administrator will forward the findings and a recommendation of appropriate remedial action or sanctions to be imposed to the Director. The Director will take actions appropriate, and consistent with the decision.

If the contractor files a timely objection, , the Director will hold a hearing not less than five days nor more than ten days from the filing, unless the contractor and the Director otherwise mutually agree. The Director shall send notice of the date, time, and place for hearing by mail to all interested parties. The contractor shall have the right to record the proceedings of the hearing at the sole expense of the contractor.

Within five business days after the hearing, the Director shall issue and send by certified mail to the contractor findings of fact and a determination of compliance or noncompliance. If the Director determines that the contractor is in compliance, the Director shall issue an appropriate certificate. If the Director determines that the contractor is in default or is not in compliance, the Director, in addition to other remedies available, may take any of the following actions:

- Cancel any existing certificate of employment compliance or withhold issuance of a certificate until the contractor cures the default or complies fully;
- Recommend that the City withhold all or part of any payments due the contractor until such time as the Contractor cures the default or is in full compliance;
- Recommend that the City cancel the contract and declare a forfeiture of any performance bond;
- Recommend that the Director of Law take such legal action, whether civil or criminal, as appropriate;
- Recommend rescission of the contract based upon a material breach of the contract pertaining to CSB, MBE, or FBE participation;

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- Recommend disqualification of a bidder, contractor, or other Business Enterprise from eligibility for providing goods or services to the City for a period not to exceed two years; or
- Recommend a claim for payment of damages, including any liquidated damages specified in the contract.

Notwithstanding any other provision of this section, if the Director determines after an investigative hearing that the City has contracted with a Front Organization<sup>333</sup> and/or that a contractor has participated with a CSB, FBE, or MBE Contractor in activities that would create a Front Organization, then the Director shall:

- Decertify the contractor and and/or Front Organization;
- Not permit the contractor and/or Front Organization to be certified for a period of not less than one year after a final determination; and
- Refer the matter to the City Prosecutor's office for appropriate action.

The decision of the Director is final and may be appealed to the Board of Zoning Appeals, whose decision, in turn, may be reviewed by the Common Pleas Court.

### **7. Small Contract Rotation Program<sup>334</sup>**

The Director is authorized to establish a Small Contract Rotation Program for MBEs and FBEs, including procedures, applicable to the categories of construction, professional services and purchase contracts where the cost of the Contract is anticipated to be under \$10,000.

Under the Small Contract Rotation Program, the City shall limit every second contract to be let by the City for each type of contract, within a category where MBEs and FBEs are underutilized at a statistically significant level, to competition among certified MBEs and FBEs who submit an application in a form acceptable to the Director. The Director shall compile an approved list comprised of not less than two certified MBEs and FBEs for each industry and, as needed, compile specialized lists within industries. The eligible businesses shall be alphabetically ranked on each list and, for a thirty-day period commencing on January 1st and June 1st of each year, the Director shall hold open enrollment for applicants. The lists of prequalified vendors shall be made available to the public. The Commissioner of Purchases and Supplies shall solicit bids or proposals from all MBEs or FBEs on the list for each contract to be entered into under the Small Contract Rotation Program. When only one qualified vendor is on the list, the Commissioner of

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<sup>333</sup> "Front Organization" means any FBE, MBE, or CSB that serves as a Contractor, or as a subcontractor to any Contractor under Contract, who obtained and/or retained certification through false statements or who committed to performance of a distinct element of the work under the Contract but did not carry out its responsibilities by actually performing, managing or supervising the work involved, or who did not provide products, services, goods or supplies in a manner, in the Director's determination, consistent with its certification. C.O. § 187.01(w).

<sup>334</sup> C.O. § 187.14.

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Purchases and Supplies may purchase directly from that firm by direct negotiation of the purchase price.

### **8. Bonding Reduction Waiver Policy**

In 2005, Cleveland amended the performance bond requirements for public improvement by requirement contracts to permit the Commissioner of Purchases and Supplies, with the approval of the Director of Finance and the Director of the Office of Equal Opportunity, to waive the performance bond requirement for contracts not to exceed \$100,000; to reduce the bond to 25 percent of contracts not to exceed \$250,000; and to 50 percent for contracts over \$250,000. Formerly, covered contracts estimated to exceed \$50,000 had to be secured by a bond equal to at least 25 percent of the contract price.

The bond may be reduced or waived where the City believes in its discretion that there is a low likelihood of default, or where default would result in minimal damage to the City. Prior to any bid, the Departmental Director may recommend to the Commissioner of Purchases and Supplies that the City increase the requirements for a specific contract where there is good cause.

This race- and gender-neutral policy serves two purpose. First, it enhances bid competition by making contracts awarded by the City equitably available to all qualified vendors. Second, the City benefits financially because the cost of bonds is typically passed on to the City by contractors.

### **B. Business Owner Interviews**

To gather anecdotal evidence of the effectiveness of the City's current and past M/FBE policies and procedures in opening up opportunities for all firms, we interviewed 158 firm owners or representatives. The following are summaries of the issues discussed. Quotations are indented and are representative of the views expressed by multiple participants. Highly repetitive or idiosyncratic comments were not included, and some comments have been shortened for readability.

#### **1. Perceptions of the Program's Overall Effectiveness**

As discussed in detail in Chapter VIII, the great majority of minorities and women reported that the contracting affirmative action programs remain critical to ensure their full and fair access to City of Cleveland contracts and associated subcontracts. Being certified created opportunities that otherwise would not have been open to them. M/FBE requirements were seen as vital to the continuing viability of their companies.

The MBE and the WBE participation that's posted or the goals open a door for us. So I would really recommend that we keep it. The S[mall] B[usiness] E[nterprise program] under the Sewer District did not work for us simply because the criteria for SBE was so high.... Now that we have opened it to MBE and WBE it seems like more opportunities are coming.



## **2. Access to Prime Contract Awards**

As also reported in Chapter VIII, many minority and women owners who want to do prime contract work were frustrated at not being permitted to count their own participation towards meeting contract goals. Some large general contractor agreed that it is important to count M/FBE prime participation to grow firms' capacities.

I have a problem with that because the whole point of this is empowering the smaller firms.

## **3. Contract Size and Complexity**

Some problems were common to all firms, regardless of the race or gender of the ownership. There was almost universal support regardless of firm ownership, size or industry for "unbundling" or disaggregating contracts.

If they took projects, like a large project, and broke it up into certain [scopes].... And each person did a package but we all came together to communicate what the progress was.... If it's something that a person can at least get their feet wet with the department and let them see that that person can at least produce something. Let that be a feather in their cap so that if they are looking for a team and they say, okay, well this person did this, this, this, and this so that individual that is trying to get going has a little record of some sort. So I'm saying if there were smaller projects where a person, a firm of a specific size could do with an agency, if they could do that project and still get exposure with the larger firms [it would be helpful to build capacity].

There's so many things in there that could be chopped up for a small firm and it's just like [City staffers] don't want to take the time, like oh well, we already did this study and determined what we need so we'll just put it all in one big bow and send it out and whoever gets it, that's fine.

## **4. Payment**

Another universal challenge was slow payments. Subcontractors felt that prime contractors hold their payments and general contractors felt that the City pays too slowly and creates unnecessary and burdensome paperwork.

It's impossible to get paid by the City of Cleveland. It's bad.

We're talking 90 days if you're lucky.

You are calling [the City] constantly, chasing your money. In the meantime, the general contractors ... end up basically banking these [certified] companies. I mean they need a check every week.

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You wait a year for the last two percent [retainage to be released].... We use a lot of MBEs and FBEs and they can't handle that. I mean some of them can but there's a lot of them. Because you're bringing a lot of smaller companies into the trades and whatever. They need to be paid weekly. You're not able to hold any retainage on them or you're supposed to but you can't.... I think the one thing they could do is they should have it so that we don't get held retainage on minority and female companies.

I've had projects that have been completed for a year and a half now and I'm still waiting for my three percent. They don't care if you get your money.

Put that money into some account where we get interest on their delays.

Another thing that goes on that is very disheartening is the slow pay. And by the time that we get our money, our bills are so far behind that we divvy everything. We're back to zero. There's no growth for us any type of way.... I've been told that on some projects that [the prime firm is] not being paid and therefore they can't pay out. Then, I've been told by other trades that they've been paid and so it was no reason why we weren't getting our money.

Even as a legitimate subcontractor on a project I cannot call engineering, I cannot call the finance department and find out where progress payments are. I have to requisition the law department.

There's nothing that holds the City accountable to issue that check to the prime contractor....[It needs] better internal controls.

I have worked with the City of Cleveland [as a service provider] and I've gotten paid thirty days, thirty-five days.... As long as you have your paperwork in order, if it's not in order sometimes they'll send it back to you and it has to be in order. But when I worked with the City I haven't had any problems.

Tell the City to pay on time.

Cash flow is everything.

### **5. Certification Standards and Processes**

Overall, most M/WBEs found the system to be rigorous but tolerable.

[The certification process has] changed quite a bit because they made me go through quite a bit to make sure I knew what I was talking about on the second meeting.

I think [the certification process] been cleaned up.

## 6. Meeting M/FBE Goals at Contract Award

The goal setting process and meeting contract goals elicited many comments. Overall, most prime vendors reported they were able to meet the M/FBE goals, and could easily meet the CSB goals.

Typically you're able to meet the goal.

We like to find subs that work well with us, that we have had good experience with and we tend to stick with them.

[To make the process work, you need team meetings] throughout the project where all components, all team firms are represented at those meetings.

Some construction general contractors and goods and services providers found it hard to meet goals.

It's been a struggle, , meeting some goals even though we have done so. You come close. I think a lot of it depends on how busy the City is at that given point... Our concerns are if the City of Cleveland does actually pick up a lot of, a fair amount of work that there are enough MBEs, FBEs out there to meet our goals.... I see a lot of young MBE, FBE companies that actually have very good ownership in there but you need backing, you need the experience and you need to learn to crawl first and then walk. And I see them get thrown into job sites that are way over their heads and then they falter and I've seen good MBE, FBE companies go out of business.... [The City should step up its goals in phases, so] three years from now this is where the goals will be. Five years from now this will be the goals.

We run into issues [with capacity of MBEs and FBEs].

Professional services firms, particularly in engineering and architecture, reported difficulties in meeting goals with meaningful participation.

When you start getting into specialty things and you have to pull in an MBE or WBE subconsultant it's challenging. So you have to be creative in what you have them do. Or you might even have to have them learn on the job with you.

You try to sub out something that is almost a standalone issue.... You want a standard package with standard details and things so he's not using one symbol for a wall and someone else is using a different symbol for a wall.

They allow us to use blueprints for reproduction and everything as a part of meeting the goal. So, I mean there's ways around it ... you just slice the pie up a little bit more and you just try and make sure ... you meet the goal. And I don't think that's the intent. You

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don't want to compromise and dilute your services because at the end of the day you're holding the contract and you're liable to the City or to the entity.

If you look at what's out there [for engineering firms], you don't have a choice unfortunately.

It may be less expensive just to give them money to go away rather than go back and redesign [the project].

Mechanical, electrical, plumbing, technology. There's very few minority firms in town, at least that we know of, that perform that. And there's probably two key MBE minority firms that do that.... So the ones that are there are on everybody's team and some of them don't necessarily do good work.

Part of it isn't finding that specialty but finding that specialty that you can encapsulate that you don't have to run the risk of coordination problems.... [The MBE] wasn't integrated into the whole project. And really when you're doing a project like architectural engineering, large projects like that, you have to be a team and I often saw the DBE as outside the team.

Some young firms might be trying to start up. It's tough for us to bring someone like that on and help to train them because the fees are so tight to begin with and then for us to take extra time and effort and none of the clients are willing to pay additional fee to help do that so you're not growing them from the bottom.

The inability to obtain bonding was also recognized as an impediment to small firms working as prime contractors or even as subcontractors on larger projects.

Most of these contractors can't provide the bond.

[M/WBEs] can't get the bonding.... [It might help if] there's a pool of money or something set up to help the minority firms be able to cover the liability side of it.

One other thing that the City might consider doing is if they could provide a bonding pool for these contractors. Because the problem we have is everybody says you've got to make weekly payrolls, you have to worry about if they're paying their benefits, what supplier didn't get paid, how do you find out where they bought everything from, etc., etc.... But if the City wants to put their own skin in the game, they could provide a bonding pool to help some of these people grow a little bit and then it doesn't put all the risk on the contractors.

Why is it [the general contractor's] responsibility to try and get bonding for these folks? Why not have the City approach the bonding companies to create a program?

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One explanation offered by non-M/WBEs for the difficulty of meeting goals was that minorities and women often lack the skills to manage their businesses.

We have to constantly assist them with certified payroll reports and those types of things on a constant basis.... So now we have our office personnel assisting their office personnel with certified payroll reports, invoicing, assisting with schedule of values. All those things are expenditure on the prime or the contractor that is subbing out to the DBE or FBE.... if [a non-certified subcontractor is] not doing their paperwork, we're going to tell them to get their stuff straight or we will use another contractor.

The biggest complaint or problem or concern that we have [is] they need to learn how to run a business. They don't need to learn how to fill out paperwork. They need to know how to balance their money so that you don't get all this money and [think] okay now I'm rich.

[M/WBEs need training in] shop drawings.

One recommendation from larger, non-M/WBEs was for the City to rate or pre-qualify certified firms.

Any program or any goal should have more to it than just meeting a goal. There should be some sort of a process by, whereby you monitor how firms do as a part of this goal, as part of the program. I mean my biggest disappointment is we have a goal but are these firms really benefiting? I mean, are they maturing? Are they actually becoming better so they can compete more competitively? And I think that unfortunately hasn't been done or it hasn't been monitored or it hasn't been tracked.

There should be some [City] evaluation [of MBE subcontractors] to monitor that are they getting better, was the work acceptable or exceptional?

I would like to see that there's some sort of way to measure, metrics [for the development of certified firms].... Because if your intent is just to like set aside money and make sure money passes through to firms then that's all the intent is then, what's the point?

Put like a little synopsis of what their project were [into the list of certified firms].... List what [City contracts] they worked on.

Maybe they can prequalify [M/WBEs] for a certain amount of work, you know, until they get to a point where the City and also the contractors know their capacity.

[The City] need[s] to look at ... some type of qualification [process for certifying firms].

The problem with the program, at least from where we sit, is they don't have to demonstrate the growth three years down, five years down

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While MBEs' experiences often differed markedly from non-M/WBEs, one area of agreement was the need to thoroughly eradicate the use of "front" firms or "passthrough" firms to create the appearance of participation.

A lot of people in the room have used just a pass through.

There are cases too where we would get a project and give it to the MBE firm even though they weren't qualified to do everything in that task. And they then would go and get somebody else to come in and do the stuff they couldn't.

The City has, has cleaned up their act on fronts but they're still alive and well out there. I just think they're getting a lot more educated on how, you know, people are getting creative on this stuff.

The contractor had to buy the equipment from an FBE.... I had quoted him a price. I had quoted her a price. I didn't even know about her having to be involved.... She basically marked on the, marked up and then I was just supposed to bill her. I handled all the equipment. I handled everything direct to the contractor.... She never took delivery of the equipment.... She was putting on ten percent.... We wound up walking away from that job.... I just didn't want to do business that way.

We've actually had to sub our equipment to a third party in order to get ... the contractor to buy it because they had to meet a certain goal. They were short on the rest of their project.... So now our product which was awarded the contract has to be sold through an MBE, FBE. And for merely accepting that fax and putting it through the machine on the other side they, they're taking ten percent.... That has happened several times.

We've dealt with this [type of supplier arrangement] now on four different jobs in the last two years. And it's never been the same company.

You look at the WBEs that they're using and you look at the last names of the officers, chances are all they did was create an offshoot company in the name of their spouse or daughter or whoever it is.... That's what the City is driving them [to], and saying this is what you must have, and there in many cases are no legitimate entities out there, MBE, FBE, whatever you're trying to achieve. There are no legitimate entities out there that have the size and the wherewithal to handle these projects. If your goal is 25 or 30 percent on some type of a construction contract and you got a 30 million dollar contract, that's a hell of a lot of money. And you can set up that little shell company with your relatives in it because that's a sizable contract.

You get passthroughs that are almost boiler room type operations where I don't even know if they have an office. They probably have a fax and a phone and that's it.... I don't think it's really what the City has in mind when they're trying to further their goals.... All that does is actually a negative effect by doing nothing more than adding ten percent

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to the cost of this particular segment of the product and it costs your taxpayers more money.

### **7. Waivers of goals**

In response to these issues, several participants stated that they had been able to obtain waivers of goals based upon having made good faith efforts to meet them.

On my Schedule 4 sheet that says why you didn't meet your goal I say, you got \$150,000 worth of [scope of work] but there isn't a minority in the world that does it [and I received a waiver].... But why are they putting [an unattainable goal] on there in the first place?

You try to substitute with another minority firm.

Professional services firms, where the procurement process is qualifications based and therefore somewhat subjective, were reluctant to seek waivers.

[We don't seek waivers because] we wanted to have a chance of winning the project. They say they're goals ... but you have to meet them.

It's tough sometimes trying to meet those requirements. And so as you pointed out it's a goal but you better meet it. So, oftentimes you get people on your team that aren't necessarily bringing value to the project but you had to meet a requirement.... You could end up redoing work.

We tried to get the additional work under the new [10 percent goal] requirement. But they went back to the City and they said since the original agreement was with 38 [percent goal], they made us do the 38.... They weren't willing to waive that.

### **8. Contract Performance Monitoring and Enforcement**

Finally, concerns were raised about how the City monitors and enforces compliance with M/FBE requirements. M/WBEs and even some non-M/WBEs were concerned about the strength of the post-award monitoring process.

I'm not sure the City really tracks after the fact.

There's not enough compliance officers ... come out and make sure that what you're saying is true and that you're compliant with what the intention of the program.

[The City should] make a commitment to be more engaged, which means them having someone inside a particular department who is responsible for that particular project even on a day-to-day basis if it's a big enough project.

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Several certified firms reported that while they had been listed on the bid documents, they were substituted later or did not receive full payment.

There was a 20 percent goal for DBE businesses.... After [the general contractor] got the job, seven of those [sub]contractors, including myself, were replaced by other people that were not FBE, MBE certified.

The larger companies are getting the contracts, we are bidding, our names, our company names are being used to be awarded the contract, but still yet we're not being paid.

If there is some financial penalty to a contractor that names a minority contractor at time of bid, they're awarded the contract for using that name [but do not use the MBE], it would change some things.... If he doesn't use him, they should be financially penalized. But if there's no penalty, they don't care.

[The City] changed [its] subcontracting policies in Section 188 where if you do change somebody, if you do remove somebody that was on the Schedule 3 [Utilization Plan], there's ramifications.

The first approach [when the utilization plan is submitted] is excellent, if you want this, you have to do this. And that's excellent. But ... then we're left with nothing. You need to have them say if you don't follow through we're going to drop the bid.

The City has got to monitor that when they pay the primes, the primes are paying you and they will not get paid until they get a letter from the prime signed by you that you were paid on time.

There are a number of companies that come through and they bid. They'll put our name on a bid and then they won't use us.... If you give them your name one time, they'll just use you for another one. They keep using you. They don't give you any work. They don't. So we called the OEO department about this and we've complained. But, you know, I understand the City being in the position that they're in they need the goods, they want the lower price, sometimes they you know, overlook what they set out to do.

Those gals up there [in OEO] are awesome. They will do anything to help you get certified. But that's where it stops. It's like the right arm doesn't know that the left arm is in the same building.

### **9. Mentor-Protégé Initiatives**

There was significant support among general contractors for mentor-protégé initiatives.

ODOT has a Mentor-Protégé Program and we've been involved with that and I think usually they kind of team me up with a protégé firm. It's a two year program.... And it's



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been fine. I mean, we try to give them the experience. They were looking to try and get some experience in the area of bridge design. And we worked with them in that area.

Mentoring is a huge part of our business.

We're really pushing mentor-protégé. One of the things that we find is that a lot of the contractors just don't have all the skills it takes to run a company. They may have the physical skills. But they're not good manager people, they're not good estimators, etc. One of the things we find just from our business is that money management is something they have a very difficult time with. They really don't know when they're in trouble. They don't know, we think they have a great estimate because they're pretty close to somebody else. But whether they're managing properly. So I think training is a big issue. And unless they go through some certified training, not just in trade work but also in management skills, I don't see them growing. I just can't see them surviving without getting the skills that we all need to run our business.

I think the mentor-protégé thing is already happening on an informal basis. When we opened our office here in Cleveland we reached out to another firm and said hey, what do we need to do to be successful here in Cleveland? And that firm, an individual from that [MBE] firm, was really helpful in getting us set up. And I think, you know, we're giving back to others that have moved into town that we know that opened new offices for a company. And it happens anyway. But to formalize it, I don't know you know, how necessary that is. It certainly could be helpful.

[The protégé] did a great job in the sense of ... they actually spent the time, the money and the effort and all that [on drafting the proposal].... There were just a couple issues in the sense of them being smaller.

The mentor firm can help with some of that secretarial sort of stuff to put the proposals together as you're chasing them. You would still be the lead I think in the mentor-protégé, but we have a lot of support to help get that stuff moving.

There needs to be an annual or a series of get-togethers for firms that are like each other to learn from each other and then also, and I think this needs to be sponsored by the City, there needs to be attendees from the City there to understand what the issues are for those like firms or like vendors.... Maybe part of that get-together would be the mentor-protégé [program].

### **10. CSB Set-asides**

Many participants, both M/WBEs and non-certified firm owners, supported the concept of setting aside some smaller contracts for bidding solely by CSBs.

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You're never going to be able to compete with a bunch of firms if you don't ever learn how to compete. So maybe there's a platform whereby that competition can happen but on a smaller scale.... Then you grow from that.

### **C. Conclusion**

The interviews strongly suggest that Cleveland's current M/FBE measures are reasonable and have some effect on reducing barriers to M/FBE participation. However, improvements to the overall programs, as well as more general areas of city procurement policies such as contract size and complexity; payment; and bonding would be helpful to increase opportunities for all firms. Further, consideration of a mentor-protégé program, additional supportive services and adoption of a small business set-aside or target market would positively impact inclusion in City contracts and subcontracts.

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## Appendix A. Glossary

**ACS.** *The American Community Survey.* The Census Bureau’s ACS is an ongoing survey covering the same type of information collected in the decennial census. The ACS is sent to approximately 3 million addresses annually, including housing units in all counties in the 50 states and the District of Columbia.

**African American:** Or “Black” refers to an individual having origins in any of the Black racial groups of Africa.

**Aggregation, aggregated:** Refers to the practice of combining smaller groups into larger groups. In the present context, this term is typically used in reference to the presentation of utilization, availability, or related statistics according to industry. For example, statistics presented for the “Construction” sector as a whole are more aggregated than separate statistics for “Building Construction,” “Heavy Construction,” and Special Trades Construction” industries. See also “Disaggregation, disaggregated.”

**Anecdotal evidence:** Qualitative data regarding business owners’ accounts of experiences with disparate treatment and other barriers to business success.

**Asian or Asian/Pacific Islander:** Refers to an individual having origins in the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islanders (except Native Hawaiians).

**Availability:** A term of art in disparity studies that refers to the percentage of a given population of businesses owned by one or more groups of interest. For example, Table A indicates that M/WBE availability in Construction is between 17.01 and 17.20 percent (depending on whether award dollar weights or paid dollar weights are used), indicating our estimate that between 17.01 and 17.20 percent of all the construction establishments in the City of Cleveland’s relevant market area are owned by minorities or women. *See also* Utilization, Disparity Ratio.

**Baseline Business Universe:** The underlying population of business establishments that is used in an availability analysis. It is used as the denominator in a M/WBE availability measure.

**Black:** Or “African American” refers to an individual having origins in any of the Black racial groups of Africa.

**Capacity:** This term has no single definition. See Chapters II and IV for extended discussions of this concept and its role in disparity studies.

**Constitutional significance or substantive significance:** An indication of how large or small a given disparity is. Under the EEOC’s “four-fifths” rule, a disparity ratio is substantively significant if it is 0.8 or less on a scale of 0 to 1 or 80 or less on a scale of 1 to 100.

**Decennial:** Refers to the census conducted every decade by the U.S. Census Bureau. The last decennial census was conducted in 2010.

**Demand-side:** Refers to activity on the demand-side of an economic market. For example, when State agencies hire contractors or vendors they are creating market demand. *See also* “Supply-side.”

**Dependent variable:** In a regression analysis, a variable whose value is postulated to be influenced by one or more other “independent” or “exogenous” or “explanatory” variables. For example, in business owner earnings regressions, business owner earnings is the dependent variable, and other variables, such as industry, geographic location, or age, are the explanatory variables. *See also* “Independent variable,” “Exogenous variable.”

**Disaggregation, disaggregated:** Refers to the practice of splitting larger groups into smaller groups. In the present context, this term is typically used in reference to the presentation of utilization, availability, or related statistics according to industry. For example, statistics presented for “Building Construction,” “Heavy Construction,” and “Special Trades Construction” industries are more disaggregated than statistics for the “Construction” sector as a whole.

**Disparate impact:** A synonym for “disparity,” often used in the employment discrimination litigation context. A disparate impact occurs when a “good” outcome for a given group occurs significantly less often than expected given that group’s relative size, or when a “bad” outcome occurs significantly more often than expected.

**Disparity ratio (or Disparity Index):** A measure derived from dividing utilization by availability and multiplying the result by 100. A disparity ratio of less than 100 indicates that utilization is less than availability. A disparity ratio of 80 or less can be taken as evidence of disparate impact. *See also* Availability, Constitutional significance, Utilization.

**Distribution.** A set of numbers and their frequency of occurrence collected from measurements over a statistical population.

**Econometrics, econometrically:** Econometrics is the field of economics that concerns itself with the application of statistical inference to the empirical measurement of relationships postulated by economic theory. *See also* “Regression.”

**Endogenous variable:** A variable that is correlated with the residual in a regression analysis or equation. Endogenous variables should not be used in statistical tests for the presence of disparities. *See also* “Exogenous variable.”

**Exogenous variable:** A variable that is uncorrelated with the residual in a regression analysis or equation. Exogenous variables are appropriate for use in statistical tests for the presence of disparities. *See also* “Endogenous variable,” “Independent variable,” “Dependent variable.”

**FFY:** Fiscal Year. The City of Cleveland’s Fiscal Year runs from January 1 through December 31.

**First-tier subcontractors:** Subcontractors, subconsultants, or suppliers hired directly by the prime contractor.

**Hispanic:** Refers to an individual of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

**Independent variable:** In a regression analysis, one or more variables that are postulated to influence or explain the value of another, “dependent” variable. For example, in business owner earnings regressions, business owner earnings is the dependent variable, and other variables, such as industry, geographic location, or age, are the independent or explanatory variables. *See also* “Dependent variable,” “Exogenous variable.”

**MBE:** Minority-Owned Business Enterprise. A business establishment that is 51 percent or more owned and controlled by racial or ethnic minorities (i.e., African Americans, Hispanics, Asian/Pacific Islanders, or Native Americans).

**Mean:** A term of art in statistics, synonymous in this context with the arithmetic average. For example, the mean value of the series 1, 1, 2, 2, 2, 4, 5 is 2.43. This is derived by calculating the sum of all the values in the series (i.e., 17) and dividing that sum by the number of elements in the series (i.e., 7).

**Median:** A term of art in statistics, meaning the middle value of a series of numbers. For example, the median value of the series 1, 1, 2, 2, 2, 4, 5 is 2.

**Microdata or micro-level data:** Quantitative data rendered at the level of the individual person or business, as opposed to data rendered for groups or aggregates of individuals or businesses. For example, Dun and Bradstreet provides micro-level data on business establishments. The Census Bureau’s *Survey of Business Owners*, provides grouped or aggregated data on businesses.

**Misclassification:** In the present context, this term refers to a situation when a listing or directory of minority-owned or women-owned firms has incorrectly classified a firm’s race or gender status. For example, when a firm listed as Hispanic-owned is actually African American-owned, or when a firm listed as nonminority female-owned is actually nonminority male-owned. *See also* “Nonclassification.”

**MSA:** Metropolitan Statistical Area. As defined by the federal Office of Management and Budget, contains at least one urbanized area that has a total population of 50,000 or more, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.

**NAICS:** North American Industry Classification System. The standard system for classifying industry-based data in the U.S. Superseded the Standard Industrial Classification (SIC) System in 1997. *See also* “SIC.”

**Nonclassification:** In the present context, this term refers to a type of misclassification when a listing or directory has not identified firms as minority-owned or women-owned when, in fact, they are. *See* “Misclassification.”

**NSSBF or SSBF.** The *Survey of Small Business Finances*, formerly the *National Survey of Small Business Finances*, was produced jointly by the Federal Reserve Board and the U.S. Small Business Administration to provide a periodic statistical picture of small business finances. The SSBF was discontinued in 2003.

**Native American:** Refers to an individual having origins in any of the original peoples of North America, including Native Hawaiians.

**Nonminority:** Firms that are not M/WBEs, i.e., not owned by African Americans, Hispanics, Asian/Pacific Islanders, Native Americans, or White females.

**PUMS:** Public Use Microdata Sample. Both the decennial census and the American Community Survey publish PUMS products.

**p-value:** A standard measure used to represent the level of statistical significance. It states the numerical probability that the stated relationship is due to chance alone. For example, a p-value of 0.05 or 5 percent indicates that the chance a given statistical difference is due purely to chance is 1-in-20. *See also* “Statistical Significance.”

**Regression, multiple regression, multivariate regression:** A type of statistical analysis which examines the correlation between two variables (“regression”) or three or more variables (“multiple regression” or “multivariate regression”) in a mathematical model by determining the line of best fit through a series of data points. Econometric research typically employs regression analysis. *See also* “Econometrics.”

**SBO:** The Census Bureau’s *Survey of Business Owners* statistical data series is devoted to capturing statistical information on the nation’s minority-owned and women-owned business enterprises. Part of the five-year *Economic Census* series.

**Set-aside, set-asides:** A contracting practice where certain contracts or classes of contracts are reserved for competitive bidding exclusively among a given subset of contractors, for example minority-owned and women-owned contractors.

**SIC:** Standard Industrial Classification system. Prior to 1997, the standard system for classifying industry-based data in the U.S. Superseded by the North American Industry Classification System (NAICS). *See also* “NAICS.”

**Statistical significance:** A statistical outcome or result that is unlikely to have occurred as the result of random chance alone. The greater the statistical significance, the smaller the probability that it resulted from random chance alone. *See also* “p-value.”

**SSBF.** *See* NSSBF.

**Stratified:** In the present context, this refers to a statistical practice where random samples are drawn within different categories or “strata” such as time period, industry sector, or M/WBE status.

**Substantive significance or constitutional significance:** An indication of how large or small a given disparity is. Under the EEOC’s “four-fifths” rule, a disparity ratio is substantively significant if it is 0.8 or less on a scale of 0 to 1.

**Supply-side:** Refers to activity on the supply-side of an economic market. For example, when new businesses are formed, other things equal, the supply of contractors to the market is increased. See also “Demand-side.”

**t-test, t-statistic, t-distribution:** Often employed in disparity studies to determine the statistical significance of a particular disparity statistic. A t-test is a statistical hypothesis test based on a test statistic whose sampling distribution is a t-distribution. Various t-tests, strictly speaking, are aimed at testing hypotheses about populations with normal probability distributions. However, statistical research has shown that t-tests often provide quite adequate results for non-normally distributed populations as well.

**Two-tailed (or two-sided) statistical test:** A “two-tailed” test means that one is testing the hypothesis that two values, say  $u$  (utilization) and  $a$  (availability), are equal against the alternate hypothesis that  $u$  is not equal to  $a$ . In contrast, a one-sided test means that you are testing the hypothesis that  $u$  and  $a$  are equal against the alternate hypothesis  $u$  is not equal to  $a$  in only one direction. That is, that it is either larger than  $a$  or smaller than  $a$ .

**Utilization:** A term of art in disparity studies that refers to the percentage of a given amount of contracting and/or procurement dollars that is awarded or paid to businesses owned by one or more groups of interest. For example, Table B1 indicates that overall M/WBE utilization on all contracts was 19.21 percent of award dollars, indicating we found that 19.21 percent of the \$1.16 billion of contract awards by the City of Cleveland accrued to minorities or women, either as prime contractors or as first-tier subcontractors or suppliers. *See also* Availability, Disparity Ratio.

**WBE:** Women-Owned Business Enterprise: A business establishment that is 51 percent or more owned and controlled by nonminority women. In this Study, unless otherwise indicated, WBE refers to nonminority women-owned firms.

**ENC:** Refers to the East North Central division in the NSSBF and SSBF data sets. The East North Central region includes the states of Ohio, Illinois, Indiana, Michigan, and Wisconsin.

## Appendix B. Master M/WBE Directory Sources

### A. Entities with lists of M/WBE firms that were duplicative of previously collected lists

Akron Small Business Development Center	Greater Dayton Regional Transit Authority
Allegheny County	Indiana UCP
Central Ohio Minority Business Association	Ink Newspaper
Central Ohio Transit Authority	Michigan UCP
Central Ohio Women's Business Center	Minority Business Solutions
City of Dayton	Montgomery County
City of Pittsburgh	Ohio Minority Business Enterprise Division, The
Cleveland Hopkins International Airport	Ohio State University
Cleveland Metropolitan School District	Pennsylvania Dept. of Transportation
Columbus Regional Airport Authority	Port Authority of Allegheny County
Delaware County	Southeastern Pennsylvania Transportation Authority
Delaware County Regional Sewer District	Southwest Ohio Regional Transit Authority
Detroit Department of Transportation	Suburban Mobility Authority for Regional Transportation
Detroit Metropolitan Wayne County Airport	Warren County
Fort Wayne International Airport	Wayne County
Geauga County	Wells County
Greater Cleveland Regional Transit Authority	

### B. Entities that had no directory, or their directory did not identify race and gender

Allen County, Indiana	Blacks in Management
Allen County, Ohio	Boone County
American Business Women's Association (ABWA)	Carroll County
Ashtabula Small Business Development Center	Chinese Women Association of Cleveland
Asian American Association	City of Ann Arbor
Black Business Men Coalition	City of Cleveland Heights
	City of Elyria



## Appendix B. Master M/WBE Directory Sources

City of Mansfield	Minority Professionals Network
City of Mentor	Entrepreneurship
City of Middletown	Morrow County
Clark County	MWBE Enterprises Inc
Clermont County	North Central Small Business Development Center
Council of Smaller Enterprises	Oakland County
Dearborn County	Ohio Capital Access Program, The
Detroit Black Pages	Ohio Laborers' District Council
El Barrio	Pendleton County
Esperanza, Inc	Pickaway County
Fairfield County	Southwest Licking Community Water and Sewer District
Franklin County	Union County
Fulton County	Urban League of Greater Cleveland
Gallatin County	Cherokee Nation, Career Services, Tribal Employment Rights Office (TERO)
Grant County	Northwest Small Business Development Center, Maumee Valley Planning Organization
Greater Cleveland Partnership's Commission on Economic Inclusion	City of Detroit
Greater Warren-Youngstown Urban League	City of Toledo
Hard Hatted Women	Cuyahoga County
Heath-Newark-Licking County Port Authority	Cuyahoga Metropolitan Housing Authority SDB Coordinator
Hispanic Business Association - Cleveland	Greater Dayton Hispanic Chamber of Commerce
HNTB	Hamilton County
Kenton County	Wire-Net
Licking County	Wood County
Lorain County	Cleveland Clinic, The
Macomb County	Kent State University
Madison County	
Miami County	
Minority Contractors and Business Assistance Program	

**C. Entities that were unresponsive to repeated contacts**

African American Business Directory	Lucas County
Brown County	Mahoning County
Butler County	Medina County
City of Erie	Northern Ohio Minority Business Council
City of Youngstown	Northwestern Water & Sewer District
Consortium of African-American Organizations	Ohio Asian American Chamber of Commerce
Dayton Airport	Ohio Commission on Hispanic/Latino Affairs
Earnhart Hill Regional Water & Sewer District	Ohio River Valley Women's Business Center
Fort Wayne Black Chamber of Commerce	Ohio Wesleyan University
Franklin County	Organization of Chinese Americans of Greater Cleveland
Glenville Development Corporation, Micro-Enterprise Program	Ottawa County
Hispanic Chamber Cincinnati	
Lake County	
Lake County Port Authority	

**D. Entities that refused to provide the requested information**

South Central Ohio Minority Supplier Development Council	Greater Cleveland African American Chamber of Commerce
Tuscarawas Small Business Development Center	Hispanic Alliance
City of Buffalo	Minority Business Accelerator
Akron Urban League	National Association of Women in Construction
Campbell County	Northern Ohio Minority Supplier Development Council

## **Appendix C. Detailed Utilization, Availability & Disparity Tables**

This appendix presents M/WBE and DBE utilization, availability, and disparity statistics analogous to those presented in Chapter VII, Tables 7.21 through 7.30, according to detailed NAICS Industry Groups.<sup>335</sup>

Forty tables are presented in this appendix; ten each for Construction, AE-CRS, Services, and Commodities, respectively. Each table is presented in pairs: the first using dollars awarded as the metric of utilization and the second using dollars paid. Tables are presented showing All Funds, Federal Funds, Local Funds, Major Procurements, and Minor Procurements.

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<sup>335</sup> Comparable statistics were calculated at the NAICS Industry level as well (five-digit and six-digit NAICS). In the interest of space, these results are not reported here. Four-digit NAICS codes are most comparable to four-digit Standard Industrial Classification (SIC) codes, which were used prior to the advent of the NAICS system.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.1. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Construction Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	4.76	2.78	
Hispanic	0.00	0.19	1.43 ***
Asian	4.01	0.04	
Native American	0.00	1.19	0.00 ***
Minority	8.77	4.20	
Nonminority female	5.36	16.26	32.95 ***
M/WBE Total	14.13	20.46	69.05
Building Equipment Contractors (NAICS 2382)			
African American	14.46	3.34	
Hispanic	10.52	0.15	
Asian	8.09	0.22	
Native American	0.00	1.27	0.00 ***
Minority	33.07	4.98	
Nonminority female	6.70	15.90	42.17 **
M/WBE Total	39.78	20.88	
Utility System Construction (NAICS 2371)			
African American	2.57	1.45	
Hispanic	0.00	0.00	
Asian	4.55	0.00	
Native American	0.00	0.00	
Minority	7.12	1.45	
Nonminority female	2.52	12.24	20.61 ***
M/WBE Total	9.64	13.68	70.48
Residential Building Construction (NAICS 2361)			
African American	13.01	2.77	
Hispanic	1.21	1.65	72.98
Asian	0.00	0.02	0.00
Native American	0.00	0.81	0.00 ***
Minority	14.22	5.26	
Nonminority female	0.90	8.29	10.84 ***
M/WBE Total	15.12	13.55	
Nonresidential Building Construction (NAICS 2362)			
African American	2.36	4.66	50.56
Hispanic	0.09	2.09	4.43
Asian	0.22	0.15	
Native American	0.00	0.92	0.00 ***
Minority	2.67	7.83	34.12

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	4.21	11.15	37.79
M/WBE Total	6.88	18.98	36.28
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	15.93	3.05	
Hispanic	2.39	0.15	
Asian	0.15	0.00	
Native American	12.94	1.56	
Minority	31.41	4.76	
Nonminority female	2.71	16.93	16.03 ***
M/WBE Total	34.12	21.69	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	4.83	5.91	81.70
Hispanic	0.00	0.95	0.00 ***
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	4.83	6.87	70.37
Nonminority female	1.14	11.73	9.71 ***
M/WBE Total	5.97	18.59	32.11 ***
Building Finishing Contractors (NAICS 2383)			
African American	6.06	3.01	
Hispanic	2.70	0.13	
Asian	0.00	0.00	
Native American	0.00	1.20	0.00 ***
Minority	8.76	4.34	
Nonminority female	25.96	16.53	
M/WBE Total	34.72	20.87	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	66.95	4.53	
Hispanic	0.00	0.14	0.00
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	66.95	4.75	
Nonminority female	23.95	22.43	
M/WBE Total	90.90	27.18	
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	3.31	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	3.31	0.00
Nonminority female	0.00	11.49	0.00 ***
M/WBE Total	0.00	14.81	0.00 ***
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	1.80	2.71	66.36
Hispanic	0.00	0.02	0.00
Asian	0.00	0.59	0.00 ***
Native American	0.00	0.00	
Minority	1.80	3.32	54.21
Nonminority female	22.76	18.43	
M/WBE Total	24.56	21.75	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	2.93	0.00 ***
Hispanic	0.00	1.03	0.00 ***
Asian	11.48	2.34	
Native American	0.00	0.03	0.00
Minority	11.48	6.33	
Nonminority female	15.47	15.17	
M/WBE Total	26.94	21.50	
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	2.54	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.54	0.00 ***
Nonminority female	0.00	21.66	0.00 ***
M/WBE Total	0.00	24.21	0.00 ***
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.19	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.19	0.00
Native American	0.00	0.00	
Minority	0.00	4.39	0.00 ***
Nonminority female	0.00	27.05	0.00 ***
M/WBE Total	0.00	31.43	0.00 ***
General Freight Trucking (NAICS 4841)			
African American	86.81	7.63	
Hispanic	0.00	0.31	0.00 ***
Asian	0.00	0.16	0.00 ***
Native American	0.00	0.06	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	86.81	8.15	
Nonminority female	12.49	18.87	66.18
M/WBE Total	99.30	27.02	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.72	0.00 ***
Hispanic	0.00	0.25	0.00 ***
Asian	0.00	0.31	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.28	0.00 ***
Nonminority female	5.03	20.08	25.04 ***
M/WBE Total	5.03	23.36	21.53 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	34.58	3.98	
Hispanic	0.00	0.15	0.00 ***
Asian	0.00	0.07	0.00
Native American	0.00	0.24	0.00 ***
Minority	34.58	4.43	
Nonminority female	49.97	21.37	
M/WBE Total	84.55	25.80	
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	2.30	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00 ***
Nonminority female	99.74	27.44	
M/WBE Total	99.74	29.96	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	3.38	0.00 ***
Hispanic	0.00	0.05	0.00 ***
Asian	0.00	0.16	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.59	0.00 ***
Nonminority female	0.00	18.89	0.02 ***
M/WBE Total	0.00	22.47	0.01 ***
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.17	0.00
Asian	0.00	0.99	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	4.08	0.00 ***
Nonminority female	58.64	20.66	
M/WBE Total	58.64	24.74	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	78.00	2.81	
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	78.00	4.12	
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	78.00	23.88	
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00
M/WBE Total	0.00	9.86	0.00
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.59	0.00 ***
Hispanic	0.00	0.14	0.00 ***
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.11	0.00 ***
Nonminority female	2.62	19.31	13.55 ***
M/WBE Total	2.62	23.42	11.17 ***
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	2.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.18	0.00
Native American	0.00	0.00	
Minority	0.00	2.57	0.00
Nonminority female	0.00	25.66	0.00 ***
M/WBE Total	0.00	28.22	0.00 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	4.71	0.74	
Hispanic	0.00	0.20	0.00 ***



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	1.31	0.00 ***
Native American	0.00	1.24	0.00 ***
Minority	4.71	3.49	
Nonminority female	0.00	14.06	0.00 ***
M/WBE Total	4.71	17.55	26.82 **
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	4.74	0.69	
Hispanic	0.00	0.14	0.00
Asian	0.00	1.36	0.00 ***
Native American	0.00	1.26	0.00 ***
Minority	4.74	3.45	
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	4.74	16.83	28.14
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	2.68	0.00
Hispanic	0.00	0.71	0.00
Asian	0.00	0.73	0.00
Native American	0.00	0.00	
Minority	0.00	4.12	0.00
Nonminority female	0.00	17.52	0.00 ***
M/WBE Total	0.00	21.65	0.00 ***
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	6.64	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.88	0.00
Native American	0.00	0.00	
Minority	0.00	8.52	0.00
Nonminority female	0.00	16.04	0.00
M/WBE Total	0.00	24.56	0.00 ***
Investigation and Security Services (NAICS 5616)			
African American	91.41	4.97	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	91.41	5.00	
Nonminority female	0.00	19.32	0.00 ***
M/WBE Total	91.41	24.31	
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00 ***
Nonminority female	0.00	20.40	0.00 ***
M/WBE Total	0.00	23.69	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.29	0.00 ***
Hispanic	0.00	0.20	0.00 ***
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.87	0.00 ***
Nonminority female	64.31	19.18	
M/WBE Total	64.31	23.05	
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	1.49	0.00	
Minority	1.49	4.30	34.54
Nonminority female	52.17	21.36	
M/WBE Total	53.66	25.66	
Remediation and Other Waste Management Services (NAICS 5629)			
African American	1.41	16.79	8.41 ***
Hispanic	0.00	0.00	
Asian	1.89	0.00	
Native American	0.00	0.00	
Minority	3.30	16.79	19.67 ***
Nonminority female	9.09	17.48	51.96 *
M/WBE Total	12.39	34.27	36.14 ***
Specialized Freight Trucking (NAICS 4842)			
African American	97.05	8.04	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	97.05	8.10	
Nonminority female	1.79	20.63	8.69 ***
M/WBE Total	98.85	28.72	
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	1.39	3.02	45.97

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	1.39	3.10	44.76
Nonminority female	0.22	20.89	1.04 ***
M/WBE Total	1.60	23.99	6.69 ***
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00 ***
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	23.85	0.00 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	1.76	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.45	0.00 ***
Native American	0.00	0.00	
Minority	0.00	2.21	0.00 ***
Nonminority female	0.00	38.24	0.00 ***
M/WBE Total	0.00	40.45	0.00 ***
Foundries (NAICS 3315)			
African American	0.00	2.82	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 **
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	57.63	2.38	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	57.63	2.38	
Nonminority female	2.16	21.34	10.12 ***
M/WBE Total	59.79	23.73	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	3.31	0.00 ***
Hispanic	10.99	0.75	
Asian	0.00	1.04	0.00 ***
Native American	0.00	0.10	0.00
Minority	10.99	5.19	
Nonminority female	0.00	18.19	0.00 ***
M/WBE Total	10.99	23.38	47.00
Land Subdivision (NAICS 2372)			
African American	18.75	2.13	
Hispanic	0.00	0.52	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	18.75	2.65	
Nonminority female	0.00	10.82	0.00 ***
M/WBE Total	18.75	13.48	
Other Support Services (NAICS 5619)			
African American	41.86	3.46	
Hispanic	0.00	0.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.74	0.00
Minority	41.86	4.55	
Nonminority female	2.12	27.47	7.73 ***
M/WBE Total	43.98	32.03	
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	4.76	0.00 ***
Hispanic	0.00	2.13	0.00
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	6.92	0.00 ***
Nonminority female	0.00	17.39	0.00 ***
M/WBE Total	0.00	24.31	0.00 ***
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	2.29	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.21	0.00
Native American	0.00	0.00	
Minority	0.00	2.50	0.00 ***
Nonminority female	91.74	27.79	
M/WBE Total	91.74	30.29	
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
M/WBE Total	100.00	30.30	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	3.89	1.69	
Hispanic	0.00	0.70	0.00
Asian	0.00	0.71	0.00
Native American	0.00	0.03	0.00
Minority	3.89	3.13	
Nonminority female	26.02	15.62	
M/WBE Total	29.91	18.75	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	8.82	0.00 ***
Hispanic	0.00	2.06	0.00 ***
Asian	0.00	0.11	0.00
Native American	0.00	2.94	0.00 ***
Minority	0.00	13.93	0.00 ***
Nonminority female	0.00	16.49	0.00 ***
M/WBE Total	0.00	30.42	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.2. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Construction Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	4.85	2.77	
Hispanic	0.00	0.19	1.68 ***
Asian	4.46	0.03	
Native American	0.00	1.19	0.00 ***
Minority	9.31	4.19	
Nonminority female	3.82	16.25	23.48 ***
M/WBE Total	13.13	20.44	64.23
Building Equipment Contractors (NAICS 2382)			
African American	14.35	3.38	
Hispanic	9.28	0.15	
Asian	7.54	0.23	
Native American	0.00	1.27	0.00 ***
Minority	31.18	5.03	
Nonminority female	7.54	15.99	47.18 *
M/WBE Total	38.72	21.02	
Residential Building Construction (NAICS 2361)			
African American	8.94	2.76	
Hispanic	1.37	1.65	83.07
Asian	0.00	0.02	0.00
Native American	0.00	0.81	0.00 ***
Minority	10.31	5.24	
Nonminority female	0.91	8.26	10.98 ***
M/WBE Total	11.21	13.50	83.08
Nonresidential Building Construction (NAICS 2362)			
African American	2.06	4.80	42.93
Hispanic	0.11	2.00	5.72
Asian	0.27	0.17	
Native American	0.00	0.92	0.00 ***
Minority	2.45	7.89	31.01
Nonminority female	3.81	11.10	34.34
M/WBE Total	6.26	18.99	32.96
Utility System Construction (NAICS 2371)			
African American	3.09	1.45	
Hispanic	0.00	0.00	
Asian	5.71	0.00	
Native American	0.00	0.00	
Minority	8.80	1.45	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	3.84	12.24	31.35 **
M/WBE Total	12.64	13.68	92.34
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	13.72	2.91	
Hispanic	3.37	0.13	
Asian	0.20	0.00	
Native American	18.15	1.69	
Minority	35.44	4.73	
Nonminority female	2.96	17.37	17.02 ***
M/WBE Total	38.40	22.10	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	1.28	5.91	21.60 *
Hispanic	0.00	0.95	0.00 ***
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	1.28	6.87	18.60 **
Nonminority female	1.56	11.73	13.26 ***
M/WBE Total	2.83	18.59	15.23 ***
Building Finishing Contractors (NAICS 2383)			
African American	7.10	2.96	
Hispanic	3.64	0.12	
Asian	0.00	0.00	
Native American	0.00	1.20	0.00 ***
Minority	10.74	4.29	
Nonminority female	18.57	16.53	
M/WBE Total	29.31	20.82	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	59.26	4.57	
Hispanic	0.00	0.12	0.00
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	59.26	4.77	
Nonminority female	31.78	22.40	
M/WBE Total	91.04	27.18	
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	3.31	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	3.31	0.00
Nonminority female	0.00	11.49	0.00 ***
M/WBE Total	0.00	14.81	0.00 ***
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.19	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.19	0.00
Native American	0.00	0.00	
Minority	0.00	4.39	0.00
Nonminority female	0.00	27.05	0.00 ***
M/WBE Total	0.00	31.43	0.00 ***
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	2.00	2.72	73.47
Hispanic	0.00	0.02	0.00
Asian	0.00	0.58	0.00 ***
Native American	0.00	0.00	
Minority	2.00	3.31	60.21
Nonminority female	14.19	18.43	77.01
M/WBE Total	16.18	21.74	74.44
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	2.53	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.53	0.00 ***
Nonminority female	0.00	22.22	0.00 ***
M/WBE Total	0.00	24.74	0.00 ***
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	2.88	0.00 ***
Hispanic	0.00	1.03	0.00 ***
Asian	13.58	2.27	
Native American	0.00	0.03	0.00
Minority	13.58	6.21	
Nonminority female	17.56	15.15	
M/WBE Total	31.13	21.36	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.71	0.00 ***
Hispanic	0.00	0.25	0.00
Asian	0.00	0.31	0.00



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	3.28	0.00 ***
Nonminority female	5.83	20.08	29.02 ***
M/WBE Total	5.83	23.36	24.95 ***
General Freight Trucking (NAICS 4841)			
African American	79.54	7.74	
Hispanic	0.00	0.29	0.00 ***
Asian	0.00	0.17	0.00
Native American	0.00	0.03	0.00
Minority	79.54	8.23	
Nonminority female	19.70	18.68	
M/WBE Total	99.24	26.91	
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	2.30	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00 **
Nonminority female	99.73	27.44	
M/WBE Total	99.73	29.96	
Services to Buildings and Dwellings (NAICS 5617)			
African American	32.06	3.87	
Hispanic	0.00	0.13	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.23	0.00
Minority	32.06	4.30	
Nonminority female	46.25	21.29	
M/WBE Total	78.30	25.58	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	3.42	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.18	0.00 **
Native American	0.00	0.00	
Minority	0.00	3.65	0.00 ***
Nonminority female	0.00	18.84	0.02 ***
M/WBE Total	0.00	22.49	0.02 ***
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.16	0.00
Asian	0.00	0.99	0.00 **

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	4.07	0.00 ***
Nonminority female	60.31	20.65	
M/WBE Total	60.31	24.71	
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	2.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.18	0.00
Native American	0.00	0.00	
Minority	0.00	2.57	0.00
Nonminority female	0.00	25.66	0.00 ***
M/WBE Total	0.00	28.22	0.00 ***
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.59	0.00 ***
Hispanic	0.00	0.14	0.00 **
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.11	0.00 ***
Nonminority female	1.26	19.31	6.50 ***
M/WBE Total	1.26	23.42	5.36 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	4.87	0.74	
Hispanic	0.00	0.20	0.00 **
Asian	0.00	1.31	0.00 ***
Native American	0.00	1.24	0.00 ***
Minority	4.87	3.49	
Nonminority female	0.00	14.06	0.00 ***
M/WBE Total	4.87	17.55	27.78 **
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00
M/WBE Total	0.00	9.86	0.00
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	4.99	0.69	
Hispanic	0.00	0.14	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	1.36	0.00 **
Native American	0.00	1.26	0.00 **
Minority	4.99	3.45	
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	4.99	16.83	29.64
Investigation and Security Services (NAICS 5616)			
African American	92.98	4.97	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	92.98	5.00	
Nonminority female	0.00	19.32	0.00 ***
M/WBE Total	92.98	24.31	
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	6.64	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.88	0.00
Native American	0.00	0.00	
Minority	0.00	8.52	0.00
Nonminority female	0.00	16.04	0.00
M/WBE Total	0.00	24.56	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.29	0.00 ***
Hispanic	0.00	0.20	0.00
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.87	0.00 ***
Nonminority female	68.52	19.18	
M/WBE Total	68.52	23.05	
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	1.62	0.00	
Minority	1.62	4.30	37.74
Nonminority female	57.02	21.36	
M/WBE Total	58.64	25.66	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	37.72	2.81	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	37.72	4.12	
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	37.72	23.88	
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00 ***
Nonminority female	0.00	20.40	0.00 ***
M/WBE Total	0.00	23.69	0.00 ***
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	1.38	3.02	45.76
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	1.38	3.10	44.55
Nonminority female	0.22	20.89	1.04 ***
M/WBE Total	1.60	23.99	6.66 ***
Remediation and Other Waste Management Services (NAICS 5629)			
African American	1.99	16.79	11.85 ***
Hispanic	0.00	0.00	
Asian	2.66	0.00	
Native American	0.00	0.00	
Minority	4.65	16.79	27.71 ***
Nonminority female	12.46	17.48	71.28
M/WBE Total	17.12	34.27	49.94 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	1.76	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.45	0.00 **
Native American	0.00	0.00	
Minority	0.00	2.21	0.00 ***
Nonminority female	0.00	38.24	0.00 ***
M/WBE Total	0.00	40.45	0.00 ***
Foundries (NAICS 3315)			

# Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Specialized Freight Trucking (NAICS 4842)			
African American	95.33	8.04	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	95.33	8.10	
Nonminority female	2.84	20.63	13.76 ***
M/WBE Total	98.17	28.72	
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	64.03	2.38	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	64.03	2.38	
Nonminority female	0.00	21.34	0.00 ***
M/WBE Total	64.03	23.73	
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00 ***
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	23.85	0.00 ***
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	4.76	0.00
Hispanic	0.00	2.13	0.00
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	6.92	0.00
Nonminority female	0.00	17.39	0.00 ***
M/WBE Total	0.00	24.31	0.00 ***
Land Subdivision (NAICS 2372)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	11.93	2.13	
Hispanic	0.00	0.52	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	11.93	2.65	
Nonminority female	0.00	10.82	0.00 ***
M/WBE Total	11.93	13.48	88.53
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
M/WBE Total	100.00	30.30	

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.3. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Construction Contracting (Federal Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	0.64	4.87	13.10
Hispanic	0.00	1.96	0.00
Asian	0.00	0.18	0.00
Native American	0.00	0.92	0.00
Minority	0.64	7.92	8.05
Nonminority female	8.52	11.07	77.00
DBE Total	9.16	18.99	48.24
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.70	0.00 ***
Hispanic	6.76	0.17	
Asian	0.00	0.29	0.00
Native American	0.00	1.26	0.00
Minority	6.76	5.42	
Nonminority female	0.00	16.59	0.00 ***
DBE Total	6.76	22.02	30.72
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	2.71	0.00
Hispanic	0.00	0.19	0.00
Asian	32.83	0.02	
Native American	0.00	1.19	0.00
Minority	32.83	4.11	
Nonminority female	8.32	16.25	51.21
DBE Total	41.15	20.36	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	1.74	5.91	29.36
Hispanic	0.00	0.95	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	1.74	6.87	25.29
Nonminority female	3.14	11.73	26.76
DBE Total	4.87	18.59	26.21
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	2.45	2.71	90.38
Hispanic	0.00	0.02	0.00
Asian	0.00	0.59	0.00
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	2.45	3.32	73.83
Nonminority female	4.93	18.43	26.73
DBE Total	7.38	21.75	33.92
Residential Building Construction (NAICS 2361)			
African American	0.00	2.56	0.00
Hispanic	0.00	1.61	0.00
Asian	0.00	0.00	
Native American	0.00	0.83	0.00
Minority	0.00	5.00	0.00
Nonminority female	4.65	8.33	55.76
DBE Total	4.65	13.33	34.86 ***
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	6.50	3.69	
Hispanic	0.00	0.28	0.00
Asian	0.00	0.00	
Native American	2.54	1.17	
Minority	9.04	5.14	
Nonminority female	0.00	15.68	0.00 ***
DBE Total	9.04	20.82	43.41
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	2.90	0.00 ***
Hispanic	0.00	1.03	0.00 **
Asian	37.78	2.29	
Native American	0.00	0.03	0.00
Minority	37.78	6.25	
Nonminority female	43.31	15.16	
DBE Total	81.09	21.41	
General Freight Trucking (NAICS 4841)			
African American	100.00	7.74	
Hispanic	0.00	0.29	0.00
Asian	0.00	0.17	0.00
Native American	0.00	0.03	0.00
Minority	100.00	8.23	
Nonminority female	0.00	18.68	0.00 ***
DBE Total	100.00	26.91	
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	2.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.18	0.00
Native American	0.00	0.00	



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	2.57	0.00
Nonminority female	0.00	25.66	0.00 ***
DBE Total	0.00	28.22	0.00 ***
Utility System Construction (NAICS 2371)			
African American	0.00	1.45	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.45	0.00
Nonminority female	0.00	12.24	0.00
DBE Total	0.00	13.68	0.00
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	0.74	0.00
Hispanic	0.00	0.20	0.00
Asian	0.00	1.31	0.00
Native American	0.00	1.24	0.00
Minority	0.00	3.49	0.00 ***
Nonminority female	0.00	14.06	0.00 ***
DBE Total	0.00	17.55	0.00 ***
Building Finishing Contractors (NAICS 2383)			
African American	0.00	3.23	0.00
Hispanic	0.00	0.15	0.00
Asian	0.00	0.00	
Native American	0.00	1.20	0.00
Minority	0.00	4.58	0.00
Nonminority female	0.00	16.55	0.00 ***
DBE Total	0.00	21.13	0.00 ***
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	6.64	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.88	0.00
Native American	0.00	0.00	
Minority	0.00	8.52	0.00
Nonminority female	0.00	16.04	0.00
DBE Total	0.00	24.56	0.00
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	81.81	4.77	
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	81.81	4.85	
Nonminority female	18.19	22.29	81.64
DBE Total	100.00	27.14	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	2.78	0.00
Nonminority female	0.00	18.27	0.00 ***
DBE Total	0.00	21.05	0.00 ***
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
DBE Total	100.00	30.30	
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	3.47	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.20	0.00
Minority	0.00	3.81	0.00
Nonminority female	97.08	21.00	
DBE Total	97.08	24.81	
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	8.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	8.38	0.00
Nonminority female	100.00	18.36	
DBE Total	100.00	26.73	
Support Activities for Mining (NAICS 2131)			
African American	0.00	4.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	4.52	0.00
Nonminority female	0.00	25.97	0.00
DBE Total	0.00	30.49	0.00
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	6.07	0.00
Hispanic	0.00	1.74	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.81	0.00 ***
Nonminority female	0.81	19.49	4.16 ***
DBE Total	0.81	27.29	2.97 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.4. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Construction Contracting (Federal Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	0.66	4.87	13.57
Hispanic	0.00	1.96	0.00
Asian	0.00	0.18	0.00
Native American	0.00	0.92	0.00
Minority	0.66	7.92	8.33
Nonminority female	6.42	11.07	58.01
DBE Total	7.08	18.99	37.29
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.70	0.00 ***
Hispanic	6.60	0.17	
Asian	0.00	0.29	0.00
Native American	0.00	1.26	0.00
Minority	6.60	5.42	
Nonminority female	0.00	16.59	0.00 ***
DBE Total	6.60	22.02	29.97
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	2.72	0.00
Hispanic	0.00	0.19	0.00
Asian	37.38	0.02	
Native American	0.00	1.19	0.00
Minority	37.38	4.12	
Nonminority female	9.40	16.25	57.82
DBE Total	46.77	20.37	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	1.77	5.91	29.99
Hispanic	0.00	0.95	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	1.77	6.87	25.83
Nonminority female	3.21	11.73	27.34
DBE Total	4.98	18.59	26.78
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	2.48	2.71	91.58
Hispanic	0.00	0.02	0.00
Asian	0.00	0.59	0.00
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	2.48	3.32	74.83
Nonminority female	3.65	18.43	19.79
DBE Total	6.13	21.75	28.19
Residential Building Construction (NAICS 2361)			
African American	0.00	2.50	0.00
Hispanic	0.00	1.59	0.00
Asian	0.00	0.00	
Native American	0.00	0.82	0.00
Minority	0.00	4.92	0.00
Nonminority female	5.33	8.26	64.55
DBE Total	5.33	13.18	40.46
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	6.14	3.69	
Hispanic	0.00	0.28	0.00
Asian	0.00	0.00	
Native American	2.39	1.17	
Minority	8.53	5.14	
Nonminority female	0.00	15.68	0.00 ***
DBE Total	8.53	20.82	40.99
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	2.90	0.00 *
Hispanic	0.00	1.03	0.00
Asian	38.66	2.29	
Native American	0.00	0.03	0.00
Minority	38.66	6.24	
Nonminority female	41.96	15.16	
DBE Total	80.62	21.40	
General Freight Trucking (NAICS 4841)			
African American	100.00	7.74	
Hispanic	0.00	0.29	0.00
Asian	0.00	0.17	0.00
Native American	0.00	0.03	0.00
Minority	100.00	8.23	
Nonminority female	0.00	18.68	0.00 ***
DBE Total	100.00	26.91	
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	2.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.18	0.00
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	2.57	0.00
Nonminority female	0.00	25.66	0.00 ***
DBE Total	0.00	28.22	0.00 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	0.74	0.00
Hispanic	0.00	0.20	0.00
Asian	0.00	1.31	0.00
Native American	0.00	1.24	0.00
Minority	0.00	3.49	0.00 ***
Nonminority female	0.00	14.06	0.00 ***
DBE Total	0.00	17.55	0.00 ***
Building Finishing Contractors (NAICS 2383)			
African American	0.00	3.23	0.00
Hispanic	0.00	0.15	0.00
Asian	0.00	0.00	
Native American	0.00	1.20	0.00
Minority	0.00	4.58	0.00
Nonminority female	0.00	16.55	0.00 ***
DBE Total	0.00	21.13	0.00 ***
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	6.64	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.88	0.00
Native American	0.00	0.00	
Minority	0.00	8.52	0.00
Nonminority female	0.00	16.04	0.00
DBE Total	0.00	24.56	0.00
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	90.02	4.77	
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	90.02	4.85	
Nonminority female	9.98	22.29	44.78
DBE Total	100.00	27.14	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	2.78	0.00
Nonminority female	0.00	18.27	0.00 ***
DBE Total	0.00	21.05	0.00 ***
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
DBE Total	100.00	30.30	
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	8.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	8.38	0.00
Nonminority female	100.00	18.36	
DBE Total	100.00	26.73	
Support Activities for Mining (NAICS 2131)			
African American	0.00	4.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	4.52	0.00
Nonminority female	0.00	25.97	0.00
DBE Total	0.00	30.49	0.00
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	3.47	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.20	0.00
Minority	0.00	3.81	0.00
Nonminority female	96.16	21.00	
DBE Total	96.16	24.81	
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	6.07	0.00
Hispanic	0.00	1.74	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	7.81	0.00 ***
Nonminority female	0.81	19.49	4.16 ***
DBE Total	0.81	27.29	2.97 ***

Source and Notes: See Table 7.21.



## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.5. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Construction Contracting (Local Funds) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	5.32	2.79	
Hispanic	0.00	0.19	1.60 ***
Asian	0.58	0.04	
Native American	0.00	1.19	0.00 ***
Minority	5.91	4.21	
Nonminority female	5.00	16.26	30.78 ***
M/WBE Total	10.91	20.47	53.30
Building Equipment Contractors (NAICS 2382)			
African American	16.86	3.28	
Hispanic	11.15	0.15	
Asian	9.42	0.21	
Native American	0.00	1.27	0.00 ***
Minority	37.43	4.90	
Nonminority female	7.81	15.78	49.51 *
M/WBE Total	45.24	20.69	
Utility System Construction (NAICS 2371)			
African American	2.61	1.45	
Hispanic	0.00	0.00	
Asian	4.62	0.00	
Native American	0.00	0.00	
Minority	7.24	1.45	
Nonminority female	2.56	12.24	20.95 ***
M/WBE Total	9.80	13.68	71.61
Residential Building Construction (NAICS 2361)			
African American	13.47	2.78	
Hispanic	1.25	1.65	75.46
Asian	0.00	0.02	0.00
Native American	0.00	0.81	0.00 ***
Minority	14.72	5.26	
Nonminority female	0.77	8.29	9.26 ***
M/WBE Total	15.48	13.55	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	16.32	3.02	
Hispanic	2.49	0.15	
Asian	0.15	0.00	
Native American	13.38	1.57	
Minority	32.35	4.74	

# Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	2.83	16.98	16.66 ***
M/WBE Total	35.18	21.71	
Nonresidential Building Construction (NAICS 2362)			
African American	3.60	4.52	79.57
Hispanic	0.16	2.18	7.29
Asian	0.38	0.13	
Native American	0.00	0.92	0.00 ***
Minority	4.13	7.76	53.27
Nonminority female	1.11	11.21	9.93 ***
M/WBE Total	5.24	18.96	27.66 *
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	5.33	5.91	90.08
Hispanic	0.00	0.95	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	5.33	6.87	77.59
Nonminority female	0.82	11.73	6.98 ***
M/WBE Total	6.15	18.59	33.06 **
Building Finishing Contractors (NAICS 2383)			
African American	6.38	3.00	
Hispanic	2.84	0.13	
Asian	0.00	0.00	
Native American	0.00	1.20	0.00 ***
Minority	9.22	4.33	
Nonminority female	27.32	16.53	
M/WBE Total	36.54	20.85	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	66.08	4.51	
Hispanic	0.00	0.15	0.00
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	66.08	4.75	
Nonminority female	24.29	22.44	
M/WBE Total	90.37	27.19	
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	3.31	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	3.31	0.00
Nonminority female	0.00	11.49	0.00 ***
M/WBE Total	0.00	14.81	0.00 ***
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	2.54	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.54	0.00 ***
Nonminority female	0.00	21.66	0.00 ***
M/WBE Total	0.00	24.21	0.00 ***
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.19	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.19	0.00
Native American	0.00	0.00	
Minority	0.00	4.39	0.00 ***
Nonminority female	0.00	27.05	0.00 ***
M/WBE Total	0.00	31.43	0.00 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.71	0.00 ***
Hispanic	0.00	0.27	0.00 ***
Asian	0.00	0.34	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.32	0.00 ***
Nonminority female	5.43	20.24	26.82 ***
M/WBE Total	5.43	23.57	23.04 ***
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	2.94	0.00 ***
Hispanic	0.00	1.03	0.00 ***
Asian	0.40	2.36	16.89 *
Native American	0.00	0.03	0.00
Minority	0.40	6.36	6.27 ***
Nonminority female	3.75	15.18	24.68 ***
M/WBE Total	4.15	21.54	19.24 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	36.91	4.01	
Hispanic	0.00	0.15	0.00 ***
Asian	0.00	0.07	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.24	0.00 ***
Minority	36.91	4.47	
Nonminority female	46.79	21.39	
M/WBE Total	83.70	25.86	
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	2.30	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00 ***
Nonminority female	99.74	27.44	
M/WBE Total	99.74	29.96	
General Freight Trucking (NAICS 4841)			
African American	79.46	7.62	
Hispanic	0.00	0.31	0.00 ***
Asian	0.00	0.16	0.00 ***
Native American	0.00	0.06	0.00
Minority	79.46	8.15	
Nonminority female	19.45	18.87	
M/WBE Total	98.91	27.02	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	3.38	0.00 ***
Hispanic	0.00	0.05	0.00 ***
Asian	0.00	0.16	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.59	0.00 ***
Nonminority female	0.00	18.89	0.02 ***
M/WBE Total	0.00	22.47	0.01 ***
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.17	0.00
Asian	0.00	0.99	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.08	0.00 ***
Nonminority female	62.74	20.66	
M/WBE Total	62.74	24.74	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	78.00	2.81	
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	78.00	4.12	
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	78.00	23.88	
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00
M/WBE Total	0.00	9.86	0.00
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.59	0.00 ***
Hispanic	0.00	0.14	0.00 ***
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.11	0.00 ***
Nonminority female	2.62	19.31	13.55 ***
M/WBE Total	2.62	23.42	11.18 ***
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	2.67	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.68	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.35	0.00 ***
Nonminority female	72.03	18.45	
M/WBE Total	72.03	21.80	
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	4.74	0.69	
Hispanic	0.00	0.14	0.00
Asian	0.00	1.36	0.00 ***
Native American	0.00	1.26	0.00 ***
Minority	4.74	3.45	
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	4.74	16.83	28.14
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	2.68	0.00
Hispanic	0.00	0.71	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.73	0.00
Native American	0.00	0.00	
Minority	0.00	4.12	0.00
Nonminority female	0.00	17.52	0.00 ***
M/WBE Total	0.00	21.65	0.00 ***
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00 ***
Nonminority female	0.00	20.40	0.00 ***
M/WBE Total	0.00	23.69	0.00 ***
Investigation and Security Services (NAICS 5616)			
African American	92.64	4.97	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	92.64	5.00	
Nonminority female	0.00	19.32	0.00 ***
M/WBE Total	92.64	24.31	
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.29	0.00 ***
Hispanic	0.00	0.20	0.00 ***
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.87	0.00 ***
Nonminority female	64.31	19.18	
M/WBE Total	64.31	23.05	
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	1.49	0.00	
Minority	1.49	4.30	34.54
Nonminority female	52.17	21.36	
M/WBE Total	53.66	25.66	
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	16.79	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.00	
Asian	1.92	0.00	
Native American	0.00	0.00	
Minority	1.92	16.79	11.42 ***
Nonminority female	9.22	17.48	52.71 *
M/WBE Total	11.13	34.27	32.48 ***
Specialized Freight Trucking (NAICS 4842)			
African American	98.82	8.04	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	98.82	8.10	
Nonminority female	0.00	20.63	0.00 ***
M/WBE Total	98.82	28.72	
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	1.39	3.02	45.97
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	1.39	3.10	44.76
Nonminority female	0.22	20.89	1.04 ***
M/WBE Total	1.60	23.99	6.69 ***
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00 ***
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	23.85	0.00 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	1.76	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.45	0.00 ***
Native American	0.00	0.00	
Minority	0.00	2.21	0.00 ***
Nonminority female	0.00	38.24	0.00 ***
M/WBE Total	0.00	40.45	0.00 ***
Foundries (NAICS 3315)			
African American	0.00	2.82	0.00 **

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 **
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	57.63	2.38	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	57.63	2.38	
Nonminority female	2.16	21.34	10.12 ***
M/WBE Total	59.79	23.73	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	3.31	0.00 ***
Hispanic	10.99	0.75	
Asian	0.00	1.04	0.00 ***
Native American	0.00	0.10	0.00
Minority	10.99	5.19	
Nonminority female	0.00	18.19	0.00 ***
M/WBE Total	10.99	23.38	47.00
Land Subdivision (NAICS 2372)			
African American	18.75	2.13	
Hispanic	0.00	0.52	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	18.75	2.65	
Nonminority female	0.00	10.82	0.00 ***
M/WBE Total	18.75	13.48	
Other Support Services (NAICS 5619)			
African American	41.86	3.46	
Hispanic	0.00	0.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.74	0.00
Minority	41.86	4.55	
Nonminority female	2.12	27.47	7.73 ***
M/WBE Total	43.98	32.03	
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	4.76	0.00 ***



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	2.13	0.00
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	6.92	0.00 ***
Nonminority female	0.00	17.39	0.00 ***
M/WBE Total	0.00	24.31	0.00 ***
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	2.29	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.21	0.00
Native American	0.00	0.00	
Minority	0.00	2.50	0.00 ***
Nonminority female	91.74	27.79	
M/WBE Total	91.74	30.29	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	3.97	1.69	
Hispanic	0.00	0.70	0.00
Asian	0.00	0.71	0.00
Native American	0.00	0.03	0.00
Minority	3.97	3.13	
Nonminority female	24.43	15.62	
M/WBE Total	28.40	18.75	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	8.82	0.00 ***
Hispanic	0.00	2.06	0.00 ***
Asian	0.00	0.11	0.00
Native American	0.00	2.94	0.00 ***
Minority	0.00	13.93	0.00 ***
Nonminority female	0.00	16.49	0.00 ***
M/WBE Total	0.00	30.42	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.6. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Construction Contracting (Local Funds) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	5.45	2.78	
Hispanic	0.00	0.19	1.89 ***
Asian	0.40	0.03	
Native American	0.00	1.19	0.00 ***
Minority	5.86	4.20	
Nonminority female	3.13	16.26	19.25 ***
M/WBE Total	8.99	20.45	43.94 **
Residential Building Construction (NAICS 2361)			
African American	9.25	2.77	
Hispanic	1.42	1.65	85.90
Asian	0.00	0.02	0.00
Native American	0.00	0.81	0.00 ***
Minority	10.67	5.25	
Nonminority female	0.75	8.26	9.09 ***
M/WBE Total	11.42	13.51	84.55
Building Equipment Contractors (NAICS 2382)			
African American	17.38	3.31	
Hispanic	9.85	0.15	
Asian	9.13	0.22	
Native American	0.00	1.27	0.00 ***
Minority	36.36	4.95	
Nonminority female	9.13	15.86	57.60
M/WBE Total	45.50	20.80	
Utility System Construction (NAICS 2371)			
African American	3.09	1.45	
Hispanic	0.00	0.00	
Asian	5.72	0.00	
Native American	0.00	0.00	
Minority	8.81	1.45	
Nonminority female	3.84	12.24	31.39 *
M/WBE Total	12.65	13.68	92.46
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	14.15	2.87	
Hispanic	3.56	0.12	
Asian	0.21	0.00	
Native American	19.05	1.72	
Minority	36.98	4.70	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	3.13	17.46	17.90 ***
M/WBE Total	40.10	22.16	
Nonresidential Building Construction (NAICS 2362)			
African American	3.46	4.73	73.18
Hispanic	0.23	2.04	11.20
Asian	0.55	0.16	
Native American	0.00	0.92	0.00 ***
Minority	4.24	7.86	53.91
Nonminority female	1.20	11.13	10.75 **
M/WBE Total	5.43	18.98	28.61 *
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	1.17	5.91	19.70
Hispanic	0.00	0.95	0.00 *
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	1.17	6.87	16.97 **
Nonminority female	1.18	11.73	10.08 ***
M/WBE Total	2.35	18.59	12.63 ***
Building Finishing Contractors (NAICS 2383)			
African American	7.64	2.94	
Hispanic	3.91	0.12	
Asian	0.00	0.00	
Native American	0.00	1.20	0.00 ***
Minority	11.55	4.26	
Nonminority female	19.97	16.53	
M/WBE Total	31.53	20.80	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	57.19	4.56	
Hispanic	0.00	0.12	0.00
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	57.19	4.77	
Nonminority female	33.24	22.41	
M/WBE Total	90.44	27.18	
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	3.31	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	3.31	0.00
Nonminority female	0.00	11.49	0.00 ***
M/WBE Total	0.00	14.81	0.00 ***
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.19	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.19	0.00
Native American	0.00	0.00	
Minority	0.00	4.39	0.00
Nonminority female	0.00	27.05	0.00 ***
M/WBE Total	0.00	31.43	0.00 ***
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	2.53	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.53	0.00 ***
Nonminority female	0.00	22.22	0.00 ***
M/WBE Total	0.00	24.74	0.00 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.71	0.00 ***
Hispanic	0.00	0.28	0.00
Asian	0.00	0.34	0.00
Native American	0.00	0.00	
Minority	0.00	3.33	0.00 ***
Nonminority female	6.33	20.26	31.25 ***
M/WBE Total	6.33	23.58	26.85 ***
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	2.30	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00 **
Nonminority female	99.73	27.44	
M/WBE Total	99.73	29.96	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	2.88	0.00 ***
Hispanic	0.00	1.03	0.00 ***
Asian	0.24	2.26	10.44 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.03	0.00
Minority	0.24	6.19	3.81 ***
Nonminority female	4.57	15.15	30.17 ***
M/WBE Total	4.81	21.34	22.53 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	34.33	3.89	
Hispanic	0.00	0.14	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.23	0.00
Minority	34.33	4.32	
Nonminority female	42.70	21.30	
M/WBE Total	77.03	25.62	
General Freight Trucking (NAICS 4841)			
African American	62.99	7.74	
Hispanic	0.00	0.29	0.00 ***
Asian	0.00	0.17	0.00
Native American	0.00	0.03	0.00
Minority	62.99	8.23	
Nonminority female	35.63	18.68	
M/WBE Total	98.62	26.91	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	3.42	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.18	0.00 **
Native American	0.00	0.00	
Minority	0.00	3.65	0.00 ***
Nonminority female	0.00	18.84	0.02 ***
M/WBE Total	0.00	22.49	0.02 ***
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.16	0.00
Asian	0.00	0.99	0.00 **
Native American	0.00	0.00	
Minority	0.00	4.07	0.00 ***
Nonminority female	64.66	20.65	
M/WBE Total	64.66	24.71	
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.59	0.00 ***
Hispanic	0.00	0.14	0.00 **
Asian	0.00	0.38	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	4.11	0.00 ***
Nonminority female	1.26	19.31	6.50 ***
M/WBE Total	1.26	23.42	5.36 ***
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00
M/WBE Total	0.00	9.86	0.00
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	4.99	0.69	
Hispanic	0.00	0.14	0.00
Asian	0.00	1.36	0.00 **
Native American	0.00	1.26	0.00 **
Minority	4.99	3.45	
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	4.99	16.83	29.64
Investigation and Security Services (NAICS 5616)			
African American	94.22	4.97	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	94.22	5.00	
Nonminority female	0.00	19.32	0.00 ***
M/WBE Total	94.22	24.31	
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.29	0.00 ***
Hispanic	0.00	0.20	0.00
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.87	0.00 ***
Nonminority female	68.52	19.18	
M/WBE Total	68.52	23.05	
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 ***
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.10	0.00
Native American	1.62	0.00	
Minority	1.62	4.30	37.74
Nonminority female	57.02	21.36	
M/WBE Total	58.64	25.66	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	37.72	2.81	
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	37.72	4.12	
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	37.72	23.88	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	2.67	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.68	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.35	0.00 ***
Nonminority female	57.34	18.45	
M/WBE Total	57.34	21.80	
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00 ***
Nonminority female	0.00	20.40	0.00 ***
M/WBE Total	0.00	23.69	0.00 ***
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	1.38	3.02	45.76
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	1.38	3.10	44.55
Nonminority female	0.22	20.89	1.04 ***
M/WBE Total	1.60	23.99	6.66 ***
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	16.79	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.00	
Asian	2.72	0.00	
Native American	0.00	0.00	
Minority	2.72	16.79	16.18 ***
Nonminority female	12.72	17.48	72.73
M/WBE Total	15.43	34.27	45.02 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	1.76	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.45	0.00 **
Native American	0.00	0.00	
Minority	0.00	2.21	0.00 ***
Nonminority female	0.00	38.24	0.00 ***
M/WBE Total	0.00	40.45	0.00 ***
Foundries (NAICS 3315)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	64.03	2.38	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	64.03	2.38	
Nonminority female	0.00	21.34	0.00 ***
M/WBE Total	64.03	23.73	
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00 ***
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	23.85	0.00 ***
Specialized Freight Trucking (NAICS 4842)			



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	98.12	8.04	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	98.12	8.10	
Nonminority female	0.00	20.63	0.00 ***
M/WBE Total	98.12	28.72	
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	4.76	0.00
Hispanic	0.00	2.13	0.00
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	6.92	0.00
Nonminority female	0.00	17.39	0.00 ***
M/WBE Total	0.00	24.31	0.00 ***
Land Subdivision (NAICS 2372)			
African American	11.93	2.13	
Hispanic	0.00	0.52	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	11.93	2.65	
Nonminority female	0.00	10.82	0.00 ***
M/WBE Total	11.93	13.48	88.53

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.7. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland AE-CRS Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	4.04	3.13	
Hispanic	0.48	1.02	47.11
Asian	21.26	2.48	
Native American	0.00	0.03	0.00
Minority	25.78	6.65	
Nonminority female	3.82	15.32	24.97 ***
M/WBE Total	29.60	21.97	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	5.39	3.01	
Hispanic	0.00	0.77	0.00 ***
Asian	16.04	0.88	
Native American	0.00	0.07	0.00
Minority	21.43	4.73	
Nonminority female	36.78	17.80	
M/WBE Total	58.21	22.53	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	95.36	3.74	
Hispanic	0.00	0.57	0.00 ***
Asian	0.00	0.24	0.00 ***
Native American	0.00	0.00	
Minority	95.36	4.55	
Nonminority female	1.00	20.54	4.86 ***
M/WBE Total	96.36	25.09	
Other Specialty Trade Contractors (NAICS 2389)			
African American	3.10	3.46	89.80
Hispanic	0.00	0.21	0.00 ***
Asian	0.00	0.19	0.00 ***
Native American	0.00	1.18	0.00 ***
Minority	3.10	5.05	61.48
Nonminority female	1.85	16.34	11.29 ***
M/WBE Total	4.95	21.39	23.13 ***
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	3.31	0.00 ***
Hispanic	0.00	0.87	0.00 ***
Asian	13.13	2.06	
Native American	0.00	0.07	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	13.13	6.31	
Nonminority female	84.81	19.17	
M/WBE Total	97.93	25.48	
Building Equipment Contractors (NAICS 2382)			
African American	54.51	3.28	
Hispanic	15.38	0.16	
Asian	0.00	0.21	0.00 ***
Native American	0.00	1.27	0.00 ***
Minority	69.88	4.92	
Nonminority female	14.13	15.89	88.92
M/WBE Total	84.02	20.81	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	4.61	3.69	
Hispanic	0.00	0.28	0.00 ***
Asian	0.00	0.00	
Native American	0.00	1.17	0.00 ***
Minority	4.61	5.14	89.73
Nonminority female	0.00	15.68	0.00 ***
M/WBE Total	4.61	20.82	22.14 ***
Specialized Design Services (NAICS 5414)			
African American	0.00	2.66	0.00 ***
Hispanic	0.00	1.08	0.00 **
Asian	0.00	0.45	0.00
Native American	0.00	0.51	0.00
Minority	0.00	4.70	0.00 ***
Nonminority female	80.70	40.35	
M/WBE Total	80.70	45.05	
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.55	0.00
Hispanic	0.00	1.87	0.00
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.60	0.00
Nonminority female	0.00	24.89	0.00 ***
M/WBE Total	0.00	27.49	0.00 ***
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	2.13	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.25	0.00
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	2.39	0.00 ***
Nonminority female	95.68	31.49	
M/WBE Total	95.68	33.88	
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	4.87	0.00 ***
Hispanic	0.00	1.96	0.00 ***
Asian	0.00	0.18	0.00 ***
Native American	0.00	0.92	0.00 ***
Minority	0.00	7.92	0.00 ***
Nonminority female	7.44	11.07	67.24
M/WBE Total	7.44	18.99	39.19
Office Administrative Services (NAICS 5611)			
African American	100.00	3.22	
Hispanic	0.00	0.00	
Asian	0.00	0.38	0.00
Native American	0.00	0.09	0.00
Minority	100.00	3.69	
Nonminority female	0.00	20.73	0.00 ***
M/WBE Total	100.00	24.42	
Software Publishers (NAICS 5112)			
African American	0.00	3.32	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.24	0.00
Minority	0.00	3.91	0.00 ***
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	0.00	25.54	0.00 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	3.47	0.00 ***
Hispanic	0.00	0.08	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.20	0.00 ***
Minority	0.00	3.81	0.00 ***
Nonminority female	98.64	21.00	
M/WBE Total	98.64	24.81	
General Freight Trucking (NAICS 4841)			
African American	100.00	7.74	
Hispanic	0.00	0.29	0.00 ***
Asian	0.00	0.17	0.00 ***
Native American	0.00	0.03	0.00
Minority	100.00	8.23	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	0.00	18.68	0.00 ***
M/WBE Total	100.00	26.91	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	2.12	0.00 ***
Hispanic	0.00	0.23	0.00 ***
Asian	0.00	0.00	
Native American	0.00	1.22	0.00 ***
Minority	0.00	3.57	0.00 ***
Nonminority female	0.00	16.34	0.00 ***
M/WBE Total	0.00	19.91	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.48	0.00 ***
Hispanic	0.00	0.10	0.00
Asian	0.00	0.00	
Native American	0.00	0.07	0.00
Minority	0.00	2.64	0.00 ***
Nonminority female	0.00	20.08	0.00 ***
M/WBE Total	0.00	22.73	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.8. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland AE-CRS Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	4.07	3.11	
Hispanic	0.75	1.03	72.88
Asian	20.83	2.49	
Native American	0.00	0.03	0.00
Minority	25.64	6.66	
Nonminority female	3.27	15.28	21.43 ***
M/WBE Total	28.92	21.93	
Other Specialty Trade Contractors (NAICS 2389)			
African American	3.10	3.40	91.32
Hispanic	0.00	0.21	0.00 ***
Asian	0.00	0.18	0.00 ***
Native American	0.00	1.18	0.00 ***
Minority	3.10	4.98	62.38
Nonminority female	1.85	16.34	11.30 ***
M/WBE Total	4.95	21.31	23.22 ***
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	12.03	3.12	
Hispanic	0.00	0.78	0.00 ***
Asian	27.08	0.89	
Native American	0.00	0.07	0.00
Minority	39.11	4.87	
Nonminority female	29.22	17.81	
M/WBE Total	68.32	22.68	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	91.44	3.74	
Hispanic	0.00	0.57	0.00 ***
Asian	0.00	0.24	0.00 ***
Native American	0.00	0.00	
Minority	91.44	4.55	
Nonminority female	1.84	20.54	8.97 ***
M/WBE Total	93.28	25.09	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	4.76	3.69	
Hispanic	0.00	0.28	0.00 ***
Asian	0.00	0.00	
Native American	0.00	1.17	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	4.76	5.14	92.75
Nonminority female	0.00	15.68	0.00 ***
M/WBE Total	4.76	20.82	22.89 ***
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.55	0.00
Hispanic	0.00	1.87	0.00
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.60	0.00
Nonminority female	0.00	24.89	0.00 ***
M/WBE Total	0.00	27.49	0.00 ***
Specialized Design Services (NAICS 5414)			
African American	0.00	2.66	0.00 **
Hispanic	0.00	1.08	0.00
Asian	0.00	0.45	0.00
Native American	0.00	0.51	0.00
Minority	0.00	4.70	0.00 ***
Nonminority female	80.40	40.35	
M/WBE Total	80.40	45.05	
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	4.87	0.00 ***
Hispanic	0.00	1.96	0.00 ***
Asian	0.00	0.18	0.00
Native American	0.00	0.92	0.00 ***
Minority	0.00	7.92	0.00 ***
Nonminority female	4.13	11.07	37.31
M/WBE Total	4.13	18.99	21.75
Software Publishers (NAICS 5112)			
African American	0.00	3.32	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00
Native American	0.00	0.24	0.00
Minority	0.00	3.91	0.00 ***
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	0.00	25.54	0.00 ***
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.84	0.00 ***
Hispanic	38.42	0.18	
Asian	0.00	0.32	0.00 ***
Native American	0.00	1.26	0.00 ***
Minority	38.42	5.59	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	21.64	16.83	
M/WBE Total	60.06	22.42	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	3.39	0.00 ***
Hispanic	0.00	0.91	0.00 ***
Asian	20.36	2.03	
Native American	0.00	0.07	0.00
Minority	20.36	6.40	
Nonminority female	79.64	19.39	
M/WBE Total	100.00	25.79	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	2.13	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.25	0.00
Native American	0.00	0.00	
Minority	0.00	2.39	0.00 ***
Nonminority female	94.02	31.49	
M/WBE Total	94.02	33.88	
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	3.47	0.00 ***
Hispanic	0.00	0.08	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.20	0.00
Minority	0.00	3.81	0.00 ***
Nonminority female	98.64	21.00	
M/WBE Total	98.64	24.81	
General Freight Trucking (NAICS 4841)			
African American	100.00	7.74	
Hispanic	0.00	0.29	0.00 ***
Asian	0.00	0.17	0.00
Native American	0.00	0.03	0.00
Minority	100.00	8.23	
Nonminority female	0.00	18.68	0.00 ***
M/WBE Total	100.00	26.91	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	2.12	0.00 ***
Hispanic	0.00	0.23	0.00 *
Asian	0.00	0.00	
Native American	0.00	1.22	0.00 ***
Minority	0.00	3.57	0.00 ***



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	0.00	16.34	0.00 ***
M/WBE Total	0.00	19.91	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.48	0.00 ***
Hispanic	0.00	0.10	0.00
Asian	0.00	0.00	
Native American	0.00	0.07	0.00
Minority	0.00	2.64	0.00 ***
Nonminority female	0.00	20.08	0.00 ***
M/WBE Total	0.00	22.73	0.00 ***
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	0.04	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	1.31	0.00 **
Native American	0.00	1.27	0.00 **
Minority	0.00	2.65	0.00 ***
Nonminority female	0.00	12.25	0.00 ***
M/WBE Total	0.00	14.90	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	2.55	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.62	0.00 ***
Nonminority female	10.83	19.99	54.16
M/WBE Total	10.83	22.62	47.88
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	33.28	2.93	
Hispanic	0.00	0.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.27	0.00
Minority	33.28	3.30	
Nonminority female	0.00	22.15	0.00 ***
M/WBE Total	33.28	25.45	

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.9. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland AE-CRS Contracting (Federal Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Total	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	2.09	3.15	66.27
Hispanic	0.00	1.02	0.00 **
Asian	14.10	2.52	
Native American	0.00	0.03	0.00
Minority	16.19	6.72	
Nonminority female	4.35	15.35	28.34 **
DBE Total	20.54	22.07	93.08
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	3.39	0.00
Hispanic	0.00	0.91	0.00
Asian	0.00	2.03	0.00
Native American	0.00	0.07	0.00
Minority	0.00	6.40	0.00
Nonminority female	100.00	19.39	
DBE Total	100.00	25.79	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	3.31	0.00 ***
Hispanic	0.00	0.75	0.00
Asian	0.00	1.04	0.00
Native American	0.00	0.10	0.00
Minority	0.00	5.19	0.00 ***
Nonminority female	100.00	18.19	
DBE Total	100.00	23.38	
Office Administrative Services (NAICS 5611)			
African American	100.00	3.22	
Hispanic	0.00	0.00	
Asian	0.00	0.38	0.00
Native American	0.00	0.09	0.00
Minority	100.00	3.69	
Nonminority female	0.00	20.73	0.00
DBE Total	100.00	24.42	

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.10. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland AE-CRS Contracting (Federal Funds) (Dollars Paid)**

NAICS Industry Group / DBE Total	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.20	3.17	6.19
Hispanic	0.00	1.07	0.00
Asian	15.42	2.51	
Native American	0.00	0.03	0.00
Minority	15.61	6.78	
Nonminority female	5.75	15.26	37.69
DBE Total	21.36	22.04	96.92
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	3.31	0.00
Hispanic	0.00	0.75	0.00
Asian	0.00	1.04	0.00
Native American	0.00	0.10	0.00
Minority	0.00	5.19	0.00
Nonminority female	100.00	18.19	
DBE Total	100.00	23.38	
Specialized Design Services (NAICS 5414)			
African American	0.00	2.66	0.00
Hispanic	0.00	1.08	0.00
Asian	0.00	0.45	0.00
Native American	0.00	0.51	0.00
Minority	0.00	4.70	0.00
Nonminority female	100.00	40.35	
DBE Total	100.00	45.05	

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.11. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland AE-CRS Contracting (Local Funds) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	4.41	3.13	
Hispanic	0.57	1.02	56.00
Asian	22.60	2.47	
Native American	0.00	0.03	0.00
Minority	27.58	6.64	
Nonminority female	3.72	15.31	24.33 ***
M/WBE Total	31.30	21.95	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	6.66	2.96	
Hispanic	0.00	0.77	0.00 ***
Asian	19.81	0.85	
Native American	0.00	0.07	0.00
Minority	26.46	4.65	
Nonminority female	21.92	17.74	
M/WBE Total	48.39	22.39	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	95.36	3.74	
Hispanic	0.00	0.57	0.00 ***
Asian	0.00	0.24	0.00 ***
Native American	0.00	0.00	
Minority	95.36	4.55	
Nonminority female	1.00	20.54	4.86 ***
M/WBE Total	96.36	25.09	
Other Specialty Trade Contractors (NAICS 2389)			
African American	3.10	3.40	91.32
Hispanic	0.00	0.21	0.00 ***
Asian	0.00	0.18	0.00 ***
Native American	0.00	1.18	0.00 ***
Minority	3.10	4.98	62.38
Nonminority female	1.85	16.34	11.30 ***
M/WBE Total	4.95	21.31	23.22 ***
Building Equipment Contractors (NAICS 2382)			
African American	54.51	3.28	
Hispanic	15.38	0.16	
Asian	0.00	0.21	0.00 ***
Native American	0.00	1.27	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	69.88	4.92	
Nonminority female	14.13	15.89	88.92
M/WBE Total	84.02	20.81	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	3.24	0.00 ***
Hispanic	0.00	0.82	0.00 ***
Asian	26.57	2.10	
Native American	0.00	0.07	0.00
Minority	26.57	6.22	
Nonminority female	69.25	18.94	
M/WBE Total	95.82	25.16	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	4.61	3.69	
Hispanic	0.00	0.28	0.00 **
Asian	0.00	0.00	
Native American	0.00	1.17	0.00 ***
Minority	4.61	5.14	89.73
Nonminority female	0.00	15.68	0.00 ***
M/WBE Total	4.61	20.82	22.14 ***
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.55	0.00
Hispanic	0.00	1.87	0.00
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.60	0.00
Nonminority female	0.00	24.89	0.00 ***
M/WBE Total	0.00	27.49	0.00 ***
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	2.13	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.25	0.00
Native American	0.00	0.00	
Minority	0.00	2.39	0.00 ***
Nonminority female	95.68	31.49	
M/WBE Total	95.68	33.88	
Specialized Design Services (NAICS 5414)			
African American	0.00	2.66	0.00 ***
Hispanic	0.00	1.08	0.00 **
Asian	0.00	0.45	0.00
Native American	0.00	0.51	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	4.70	0.00 ***
Nonminority female	78.23	40.35	
M/WBE Total	78.23	45.05	
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	4.87	0.00 ***
Hispanic	0.00	1.96	0.00 ***
Asian	0.00	0.18	0.00 ***
Native American	0.00	0.92	0.00 ***
Minority	0.00	7.92	0.00 ***
Nonminority female	7.44	11.07	67.24
M/WBE Total	7.44	18.99	39.19
Software Publishers (NAICS 5112)			
African American	0.00	3.32	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.24	0.00
Minority	0.00	3.91	0.00 ***
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	0.00	25.54	0.00 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	3.47	0.00 ***
Hispanic	0.00	0.08	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.20	0.00 ***
Minority	0.00	3.81	0.00 ***
Nonminority female	98.64	21.00	
M/WBE Total	98.64	24.81	
General Freight Trucking (NAICS 4841)			
African American	100.00	7.74	
Hispanic	0.00	0.29	0.00 ***
Asian	0.00	0.17	0.00 ***
Native American	0.00	0.03	0.00
Minority	100.00	8.23	
Nonminority female	0.00	18.68	0.00 ***
M/WBE Total	100.00	26.91	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	2.12	0.00 ***
Hispanic	0.00	0.23	0.00 ***
Asian	0.00	0.00	
Native American	0.00	1.22	0.00 ***
Minority	0.00	3.57	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	0.00	16.34	0.00 ***
M/WBE Total	0.00	19.91	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.48	0.00 ***
Hispanic	0.00	0.10	0.00
Asian	0.00	0.00	
Native American	0.00	0.07	0.00
Minority	0.00	2.64	0.00 ***
Nonminority female	0.00	20.08	0.00 ***
M/WBE Total	0.00	22.73	0.00 ***
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	0.04	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	1.31	0.00 ***
Native American	0.00	1.27	0.00 ***
Minority	0.00	2.65	0.00 ***
Nonminority female	0.00	12.25	0.00 ***
M/WBE Total	0.00	14.90	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.12. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland AE-CRS Contracting (Local Funds) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	4.37	3.11	
Hispanic	0.81	1.03	78.67
Asian	21.25	2.49	
Native American	0.00	0.03	0.00
Minority	26.43	6.65	
Nonminority female	3.08	15.28	20.16 ***
M/WBE Total	29.51	21.93	
Other Specialty Trade Contractors (NAICS 2389)			
African American	3.10	3.40	91.32
Hispanic	0.00	0.21	0.00 ***
Asian	0.00	0.18	0.00 ***
Native American	0.00	1.18	0.00 ***
Minority	3.10	4.98	62.38
Nonminority female	1.85	16.34	11.30 ***
M/WBE Total	4.95	21.31	23.22 ***
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	13.04	3.11	
Hispanic	0.00	0.78	0.00 ***
Asian	29.34	0.88	
Native American	0.00	0.07	0.00
Minority	42.38	4.84	
Nonminority female	23.30	17.78	
M/WBE Total	65.68	22.63	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	91.44	3.74	
Hispanic	0.00	0.57	0.00 ***
Asian	0.00	0.24	0.00 ***
Native American	0.00	0.00	
Minority	91.44	4.55	
Nonminority female	1.84	20.54	8.97 ***
M/WBE Total	93.28	25.09	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	4.76	3.69	
Hispanic	0.00	0.28	0.00 *
Asian	0.00	0.00	
Native American	0.00	1.17	0.00 ***



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	4.76	5.14	92.75
Nonminority female	0.00	15.68	0.00 ***
M/WBE Total	4.76	20.82	22.89 ***
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.55	0.00
Hispanic	0.00	1.87	0.00
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.60	0.00
Nonminority female	0.00	24.89	0.00 ***
M/WBE Total	0.00	27.49	0.00 ***
Specialized Design Services (NAICS 5414)			
African American	0.00	2.66	0.00 **
Hispanic	0.00	1.08	0.00
Asian	0.00	0.45	0.00
Native American	0.00	0.51	0.00
Minority	0.00	4.70	0.00 ***
Nonminority female	77.84	40.35	
M/WBE Total	77.84	45.05	
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	4.87	0.00 ***
Hispanic	0.00	1.96	0.00 ***
Asian	0.00	0.18	0.00
Native American	0.00	0.92	0.00 ***
Minority	0.00	7.92	0.00 ***
Nonminority female	4.13	11.07	37.31
M/WBE Total	4.13	18.99	21.75 **
Software Publishers (NAICS 5112)			
African American	0.00	3.32	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00
Native American	0.00	0.24	0.00
Minority	0.00	3.91	0.00 ***
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	0.00	25.54	0.00 ***
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.84	0.00 ***
Hispanic	38.42	0.18	
Asian	0.00	0.32	0.00 ***
Native American	0.00	1.26	0.00 ***
Minority	38.42	5.59	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	21.64	16.83	
M/WBE Total	60.06	22.42	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	3.39	0.00 ***
Hispanic	0.00	0.91	0.00 ***
Asian	20.77	2.03	
Native American	0.00	0.07	0.00
Minority	20.77	6.40	
Nonminority female	79.23	19.39	
M/WBE Total	100.00	25.79	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	2.13	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.25	0.00
Native American	0.00	0.00	
Minority	0.00	2.39	0.00 ***
Nonminority female	94.02	31.49	
M/WBE Total	94.02	33.88	
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	3.47	0.00 ***
Hispanic	0.00	0.08	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.20	0.00
Minority	0.00	3.81	0.00 ***
Nonminority female	98.64	21.00	
M/WBE Total	98.64	24.81	
General Freight Trucking (NAICS 4841)			
African American	100.00	7.74	
Hispanic	0.00	0.29	0.00 ***
Asian	0.00	0.17	0.00
Native American	0.00	0.03	0.00
Minority	100.00	8.23	
Nonminority female	0.00	18.68	0.00 ***
M/WBE Total	100.00	26.91	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	2.12	0.00 ***
Hispanic	0.00	0.23	0.00 *
Asian	0.00	0.00	
Native American	0.00	1.22	0.00 ***
Minority	0.00	3.57	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	0.00	16.34	0.00 ***
M/WBE Total	0.00	19.91	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.48	0.00 ***
Hispanic	0.00	0.10	0.00
Asian	0.00	0.00	
Native American	0.00	0.07	0.00
Minority	0.00	2.64	0.00 ***
Nonminority female	0.00	20.08	0.00 ***
M/WBE Total	0.00	22.73	0.00 ***
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	0.04	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	1.31	0.00 **
Native American	0.00	1.27	0.00 **
Minority	0.00	2.65	0.00 ***
Nonminority female	0.00	12.25	0.00 ***
M/WBE Total	0.00	14.90	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	2.55	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.62	0.00 ***
Nonminority female	10.83	19.99	54.16
M/WBE Total	10.83	22.62	47.88
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	33.28	2.93	
Hispanic	0.00	0.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.27	0.00
Minority	33.28	3.30	
Nonminority female	0.00	22.15	0.00 ***
M/WBE Total	33.28	25.45	

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.13. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Services Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	3.63	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	0.00
Minority	0.00	3.63	0.00 ***
Nonminority female	0.00	19.29	0.00 ***
M/WBE Total	0.00	22.91	0.00 ***
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	5.36	3.36	
Hispanic	0.34	0.86	40.06
Asian	6.25	0.97	
Native American	0.41	0.07	
Minority	12.36	5.26	
Nonminority female	6.60	18.44	35.79 *
M/WBE Total	18.96	23.69	80.04
Employment Services (NAICS 5613)			
African American	68.52	5.18	
Hispanic	0.00	0.36	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.59	0.00
Minority	68.52	6.18	
Nonminority female	2.86	25.52	11.22 ***
M/WBE Total	71.39	31.70	
General Freight Trucking (NAICS 4841)			
African American	45.29	7.73	
Hispanic	11.44	0.29	
Asian	0.00	0.17	0.00 ***
Native American	0.00	0.03	0.00
Minority	56.73	8.22	
Nonminority female	0.06	18.69	0.32 ***
M/WBE Total	56.79	26.92	
Computer Systems Design and Related Services (NAICS 5415)			
African American	13.02	3.23	
Hispanic	0.41	0.86	47.94
Asian	0.00	1.97	0.00 ***
Native American	0.00	0.07	0.00
Minority	13.44	6.13	
Nonminority female	1.21	18.92	6.40 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	14.65	25.05	58.47
Other Personal Services (NAICS 8129)			
African American	0.32	9.23	3.43
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.08	0.00 ***
Minority	0.32	13.85	2.29
Nonminority female	0.00	13.86	0.00 ***
M/WBE Total	0.32	27.71	1.14 *
Software Publishers (NAICS 5112)			
African American	0.16	3.32	4.79 *
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.24	0.00
Minority	0.16	3.91	4.06 **
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	0.16	25.54	0.62 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	36.75	4.05	
Hispanic	0.04	0.15	23.88
Asian	0.00	0.08	0.00
Native American	0.00	0.24	0.00 ***
Minority	36.79	4.52	
Nonminority female	9.87	21.41	46.11 ***
M/WBE Total	46.66	25.93	
Other Telecommunications (NAICS 5179)			
African American	0.00	2.93	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.05	0.00 ***
Nonminority female	0.00	20.86	0.00 ***
M/WBE Total	0.00	23.91	0.00 ***
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	1.27	2.61	48.80
Hispanic	3.04	0.62	
Asian	0.08	1.37	5.73 **
Native American	0.00	0.07	0.00
Minority	4.39	4.66	94.10
Nonminority female	1.34	19.78	6.77 ***
M/WBE Total	5.73	24.44	23.44

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	16.24	5.46	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.12	0.00
Minority	16.24	5.58	
Nonminority female	0.00	20.17	0.00 ***
M/WBE Total	16.24	25.75	63.07
Building Equipment Contractors (NAICS 2382)			
African American	15.56	3.51	
Hispanic	61.63	0.16	
Asian	0.93	0.25	
Native American	0.00	1.27	0.00 ***
Minority	78.12	5.20	
Nonminority female	5.69	16.27	34.99 ***
M/WBE Total	83.81	21.46	
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	2.44	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00 ***
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	51.15	3.59	
Hispanic	0.00	0.91	0.00 ***
Asian	20.09	1.73	
Native American	0.00	0.03	0.00
Minority	71.24	6.26	
Nonminority female	1.52	15.25	9.97 ***
M/WBE Total	72.76	21.51	
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	50.71	2.93	
Hispanic	0.00	0.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.27	0.00
Minority	50.71	3.30	
Nonminority female	0.25	22.15	1.15 ***
M/WBE Total	50.96	25.45	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Social Advocacy Organizations (NAICS 8133)			
African American	0.00	10.66	0.00 ***
Hispanic	0.00	1.51	0.00 ***
Asian	0.00	0.00	
Native American	0.00	3.02	0.00 ***
Minority	0.00	15.20	0.00 ***
Nonminority female	0.00	13.61	0.00 ***
M/WBE Total	0.00	28.81	0.00 ***
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	9.17	0.00 ***
Hispanic	0.00	1.66	0.00 ***
Asian	0.00	0.14	0.00 ***
Native American	0.00	3.06	0.00 ***
Minority	0.00	14.02	0.00 ***
Nonminority female	2.72	14.94	18.20 ***
M/WBE Total	2.72	28.95	9.39 ***
Legal Services (NAICS 5411)			
African American	10.74	1.50	
Hispanic	0.00	0.77	0.00
Asian	0.00	0.63	0.00
Native American	0.00	0.04	0.00
Minority	10.74	2.93	
Nonminority female	0.56	16.63	3.35 ***
M/WBE Total	11.30	19.56	57.77
Remediation and Other Waste Management Services (NAICS 5629)			
African American	8.21	14.83	55.35
Hispanic	0.00	0.02	0.00
Asian	7.33	0.03	
Native American	0.00	0.05	0.00
Minority	15.54	14.93	
Nonminority female	7.56	18.32	41.27 ***
M/WBE Total	23.11	33.26	69.48
Waste Collection (NAICS 5621)			
African American	0.02	5.29	0.35
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.14	0.00
Minority	0.02	5.43	0.34
Nonminority female	0.00	27.68	0.00 ***
M/WBE Total	0.02	33.11	0.06 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Services (NAICS 5619)			
African American	2.70	3.46	77.97
Hispanic	0.00	0.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.74	0.00
Minority	2.70	4.55	59.29
Nonminority female	0.00	27.47	0.00 ***
M/WBE Total	2.70	32.03	8.43 ***
Individual and Family Services (NAICS 6241)			
African American	3.08	0.72	
Hispanic	0.00	2.06	0.00 **
Asian	0.00	0.11	0.00
Native American	0.00	0.01	0.00
Minority	3.08	2.90	
Nonminority female	13.61	18.78	72.45
M/WBE Total	16.69	21.68	76.99
Insurance Carriers (NAICS 5241)			
African American	0.00	4.50	0.00 ***
Hispanic	0.00	0.85	0.00
Asian	0.00	0.00	
Native American	0.00	0.29	0.00
Minority	0.00	5.64	0.00 ***
Nonminority female	23.60	22.69	
M/WBE Total	23.60	28.33	83.31
Special Food Services (NAICS 7223)			
African American	95.79	2.91	
Hispanic	0.00	1.73	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.30	0.00
Minority	95.79	5.01	
Nonminority female	0.00	26.53	0.00 ***
M/WBE Total	95.79	31.54	
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	9.38	0.00 ***
Hispanic	0.00	1.53	0.00 ***
Asian	0.00	0.00	0.00
Native American	0.00	3.05	0.00 ***
Minority	0.00	13.98	0.00 ***
Nonminority female	0.00	13.97	0.00 ***
M/WBE Total	0.00	27.95	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	3.23	0.00 ***
Hispanic	0.00	0.19	0.00 ***
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.77	0.00 ***
Nonminority female	91.88	19.25	
M/WBE Total	91.88	23.02	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	10.24	0.00 ***
Hispanic	0.00	1.81	0.00 ***
Asian	0.00	0.10	0.00
Native American	0.00	2.90	0.00 ***
Minority	0.00	15.04	0.00 ***
Nonminority female	19.53	16.35	
M/WBE Total	19.53	31.40	62.21
Civic and Social Organizations (NAICS 8134)			
African American	0.00	9.37	0.00 ***
Hispanic	0.00	1.53	0.00 *
Asian	0.00	0.00	
Native American	0.00	3.05	0.00 ***
Minority	0.00	13.95	0.00 ***
Nonminority female	0.00	13.82	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.40	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.01	0.00
Minority	0.00	2.41	0.00 ***
Nonminority female	0.00	21.19	0.00 ***
M/WBE Total	0.00	23.60	0.00 ***
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	4.49	2.31	
Hispanic	0.00	0.69	0.00
Asian	0.00	0.57	0.00
Native American	0.00	0.07	0.00
Minority	4.49	3.63	
Nonminority female	0.46	19.16	2.42 ***
M/WBE Total	4.95	22.79	21.73

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	5.91	0.00 ***
Hispanic	0.00	0.95	0.00 ***
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.87	0.00 ***
Nonminority female	0.00	11.73	0.00 ***
M/WBE Total	0.00	18.59	0.00 ***
Residential Building Construction (NAICS 2361)			
African American	58.79	2.83	
Hispanic	0.00	1.66	0.00 ***
Asian	0.00	0.02	0.00
Native American	0.00	0.82	0.00 ***
Minority	58.79	5.34	
Nonminority female	13.25	8.40	
M/WBE Total	72.04	13.74	
Educational Support Services (NAICS 6117)			
African American	0.00	1.79	0.00 ***
Hispanic	0.00	1.64	0.00 ***
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	3.60	0.00 ***
Nonminority female	0.00	31.37	0.00 ***
M/WBE Total	0.00	34.98	0.00 ***
Other Ambulatory Health Care Services (NAICS 6219)			
African American	28.93	0.53	
Hispanic	0.00	2.03	0.00 ***
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	28.93	2.60	
Nonminority female	0.00	19.89	0.00 ***
M/WBE Total	28.93	22.48	
Other Specialty Trade Contractors (NAICS 2389)			
African American	3.26	3.07	
Hispanic	0.00	0.20	0.00 ***
Asian	0.00	0.10	0.00 ***
Native American	0.00	1.19	0.00 ***
Minority	3.26	4.57	71.42
Nonminority female	0.43	16.29	2.62 ***
M/WBE Total	3.69	20.86	17.69 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Business Support Services (NAICS 5614)</b>			
African American	17.47	3.82	
Hispanic	0.00	0.10	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.29	0.00
Minority	17.47	4.26	
Nonminority female	0.42	22.18	1.87 ***
M/WBE Total	17.89	26.44	67.66
<b>Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)</b>			
African American	0.00	3.07	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.19	0.00 ***
Nonminority female	0.00	20.68	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***
<b>Scientific Research and Development Services (NAICS 5417)</b>			
African American	10.41	1.46	
Hispanic	0.00	0.58	0.00
Asian	0.00	1.26	0.00 ***
Native American	0.00	0.03	0.00
Minority	10.41	3.33	
Nonminority female	4.31	15.34	28.12 **
M/WBE Total	14.72	18.67	78.86
<b>Support Activities for Crop Production (NAICS 1151)</b>			
African American	0.00	1.86	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.86	0.00
Native American	0.00	0.00	
Minority	0.00	3.72	0.00
Nonminority female	0.00	26.83	0.00 ***
M/WBE Total	0.00	30.55	0.00 ***
<b>Activities Related to Real Estate (NAICS 5313)</b>			
African American	1.77	2.44	72.59 *
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	1.77	2.44	72.59 *
Nonminority female	2.10	19.51	10.74 ***
M/WBE Total	3.87	21.95	17.61 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	4.65	4.03	
Hispanic	0.00	0.06	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.33	0.00
Minority	4.65	4.43	
Nonminority female	0.00	22.98	0.00 ***
M/WBE Total	4.65	27.41	16.97 ***
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	0.00	4.93	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.38	0.00 ***
Minority	0.00	5.31	0.00 ***
Nonminority female	0.00	22.99	0.00 ***
M/WBE Total	0.00	28.29	0.00 ***
Support Activities for Air Transportation (NAICS 4881)			
African American	99.00	5.56	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	99.00	5.58	
Nonminority female	0.00	17.54	0.00 ***
M/WBE Total	99.00	23.12	
Specialized Design Services (NAICS 5414)			
African American	2.91	3.69	78.69
Hispanic	0.00	0.73	0.00 **
Asian	0.00	0.72	0.00 **
Native American	0.00	0.16	0.00
Minority	2.91	5.30	54.86
Nonminority female	0.00	28.30	0.00 ***
M/WBE Total	2.91	33.60	8.65 ***
Office Administrative Services (NAICS 5611)			
African American	90.16	3.22	
Hispanic	0.00	0.00	
Asian	0.00	0.38	0.00
Native American	0.00	0.09	0.00
Minority	90.16	3.69	
Nonminority female	4.80	20.73	23.15 **
M/WBE Total	94.96	24.42	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	6.97	0.00 ***
Hispanic	13.07	0.99	
Asian	0.00	0.00	
Native American	0.00	0.05	0.00
Minority	13.07	8.01	
Nonminority female	0.00	19.31	0.00 ***
M/WBE Total	13.07	27.32	47.84 **
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	15.74	0.00 ***
Hispanic	0.00	1.53	0.00 ***
Asian	0.00	0.35	0.00
Native American	0.00	2.64	0.00 ***
Minority	0.00	20.26	0.00 ***
Nonminority female	0.00	18.23	0.00 ***
M/WBE Total	0.00	38.49	0.00 ***
Outpatient Care Centers (NAICS 6214)			
African American	0.00	0.31	0.00
Hispanic	0.00	1.96	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00
Minority	0.00	2.37	0.00
Nonminority female	0.00	22.40	0.00 ***
M/WBE Total	0.00	24.77	0.00 ***
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.05	1.46	3.39
Hispanic	0.00	0.62	0.00
Asian	1.98	1.21	
Native American	0.00	0.09	0.00
Minority	2.03	3.37	60.17
Nonminority female	0.20	21.79	0.91 ***
M/WBE Total	2.23	25.16	8.85 ***
Other Information Services (NAICS 5191)			
African American	0.00	4.57	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.62	0.00
Minority	0.00	5.20	0.00 ***
Nonminority female	0.00	25.54	0.00 ***
M/WBE Total	0.00	30.74	0.00 ***
Warehousing and Storage (NAICS 4931)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	3.19	5.96	53.61
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.04	0.00
Minority	3.19	5.99	53.27
Nonminority female	0.00	20.05	0.00 ***
M/WBE Total	3.19	26.05	12.26 *
Specialized Freight Trucking (NAICS 4842)			
African American	71.05	7.85	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	71.05	7.91	
Nonminority female	0.13	21.76	0.61 ***
M/WBE Total	71.18	29.66	
Gasoline Stations (NAICS 4471)			
African American	0.00	0.28	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	1.29	0.00 ***
Native American	0.00	1.27	0.00
Minority	0.00	2.92	0.00 ***
Nonminority female	0.00	11.60	0.00 ***
M/WBE Total	0.00	14.52	0.00 ***
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	9.17	0.00 ***
Hispanic	0.00	1.65	0.00 ***
Asian	0.00	0.02	0.00
Native American	0.00	2.97	0.00 ***
Minority	0.00	13.82	0.00 ***
Nonminority female	0.00	15.42	0.00 ***
M/WBE Total	0.00	29.23	0.00 ***
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	1.41	9.45	14.98
Hispanic	0.00	1.52	0.00 ***
Asian	0.00	0.03	0.00
Native American	0.00	2.96	0.00 ***
Minority	1.41	13.96	10.13 **
Nonminority female	55.98	15.79	
M/WBE Total	57.39	29.75	
Automotive Equipment Rental and Leasing			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
(NAICS 5321)			
African American	0.00	2.51	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.12	0.00
Minority	0.00	2.63	0.00
Nonminority female	0.00	17.76	0.00 ***
M/WBE Total	0.00	20.39	0.00 ***
Lessors of Real Estate (NAICS 5311)			
African American	0.00	2.64	0.00 ***
Hispanic	0.00	0.02	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.15	0.00
Minority	0.00	2.87	0.00 ***
Nonminority female	0.00	20.54	0.00 ***
M/WBE Total	0.00	23.41	0.00 ***
Consumer Goods Rental (NAICS 5322)			
African American	0.00	2.58	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.77	0.00 ***
Nonminority female	0.00	21.33	0.00 ***
M/WBE Total	0.00	24.09	0.00 ***
Colleges, Universities, and Professional Schools (NAICS 6113)			
African American	0.00	0.51	0.00
Hispanic	0.00	2.07	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.58	0.00
Nonminority female	0.00	18.65	0.00 ***
M/WBE Total	0.00	21.24	0.00 ***
Radio and Television Broadcasting (NAICS 5151)			
African American	0.00	4.11	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.20	0.00
Minority	0.00	4.31	0.00
Nonminority female	0.00	21.22	0.00 ***
M/WBE Total	0.00	25.53	0.00 ***
Converted Paper Product Manufacturing (NAICS 3222)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Offices of Physicians (NAICS 6211)			
African American	0.00	0.59	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.64	0.00
Native American	0.00	0.22	0.00
Minority	0.00	3.37	0.00 ***
Nonminority female	0.00	22.07	0.00 ***
M/WBE Total	0.00	25.44	0.00 ***
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.50	0.00
Hispanic	0.00	1.92	0.00
Asian	0.00	0.00	
Native American	0.00	0.13	0.00
Minority	0.00	2.54	0.00
Nonminority female	0.00	23.45	0.00 ***
M/WBE Total	0.00	25.99	0.00 ***
Technical and Trade Schools (NAICS 6115)			
African American	0.00	6.06	0.00 ***
Hispanic	0.00	1.75	0.00
Asian	0.00	0.00	
Native American	0.00	0.16	0.00
Minority	0.00	7.96	0.00 ***
Nonminority female	0.00	24.12	0.00 ***
M/WBE Total	0.00	32.09	0.00 ***
Death Care Services (NAICS 8122)			
African American	0.00	11.40	0.00 ***
Hispanic	0.00	1.53	0.00
Asian	0.00	0.31	0.00
Native American	0.00	2.90	0.00
Minority	0.00	16.14	0.00 ***
Nonminority female	0.00	15.70	0.00 ***
M/WBE Total	0.00	31.84	0.00 ***
Home Health Care Services (NAICS 6216)			
African American	0.00	1.92	0.00
Hispanic	0.00	1.81	0.00
Asian	0.00	0.20	0.00



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.21	0.00
Minority	0.00	4.14	0.00
Nonminority female	0.00	25.40	0.00 ***
M/WBE Total	0.00	29.54	0.00 ***
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	83.67	4.28	
Hispanic	0.00	0.45	0.00 ***
Asian	0.00	0.49	0.00 ***
Native American	0.00	0.00	
Minority	83.67	5.23	
Nonminority female	8.92	23.49	37.96 ***
M/WBE Total	92.58	28.72	
Religious Organizations (NAICS 8131)			
African American	0.00	9.26	0.00 ***
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.07	0.00
Minority	0.00	13.88	0.00 ***
Nonminority female	0.00	13.89	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	94.06	4.77	
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	94.06	4.85	
Nonminority female	5.61	22.29	25.17 ***
M/WBE Total	99.67	27.14	
Vocational Rehabilitation Services (NAICS 6243)			
African American	1.48	2.12	69.67
Hispanic	0.00	2.00	0.00
Asian	0.00	0.00	
Native American	0.00	0.81	0.00
Minority	1.48	4.94	29.96 *
Nonminority female	0.00	18.63	0.00 ***
M/WBE Total	1.48	23.57	6.28 ***
Drinking Places (Alcoholic Beverages) (NAICS 7224)			
African American	0.00	0.64	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.07	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.12	0.00
Minority	0.00	2.75	0.00
Nonminority female	0.00	23.16	0.00 ***
M/WBE Total	0.00	25.91	0.00 ***
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	8.38	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	8.38	0.00 ***
Nonminority female	99.69	18.36	
M/WBE Total	99.69	26.73	
Support Activities for Water Transportation (NAICS 4883)			
African American	0.00	5.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.66	0.00
Nonminority female	0.00	16.98	0.00 ***
M/WBE Total	0.00	22.64	0.00 ***
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Business Schools and Computer and Management Training (NAICS 6114)			
African American	0.00	0.99	0.00
Hispanic	17.09	1.70	
Asian	0.00	0.00	
Native American	0.00	0.33	0.00
Minority	17.09	3.02	
Nonminority female	0.00	29.83	0.00 ***
M/WBE Total	17.09	32.85	52.03
Cable and Other Subscription Programming (NAICS 5152)			
African American	0.00	3.74	0.00 ***
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	3.74	0.00 ***
Nonminority female	0.00	19.25	0.00 ***
M/WBE Total	0.00	22.99	0.00 ***
Full-Service Restaurants (NAICS 7221)			
African American	0.00	0.65	0.00
Hispanic	0.00	1.94	0.00
Asian	0.00	1.05	0.00
Native American	0.00	0.17	0.00
Minority	0.00	3.81	0.00 ***
Nonminority female	0.00	22.03	0.00 ***
M/WBE Total	0.00	25.84	0.00 ***
Freight Transportation Arrangement (NAICS 4885)			
African American	100.00	6.51	
Hispanic	0.00	0.42	0.00
Asian	0.00	0.84	0.00
Native American	0.00	0.09	0.00
Minority	100.00	7.87	
Nonminority female	0.00	21.95	0.00
M/WBE Total	100.00	29.82	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	3.31	0.00 ***
Hispanic	0.00	0.11	0.00
Asian	0.00	0.70	0.00 *
Native American	0.00	0.00	
Minority	0.00	4.12	0.00 ***
Nonminority female	0.00	20.75	0.00 ***
M/WBE Total	0.00	24.87	0.00 ***
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	1.19	0.00
Hispanic	0.00	1.95	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00
Minority	0.00	3.24	0.00 ***
Nonminority female	0.00	21.81	0.00 ***
M/WBE Total	0.00	25.05	0.00 ***
Aerospace Product and Parts Manufacturing (NAICS 3364)			
African American	0.00	9.36	0.00
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	9.44	0.00
Nonminority female	0.00	25.69	0.00
M/WBE Total	0.00	35.14	0.00
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	1.55	0.00
Hispanic	0.00	1.43	0.00
Asian	0.00	0.00	
Native American	0.00	0.35	0.00
Minority	0.00	3.33	0.00
Nonminority female	26.96	36.40	74.07
M/WBE Total	26.96	39.73	67.86
General Medical and Surgical Hospitals (NAICS 6221)			
African American	0.00	0.09	0.00
Hispanic	0.00	2.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	0.00	2.13	0.00
Nonminority female	0.00	19.46	0.00 ***
M/WBE Total	0.00	21.59	0.00 ***
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	4.43	0.00 ***
Hispanic	28.76	0.60	
Asian	0.00	1.13	0.00
Native American	0.00	0.57	0.00
Minority	28.76	6.72	
Nonminority female	0.00	24.70	0.00 ***
M/WBE Total	28.76	31.42	91.54
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	1.88	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.88	0.00 ***
Nonminority female	0.00	44.60	0.00 ***
M/WBE Total	0.00	46.48	0.00 ***
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
M/WBE Total	100.00	30.30	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	2.67	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.68	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.35	0.00 ***
Nonminority female	3.02	18.45	16.36 ***
M/WBE Total	3.02	21.80	13.85 ***
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	3.23	0.00 ***
Hispanic	5.92	0.12	
Asian	0.00	0.00	
Native American	0.00	1.16	0.00 ***
Minority	5.92	4.51	
Nonminority female	6.40	17.84	35.86 **
M/WBE Total	12.32	22.35	55.10
Grantmaking and Giving Services (NAICS 8132)			
African American	0.00	8.83	0.00
Hispanic	0.00	1.63	0.00
Asian	0.00	0.10	0.00
Native American	0.00	2.94	0.00
Minority	0.00	13.51	0.00
Nonminority female	0.00	17.87	0.00
M/WBE Total	0.00	31.38	0.00 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.60	0.00 ***
Hispanic	0.00	0.34	0.00 ***
Asian	0.00	0.40	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.34	0.00 ***
Nonminority female	0.00	20.54	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.14. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Services Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	3.38	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	0.00
Minority	0.00	3.38	0.00 **
Nonminority female	0.00	19.33	0.00 ***
M/WBE Total	0.00	22.71	0.00 ***
Employment Services (NAICS 5613)			
African American	71.49	5.18	
Hispanic	0.00	0.36	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.59	0.00
Minority	71.49	6.18	
Nonminority female	2.64	25.50	10.35 ***
M/WBE Total	74.13	31.68	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	7.36	3.41	
Hispanic	0.43	0.89	49.10
Asian	9.24	0.98	
Native American	0.18	0.07	
Minority	17.22	5.34	
Nonminority female	3.96	18.66	21.22 ***
M/WBE Total	21.17	24.00	88.22
Computer Systems Design and Related Services (NAICS 5415)			
African American	14.78	3.26	
Hispanic	0.66	0.87	75.19
Asian	0.00	1.99	0.00 ***
Native American	0.00	0.07	0.00
Minority	15.44	6.19	
Nonminority female	1.27	19.02	6.66 ***
M/WBE Total	16.71	25.22	66.25
General Freight Trucking (NAICS 4841)			
African American	56.20	7.72	
Hispanic	11.99	0.29	
Asian	0.00	0.17	0.00
Native American	0.00	0.04	0.00
Minority	68.19	8.22	
Nonminority female	0.09	18.70	0.46 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	68.28	26.92	
Other Personal Services (NAICS 8129)			
African American	0.09	9.23	0.96
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	
Native American	0.00	3.08	0.00 *
Minority	0.09	13.85	0.64
Nonminority female	0.00	13.85	0.00 ***
M/WBE Total	0.09	27.69	0.32 ***
Software Publishers (NAICS 5112)			
African American	0.19	3.32	5.77
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00
Native American	0.00	0.24	0.00
Minority	0.19	3.91	4.89 *
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	0.19	25.54	0.75 ***
Other Telecommunications (NAICS 5179)			
African American	0.00	2.93	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.05	0.00 **
Nonminority female	0.00	20.86	0.00 ***
M/WBE Total	0.00	23.91	0.00 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	35.61	4.15	
Hispanic	0.05	0.17	30.81
Asian	0.00	0.08	0.00
Native American	0.00	0.25	0.00
Minority	35.66	4.65	
Nonminority female	8.16	21.49	37.98 ***
M/WBE Total	43.82	26.13	
Building Equipment Contractors (NAICS 2382)			
African American	15.87	3.51	
Hispanic	61.58	0.16	
Asian	0.98	0.25	
Native American	0.00	1.27	0.00 ***
Minority	78.43	5.20	
Nonminority female	5.47	16.27	33.60 ***
M/WBE Total	83.90	21.46	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	18.35	5.35	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	18.35	5.46	
Nonminority female	0.00	20.11	0.00 ***
M/WBE Total	18.35	25.57	71.76
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	11.33	2.93	
Hispanic	0.00	0.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.27	0.00
Minority	11.33	3.30	
Nonminority female	0.14	22.15	0.65 ***
M/WBE Total	11.48	25.45	45.10
Legal Services (NAICS 5411)			
African American	6.98	1.47	
Hispanic	0.00	0.76	0.00
Asian	0.00	0.63	0.00
Native American	0.00	0.03	0.00
Minority	6.98	2.89	
Nonminority female	20.04	16.48	
M/WBE Total	27.02	19.37	
Social Advocacy Organizations (NAICS 8133)			
African American	0.00	10.66	0.00 ***
Hispanic	0.00	1.51	0.00 *
Asian	0.00	0.00	
Native American	0.00	3.02	0.00 ***
Minority	0.00	15.20	0.00 ***
Nonminority female	0.00	13.61	0.00 ***
M/WBE Total	0.00	28.81	0.00 ***
Remediation and Other Waste Management Services (NAICS 5629)			
African American	7.77	15.64	49.69 *
Hispanic	0.00	0.01	0.00
Asian	8.05	0.01	
Native American	0.00	0.03	0.00
Minority	15.82	15.70	
Nonminority female	5.28	17.98	29.38 ***
M/WBE Total	21.11	33.68	62.67 *



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	9.17	0.00 ***
Hispanic	0.00	1.61	0.00 ***
Asian	0.00	0.12	0.00
Native American	0.00	3.09	0.00 ***
Minority	0.00	14.00	0.00 ***
Nonminority female	4.71	14.87	31.65 ***
M/WBE Total	4.71	28.87	16.30 ***
Individual and Family Services (NAICS 6241)			
African American	3.73	0.73	
Hispanic	0.00	2.06	0.00
Asian	0.00	0.10	0.00
Native American	0.00	0.01	0.00
Minority	3.73	2.89	
Nonminority female	16.75	18.78	89.17
M/WBE Total	20.48	21.67	94.51
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	30.54	3.37	
Hispanic	0.00	0.93	0.00 ***
Asian	33.04	2.17	
Native American	0.00	0.03	0.00
Minority	63.57	6.50	
Nonminority female	0.91	15.55	5.84 ***
M/WBE Total	64.48	22.05	
Insurance Carriers (NAICS 5241)			
African American	0.00	4.62	0.00
Hispanic	0.00	0.96	0.00
Asian	0.00	0.00	
Native American	0.00	0.28	0.00
Minority	0.00	5.86	0.00 ***
Nonminority female	29.22	22.56	
M/WBE Total	29.22	28.42	
Special Food Services (NAICS 7223)			
African American	96.33	2.91	
Hispanic	0.00	1.73	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.30	0.00
Minority	96.33	5.01	
Nonminority female	0.00	26.53	0.00 ***
M/WBE Total	96.33	31.54	
Business, Professional, Labor, Political, and			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Similar Organizations (NAICS 8139)			
African American	0.00	9.35	0.00 ***
Hispanic	0.00	1.54	0.00 **
Asian	0.00	0.00	0.00
Native American	0.00	3.06	0.00 ***
Minority	0.00	13.95	0.00 ***
Nonminority female	0.00	13.97	0.00 ***
M/WBE Total	0.00	27.92	0.00 ***
Residential Building Construction (NAICS 2361)			
African American	55.68	2.84	
Hispanic	0.00	1.67	0.00 ***
Asian	0.00	0.01	0.00
Native American	0.00	0.83	0.00 ***
Minority	55.68	5.35	
Nonminority female	13.76	8.42	
M/WBE Total	69.44	13.76	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	5.86	2.92	
Hispanic	13.86	0.97	
Asian	0.32	1.13	28.16
Native American	0.00	0.10	0.00
Minority	20.04	5.12	
Nonminority female	4.19	21.53	19.44 **
M/WBE Total	24.22	26.66	90.87
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	5.33	2.21	
Hispanic	0.00	0.69	0.00
Asian	0.00	0.56	0.00
Native American	0.00	0.06	0.00
Minority	5.33	3.53	
Nonminority female	0.55	18.87	2.92 ***
M/WBE Total	5.88	22.40	26.27
Civic and Social Organizations (NAICS 8134)			
African American	0.00	9.37	0.00 ***
Hispanic	0.00	1.53	0.00
Asian	0.00	0.00	
Native American	0.00	3.05	0.00 **
Minority	0.00	13.95	0.00 ***
Nonminority female	0.00	13.82	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.19	0.00 ***
Hispanic	0.00	0.18	0.00
Asian	0.00	0.34	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.70	0.00 ***
Nonminority female	86.42	19.29	
M/WBE Total	86.42	22.99	
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.40	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.01	0.00
Minority	0.00	2.42	0.00 ***
Nonminority female	0.00	21.16	0.00 ***
M/WBE Total	0.00	23.58	0.00 ***
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	9.80	0.00 ***
Hispanic	0.00	1.89	0.00 **
Asian	0.00	0.10	0.00
Native American	0.00	2.91	0.00 ***
Minority	0.00	14.70	0.00 ***
Nonminority female	21.26	16.40	
M/WBE Total	21.26	31.09	68.37
Other Support Services (NAICS 5619)			
African American	6.82	3.46	
Hispanic	0.00	0.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.74	0.00
Minority	6.82	4.55	
Nonminority female	0.00	27.47	0.00 ***
M/WBE Total	6.82	32.03	21.30 **
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.10	3.07	3.21 ***
Hispanic	0.00	0.20	0.00 ***
Asian	0.00	0.10	0.00 ***
Native American	0.00	1.19	0.00 ***
Minority	0.10	4.56	2.16 ***
Nonminority female	0.44	16.29	2.68 ***
M/WBE Total	0.53	20.85	2.56 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Educational Support Services (NAICS 6117)			
African American	0.00	1.79	0.00
Hispanic	0.00	1.64	0.00
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	3.60	0.00 **
Nonminority female	0.00	31.37	0.00 ***
M/WBE Total	0.00	34.98	0.00 ***
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	1.86	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.86	0.00
Native American	0.00	0.00	
Minority	0.00	3.72	0.00
Nonminority female	0.00	26.83	0.00 ***
M/WBE Total	0.00	30.55	0.00 ***
Other Ambulatory Health Care Services (NAICS 6219)			
African American	39.87	0.53	
Hispanic	0.00	2.03	0.00 *
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	39.87	2.60	
Nonminority female	0.00	19.89	0.00 ***
M/WBE Total	39.87	22.48	
Activities Related to Real Estate (NAICS 5313)			
African American	0.81	2.44	33.06 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.81	2.44	33.06 ***
Nonminority female	1.29	19.51	6.59 ***
M/WBE Total	2.09	21.95	9.53 ***
Business Support Services (NAICS 5614)			
African American	27.19	3.87	
Hispanic	0.00	0.02	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.16	0.00
Minority	27.19	4.10	
Nonminority female	0.00	20.74	0.00 ***
M/WBE Total	27.19	24.85	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Outpatient Care Centers (NAICS 6214)</b>			
African American	0.00	0.31	0.00
Hispanic	0.00	1.96	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00
Minority	0.00	2.37	0.00
Nonminority female	0.00	22.41	0.00 ***
M/WBE Total	0.00	24.78	0.00 ***
<b>Specialized Design Services (NAICS 5414)</b>			
African American	3.50	3.69	94.80
Hispanic	0.00	0.73	0.00
Asian	0.00	0.72	0.00
Native American	0.00	0.16	0.00
Minority	3.50	5.30	66.09
Nonminority female	0.00	28.30	0.00 ***
M/WBE Total	3.50	33.60	10.42 ***
<b>Warehousing and Storage (NAICS 4931)</b>			
African American	1.35	5.93	22.85
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.04	0.00
Minority	1.35	5.97	22.70
Nonminority female	0.00	20.07	0.00 ***
M/WBE Total	1.35	26.04	5.20 **
<b>Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)</b>			
African American	0.00	3.07	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.19	0.00
Nonminority female	0.00	20.68	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***
<b>Specialized Freight Trucking (NAICS 4842)</b>			
African American	70.18	7.84	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	70.18	7.90	
Nonminority female	0.14	21.79	0.62 ***
M/WBE Total	70.31	29.69	
<b>Gasoline Stations (NAICS 4471)</b>			
African American	0.00	0.28	0.00
Hispanic	0.00	0.08	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	1.29	0.00 ***
Native American	0.00	1.27	0.00
Minority	0.00	2.92	0.00 ***
Nonminority female	0.00	11.60	0.00 ***
M/WBE Total	0.00	14.52	0.00 ***
Other Information Services (NAICS 5191)			
African American	0.00	4.57	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.62	0.00
Minority	0.00	5.20	0.00 **
Nonminority female	0.00	25.54	0.00 ***
M/WBE Total	0.00	30.74	0.00 ***
Scientific Research and Development Services (NAICS 5417)			
African American	14.82	1.57	
Hispanic	0.00	0.58	0.00
Asian	0.00	1.48	0.00
Native American	0.00	0.04	0.00
Minority	14.82	3.67	
Nonminority female	6.68	16.18	41.29
M/WBE Total	21.50	19.84	
Office Administrative Services (NAICS 5611)			
African American	89.27	3.22	
Hispanic	0.00	0.00	
Asian	0.00	0.38	0.00
Native American	0.00	0.09	0.00
Minority	89.27	3.69	
Nonminority female	5.97	20.73	28.81
M/WBE Total	95.24	24.42	
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	16.34	0.00 ***
Hispanic	0.00	1.51	0.00 ***
Asian	0.00	0.42	0.00
Native American	0.00	2.63	0.00 ***
Minority	0.00	20.90	0.00 ***
Nonminority female	0.00	17.57	0.00 ***
M/WBE Total	0.00	38.48	0.00 ***
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	0.00	4.82	0.00 ***
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.00	
Native American	0.00	0.33	0.00
Minority	0.00	5.14	0.00 ***
Nonminority female	0.00	22.48	0.00 ***
M/WBE Total	0.00	27.62	0.00 ***
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	1.69	9.45	17.87
Hispanic	0.00	1.52	0.00 *
Asian	0.00	0.03	0.00
Native American	0.00	2.96	0.00 *
Minority	1.69	13.96	12.09 **
Nonminority female	66.20	15.79	
M/WBE Total	67.89	29.75	
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	6.96	0.00 **
Hispanic	14.44	1.00	
Asian	0.00	0.00	
Native American	0.00	0.05	0.00
Minority	14.44	8.01	
Nonminority female	0.00	19.31	0.00 ***
M/WBE Total	14.44	27.32	52.87
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	1.40	0.00
Hispanic	0.00	0.59	0.00
Asian	2.85	1.34	
Native American	0.00	0.10	0.00
Minority	2.85	3.43	82.93
Nonminority female	0.00	23.44	0.00 ***
M/WBE Total	2.85	26.88	10.60 ***
Consumer Goods Rental (NAICS 5322)			
African American	0.00	2.57	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.75	0.00 *
Nonminority female	0.00	21.23	0.00 ***
M/WBE Total	0.00	23.98	0.00 ***
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	2.44	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	9.19	0.00 ***
Hispanic	0.00	1.66	0.00 ***
Asian	0.00	0.02	0.00
Native American	0.00	2.97	0.00 ***
Minority	0.00	13.85	0.00 ***
Nonminority female	0.00	15.38	0.00 ***
M/WBE Total	0.00	29.22	0.00 ***
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	10.26	4.03	
Hispanic	0.00	0.06	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.33	0.00
Minority	10.26	4.43	
Nonminority female	0.00	22.98	0.00 ***
M/WBE Total	10.26	27.41	37.43 ***
Lessors of Real Estate (NAICS 5311)			
African American	0.00	2.62	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	0.08	0.00
Native American	0.00	0.15	0.00
Minority	0.00	2.87	0.00
Nonminority female	0.00	20.44	0.00 ***
M/WBE Total	0.00	23.30	0.00 ***
Radio and Television Broadcasting (NAICS 5151)			
African American	0.00	4.28	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.21	0.00
Minority	0.00	4.49	0.00
Nonminority female	0.00	21.30	0.00 ***
M/WBE Total	0.00	25.79	0.00 ***
Colleges, Universities, and Professional Schools (NAICS 6113)			
African American	0.00	0.51	0.00



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	2.07	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.58	0.00
Nonminority female	0.00	18.65	0.00 ***
M/WBE Total	0.00	21.24	0.00 ***
Offices of Physicians (NAICS 6211)			
African American	0.00	0.60	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.65	0.00
Native American	0.00	0.22	0.00
Minority	0.00	3.39	0.00
Nonminority female	0.00	22.09	0.00 ***
M/WBE Total	0.00	25.47	0.00 ***
Death Care Services (NAICS 8122)			
African American	0.00	11.40	0.00 ***
Hispanic	0.00	1.53	0.00
Asian	0.00	0.31	0.00
Native American	0.00	2.90	0.00
Minority	0.00	16.14	0.00 ***
Nonminority female	0.00	15.70	0.00 ***
M/WBE Total	0.00	31.84	0.00 ***
Home Health Care Services (NAICS 6216)			
African American	0.00	1.92	0.00
Hispanic	0.00	1.81	0.00
Asian	0.00	0.20	0.00
Native American	0.00	0.21	0.00
Minority	0.00	4.14	0.00
Nonminority female	0.00	25.40	0.00 ***
M/WBE Total	0.00	29.54	0.00 ***
Religious Organizations (NAICS 8131)			
African American	0.00	9.26	0.00
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.07	0.00
Minority	0.00	13.88	0.00
Nonminority female	0.00	13.89	0.00
M/WBE Total	0.00	27.76	0.00 ***
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	93.91	4.77	
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	93.91	4.85	
Nonminority female	5.71	22.29	25.61 ***
M/WBE Total	99.62	27.14	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	81.17	4.51	
Hispanic	0.00	0.41	0.00 ***
Asian	0.00	0.60	0.00 ***
Native American	0.00	0.00	
Minority	81.17	5.51	
Nonminority female	11.63	24.73	47.02 ***
M/WBE Total	92.80	30.25	
Technical and Trade Schools (NAICS 6115)			
African American	0.00	6.06	0.00 *
Hispanic	0.00	1.75	0.00
Asian	0.00	0.00	
Native American	0.00	0.16	0.00
Minority	0.00	7.96	0.00 *
Nonminority female	0.00	24.12	0.00 ***
M/WBE Total	0.00	32.09	0.00 ***
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	5.91	0.00 ***
Hispanic	0.00	0.95	0.00 ***
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.87	0.00 ***
Nonminority female	0.00	11.73	0.00 ***
M/WBE Total	0.00	18.59	0.00 ***
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.50	0.00
Hispanic	0.00	1.92	0.00
Asian	0.00	0.00	
Native American	0.00	0.13	0.00
Minority	0.00	2.54	0.00
Nonminority female	0.00	23.45	0.00 ***
M/WBE Total	0.00	25.99	0.00 ***
Support Activities for Water Transportation (NAICS 4883)			
African American	0.00	5.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	5.66	0.00
Nonminority female	0.00	16.98	0.00 ***
M/WBE Total	0.00	22.64	0.00 ***
Vocational Rehabilitation Services (NAICS 6243)			
African American	2.10	2.12	99.06
Hispanic	0.00	2.00	0.00
Asian	0.00	0.00	
Native American	0.00	0.81	0.00
Minority	2.10	4.94	42.59
Nonminority female	0.00	18.63	0.00 ***
M/WBE Total	2.10	23.57	8.92 ***
Drinking Places (Alcoholic Beverages) (NAICS 7224)			
African American	0.00	0.64	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.12	0.00
Minority	0.00	2.75	0.00
Nonminority female	0.00	23.16	0.00 *
M/WBE Total	0.00	25.91	0.00 *
Freight Transportation Arrangement (NAICS 4885)			
African American	100.00	6.51	
Hispanic	0.00	0.42	0.00
Asian	0.00	0.84	0.00
Native American	0.00	0.09	0.00
Minority	100.00	7.87	
Nonminority female	0.00	21.95	0.00
M/WBE Total	100.00	29.82	
Aerospace Product and Parts Manufacturing (NAICS 3364)			
African American	0.00	9.36	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	9.44	0.00
Nonminority female	0.00	25.69	0.00
M/WBE Total	0.00	35.14	0.00
Full-Service Restaurants (NAICS 7221)			
African American	0.00	0.65	0.00
Hispanic	0.00	1.94	0.00
Asian	0.00	1.05	0.00
Native American	0.00	0.17	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	3.81	0.00
Nonminority female	0.00	22.03	0.00 ***
M/WBE Total	0.00	25.84	0.00 ***
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	1.88	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.88	0.00
Nonminority female	0.00	44.60	0.00 ***
M/WBE Total	0.00	46.48	0.00 ***
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
General Medical and Surgical Hospitals (NAICS 6221)			
African American	0.00	0.09	0.00
Hispanic	0.00	2.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	0.00	2.13	0.00
Nonminority female	0.00	19.46	0.00 ***
M/WBE Total	0.00	21.59	0.00 ***
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	1.19	0.00
Hispanic	0.00	1.95	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00
Minority	0.00	3.24	0.00 *
Nonminority female	0.00	21.81	0.00 ***
M/WBE Total	0.00	25.05	0.00 ***
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	4.43	0.00
Hispanic	38.41	0.60	
Asian	0.00	1.13	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.57	0.00
Minority	38.41	6.72	
Nonminority female	0.00	24.70	0.00 ***
M/WBE Total	38.41	31.42	
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	1.55	0.00
Hispanic	0.00	1.43	0.00
Asian	0.00	0.00	
Native American	0.00	0.35	0.00
Minority	0.00	3.33	0.00
Nonminority female	37.30	36.40	
M/WBE Total	37.30	39.73	93.90
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
M/WBE Total	100.00	30.30	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	3.23	0.00 ***
Hispanic	0.00	0.12	0.00 *
Asian	0.00	0.00	
Native American	0.00	1.16	0.00 ***
Minority	0.00	4.51	0.00 ***
Nonminority female	6.80	17.84	38.12 **
M/WBE Total	6.80	22.35	30.43 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.60	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.40	0.00
Native American	0.00	0.00	
Minority	0.00	3.34	0.00 ***
Nonminority female	0.00	20.54	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***
Grantmaking and Giving Services (NAICS 8132)			
African American	0.00	8.83	0.00
Hispanic	0.00	1.63	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.10	0.00
Native American	0.00	2.94	0.00
Minority	0.00	13.51	0.00
Nonminority female	0.00	17.87	0.00
M/WBE Total	0.00	31.38	0.00 ***
Business Schools and Computer and Management Training (NAICS 6114)			
African American	0.00	0.99	0.00
Hispanic	0.00	1.70	0.00
Asian	0.00	0.00	
Native American	0.00	0.33	0.00
Minority	0.00	3.02	0.00
Nonminority female	0.00	29.83	0.00 ***
M/WBE Total	0.00	32.85	0.00 ***
Taxi and Limousine Service (NAICS 4853)			
African American	0.00	12.04	0.00
Hispanic	0.00	0.00	
Asian	0.00	3.46	0.00
Native American	0.00	3.89	0.00
Minority	0.00	19.39	0.00
Nonminority female	0.00	9.89	0.00
M/WBE Total	0.00	29.28	0.00
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	4.03	0.00 ***
Hispanic	0.00	1.86	0.00 ***
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.89	0.00 ***
Nonminority female	0.00	24.27	0.00 ***
M/WBE Total	0.00	30.16	0.00 ***
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	2.68	0.00
Hispanic	0.00	0.71	0.00
Asian	0.00	0.73	0.00
Native American	0.00	0.00	
Minority	0.00	4.12	0.00
Nonminority female	0.00	17.52	0.00 ***
M/WBE Total	0.00	21.65	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.15. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Services Contracting (Federal Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	12.28	3.58	
Hispanic	0.00	0.88	0.00
Asian	0.00	0.86	0.00
Native American	0.00	0.05	0.00
Minority	12.28	5.38	
Nonminority female	3.67	17.62	20.81
DBE Total	15.94	23.00	69.32
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	28.80	3.62	
Hispanic	0.00	0.92	0.00 **
Asian	37.28	1.76	
Native American	0.00	0.03	0.00
Minority	66.08	6.33	
Nonminority female	2.47	15.20	16.22 ***
DBE Total	68.55	21.53	
Employment Services (NAICS 5613)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
DBE Total	0.00	21.95	0.00 ***
Specialized Design Services (NAICS 5414)			
African American	0.00	3.69	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	0.72	0.00
Native American	0.00	0.16	0.00
Minority	0.00	5.30	0.00
Nonminority female	0.00	28.30	0.00 ***
DBE Total	0.00	33.60	0.00 ***
Aerospace Product and Parts Manufacturing (NAICS 3364)			
African American	0.00	9.36	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	9.44	0.00
Nonminority female	0.00	25.69	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
DBE Total	0.00	35.14	0.00
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	100.00	4.59	
Hispanic	0.00	6.62	0.00
Asian	0.00	0.19	0.00
Native American	0.00	0.00	
Minority	100.00	11.40	
Nonminority female	0.00	22.03	0.00
DBE Total	100.00	33.42	

Source and Notes: See Table 7.21.



## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.16. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Services Contracting (Federal Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	14.72	3.59	
Hispanic	0.00	0.88	0.00
Asian	0.00	0.86	0.00
Native American	0.00	0.05	0.00
Minority	14.72	5.38	
Nonminority female	4.45	17.61	25.27
DBE Total	19.17	22.99	83.37
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	3.70	0.00 **
Hispanic	0.00	0.90	0.00
Asian	70.55	1.64	
Native American	0.00	0.03	0.00
Minority	70.55	6.27	
Nonminority female	4.97	15.20	32.68 *
DBE Total	75.52	21.46	
Specialized Design Services (NAICS 5414)			
African American	0.00	3.69	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	0.72	0.00
Native American	0.00	0.16	0.00
Minority	0.00	5.30	0.00
Nonminority female	0.00	28.30	0.00 ***
DBE Total	0.00	33.60	0.00 ***
Aerospace Product and Parts Manufacturing (NAICS 3364)			
African American	0.00	9.36	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	9.44	0.00
Nonminority female	0.00	25.69	0.00
DBE Total	0.00	35.14	0.00
Employment Services (NAICS 5613)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
DBE Total	0.00	21.95	0.00
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	100.00	4.59	
Hispanic	0.00	6.62	0.00
Asian	0.00	0.19	0.00
Native American	0.00	0.00	
Minority	100.00	11.40	
Nonminority female	0.00	22.03	0.00
DBE Total	100.00	33.42	

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.17. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Services Contracting (Local Funds) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	3.63	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	0.00
Minority	0.00	3.63	0.00 ***
Nonminority female	0.00	19.29	0.00 ***
M/WBE Total	0.00	22.91	0.00 ***
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	4.33	3.33	
Hispanic	0.40	0.86	46.23
Asian	7.18	0.98	
Native American	0.47	0.07	
Minority	12.38	5.24	
Nonminority female	7.04	18.56	37.92
M/WBE Total	19.41	23.80	81.59
Employment Services (NAICS 5613)			
African American	68.90	5.19	
Hispanic	0.00	0.36	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.59	0.00
Minority	68.90	6.20	
Nonminority female	2.88	25.55	11.26 ***
M/WBE Total	71.78	31.75	
General Freight Trucking (NAICS 4841)			
African American	45.29	7.73	
Hispanic	11.44	0.29	
Asian	0.00	0.17	0.00 ***
Native American	0.00	0.03	0.00
Minority	56.73	8.22	
Nonminority female	0.06	18.69	0.32 ***
M/WBE Total	56.79	26.92	
Computer Systems Design and Related Services (NAICS 5415)			
African American	13.02	3.23	
Hispanic	0.41	0.86	47.94
Asian	0.00	1.97	0.00 ***
Native American	0.00	0.07	0.00
Minority	13.44	6.13	
Nonminority female	1.21	18.92	6.40 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	14.65	25.05	58.47
Other Personal Services (NAICS 8129)			
African American	0.32	9.23	3.43
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.08	0.00 ***
Minority	0.32	13.85	2.29
Nonminority female	0.00	13.86	0.00 ***
M/WBE Total	0.32	27.71	1.14 *
Software Publishers (NAICS 5112)			
African American	0.16	3.32	4.79 *
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.24	0.00
Minority	0.16	3.91	4.06 **
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	0.16	25.54	0.62 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	36.75	4.05	
Hispanic	0.04	0.15	23.88
Asian	0.00	0.08	0.00
Native American	0.00	0.24	0.00 ***
Minority	36.79	4.52	
Nonminority female	9.87	21.41	46.11 ***
M/WBE Total	46.66	25.93	
Other Telecommunications (NAICS 5179)			
African American	0.00	2.93	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.05	0.00 ***
Nonminority female	0.00	20.86	0.00 ***
M/WBE Total	0.00	23.91	0.00 ***
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.38	2.61	14.74
Hispanic	3.06	0.62	
Asian	0.08	1.37	5.79 **
Native American	0.00	0.07	0.00
Minority	3.53	4.66	75.64
Nonminority female	1.35	19.78	6.83 ***
M/WBE Total	4.88	24.44	19.96

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	16.24	5.46	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.12	0.00
Minority	16.24	5.58	
Nonminority female	0.00	20.17	0.00 ***
M/WBE Total	16.24	25.75	63.07
Building Equipment Contractors (NAICS 2382)			
African American	15.56	3.51	
Hispanic	61.63	0.16	
Asian	0.93	0.25	
Native American	0.00	1.27	0.00 ***
Minority	78.12	5.20	
Nonminority female	5.69	16.27	34.99 ***
M/WBE Total	83.81	21.46	
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	2.44	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00 ***
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	50.71	2.93	
Hispanic	0.00	0.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.27	0.00
Minority	50.71	3.30	
Nonminority female	0.25	22.15	1.15 ***
M/WBE Total	50.96	25.45	
Social Advocacy Organizations (NAICS 8133)			
African American	0.00	10.66	0.00 ***
Hispanic	0.00	1.51	0.00 ***
Asian	0.00	0.00	
Native American	0.00	3.02	0.00 ***
Minority	0.00	15.20	0.00 ***
Nonminority female	0.00	13.61	0.00 ***
M/WBE Total	0.00	28.81	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	9.17	0.00 ***
Hispanic	0.00	1.66	0.00 ***
Asian	0.00	0.14	0.00 ***
Native American	0.00	3.06	0.00 ***
Minority	0.00	14.02	0.00 ***
Nonminority female	2.72	14.94	18.20 ***
M/WBE Total	2.72	28.95	9.39 ***
Legal Services (NAICS 5411)			
African American	10.74	1.50	
Hispanic	0.00	0.77	0.00
Asian	0.00	0.63	0.00
Native American	0.00	0.04	0.00
Minority	10.74	2.93	
Nonminority female	0.56	16.63	3.35 ***
M/WBE Total	11.30	19.56	57.77
Remediation and Other Waste Management Services (NAICS 5629)			
African American	8.21	14.83	55.35
Hispanic	0.00	0.02	0.00
Asian	7.33	0.03	
Native American	0.00	0.05	0.00
Minority	15.54	14.93	
Nonminority female	7.56	18.32	41.27 ***
M/WBE Total	23.11	33.26	69.48
Waste Collection (NAICS 5621)			
African American	0.02	5.29	0.35
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.14	0.00
Minority	0.02	5.43	0.34
Nonminority female	0.00	27.68	0.00 ***
M/WBE Total	0.02	33.11	0.06 ***
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	57.96	3.58	
Hispanic	0.00	0.91	0.00 ***
Asian	14.85	1.72	
Native American	0.00	0.03	0.00
Minority	72.81	6.24	
Nonminority female	1.23	15.26	8.07 ***
M/WBE Total	74.04	21.50	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Services (NAICS 5619)			
African American	2.70	3.46	77.97
Hispanic	0.00	0.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.74	0.00
Minority	2.70	4.55	59.29
Nonminority female	0.00	27.47	0.00 ***
M/WBE Total	2.70	32.03	8.43 ***
Individual and Family Services (NAICS 6241)			
African American	3.08	0.72	
Hispanic	0.00	2.06	0.00 **
Asian	0.00	0.11	0.00
Native American	0.00	0.01	0.00
Minority	3.08	2.90	
Nonminority female	13.61	18.78	72.45
M/WBE Total	16.69	21.68	76.99
Insurance Carriers (NAICS 5241)			
African American	0.00	4.50	0.00 ***
Hispanic	0.00	0.85	0.00
Asian	0.00	0.00	
Native American	0.00	0.29	0.00
Minority	0.00	5.64	0.00 ***
Nonminority female	23.60	22.69	
M/WBE Total	23.60	28.33	83.31
Special Food Services (NAICS 7223)			
African American	95.79	2.91	
Hispanic	0.00	1.73	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.30	0.00
Minority	95.79	5.01	
Nonminority female	0.00	26.53	0.00 ***
M/WBE Total	95.79	31.54	
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	9.38	0.00 ***
Hispanic	0.00	1.53	0.00 ***
Asian	0.00	0.00	0.00
Native American	0.00	3.05	0.00 ***
Minority	0.00	13.98	0.00 ***
Nonminority female	0.00	13.97	0.00 ***
M/WBE Total	0.00	27.95	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	3.23	0.00 ***
Hispanic	0.00	0.19	0.00 ***
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.77	0.00 ***
Nonminority female	91.88	19.25	
M/WBE Total	91.88	23.02	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	10.24	0.00 ***
Hispanic	0.00	1.81	0.00 ***
Asian	0.00	0.10	0.00
Native American	0.00	2.90	0.00 ***
Minority	0.00	15.04	0.00 ***
Nonminority female	19.53	16.35	
M/WBE Total	19.53	31.40	62.21
Civic and Social Organizations (NAICS 8134)			
African American	0.00	9.37	0.00 ***
Hispanic	0.00	1.53	0.00 *
Asian	0.00	0.00	
Native American	0.00	3.05	0.00 ***
Minority	0.00	13.95	0.00 ***
Nonminority female	0.00	13.82	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.40	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.01	0.00
Minority	0.00	2.41	0.00 ***
Nonminority female	0.00	21.19	0.00 ***
M/WBE Total	0.00	23.60	0.00 ***
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	4.49	2.31	
Hispanic	0.00	0.69	0.00
Asian	0.00	0.57	0.00
Native American	0.00	0.07	0.00
Minority	4.49	3.63	
Nonminority female	0.46	19.16	2.42 ***
M/WBE Total	4.95	22.79	21.73



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	5.91	0.00 ***
Hispanic	0.00	0.95	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.87	0.00 ***
Nonminority female	0.00	11.73	0.00 ***
M/WBE Total	0.00	18.59	0.00 ***
Residential Building Construction (NAICS 2361)			
African American	58.79	2.83	
Hispanic	0.00	1.66	0.00 ***
Asian	0.00	0.02	0.00
Native American	0.00	0.82	0.00 ***
Minority	58.79	5.34	
Nonminority female	13.25	8.40	
M/WBE Total	72.04	13.74	
Educational Support Services (NAICS 6117)			
African American	0.00	1.79	0.00 ***
Hispanic	0.00	1.64	0.00 ***
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	3.60	0.00 ***
Nonminority female	0.00	31.37	0.00 ***
M/WBE Total	0.00	34.98	0.00 ***
Other Ambulatory Health Care Services (NAICS 6219)			
African American	28.93	0.53	
Hispanic	0.00	2.03	0.00 ***
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	28.93	2.60	
Nonminority female	0.00	19.89	0.00 ***
M/WBE Total	28.93	22.48	
Other Specialty Trade Contractors (NAICS 2389)			
African American	3.26	3.07	
Hispanic	0.00	0.20	0.00 ***
Asian	0.00	0.10	0.00 ***
Native American	0.00	1.19	0.00 ***
Minority	3.26	4.57	71.42
Nonminority female	0.43	16.29	2.62 ***
M/WBE Total	3.69	20.86	17.69 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Business Support Services (NAICS 5614)</b>			
African American	17.12	3.82	
Hispanic	0.00	0.10	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.29	0.00
Minority	17.12	4.27	
Nonminority female	0.42	22.18	1.88 ***
M/WBE Total	17.54	26.45	66.31
<b>Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)</b>			
African American	0.00	3.07	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.19	0.00 ***
Nonminority female	0.00	20.68	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***
<b>Scientific Research and Development Services (NAICS 5417)</b>			
African American	10.41	1.46	
Hispanic	0.00	0.58	0.00
Asian	0.00	1.26	0.00 ***
Native American	0.00	0.03	0.00
Minority	10.41	3.33	
Nonminority female	4.31	15.34	28.12 **
M/WBE Total	14.72	18.67	78.86
<b>Support Activities for Crop Production (NAICS 1151)</b>			
African American	0.00	1.86	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.86	0.00
Native American	0.00	0.00	
Minority	0.00	3.72	0.00
Nonminority female	0.00	26.83	0.00 ***
M/WBE Total	0.00	30.55	0.00 ***
<b>Activities Related to Real Estate (NAICS 5313)</b>			
African American	1.77	2.44	72.59 *
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	1.77	2.44	72.59 *
Nonminority female	2.10	19.51	10.74 ***
M/WBE Total	3.87	21.95	17.61 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	4.65	4.03	
Hispanic	0.00	0.06	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.33	0.00
Minority	4.65	4.43	
Nonminority female	0.00	22.98	0.00 ***
M/WBE Total	4.65	27.41	16.97 ***
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	0.00	4.93	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.38	0.00 ***
Minority	0.00	5.31	0.00 ***
Nonminority female	0.00	22.99	0.00 ***
M/WBE Total	0.00	28.29	0.00 ***
Support Activities for Air Transportation (NAICS 4881)			
African American	99.00	5.56	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	99.00	5.58	
Nonminority female	0.00	17.54	0.00 ***
M/WBE Total	99.00	23.12	
Office Administrative Services (NAICS 5611)			
African American	90.16	3.22	
Hispanic	0.00	0.00	
Asian	0.00	0.38	0.00
Native American	0.00	0.09	0.00
Minority	90.16	3.69	
Nonminority female	4.80	20.73	23.15 ***
M/WBE Total	94.96	24.42	
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	6.97	0.00 ***
Hispanic	13.07	0.99	
Asian	0.00	0.00	
Native American	0.00	0.05	0.00
Minority	13.07	8.01	
Nonminority female	0.00	19.31	0.00 ***
M/WBE Total	13.07	27.32	47.84 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	15.74	0.00 ***
Hispanic	0.00	1.53	0.00 ***
Asian	0.00	0.35	0.00
Native American	0.00	2.64	0.00 ***
Minority	0.00	20.26	0.00 ***
Nonminority female	0.00	18.23	0.00 ***
M/WBE Total	0.00	38.49	0.00 ***
Outpatient Care Centers (NAICS 6214)			
African American	0.00	0.31	0.00
Hispanic	0.00	1.96	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00
Minority	0.00	2.37	0.00
Nonminority female	0.00	22.40	0.00 ***
M/WBE Total	0.00	24.77	0.00 ***
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.05	1.46	3.39 *
Hispanic	0.00	0.62	0.00
Asian	1.98	1.21	
Native American	0.00	0.09	0.00
Minority	2.03	3.37	60.17
Nonminority female	0.20	21.79	0.91 ***
M/WBE Total	2.23	25.16	8.85 ***
Other Information Services (NAICS 5191)			
African American	0.00	4.57	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.62	0.00
Minority	0.00	5.20	0.00 ***
Nonminority female	0.00	25.54	0.00 ***
M/WBE Total	0.00	30.74	0.00 ***
Warehousing and Storage (NAICS 4931)			
African American	3.19	5.96	53.61
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.04	0.00
Minority	3.19	5.99	53.27
Nonminority female	0.00	20.05	0.00 ***
M/WBE Total	3.19	26.05	12.26 *
Specialized Freight Trucking (NAICS 4842)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	71.05	7.85	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	71.05	7.91	
Nonminority female	0.13	21.76	0.61 ***
M/WBE Total	71.18	29.66	
Specialized Design Services (NAICS 5414)			
African American	3.75	3.69	
Hispanic	0.00	0.73	0.00 **
Asian	0.00	0.72	0.00 **
Native American	0.00	0.16	0.00
Minority	3.75	5.30	70.80
Nonminority female	0.00	28.30	0.00 ***
M/WBE Total	3.75	33.60	11.16 ***
Gasoline Stations (NAICS 4471)			
African American	0.00	0.28	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	1.29	0.00 ***
Native American	0.00	1.27	0.00
Minority	0.00	2.92	0.00 ***
Nonminority female	0.00	11.60	0.00 ***
M/WBE Total	0.00	14.52	0.00 ***
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	9.17	0.00 ***
Hispanic	0.00	1.65	0.00 ***
Asian	0.00	0.02	0.00
Native American	0.00	2.97	0.00 ***
Minority	0.00	13.82	0.00 ***
Nonminority female	0.00	15.42	0.00 ***
M/WBE Total	0.00	29.23	0.00 ***
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	1.41	9.45	14.98
Hispanic	0.00	1.52	0.00 ***
Asian	0.00	0.03	0.00
Native American	0.00	2.96	0.00 ***
Minority	1.41	13.96	10.13 **
Nonminority female	55.98	15.79	
M/WBE Total	57.39	29.75	
Automotive Equipment Rental and Leasing			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
(NAICS 5321)			
African American	0.00	2.51	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.12	0.00
Minority	0.00	2.63	0.00
Nonminority female	0.00	17.76	0.00 ***
M/WBE Total	0.00	20.39	0.00 ***
Lessors of Real Estate (NAICS 5311)			
African American	0.00	2.64	0.00 ***
Hispanic	0.00	0.02	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.15	0.00
Minority	0.00	2.87	0.00 ***
Nonminority female	0.00	20.54	0.00 ***
M/WBE Total	0.00	23.41	0.00 ***
Consumer Goods Rental (NAICS 5322)			
African American	0.00	2.58	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.77	0.00 ***
Nonminority female	0.00	21.33	0.00 ***
M/WBE Total	0.00	24.09	0.00 ***
Colleges, Universities, and Professional Schools (NAICS 6113)			
African American	0.00	0.51	0.00
Hispanic	0.00	2.07	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.58	0.00
Nonminority female	0.00	18.65	0.00 ***
M/WBE Total	0.00	21.24	0.00 ***
Radio and Television Broadcasting (NAICS 5151)			
African American	0.00	4.11	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.20	0.00
Minority	0.00	4.31	0.00
Nonminority female	0.00	21.22	0.00 ***
M/WBE Total	0.00	25.53	0.00 ***
Converted Paper Product Manufacturing (NAICS 3222)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Offices of Physicians (NAICS 6211)			
African American	0.00	0.59	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.64	0.00
Native American	0.00	0.22	0.00
Minority	0.00	3.37	0.00 ***
Nonminority female	0.00	22.07	0.00 ***
M/WBE Total	0.00	25.44	0.00 ***
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.50	0.00
Hispanic	0.00	1.92	0.00
Asian	0.00	0.00	
Native American	0.00	0.13	0.00
Minority	0.00	2.54	0.00
Nonminority female	0.00	23.45	0.00 ***
M/WBE Total	0.00	25.99	0.00 ***
Technical and Trade Schools (NAICS 6115)			
African American	0.00	6.06	0.00 ***
Hispanic	0.00	1.75	0.00
Asian	0.00	0.00	
Native American	0.00	0.16	0.00
Minority	0.00	7.96	0.00 ***
Nonminority female	0.00	24.12	0.00 ***
M/WBE Total	0.00	32.09	0.00 ***
Death Care Services (NAICS 8122)			
African American	0.00	11.40	0.00 ***
Hispanic	0.00	1.53	0.00
Asian	0.00	0.31	0.00
Native American	0.00	2.90	0.00
Minority	0.00	16.14	0.00 ***
Nonminority female	0.00	15.70	0.00 ***
M/WBE Total	0.00	31.84	0.00 ***
Home Health Care Services (NAICS 6216)			
African American	0.00	1.92	0.00
Hispanic	0.00	1.81	0.00
Asian	0.00	0.20	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.21	0.00
Minority	0.00	4.14	0.00
Nonminority female	0.00	25.40	0.00 ***
M/WBE Total	0.00	29.54	0.00 ***
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	83.67	4.28	
Hispanic	0.00	0.45	0.00 ***
Asian	0.00	0.49	0.00 ***
Native American	0.00	0.00	
Minority	83.67	5.23	
Nonminority female	8.92	23.49	37.96 ***
M/WBE Total	92.58	28.72	
Religious Organizations (NAICS 8131)			
African American	0.00	9.26	0.00 ***
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.07	0.00
Minority	0.00	13.88	0.00 ***
Nonminority female	0.00	13.89	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	94.06	4.77	
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	94.06	4.85	
Nonminority female	5.61	22.29	25.17 ***
M/WBE Total	99.67	27.14	
Vocational Rehabilitation Services (NAICS 6243)			
African American	1.48	2.12	69.67
Hispanic	0.00	2.00	0.00
Asian	0.00	0.00	
Native American	0.00	0.81	0.00
Minority	1.48	4.94	29.96 *
Nonminority female	0.00	18.63	0.00 ***
M/WBE Total	1.48	23.57	6.28 ***
Drinking Places (Alcoholic Beverages) (NAICS 7224)			
African American	0.00	0.64	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.07	0.00



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.12	0.00
Minority	0.00	2.75	0.00
Nonminority female	0.00	23.16	0.00 ***
M/WBE Total	0.00	25.91	0.00 ***
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	8.38	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	8.38	0.00 ***
Nonminority female	99.69	18.36	
M/WBE Total	99.69	26.73	
Support Activities for Water Transportation (NAICS 4883)			
African American	0.00	5.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.66	0.00
Nonminority female	0.00	16.98	0.00 ***
M/WBE Total	0.00	22.64	0.00 ***
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Business Schools and Computer and Management Training (NAICS 6114)			
African American	0.00	0.99	0.00
Hispanic	17.09	1.70	
Asian	0.00	0.00	
Native American	0.00	0.33	0.00
Minority	17.09	3.02	
Nonminority female	0.00	29.83	0.00 ***
M/WBE Total	17.09	32.85	52.03
Cable and Other Subscription Programming (NAICS 5152)			
African American	0.00	3.74	0.00 ***
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	3.74	0.00 ***
Nonminority female	0.00	19.25	0.00 ***
M/WBE Total	0.00	22.99	0.00 ***
Full-Service Restaurants (NAICS 7221)			
African American	0.00	0.65	0.00
Hispanic	0.00	1.94	0.00
Asian	0.00	1.05	0.00
Native American	0.00	0.17	0.00
Minority	0.00	3.81	0.00 ***
Nonminority female	0.00	22.03	0.00 ***
M/WBE Total	0.00	25.84	0.00 ***
Freight Transportation Arrangement (NAICS 4885)			
African American	100.00	6.51	
Hispanic	0.00	0.42	0.00
Asian	0.00	0.84	0.00
Native American	0.00	0.09	0.00
Minority	100.00	7.87	
Nonminority female	0.00	21.95	0.00
M/WBE Total	100.00	29.82	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	3.31	0.00 ***
Hispanic	0.00	0.11	0.00
Asian	0.00	0.70	0.00 *
Native American	0.00	0.00	
Minority	0.00	4.12	0.00 ***
Nonminority female	0.00	20.75	0.00 ***
M/WBE Total	0.00	24.87	0.00 ***
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	1.19	0.00
Hispanic	0.00	1.95	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00
Minority	0.00	3.24	0.00 ***
Nonminority female	0.00	21.81	0.00 ***
M/WBE Total	0.00	25.05	0.00 ***
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	1.55	0.00
Hispanic	0.00	1.43	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.00	
Native American	0.00	0.35	0.00
Minority	0.00	3.33	0.00
Nonminority female	26.96	36.40	74.07
M/WBE Total	26.96	39.73	67.86
General Medical and Surgical Hospitals (NAICS 6221)			
African American	0.00	0.09	0.00
Hispanic	0.00	2.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	0.00	2.13	0.00
Nonminority female	0.00	19.46	0.00 ***
M/WBE Total	0.00	21.59	0.00 ***
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	4.43	0.00 ***
Hispanic	28.76	0.60	
Asian	0.00	1.13	0.00
Native American	0.00	0.57	0.00
Minority	28.76	6.72	
Nonminority female	0.00	24.70	0.00 ***
M/WBE Total	28.76	31.42	91.54
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	1.88	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.88	0.00 ***
Nonminority female	0.00	44.60	0.00 ***
M/WBE Total	0.00	46.48	0.00 ***
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
M/WBE Total	100.00	30.30	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	2.67	0.00 ***
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.68	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.35	0.00 ***
Nonminority female	3.02	18.45	16.36 ***
M/WBE Total	3.02	21.80	13.85 ***
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	3.23	0.00 ***
Hispanic	5.92	0.12	
Asian	0.00	0.00	
Native American	0.00	1.16	0.00 ***
Minority	5.92	4.51	
Nonminority female	6.40	17.84	35.86 **
M/WBE Total	12.32	22.35	55.10
Grantmaking and Giving Services (NAICS 8132)			
African American	0.00	8.83	0.00
Hispanic	0.00	1.63	0.00
Asian	0.00	0.10	0.00
Native American	0.00	2.94	0.00
Minority	0.00	13.51	0.00
Nonminority female	0.00	17.87	0.00
M/WBE Total	0.00	31.38	0.00 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.60	0.00 ***
Hispanic	0.00	0.34	0.00 ***
Asian	0.00	0.40	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.34	0.00 ***
Nonminority female	0.00	20.54	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.18. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Services Contracting (Local Funds) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	3.38	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	0.00
Minority	0.00	3.38	0.00 **
Nonminority female	0.00	19.33	0.00 ***
M/WBE Total	0.00	22.71	0.00 ***
Employment Services (NAICS 5613)			
African American	71.76	5.19	
Hispanic	0.00	0.36	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.59	0.00
Minority	71.76	6.19	
Nonminority female	2.65	25.53	10.38 ***
M/WBE Total	74.41	31.72	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	6.58	3.39	
Hispanic	0.48	0.89	54.27
Asian	10.21	0.99	
Native American	0.20	0.07	
Minority	17.48	5.34	
Nonminority female	3.91	18.77	20.82 **
M/WBE Total	21.39	24.11	88.71
Computer Systems Design and Related Services (NAICS 5415)			
African American	14.78	3.26	
Hispanic	0.66	0.87	75.19
Asian	0.00	1.99	0.00 ***
Native American	0.00	0.07	0.00
Minority	15.44	6.19	
Nonminority female	1.27	19.02	6.66 ***
M/WBE Total	16.71	25.22	66.25
General Freight Trucking (NAICS 4841)			
African American	56.20	7.72	
Hispanic	11.99	0.29	
Asian	0.00	0.17	0.00
Native American	0.00	0.04	0.00
Minority	68.19	8.22	
Nonminority female	0.09	18.70	0.46 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	68.28	26.92	
Other Personal Services (NAICS 8129)			
African American	0.09	9.23	0.96
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	
Native American	0.00	3.08	0.00 *
Minority	0.09	13.85	0.64
Nonminority female	0.00	13.85	0.00 ***
M/WBE Total	0.09	27.69	0.32 ***
Software Publishers (NAICS 5112)			
African American	0.19	3.32	5.77
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00
Native American	0.00	0.24	0.00
Minority	0.19	3.91	4.89 *
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	0.19	25.54	0.75 ***
Other Telecommunications (NAICS 5179)			
African American	0.00	2.93	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.05	0.00 **
Nonminority female	0.00	20.86	0.00 ***
M/WBE Total	0.00	23.91	0.00 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	35.61	4.15	
Hispanic	0.05	0.17	30.81
Asian	0.00	0.08	0.00
Native American	0.00	0.25	0.00
Minority	35.66	4.65	
Nonminority female	8.16	21.49	37.98 ***
M/WBE Total	43.82	26.13	
Building Equipment Contractors (NAICS 2382)			
African American	15.87	3.51	
Hispanic	61.58	0.16	
Asian	0.98	0.25	
Native American	0.00	1.27	0.00 ***
Minority	78.43	5.20	
Nonminority female	5.47	16.27	33.60 ***
M/WBE Total	83.90	21.46	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	18.35	5.35	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	18.35	5.46	
Nonminority female	0.00	20.11	0.00 ***
M/WBE Total	18.35	25.57	71.76
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	11.33	2.93	
Hispanic	0.00	0.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.27	0.00
Minority	11.33	3.30	
Nonminority female	0.14	22.15	0.65 ***
M/WBE Total	11.48	25.45	45.10
Legal Services (NAICS 5411)			
African American	6.98	1.47	
Hispanic	0.00	0.76	0.00
Asian	0.00	0.63	0.00
Native American	0.00	0.03	0.00
Minority	6.98	2.89	
Nonminority female	20.04	16.48	
M/WBE Total	27.02	19.37	
Social Advocacy Organizations (NAICS 8133)			
African American	0.00	10.66	0.00 ***
Hispanic	0.00	1.51	0.00 *
Asian	0.00	0.00	
Native American	0.00	3.02	0.00 ***
Minority	0.00	15.20	0.00 ***
Nonminority female	0.00	13.61	0.00 ***
M/WBE Total	0.00	28.81	0.00 ***
Remediation and Other Waste Management Services (NAICS 5629)			
African American	7.77	15.64	49.69 *
Hispanic	0.00	0.01	0.00
Asian	8.05	0.01	
Native American	0.00	0.03	0.00
Minority	15.82	15.70	
Nonminority female	5.28	17.98	29.38 ***
M/WBE Total	21.11	33.68	62.67 *

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	9.17	0.00 ***
Hispanic	0.00	1.61	0.00 ***
Asian	0.00	0.12	0.00
Native American	0.00	3.09	0.00 ***
Minority	0.00	14.00	0.00 ***
Nonminority female	4.71	14.87	31.65 ***
M/WBE Total	4.71	28.87	16.30 ***
Individual and Family Services (NAICS 6241)			
African American	3.73	0.73	
Hispanic	0.00	2.06	0.00
Asian	0.00	0.10	0.00
Native American	0.00	0.01	0.00
Minority	3.73	2.89	
Nonminority female	16.75	18.78	89.17
M/WBE Total	20.48	21.67	94.51
Insurance Carriers (NAICS 5241)			
African American	0.00	4.62	0.00
Hispanic	0.00	0.96	0.00
Asian	0.00	0.00	
Native American	0.00	0.28	0.00
Minority	0.00	5.86	0.00 ***
Nonminority female	29.22	22.56	
M/WBE Total	29.22	28.42	
Special Food Services (NAICS 7223)			
African American	96.33	2.91	
Hispanic	0.00	1.73	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.30	0.00
Minority	96.33	5.01	
Nonminority female	0.00	26.53	0.00 ***
M/WBE Total	96.33	31.54	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	34.34	3.33	
Hispanic	0.00	0.93	0.00 ***
Asian	28.36	2.23	
Native American	0.00	0.03	0.00
Minority	62.70	6.52	
Nonminority female	0.40	15.60	2.58 ***
M/WBE Total	63.11	22.12	
Business, Professional, Labor, Political, and			



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Similar Organizations (NAICS 8139)			
African American	0.00	9.35	0.00 ***
Hispanic	0.00	1.54	0.00 **
Asian	0.00	0.00	0.00
Native American	0.00	3.06	0.00 ***
Minority	0.00	13.95	0.00 ***
Nonminority female	0.00	13.97	0.00 ***
M/WBE Total	0.00	27.92	0.00 ***
Residential Building Construction (NAICS 2361)			
African American	55.68	2.84	
Hispanic	0.00	1.67	0.00 ***
Asian	0.00	0.01	0.00
Native American	0.00	0.83	0.00 ***
Minority	55.68	5.35	
Nonminority female	13.76	8.42	
M/WBE Total	69.44	13.76	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	1.83	2.84	64.32
Hispanic	14.45	0.73	
Asian	0.33	1.17	28.36
Native American	0.00	0.11	0.00
Minority	16.61	4.85	
Nonminority female	4.36	21.51	20.29 *
M/WBE Total	20.98	26.37	79.57
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	5.33	2.21	
Hispanic	0.00	0.69	0.00
Asian	0.00	0.56	0.00
Native American	0.00	0.06	0.00
Minority	5.33	3.53	
Nonminority female	0.55	18.87	2.92 ***
M/WBE Total	5.88	22.40	26.27
Civic and Social Organizations (NAICS 8134)			
African American	0.00	9.37	0.00 ***
Hispanic	0.00	1.53	0.00
Asian	0.00	0.00	
Native American	0.00	3.05	0.00 **
Minority	0.00	13.95	0.00 ***
Nonminority female	0.00	13.82	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.19	0.00 ***
Hispanic	0.00	0.18	0.00
Asian	0.00	0.34	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.70	0.00 ***
Nonminority female	86.42	19.29	
M/WBE Total	86.42	22.99	
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.40	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.01	0.00
Minority	0.00	2.42	0.00 ***
Nonminority female	0.00	21.16	0.00 ***
M/WBE Total	0.00	23.58	0.00 ***
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	9.80	0.00 ***
Hispanic	0.00	1.89	0.00 **
Asian	0.00	0.10	0.00
Native American	0.00	2.91	0.00 ***
Minority	0.00	14.70	0.00 ***
Nonminority female	21.26	16.40	
M/WBE Total	21.26	31.09	68.37
Other Support Services (NAICS 5619)			
African American	6.82	3.46	
Hispanic	0.00	0.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.74	0.00
Minority	6.82	4.55	
Nonminority female	0.00	27.47	0.00 ***
M/WBE Total	6.82	32.03	21.30 **
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.10	3.07	3.21 ***
Hispanic	0.00	0.20	0.00 ***
Asian	0.00	0.10	0.00 ***
Native American	0.00	1.19	0.00 ***
Minority	0.10	4.56	2.16 ***
Nonminority female	0.44	16.29	2.68 ***
M/WBE Total	0.53	20.85	2.56 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Educational Support Services (NAICS 6117)			
African American	0.00	1.79	0.00
Hispanic	0.00	1.64	0.00
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	3.60	0.00 **
Nonminority female	0.00	31.37	0.00 ***
M/WBE Total	0.00	34.98	0.00 ***
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	1.86	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.86	0.00
Native American	0.00	0.00	
Minority	0.00	3.72	0.00
Nonminority female	0.00	26.83	0.00 ***
M/WBE Total	0.00	30.55	0.00 ***
Other Ambulatory Health Care Services (NAICS 6219)			
African American	39.87	0.53	
Hispanic	0.00	2.03	0.00 *
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	39.87	2.60	
Nonminority female	0.00	19.89	0.00 ***
M/WBE Total	39.87	22.48	
Activities Related to Real Estate (NAICS 5313)			
African American	0.81	2.44	33.06 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.81	2.44	33.06 ***
Nonminority female	1.29	19.51	6.59 ***
M/WBE Total	2.09	21.95	9.53 ***
Business Support Services (NAICS 5614)			
African American	26.67	3.88	
Hispanic	0.00	0.02	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.16	0.00
Minority	26.67	4.11	
Nonminority female	0.00	20.74	0.00 ***
M/WBE Total	26.67	24.85	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Outpatient Care Centers (NAICS 6214)</b>			
African American	0.00	0.31	0.00
Hispanic	0.00	1.96	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00
Minority	0.00	2.37	0.00
Nonminority female	0.00	22.41	0.00 ***
M/WBE Total	0.00	24.78	0.00 ***
<b>Warehousing and Storage (NAICS 4931)</b>			
African American	1.35	5.93	22.85
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.04	0.00
Minority	1.35	5.97	22.70
Nonminority female	0.00	20.07	0.00 ***
M/WBE Total	1.35	26.04	5.20 **
<b>Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)</b>			
African American	0.00	3.07	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.19	0.00
Nonminority female	0.00	20.68	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***
<b>Specialized Freight Trucking (NAICS 4842)</b>			
African American	70.18	7.84	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	70.18	7.90	
Nonminority female	0.14	21.79	0.62 ***
M/WBE Total	70.31	29.69	
<b>Gasoline Stations (NAICS 4471)</b>			
African American	0.00	0.28	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	1.29	0.00 ***
Native American	0.00	1.27	0.00
Minority	0.00	2.92	0.00 ***
Nonminority female	0.00	11.60	0.00 ***
M/WBE Total	0.00	14.52	0.00 ***
<b>Other Information Services (NAICS 5191)</b>			
African American	0.00	4.57	0.00 **
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.00	
Native American	0.00	0.62	0.00
Minority	0.00	5.20	0.00 **
Nonminority female	0.00	25.54	0.00 ***
M/WBE Total	0.00	30.74	0.00 ***
Scientific Research and Development Services (NAICS 5417)			
African American	14.82	1.57	
Hispanic	0.00	0.58	0.00
Asian	0.00	1.48	0.00
Native American	0.00	0.04	0.00
Minority	14.82	3.67	
Nonminority female	6.68	16.18	41.29
M/WBE Total	21.50	19.84	
Office Administrative Services (NAICS 5611)			
African American	89.27	3.22	
Hispanic	0.00	0.00	
Asian	0.00	0.38	0.00
Native American	0.00	0.09	0.00
Minority	89.27	3.69	
Nonminority female	5.97	20.73	28.81
M/WBE Total	95.24	24.42	
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	16.34	0.00 ***
Hispanic	0.00	1.51	0.00 ***
Asian	0.00	0.42	0.00
Native American	0.00	2.63	0.00 ***
Minority	0.00	20.90	0.00 ***
Nonminority female	0.00	17.57	0.00 ***
M/WBE Total	0.00	38.48	0.00 ***
Specialized Design Services (NAICS 5414)			
African American	4.68	3.69	
Hispanic	0.00	0.73	0.00
Asian	0.00	0.72	0.00
Native American	0.00	0.16	0.00
Minority	4.68	5.30	88.28
Nonminority female	0.00	28.30	0.00 ***
M/WBE Total	4.68	33.60	13.92 ***
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	0.00	4.82	0.00 ***
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.00	
Native American	0.00	0.33	0.00
Minority	0.00	5.14	0.00 ***
Nonminority female	0.00	22.48	0.00 ***
M/WBE Total	0.00	27.62	0.00 ***
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	1.69	9.45	17.87
Hispanic	0.00	1.52	0.00 *
Asian	0.00	0.03	0.00
Native American	0.00	2.96	0.00 *
Minority	1.69	13.96	12.09 **
Nonminority female	66.20	15.79	
M/WBE Total	67.89	29.75	
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	6.96	0.00
Hispanic	14.44	1.00	
Asian	0.00	0.00	
Native American	0.00	0.05	0.00
Minority	14.44	8.01	
Nonminority female	0.00	19.31	0.00 ***
M/WBE Total	14.44	27.32	52.87
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	1.40	0.00
Hispanic	0.00	0.59	0.00
Asian	2.85	1.34	
Native American	0.00	0.10	0.00
Minority	2.85	3.43	82.93
Nonminority female	0.00	23.44	0.00 ***
M/WBE Total	2.85	26.88	10.60 ***
Consumer Goods Rental (NAICS 5322)			
African American	0.00	2.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.75	0.00
Nonminority female	0.00	21.23	0.00 ***
M/WBE Total	0.00	23.98	0.00 ***
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	2.44	0.00

# Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	9.19	0.00 ***
Hispanic	0.00	1.66	0.00 ***
Asian	0.00	0.02	0.00
Native American	0.00	2.97	0.00 ***
Minority	0.00	13.85	0.00 ***
Nonminority female	0.00	15.38	0.00 ***
M/WBE Total	0.00	29.22	0.00 ***
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	10.26	4.03	
Hispanic	0.00	0.06	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.33	0.00
Minority	10.26	4.43	
Nonminority female	0.00	22.98	0.00 ***
M/WBE Total	10.26	27.41	37.43 ***
Lessors of Real Estate (NAICS 5311)			
African American	0.00	2.62	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	0.08	0.00
Native American	0.00	0.15	0.00
Minority	0.00	2.87	0.00
Nonminority female	0.00	20.44	0.00 ***
M/WBE Total	0.00	23.30	0.00 ***
Radio and Television Broadcasting (NAICS 5151)			
African American	0.00	4.28	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.21	0.00
Minority	0.00	4.49	0.00
Nonminority female	0.00	21.30	0.00 ***
M/WBE Total	0.00	25.79	0.00 ***
Colleges, Universities, and Professional Schools (NAICS 6113)			
African American	0.00	0.51	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	2.07	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.58	0.00
Nonminority female	0.00	18.65	0.00 ***
M/WBE Total	0.00	21.24	0.00 ***
Offices of Physicians (NAICS 6211)			
African American	0.00	0.60	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.65	0.00
Native American	0.00	0.22	0.00
Minority	0.00	3.39	0.00
Nonminority female	0.00	22.09	0.00 ***
M/WBE Total	0.00	25.47	0.00 ***
Death Care Services (NAICS 8122)			
African American	0.00	11.40	0.00 ***
Hispanic	0.00	1.53	0.00
Asian	0.00	0.31	0.00
Native American	0.00	2.90	0.00
Minority	0.00	16.14	0.00 ***
Nonminority female	0.00	15.70	0.00 ***
M/WBE Total	0.00	31.84	0.00 ***
Home Health Care Services (NAICS 6216)			
African American	0.00	1.92	0.00
Hispanic	0.00	1.81	0.00
Asian	0.00	0.20	0.00
Native American	0.00	0.21	0.00
Minority	0.00	4.14	0.00
Nonminority female	0.00	25.40	0.00 ***
M/WBE Total	0.00	29.54	0.00 ***
Religious Organizations (NAICS 8131)			
African American	0.00	9.26	0.00
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.07	0.00
Minority	0.00	13.88	0.00
Nonminority female	0.00	13.89	0.00
M/WBE Total	0.00	27.76	0.00 ***
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	93.91	4.77	
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	93.91	4.85	
Nonminority female	5.71	22.29	25.61 ***
M/WBE Total	99.62	27.14	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	81.17	4.51	
Hispanic	0.00	0.41	0.00 ***
Asian	0.00	0.60	0.00 ***
Native American	0.00	0.00	
Minority	81.17	5.51	
Nonminority female	11.63	24.73	47.02 ***
M/WBE Total	92.80	30.25	
Technical and Trade Schools (NAICS 6115)			
African American	0.00	6.06	0.00 *
Hispanic	0.00	1.75	0.00
Asian	0.00	0.00	
Native American	0.00	0.16	0.00
Minority	0.00	7.96	0.00 *
Nonminority female	0.00	24.12	0.00 ***
M/WBE Total	0.00	32.09	0.00 ***
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	5.91	0.00 ***
Hispanic	0.00	0.95	0.00 *
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.87	0.00 ***
Nonminority female	0.00	11.73	0.00 ***
M/WBE Total	0.00	18.59	0.00 ***
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.50	0.00
Hispanic	0.00	1.92	0.00
Asian	0.00	0.00	
Native American	0.00	0.13	0.00
Minority	0.00	2.54	0.00
Nonminority female	0.00	23.45	0.00 ***
M/WBE Total	0.00	25.99	0.00 ***
Support Activities for Water Transportation (NAICS 4883)			
African American	0.00	5.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	5.66	0.00
Nonminority female	0.00	16.98	0.00 ***
M/WBE Total	0.00	22.64	0.00 ***
Vocational Rehabilitation Services (NAICS 6243)			
African American	2.10	2.12	99.06
Hispanic	0.00	2.00	0.00
Asian	0.00	0.00	
Native American	0.00	0.81	0.00
Minority	2.10	4.94	42.59
Nonminority female	0.00	18.63	0.00 ***
M/WBE Total	2.10	23.57	8.92 ***
Drinking Places (Alcoholic Beverages) (NAICS 7224)			
African American	0.00	0.64	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.12	0.00
Minority	0.00	2.75	0.00
Nonminority female	0.00	23.16	0.00 *
M/WBE Total	0.00	25.91	0.00 *
Freight Transportation Arrangement (NAICS 4885)			
African American	100.00	6.51	
Hispanic	0.00	0.42	0.00
Asian	0.00	0.84	0.00
Native American	0.00	0.09	0.00
Minority	100.00	7.87	
Nonminority female	0.00	21.95	0.00
M/WBE Total	100.00	29.82	
Full-Service Restaurants (NAICS 7221)			
African American	0.00	0.65	0.00
Hispanic	0.00	1.94	0.00
Asian	0.00	1.05	0.00
Native American	0.00	0.17	0.00
Minority	0.00	3.81	0.00
Nonminority female	0.00	22.03	0.00 ***
M/WBE Total	0.00	25.84	0.00 ***
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	1.88	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	1.88	0.00
Nonminority female	0.00	44.60	0.00 ***
M/WBE Total	0.00	46.48	0.00 ***
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
General Medical and Surgical Hospitals (NAICS 6221)			
African American	0.00	0.09	0.00
Hispanic	0.00	2.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	0.00	2.13	0.00
Nonminority female	0.00	19.46	0.00 ***
M/WBE Total	0.00	21.59	0.00 ***
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	1.19	0.00
Hispanic	0.00	1.95	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00
Minority	0.00	3.24	0.00 *
Nonminority female	0.00	21.81	0.00 ***
M/WBE Total	0.00	25.05	0.00 ***
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	4.43	0.00
Hispanic	38.41	0.60	
Asian	0.00	1.13	0.00
Native American	0.00	0.57	0.00
Minority	38.41	6.72	
Nonminority female	0.00	24.70	0.00 ***
M/WBE Total	38.41	31.42	
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	1.55	0.00
Hispanic	0.00	1.43	0.00
Asian	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.35	0.00
Minority	0.00	3.33	0.00
Nonminority female	37.30	36.40	
M/WBE Total	37.30	39.73	93.90
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
M/WBE Total	100.00	30.30	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	3.23	0.00 ***
Hispanic	0.00	0.12	0.00 *
Asian	0.00	0.00	
Native American	0.00	1.16	0.00 ***
Minority	0.00	4.51	0.00 ***
Nonminority female	6.80	17.84	38.12 **
M/WBE Total	6.80	22.35	30.43 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.60	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.40	0.00
Native American	0.00	0.00	
Minority	0.00	3.34	0.00 ***
Nonminority female	0.00	20.54	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***
Grantmaking and Giving Services (NAICS 8132)			
African American	0.00	8.83	0.00
Hispanic	0.00	1.63	0.00
Asian	0.00	0.10	0.00
Native American	0.00	2.94	0.00
Minority	0.00	13.51	0.00
Nonminority female	0.00	17.87	0.00
M/WBE Total	0.00	31.38	0.00 ***
Business Schools and Computer and Management Training (NAICS 6114)			
African American	0.00	0.99	0.00
Hispanic	0.00	1.70	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.00	
Native American	0.00	0.33	0.00
Minority	0.00	3.02	0.00
Nonminority female	0.00	29.83	0.00 ***
M/WBE Total	0.00	32.85	0.00 ***
Taxi and Limousine Service (NAICS 4853)			
African American	0.00	12.04	0.00
Hispanic	0.00	0.00	
Asian	0.00	3.46	0.00
Native American	0.00	3.89	0.00
Minority	0.00	19.39	0.00
Nonminority female	0.00	9.89	0.00
M/WBE Total	0.00	29.28	0.00
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	4.03	0.00 ***
Hispanic	0.00	1.86	0.00 ***
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.89	0.00 ***
Nonminority female	0.00	24.27	0.00 ***
M/WBE Total	0.00	30.16	0.00 ***
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	2.68	0.00
Hispanic	0.00	0.71	0.00
Asian	0.00	0.73	0.00
Native American	0.00	0.00	
Minority	0.00	4.12	0.00
Nonminority female	0.00	17.52	0.00 ***
M/WBE Total	0.00	21.65	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.19. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Commodities Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.52	0.00 ***
Hispanic	0.00	0.15	0.00 ***
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.05	0.00 ***
Nonminority female	30.93	19.41	
M/WBE Total	30.93	23.45	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	2.89	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	0.00
Native American	0.00	0.00	
Minority	0.00	2.89	0.00 ***
Nonminority female	0.00	17.05	0.00 ***
M/WBE Total	0.00	19.93	0.00 ***
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	6.82	5.23	
Hispanic	0.00	0.00	
Asian	0.00	0.64	0.00 ***
Native American	0.00	0.00	
Minority	6.82	5.87	
Nonminority female	0.44	21.17	2.09 ***
M/WBE Total	7.26	27.03	26.85 **
Automobile Dealers (NAICS 4411)			
African American	0.00	0.89	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	1.27	0.00 ***
Native American	0.00	1.44	0.00 ***
Minority	0.00	3.61	0.00 ***
Nonminority female	0.00	10.73	0.00 ***
M/WBE Total	0.00	14.34	0.00 ***
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	7.98	3.82	
Hispanic	3.61	0.17	
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.00	
Minority	11.59	4.35	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	14.96	19.90	75.18
M/WBE Total	26.55	24.25	
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	6.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	6.17	0.00 ***
Nonminority female	0.00	20.21	0.00 ***
M/WBE Total	0.00	26.37	0.00 ***
Basic Chemical Manufacturing (NAICS 3251)			
African American	0.00	5.74	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.54	0.00
Native American	0.00	0.00	
Minority	0.00	6.28	0.00 ***
Nonminority female	0.00	18.31	0.00 ***
M/WBE Total	0.00	24.59	0.00 ***
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	5.89	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	5.97	0.00 ***
Nonminority female	0.00	20.09	0.00 ***
M/WBE Total	0.00	26.05	0.00 ***
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	3.71	0.00 ***
Hispanic	0.00	0.49	0.00 ***
Asian	1.42	0.65	
Native American	0.00	0.00	
Minority	1.42	4.85	29.25 **
Nonminority female	0.00	20.87	0.00 ***
M/WBE Total	1.42	25.71	5.52 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	2.30	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.43	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	2.77	0.00 ***
Nonminority female	0.00	27.28	0.00 ***
M/WBE Total	0.00	30.05	0.00 ***
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	2.81	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.89	0.00 ***
Nonminority female	0.00	18.52	0.00 ***
M/WBE Total	0.00	21.40	0.00 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	1.15	0.68	
Hispanic	0.00	0.17	0.00 ***
Asian	0.00	1.31	0.00 ***
Native American	0.34	1.31	26.07
Minority	1.49	3.47	42.96
Nonminority female	0.19	13.90	1.35 ***
M/WBE Total	1.68	17.37	9.67 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.65	0.00 ***
Hispanic	0.00	0.24	0.00 ***
Asian	0.00	0.30	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.19	0.00 ***
Nonminority female	0.96	19.89	4.80 ***
M/WBE Total	0.96	23.08	4.14 ***
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	4.90	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	4.92	0.00 ***
Nonminority female	0.00	17.43	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	1.24	0.55	



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.04	0.00
Asian	0.00	1.71	0.00 ***
Native American	0.00	1.75	0.00 ***
Minority	1.24	4.05	30.52
Nonminority female	0.00	12.89	0.00 ***
M/WBE Total	1.24	16.93	7.29 ***
Motor Vehicle Manufacturing (NAICS 3361)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	2.58	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.64	0.00 ***
Nonminority female	0.00	19.67	0.00 ***
M/WBE Total	0.00	22.31	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.10	0.00 ***
Hispanic	9.75	0.15	
Asian	0.00	0.30	0.00 ***
Native American	0.00	0.00	
Minority	9.75	3.56	
Nonminority female	13.60	19.39	70.16
M/WBE Total	23.35	22.94	
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.74	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.34	0.00 ***
Native American	0.00	0.00	
Minority	0.00	6.07	0.00 ***
Nonminority female	25.09	23.83	
M/WBE Total	25.09	29.91	83.89
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.29	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.27	0.00
Native American	0.00	0.00	
Minority	0.00	2.57	0.00 ***
Nonminority female	0.00	27.54	0.00 ***
M/WBE Total	0.00	30.10	0.00 ***
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	3.00	0.00 ***
Hispanic	0.00	0.07	0.00
Asian	0.00	0.50	0.00 *
Native American	0.00	0.00	
Minority	0.00	3.57	0.00 ***
Nonminority female	5.76	21.83	26.37
M/WBE Total	5.76	25.40	22.66
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	1.52	0.00 ***
Hispanic	0.00	0.67	0.00 ***
Asian	0.00	1.66	0.00 ***
Native American	0.00	1.34	0.00 ***
Minority	0.00	5.18	0.00 ***
Nonminority female	0.00	12.51	0.00 ***
M/WBE Total	0.00	17.69	0.00 ***
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	3.73	0.00 ***
Hispanic	0.00	0.46	0.00 ***
Asian	0.00	0.28	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.47	0.00 ***
Nonminority female	0.00	21.13	0.00 ***
M/WBE Total	0.00	25.60	0.00 ***
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	0.69	0.00 ***
Hispanic	0.00	0.14	0.00
Asian	0.00	1.36	0.00 ***
Native American	0.00	1.26	0.00 ***
Minority	0.00	3.45	0.00 ***
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	0.00	16.83	0.00 ***
Lawn and Garden Equipment and Supplies			

# Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Stores (NAICS 4442)			
African American	0.00	0.42	0.00 ***
Hispanic	0.00	0.05	0.00
Asian	0.00	1.43	0.00 ***
Native American	0.00	1.19	0.00 ***
Minority	0.00	3.10	0.00 ***
Nonminority female	17.57	15.33	
M/WBE Total	17.57	18.43	95.33
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	2.62	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	2.70	0.00 ***
Nonminority female	0.00	20.97	0.00 ***
M/WBE Total	0.00	23.67	0.00 ***
Rubber Product Manufacturing (NAICS 3262)			
African American	0.00	2.82	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 ***
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	1.32	0.00 ***
Native American	0.00	1.27	0.00 ***
Minority	0.00	2.70	0.00 ***
Nonminority female	0.00	12.71	0.00 ***
M/WBE Total	0.00	15.41	0.00 ***
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	2.77	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.47	0.00 **
Native American	0.00	0.00	
Minority	0.00	3.28	0.00 ***
Nonminority female	0.12	18.40	0.64 ***
M/WBE Total	0.12	21.68	0.54 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	2.62	0.00 ***
Hispanic	0.00	0.21	0.00
Asian	0.00	0.17	0.00
Native American	0.00	0.00	
Minority	0.00	3.00	0.00 ***
Nonminority female	0.00	21.22	0.00 ***
M/WBE Total	0.00	24.22	0.00 ***
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	0.00	0.00	
Minority	0.00	4.30	0.00 ***
Nonminority female	0.66	21.36	3.11 ***
M/WBE Total	0.66	25.66	2.59 ***
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	4.18	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	4.22	0.00 ***
Nonminority female	0.00	19.35	0.00 ***
M/WBE Total	0.00	23.57	0.00 ***
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	2.72	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	2.76	0.00 ***
Nonminority female	0.00	18.90	0.00 ***
M/WBE Total	0.00	21.66	0.00 ***
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	2.77	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.59	0.00
Native American	0.00	0.00	
Minority	0.00	3.35	0.00 ***
Nonminority female	0.00	17.46	0.00 ***
M/WBE Total	0.00	20.81	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00 ***
Nonminority female	3.13	20.40	15.33
M/WBE Total	3.13	23.69	13.20
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	3.03	0.00 ***
Hispanic	0.00	0.23	0.00
Asian	0.00	0.19	0.00
Native American	0.00	0.00	
Minority	0.00	3.44	0.00 ***
Nonminority female	0.00	21.52	0.00 ***
M/WBE Total	0.00	24.96	0.00 ***
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	3.33	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.97	0.00
Native American	0.00	0.00	
Minority	0.00	5.30	0.00 ***
Nonminority female	0.00	17.99	0.00 ***
M/WBE Total	0.00	23.29	0.00 ***
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	1.97	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.97	0.00 ***
Nonminority female	0.31	41.98	0.74 ***
M/WBE Total	0.31	43.95	0.71 ***
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	2.29	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.21	0.00
Native American	0.00	0.00	
Minority	0.00	2.50	0.00 ***
Nonminority female	0.00	27.79	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	0.00	30.29	0.00 ***
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	2.66	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.73	0.00 ***
Nonminority female	0.00	20.06	0.00 ***
M/WBE Total	0.00	22.79	0.00 ***
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	3.31	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	3.34	0.00 ***
Nonminority female	0.00	18.48	0.00 ***
M/WBE Total	0.00	21.82	0.00 ***
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.53	0.00 ***
Hispanic	22.28	0.16	
Asian	7.31	0.26	
Native American	0.00	1.27	0.00 ***
Minority	29.59	5.21	
Nonminority female	10.92	16.31	66.98
M/WBE Total	40.51	21.52	
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***
M/WBE Total	0.00	26.63	0.00 ***
Other Motor Vehicle Dealers (NAICS 4412)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.06	0.00
Asian	0.00	1.59	0.00
Native American	0.00	1.35	0.00
Minority	0.00	3.06	0.00
Nonminority female	0.00	13.08	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	0.00	16.14	0.00 ***
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00 ***
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	23.85	0.00 ***
Grocery Stores (NAICS 4451)			
African American	0.00	0.62	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.47	0.00 ***
Native American	0.00	1.40	0.00 ***
Minority	0.00	3.77	0.00 ***
Nonminority female	0.00	13.62	0.00 ***
M/WBE Total	0.00	17.39	0.00 ***
Home Furnishings Stores (NAICS 4422)			
African American	0.00	1.21	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.39	0.00
Native American	0.00	1.27	0.00
Minority	0.00	4.15	0.00 ***
Nonminority female	8.22	12.98	63.31
M/WBE Total	8.22	17.13	47.97
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	2.84	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.27	0.00
Native American	0.00	0.00	
Minority	0.00	3.11	0.00 ***
Nonminority female	0.00	17.81	0.00 ***
M/WBE Total	0.00	20.92	0.00 ***
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	2.76	2.81	98.29
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	2.76	4.12	66.90
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	2.76	23.88	11.55 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	2.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.00	0.00
Native American	0.00	0.00	
Minority	0.00	6.31	0.00 ***
Nonminority female	59.72	21.84	
M/WBE Total	59.72	28.15	
Foundries (NAICS 3315)			
African American	0.00	2.82	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 **
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Lime and Gypsum Product Manufacturing (NAICS 3274)			
African American	0.00	2.11	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.30	0.00
Native American	0.00	0.00	
Minority	0.00	2.41	0.00
Nonminority female	0.00	31.13	0.00 ***
M/WBE Total	0.00	33.54	0.00 ***
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	1.23	0.00 ***
Hispanic	0.00	0.12	0.00
Asian	0.00	1.36	0.00 ***
Native American	0.00	1.23	0.00 ***
Minority	0.00	3.95	0.00 ***
Nonminority female	0.00	18.40	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Other Textile Product Mills (NAICS 3149)			
African American	0.00	2.25	0.00 ***
Hispanic	0.00	2.14	0.00 ***
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	4.52	0.00 ***
Nonminority female	75.45	20.90	
M/WBE Total	75.45	25.42	



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Audio and Video Equipment Manufacturing (NAICS 3343)</b>			
African American	0.00	10.80	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	10.85	0.00 ***
Nonminority female	0.00	17.86	0.00 ***
M/WBE Total	0.00	28.71	0.00 ***
<b>Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)</b>			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Sawmills and Wood Preservation (NAICS 3211)</b>			
African American	0.00	2.82	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 ***
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Pharmaceutical and Medicine Manufacturing (NAICS 3254)</b>			
African American	0.00	2.82	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 ***
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)</b>			
African American	0.00	2.30	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00 ***
Nonminority female	2.16	27.44	7.87 ***
M/WBE Total	2.16	29.96	7.21 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***
M/WBE Total	0.00	26.63	0.00 ***
Dairy Product Manufacturing (NAICS 3115)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00 ***
M/WBE Total	0.00	9.86	0.00 ***
Bakeries and Tortilla Manufacturing (NAICS 3118)			
African American	0.00	2.06	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.88	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.94	0.00 ***
Nonminority female	0.00	30.94	0.00 ***
M/WBE Total	0.00	34.88	0.00 ***
Clothing Stores (NAICS 4481)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.36	0.00
Asian	0.00	2.40	0.00 ***
Native American	0.00	1.13	0.00
Minority	0.00	4.08	0.00 ***
Nonminority female	0.00	25.01	0.00 ***
M/WBE Total	0.00	29.10	0.00 ***
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	2.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	2.78	0.00
Nonminority female	0.00	18.32	0.00 ***
M/WBE Total	0.00	21.10	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Furniture Stores (NAICS 4421)</b>			
African American	0.00	0.11	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	1.36	0.00
Native American	0.00	1.25	0.00
Minority	0.00	3.10	0.00
Nonminority female	0.00	15.97	0.00 ***
M/WBE Total	0.00	19.07	0.00 ***
<b>Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)</b>			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Industrial Machinery Manufacturing (NAICS 3332)</b>			
African American	0.00	2.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.71	0.00 ***
Nonminority female	0.00	20.70	0.00 ***
M/WBE Total	0.00	23.40	0.00 ***
<b>Cement and Concrete Product Manufacturing (NAICS 3273)</b>			
African American	0.00	2.36	0.00 ***
Hispanic	0.00	1.38	0.00 ***
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	3.90	0.00 ***
Nonminority female	0.00	23.70	0.00 ***
M/WBE Total	0.00	27.60	0.00 ***
<b>Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)</b>			
African American	0.00	3.89	0.00 ***
Hispanic	0.00	1.14	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.00	
Minority	0.00	5.09	0.00 ***
Nonminority female	0.00	19.26	0.00 ***
M/WBE Total	0.00	24.35	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.60	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.00	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.60	0.00 ***
Nonminority female	31.71	19.94	
M/WBE Total	31.71	23.54	
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	2.28	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	1.43	0.00 ***
Minority	0.00	3.71	0.00 ***
Nonminority female	0.00	14.71	0.00 ***
M/WBE Total	0.00	18.42	0.00 ***
Other General Merchandise Stores (NAICS 4529)			
African American	0.00	0.33	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	1.39	0.00 ***
Native American	0.00	1.29	0.00 ***
Minority	0.00	3.05	0.00 ***
Nonminority female	0.00	12.16	0.00 ***
M/WBE Total	0.00	15.21	0.00 ***
Glass and Glass Product Mfg. (NAICS 3272)			
African American	0.00	1.79	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.22	0.00
Native American	0.00	0.00	
Minority	0.00	6.01	0.00
Nonminority female	0.00	32.18	0.00 ***
M/WBE Total	0.00	38.20	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.20. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Commodities Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.51	0.00 ***
Hispanic	0.00	0.15	0.00 **
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.04	0.00 ***
Nonminority female	17.75	19.42	91.36
M/WBE Total	17.75	23.46	75.64
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	2.86	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	0.00
Native American	0.00	0.00	
Minority	0.00	2.86	0.00
Nonminority female	0.00	16.99	0.00 ***
M/WBE Total	0.00	19.84	0.00 ***
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	9.02	5.23	
Hispanic	0.00	0.00	
Asian	0.00	0.64	0.00
Native American	0.00	0.00	
Minority	9.02	5.87	
Nonminority female	0.30	21.17	1.40 ***
M/WBE Total	9.32	27.03	34.47
Automobile Dealers (NAICS 4411)			
African American	0.00	0.90	0.00
Hispanic	0.00	0.01	0.00
Asian	0.00	1.27	0.00 ***
Native American	0.00	1.44	0.00 ***
Minority	0.00	3.61	0.00 ***
Nonminority female	0.00	10.71	0.00 ***
M/WBE Total	0.00	14.32	0.00 ***
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	6.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	6.17	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	0.00	20.20	0.00 ***
M/WBE Total	0.00	26.37	0.00 ***
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	8.29	3.85	
Hispanic	4.81	0.20	
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.00	
Minority	13.10	4.41	
Nonminority female	22.58	20.41	
M/WBE Total	35.68	24.83	
Basic Chemical Manufacturing (NAICS 3251)			
African American	0.00	5.93	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.62	0.00
Native American	0.00	0.00	
Minority	0.00	6.55	0.00 ***
Nonminority female	0.00	18.59	0.00 ***
M/WBE Total	0.00	25.14	0.00 ***
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	5.88	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	5.96	0.00 ***
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	26.06	0.00 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	2.21	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.45	0.00 **
Native American	0.00	0.00	
Minority	0.00	2.69	0.00 ***
Nonminority female	0.00	29.01	0.00 ***
M/WBE Total	0.00	31.71	0.00 ***
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	3.73	0.00 ***
Hispanic	0.00	0.51	0.00 ***
Asian	1.79	0.66	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	1.79	4.90	36.55 *
Nonminority female	0.00	20.82	0.00 ***
M/WBE Total	1.79	25.72	6.96 ***
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	2.81	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.88	0.00 ***
Nonminority female	0.00	18.49	0.00 ***
M/WBE Total	0.00	21.37	0.00 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	1.10	0.68	
Hispanic	0.00	0.17	0.00 **
Asian	0.00	1.31	0.00 ***
Native American	0.40	1.30	30.70
Minority	1.50	3.47	43.32
Nonminority female	0.23	13.90	1.68 ***
M/WBE Total	1.74	17.36	10.00 ***
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	4.90	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	4.92	0.00 ***
Nonminority female	0.00	17.43	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.65	0.00 ***
Hispanic	0.00	0.25	0.00
Asian	0.00	0.31	0.00
Native American	0.00	0.00	
Minority	0.00	3.21	0.00 ***
Nonminority female	1.55	19.96	7.78 ***
M/WBE Total	1.55	23.17	6.70 ***
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	1.38	0.55	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.04	0.00
Asian	0.00	1.71	0.00
Native American	0.00	1.75	0.00
Minority	1.38	4.05	34.01
Nonminority female	0.00	12.89	0.00 ***
M/WBE Total	1.38	16.93	8.13 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.10	0.00 ***
Hispanic	7.71	0.15	
Asian	0.00	0.30	0.00 ***
Native American	0.00	0.00	
Minority	7.71	3.56	
Nonminority female	10.51	19.39	54.20
M/WBE Total	18.22	22.94	79.40
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.69	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.34	0.00 ***
Native American	0.00	0.00	
Minority	0.00	6.03	0.00 ***
Nonminority female	30.29	23.85	
M/WBE Total	30.29	29.88	
Motor Vehicle Manufacturing (NAICS 3361)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 *
M/WBE Total	0.00	19.72	0.00 *
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	1.59	0.00 ***
Hispanic	0.00	0.63	0.00 **
Asian	0.00	1.64	0.00 ***
Native American	0.00	1.33	0.00 ***
Minority	0.00	5.19	0.00 ***
Nonminority female	0.00	12.49	0.00 ***
M/WBE Total	0.00	17.68	0.00 ***
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.58	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.64	0.00 ***
Nonminority female	0.00	19.67	0.00 ***
M/WBE Total	0.00	22.31	0.00 ***
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	2.30	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.28	0.00
Native American	0.00	0.00	
Minority	0.00	2.57	0.00 ***
Nonminority female	0.00	27.52	0.00 ***
M/WBE Total	0.00	30.09	0.00 ***
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	0.69	0.00
Hispanic	0.00	0.14	0.00
Asian	0.00	1.36	0.00 **
Native American	0.00	1.26	0.00 **
Minority	0.00	3.45	0.00 ***
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	0.00	16.83	0.00 ***
Rubber Product Manufacturing (NAICS 3262)			
African American	0.00	2.82	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 **
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	2.62	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	2.70	0.00 *
Nonminority female	0.00	20.97	0.00 ***
M/WBE Total	0.00	23.67	0.00 ***
Lumber and Other Construction Materials			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Merchant Wholesalers (NAICS 4233)			
African American	0.00	2.76	0.00 ***
Hispanic	0.00	0.03	0.00
Asian	0.00	0.50	0.00 *
Native American	0.00	0.00	
Minority	0.00	3.28	0.00 ***
Nonminority female	0.14	18.41	0.78 ***
M/WBE Total	0.14	21.69	0.66 ***
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	1.32	0.00 **
Native American	0.00	1.27	0.00 **
Minority	0.00	2.70	0.00 ***
Nonminority female	0.00	12.74	0.00 ***
M/WBE Total	0.00	15.44	0.00 ***
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	2.26	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	0.26	0.00
Native American	0.00	0.00	
Minority	0.00	2.53	0.00 ***
Nonminority female	12.49	29.48	42.37
M/WBE Total	12.49	32.01	39.02
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	2.62	0.00 ***
Hispanic	0.00	0.14	0.00
Asian	0.00	0.14	0.00
Native American	0.00	0.00	
Minority	0.00	2.90	0.00 ***
Nonminority female	0.00	21.14	0.00 ***
M/WBE Total	0.00	24.04	0.00 ***
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	0.00	0.00	
Minority	0.00	4.30	0.00 ***
Nonminority female	0.97	21.36	4.52 ***
M/WBE Total	0.97	25.66	3.76 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	3.61	0.00 ***
Hispanic	0.00	0.41	0.00 ***
Asian	0.00	0.26	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.29	0.00 ***
Nonminority female	0.00	21.36	0.00 ***
M/WBE Total	0.00	25.65	0.00 ***
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	3.33	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.97	0.00
Native American	0.00	0.00	
Minority	0.00	5.30	0.00
Nonminority female	0.00	17.99	0.00 ***
M/WBE Total	0.00	23.29	0.00 ***
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	3.95	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	4.01	0.00 ***
Nonminority female	0.00	20.27	0.00 ***
M/WBE Total	0.00	24.28	0.00 ***
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00 ***
Nonminority female	3.49	20.40	17.10
M/WBE Total	3.49	23.69	14.72
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	2.98	0.00 ***
Hispanic	0.00	0.22	0.00
Asian	0.00	0.19	0.00
Native American	0.00	0.00	
Minority	0.00	3.39	0.00 ***
Nonminority female	0.00	21.54	0.00 ***
M/WBE Total	0.00	24.93	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.03	0.00
Asian	0.00	1.32	0.00 **
Native American	0.00	1.21	0.00 **
Minority	0.00	2.76	0.00 ***
Nonminority female	37.79	15.30	
M/WBE Total	37.79	18.07	
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	2.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	2.76	0.00
Nonminority female	0.00	18.90	0.00 ***
M/WBE Total	0.00	21.66	0.00 ***
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	2.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.73	0.00
Nonminority female	0.00	20.06	0.00 ***
M/WBE Total	0.00	22.79	0.00 ***
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.53	0.00 ***
Hispanic	22.28	0.16	
Asian	7.31	0.26	
Native American	0.00	1.27	0.00 ***
Minority	29.59	5.21	
Nonminority female	10.92	16.31	66.98
M/WBE Total	40.51	21.52	
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	2.33	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.74	0.00
Native American	0.00	0.00	
Minority	0.00	5.07	0.00
Nonminority female	50.92	23.18	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	50.92	28.25	
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***
M/WBE Total	0.00	26.63	0.00 ***
Other Motor Vehicle Dealers (NAICS 4412)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.06	0.00
Asian	0.00	1.59	0.00
Native American	0.00	1.35	0.00
Minority	0.00	3.06	0.00
Nonminority female	0.00	13.08	0.00
M/WBE Total	0.00	16.14	0.00
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	3.30	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	3.33	0.00 **
Nonminority female	0.00	18.46	0.00 ***
M/WBE Total	0.00	21.79	0.00 ***
Home Furnishings Stores (NAICS 4422)			
African American	0.00	1.21	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.39	0.00
Native American	0.00	1.27	0.00
Minority	0.00	4.15	0.00 *
Nonminority female	8.07	12.98	62.16
M/WBE Total	8.07	17.13	47.10
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	2.29	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.21	0.00
Native American	0.00	0.00	
Minority	0.00	2.50	0.00 ***
Nonminority female	0.00	27.79	0.00 ***
M/WBE Total	0.00	30.29	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	3.12	2.81	
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	3.12	4.12	75.57
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	3.12	23.88	13.05 ***
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00 ***
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	23.85	0.00 ***
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	2.14	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.14	0.00
Nonminority female	0.82	37.00	2.21 ***
M/WBE Total	0.82	39.14	2.09 ***
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	2.84	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.25	0.00
Native American	0.00	0.00	
Minority	0.00	3.09	0.00
Nonminority female	0.00	17.73	0.00 ***
M/WBE Total	0.00	20.82	0.00 ***
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	2.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.95	0.00
Native American	0.00	0.00	
Minority	0.00	4.61	0.00 *
Nonminority female	0.00	18.75	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	0.00	23.35	0.00 ***
Other Textile Product Mills (NAICS 3149)			
African American	0.00	2.25	0.00
Hispanic	0.00	2.14	0.00
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	4.52	0.00 **
Nonminority female	75.20	20.90	
M/WBE Total	75.20	25.42	
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	1.23	0.00
Hispanic	0.00	0.12	0.00
Asian	0.00	1.36	0.00
Native American	0.00	1.23	0.00
Minority	0.00	3.95	0.00 ***
Nonminority female	0.00	18.40	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Audio and Video Equipment Manufacturing (NAICS 3343)			
African American	0.00	10.80	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	10.85	0.00 ***
Nonminority female	0.00	17.86	0.00 ***
M/WBE Total	0.00	28.71	0.00 ***
Foundries (NAICS 3315)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Lime and Gypsum Product Manufacturing (NAICS 3274)			
African American	0.00	2.11	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.30	0.00
Native American	0.00	0.00	
Minority	0.00	2.41	0.00
Nonminority female	0.00	31.13	0.00 ***
M/WBE Total	0.00	33.54	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 **
M/WBE Total	0.00	19.72	0.00 ***
Sawmills and Wood Preservation (NAICS 3211)			
African American	0.00	2.82	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 *
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***
M/WBE Total	0.00	26.63	0.00 ***
Pharmaceutical and Medicine Manufacturing (NAICS 3254)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Dairy Product Manufacturing (NAICS 3115)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00 ***
M/WBE Total	0.00	9.86	0.00 ***



# Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	2.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	2.78	0.00
Nonminority female	0.00	18.32	0.00 ***
M/WBE Total	0.00	21.10	0.00 ***
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00
M/WBE Total	0.00	19.72	0.00
Grocery Stores (NAICS 4451)			
African American	0.00	0.62	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.47	0.00
Native American	0.00	1.40	0.00
Minority	0.00	3.77	0.00
Nonminority female	0.00	13.62	0.00 ***
M/WBE Total	0.00	17.39	0.00 ***
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	2.30	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00 **
Nonminority female	2.23	27.44	8.13
M/WBE Total	2.23	29.96	7.45 *
Bakeries and Tortilla Manufacturing (NAICS 3118)			
African American	0.00	2.06	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.88	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.94	0.00 ***
Nonminority female	0.00	30.94	0.00 ***
M/WBE Total	0.00	34.88	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.60	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.00	0.00 **
Native American	0.00	0.00	
Minority	0.00	3.60	0.00 ***
Nonminority female	33.95	19.94	
M/WBE Total	33.95	23.54	
Clothing Stores (NAICS 4481)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.36	0.00
Asian	0.00	2.40	0.00
Native American	0.00	1.13	0.00
Minority	0.00	4.08	0.00 ***
Nonminority female	0.00	25.01	0.00 ***
M/WBE Total	0.00	29.10	0.00 ***
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	2.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.71	0.00 ***
Nonminority female	0.00	20.70	0.00 ***
M/WBE Total	0.00	23.40	0.00 ***
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	2.28	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	1.43	0.00 ***
Minority	0.00	3.71	0.00 ***
Nonminority female	0.00	14.71	0.00 ***
M/WBE Total	0.00	18.42	0.00 ***
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	2.36	0.00 ***
Hispanic	0.00	1.38	0.00 ***
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	3.90	0.00 ***
Nonminority female	0.00	23.70	0.00 ***
M/WBE Total	0.00	27.60	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	3.89	0.00
Hispanic	0.00	1.14	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.00	
Minority	0.00	5.09	0.00
Nonminority female	0.00	19.26	0.00 ***
M/WBE Total	0.00	24.35	0.00 ***
Glass and Glass Product Manufacturing (NAICS 3272)			
African American	0.00	1.79	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.22	0.00
Native American	0.00	0.00	
Minority	0.00	6.01	0.00
Nonminority female	0.00	32.18	0.00 ***
M/WBE Total	0.00	38.20	0.00 ***
Gasoline Stations (NAICS 4471)			
African American	0.00	0.28	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	1.29	0.00 ***
Native American	0.00	1.27	0.00
Minority	0.00	2.92	0.00 ***
Nonminority female	0.00	11.60	0.00 ***
M/WBE Total	0.00	14.52	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.21. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Commodities Contracting (Federal Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	2.78	0.00
Nonminority female	0.00	18.27	0.00 ***
DBE Total	0.00	21.05	0.00 ***
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.26	0.00 ***
Hispanic	41.26	0.16	
Asian	13.53	0.20	
Native American	0.00	1.27	0.00
Minority	54.79	4.89	
Nonminority female	19.81	15.86	
DBE Total	74.60	20.75	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	2.28	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	1.43	0.00
Minority	0.00	3.71	0.00
Nonminority female	0.00	14.71	0.00 ***
DBE Total	0.00	18.42	0.00 ***
Remediation and Other Waste Management Services (NAICS 5629)			
African American	100.00	16.79	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	100.00	16.79	
Nonminority female	0.00	17.48	0.00 ***
DBE Total	100.00	34.27	
General Freight Trucking (NAICS 4841)			
African American	0.00	7.74	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	0.17	0.00
Native American	0.00	0.03	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	8.23	0.00
Nonminority female	0.00	18.68	0.00 ***
DBE Total	0.00	26.91	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.22. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Commodities Contracting (Federal Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	2.78	0.00
Nonminority female	0.00	18.27	0.00 ***
DBE Total	0.00	21.05	0.00 ***
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.26	0.00 ***
Hispanic	41.26	0.16	
Asian	13.53	0.20	
Native American	0.00	1.27	0.00
Minority	54.79	4.89	
Nonminority female	19.81	15.86	
DBE Total	74.60	20.75	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	2.28	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	1.43	0.00
Minority	0.00	3.71	0.00
Nonminority female	0.00	14.71	0.00 ***
DBE Total	0.00	18.42	0.00 ***
Remediation and Other Waste Management Services (NAICS 5629)			
African American	100.00	16.79	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	100.00	16.79	
Nonminority female	0.00	17.48	0.00 ***
DBE Total	100.00	34.27	
General Freight Trucking (NAICS 4841)			
African American	0.00	7.74	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	0.17	0.00
Native American	0.00	0.03	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	8.23	0.00
Nonminority female	0.00	18.68	0.00 ***
DBE Total	0.00	26.91	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.23. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Commodities Contracting (Local Funds) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.52	0.00 ***
Hispanic	0.00	0.15	0.00 ***
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.05	0.00 ***
Nonminority female	30.93	19.41	
M/WBE Total	30.93	23.45	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	2.89	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	0.00
Native American	0.00	0.00	
Minority	0.00	2.89	0.00 ***
Nonminority female	0.00	17.05	0.00 ***
M/WBE Total	0.00	19.93	0.00 ***
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	6.82	5.23	
Hispanic	0.00	0.00	
Asian	0.00	0.64	0.00 ***
Native American	0.00	0.00	
Minority	6.82	5.87	
Nonminority female	0.44	21.17	2.09 ***
M/WBE Total	7.26	27.03	26.85 **
Automobile Dealers (NAICS 4411)			
African American	0.00	0.89	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	1.27	0.00 ***
Native American	0.00	1.44	0.00 ***
Minority	0.00	3.61	0.00 ***
Nonminority female	0.00	10.73	0.00 ***
M/WBE Total	0.00	14.34	0.00 ***
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	7.98	3.82	
Hispanic	3.61	0.17	
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.00	
Minority	11.59	4.35	



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	14.96	19.90	75.18
M/WBE Total	26.55	24.25	
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	6.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	6.17	0.00 ***
Nonminority female	0.00	20.21	0.00 ***
M/WBE Total	0.00	26.37	0.00 ***
Basic Chemical Manufacturing (NAICS 3251)			
African American	0.00	5.74	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.54	0.00
Native American	0.00	0.00	
Minority	0.00	6.28	0.00 ***
Nonminority female	0.00	18.31	0.00 ***
M/WBE Total	0.00	24.59	0.00 ***
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	5.89	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	5.97	0.00 ***
Nonminority female	0.00	20.09	0.00 ***
M/WBE Total	0.00	26.05	0.00 ***
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	3.71	0.00 ***
Hispanic	0.00	0.49	0.00 ***
Asian	1.42	0.65	
Native American	0.00	0.00	
Minority	1.42	4.85	29.25 **
Nonminority female	0.00	20.87	0.00 ***
M/WBE Total	1.42	25.71	5.52 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	2.30	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.43	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	2.77	0.00 ***
Nonminority female	0.00	27.28	0.00 ***
M/WBE Total	0.00	30.05	0.00 ***
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	2.81	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.89	0.00 ***
Nonminority female	0.00	18.52	0.00 ***
M/WBE Total	0.00	21.40	0.00 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	1.15	0.68	
Hispanic	0.00	0.17	0.00 **
Asian	0.00	1.31	0.00 ***
Native American	0.34	1.31	26.07
Minority	1.49	3.47	42.96
Nonminority female	0.19	13.90	1.35 ***
M/WBE Total	1.68	17.37	9.67 ***
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	4.90	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	4.92	0.00 ***
Nonminority female	0.00	17.43	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.64	0.00 ***
Hispanic	0.00	0.27	0.00 ***
Asian	0.00	0.33	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.24	0.00 ***
Nonminority female	1.07	20.09	5.34 ***
M/WBE Total	1.07	23.34	4.60 ***
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	1.24	0.55	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.04	0.00
Asian	0.00	1.71	0.00 ***
Native American	0.00	1.75	0.00 ***
Minority	1.24	4.05	30.52
Nonminority female	0.00	12.89	0.00 ***
M/WBE Total	1.24	16.93	7.29 ***
Motor Vehicle Manufacturing (NAICS 3361)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	2.58	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.64	0.00 ***
Nonminority female	0.00	19.67	0.00 ***
M/WBE Total	0.00	22.31	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.10	0.00 ***
Hispanic	9.75	0.15	
Asian	0.00	0.30	0.00 ***
Native American	0.00	0.00	
Minority	9.75	3.56	
Nonminority female	13.60	19.39	70.16
M/WBE Total	23.35	22.94	
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.74	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.34	0.00 ***
Native American	0.00	0.00	
Minority	0.00	6.07	0.00 ***
Nonminority female	25.09	23.83	
M/WBE Total	25.09	29.91	83.89
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.29	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.27	0.00
Native American	0.00	0.00	
Minority	0.00	2.57	0.00 ***
Nonminority female	0.00	27.54	0.00 ***
M/WBE Total	0.00	30.10	0.00 ***
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	3.00	0.00 ***
Hispanic	0.00	0.07	0.00
Asian	0.00	0.50	0.00 *
Native American	0.00	0.00	
Minority	0.00	3.57	0.00 ***
Nonminority female	5.76	21.83	26.37
M/WBE Total	5.76	25.40	22.66
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	1.52	0.00 ***
Hispanic	0.00	0.67	0.00 ***
Asian	0.00	1.66	0.00 ***
Native American	0.00	1.34	0.00 ***
Minority	0.00	5.18	0.00 ***
Nonminority female	0.00	12.51	0.00 ***
M/WBE Total	0.00	17.69	0.00 ***
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	3.73	0.00 ***
Hispanic	0.00	0.46	0.00 ***
Asian	0.00	0.28	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.47	0.00 ***
Nonminority female	0.00	21.13	0.00 ***
M/WBE Total	0.00	25.60	0.00 ***
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	0.69	0.00 ***
Hispanic	0.00	0.14	0.00
Asian	0.00	1.36	0.00 ***
Native American	0.00	1.26	0.00 ***
Minority	0.00	3.45	0.00 ***
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	0.00	16.83	0.00 ***
Lawn and Garden Equipment and Supplies			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Stores (NAICS 4442)</b>			
African American	0.00	0.42	0.00 ***
Hispanic	0.00	0.05	0.00
Asian	0.00	1.43	0.00 ***
Native American	0.00	1.19	0.00 ***
Minority	0.00	3.10	0.00 ***
Nonminority female	17.57	15.33	
M/WBE Total	17.57	18.43	95.33
<b>Other Fabricated Metal Product Manufacturing (NAICS 3329)</b>			
African American	0.00	2.62	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	2.70	0.00 ***
Nonminority female	0.00	20.97	0.00 ***
M/WBE Total	0.00	23.67	0.00 ***
<b>Rubber Product Manufacturing (NAICS 3262)</b>			
African American	0.00	2.82	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 ***
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)</b>			
African American	0.00	0.06	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	1.32	0.00 ***
Native American	0.00	1.27	0.00 ***
Minority	0.00	2.70	0.00 ***
Nonminority female	0.00	12.71	0.00 ***
M/WBE Total	0.00	15.41	0.00 ***
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	2.77	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.47	0.00 **
Native American	0.00	0.00	
Minority	0.00	3.28	0.00 ***
Nonminority female	0.12	18.40	0.64 ***
M/WBE Total	0.12	21.68	0.54 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	2.62	0.00 ***
Hispanic	0.00	0.21	0.00
Asian	0.00	0.17	0.00
Native American	0.00	0.00	
Minority	0.00	3.00	0.00 ***
Nonminority female	0.00	21.22	0.00 ***
M/WBE Total	0.00	24.22	0.00 ***
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	0.00	0.00	
Minority	0.00	4.30	0.00 ***
Nonminority female	0.66	21.36	3.11 ***
M/WBE Total	0.66	25.66	2.59 ***
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	4.18	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	4.22	0.00 ***
Nonminority female	0.00	19.35	0.00 ***
M/WBE Total	0.00	23.57	0.00 ***
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	2.72	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	2.76	0.00 ***
Nonminority female	0.00	18.90	0.00 ***
M/WBE Total	0.00	21.66	0.00 ***
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	2.77	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.59	0.00
Native American	0.00	0.00	
Minority	0.00	3.35	0.00 ***
Nonminority female	0.00	17.46	0.00 ***
M/WBE Total	0.00	20.81	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00 ***
Nonminority female	3.13	20.40	15.33
M/WBE Total	3.13	23.69	13.20
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	3.03	0.00 ***
Hispanic	0.00	0.23	0.00
Asian	0.00	0.19	0.00
Native American	0.00	0.00	
Minority	0.00	3.44	0.00 ***
Nonminority female	0.00	21.52	0.00 ***
M/WBE Total	0.00	24.96	0.00 ***
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	3.33	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.97	0.00
Native American	0.00	0.00	
Minority	0.00	5.30	0.00 ***
Nonminority female	0.00	17.99	0.00 ***
M/WBE Total	0.00	23.29	0.00 ***
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	1.97	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.97	0.00 ***
Nonminority female	0.31	41.98	0.74 ***
M/WBE Total	0.31	43.95	0.71 ***
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	2.29	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.21	0.00
Native American	0.00	0.00	
Minority	0.00	2.50	0.00 ***
Nonminority female	0.00	27.79	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	0.00	30.29	0.00 ***
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	2.66	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.73	0.00 ***
Nonminority female	0.00	20.06	0.00 ***
M/WBE Total	0.00	22.79	0.00 ***
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	3.31	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	3.34	0.00 ***
Nonminority female	0.00	18.48	0.00 ***
M/WBE Total	0.00	21.82	0.00 ***
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***
M/WBE Total	0.00	26.63	0.00 ***
Other Motor Vehicle Dealers (NAICS 4412)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.06	0.00
Asian	0.00	1.59	0.00
Native American	0.00	1.35	0.00
Minority	0.00	3.06	0.00
Nonminority female	0.00	13.08	0.00 ***
M/WBE Total	0.00	16.14	0.00 ***
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00 ***
Nonminority female	0.00	20.10	0.00 ***



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	0.00	23.85	0.00 ***
Grocery Stores (NAICS 4451)			
African American	0.00	0.62	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.47	0.00 ***
Native American	0.00	1.40	0.00 ***
Minority	0.00	3.77	0.00 ***
Nonminority female	0.00	13.62	0.00 ***
M/WBE Total	0.00	17.39	0.00 ***
Home Furnishings Stores (NAICS 4422)			
African American	0.00	1.21	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.39	0.00
Native American	0.00	1.27	0.00
Minority	0.00	4.15	0.00 ***
Nonminority female	8.22	12.98	63.31
M/WBE Total	8.22	17.13	47.97
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	2.84	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.27	0.00
Native American	0.00	0.00	
Minority	0.00	3.11	0.00 ***
Nonminority female	0.00	17.81	0.00 ***
M/WBE Total	0.00	20.92	0.00 ***
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	2.76	2.81	98.29
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	2.76	4.12	66.90
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	2.76	23.88	11.55 ***
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	2.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.00	0.00
Native American	0.00	0.00	
Minority	0.00	6.31	0.00 ***
Nonminority female	59.72	21.84	
M/WBE Total	59.72	28.15	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundries (NAICS 3315)			
African American	0.00	2.82	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 **
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Lime and Gypsum Product Manufacturing (NAICS 3274)			
African American	0.00	2.11	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.30	0.00
Native American	0.00	0.00	
Minority	0.00	2.41	0.00
Nonminority female	0.00	31.13	0.00 ***
M/WBE Total	0.00	33.54	0.00 ***
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	1.23	0.00 ***
Hispanic	0.00	0.12	0.00
Asian	0.00	1.36	0.00 ***
Native American	0.00	1.23	0.00 ***
Minority	0.00	3.95	0.00 ***
Nonminority female	0.00	18.40	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Other Textile Product Mills (NAICS 3149)			
African American	0.00	2.25	0.00 ***
Hispanic	0.00	2.14	0.00 ***
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	4.52	0.00 ***
Nonminority female	75.45	20.90	
M/WBE Total	75.45	25.42	
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.84	0.00 ***
Hispanic	0.00	0.18	0.00 ***
Asian	0.00	0.32	0.00 ***
Native American	0.00	1.26	0.00 ***
Minority	0.00	5.59	0.00 ***
Nonminority female	0.48	16.83	2.88 ***
M/WBE Total	0.48	22.42	2.16 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Audio and Video Equipment Manufacturing (NAICS 3343)</b>			
African American	0.00	10.80	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	10.85	0.00 ***
Nonminority female	0.00	17.86	0.00 ***
M/WBE Total	0.00	28.71	0.00 ***
<b>Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)</b>			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Sawmills and Wood Preservation (NAICS 3211)</b>			
African American	0.00	2.82	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 ***
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Pharmaceutical and Medicine Manufacturing (NAICS 3254)</b>			
African American	0.00	2.82	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 ***
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)</b>			
African American	0.00	2.30	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00 ***
Nonminority female	2.16	27.44	7.87 ***
M/WBE Total	2.16	29.96	7.21 ***

# Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***
M/WBE Total	0.00	26.63	0.00 ***
Dairy Product Manufacturing (NAICS 3115)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00 ***
M/WBE Total	0.00	9.86	0.00 ***
Bakeries and Tortilla Manufacturing (NAICS 3118)			
African American	0.00	2.06	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.88	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.94	0.00 ***
Nonminority female	0.00	30.94	0.00 ***
M/WBE Total	0.00	34.88	0.00 ***
Clothing Stores (NAICS 4481)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.36	0.00
Asian	0.00	2.40	0.00 ***
Native American	0.00	1.13	0.00
Minority	0.00	4.08	0.00 ***
Nonminority female	0.00	25.01	0.00 ***
M/WBE Total	0.00	29.10	0.00 ***
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	2.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	2.78	0.00
Nonminority female	0.00	18.32	0.00 ***
M/WBE Total	0.00	21.10	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Furniture Stores (NAICS 4421)</b>			
African American	0.00	0.11	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	1.36	0.00
Native American	0.00	1.25	0.00
Minority	0.00	3.10	0.00
Nonminority female	0.00	15.97	0.00 ***
M/WBE Total	0.00	19.07	0.00 ***
<b>Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)</b>			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Industrial Machinery Manufacturing (NAICS 3332)</b>			
African American	0.00	2.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.71	0.00 ***
Nonminority female	0.00	20.70	0.00 ***
M/WBE Total	0.00	23.40	0.00 ***
<b>Cement and Concrete Product Manufacturing (NAICS 3273)</b>			
African American	0.00	2.36	0.00 ***
Hispanic	0.00	1.38	0.00 ***
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	3.90	0.00 ***
Nonminority female	0.00	23.70	0.00 ***
M/WBE Total	0.00	27.60	0.00 ***
<b>Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)</b>			
African American	0.00	3.89	0.00 ***
Hispanic	0.00	1.14	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.00	
Minority	0.00	5.09	0.00 ***
Nonminority female	0.00	19.26	0.00 ***
M/WBE Total	0.00	24.35	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.60	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.00	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.60	0.00 ***
Nonminority female	31.71	19.94	
M/WBE Total	31.71	23.54	
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Other General Merchandise Stores (NAICS 4529)			
African American	0.00	0.33	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	1.39	0.00 ***
Native American	0.00	1.29	0.00 ***
Minority	0.00	3.05	0.00 ***
Nonminority female	0.00	12.16	0.00 ***
M/WBE Total	0.00	15.21	0.00 ***
Glass and Glass Product Manufacturing (NAICS 3272)			
African American	0.00	1.79	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.22	0.00
Native American	0.00	0.00	
Minority	0.00	6.01	0.00
Nonminority female	0.00	32.18	0.00 ***
M/WBE Total	0.00	38.20	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.24. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Commodities Contracting (Local Funds) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.51	0.00 ***
Hispanic	0.00	0.15	0.00 **
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.04	0.00 ***
Nonminority female	17.75	19.42	91.36
M/WBE Total	17.75	23.46	75.64
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	2.86	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	0.00
Native American	0.00	0.00	
Minority	0.00	2.86	0.00
Nonminority female	0.00	16.99	0.00 ***
M/WBE Total	0.00	19.84	0.00 ***
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	9.02	5.23	
Hispanic	0.00	0.00	
Asian	0.00	0.64	0.00
Native American	0.00	0.00	
Minority	9.02	5.87	
Nonminority female	0.30	21.17	1.40 ***
M/WBE Total	9.32	27.03	34.47
Automobile Dealers (NAICS 4411)			
African American	0.00	0.90	0.00
Hispanic	0.00	0.01	0.00
Asian	0.00	1.27	0.00 ***
Native American	0.00	1.44	0.00 ***
Minority	0.00	3.61	0.00 ***
Nonminority female	0.00	10.71	0.00 ***
M/WBE Total	0.00	14.32	0.00 ***
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	6.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	6.17	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	0.00	20.20	0.00 ***
M/WBE Total	0.00	26.37	0.00 ***
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	8.29	3.85	
Hispanic	4.81	0.20	
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.00	
Minority	13.10	4.41	
Nonminority female	22.58	20.41	
M/WBE Total	35.68	24.83	
Basic Chemical Manufacturing (NAICS 3251)			
African American	0.00	5.93	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.62	0.00
Native American	0.00	0.00	
Minority	0.00	6.55	0.00 ***
Nonminority female	0.00	18.59	0.00 ***
M/WBE Total	0.00	25.14	0.00 ***
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	5.88	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	5.96	0.00 ***
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	26.06	0.00 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	2.21	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.45	0.00 **
Native American	0.00	0.00	
Minority	0.00	2.69	0.00 ***
Nonminority female	0.00	29.01	0.00 ***
M/WBE Total	0.00	31.71	0.00 ***
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	3.73	0.00 ***
Hispanic	0.00	0.51	0.00 ***
Asian	1.79	0.66	



# Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	1.79	4.90	36.55 *
Nonminority female	0.00	20.82	0.00 ***
M/WBE Total	1.79	25.72	6.96 ***
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	2.81	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.88	0.00 ***
Nonminority female	0.00	18.49	0.00 ***
M/WBE Total	0.00	21.37	0.00 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	1.10	0.68	
Hispanic	0.00	0.17	0.00 *
Asian	0.00	1.31	0.00 ***
Native American	0.40	1.30	30.70
Minority	1.50	3.47	43.32
Nonminority female	0.23	13.90	1.68 ***
M/WBE Total	1.74	17.36	10.00 ***
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	4.90	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	4.92	0.00 ***
Nonminority female	0.00	17.43	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	1.38	0.55	
Hispanic	0.00	0.04	0.00
Asian	0.00	1.71	0.00
Native American	0.00	1.75	0.00
Minority	1.38	4.05	34.01
Nonminority female	0.00	12.89	0.00 ***
M/WBE Total	1.38	16.93	8.13 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.63	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.29	0.00
Asian	0.00	0.35	0.00
Native American	0.00	0.00	
Minority	0.00	3.27	0.00 ***
Nonminority female	1.79	20.22	8.85 ***
M/WBE Total	1.79	23.49	7.62 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.10	0.00 ***
Hispanic	7.71	0.15	
Asian	0.00	0.30	0.00 ***
Native American	0.00	0.00	
Minority	7.71	3.56	
Nonminority female	10.51	19.39	54.20
M/WBE Total	18.22	22.94	79.40
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.69	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.34	0.00 ***
Native American	0.00	0.00	
Minority	0.00	6.03	0.00 ***
Nonminority female	30.29	23.85	
M/WBE Total	30.29	29.88	
Motor Vehicle Manufacturing (NAICS 3361)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 *
M/WBE Total	0.00	19.72	0.00 *
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	1.59	0.00 ***
Hispanic	0.00	0.63	0.00 **
Asian	0.00	1.64	0.00 ***
Native American	0.00	1.33	0.00 ***
Minority	0.00	5.19	0.00 ***
Nonminority female	0.00	12.49	0.00 ***
M/WBE Total	0.00	17.68	0.00 ***
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.58	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.64	0.00 ***
Nonminority female	0.00	19.67	0.00 ***
M/WBE Total	0.00	22.31	0.00 ***
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	2.30	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.28	0.00
Native American	0.00	0.00	
Minority	0.00	2.57	0.00 ***
Nonminority female	0.00	27.52	0.00 ***
M/WBE Total	0.00	30.09	0.00 ***
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	0.69	0.00
Hispanic	0.00	0.14	0.00
Asian	0.00	1.36	0.00 **
Native American	0.00	1.26	0.00 **
Minority	0.00	3.45	0.00 ***
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	0.00	16.83	0.00 ***
Rubber Product Manufacturing (NAICS 3262)			
African American	0.00	2.82	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 **
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	2.62	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	2.70	0.00 *
Nonminority female	0.00	20.97	0.00 ***
M/WBE Total	0.00	23.67	0.00 ***
Lumber and Other Construction Materials			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Merchant Wholesalers (NAICS 4233)			
African American	0.00	2.76	0.00 ***
Hispanic	0.00	0.03	0.00
Asian	0.00	0.50	0.00 *
Native American	0.00	0.00	
Minority	0.00	3.28	0.00 ***
Nonminority female	0.14	18.41	0.78 ***
M/WBE Total	0.14	21.69	0.66 ***
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	1.32	0.00 **
Native American	0.00	1.27	0.00 **
Minority	0.00	2.70	0.00 ***
Nonminority female	0.00	12.74	0.00 ***
M/WBE Total	0.00	15.44	0.00 ***
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	2.26	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	0.26	0.00
Native American	0.00	0.00	
Minority	0.00	2.53	0.00 ***
Nonminority female	12.49	29.48	42.37
M/WBE Total	12.49	32.01	39.02
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	2.62	0.00 ***
Hispanic	0.00	0.14	0.00
Asian	0.00	0.14	0.00
Native American	0.00	0.00	
Minority	0.00	2.90	0.00 ***
Nonminority female	0.00	21.14	0.00 ***
M/WBE Total	0.00	24.04	0.00 ***
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	0.00	0.00	
Minority	0.00	4.30	0.00 ***
Nonminority female	0.97	21.36	4.52 ***
M/WBE Total	0.97	25.66	3.76 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	3.61	0.00 ***
Hispanic	0.00	0.41	0.00 ***
Asian	0.00	0.26	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.29	0.00 ***
Nonminority female	0.00	21.36	0.00 ***
M/WBE Total	0.00	25.65	0.00 ***
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	3.33	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.97	0.00
Native American	0.00	0.00	
Minority	0.00	5.30	0.00
Nonminority female	0.00	17.99	0.00 ***
M/WBE Total	0.00	23.29	0.00 ***
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	3.95	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	4.01	0.00 ***
Nonminority female	0.00	20.27	0.00 ***
M/WBE Total	0.00	24.28	0.00 ***
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00 ***
Nonminority female	3.49	20.40	17.10
M/WBE Total	3.49	23.69	14.72
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	2.98	0.00 ***
Hispanic	0.00	0.22	0.00
Asian	0.00	0.19	0.00
Native American	0.00	0.00	
Minority	0.00	3.39	0.00 ***
Nonminority female	0.00	21.54	0.00 ***
M/WBE Total	0.00	24.93	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.03	0.00
Asian	0.00	1.32	0.00 **
Native American	0.00	1.21	0.00 **
Minority	0.00	2.76	0.00 ***
Nonminority female	37.79	15.30	
M/WBE Total	37.79	18.07	
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	2.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	2.76	0.00
Nonminority female	0.00	18.90	0.00 ***
M/WBE Total	0.00	21.66	0.00 ***
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	2.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.73	0.00
Nonminority female	0.00	20.06	0.00 ***
M/WBE Total	0.00	22.79	0.00 ***
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	2.33	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.74	0.00
Native American	0.00	0.00	
Minority	0.00	5.07	0.00
Nonminority female	50.92	23.18	
M/WBE Total	50.92	28.25	
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***

# Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	0.00	26.63	0.00 ***
Other Motor Vehicle Dealers (NAICS 4412)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.06	0.00
Asian	0.00	1.59	0.00
Native American	0.00	1.35	0.00
Minority	0.00	3.06	0.00
Nonminority female	0.00	13.08	0.00
M/WBE Total	0.00	16.14	0.00
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	3.30	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	3.33	0.00 **
Nonminority female	0.00	18.46	0.00 ***
M/WBE Total	0.00	21.79	0.00 ***
Home Furnishings Stores (NAICS 4422)			
African American	0.00	1.21	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.39	0.00
Native American	0.00	1.27	0.00
Minority	0.00	4.15	0.00 *
Nonminority female	8.07	12.98	62.16
M/WBE Total	8.07	17.13	47.10
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	2.29	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.21	0.00
Native American	0.00	0.00	
Minority	0.00	2.50	0.00 ***
Nonminority female	0.00	27.79	0.00 ***
M/WBE Total	0.00	30.29	0.00 ***
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	3.12	2.81	
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	3.12	4.12	75.57
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	3.12	23.88	13.05 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00 ***
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	23.85	0.00 ***
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	2.14	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.14	0.00
Nonminority female	0.82	37.00	2.21 ***
M/WBE Total	0.82	39.14	2.09 ***
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	2.84	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.25	0.00
Native American	0.00	0.00	
Minority	0.00	3.09	0.00
Nonminority female	0.00	17.73	0.00 ***
M/WBE Total	0.00	20.82	0.00 ***
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	2.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.95	0.00
Native American	0.00	0.00	
Minority	0.00	4.61	0.00 *
Nonminority female	0.00	18.75	0.00 ***
M/WBE Total	0.00	23.35	0.00 ***
Other Textile Product Mills (NAICS 3149)			
African American	0.00	2.25	0.00
Hispanic	0.00	2.14	0.00
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	4.52	0.00 **
Nonminority female	75.20	20.90	
M/WBE Total	75.20	25.42	



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.84	0.00 ***
Hispanic	0.00	0.18	0.00 *
Asian	0.00	0.32	0.00 ***
Native American	0.00	1.26	0.00 ***
Minority	0.00	5.59	0.00 ***
Nonminority female	0.48	16.83	2.88 ***
M/WBE Total	0.48	22.42	2.16 ***
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	1.23	0.00
Hispanic	0.00	0.12	0.00
Asian	0.00	1.36	0.00
Native American	0.00	1.23	0.00
Minority	0.00	3.95	0.00 ***
Nonminority female	0.00	18.40	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Audio and Video Equipment Manufacturing (NAICS 3343)			
African American	0.00	10.80	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	10.85	0.00 ***
Nonminority female	0.00	17.86	0.00 ***
M/WBE Total	0.00	28.71	0.00 ***
Foundries (NAICS 3315)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Lime and Gypsum Product Manufacturing (NAICS 3274)			
African American	0.00	2.11	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.30	0.00
Native American	0.00	0.00	
Minority	0.00	2.41	0.00
Nonminority female	0.00	31.13	0.00 ***
M/WBE Total	0.00	33.54	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 **
M/WBE Total	0.00	19.72	0.00 ***
Sawmills and Wood Preservation (NAICS 3211)			
African American	0.00	2.82	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 *
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***
M/WBE Total	0.00	26.63	0.00 ***
Pharmaceutical and Medicine Manufacturing (NAICS 3254)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Dairy Product Manufacturing (NAICS 3115)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00 ***
M/WBE Total	0.00	9.86	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	2.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	2.78	0.00
Nonminority female	0.00	18.32	0.00 ***
M/WBE Total	0.00	21.10	0.00 ***
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00
M/WBE Total	0.00	19.72	0.00
Grocery Stores (NAICS 4451)			
African American	0.00	0.62	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.47	0.00
Native American	0.00	1.40	0.00
Minority	0.00	3.77	0.00
Nonminority female	0.00	13.62	0.00 ***
M/WBE Total	0.00	17.39	0.00 ***
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	2.30	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00 **
Nonminority female	2.23	27.44	8.13
M/WBE Total	2.23	29.96	7.45 *
Bakeries and Tortilla Manufacturing (NAICS 3118)			
African American	0.00	2.06	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.88	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.94	0.00 ***
Nonminority female	0.00	30.94	0.00 ***
M/WBE Total	0.00	34.88	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.60	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.00	0.00 **
Native American	0.00	0.00	
Minority	0.00	3.60	0.00 ***
Nonminority female	33.95	19.94	
M/WBE Total	33.95	23.54	
Clothing Stores (NAICS 4481)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.36	0.00
Asian	0.00	2.40	0.00
Native American	0.00	1.13	0.00
Minority	0.00	4.08	0.00 ***
Nonminority female	0.00	25.01	0.00 ***
M/WBE Total	0.00	29.10	0.00 ***
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	2.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.71	0.00 ***
Nonminority female	0.00	20.70	0.00 ***
M/WBE Total	0.00	23.40	0.00 ***
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	2.36	0.00 ***
Hispanic	0.00	1.38	0.00 ***
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	3.90	0.00 ***
Nonminority female	0.00	23.70	0.00 ***
M/WBE Total	0.00	27.60	0.00 ***
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	3.89	0.00
Hispanic	0.00	1.14	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.00	
Minority	0.00	5.09	0.00
Nonminority female	0.00	19.26	0.00 ***
M/WBE Total	0.00	24.35	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Glass and Glass Product Manufacturing (NAICS 3272)			
African American	0.00	1.79	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.22	0.00
Native American	0.00	0.00	
Minority	0.00	6.01	0.00
Nonminority female	0.00	32.18	0.00 ***
M/WBE Total	0.00	38.20	0.00 ***
Gasoline Stations (NAICS 4471)			
African American	0.00	0.28	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	1.29	0.00 ***
Native American	0.00	1.27	0.00
Minority	0.00	2.92	0.00 ***
Nonminority female	0.00	11.60	0.00 ***
M/WBE Total	0.00	14.52	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.25. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Construction Contracting (Major Procurements) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	4.55	2.78	
Hispanic	0.00	0.19	0.00 ***
Asian	4.98	0.04	
Native American	0.00	1.19	0.00 ***
Minority	9.53	4.20	
Nonminority female	5.79	16.26	35.64
M/WBE Total	15.32	20.46	74.89
Building Equipment Contractors (NAICS 2382)			
African American	14.75	3.34	
Hispanic	10.70	0.15	
Asian	8.26	0.22	
Native American	0.00	1.27	0.00 ***
Minority	33.71	4.98	
Nonminority female	6.70	15.90	42.11 **
M/WBE Total	40.41	20.88	
Utility System Construction (NAICS 2371)			
African American	2.57	1.45	
Hispanic	0.00	0.00	
Asian	4.56	0.00	
Native American	0.00	0.00	
Minority	7.13	1.45	
Nonminority female	2.45	12.24	20.00 ***
M/WBE Total	9.58	13.68	70.01
Residential Building Construction (NAICS 2361)			
African American	14.08	2.77	
Hispanic	0.87	1.65	52.65
Asian	0.00	0.02	0.00
Native American	0.00	0.81	0.00 ***
Minority	14.95	5.26	
Nonminority female	0.95	8.29	11.47 ***
M/WBE Total	15.90	13.55	
Nonresidential Building Construction (NAICS 2362)			
African American	2.11	4.66	45.33
Hispanic	0.09	2.09	4.50
Asian	0.22	0.15	
Native American	0.00	0.92	0.00 ***
Minority	2.43	7.83	31.02

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	4.20	11.15	37.64
M/WBE Total	6.62	18.98	34.91
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	16.43	3.05	
Hispanic	2.47	0.15	
Asian	0.14	0.00	
Native American	13.35	1.56	
Minority	32.40	4.76	
Nonminority female	2.78	16.93	16.43 ***
M/WBE Total	35.18	21.69	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	4.86	5.91	82.22
Hispanic	0.00	0.95	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	4.86	6.87	70.82
Nonminority female	1.09	11.73	9.29 ***
M/WBE Total	5.95	18.59	32.02 ***
Building Finishing Contractors (NAICS 2383)			
African American	6.26	3.01	
Hispanic	0.66	0.13	
Asian	0.00	0.00	
Native American	0.00	1.20	0.00 ***
Minority	6.92	4.34	
Nonminority female	26.71	16.53	
M/WBE Total	33.62	20.87	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	66.95	4.53	
Hispanic	0.00	0.14	0.00
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	66.95	4.75	
Nonminority female	23.95	22.43	
M/WBE Total	90.90	27.18	
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	3.31	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	3.31	0.00
Nonminority female	0.00	11.49	0.00 ***
M/WBE Total	0.00	14.81	0.00 ***
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	1.80	2.71	66.36
Hispanic	0.00	0.02	0.00
Asian	0.00	0.59	0.00 *
Native American	0.00	0.00	
Minority	1.80	3.32	54.21
Nonminority female	22.76	18.43	
M/WBE Total	24.56	21.75	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	2.93	0.00 ***
Hispanic	0.00	1.03	0.00 ***
Asian	11.48	2.34	
Native American	0.00	0.03	0.00
Minority	11.48	6.33	
Nonminority female	15.47	15.17	
M/WBE Total	26.94	21.50	
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	2.54	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.54	0.00 ***
Nonminority female	0.00	21.66	0.00 ***
M/WBE Total	0.00	24.21	0.00 ***
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.19	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.19	0.00
Native American	0.00	0.00	
Minority	0.00	4.39	0.00
Nonminority female	0.00	27.05	0.00 ***
M/WBE Total	0.00	31.43	0.00 ***
General Freight Trucking (NAICS 4841)			
African American	86.81	7.63	
Hispanic	0.00	0.31	0.00
Asian	0.00	0.16	0.00
Native American	0.00	0.06	0.00



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	86.81	8.15	
Nonminority female	12.49	18.87	66.18
M/WBE Total	99.30	27.02	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.72	0.00 ***
Hispanic	0.00	0.25	0.00
Asian	0.00	0.31	0.00
Native American	0.00	0.00	
Minority	0.00	3.28	0.00 ***
Nonminority female	5.03	20.08	25.04 ***
M/WBE Total	5.03	23.36	21.53 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	34.58	3.98	
Hispanic	0.00	0.15	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.24	0.00
Minority	34.58	4.43	
Nonminority female	49.97	21.37	
M/WBE Total	84.55	25.80	
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	2.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00
Nonminority female	99.74	27.44	
M/WBE Total	99.74	29.96	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	3.38	0.00 ***
Hispanic	0.00	0.05	0.00
Asian	0.00	0.16	0.00
Native American	0.00	0.00	
Minority	0.00	3.59	0.00 ***
Nonminority female	0.00	18.89	0.02 ***
M/WBE Total	0.00	22.47	0.01 ***
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.17	0.00
Asian	0.00	0.99	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	4.08	0.00 ***
Nonminority female	58.64	20.66	
M/WBE Total	58.64	24.74	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	78.00	2.81	
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	78.00	4.12	
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	78.00	23.88	
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00
M/WBE Total	0.00	9.86	0.00
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.59	0.00 ***
Hispanic	0.00	0.14	0.00
Asian	0.00	0.38	0.00 **
Native American	0.00	0.00	
Minority	0.00	4.11	0.00 ***
Nonminority female	2.62	19.31	13.55 ***
M/WBE Total	2.62	23.42	11.17 ***
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	2.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.18	0.00
Native American	0.00	0.00	
Minority	0.00	2.57	0.00
Nonminority female	0.00	25.66	0.00 ***
M/WBE Total	0.00	28.22	0.00 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	4.71	0.74	
Hispanic	0.00	0.20	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	1.31	0.00 *
Native American	0.00	1.24	0.00 *
Minority	4.71	3.49	
Nonminority female	0.00	14.06	0.00 ***
M/WBE Total	4.71	17.55	26.82
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	4.74	0.69	
Hispanic	0.00	0.14	0.00
Asian	0.00	1.36	0.00
Native American	0.00	1.26	0.00
Minority	4.74	3.45	
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	4.74	16.83	28.14
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	2.68	0.00
Hispanic	0.00	0.71	0.00
Asian	0.00	0.73	0.00
Native American	0.00	0.00	
Minority	0.00	4.12	0.00
Nonminority female	0.00	17.52	0.00 ***
M/WBE Total	0.00	21.65	0.00 ***
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	6.64	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.88	0.00
Native American	0.00	0.00	
Minority	0.00	8.52	0.00
Nonminority female	0.00	16.04	0.00
M/WBE Total	0.00	24.56	0.00 ***
Investigation and Security Services (NAICS 5616)			
African American	91.41	4.97	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	91.41	5.00	
Nonminority female	0.00	19.32	0.00 ***
M/WBE Total	91.41	24.31	
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00
Nonminority female	0.00	20.40	0.00 ***
M/WBE Total	0.00	23.69	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.29	0.00 ***
Hispanic	0.00	0.20	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.00	
Minority	0.00	3.87	0.00 ***
Nonminority female	64.31	19.18	
M/WBE Total	64.31	23.05	
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	1.49	0.00	
Minority	1.49	4.30	34.54
Nonminority female	52.17	21.36	
M/WBE Total	53.66	25.66	
Remediation and Other Waste Management Services (NAICS 5629)			
African American	1.41	16.79	8.41 ***
Hispanic	0.00	0.00	
Asian	1.89	0.00	
Native American	0.00	0.00	
Minority	3.30	16.79	19.67 ***
Nonminority female	9.09	17.48	51.96
M/WBE Total	12.39	34.27	36.14 ***
Specialized Freight Trucking (NAICS 4842)			
African American	97.05	8.04	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	97.05	8.10	
Nonminority female	1.79	20.63	8.69 **
M/WBE Total	98.85	28.72	
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	1.39	3.02	45.97

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	1.39	3.10	44.76
Nonminority female	0.22	20.89	1.04 ***
M/WBE Total	1.60	23.99	6.69 **
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	23.85	0.00 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	1.76	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.45	0.00
Native American	0.00	0.00	
Minority	0.00	2.21	0.00 ***
Nonminority female	0.00	38.24	0.00 ***
M/WBE Total	0.00	40.45	0.00 ***
Foundries (NAICS 3315)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	57.63	2.38	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	57.63	2.38	
Nonminority female	2.16	21.34	10.12 ***
M/WBE Total	59.79	23.73	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	3.31	0.00 ***
Hispanic	10.99	0.75	
Asian	0.00	1.04	0.00 ***
Native American	0.00	0.10	0.00
Minority	10.99	5.19	
Nonminority female	0.00	18.19	0.00 ***
M/WBE Total	10.99	23.38	47.00
Land Subdivision (NAICS 2372)			
African American	10.04	2.13	
Hispanic	0.00	0.52	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	10.04	2.65	
Nonminority female	0.00	10.82	0.00 ***
M/WBE Total	10.04	13.48	74.48
Other Support Services (NAICS 5619)			
African American	41.86	3.46	
Hispanic	0.00	0.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.74	0.00
Minority	41.86	4.55	
Nonminority female	2.12	27.47	7.73 ***
M/WBE Total	43.98	32.03	
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	4.76	0.00
Hispanic	0.00	2.13	0.00
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	6.92	0.00
Nonminority female	0.00	17.39	0.00 ***
M/WBE Total	0.00	24.31	0.00 ***
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	2.29	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.21	0.00
Native American	0.00	0.00	
Minority	0.00	2.50	0.00
Nonminority female	91.74	27.79	
M/WBE Total	91.74	30.29	
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
M/WBE Total	100.00	30.30	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	3.89	1.69	
Hispanic	0.00	0.70	0.00
Asian	0.00	0.71	0.00
Native American	0.00	0.03	0.00
Minority	3.89	3.13	
Nonminority female	26.02	15.62	
M/WBE Total	29.91	18.75	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	8.82	0.00 ***
Hispanic	0.00	2.06	0.00
Asian	0.00	0.11	0.00
Native American	0.00	2.94	0.00 ***
Minority	0.00	13.93	0.00 ***
Nonminority female	0.00	16.49	0.00 ***
M/WBE Total	0.00	30.42	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.26. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Construction Contracting (Major Procurements) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	4.70	2.77	
Hispanic	0.00	0.19	0.00 *
Asian	5.58	0.03	
Native American	0.00	1.19	0.00 ***
Minority	10.27	4.19	
Nonminority female	3.89	16.25	23.91 **
M/WBE Total	14.16	20.44	69.28
Building Equipment Contractors (NAICS 2382)			
African American	14.62	3.38	
Hispanic	9.42	0.15	
Asian	7.70	0.23	
Native American	0.00	1.27	0.00 ***
Minority	31.74	5.03	
Nonminority female	7.57	15.99	47.33 **
M/WBE Total	39.30	21.02	
Residential Building Construction (NAICS 2361)			
African American	9.47	2.76	
Hispanic	1.00	1.65	60.53
Asian	0.00	0.02	0.00
Native American	0.00	0.81	0.00 ***
Minority	10.47	5.24	
Nonminority female	0.97	8.26	11.69 ***
M/WBE Total	11.43	13.50	84.72
Nonresidential Building Construction (NAICS 2362)			
African American	1.74	4.80	36.33
Hispanic	0.12	2.00	5.81
Asian	0.27	0.17	
Native American	0.00	0.92	0.00 **
Minority	2.13	7.89	27.01
Nonminority female	3.84	11.10	34.60
M/WBE Total	5.97	18.99	31.44
Utility System Construction (NAICS 2371)			
African American	3.09	1.45	
Hispanic	0.00	0.00	
Asian	5.72	0.00	
Native American	0.00	0.00	
Minority	8.82	1.45	



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	3.76	12.24	30.71 **
M/WBE Total	12.57	13.68	91.88
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	14.28	2.91	
Hispanic	3.51	0.13	
Asian	0.20	0.00	
Native American	18.90	1.69	
Minority	36.88	4.73	
Nonminority female	3.05	17.37	17.57 ***
M/WBE Total	39.93	22.10	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	1.29	5.91	21.78 *
Hispanic	0.00	0.95	0.00 *
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	1.29	6.87	18.76 **
Nonminority female	1.49	11.73	12.72 ***
M/WBE Total	2.78	18.59	14.95 ***
Building Finishing Contractors (NAICS 2383)			
African American	7.40	2.96	
Hispanic	0.87	0.12	
Asian	0.00	0.00	
Native American	0.00	1.20	0.00 ***
Minority	8.27	4.29	
Nonminority female	19.22	16.53	
M/WBE Total	27.49	20.82	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	59.26	4.57	
Hispanic	0.00	0.12	0.00
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	59.26	4.77	
Nonminority female	31.78	22.40	
M/WBE Total	91.04	27.18	
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	3.31	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	3.31	0.00
Nonminority female	0.00	11.49	0.00 ***
M/WBE Total	0.00	14.81	0.00 ***
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.19	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.19	0.00
Native American	0.00	0.00	
Minority	0.00	4.39	0.00
Nonminority female	0.00	27.05	0.00 ***
M/WBE Total	0.00	31.43	0.00 ***
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	2.00	2.72	73.47
Hispanic	0.00	0.02	0.00
Asian	0.00	0.58	0.00 **
Native American	0.00	0.00	
Minority	2.00	3.31	60.21
Nonminority female	14.19	18.43	77.01
M/WBE Total	16.18	21.74	74.44
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	2.53	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.53	0.00
Nonminority female	0.00	22.22	0.00 ***
M/WBE Total	0.00	24.74	0.00 ***
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	2.88	0.00 ***
Hispanic	0.00	1.03	0.00 ***
Asian	13.58	2.27	
Native American	0.00	0.03	0.00
Minority	13.58	6.21	
Nonminority female	17.56	15.15	
M/WBE Total	31.13	21.36	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.71	0.00 ***
Hispanic	0.00	0.25	0.00
Asian	0.00	0.31	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	3.28	0.00 ***
Nonminority female	5.83	20.08	29.02 ***
M/WBE Total	5.83	23.36	24.95 ***
General Freight Trucking (NAICS 4841)			
African American	79.54	7.74	
Hispanic	0.00	0.29	0.00
Asian	0.00	0.17	0.00
Native American	0.00	0.03	0.00
Minority	79.54	8.23	
Nonminority female	19.70	18.68	
M/WBE Total	99.24	26.91	
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	2.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00
Nonminority female	99.73	27.44	
M/WBE Total	99.73	29.96	
Services to Buildings and Dwellings (NAICS 5617)			
African American	32.06	3.87	
Hispanic	0.00	0.13	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.23	0.00
Minority	32.06	4.30	
Nonminority female	46.25	21.29	
M/WBE Total	78.30	25.58	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	3.42	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.18	0.00
Native American	0.00	0.00	
Minority	0.00	3.65	0.00 ***
Nonminority female	0.00	18.84	0.02 ***
M/WBE Total	0.00	22.49	0.02 ***
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.92	0.00 **
Hispanic	0.00	0.16	0.00
Asian	0.00	0.99	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	4.07	0.00 ***
Nonminority female	60.31	20.65	
M/WBE Total	60.31	24.71	
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	2.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.18	0.00
Native American	0.00	0.00	
Minority	0.00	2.57	0.00
Nonminority female	0.00	25.66	0.00 ***
M/WBE Total	0.00	28.22	0.00 ***
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.59	0.00 ***
Hispanic	0.00	0.14	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.00	
Minority	0.00	4.11	0.00 ***
Nonminority female	1.26	19.31	6.50 ***
M/WBE Total	1.26	23.42	5.36 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	4.87	0.74	
Hispanic	0.00	0.20	0.00
Asian	0.00	1.31	0.00 ***
Native American	0.00	1.24	0.00 ***
Minority	4.87	3.49	
Nonminority female	0.00	14.06	0.00 ***
M/WBE Total	4.87	17.55	27.78
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00
M/WBE Total	0.00	9.86	0.00
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	4.99	0.69	
Hispanic	0.00	0.14	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	1.36	0.00
Native American	0.00	1.26	0.00
Minority	4.99	3.45	
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	4.99	16.83	29.64
Investigation and Security Services (NAICS 5616)			
African American	92.98	4.97	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	92.98	5.00	
Nonminority female	0.00	19.32	0.00 ***
M/WBE Total	92.98	24.31	
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	6.64	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.88	0.00
Native American	0.00	0.00	
Minority	0.00	8.52	0.00
Nonminority female	0.00	16.04	0.00
M/WBE Total	0.00	24.56	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.29	0.00 ***
Hispanic	0.00	0.20	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.00	
Minority	0.00	3.87	0.00 ***
Nonminority female	68.52	19.18	
M/WBE Total	68.52	23.05	
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	1.62	0.00	
Minority	1.62	4.30	37.74
Nonminority female	57.02	21.36	
M/WBE Total	58.64	25.66	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	37.72	2.81	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	37.72	4.12	
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	37.72	23.88	
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00
Nonminority female	0.00	20.40	0.00 ***
M/WBE Total	0.00	23.69	0.00 ***
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	1.38	3.02	45.76
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	1.38	3.10	44.55
Nonminority female	0.22	20.89	1.04 ***
M/WBE Total	1.60	23.99	6.66 ***
Remediation and Other Waste Management Services (NAICS 5629)			
African American	1.99	16.79	11.85 ***
Hispanic	0.00	0.00	
Asian	2.66	0.00	
Native American	0.00	0.00	
Minority	4.65	16.79	27.71 ***
Nonminority female	12.46	17.48	71.28
M/WBE Total	17.12	34.27	49.94 **
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	1.76	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.45	0.00
Native American	0.00	0.00	
Minority	0.00	2.21	0.00 **
Nonminority female	0.00	38.24	0.00 ***
M/WBE Total	0.00	40.45	0.00 ***
Foundries (NAICS 3315)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Specialized Freight Trucking (NAICS 4842)			
African American	95.33	8.04	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	95.33	8.10	
Nonminority female	2.84	20.63	13.76
M/WBE Total	98.17	28.72	
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	64.03	2.38	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	64.03	2.38	
Nonminority female	0.00	21.34	0.00 ***
M/WBE Total	64.03	23.73	
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	23.85	0.00 ***
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	4.76	0.00
Hispanic	0.00	2.13	0.00
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	6.92	0.00
Nonminority female	0.00	17.39	0.00 ***
M/WBE Total	0.00	24.31	0.00 ***
Land Subdivision (NAICS 2372)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	11.20	2.13	
Hispanic	0.00	0.52	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	11.20	2.65	
Nonminority female	0.00	10.82	0.00 ***
M/WBE Total	11.20	13.48	83.08
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
M/WBE Total	100.00	30.30	

Source and Notes: See Table 7.21.



## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.27. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland AE-CRS Contracting (Major Procurements) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	3.60	3.13	
Hispanic	0.49	1.02	47.81
Asian	21.57	2.48	
Native American	0.00	0.03	0.00
Minority	25.66	6.65	
Nonminority female	3.88	15.32	25.34 ***
M/WBE Total	29.54	21.97	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	5.39	3.01	
Hispanic	0.00	0.77	0.00 **
Asian	16.04	0.88	
Native American	0.00	0.07	0.00
Minority	21.43	4.73	
Nonminority female	36.78	17.80	
M/WBE Total	58.21	22.53	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	95.36	3.74	
Hispanic	0.00	0.57	0.00 ***
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	95.36	4.55	
Nonminority female	1.00	20.54	4.86 ***
M/WBE Total	96.36	25.09	
Other Specialty Trade Contractors (NAICS 2389)			
African American	3.10	3.46	89.80
Hispanic	0.00	0.21	0.00 ***
Asian	0.00	0.19	0.00 ***
Native American	0.00	1.18	0.00 ***
Minority	3.10	5.05	61.48
Nonminority female	1.85	16.34	11.29 ***
M/WBE Total	4.95	21.39	23.13 ***
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	3.31	0.00 ***
Hispanic	0.00	0.87	0.00 ***
Asian	13.13	2.06	
Native American	0.00	0.07	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	13.13	6.31	
Nonminority female	84.81	19.17	
M/WBE Total	97.93	25.48	
Building Equipment Contractors (NAICS 2382)			
African American	54.51	3.28	
Hispanic	15.38	0.16	
Asian	0.00	0.21	0.00 **
Native American	0.00	1.27	0.00 ***
Minority	69.88	4.92	
Nonminority female	14.13	15.89	88.92
M/WBE Total	84.02	20.81	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	4.61	3.69	
Hispanic	0.00	0.28	0.00 **
Asian	0.00	0.00	
Native American	0.00	1.17	0.00 ***
Minority	4.61	5.14	89.73
Nonminority female	0.00	15.68	0.00 ***
M/WBE Total	4.61	20.82	22.14 ***
Specialized Design Services (NAICS 5414)			
African American	0.00	2.66	0.00
Hispanic	0.00	1.08	0.00
Asian	0.00	0.45	0.00
Native American	0.00	0.51	0.00
Minority	0.00	4.70	0.00
Nonminority female	81.95	40.35	
M/WBE Total	81.95	45.05	
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.55	0.00
Hispanic	0.00	1.87	0.00
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.60	0.00
Nonminority female	0.00	24.89	0.00 ***
M/WBE Total	0.00	27.49	0.00 ***
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	2.13	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.25	0.00
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	2.39	0.00
Nonminority female	95.68	31.49	
M/WBE Total	95.68	33.88	
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	4.87	0.00 ***
Hispanic	0.00	1.96	0.00 ***
Asian	0.00	0.18	0.00
Native American	0.00	0.92	0.00 ***
Minority	0.00	7.92	0.00 ***
Nonminority female	7.44	11.07	67.24
M/WBE Total	7.44	18.99	39.19
Office Administrative Services (NAICS 5611)			
African American	100.00	3.22	
Hispanic	0.00	0.00	
Asian	0.00	0.38	0.00
Native American	0.00	0.09	0.00
Minority	100.00	3.69	
Nonminority female	0.00	20.73	0.00 ***
M/WBE Total	100.00	24.42	
Software Publishers (NAICS 5112)			
African American	0.00	3.32	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00
Native American	0.00	0.24	0.00
Minority	0.00	3.91	0.00 ***
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	0.00	25.54	0.00 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	3.47	0.00 ***
Hispanic	0.00	0.08	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.20	0.00
Minority	0.00	3.81	0.00 ***
Nonminority female	98.64	21.00	
M/WBE Total	98.64	24.81	
General Freight Trucking (NAICS 4841)			
African American	100.00	7.74	
Hispanic	0.00	0.29	0.00
Asian	0.00	0.17	0.00
Native American	0.00	0.03	0.00
Minority	100.00	8.23	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	0.00	18.68	0.00 ***
M/WBE Total	100.00	26.91	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	2.12	0.00 ***
Hispanic	0.00	0.23	0.00
Asian	0.00	0.00	
Native American	0.00	1.22	0.00 ***
Minority	0.00	3.57	0.00 ***
Nonminority female	0.00	16.34	0.00 ***
M/WBE Total	0.00	19.91	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.48	0.00 *
Hispanic	0.00	0.10	0.00
Asian	0.00	0.00	
Native American	0.00	0.07	0.00
Minority	0.00	2.64	0.00 ***
Nonminority female	0.00	20.08	0.00 ***
M/WBE Total	0.00	22.73	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.28. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland AE-CRS Contracting (Major Procurements) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	3.62	3.11	
Hispanic	0.76	1.03	74.15
Asian	21.19	2.49	
Native American	0.00	0.03	0.00
Minority	25.57	6.66	
Nonminority female	3.33	15.28	21.80 ***
M/WBE Total	28.90	21.93	
Other Specialty Trade Contractors (NAICS 2389)			
African American	3.10	3.40	91.32
Hispanic	0.00	0.21	0.00 *
Asian	0.00	0.18	0.00 *
Native American	0.00	1.18	0.00 ***
Minority	3.10	4.98	62.38
Nonminority female	1.85	16.34	11.30 ***
M/WBE Total	4.95	21.31	23.22 ***
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	12.03	3.12	
Hispanic	0.00	0.78	0.00
Asian	27.08	0.89	
Native American	0.00	0.07	0.00
Minority	39.11	4.87	
Nonminority female	29.22	17.81	
M/WBE Total	68.32	22.68	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	91.44	3.74	
Hispanic	0.00	0.57	0.00 *
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	91.44	4.55	
Nonminority female	1.84	20.54	8.97 ***
M/WBE Total	93.28	25.09	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	4.76	3.69	
Hispanic	0.00	0.28	0.00
Asian	0.00	0.00	
Native American	0.00	1.17	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	4.76	5.14	92.75
Nonminority female	0.00	15.68	0.00 ***
M/WBE Total	4.76	20.82	22.89 ***
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.55	0.00
Hispanic	0.00	1.87	0.00
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.60	0.00
Nonminority female	0.00	24.89	0.00 ***
M/WBE Total	0.00	27.49	0.00 ***
Specialized Design Services (NAICS 5414)			
African American	0.00	2.66	0.00
Hispanic	0.00	1.08	0.00
Asian	0.00	0.45	0.00
Native American	0.00	0.51	0.00
Minority	0.00	4.70	0.00
Nonminority female	81.95	40.35	
M/WBE Total	81.95	45.05	
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	4.87	0.00 ***
Hispanic	0.00	1.96	0.00 ***
Asian	0.00	0.18	0.00
Native American	0.00	0.92	0.00 **
Minority	0.00	7.92	0.00 ***
Nonminority female	4.13	11.07	37.31
M/WBE Total	4.13	18.99	21.75
Software Publishers (NAICS 5112)			
African American	0.00	3.32	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00
Native American	0.00	0.24	0.00
Minority	0.00	3.91	0.00 **
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	0.00	25.54	0.00 ***
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.84	0.00 ***
Hispanic	38.42	0.18	
Asian	0.00	0.32	0.00 *
Native American	0.00	1.26	0.00 ***
Minority	38.42	5.59	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	21.64	16.83	
M/WBE Total	60.06	22.42	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	3.39	0.00 **
Hispanic	0.00	0.91	0.00
Asian	20.36	2.03	
Native American	0.00	0.07	0.00
Minority	20.36	6.40	
Nonminority female	79.64	19.39	
M/WBE Total	100.00	25.79	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	2.13	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.25	0.00
Native American	0.00	0.00	
Minority	0.00	2.39	0.00 ***
Nonminority female	94.02	31.49	
M/WBE Total	94.02	33.88	
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	3.47	0.00 ***
Hispanic	0.00	0.08	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.20	0.00
Minority	0.00	3.81	0.00 ***
Nonminority female	98.64	21.00	
M/WBE Total	98.64	24.81	
General Freight Trucking (NAICS 4841)			
African American	100.00	7.74	
Hispanic	0.00	0.29	0.00
Asian	0.00	0.17	0.00
Native American	0.00	0.03	0.00
Minority	100.00	8.23	
Nonminority female	0.00	18.68	0.00 ***
M/WBE Total	100.00	26.91	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	2.12	0.00 ***
Hispanic	0.00	0.23	0.00
Asian	0.00	0.00	
Native American	0.00	1.22	0.00 ***
Minority	0.00	3.57	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	0.00	16.34	0.00 ***
M/WBE Total	0.00	19.91	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.48	0.00 ***
Hispanic	0.00	0.10	0.00
Asian	0.00	0.00	
Native American	0.00	0.07	0.00
Minority	0.00	2.64	0.00 ***
Nonminority female	0.00	20.08	0.00 ***
M/WBE Total	0.00	22.73	0.00 ***
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	0.04	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	1.31	0.00
Native American	0.00	1.27	0.00
Minority	0.00	2.65	0.00
Nonminority female	0.00	12.25	0.00 ***
M/WBE Total	0.00	14.90	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	2.55	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.62	0.00 ***
Nonminority female	10.83	19.99	54.16
M/WBE Total	10.83	22.62	47.88
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	33.28	2.93	
Hispanic	0.00	0.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.27	0.00
Minority	33.28	3.30	
Nonminority female	0.00	22.15	0.00 ***
M/WBE Total	33.28	25.45	

Source and Notes: See Table 7.21.



## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.29. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Services Contracting (Major Procurements) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	3.63	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	0.00
Minority	0.00	3.63	0.00 *
Nonminority female	0.00	19.29	0.00 ***
M/WBE Total	0.00	22.91	0.00 ***
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	5.48	3.36	
Hispanic	0.36	0.86	41.40
Asian	6.40	0.97	
Native American	0.29	0.07	
Minority	12.53	5.26	
Nonminority female	5.97	18.44	32.36 **
M/WBE Total	18.50	23.69	78.07
Employment Services (NAICS 5613)			
African American	69.07	5.18	
Hispanic	0.00	0.36	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.59	0.00
Minority	69.07	6.18	
Nonminority female	2.66	25.52	10.44 ***
M/WBE Total	71.74	31.70	
General Freight Trucking (NAICS 4841)			
African American	34.97	7.73	
Hispanic	13.83	0.29	
Asian	0.00	0.17	0.00
Native American	0.00	0.03	0.00
Minority	48.80	8.22	
Nonminority female	0.07	18.69	0.39 ***
M/WBE Total	48.87	26.92	
Computer Systems Design and Related Services (NAICS 5415)			
African American	13.74	3.23	
Hispanic	0.44	0.86	50.61
Asian	0.00	1.97	0.00 ***
Native American	0.00	0.07	0.00
Minority	14.17	6.13	
Nonminority female	1.00	18.92	5.28 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	15.17	25.05	60.56
Other Personal Services (NAICS 8129)			
African American	0.23	9.23	2.47
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.08	0.00
Minority	0.23	13.85	1.65
Nonminority female	0.00	13.86	0.00 ***
M/WBE Total	0.23	27.71	0.82
Software Publishers (NAICS 5112)			
African American	0.00	3.32	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00
Native American	0.00	0.24	0.00
Minority	0.00	3.91	0.00 ***
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	0.00	25.54	0.00 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	35.61	4.05	
Hispanic	0.00	0.15	0.00
Asian	0.00	0.08	0.00
Native American	0.00	0.24	0.00
Minority	35.61	4.52	
Nonminority female	11.51	21.41	53.77 **
M/WBE Total	47.12	25.93	
Other Telecommunications (NAICS 5179)			
African American	0.00	2.93	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.05	0.00 ***
Nonminority female	0.00	20.86	0.00 ***
M/WBE Total	0.00	23.91	0.00 ***
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	1.07	2.61	40.83
Hispanic	3.07	0.62	
Asian	0.00	1.37	0.00
Native American	0.00	0.07	0.00
Minority	4.13	4.66	88.63
Nonminority female	1.22	19.78	6.14 *
M/WBE Total	5.35	24.44	21.89

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	17.14	5.46	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.12	0.00
Minority	17.14	5.58	
Nonminority female	0.00	20.17	0.00 ***
M/WBE Total	17.14	25.75	66.58
Building Equipment Contractors (NAICS 2382)			
African American	15.56	3.51	
Hispanic	61.63	0.16	
Asian	0.93	0.25	
Native American	0.00	1.27	0.00 ***
Minority	78.12	5.20	
Nonminority female	5.69	16.27	34.99 ***
M/WBE Total	83.81	21.46	
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	51.15	3.59	
Hispanic	0.00	0.91	0.00 ***
Asian	20.09	1.73	
Native American	0.00	0.03	0.00
Minority	71.24	6.26	
Nonminority female	1.52	15.25	9.97 ***
M/WBE Total	72.76	21.51	
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	51.97	2.93	
Hispanic	0.00	0.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.27	0.00
Minority	51.97	3.30	
Nonminority female	0.00	22.15	0.00 ***
M/WBE Total	51.97	25.45	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Social Advocacy Organizations (NAICS 8133)			
African American	0.00	10.66	0.00 ***
Hispanic	0.00	1.51	0.00 ***
Asian	0.00	0.00	
Native American	0.00	3.02	0.00 ***
Minority	0.00	15.20	0.00 ***
Nonminority female	0.00	13.61	0.00 ***
M/WBE Total	0.00	28.81	0.00 ***
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	9.17	0.00 ***
Hispanic	0.00	1.66	0.00
Asian	0.00	0.14	0.00
Native American	0.00	3.06	0.00 ***
Minority	0.00	14.02	0.00 ***
Nonminority female	3.82	14.94	25.55 **
M/WBE Total	3.82	28.95	13.18 ***
Legal Services (NAICS 5411)			
African American	11.12	1.50	
Hispanic	0.00	0.77	0.00
Asian	0.00	0.63	0.00
Native American	0.00	0.04	0.00
Minority	11.12	2.93	
Nonminority female	0.59	16.63	3.57 ***
M/WBE Total	11.71	19.56	59.89
Remediation and Other Waste Management Services (NAICS 5629)			
African American	7.79	14.83	52.52
Hispanic	0.00	0.02	0.00
Asian	10.24	0.03	
Native American	0.00	0.05	0.00
Minority	18.03	14.93	
Nonminority female	6.16	18.32	33.62 ***
M/WBE Total	24.19	33.26	72.74
Waste Collection (NAICS 5621)			
African American	0.02	5.29	0.35
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.14	0.00
Minority	0.02	5.43	0.34
Nonminority female	0.00	27.68	0.00 ***
M/WBE Total	0.02	33.11	0.06 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Services (NAICS 5619)			
African American	2.79	3.46	80.68
Hispanic	0.00	0.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.74	0.00
Minority	2.79	4.55	61.35
Nonminority female	0.00	27.47	0.00 ***
M/WBE Total	2.79	32.03	8.72 ***
Individual and Family Services (NAICS 6241)			
African American	3.30	0.72	
Hispanic	0.00	2.06	0.00 **
Asian	0.00	0.11	0.00
Native American	0.00	0.01	0.00
Minority	3.30	2.90	
Nonminority female	14.50	18.78	77.23
M/WBE Total	17.81	21.68	82.14
Insurance Carriers (NAICS 5241)			
African American	0.00	4.50	0.00
Hispanic	0.00	0.85	0.00
Asian	0.00	0.00	
Native American	0.00	0.29	0.00
Minority	0.00	5.64	0.00 ***
Nonminority female	23.57	22.69	
M/WBE Total	23.57	28.33	83.20
Special Food Services (NAICS 7223)			
African American	99.68	2.91	
Hispanic	0.00	1.73	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.30	0.00
Minority	99.68	5.01	
Nonminority female	0.00	26.53	0.00 ***
M/WBE Total	99.68	31.54	
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	9.38	0.00 ***
Hispanic	0.00	1.53	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.05	0.00 *
Minority	0.00	13.98	0.00 ***
Nonminority female	0.00	13.97	0.00 ***
M/WBE Total	0.00	27.95	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	3.23	0.00 ***
Hispanic	0.00	0.19	0.00
Asian	0.00	0.36	0.00
Native American	0.00	0.00	
Minority	0.00	3.77	0.00 ***
Nonminority female	91.88	19.25	
M/WBE Total	91.88	23.02	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	10.24	0.00 ***
Hispanic	0.00	1.81	0.00
Asian	0.00	0.10	0.00
Native American	0.00	2.90	0.00 ***
Minority	0.00	15.04	0.00 ***
Nonminority female	17.08	16.35	
M/WBE Total	17.08	31.40	54.39 **
Civic and Social Organizations (NAICS 8134)			
African American	0.00	9.37	0.00 ***
Hispanic	0.00	1.53	0.00 *
Asian	0.00	0.00	
Native American	0.00	3.05	0.00 *
Minority	0.00	13.95	0.00 ***
Nonminority female	0.00	13.82	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.40	0.00 *
Hispanic	0.00	0.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.01	0.00
Minority	0.00	2.41	0.00 *
Nonminority female	0.00	21.19	0.00 ***
M/WBE Total	0.00	23.60	0.00 ***
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	4.59	2.31	
Hispanic	0.00	0.69	0.00
Asian	0.00	0.57	0.00
Native American	0.00	0.07	0.00
Minority	4.59	3.63	
Nonminority female	0.00	19.16	0.00 ***
M/WBE Total	4.59	22.79	20.13

# Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	5.91	0.00 ***
Hispanic	0.00	0.95	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.87	0.00 ***
Nonminority female	0.00	11.73	0.00 ***
M/WBE Total	0.00	18.59	0.00 ***
Residential Building Construction (NAICS 2361)			
African American	58.79	2.83	
Hispanic	0.00	1.66	0.00 ***
Asian	0.00	0.02	0.00
Native American	0.00	0.82	0.00 ***
Minority	58.79	5.34	
Nonminority female	13.25	8.40	
M/WBE Total	72.04	13.74	
Educational Support Services (NAICS 6117)			
African American	0.00	1.79	0.00
Hispanic	0.00	1.64	0.00
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	3.60	0.00
Nonminority female	0.00	31.37	0.00 ***
M/WBE Total	0.00	34.98	0.00 ***
Other Ambulatory Health Care Services (NAICS 6219)			
African American	32.54	0.53	
Hispanic	0.00	2.03	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	32.54	2.60	
Nonminority female	0.00	19.89	0.00 ***
M/WBE Total	32.54	22.48	
Other Specialty Trade Contractors (NAICS 2389)			
African American	3.26	3.07	
Hispanic	0.00	0.20	0.00 ***
Asian	0.00	0.10	0.00 ***
Native American	0.00	1.19	0.00 ***
Minority	3.26	4.57	71.42
Nonminority female	0.43	16.29	2.62 ***
M/WBE Total	3.69	20.86	17.69 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Business Support Services (NAICS 5614)</b>			
African American	22.79	3.82	
Hispanic	0.00	0.10	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.29	0.00
Minority	22.79	4.26	
Nonminority female	0.58	22.18	2.60 ***
M/WBE Total	23.37	26.44	88.38
<b>Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)</b>			
African American	0.00	3.07	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.19	0.00
Nonminority female	0.00	20.68	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***
<b>Scientific Research and Development Services (NAICS 5417)</b>			
African American	11.99	1.46	
Hispanic	0.00	0.58	0.00
Asian	0.00	1.26	0.00
Native American	0.00	0.03	0.00
Minority	11.99	3.33	
Nonminority female	6.10	15.34	39.76
M/WBE Total	18.09	18.67	96.92
<b>Support Activities for Crop Production (NAICS 1151)</b>			
African American	0.00	1.86	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.86	0.00
Native American	0.00	0.00	
Minority	0.00	3.72	0.00
Nonminority female	0.00	26.83	0.00 ***
M/WBE Total	0.00	30.55	0.00 ***
<b>Activities Related to Real Estate (NAICS 5313)</b>			
African American	15.05	2.44	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	15.05	2.44	
Nonminority female	17.81	19.51	91.26
M/WBE Total	32.86	21.95	



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	5.35	4.03	
Hispanic	0.00	0.06	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.33	0.00
Minority	5.35	4.43	
Nonminority female	0.00	22.98	0.00 ***
M/WBE Total	5.35	27.41	19.52 ***
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	0.00	4.93	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.38	0.00
Minority	0.00	5.31	0.00
Nonminority female	0.00	22.99	0.00 ***
M/WBE Total	0.00	28.29	0.00 ***
Support Activities for Air Transportation (NAICS 4881)			
African American	100.00	5.56	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	100.00	5.58	
Nonminority female	0.00	17.54	0.00
M/WBE Total	100.00	23.12	
Specialized Design Services (NAICS 5414)			
African American	5.27	3.69	
Hispanic	0.00	0.73	0.00
Asian	0.00	0.72	0.00
Native American	0.00	0.16	0.00
Minority	5.27	5.30	99.50
Nonminority female	0.00	28.30	0.00 ***
M/WBE Total	5.27	33.60	15.69 *
Office Administrative Services (NAICS 5611)			
African American	90.32	3.22	
Hispanic	0.00	0.00	
Asian	0.00	0.38	0.00
Native American	0.00	0.09	0.00
Minority	90.32	3.69	
Nonminority female	5.67	20.73	27.37 ***
M/WBE Total	95.99	24.42	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	6.97	0.00 ***
Hispanic	11.73	0.99	
Asian	0.00	0.00	
Native American	0.00	0.05	0.00
Minority	11.73	8.01	
Nonminority female	0.00	19.31	0.00 ***
M/WBE Total	11.73	27.32	42.92 *
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	15.74	0.00
Hispanic	0.00	1.53	0.00
Asian	0.00	0.35	0.00
Native American	0.00	2.64	0.00
Minority	0.00	20.26	0.00
Nonminority female	0.00	18.23	0.00
M/WBE Total	0.00	38.49	0.00 ***
Outpatient Care Centers (NAICS 6214)			
African American	0.00	0.31	0.00
Hispanic	0.00	1.96	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00
Minority	0.00	2.37	0.00
Nonminority female	0.00	22.40	0.00 ***
M/WBE Total	0.00	24.77	0.00 ***
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.06	1.46	4.03
Hispanic	0.00	0.62	0.00
Asian	2.35	1.21	
Native American	0.00	0.09	0.00
Minority	2.41	3.37	71.48
Nonminority female	0.00	21.79	0.00 ***
M/WBE Total	2.41	25.16	9.57 ***
Other Information Services (NAICS 5191)			
African American	0.00	4.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.62	0.00
Minority	0.00	5.20	0.00
Nonminority female	0.00	25.54	0.00 ***
M/WBE Total	0.00	30.74	0.00 ***
Warehousing and Storage (NAICS 4931)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	5.96	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.04	0.00
Minority	0.00	5.99	0.00
Nonminority female	0.00	20.05	0.00 ***
M/WBE Total	0.00	26.05	0.00 ***
Specialized Freight Trucking (NAICS 4842)			
African American	74.27	7.85	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	74.27	7.91	
Nonminority female	0.46	21.76	2.11 ***
M/WBE Total	74.72	29.66	
Gasoline Stations (NAICS 4471)			
African American	0.00	0.28	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	1.29	0.00
Native American	0.00	1.27	0.00
Minority	0.00	2.92	0.00
Nonminority female	0.00	11.60	0.00
M/WBE Total	0.00	14.52	0.00
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	9.17	0.00 ***
Hispanic	0.00	1.65	0.00
Asian	0.00	0.02	0.00
Native American	0.00	2.97	0.00
Minority	0.00	13.82	0.00 ***
Nonminority female	0.00	15.42	0.00 ***
M/WBE Total	0.00	29.23	0.00 ***
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	0.00	9.45	0.00
Hispanic	0.00	1.52	0.00
Asian	0.00	0.03	0.00
Native American	0.00	2.96	0.00
Minority	0.00	13.96	0.00 ***
Nonminority female	59.85	15.79	
M/WBE Total	59.85	29.75	
Automotive Equipment Rental and Leasing			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
(NAICS 5321)			
African American	0.00	2.51	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.12	0.00
Minority	0.00	2.63	0.00
Nonminority female	0.00	17.76	0.00 ***
M/WBE Total	0.00	20.39	0.00 ***
Lessors of Real Estate (NAICS 5311)			
African American	0.00	2.64	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.15	0.00
Minority	0.00	2.87	0.00
Nonminority female	0.00	20.54	0.00 ***
M/WBE Total	0.00	23.41	0.00 ***
Consumer Goods Rental (NAICS 5322)			
African American	0.00	2.58	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.77	0.00
Nonminority female	0.00	21.33	0.00 ***
M/WBE Total	0.00	24.09	0.00 ***
Colleges, Universities, and Professional Schools (NAICS 6113)			
African American	0.00	0.51	0.00
Hispanic	0.00	2.07	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.58	0.00
Nonminority female	0.00	18.65	0.00 ***
M/WBE Total	0.00	21.24	0.00 ***
Radio and Television Broadcasting (NAICS 5151)			
African American	0.00	4.11	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.20	0.00
Minority	0.00	4.31	0.00
Nonminority female	0.00	21.22	0.00 ***
M/WBE Total	0.00	25.53	0.00 ***
Converted Paper Product Manufacturing (NAICS 3222)			

# Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Offices of Physicians (NAICS 6211)			
African American	0.00	0.59	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.64	0.00
Native American	0.00	0.22	0.00
Minority	0.00	3.37	0.00
Nonminority female	0.00	22.07	0.00 ***
M/WBE Total	0.00	25.44	0.00 ***
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.50	0.00
Hispanic	0.00	1.92	0.00
Asian	0.00	0.00	
Native American	0.00	0.13	0.00
Minority	0.00	2.54	0.00
Nonminority female	0.00	23.45	0.00 ***
M/WBE Total	0.00	25.99	0.00 ***
Technical and Trade Schools (NAICS 6115)			
African American	0.00	6.06	0.00
Hispanic	0.00	1.75	0.00
Asian	0.00	0.00	
Native American	0.00	0.16	0.00
Minority	0.00	7.96	0.00 ***
Nonminority female	0.00	24.12	0.00 ***
M/WBE Total	0.00	32.09	0.00 ***
Death Care Services (NAICS 8122)			
African American	0.00	11.40	0.00
Hispanic	0.00	1.53	0.00
Asian	0.00	0.31	0.00
Native American	0.00	2.90	0.00
Minority	0.00	16.14	0.00 ***
Nonminority female	0.00	15.70	0.00 ***
M/WBE Total	0.00	31.84	0.00 ***
Home Health Care Services (NAICS 6216)			
African American	0.00	1.92	0.00
Hispanic	0.00	1.81	0.00
Asian	0.00	0.20	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.21	0.00
Minority	0.00	4.14	0.00
Nonminority female	0.00	25.40	0.00
M/WBE Total	0.00	29.54	0.00
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	83.67	4.28	
Hispanic	0.00	0.45	0.00 ***
Asian	0.00	0.49	0.00 ***
Native American	0.00	0.00	
Minority	83.67	5.23	
Nonminority female	8.92	23.49	37.96 ***
M/WBE Total	92.58	28.72	
Religious Organizations (NAICS 8131)			
African American	0.00	9.26	0.00
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.07	0.00
Minority	0.00	13.88	0.00 ***
Nonminority female	0.00	13.89	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	94.06	4.77	
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	94.06	4.85	
Nonminority female	5.61	22.29	25.17 ***
M/WBE Total	99.67	27.14	
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	2.12	0.00
Hispanic	0.00	2.00	0.00
Asian	0.00	0.00	
Native American	0.00	0.81	0.00
Minority	0.00	4.94	0.00
Nonminority female	0.00	18.63	0.00 ***
M/WBE Total	0.00	23.57	0.00 ***
Drinking Places (Alcoholic Beverages) (NAICS 7224)			
African American	0.00	0.64	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.07	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.12	0.00
Minority	0.00	2.75	0.00
Nonminority female	0.00	23.16	0.00 ***
M/WBE Total	0.00	25.91	0.00 ***
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	8.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	8.38	0.00
Nonminority female	100.00	18.36	
M/WBE Total	100.00	26.73	
Support Activities for Water Transportation (NAICS 4883)			
African American	0.00	5.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.66	0.00
Nonminority female	0.00	16.98	0.00
M/WBE Total	0.00	22.64	0.00
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Business Schools and Computer and Management Training (NAICS 6114)			
African American	0.00	0.99	0.00
Hispanic	0.00	1.70	0.00
Asian	0.00	0.00	
Native American	0.00	0.33	0.00
Minority	0.00	3.02	0.00
Nonminority female	0.00	29.83	0.00 ***
M/WBE Total	0.00	32.85	0.00 ***
Cable and Other Subscription Programming (NAICS 5152)			
African American	0.00	3.74	0.00
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	3.74	0.00
Nonminority female	0.00	19.25	0.00
M/WBE Total	0.00	22.99	0.00
Full-Service Restaurants (NAICS 7221)			
African American	0.00	0.65	0.00
Hispanic	0.00	1.94	0.00
Asian	0.00	1.05	0.00
Native American	0.00	0.17	0.00
Minority	0.00	3.81	0.00
Nonminority female	0.00	22.03	0.00
M/WBE Total	0.00	25.84	0.00 ***
Freight Transportation Arrangement (NAICS 4885)			
African American	100.00	6.51	
Hispanic	0.00	0.42	0.00
Asian	0.00	0.84	0.00
Native American	0.00	0.09	0.00
Minority	100.00	7.87	
Nonminority female	0.00	21.95	0.00
M/WBE Total	100.00	29.82	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	3.31	0.00
Hispanic	0.00	0.11	0.00
Asian	0.00	0.70	0.00
Native American	0.00	0.00	
Minority	0.00	4.12	0.00
Nonminority female	0.00	20.75	0.00 ***
M/WBE Total	0.00	24.87	0.00 ***
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	1.19	0.00
Hispanic	0.00	1.95	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00
Minority	0.00	3.24	0.00
Nonminority female	0.00	21.81	0.00
M/WBE Total	0.00	25.05	0.00
Aerospace Product and Parts Manufacturing (NAICS 3364)			
African American	0.00	9.36	0.00
Hispanic	0.00	0.00	



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	9.44	0.00
Nonminority female	0.00	25.69	0.00
M/WBE Total	0.00	35.14	0.00
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	1.55	0.00
Hispanic	0.00	1.43	0.00
Asian	0.00	0.00	
Native American	0.00	0.35	0.00
Minority	0.00	3.33	0.00
Nonminority female	100.00	36.40	
M/WBE Total	100.00	39.73	
General Medical and Surgical Hospitals (NAICS 6221)			
African American	0.00	0.09	0.00
Hispanic	0.00	2.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	0.00	2.13	0.00
Nonminority female	0.00	19.46	0.00
M/WBE Total	0.00	21.59	0.00
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	4.43	0.00
Hispanic	41.87	0.60	
Asian	0.00	1.13	0.00
Native American	0.00	0.57	0.00
Minority	41.87	6.72	
Nonminority female	0.00	24.70	0.00 ***
M/WBE Total	41.87	31.42	
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	1.88	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.88	0.00
Nonminority female	0.00	44.60	0.00 ***
M/WBE Total	0.00	46.48	0.00 ***
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
M/WBE Total	100.00	30.30	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	2.67	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.68	0.00 *
Native American	0.00	0.00	
Minority	0.00	3.35	0.00 ***
Nonminority female	3.02	18.45	16.36 ***
M/WBE Total	3.02	21.80	13.85 ***
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	3.23	0.00 ***
Hispanic	5.92	0.12	
Asian	0.00	0.00	
Native American	0.00	1.16	0.00 ***
Minority	5.92	4.51	
Nonminority female	6.40	17.84	35.86 **
M/WBE Total	12.32	22.35	55.10
Grantmaking and Giving Services (NAICS 8132)			
African American	0.00	8.83	0.00
Hispanic	0.00	1.63	0.00
Asian	0.00	0.10	0.00
Native American	0.00	2.94	0.00
Minority	0.00	13.51	0.00
Nonminority female	0.00	17.87	0.00
M/WBE Total	0.00	31.38	0.00
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.60	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.40	0.00 **
Native American	0.00	0.00	
Minority	0.00	3.34	0.00 ***
Nonminority female	0.00	20.54	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.30. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Services Contracting (Major Procurements) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	3.38	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	0.00
Minority	0.00	3.38	0.00 *
Nonminority female	0.00	19.33	0.00 ***
M/WBE Total	0.00	22.71	0.00 ***
Employment Services (NAICS 5613)			
African American	71.69	5.18	
Hispanic	0.00	0.36	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.59	0.00
Minority	71.69	6.18	
Nonminority female	2.63	25.50	10.30 ***
M/WBE Total	74.32	31.68	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	7.51	3.41	
Hispanic	0.45	0.89	50.70
Asian	9.45	0.98	
Native American	0.00	0.07	0.00
Minority	17.41	5.34	
Nonminority female	3.47	18.66	18.59 ***
M/WBE Total	20.88	24.00	87.00
Computer Systems Design and Related Services (NAICS 5415)			
African American	15.42	3.26	
Hispanic	0.68	0.87	78.49
Asian	0.00	1.99	0.00
Native American	0.00	0.07	0.00
Minority	16.10	6.19	
Nonminority female	1.04	19.02	5.48 ***
M/WBE Total	17.15	25.22	68.00
General Freight Trucking (NAICS 4841)			
African American	45.29	7.72	
Hispanic	15.48	0.29	
Asian	0.00	0.17	0.00
Native American	0.00	0.04	0.00
Minority	60.78	8.22	
Nonminority female	0.11	18.70	0.59 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	60.89	26.92	
Other Personal Services (NAICS 8129)			
African American	0.00	9.23	0.00
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	
Native American	0.00	3.08	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	13.85	0.00
M/WBE Total	0.00	27.69	0.00 ***
Software Publishers (NAICS 5112)			
African American	0.00	3.32	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00
Native American	0.00	0.24	0.00
Minority	0.00	3.91	0.00 **
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	0.00	25.54	0.00 ***
Other Telecommunications (NAICS 5179)			
African American	0.00	2.93	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.05	0.00
Nonminority female	0.00	20.86	0.00 ***
M/WBE Total	0.00	23.91	0.00 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	33.46	4.15	
Hispanic	0.00	0.17	0.00
Asian	0.00	0.08	0.00
Native American	0.00	0.25	0.00
Minority	33.46	4.65	
Nonminority female	9.93	21.49	46.21 **
M/WBE Total	43.38	26.13	
Building Equipment Contractors (NAICS 2382)			
African American	15.87	3.51	
Hispanic	61.58	0.16	
Asian	0.98	0.25	
Native American	0.00	1.27	0.00 ***
Minority	78.43	5.20	
Nonminority female	5.47	16.27	33.60 ***
M/WBE Total	83.90	21.46	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	19.05	5.35	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	19.05	5.46	
Nonminority female	0.00	20.11	0.00 ***
M/WBE Total	19.05	25.57	74.49
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	11.47	2.93	
Hispanic	0.00	0.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.27	0.00
Minority	11.47	3.30	
Nonminority female	0.00	22.15	0.00 ***
M/WBE Total	11.47	25.45	45.06
Legal Services (NAICS 5411)			
African American	7.26	1.47	
Hispanic	0.00	0.76	0.00
Asian	0.00	0.63	0.00
Native American	0.00	0.03	0.00
Minority	7.26	2.89	
Nonminority female	20.83	16.48	
M/WBE Total	28.10	19.37	
Social Advocacy Organizations (NAICS 8133)			
African American	0.00	10.66	0.00 ***
Hispanic	0.00	1.51	0.00 **
Asian	0.00	0.00	
Native American	0.00	3.02	0.00 ***
Minority	0.00	15.20	0.00 ***
Nonminority female	0.00	13.61	0.00 ***
M/WBE Total	0.00	28.81	0.00 ***
Remediation and Other Waste Management Services (NAICS 5629)			
African American	6.86	15.64	43.89
Hispanic	0.00	0.01	0.00
Asian	11.14	0.01	
Native American	0.00	0.03	0.00
Minority	18.01	15.70	
Nonminority female	3.72	17.98	20.72 ***
M/WBE Total	21.73	33.68	64.53

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	9.17	0.00 ***
Hispanic	0.00	1.61	0.00
Asian	0.00	0.12	0.00
Native American	0.00	3.09	0.00
Minority	0.00	14.00	0.00 ***
Nonminority female	8.56	14.87	57.60
M/WBE Total	8.56	28.87	29.66 ***
Individual and Family Services (NAICS 6241)			
African American	3.92	0.73	
Hispanic	0.00	2.06	0.00 **
Asian	0.00	0.10	0.00
Native American	0.00	0.01	0.00
Minority	3.92	2.89	
Nonminority female	17.51	18.78	93.24
M/WBE Total	21.43	21.67	98.90
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	30.54	3.37	
Hispanic	0.00	0.93	0.00 ***
Asian	33.04	2.17	
Native American	0.00	0.03	0.00
Minority	63.57	6.50	
Nonminority female	0.91	15.55	5.84 ***
M/WBE Total	64.48	22.05	
Insurance Carriers (NAICS 5241)			
African American	0.00	4.62	0.00
Hispanic	0.00	0.96	0.00
Asian	0.00	0.00	
Native American	0.00	0.28	0.00
Minority	0.00	5.86	0.00
Nonminority female	30.00	22.56	
M/WBE Total	30.00	28.42	
Special Food Services (NAICS 7223)			
African American	100.00	2.91	
Hispanic	0.00	1.73	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.30	0.00
Minority	100.00	5.01	
Nonminority female	0.00	26.53	0.00 ***
M/WBE Total	100.00	31.54	
Business, Professional, Labor, Political, and			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Similar Organizations (NAICS 8139)			
African American	0.00	9.35	0.00 ***
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.06	0.00
Minority	0.00	13.95	0.00 ***
Nonminority female	0.00	13.97	0.00 ***
M/WBE Total	0.00	27.92	0.00 ***
Residential Building Construction (NAICS 2361)			
African American	55.68	2.84	
Hispanic	0.00	1.67	0.00 ***
Asian	0.00	0.01	0.00
Native American	0.00	0.83	0.00 ***
Minority	55.68	5.35	
Nonminority female	13.76	8.42	
M/WBE Total	69.44	13.76	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	9.20	2.92	
Hispanic	26.47	0.97	
Asian	0.00	1.13	0.00
Native American	0.00	0.10	0.00
Minority	35.67	5.12	
Nonminority female	6.06	21.53	28.15
M/WBE Total	41.73	26.66	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	5.29	2.21	
Hispanic	0.00	0.69	0.00
Asian	0.00	0.56	0.00
Native American	0.00	0.06	0.00
Minority	5.29	3.53	
Nonminority female	0.00	18.87	0.00 ***
M/WBE Total	5.29	22.40	23.63
Civic and Social Organizations (NAICS 8134)			
African American	0.00	9.37	0.00 ***
Hispanic	0.00	1.53	0.00
Asian	0.00	0.00	
Native American	0.00	3.05	0.00
Minority	0.00	13.95	0.00 ***
Nonminority female	0.00	13.82	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.19	0.00 ***
Hispanic	0.00	0.18	0.00
Asian	0.00	0.34	0.00
Native American	0.00	0.00	
Minority	0.00	3.70	0.00 ***
Nonminority female	86.42	19.29	
M/WBE Total	86.42	22.99	
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.40	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.01	0.00
Minority	0.00	2.42	0.00 ***
Nonminority female	0.00	21.16	0.00 ***
M/WBE Total	0.00	23.58	0.00 ***
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	9.80	0.00 ***
Hispanic	0.00	1.89	0.00
Asian	0.00	0.10	0.00
Native American	0.00	2.91	0.00
Minority	0.00	14.70	0.00 ***
Nonminority female	18.21	16.40	
M/WBE Total	18.21	31.09	58.58
Other Support Services (NAICS 5619)			
African American	7.26	3.46	
Hispanic	0.00	0.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.74	0.00
Minority	7.26	4.55	
Nonminority female	0.00	27.47	0.00 ***
M/WBE Total	7.26	32.03	22.67 *
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.10	3.07	3.21 ***
Hispanic	0.00	0.20	0.00 *
Asian	0.00	0.10	0.00 *
Native American	0.00	1.19	0.00 ***
Minority	0.10	4.56	2.16 ***
Nonminority female	0.44	16.29	2.68 ***
M/WBE Total	0.53	20.85	2.56 ***



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Educational Support Services (NAICS 6117)			
African American	0.00	1.79	0.00
Hispanic	0.00	1.64	0.00
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	3.60	0.00
Nonminority female	0.00	31.37	0.00 ***
M/WBE Total	0.00	34.98	0.00 ***
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	1.86	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.86	0.00
Native American	0.00	0.00	
Minority	0.00	3.72	0.00
Nonminority female	0.00	26.83	0.00 ***
M/WBE Total	0.00	30.55	0.00 ***
Other Ambulatory Health Care Services (NAICS 6219)			
African American	45.54	0.53	
Hispanic	0.00	2.03	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	45.54	2.60	
Nonminority female	0.00	19.89	0.00 ***
M/WBE Total	45.54	22.48	
Activities Related to Real Estate (NAICS 5313)			
African American	9.03	2.44	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	9.03	2.44	
Nonminority female	14.39	19.51	73.74
M/WBE Total	23.41	21.95	
Business Support Services (NAICS 5614)			
African American	32.63	3.87	
Hispanic	0.00	0.02	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.16	0.00
Minority	32.63	4.10	
Nonminority female	0.00	20.74	0.00 ***
M/WBE Total	32.63	24.85	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Outpatient Care Centers (NAICS 6214)</b>			
African American	0.00	0.31	0.00
Hispanic	0.00	1.96	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00
Minority	0.00	2.37	0.00
Nonminority female	0.00	22.41	0.00 ***
M/WBE Total	0.00	24.78	0.00 ***
<b>Specialized Design Services (NAICS 5414)</b>			
African American	5.34	3.69	
Hispanic	0.00	0.73	0.00
Asian	0.00	0.72	0.00
Native American	0.00	0.16	0.00
Minority	5.34	5.30	
Nonminority female	0.00	28.30	0.00 ***
M/WBE Total	5.34	33.60	15.88 *
<b>Warehousing and Storage (NAICS 4931)</b>			
African American	0.00	5.93	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.04	0.00
Minority	0.00	5.97	0.00
Nonminority female	0.00	20.07	0.00 ***
M/WBE Total	0.00	26.04	0.00 ***
<b>Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)</b>			
African American	0.00	3.07	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.19	0.00
Nonminority female	0.00	20.68	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***
<b>Specialized Freight Trucking (NAICS 4842)</b>			
African American	74.22	7.84	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	74.22	7.90	
Nonminority female	0.46	21.79	2.11 ***
M/WBE Total	74.68	29.69	
<b>Gasoline Stations (NAICS 4471)</b>			
African American	0.00	0.28	0.00
Hispanic	0.00	0.08	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	1.29	0.00
Native American	0.00	1.27	0.00
Minority	0.00	2.92	0.00
Nonminority female	0.00	11.60	0.00
M/WBE Total	0.00	14.52	0.00
Other Information Services (NAICS 5191)			
African American	0.00	4.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.62	0.00
Minority	0.00	5.20	0.00
Nonminority female	0.00	25.54	0.00 ***
M/WBE Total	0.00	30.74	0.00 ***
Scientific Research and Development Services (NAICS 5417)			
African American	19.64	1.57	
Hispanic	0.00	0.58	0.00
Asian	0.00	1.48	0.00
Native American	0.00	0.04	0.00
Minority	19.64	3.67	
Nonminority female	9.66	16.18	59.70
M/WBE Total	29.30	19.84	
Office Administrative Services (NAICS 5611)			
African American	88.81	3.22	
Hispanic	0.00	0.00	
Asian	0.00	0.38	0.00
Native American	0.00	0.09	0.00
Minority	88.81	3.69	
Nonminority female	6.31	20.73	30.45 **
M/WBE Total	95.13	24.42	
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	16.34	0.00
Hispanic	0.00	1.51	0.00
Asian	0.00	0.42	0.00
Native American	0.00	2.63	0.00
Minority	0.00	20.90	0.00
Nonminority female	0.00	17.57	0.00
M/WBE Total	0.00	38.48	0.00 ***
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	0.00	4.82	0.00
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.00	
Native American	0.00	0.33	0.00
Minority	0.00	5.14	0.00
Nonminority female	0.00	22.48	0.00 ***
M/WBE Total	0.00	27.62	0.00 ***
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	0.00	9.45	0.00
Hispanic	0.00	1.52	0.00
Asian	0.00	0.03	0.00
Native American	0.00	2.96	0.00
Minority	0.00	13.96	0.00 ***
Nonminority female	71.27	15.79	
M/WBE Total	71.27	29.75	
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	6.96	0.00
Hispanic	13.30	1.00	
Asian	0.00	0.00	
Native American	0.00	0.05	0.00
Minority	13.30	8.01	
Nonminority female	0.00	19.31	0.00 ***
M/WBE Total	13.30	27.32	48.69
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	1.40	0.00
Hispanic	0.00	0.59	0.00
Asian	3.23	1.34	
Native American	0.00	0.10	0.00
Minority	3.23	3.43	94.16
Nonminority female	0.00	23.44	0.00 ***
M/WBE Total	3.23	26.88	12.03 **
Consumer Goods Rental (NAICS 5322)			
African American	0.00	2.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.75	0.00
Nonminority female	0.00	21.23	0.00 ***
M/WBE Total	0.00	23.98	0.00 ***
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	2.44	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	9.19	0.00 ***
Hispanic	0.00	1.66	0.00
Asian	0.00	0.02	0.00
Native American	0.00	2.97	0.00
Minority	0.00	13.85	0.00 ***
Nonminority female	0.00	15.38	0.00 ***
M/WBE Total	0.00	29.22	0.00 ***
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	14.05	4.03	
Hispanic	0.00	0.06	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.33	0.00
Minority	14.05	4.43	
Nonminority female	0.00	22.98	0.00 ***
M/WBE Total	14.05	27.41	51.25 **
Lessors of Real Estate (NAICS 5311)			
African American	0.00	2.62	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	0.08	0.00
Native American	0.00	0.15	0.00
Minority	0.00	2.87	0.00
Nonminority female	0.00	20.44	0.00 ***
M/WBE Total	0.00	23.30	0.00 ***
Radio and Television Broadcasting (NAICS 5151)			
African American	0.00	4.28	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.21	0.00
Minority	0.00	4.49	0.00
Nonminority female	0.00	21.30	0.00 ***
M/WBE Total	0.00	25.79	0.00 ***
Colleges, Universities, and Professional Schools (NAICS 6113)			
African American	0.00	0.51	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	2.07	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.58	0.00
Nonminority female	0.00	18.65	0.00 ***
M/WBE Total	0.00	21.24	0.00 ***
Offices of Physicians (NAICS 6211)			
African American	0.00	0.60	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.65	0.00
Native American	0.00	0.22	0.00
Minority	0.00	3.39	0.00
Nonminority female	0.00	22.09	0.00 ***
M/WBE Total	0.00	25.47	0.00 ***
Death Care Services (NAICS 8122)			
African American	0.00	11.40	0.00
Hispanic	0.00	1.53	0.00
Asian	0.00	0.31	0.00
Native American	0.00	2.90	0.00
Minority	0.00	16.14	0.00 ***
Nonminority female	0.00	15.70	0.00 ***
M/WBE Total	0.00	31.84	0.00 ***
Home Health Care Services (NAICS 6216)			
African American	0.00	1.92	0.00
Hispanic	0.00	1.81	0.00
Asian	0.00	0.20	0.00
Native American	0.00	0.21	0.00
Minority	0.00	4.14	0.00
Nonminority female	0.00	25.40	0.00
M/WBE Total	0.00	29.54	0.00
Religious Organizations (NAICS 8131)			
African American	0.00	9.26	0.00
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.07	0.00
Minority	0.00	13.88	0.00
Nonminority female	0.00	13.89	0.00
M/WBE Total	0.00	27.76	0.00
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	93.91	4.77	
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	93.91	4.85	
Nonminority female	5.71	22.29	25.61 ***
M/WBE Total	99.62	27.14	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	81.17	4.51	
Hispanic	0.00	0.41	0.00 *
Asian	0.00	0.60	0.00 *
Native American	0.00	0.00	
Minority	81.17	5.51	
Nonminority female	11.63	24.73	47.02 ***
M/WBE Total	92.80	30.25	
Technical and Trade Schools (NAICS 6115)			
African American	0.00	6.06	0.00
Hispanic	0.00	1.75	0.00
Asian	0.00	0.00	
Native American	0.00	0.16	0.00
Minority	0.00	7.96	0.00 ***
Nonminority female	0.00	24.12	0.00 ***
M/WBE Total	0.00	32.09	0.00 ***
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	5.91	0.00 ***
Hispanic	0.00	0.95	0.00 *
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.87	0.00 ***
Nonminority female	0.00	11.73	0.00 ***
M/WBE Total	0.00	18.59	0.00 ***
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.50	0.00
Hispanic	0.00	1.92	0.00
Asian	0.00	0.00	
Native American	0.00	0.13	0.00
Minority	0.00	2.54	0.00
Nonminority female	0.00	23.45	0.00 ***
M/WBE Total	0.00	25.99	0.00 ***
Support Activities for Water Transportation (NAICS 4883)			
African American	0.00	5.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	5.66	0.00
Nonminority female	0.00	16.98	0.00
M/WBE Total	0.00	22.64	0.00
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	2.12	0.00
Hispanic	0.00	2.00	0.00
Asian	0.00	0.00	
Native American	0.00	0.81	0.00
Minority	0.00	4.94	0.00
Nonminority female	0.00	18.63	0.00 ***
M/WBE Total	0.00	23.57	0.00 ***
Drinking Places (Alcoholic Beverages) (NAICS 7224)			
African American	0.00	0.64	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.12	0.00
Minority	0.00	2.75	0.00
Nonminority female	0.00	23.16	0.00
M/WBE Total	0.00	25.91	0.00
Freight Transportation Arrangement (NAICS 4885)			
African American	100.00	6.51	
Hispanic	0.00	0.42	0.00
Asian	0.00	0.84	0.00
Native American	0.00	0.09	0.00
Minority	100.00	7.87	
Nonminority female	0.00	21.95	0.00
M/WBE Total	100.00	29.82	
Aerospace Product and Parts Manufacturing (NAICS 3364)			
African American	0.00	9.36	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	9.44	0.00
Nonminority female	0.00	25.69	0.00
M/WBE Total	0.00	35.14	0.00
Full-Service Restaurants (NAICS 7221)			
African American	0.00	0.65	0.00
Hispanic	0.00	1.94	0.00
Asian	0.00	1.05	0.00
Native American	0.00	0.17	0.00



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	3.81	0.00
Nonminority female	0.00	22.03	0.00
M/WBE Total	0.00	25.84	0.00
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	1.88	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.88	0.00
Nonminority female	0.00	44.60	0.00 ***
M/WBE Total	0.00	46.48	0.00 ***
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
General Medical and Surgical Hospitals (NAICS 6221)			
African American	0.00	0.09	0.00
Hispanic	0.00	2.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	0.00	2.13	0.00
Nonminority female	0.00	19.46	0.00
M/WBE Total	0.00	21.59	0.00
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	1.19	0.00
Hispanic	0.00	1.95	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00
Minority	0.00	3.24	0.00
Nonminority female	0.00	21.81	0.00
M/WBE Total	0.00	25.05	0.00
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	4.43	0.00
Hispanic	63.65	0.60	
Asian	0.00	1.13	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.57	0.00
Minority	63.65	6.72	
Nonminority female	0.00	24.70	0.00 ***
M/WBE Total	63.65	31.42	
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	1.55	0.00
Hispanic	0.00	1.43	0.00
Asian	0.00	0.00	
Native American	0.00	0.35	0.00
Minority	0.00	3.33	0.00
Nonminority female	100.00	36.40	
M/WBE Total	100.00	39.73	
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
M/WBE Total	100.00	30.30	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	3.23	0.00 ***
Hispanic	0.00	0.12	0.00
Asian	0.00	0.00	
Native American	0.00	1.16	0.00 ***
Minority	0.00	4.51	0.00 ***
Nonminority female	6.80	17.84	38.12 ***
M/WBE Total	6.80	22.35	30.43 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.60	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.40	0.00 *
Native American	0.00	0.00	
Minority	0.00	3.34	0.00 ***
Nonminority female	0.00	20.54	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***
Grantmaking and Giving Services (NAICS 8132)			
African American	0.00	8.83	0.00
Hispanic	0.00	1.63	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.10	0.00
Native American	0.00	2.94	0.00
Minority	0.00	13.51	0.00
Nonminority female	0.00	17.87	0.00
M/WBE Total	0.00	31.38	0.00
Business Schools and Computer and Management Training (NAICS 6114)			
African American	0.00	0.99	0.00
Hispanic	0.00	1.70	0.00
Asian	0.00	0.00	
Native American	0.00	0.33	0.00
Minority	0.00	3.02	0.00
Nonminority female	0.00	29.83	0.00 ***
M/WBE Total	0.00	32.85	0.00 ***
Taxi and Limousine Service (NAICS 4853)			
African American	0.00	12.04	0.00
Hispanic	0.00	0.00	
Asian	0.00	3.46	0.00
Native American	0.00	3.89	0.00
Minority	0.00	19.39	0.00
Nonminority female	0.00	9.89	0.00
M/WBE Total	0.00	29.28	0.00
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	4.03	0.00 ***
Hispanic	0.00	1.86	0.00 ***
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.89	0.00 ***
Nonminority female	0.00	24.27	0.00 ***
M/WBE Total	0.00	30.16	0.00 ***
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	2.68	0.00
Hispanic	0.00	0.71	0.00
Asian	0.00	0.73	0.00
Native American	0.00	0.00	
Minority	0.00	4.12	0.00
Nonminority female	0.00	17.52	0.00 ***
M/WBE Total	0.00	21.65	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.31. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Commodities Contracting (Major Procurements) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.52	0.00 ***
Hispanic	0.00	0.15	0.00
Asian	0.00	0.38	0.00 **
Native American	0.00	0.00	
Minority	0.00	4.05	0.00 ***
Nonminority female	33.21	19.41	
M/WBE Total	33.21	23.45	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	2.89	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	0.00
Native American	0.00	0.00	
Minority	0.00	2.89	0.00 ***
Nonminority female	0.00	17.05	0.00 ***
M/WBE Total	0.00	19.93	0.00 ***
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	6.72	5.23	
Hispanic	0.00	0.00	
Asian	0.00	0.64	0.00
Native American	0.00	0.00	
Minority	6.72	5.87	
Nonminority female	0.26	21.17	1.23 ***
M/WBE Total	6.98	27.03	25.82 ***
Automobile Dealers (NAICS 4411)			
African American	0.00	0.89	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	1.27	0.00 ***
Native American	0.00	1.44	0.00 ***
Minority	0.00	3.61	0.00 ***
Nonminority female	0.00	10.73	0.00 ***
M/WBE Total	0.00	14.34	0.00 ***
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	8.32	3.82	
Hispanic	4.51	0.17	
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.00	
Minority	12.83	4.35	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	17.16	19.90	86.24
M/WBE Total	29.99	24.25	
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	6.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	6.17	0.00 ***
Nonminority female	0.00	20.21	0.00 ***
M/WBE Total	0.00	26.37	0.00 ***
Basic Chemical Manufacturing (NAICS 3251)			
African American	0.00	5.74	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.54	0.00
Native American	0.00	0.00	
Minority	0.00	6.28	0.00 ***
Nonminority female	0.00	18.31	0.00 ***
M/WBE Total	0.00	24.59	0.00 ***
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	5.89	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	5.97	0.00 ***
Nonminority female	0.00	20.09	0.00 ***
M/WBE Total	0.00	26.05	0.00 ***
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	3.71	0.00 ***
Hispanic	0.00	0.49	0.00
Asian	0.50	0.65	77.48
Native American	0.00	0.00	
Minority	0.50	4.85	10.36 ***
Nonminority female	0.00	20.87	0.00 ***
M/WBE Total	0.50	25.71	1.95 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	2.30	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.43	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	2.77	0.00 ***
Nonminority female	0.00	27.28	0.00 ***
M/WBE Total	0.00	30.05	0.00 ***
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	2.81	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.89	0.00 ***
Nonminority female	0.00	18.52	0.00 ***
M/WBE Total	0.00	21.40	0.00 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	0.68	0.00 *
Hispanic	0.00	0.17	0.00
Asian	0.00	1.31	0.00 *
Native American	0.00	1.31	0.00 *
Minority	0.00	3.47	0.00 ***
Nonminority female	0.00	13.90	0.00 ***
M/WBE Total	0.00	17.37	0.00 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.65	0.00 ***
Hispanic	0.00	0.24	0.00
Asian	0.00	0.30	0.00
Native American	0.00	0.00	
Minority	0.00	3.19	0.00 ***
Nonminority female	0.68	19.89	3.44 ***
M/WBE Total	0.68	23.08	2.96 ***
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	4.90	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	4.92	0.00 ***
Nonminority female	0.00	17.43	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	1.32	0.55	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.04	0.00
Asian	0.00	1.71	0.00
Native American	0.00	1.75	0.00
Minority	1.32	4.05	32.68
Nonminority female	0.00	12.89	0.00 ***
M/WBE Total	1.32	16.93	7.81 ***
Motor Vehicle Manufacturing (NAICS 3361)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	2.58	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.64	0.00
Nonminority female	0.00	19.67	0.00 ***
M/WBE Total	0.00	22.31	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.10	0.00 ***
Hispanic	2.18	0.15	
Asian	0.00	0.30	0.00
Native American	0.00	0.00	
Minority	2.18	3.56	61.33
Nonminority female	12.64	19.39	65.21
M/WBE Total	14.82	22.94	64.61
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.74	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.34	0.00
Native American	0.00	0.00	
Minority	0.00	6.07	0.00 ***
Nonminority female	34.09	23.83	
M/WBE Total	34.09	29.91	
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.29	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.27	0.00
Native American	0.00	0.00	
Minority	0.00	2.57	0.00 ***
Nonminority female	0.00	27.54	0.00 ***
M/WBE Total	0.00	30.10	0.00 ***
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	3.00	0.00
Hispanic	0.00	0.07	0.00
Asian	0.00	0.50	0.00
Native American	0.00	0.00	
Minority	0.00	3.57	0.00
Nonminority female	1.60	21.83	7.31 **
M/WBE Total	1.60	25.40	6.28 ***
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	1.52	0.00
Hispanic	0.00	0.67	0.00
Asian	0.00	1.66	0.00
Native American	0.00	1.34	0.00
Minority	0.00	5.18	0.00 ***
Nonminority female	0.00	12.51	0.00 ***
M/WBE Total	0.00	17.69	0.00 ***
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	3.73	0.00 ***
Hispanic	0.00	0.46	0.00
Asian	0.00	0.28	0.00
Native American	0.00	0.00	
Minority	0.00	4.47	0.00 ***
Nonminority female	0.00	21.13	0.00 ***
M/WBE Total	0.00	25.60	0.00 ***
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	0.69	0.00
Hispanic	0.00	0.14	0.00
Asian	0.00	1.36	0.00
Native American	0.00	1.26	0.00
Minority	0.00	3.45	0.00 ***
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	0.00	16.83	0.00 ***
Lawn and Garden Equipment and Supplies			



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Stores (NAICS 4442)</b>			
African American	0.00	0.42	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	1.43	0.00
Native American	0.00	1.19	0.00
Minority	0.00	3.10	0.00 ***
Nonminority female	19.17	15.33	
M/WBE Total	19.17	18.43	
<b>Other Fabricated Metal Product Manufacturing (NAICS 3329)</b>			
African American	0.00	2.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	2.70	0.00
Nonminority female	0.00	20.97	0.00 ***
M/WBE Total	0.00	23.67	0.00 ***
<b>Rubber Product Manufacturing (NAICS 3262)</b>			
African American	0.00	2.82	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 ***
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)</b>			
African American	0.00	0.06	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	1.32	0.00
Native American	0.00	1.27	0.00
Minority	0.00	2.70	0.00
Nonminority female	0.00	12.71	0.00 ***
M/WBE Total	0.00	15.41	0.00 ***
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	2.77	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.47	0.00 *
Native American	0.00	0.00	
Minority	0.00	3.28	0.00 ***
Nonminority female	0.00	18.40	0.00 ***
M/WBE Total	0.00	21.68	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	2.62	0.00
Hispanic	0.00	0.21	0.00
Asian	0.00	0.17	0.00
Native American	0.00	0.00	
Minority	0.00	3.00	0.00
Nonminority female	0.00	21.22	0.00 ***
M/WBE Total	0.00	24.22	0.00 ***
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	0.00	0.00	
Minority	0.00	4.30	0.00 ***
Nonminority female	0.00	21.36	0.00 ***
M/WBE Total	0.00	25.66	0.00 ***
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	4.18	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	4.22	0.00
Nonminority female	0.00	19.35	0.00 ***
M/WBE Total	0.00	23.57	0.00 ***
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	2.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	2.76	0.00
Nonminority female	0.00	18.90	0.00 ***
M/WBE Total	0.00	21.66	0.00 ***
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	2.77	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.59	0.00
Native American	0.00	0.00	
Minority	0.00	3.35	0.00
Nonminority female	0.00	17.46	0.00 ***
M/WBE Total	0.00	20.81	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00
Nonminority female	0.00	20.40	0.00 ***
M/WBE Total	0.00	23.69	0.00 ***
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	3.03	0.00
Hispanic	0.00	0.23	0.00
Asian	0.00	0.19	0.00
Native American	0.00	0.00	
Minority	0.00	3.44	0.00
Nonminority female	0.00	21.52	0.00 ***
M/WBE Total	0.00	24.96	0.00 ***
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	3.33	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.97	0.00
Native American	0.00	0.00	
Minority	0.00	5.30	0.00
Nonminority female	0.00	17.99	0.00 ***
M/WBE Total	0.00	23.29	0.00 ***
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	1.97	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.97	0.00
Nonminority female	0.00	41.98	0.00 ***
M/WBE Total	0.00	43.95	0.00 ***
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	2.29	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.21	0.00
Native American	0.00	0.00	
Minority	0.00	2.50	0.00
Nonminority female	0.00	27.79	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	0.00	30.29	0.00 ***
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	2.66	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.73	0.00 ***
Nonminority female	0.00	20.06	0.00 ***
M/WBE Total	0.00	22.79	0.00 ***
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	3.31	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	3.34	0.00
Nonminority female	0.00	18.48	0.00
M/WBE Total	0.00	21.82	0.00
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.53	0.00 ***
Hispanic	22.28	0.16	
Asian	7.31	0.26	
Native American	0.00	1.27	0.00 ***
Minority	29.59	5.21	
Nonminority female	10.92	16.31	66.98
M/WBE Total	40.51	21.52	
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00
M/WBE Total	0.00	26.63	0.00 ***
Other Motor Vehicle Dealers (NAICS 4412)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.06	0.00
Asian	0.00	1.59	0.00
Native American	0.00	1.35	0.00
Minority	0.00	3.06	0.00
Nonminority female	0.00	13.08	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	0.00	16.14	0.00 ***
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	23.85	0.00 ***
Grocery Stores (NAICS 4451)			
African American	0.00	0.62	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.47	0.00
Native American	0.00	1.40	0.00
Minority	0.00	3.77	0.00
Nonminority female	0.00	13.62	0.00 ***
M/WBE Total	0.00	17.39	0.00 ***
Home Furnishings Stores (NAICS 4422)			
African American	0.00	1.21	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.39	0.00
Native American	0.00	1.27	0.00
Minority	0.00	4.15	0.00
Nonminority female	6.69	12.98	51.54
M/WBE Total	6.69	17.13	39.06
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	2.84	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.27	0.00
Native American	0.00	0.00	
Minority	0.00	3.11	0.00
Nonminority female	0.00	17.81	0.00 ***
M/WBE Total	0.00	20.92	0.00 ***
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	2.81	0.00 ***
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	0.00	4.12	0.00 ***
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	0.00	23.88	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	2.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.00	0.00
Native American	0.00	0.00	
Minority	0.00	6.31	0.00
Nonminority female	63.47	21.84	
M/WBE Total	63.47	28.15	
Foundries (NAICS 3315)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Lime and Gypsum Product Manufacturing (NAICS 3274)			
African American	0.00	2.11	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.30	0.00
Native American	0.00	0.00	
Minority	0.00	2.41	0.00
Nonminority female	0.00	31.13	0.00 ***
M/WBE Total	0.00	33.54	0.00 ***
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	1.23	0.00
Hispanic	0.00	0.12	0.00
Asian	0.00	1.36	0.00
Native American	0.00	1.23	0.00
Minority	0.00	3.95	0.00
Nonminority female	0.00	18.40	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Other Textile Product Mills (NAICS 3149)			
African American	0.00	2.25	0.00
Hispanic	0.00	2.14	0.00
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	4.52	0.00
Nonminority female	100.00	20.90	
M/WBE Total	100.00	25.42	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Audio and Video Equipment Manufacturing (NAICS 3343)</b>			
African American	0.00	10.80	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	10.85	0.00
Nonminority female	0.00	17.86	0.00
M/WBE Total	0.00	28.71	0.00
<b>Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)</b>			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00
M/WBE Total	0.00	19.72	0.00
<b>Sawmills and Wood Preservation (NAICS 3211)</b>			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Pharmaceutical and Medicine Manufacturing (NAICS 3254)</b>			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)</b>			
African American	0.00	2.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00
Nonminority female	0.00	27.44	0.00 ***
M/WBE Total	0.00	29.96	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***
M/WBE Total	0.00	26.63	0.00 ***
Dairy Product Manufacturing (NAICS 3115)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00
M/WBE Total	0.00	9.86	0.00
Clothing Stores (NAICS 4481)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.36	0.00
Asian	0.00	2.40	0.00
Native American	0.00	1.13	0.00
Minority	0.00	4.08	0.00
Nonminority female	0.00	25.01	0.00 ***
M/WBE Total	0.00	29.10	0.00 ***
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	2.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	2.78	0.00
Nonminority female	0.00	18.32	0.00 ***
M/WBE Total	0.00	21.10	0.00 ***
Furniture Stores (NAICS 4421)			
African American	0.00	0.11	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	1.36	0.00
Native American	0.00	1.25	0.00
Minority	0.00	3.10	0.00
Nonminority female	0.00	15.97	0.00
M/WBE Total	0.00	19.07	0.00 ***
Engine, Turbine, and Power Transmission			



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Equipment Manufacturing (NAICS 3336)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00
M/WBE Total	0.00	19.72	0.00
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	2.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.71	0.00
Nonminority female	0.00	20.70	0.00 ***
M/WBE Total	0.00	23.40	0.00 ***
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	2.36	0.00 ***
Hispanic	0.00	1.38	0.00 ***
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	3.90	0.00 ***
Nonminority female	0.00	23.70	0.00 ***
M/WBE Total	0.00	27.60	0.00 ***
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	3.89	0.00
Hispanic	0.00	1.14	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.00	
Minority	0.00	5.09	0.00
Nonminority female	0.00	19.26	0.00
M/WBE Total	0.00	24.35	0.00
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00
M/WBE Total	0.00	19.72	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	2.28	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	1.43	0.00 ***
Minority	0.00	3.71	0.00 ***
Nonminority female	0.00	14.71	0.00 ***
M/WBE Total	0.00	18.42	0.00 ***
Glass and Glass Product Manufacturing (NAICS 3272)			
African American	0.00	1.79	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.22	0.00
Native American	0.00	0.00	
Minority	0.00	6.01	0.00
Nonminority female	0.00	32.18	0.00 ***
M/WBE Total	0.00	38.20	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.32. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland  
Commodities Contracting (Major Procurements) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.51	0.00 ***
Hispanic	0.00	0.15	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.00	
Minority	0.00	4.04	0.00 ***
Nonminority female	18.27	19.42	94.08
M/WBE Total	18.27	23.46	77.89
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	2.86	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	0.00
Native American	0.00	0.00	
Minority	0.00	2.86	0.00 ***
Nonminority female	0.00	16.99	0.00 ***
M/WBE Total	0.00	19.84	0.00 ***
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	8.90	5.23	
Hispanic	0.00	0.00	
Asian	0.00	0.64	0.00
Native American	0.00	0.00	
Minority	8.90	5.87	
Nonminority female	0.19	21.17	0.89 ***
M/WBE Total	9.09	27.03	33.63 **
Automobile Dealers (NAICS 4411)			
African American	0.00	0.90	0.00
Hispanic	0.00	0.01	0.00
Asian	0.00	1.27	0.00 **
Native American	0.00	1.44	0.00 **
Minority	0.00	3.61	0.00 ***
Nonminority female	0.00	10.71	0.00 ***
M/WBE Total	0.00	14.32	0.00 ***
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	6.05	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	6.17	0.00

# Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	0.00	20.20	0.00 ***
M/WBE Total	0.00	26.37	0.00 ***
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	8.58	3.85	
Hispanic	5.79	0.20	
Asian	0.00	0.36	0.00 *
Native American	0.00	0.00	
Minority	14.37	4.41	
Nonminority female	25.64	20.41	
M/WBE Total	40.02	24.83	
Basic Chemical Manufacturing (NAICS 3251)			
African American	0.00	5.93	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.62	0.00
Native American	0.00	0.00	
Minority	0.00	6.55	0.00 ***
Nonminority female	0.00	18.59	0.00 ***
M/WBE Total	0.00	25.14	0.00 ***
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	5.88	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	5.96	0.00 ***
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	26.06	0.00 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	2.21	0.00 **
Hispanic	0.00	0.04	0.00
Asian	0.00	0.45	0.00
Native American	0.00	0.00	
Minority	0.00	2.69	0.00 **
Nonminority female	0.00	29.01	0.00 ***
M/WBE Total	0.00	31.71	0.00 ***
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	3.73	0.00 ***
Hispanic	0.00	0.51	0.00
Asian	0.65	0.66	98.72

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.65	4.90	13.27 ***
Nonminority female	0.00	20.82	0.00 ***
M/WBE Total	0.65	25.72	2.53 ***
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	2.81	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.88	0.00 ***
Nonminority female	0.00	18.49	0.00 ***
M/WBE Total	0.00	21.37	0.00 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	0.68	0.00 ***
Hispanic	0.00	0.17	0.00
Asian	0.00	1.31	0.00 ***
Native American	0.00	1.30	0.00 ***
Minority	0.00	3.47	0.00 ***
Nonminority female	0.00	13.90	0.00 ***
M/WBE Total	0.00	17.36	0.00 ***
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	4.90	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	4.92	0.00 ***
Nonminority female	0.00	17.43	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.65	0.00 ***
Hispanic	0.00	0.25	0.00
Asian	0.00	0.31	0.00
Native American	0.00	0.00	
Minority	0.00	3.21	0.00 ***
Nonminority female	1.16	19.96	5.80 ***
M/WBE Total	1.16	23.17	5.00 ***
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	1.46	0.55	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.04	0.00
Asian	0.00	1.71	0.00
Native American	0.00	1.75	0.00
Minority	1.46	4.05	36.11
Nonminority female	0.00	12.89	0.00 ***
M/WBE Total	1.46	16.93	8.63 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.10	0.00 ***
Hispanic	1.45	0.15	
Asian	0.00	0.30	0.00
Native American	0.00	0.00	
Minority	1.45	3.56	40.78
Nonminority female	8.82	19.39	45.51
M/WBE Total	10.27	22.94	44.77
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.69	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.34	0.00
Native American	0.00	0.00	
Minority	0.00	6.03	0.00 **
Nonminority female	41.38	23.85	
M/WBE Total	41.38	29.88	
Motor Vehicle Manufacturing (NAICS 3361)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00
M/WBE Total	0.00	19.72	0.00 *
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	1.59	0.00
Hispanic	0.00	0.63	0.00
Asian	0.00	1.64	0.00
Native American	0.00	1.33	0.00
Minority	0.00	5.19	0.00 ***
Nonminority female	0.00	12.49	0.00 ***
M/WBE Total	0.00	17.68	0.00 ***
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.58	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.64	0.00
Nonminority female	0.00	19.67	0.00 ***
M/WBE Total	0.00	22.31	0.00 ***
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	2.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.28	0.00
Native American	0.00	0.00	
Minority	0.00	2.57	0.00
Nonminority female	0.00	27.52	0.00 ***
M/WBE Total	0.00	30.09	0.00 ***
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	0.69	0.00
Hispanic	0.00	0.14	0.00
Asian	0.00	1.36	0.00
Native American	0.00	1.26	0.00
Minority	0.00	3.45	0.00
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	0.00	16.83	0.00 ***
Rubber Product Manufacturing (NAICS 3262)			
African American	0.00	2.82	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 *
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	2.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	2.70	0.00
Nonminority female	0.00	20.97	0.00 ***
M/WBE Total	0.00	23.67	0.00 ***
Lumber and Other Construction Materials			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Merchant Wholesalers (NAICS 4233)			
African American	0.00	2.76	0.00 ***
Hispanic	0.00	0.03	0.00
Asian	0.00	0.50	0.00 **
Native American	0.00	0.00	
Minority	0.00	3.28	0.00 ***
Nonminority female	0.00	18.41	0.00 ***
M/WBE Total	0.00	21.69	0.00 ***
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	1.32	0.00
Native American	0.00	1.27	0.00
Minority	0.00	2.70	0.00
Nonminority female	0.00	12.74	0.00 ***
M/WBE Total	0.00	15.44	0.00 ***
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	2.26	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	0.26	0.00
Native American	0.00	0.00	
Minority	0.00	2.53	0.00 ***
Nonminority female	2.41	29.48	8.18 ***
M/WBE Total	2.41	32.01	7.53 ***
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	2.62	0.00
Hispanic	0.00	0.14	0.00
Asian	0.00	0.14	0.00
Native American	0.00	0.00	
Minority	0.00	2.90	0.00
Nonminority female	0.00	21.14	0.00
M/WBE Total	0.00	24.04	0.00 *
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	0.00	0.00	
Minority	0.00	4.30	0.00 **
Nonminority female	0.00	21.36	0.00 ***
M/WBE Total	0.00	25.66	0.00 ***



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	3.61	0.00
Hispanic	0.00	0.41	0.00
Asian	0.00	0.26	0.00
Native American	0.00	0.00	
Minority	0.00	4.29	0.00
Nonminority female	0.00	21.36	0.00 ***
M/WBE Total	0.00	25.65	0.00 ***
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	3.33	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.97	0.00
Native American	0.00	0.00	
Minority	0.00	5.30	0.00
Nonminority female	0.00	17.99	0.00 ***
M/WBE Total	0.00	23.29	0.00 ***
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	3.95	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	4.01	0.00
Nonminority female	0.00	20.27	0.00 ***
M/WBE Total	0.00	24.28	0.00 ***
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00
Nonminority female	0.00	20.40	0.00 ***
M/WBE Total	0.00	23.69	0.00 ***
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	2.98	0.00 ***
Hispanic	0.00	0.22	0.00
Asian	0.00	0.19	0.00
Native American	0.00	0.00	
Minority	0.00	3.39	0.00 ***
Nonminority female	0.00	21.54	0.00 ***
M/WBE Total	0.00	24.93	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.03	0.00
Asian	0.00	1.32	0.00
Native American	0.00	1.21	0.00
Minority	0.00	2.76	0.00
Nonminority female	45.37	15.30	
M/WBE Total	45.37	18.07	
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	2.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	2.76	0.00
Nonminority female	0.00	18.90	0.00 ***
M/WBE Total	0.00	21.66	0.00 ***
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	2.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.73	0.00
Nonminority female	0.00	20.06	0.00 ***
M/WBE Total	0.00	22.79	0.00 ***
Building Equipment Contractors (NAICS 2382)			
African American	0.00	3.53	0.00 ***
Hispanic	22.28	0.16	
Asian	7.31	0.26	
Native American	0.00	1.27	0.00 ***
Minority	29.59	5.21	
Nonminority female	10.92	16.31	66.98
M/WBE Total	40.51	21.52	
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	2.33	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.74	0.00
Native American	0.00	0.00	
Minority	0.00	5.07	0.00
Nonminority female	53.41	23.18	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	53.41	28.25	
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00
M/WBE Total	0.00	26.63	0.00 ***
Other Motor Vehicle Dealers (NAICS 4412)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.06	0.00
Asian	0.00	1.59	0.00
Native American	0.00	1.35	0.00
Minority	0.00	3.06	0.00
Nonminority female	0.00	13.08	0.00 ***
M/WBE Total	0.00	16.14	0.00 ***
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	3.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	3.33	0.00
Nonminority female	0.00	18.46	0.00
M/WBE Total	0.00	21.79	0.00
Home Furnishings Stores (NAICS 4422)			
African American	0.00	1.21	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.39	0.00
Native American	0.00	1.27	0.00
Minority	0.00	4.15	0.00
Nonminority female	7.09	12.98	54.60
M/WBE Total	7.09	17.13	41.37
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	2.29	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.21	0.00
Native American	0.00	0.00	
Minority	0.00	2.50	0.00
Nonminority female	0.00	27.79	0.00 ***
M/WBE Total	0.00	30.29	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	2.81	0.00 ***
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	0.00	4.12	0.00 ***
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	0.00	23.88	0.00 ***
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	23.85	0.00 ***
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	2.14	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.14	0.00
Nonminority female	0.00	37.00	0.00 ***
M/WBE Total	0.00	39.14	0.00 ***
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	2.84	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.25	0.00
Native American	0.00	0.00	
Minority	0.00	3.09	0.00
Nonminority female	0.00	17.73	0.00 ***
M/WBE Total	0.00	20.82	0.00 ***
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	2.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.95	0.00
Native American	0.00	0.00	
Minority	0.00	4.61	0.00
Nonminority female	0.00	18.75	0.00 *

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	0.00	23.35	0.00 *
Other Textile Product Mills (NAICS 3149)			
African American	0.00	2.25	0.00
Hispanic	0.00	2.14	0.00
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	4.52	0.00
Nonminority female	100.00	20.90	
M/WBE Total	100.00	25.42	
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	1.23	0.00
Hispanic	0.00	0.12	0.00
Asian	0.00	1.36	0.00
Native American	0.00	1.23	0.00
Minority	0.00	3.95	0.00
Nonminority female	0.00	18.40	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Audio and Video Equipment Manufacturing (NAICS 3343)			
African American	0.00	10.80	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	10.85	0.00
Nonminority female	0.00	17.86	0.00
M/WBE Total	0.00	28.71	0.00
Foundries (NAICS 3315)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Lime and Gypsum Product Manufacturing (NAICS 3274)			
African American	0.00	2.11	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.30	0.00
Native American	0.00	0.00	
Minority	0.00	2.41	0.00
Nonminority female	0.00	31.13	0.00 ***
M/WBE Total	0.00	33.54	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00
M/WBE Total	0.00	19.72	0.00
Sawmills and Wood Preservation (NAICS 3211)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***
M/WBE Total	0.00	26.63	0.00 ***
Pharmaceutical and Medicine Manufacturing (NAICS 3254)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Dairy Product Manufacturing (NAICS 3115)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00
M/WBE Total	0.00	9.86	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	2.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	2.78	0.00
Nonminority female	0.00	18.32	0.00
M/WBE Total	0.00	21.10	0.00
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00
M/WBE Total	0.00	19.72	0.00
Grocery Stores (NAICS 4451)			
African American	0.00	0.62	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.47	0.00
Native American	0.00	1.40	0.00
Minority	0.00	3.77	0.00
Nonminority female	0.00	13.62	0.00 **
M/WBE Total	0.00	17.39	0.00 **
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	2.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00
Nonminority female	0.00	27.44	0.00 ***
M/WBE Total	0.00	29.96	0.00 ***
Clothing Stores (NAICS 4481)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.36	0.00
Asian	0.00	2.40	0.00
Native American	0.00	1.13	0.00
Minority	0.00	4.08	0.00
Nonminority female	0.00	25.01	0.00 ***
M/WBE Total	0.00	29.10	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Industrial Machinery Manufacturing (NAICS 3332)</b>			
African American	0.00	2.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.71	0.00
Nonminority female	0.00	20.70	0.00 ***
M/WBE Total	0.00	23.40	0.00 ***
<b>Foundation, Structure, and Building Exterior Contractors (NAICS 2381)</b>			
African American	0.00	2.28	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	1.43	0.00 ***
Minority	0.00	3.71	0.00 ***
Nonminority female	0.00	14.71	0.00 ***
M/WBE Total	0.00	18.42	0.00 ***
<b>Cement and Concrete Product Manufacturing (NAICS 3273)</b>			
African American	0.00	2.36	0.00 ***
Hispanic	0.00	1.38	0.00 ***
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	3.90	0.00 ***
Nonminority female	0.00	23.70	0.00 ***
M/WBE Total	0.00	27.60	0.00 ***
<b>Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)</b>			
African American	0.00	3.89	0.00
Hispanic	0.00	1.14	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.00	
Minority	0.00	5.09	0.00
Nonminority female	0.00	19.26	0.00
M/WBE Total	0.00	24.35	0.00
<b>Glass and Glass Product Manufacturing (NAICS 3272)</b>			
African American	0.00	1.79	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.22	0.00
Native American	0.00	0.00	
Minority	0.00	6.01	0.00
Nonminority female	0.00	32.18	0.00 ***
M/WBE Total	0.00	38.20	0.00 ***



## Appendix C. Detailed Utilization, Availability & Disparity Tables

<b>NAICS Industry Group / M/WBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Gasoline Stations (NAICS 4471)			
African American	0.00	0.28	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	1.29	0.00
Native American	0.00	1.27	0.00
Minority	0.00	2.92	0.00
Nonminority female	0.00	11.60	0.00
M/WBE Total	0.00	14.52	0.00

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.33. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Construction Contracting (Minor Procurements) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	5.61	2.78	
Hispanic	0.01	0.19	7.35 ***
Asian	0.00	0.04	0.00 ***
Native American	0.00	1.19	0.00 ***
Minority	5.62	4.20	
Nonminority female	3.55	16.26	21.82 ***
M/WBE Total	9.17	20.46	44.81 ***
Building Equipment Contractors (NAICS 2382)			
African American	1.53	3.34	45.77 ***
Hispanic	2.27	0.15	
Asian	0.00	0.22	0.00 ***
Native American	0.00	1.27	0.00 ***
Minority	3.80	4.98	76.33
Nonminority female	7.10	15.90	44.64 ***
M/WBE Total	10.90	20.88	52.19 ***
Utility System Construction (NAICS 2371)			
African American	0.00	1.45	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.45	0.00
Nonminority female	48.30	12.24	
M/WBE Total	48.30	13.68	
Residential Building Construction (NAICS 2361)			
African American	6.77	2.77	
Hispanic	3.17	1.65	
Asian	0.00	0.02	0.00
Native American	0.00	0.81	0.00 ***
Minority	9.93	5.26	
Nonminority female	0.60	8.29	7.19 ***
M/WBE Total	10.53	13.55	77.74 ***
Nonresidential Building Construction (NAICS 2362)			
African American	17.12	4.66	
Hispanic	0.00	2.09	0.00 ***
Asian	0.25	0.15	
Native American	0.00	0.92	0.00 ***
Minority	17.37	7.83	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	5.22	11.15	46.77 ***
M/WBE Total	22.59	18.98	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	3.05	0.00 ***
Hispanic	0.00	0.15	0.00
Asian	0.33	0.00	
Native American	0.00	1.56	0.00 ***
Minority	0.33	4.76	6.92 ***
Nonminority female	0.58	16.93	3.43 ***
M/WBE Total	0.91	21.69	4.20 ***
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	5.91	0.00 ***
Hispanic	0.00	0.95	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.87	0.00 ***
Nonminority female	8.72	11.73	74.35
M/WBE Total	8.72	18.59	46.89 ***
Building Finishing Contractors (NAICS 2383)			
African American	0.00	3.01	0.00 ***
Hispanic	65.95	0.13	
Asian	0.00	0.00	
Native American	0.00	1.20	0.00 ***
Minority	65.95	4.34	
Nonminority female	2.72	16.53	16.48 ***
M/WBE Total	68.67	20.87	
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.19	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.19	0.00
Native American	0.00	0.00	
Minority	0.00	4.39	0.00
Nonminority female	0.00	27.05	0.00 ***
M/WBE Total	0.00	31.43	0.00 ***
Land Subdivision (NAICS 2372)			
African American	61.62	2.13	
Hispanic	0.00	0.52	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	61.62	2.65	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	0.00	10.82	0.00 ***
M/WBE Total	61.62	13.48	

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.34. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Construction Contracting (Minor Procurements) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	5.45	2.77	
Hispanic	0.02	0.19	8.39 ***
Asian	0.00	0.03	0.00
Native American	0.00	1.19	0.00 ***
Minority	5.47	4.19	
Nonminority female	3.54	16.25	21.76 ***
M/WBE Total	9.00	20.44	44.05 ***
Building Equipment Contractors (NAICS 2382)			
African American	1.51	3.38	44.68 ***
Hispanic	2.76	0.15	
Asian	0.00	0.23	0.00
Native American	0.00	1.27	0.00 ***
Minority	4.27	5.03	84.84
Nonminority female	6.40	15.99	40.06 ***
M/WBE Total	10.67	21.02	50.78 ***
Residential Building Construction (NAICS 2361)			
African American	6.11	2.76	
Hispanic	3.34	1.65	
Asian	0.00	0.02	0.00
Native American	0.00	0.81	0.00 ***
Minority	9.45	5.24	
Nonminority female	0.60	8.26	7.22 ***
M/WBE Total	10.05	13.50	74.43 ***
Nonresidential Building Construction (NAICS 2362)			
African American	22.38	4.80	
Hispanic	0.00	2.00	0.00 ***
Asian	0.33	0.17	
Native American	0.00	0.92	0.00 **
Minority	22.71	7.89	
Nonminority female	1.96	11.10	17.66 ***
M/WBE Total	24.67	18.99	
Utility System Construction (NAICS 2371)			
African American	0.00	1.45	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.45	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	49.54	12.24	
M/WBE Total	49.54	13.68	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	2.91	0.00 ***
Hispanic	0.00	0.13	0.00
Asian	0.36	0.00	
Native American	0.00	1.69	0.00 ***
Minority	0.36	4.73	7.61 ***
Nonminority female	0.64	17.37	3.66 ***
M/WBE Total	1.00	22.10	4.50 ***
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	5.91	0.00 ***
Hispanic	0.00	0.95	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.87	0.00 ***
Nonminority female	9.16	11.73	78.14
M/WBE Total	9.16	18.59	49.28 ***
Building Finishing Contractors (NAICS 2383)			
African American	0.00	2.96	0.00 ***
Hispanic	69.53	0.12	
Asian	0.00	0.00	
Native American	0.00	1.20	0.00
Minority	69.53	4.29	
Nonminority female	2.99	16.53	18.10 ***
M/WBE Total	72.53	20.82	
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.19	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.19	0.00
Native American	0.00	0.00	
Minority	0.00	4.39	0.00
Nonminority female	0.00	27.05	0.00 ***
M/WBE Total	0.00	31.43	0.00 ***
Land Subdivision (NAICS 2372)			
African American	24.30	2.13	
Hispanic	0.00	0.52	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	24.30	2.65	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	0.00	10.82	0.00
M/WBE Total	24.30	13.48	

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.35. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland AE-CRS Contracting (Minor Procurements) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	33.54	3.13	
Hispanic	0.00	1.02	0.00 ***
Asian	0.00	2.48	0.00 ***
Native American	0.00	0.03	0.00
Minority	33.54	6.65	
Nonminority female	0.00	15.32	0.00 ***
M/WBE Total	33.54	21.97	
Specialized Design Services (NAICS 5414)			
African American	0.00	2.66	0.00 ***
Hispanic	0.00	1.08	0.00 ***
Asian	0.00	0.45	0.00
Native American	0.00	0.51	0.00
Minority	0.00	4.70	0.00 ***
Nonminority female	66.67	40.35	
M/WBE Total	66.67	45.05	

Source and Notes: See Table 7.21.



## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.36. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland AE-CRS Contracting (Minor Procurements) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	29.60	3.11	
Hispanic	0.00	1.03	0.00 **
Asian	0.00	2.49	0.00 ***
Native American	0.00	0.03	0.00
Minority	29.60	6.66	
Nonminority female	0.00	15.28	0.00 ***
M/WBE Total	29.60	21.93	
Specialized Design Services (NAICS 5414)			
African American	0.00	2.66	0.00 **
Hispanic	0.00	1.08	0.00
Asian	0.00	0.45	0.00
Native American	0.00	0.51	0.00
Minority	0.00	4.70	0.00 ***
Nonminority female	58.55	40.35	
M/WBE Total	58.55	45.05	

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.37. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Services Contracting (Minor Procurements) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	3.63	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	0.00
Minority	0.00	3.63	0.00 ***
Nonminority female	0.00	19.29	0.00 ***
M/WBE Total	0.00	22.91	0.00 ***
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	1.78	3.36	52.93
Hispanic	0.00	0.86	0.00 ***
Asian	1.73	0.97	
Native American	3.84	0.07	
Minority	7.35	5.26	
Nonminority female	25.59	18.44	
M/WBE Total	32.94	23.69	
Employment Services (NAICS 5613)			
African American	10.06	5.18	
Hispanic	0.00	0.36	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.59	0.00
Minority	10.06	6.18	
Nonminority female	23.91	25.52	93.69
M/WBE Total	33.97	31.70	
General Freight Trucking (NAICS 4841)			
African American	94.63	7.73	
Hispanic	0.00	0.29	0.00 ***
Asian	0.00	0.17	0.00 ***
Native American	0.00	0.03	0.00
Minority	94.63	8.22	
Nonminority female	0.00	18.69	0.00 ***
M/WBE Total	94.63	26.92	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.22	3.23	6.70 ***
Hispanic	0.00	0.86	0.00 ***
Asian	0.00	1.97	0.00 ***
Native American	0.00	0.07	0.00
Minority	0.22	6.13	3.53 ***
Nonminority female	5.02	18.92	26.52 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	5.23	25.05	20.90 ***
Other Personal Services (NAICS 8129)			
African American	7.09	9.23	76.77
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.08	0.00 ***
Minority	7.09	13.85	51.18
Nonminority female	0.00	13.86	0.00 ***
M/WBE Total	7.09	27.71	25.58 **
Software Publishers (NAICS 5112)			
African American	2.43	3.32	73.21
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.24	0.00
Minority	2.43	3.91	62.05
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	2.43	25.54	9.50 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	41.57	4.05	
Hispanic	0.19	0.15	
Asian	0.00	0.08	0.00
Native American	0.00	0.24	0.00 ***
Minority	41.76	4.52	
Nonminority female	2.93	21.41	13.68 ***
M/WBE Total	44.69	25.93	
Other Telecommunications (NAICS 5179)			
African American	0.00	2.93	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.05	0.00 ***
Nonminority female	0.00	20.86	0.00 ***
M/WBE Total	0.00	23.91	0.00 ***
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	2.34	2.61	89.80
Hispanic	2.88	0.62	
Asian	0.48	1.37	35.25
Native American	0.00	0.07	0.00
Minority	5.70	4.66	
Nonminority female	1.98	19.78	10.00 ***
M/WBE Total	7.68	24.44	31.43 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	4.67	5.46	85.62
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.12	0.00
Minority	4.67	5.58	83.76
Nonminority female	0.00	20.17	0.00 ***
M/WBE Total	4.67	25.75	18.15 ***
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	5.84	2.93	
Hispanic	0.00	0.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.27	0.00
Minority	5.84	3.30	
Nonminority female	9.24	22.15	41.74
M/WBE Total	15.08	25.45	59.27
Social Advocacy Organizations (NAICS 8133)			
African American	0.00	10.66	0.00 ***
Hispanic	0.00	1.51	0.00
Asian	0.00	0.00	
Native American	0.00	3.02	0.00 ***
Minority	0.00	15.20	0.00 ***
Nonminority female	0.00	13.61	0.00 ***
M/WBE Total	0.00	28.81	0.00 ***
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	9.17	0.00 ***
Hispanic	0.00	1.66	0.00 ***
Asian	0.00	0.14	0.00 ***
Native American	0.00	3.06	0.00 ***
Minority	0.00	14.02	0.00 ***
Nonminority female	0.74	14.94	4.95 ***
M/WBE Total	0.74	28.95	2.55 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Legal Services (NAICS 5411)			
African American	4.98	1.50	
Hispanic	0.00	0.77	0.00
Asian	0.00	0.63	0.00
Native American	0.00	0.04	0.00
Minority	4.98	2.93	
Nonminority female	0.00	16.63	0.00 ***
M/WBE Total	4.98	19.56	25.45 ***
Remediation and Other Waste Management Services (NAICS 5629)			
African American	9.27	14.83	62.50 ***
Hispanic	0.00	0.02	0.00
Asian	0.00	0.03	0.00
Native American	0.00	0.05	0.00
Minority	9.27	14.93	62.08 ***
Nonminority female	11.10	18.32	60.55 ***
M/WBE Total	20.37	33.26	61.24 ***
Waste Collection (NAICS 5621)			
African American	0.00	5.29	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.14	0.00
Minority	0.00	5.43	0.00
Nonminority female	0.00	27.68	0.00 ***
M/WBE Total	0.00	33.11	0.00 ***
Other Support Services (NAICS 5619)			
African American	0.00	3.46	0.00 ***
Hispanic	0.00	0.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.74	0.00
Minority	0.00	4.55	0.00 ***
Nonminority female	0.00	27.47	0.00 ***
M/WBE Total	0.00	32.03	0.00 ***
Individual and Family Services (NAICS 6241)			
African American	0.00	0.72	0.00
Hispanic	0.00	2.06	0.00
Asian	0.00	0.11	0.00
Native American	0.00	0.01	0.00
Minority	0.00	2.90	0.00 ***
Nonminority female	0.94	18.78	4.98 ***
M/WBE Total	0.94	21.68	4.32 ***
Insurance Carriers (NAICS 5241)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	4.50	0.00 ***
Hispanic	0.00	0.85	0.00
Asian	0.00	0.00	
Native American	0.00	0.29	0.00
Minority	0.00	5.64	0.00 ***
Nonminority female	24.08	22.69	
M/WBE Total	24.08	28.33	85.01
Special Food Services (NAICS 7223)			
African American	5.70	2.91	
Hispanic	0.00	1.73	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.30	0.00
Minority	5.70	5.01	
Nonminority female	0.00	26.53	0.00 ***
M/WBE Total	5.70	31.54	18.08 ***
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	9.38	0.00 ***
Hispanic	0.00	1.53	0.00 ***
Asian	0.00	0.00	0.00
Native American	0.00	3.05	0.00 ***
Minority	0.00	13.98	0.00 ***
Nonminority female	0.00	13.97	0.00 ***
M/WBE Total	0.00	27.95	0.00 ***
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	10.24	0.00 ***
Hispanic	0.00	1.81	0.00 ***
Asian	0.00	0.10	0.00
Native American	0.00	2.90	0.00 ***
Minority	0.00	15.04	0.00 ***
Nonminority female	26.11	16.35	
M/WBE Total	26.11	31.40	83.15
Civic and Social Organizations (NAICS 8134)			
African American	0.00	9.37	0.00 ***
Hispanic	0.00	1.53	0.00
Asian	0.00	0.00	
Native American	0.00	3.05	0.00 ***
Minority	0.00	13.95	0.00 ***
Nonminority female	0.00	13.82	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
5324)			
African American	0.00	2.40	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.01	0.00
Minority	0.00	2.41	0.00 ***
Nonminority female	0.00	21.19	0.00 ***
M/WBE Total	0.00	23.60	0.00 ***
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	3.90	2.31	
Hispanic	0.00	0.69	0.00
Asian	0.00	0.57	0.00
Native American	0.00	0.07	0.00
Minority	3.90	3.63	
Nonminority female	3.25	19.16	16.98 **
M/WBE Total	7.16	22.79	31.40
Educational Support Services (NAICS 6117)			
African American	0.00	1.79	0.00 ***
Hispanic	0.00	1.64	0.00 ***
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	3.60	0.00 ***
Nonminority female	0.00	31.37	0.00 ***
M/WBE Total	0.00	34.98	0.00 ***
Other Ambulatory Health Care Services (NAICS 6219)			
African American	0.00	0.53	0.00
Hispanic	0.00	2.03	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	0.00	2.60	0.00 ***
Nonminority female	0.00	19.89	0.00 ***
M/WBE Total	0.00	22.48	0.00 ***
Business Support Services (NAICS 5614)			
African American	3.80	3.82	99.52
Hispanic	0.00	0.10	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.29	0.00
Minority	3.80	4.26	89.23
Nonminority female	0.00	22.18	0.00 ***
M/WBE Total	3.80	26.44	14.39 ***
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	3.07	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.19	0.00 ***
Nonminority female	0.00	20.68	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***
Scientific Research and Development Services (NAICS 5417)			
African American	6.58	1.46	
Hispanic	0.00	0.58	0.00
Asian	0.00	1.26	0.00 ***
Native American	0.00	0.03	0.00
Minority	6.58	3.33	
Nonminority female	0.00	15.34	0.00 ***
M/WBE Total	6.58	18.67	35.24 ***
Activities Related to Real Estate (NAICS 5313)			
African American	0.00	2.44	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00 ***
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	0.00	4.03	0.00 ***
Hispanic	0.00	0.06	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.33	0.00
Minority	0.00	4.43	0.00 ***
Nonminority female	0.00	22.98	0.00 ***
M/WBE Total	0.00	27.41	0.00 ***
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	0.00	4.93	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.38	0.00 ***
Minority	0.00	5.31	0.00 ***
Nonminority female	0.00	22.99	0.00 ***
M/WBE Total	0.00	28.29	0.00 ***
Support Activities for Air Transportation			



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
(NAICS 4881)			
African American	0.00	5.56	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	0.00	5.58	0.00
Nonminority female	0.00	17.54	0.00
M/WBE Total	0.00	23.12	0.00
Specialized Design Services (NAICS 5414)			
African American	0.00	3.69	0.00 ***
Hispanic	0.00	0.73	0.00 ***
Asian	0.00	0.72	0.00 ***
Native American	0.00	0.16	0.00
Minority	0.00	5.30	0.00 ***
Nonminority female	0.00	28.30	0.00 ***
M/WBE Total	0.00	33.60	0.00 ***
Office Administrative Services (NAICS 5611)			
African American	89.31	3.22	
Hispanic	0.00	0.00	
Asian	0.00	0.38	0.00
Native American	0.00	0.09	0.00
Minority	89.31	3.69	
Nonminority female	0.00	20.73	0.00 ***
M/WBE Total	89.31	24.42	
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	6.97	0.00 ***
Hispanic	14.77	0.99	
Asian	0.00	0.00	
Native American	0.00	0.05	0.00
Minority	14.77	8.01	
Nonminority female	0.00	19.31	0.00 ***
M/WBE Total	14.77	27.32	54.04
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	15.74	0.00 ***
Hispanic	0.00	1.53	0.00 ***
Asian	0.00	0.35	0.00
Native American	0.00	2.64	0.00 ***
Minority	0.00	20.26	0.00 ***
Nonminority female	0.00	18.23	0.00 ***
M/WBE Total	0.00	38.49	0.00 ***
Other Professional, Scientific, and Technical			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services (NAICS 5419)			
African American	0.00	1.46	0.00
Hispanic	0.00	0.62	0.00
Asian	0.00	1.21	0.00
Native American	0.00	0.09	0.00
Minority	0.00	3.37	0.00 ***
Nonminority female	1.25	21.79	5.74 ***
M/WBE Total	1.25	25.16	4.97 ***
Other Information Services (NAICS 5191)			
African American	0.00	4.57	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.62	0.00
Minority	0.00	5.20	0.00 ***
Nonminority female	0.00	25.54	0.00 ***
M/WBE Total	0.00	30.74	0.00 ***
Warehousing and Storage (NAICS 4931)			
African American	39.62	5.96	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.04	0.00
Minority	39.62	5.99	
Nonminority female	0.00	20.05	0.00 ***
M/WBE Total	39.62	26.05	
Specialized Freight Trucking (NAICS 4842)			
African American	69.75	7.85	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	69.75	7.91	
Nonminority female	0.00	21.76	0.00 ***
M/WBE Total	69.75	29.66	
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	9.17	0.00 ***
Hispanic	0.00	1.65	0.00 ***
Asian	0.00	0.02	0.00
Native American	0.00	2.97	0.00 ***
Minority	0.00	13.82	0.00 ***
Nonminority female	0.00	15.42	0.00 ***
M/WBE Total	0.00	29.23	0.00 ***
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
8113)			
African American	6.45	9.45	68.33
Hispanic	0.00	1.52	0.00
Asian	0.00	0.03	0.00
Native American	0.00	2.96	0.00 ***
Minority	6.45	13.96	46.25
Nonminority female	42.19	15.79	
M/WBE Total	48.64	29.75	
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	2.51	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.12	0.00
Minority	0.00	2.63	0.00
Nonminority female	0.00	17.76	0.00
M/WBE Total	0.00	20.39	0.00
Lessors of Real Estate (NAICS 5311)			
African American	0.00	2.64	0.00 ***
Hispanic	0.00	0.02	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.15	0.00
Minority	0.00	2.87	0.00 ***
Nonminority female	0.00	20.54	0.00 ***
M/WBE Total	0.00	23.41	0.00 ***
Consumer Goods Rental (NAICS 5322)			
African American	0.00	2.58	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.77	0.00 ***
Nonminority female	0.00	21.33	0.00 ***
M/WBE Total	0.00	24.09	0.00 ***
Colleges, Universities, and Professional Schools (NAICS 6113)			
African American	0.00	0.51	0.00
Hispanic	0.00	2.07	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.58	0.00
Nonminority female	0.00	18.65	0.00 ***
M/WBE Total	0.00	21.24	0.00 ***
Radio and Television Broadcasting (NAICS 5151)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	4.11	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.20	0.00
Minority	0.00	4.31	0.00
Nonminority female	0.00	21.22	0.00 ***
M/WBE Total	0.00	25.53	0.00 ***
Offices of Physicians (NAICS 6211)			
African American	0.00	0.59	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.64	0.00
Native American	0.00	0.22	0.00
Minority	0.00	3.37	0.00
Nonminority female	0.00	22.07	0.00 ***
M/WBE Total	0.00	25.44	0.00 ***
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.50	0.00
Hispanic	0.00	1.92	0.00
Asian	0.00	0.00	
Native American	0.00	0.13	0.00
Minority	0.00	2.54	0.00
Nonminority female	0.00	23.45	0.00 ***
M/WBE Total	0.00	25.99	0.00 ***
Technical and Trade Schools (NAICS 6115)			
African American	0.00	6.06	0.00 ***
Hispanic	0.00	1.75	0.00
Asian	0.00	0.00	
Native American	0.00	0.16	0.00
Minority	0.00	7.96	0.00 ***
Nonminority female	0.00	24.12	0.00 ***
M/WBE Total	0.00	32.09	0.00 ***
Death Care Services (NAICS 8122)			
African American	0.00	11.40	0.00
Hispanic	0.00	1.53	0.00
Asian	0.00	0.31	0.00
Native American	0.00	2.90	0.00
Minority	0.00	16.14	0.00
Nonminority female	0.00	15.70	0.00
M/WBE Total	0.00	31.84	0.00 ***
Home Health Care Services (NAICS 6216)			
African American	0.00	1.92	0.00
Hispanic	0.00	1.81	0.00
Asian	0.00	0.20	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.21	0.00
Minority	0.00	4.14	0.00
Nonminority female	0.00	25.40	0.00 ***
M/WBE Total	0.00	29.54	0.00 ***
Religious Organizations (NAICS 8131)			
African American	0.00	9.26	0.00
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.07	0.00
Minority	0.00	13.88	0.00 ***
Nonminority female	0.00	13.89	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***
Vocational Rehabilitation Services (NAICS 6243)			
African American	2.67	2.12	
Hispanic	0.00	2.00	0.00
Asian	0.00	0.00	
Native American	0.00	0.81	0.00
Minority	2.67	4.94	54.13 ***
Nonminority female	0.00	18.63	0.00 ***
M/WBE Total	2.67	23.57	11.34 ***
Drinking Places (Alcoholic Beverages) (NAICS 7224)			
African American	0.00	0.64	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.12	0.00
Minority	0.00	2.75	0.00
Nonminority female	0.00	23.16	0.00 ***
M/WBE Total	0.00	25.91	0.00 ***
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	8.38	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	8.38	0.00 ***
Nonminority female	99.47	18.36	
M/WBE Total	99.47	26.73	
Support Activities for Water Transportation (NAICS 4883)			
African American	0.00	5.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	5.66	0.00
Nonminority female	0.00	16.98	0.00
M/WBE Total	0.00	22.64	0.00
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Business Schools and Computer and Management Training (NAICS 6114)			
African American	0.00	0.99	0.00
Hispanic	51.08	1.70	
Asian	0.00	0.00	
Native American	0.00	0.33	0.00
Minority	51.08	3.02	
Nonminority female	0.00	29.83	0.00 ***
M/WBE Total	51.08	32.85	
Cable and Other Subscription Programming (NAICS 5152)			
African American	0.00	3.74	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	3.74	0.00 ***
Nonminority female	0.00	19.25	0.00 ***
M/WBE Total	0.00	22.99	0.00 ***
Full-Service Restaurants (NAICS 7221)			
African American	0.00	0.65	0.00
Hispanic	0.00	1.94	0.00
Asian	0.00	1.05	0.00
Native American	0.00	0.17	0.00
Minority	0.00	3.81	0.00 ***
Nonminority female	0.00	22.03	0.00 ***
M/WBE Total	0.00	25.84	0.00 ***
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	1.19	0.00
Hispanic	0.00	1.95	0.00
Asian	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.10	0.00
Minority	0.00	3.24	0.00 ***
Nonminority female	0.00	21.81	0.00 ***
M/WBE Total	0.00	25.05	0.00 ***
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	1.55	0.00
Hispanic	0.00	1.43	0.00
Asian	0.00	0.00	
Native American	0.00	0.35	0.00
Minority	0.00	3.33	0.00
Nonminority female	0.00	36.40	0.00 ***
M/WBE Total	0.00	39.73	0.00 ***
General Medical and Surgical Hospitals (NAICS 6221)			
African American	0.00	0.09	0.00
Hispanic	0.00	2.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	0.00	2.13	0.00
Nonminority female	0.00	19.46	0.00 ***
M/WBE Total	0.00	21.59	0.00 ***
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	4.43	0.00 ***
Hispanic	0.00	0.60	0.00
Asian	0.00	1.13	0.00
Native American	0.00	0.57	0.00
Minority	0.00	6.72	0.00 ***
Nonminority female	0.00	24.70	0.00 ***
M/WBE Total	0.00	31.42	0.00 ***
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
M/WBE Total	100.00	30.30	
Grantmaking and Giving Services (NAICS 8132)			
African American	0.00	8.83	0.00
Hispanic	0.00	1.63	0.00
Asian	0.00	0.10	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

<b>NAICS Industry Group / M/WBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Native American	0.00	2.94	0.00
Minority	0.00	13.51	0.00
Nonminority female	0.00	17.87	0.00
M/WBE Total	0.00	31.38	0.00

Source and Notes: See Table 7.21.



## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.38. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Services Contracting (Minor Procurements) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	3.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	0.00
Minority	0.00	3.38	0.00
Nonminority female	0.00	19.33	0.00 ***
M/WBE Total	0.00	22.71	0.00 ***
Employment Services (NAICS 5613)			
African American	22.65	5.18	
Hispanic	0.00	0.36	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.59	0.00
Minority	22.65	6.18	
Nonminority female	5.75	25.50	22.55 ***
M/WBE Total	28.40	31.68	89.65
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	2.70	3.41	79.35
Hispanic	0.00	0.89	0.00 **
Asian	2.63	0.98	
Native American	5.84	0.07	
Minority	11.16	5.34	
Nonminority female	19.06	18.66	
M/WBE Total	30.23	24.00	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.30	3.26	9.05 ***
Hispanic	0.00	0.87	0.00 *
Asian	0.00	1.99	0.00 ***
Native American	0.00	0.07	0.00
Minority	0.30	6.19	4.77 ***
Nonminority female	6.40	19.02	33.65 ***
M/WBE Total	6.70	25.22	26.56 ***
General Freight Trucking (NAICS 4841)			
African American	93.65	7.72	
Hispanic	0.00	0.29	0.00
Asian	0.00	0.17	0.00
Native American	0.00	0.04	0.00
Minority	93.65	8.22	
Nonminority female	0.00	18.70	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	93.65	26.92	
Other Personal Services (NAICS 8129)			
African American	12.75	9.23	
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	
Native American	0.00	3.08	0.00 ***
Minority	12.75	13.85	92.09
Nonminority female	0.00	13.85	0.00 ***
M/WBE Total	12.75	27.69	46.05 **
Software Publishers (NAICS 5112)			
African American	3.01	3.32	90.73
Hispanic	0.00	0.00	
Asian	0.00	0.36	0.00
Native American	0.00	0.24	0.00
Minority	3.01	3.91	76.91
Nonminority female	0.00	21.63	0.00 ***
M/WBE Total	3.01	25.54	11.78 ***
Other Telecommunications (NAICS 5179)			
African American	0.00	2.93	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.05	0.00 **
Nonminority female	0.00	20.86	0.00 ***
M/WBE Total	0.00	23.91	0.00 ***
Services to Buildings and Dwellings (NAICS 5617)			
African American	43.67	4.15	
Hispanic	0.24	0.17	
Asian	0.00	0.08	0.00
Native American	0.00	0.25	0.00
Minority	43.91	4.65	
Nonminority female	1.55	21.49	7.21 ***
M/WBE Total	45.46	26.13	
Investigation and Security Services (NAICS 5616)			
African American	6.15	5.35	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	6.15	5.46	
Nonminority female	0.00	20.11	0.00 ***
M/WBE Total	6.15	25.57	24.06 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	6.34	2.93	
Hispanic	0.00	0.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.27	0.00
Minority	6.34	3.30	
Nonminority female	5.55	22.15	25.06 *
M/WBE Total	11.89	25.45	46.71
Legal Services (NAICS 5411)			
African American	0.00	1.47	0.00
Hispanic	0.00	0.76	0.00
Asian	0.00	0.63	0.00
Native American	0.00	0.03	0.00
Minority	0.00	2.89	0.00
Nonminority female	0.00	16.48	0.00 ***
M/WBE Total	0.00	19.37	0.00 ***
Social Advocacy Organizations (NAICS 8133)			
African American	0.00	10.66	0.00 ***
Hispanic	0.00	1.51	0.00
Asian	0.00	0.00	
Native American	0.00	3.02	0.00
Minority	0.00	15.20	0.00 ***
Nonminority female	0.00	13.61	0.00 ***
M/WBE Total	0.00	28.81	0.00 ***
Remediation and Other Waste Management Services (NAICS 5629)			
African American	10.13	15.64	64.79 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	0.01	0.00
Native American	0.00	0.03	0.00
Minority	10.13	15.70	64.54 ***
Nonminority female	9.34	17.98	51.96 ***
M/WBE Total	19.48	33.68	57.83 ***
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	9.17	0.00 ***
Hispanic	0.00	1.61	0.00 ***
Asian	0.00	0.12	0.00 *
Native American	0.00	3.09	0.00 ***
Minority	0.00	14.00	0.00 ***
Nonminority female	0.29	14.87	1.98 ***
M/WBE Total	0.29	28.87	1.02 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Individual and Family Services (NAICS 6241)			
African American	0.00	0.73	0.00
Hispanic	0.00	2.06	0.00
Asian	0.00	0.10	0.00
Native American	0.00	0.01	0.00
Minority	0.00	2.89	0.00
Nonminority female	1.56	18.78	8.32 ***
M/WBE Total	1.56	21.67	7.21 ***
Insurance Carriers (NAICS 5241)			
African American	0.00	4.62	0.00 ***
Hispanic	0.00	0.96	0.00
Asian	0.00	0.00	
Native American	0.00	0.28	0.00
Minority	0.00	5.86	0.00 ***
Nonminority female	18.76	22.56	83.17
M/WBE Total	18.76	28.42	66.02
Special Food Services (NAICS 7223)			
African American	7.93	2.91	
Hispanic	0.00	1.73	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.30	0.00
Minority	7.93	5.01	
Nonminority female	0.00	26.53	0.00 ***
M/WBE Total	7.93	31.54	25.15 **
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	9.35	0.00 ***
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.06	0.00 ***
Minority	0.00	13.95	0.00 ***
Nonminority female	0.00	13.97	0.00 ***
M/WBE Total	0.00	27.92	0.00 ***
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	3.17	2.92	
Hispanic	3.70	0.97	
Asian	0.58	1.13	50.86
Native American	0.00	0.10	0.00
Minority	7.44	5.12	
Nonminority female	2.67	21.53	12.41 ***
M/WBE Total	10.11	26.66	37.94 ***
Accounting, Tax Preparation, Bookkeeping,			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
and Payroll Services (NAICS 5412)			
African American	5.63	2.21	
Hispanic	0.00	0.69	0.00
Asian	0.00	0.56	0.00
Native American	0.00	0.06	0.00
Minority	5.63	3.53	
Nonminority female	4.70	18.87	24.88
M/WBE Total	10.32	22.40	46.08
Civic and Social Organizations (NAICS 8134)			
African American	0.00	9.37	0.00 ***
Hispanic	0.00	1.53	0.00
Asian	0.00	0.00	
Native American	0.00	3.05	0.00
Minority	0.00	13.95	0.00 ***
Nonminority female	0.00	13.82	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	2.40	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.01	0.00
Minority	0.00	2.42	0.00 ***
Nonminority female	0.00	21.16	0.00 ***
M/WBE Total	0.00	23.58	0.00 ***
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	9.80	0.00 ***
Hispanic	0.00	1.89	0.00 **
Asian	0.00	0.10	0.00
Native American	0.00	2.91	0.00 ***
Minority	0.00	14.70	0.00 ***
Nonminority female	29.46	16.40	
M/WBE Total	29.46	31.09	94.76
Other Support Services (NAICS 5619)			
African American	0.00	3.46	0.00 ***
Hispanic	0.00	0.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.74	0.00
Minority	0.00	4.55	0.00 ***
Nonminority female	0.00	27.47	0.00 ***
M/WBE Total	0.00	32.03	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Educational Support Services (NAICS 6117)</b>			
African American	0.00	1.79	0.00
Hispanic	0.00	1.64	0.00
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	3.60	0.00 ***
Nonminority female	0.00	31.37	0.00 ***
M/WBE Total	0.00	34.98	0.00 ***
<b>Other Ambulatory Health Care Services (NAICS 6219)</b>			
African American	0.00	0.53	0.00
Hispanic	0.00	2.03	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	0.00	2.60	0.00 *
Nonminority female	0.00	19.89	0.00 ***
M/WBE Total	0.00	22.48	0.00 ***
<b>Activities Related to Real Estate (NAICS 5313)</b>			
African American	0.00	2.44	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00 ***
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
<b>Business Support Services (NAICS 5614)</b>			
African American	7.99	3.87	
Hispanic	0.00	0.02	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.16	0.00
Minority	7.99	4.10	
Nonminority female	0.00	20.74	0.00 ***
M/WBE Total	7.99	24.85	32.17 ***
<b>Specialized Design Services (NAICS 5414)</b>			
African American	0.00	3.69	0.00 ***
Hispanic	0.00	0.73	0.00
Asian	0.00	0.72	0.00
Native American	0.00	0.16	0.00
Minority	0.00	5.30	0.00 ***
Nonminority female	0.00	28.30	0.00 ***
M/WBE Total	0.00	33.60	0.00 ***
<b>Warehousing and Storage (NAICS 4931)</b>			
African American	25.39	5.93	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.04	0.00
Minority	25.39	5.97	
Nonminority female	0.00	20.07	0.00 ***
M/WBE Total	25.39	26.04	97.49
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	3.07	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.11	0.00
Minority	0.00	3.19	0.00
Nonminority female	0.00	20.68	0.00 ***
M/WBE Total	0.00	23.87	0.00 ***
Specialized Freight Trucking (NAICS 4842)			
African American	68.48	7.84	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	68.48	7.90	
Nonminority female	0.00	21.79	0.00 ***
M/WBE Total	68.48	29.69	
Other Information Services (NAICS 5191)			
African American	0.00	4.57	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.62	0.00
Minority	0.00	5.20	0.00 **
Nonminority female	0.00	25.54	0.00 ***
M/WBE Total	0.00	30.74	0.00 ***
Scientific Research and Development Services (NAICS 5417)			
African American	4.00	1.57	
Hispanic	0.00	0.58	0.00
Asian	0.00	1.48	0.00
Native American	0.00	0.04	0.00
Minority	4.00	3.67	
Nonminority female	0.00	16.18	0.00 ***
M/WBE Total	4.00	19.84	20.15 ***
Office Administrative Services (NAICS 5611)			
African American	97.19	3.22	
Hispanic	0.00	0.00	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Asian	0.00	0.38	0.00
Native American	0.00	0.09	0.00
Minority	97.19	3.69	
Nonminority female	0.00	20.73	0.00
M/WBE Total	97.19	24.42	
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	16.34	0.00 ***
Hispanic	0.00	1.51	0.00 ***
Asian	0.00	0.42	0.00
Native American	0.00	2.63	0.00 ***
Minority	0.00	20.90	0.00 ***
Nonminority female	0.00	17.57	0.00 ***
M/WBE Total	0.00	38.48	0.00 ***
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	0.00	4.82	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.33	0.00
Minority	0.00	5.14	0.00 ***
Nonminority female	0.00	22.48	0.00 ***
M/WBE Total	0.00	27.62	0.00 ***
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	7.59	9.45	80.35
Hispanic	0.00	1.52	0.00
Asian	0.00	0.03	0.00
Native American	0.00	2.96	0.00
Minority	7.59	13.96	54.37
Nonminority female	48.50	15.79	
M/WBE Total	56.08	29.75	
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	6.96	0.00
Hispanic	17.92	1.00	
Asian	0.00	0.00	
Native American	0.00	0.05	0.00
Minority	17.92	8.01	
Nonminority female	0.00	19.31	0.00 **
M/WBE Total	17.92	27.32	65.58
Other Professional, Scientific, and Technical Services (NAICS 5419)			



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	1.40	0.00
Hispanic	0.00	0.59	0.00
Asian	0.00	1.34	0.00
Native American	0.00	0.10	0.00
Minority	0.00	3.43	0.00
Nonminority female	0.00	23.44	0.00 ***
M/WBE Total	0.00	26.88	0.00 ***
Consumer Goods Rental (NAICS 5322)			
African American	0.00	2.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.18	0.00
Minority	0.00	2.75	0.00
Nonminority female	0.00	21.23	0.00 ***
M/WBE Total	0.00	23.98	0.00 ***
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	9.19	0.00 ***
Hispanic	0.00	1.66	0.00
Asian	0.00	0.02	0.00
Native American	0.00	2.97	0.00 ***
Minority	0.00	13.85	0.00 ***
Nonminority female	0.00	15.38	0.00 ***
M/WBE Total	0.00	29.22	0.00 ***
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	0.00	4.03	0.00 ***
Hispanic	0.00	0.06	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.33	0.00
Minority	0.00	4.43	0.00 ***
Nonminority female	0.00	22.98	0.00 ***
M/WBE Total	0.00	27.41	0.00 ***
Lessors of Real Estate (NAICS 5311)			
African American	0.00	2.62	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.02	0.00
Asian	0.00	0.08	0.00
Native American	0.00	0.15	0.00
Minority	0.00	2.87	0.00
Nonminority female	0.00	20.44	0.00 ***
M/WBE Total	0.00	23.30	0.00 ***
Radio and Television Broadcasting (NAICS 5151)			
African American	0.00	4.28	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.21	0.00
Minority	0.00	4.49	0.00
Nonminority female	0.00	21.30	0.00
M/WBE Total	0.00	25.79	0.00 ***
Colleges, Universities, and Professional Schools (NAICS 6113)			
African American	0.00	0.51	0.00
Hispanic	0.00	2.07	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.58	0.00
Nonminority female	0.00	18.65	0.00 ***
M/WBE Total	0.00	21.24	0.00 ***
Offices of Physicians (NAICS 6211)			
African American	0.00	0.60	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.65	0.00
Native American	0.00	0.22	0.00
Minority	0.00	3.39	0.00
Nonminority female	0.00	22.09	0.00 ***
M/WBE Total	0.00	25.47	0.00 ***
Death Care Services (NAICS 8122)			
African American	0.00	11.40	0.00
Hispanic	0.00	1.53	0.00
Asian	0.00	0.31	0.00
Native American	0.00	2.90	0.00
Minority	0.00	16.14	0.00
Nonminority female	0.00	15.70	0.00
M/WBE Total	0.00	31.84	0.00 ***
Home Health Care Services (NAICS 6216)			
African American	0.00	1.92	0.00
Hispanic	0.00	1.81	0.00
Asian	0.00	0.20	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.21	0.00
Minority	0.00	4.14	0.00
Nonminority female	0.00	25.40	0.00 ***
M/WBE Total	0.00	29.54	0.00 ***
Religious Organizations (NAICS 8131)			
African American	0.00	9.26	0.00
Hispanic	0.00	1.54	0.00
Asian	0.00	0.00	0.00
Native American	0.00	3.07	0.00
Minority	0.00	13.88	0.00 ***
Nonminority female	0.00	13.89	0.00 ***
M/WBE Total	0.00	27.76	0.00 ***
Technical and Trade Schools (NAICS 6115)			
African American	0.00	6.06	0.00
Hispanic	0.00	1.75	0.00
Asian	0.00	0.00	
Native American	0.00	0.16	0.00
Minority	0.00	7.96	0.00
Nonminority female	0.00	24.12	0.00 ***
M/WBE Total	0.00	32.09	0.00 ***
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.50	0.00
Hispanic	0.00	1.92	0.00
Asian	0.00	0.00	
Native American	0.00	0.13	0.00
Minority	0.00	2.54	0.00
Nonminority female	0.00	23.45	0.00 ***
M/WBE Total	0.00	25.99	0.00 ***
Support Activities for Water Transportation (NAICS 4883)			
African American	0.00	5.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.66	0.00
Nonminority female	0.00	16.98	0.00
M/WBE Total	0.00	22.64	0.00
Vocational Rehabilitation Services (NAICS 6243)			
African American	4.37	2.12	
Hispanic	0.00	2.00	0.00
Asian	0.00	0.00	
Native American	0.00	0.81	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	4.37	4.94	88.42
Nonminority female	0.00	18.63	0.00 ***
M/WBE Total	4.37	23.57	18.53 ***
Drinking Places (Alcoholic Beverages) (NAICS 7224)			
African American	0.00	0.64	0.00
Hispanic	0.00	1.91	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.12	0.00
Minority	0.00	2.75	0.00
Nonminority female	0.00	23.16	0.00
M/WBE Total	0.00	25.91	0.00
Full-Service Restaurants (NAICS 7221)			
African American	0.00	0.65	0.00
Hispanic	0.00	1.94	0.00
Asian	0.00	1.05	0.00
Native American	0.00	0.17	0.00
Minority	0.00	3.81	0.00
Nonminority female	0.00	22.03	0.00 ***
M/WBE Total	0.00	25.84	0.00 ***
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	2.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.44	0.00
Nonminority female	0.00	19.51	0.00 ***
M/WBE Total	0.00	21.95	0.00 ***
General Medical and Surgical Hospitals (NAICS 6221)			
African American	0.00	0.09	0.00
Hispanic	0.00	2.01	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	0.00	2.13	0.00
Nonminority female	0.00	19.46	0.00 ***
M/WBE Total	0.00	21.59	0.00 ***
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	1.19	0.00
Hispanic	0.00	1.95	0.00
Asian	0.00	0.00	
Native American	0.00	0.10	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	3.24	0.00
Nonminority female	0.00	21.81	0.00 ***
M/WBE Total	0.00	25.05	0.00 ***
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	4.43	0.00
Hispanic	0.00	0.60	0.00
Asian	0.00	1.13	0.00
Native American	0.00	0.57	0.00
Minority	0.00	6.72	0.00
Nonminority female	0.00	24.70	0.00 ***
M/WBE Total	0.00	31.42	0.00 ***
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	1.55	0.00
Hispanic	0.00	1.43	0.00
Asian	0.00	0.00	
Native American	0.00	0.35	0.00
Minority	0.00	3.33	0.00
Nonminority female	0.00	36.40	0.00 ***
M/WBE Total	0.00	39.73	0.00 ***
Facilities Support Services (NAICS 5612)			
African American	0.00	2.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.35	0.00
Native American	0.00	0.63	0.00
Minority	0.00	4.87	0.00
Nonminority female	100.00	25.43	
M/WBE Total	100.00	30.30	
Grantmaking and Giving Services (NAICS 8132)			
African American	0.00	8.83	0.00
Hispanic	0.00	1.63	0.00
Asian	0.00	0.10	0.00
Native American	0.00	2.94	0.00
Minority	0.00	13.51	0.00
Nonminority female	0.00	17.87	0.00
M/WBE Total	0.00	31.38	0.00
Business Schools and Computer and Management Training (NAICS 6114)			
African American	0.00	0.99	0.00
Hispanic	0.00	1.70	0.00
Asian	0.00	0.00	
Native American	0.00	0.33	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Minority	0.00	3.02	0.00
Nonminority female	0.00	29.83	0.00 ***
M/WBE Total	0.00	32.85	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.39. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland Commodities Contracting (Minor Procurements) (Dollars Awarded)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.52	0.00 ***
Hispanic	0.00	0.15	0.00 ***
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.05	0.00 ***
Nonminority female	12.24	19.41	63.07 ***
M/WBE Total	12.24	23.45	52.18 ***
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	2.89	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	0.00
Native American	0.00	0.00	
Minority	0.00	2.89	0.00 ***
Nonminority female	0.00	17.05	0.00 ***
M/WBE Total	0.00	19.93	0.00 ***
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	13.47	5.23	
Hispanic	0.00	0.00	
Asian	0.00	0.64	0.00 ***
Native American	0.00	0.00	
Minority	13.47	5.87	
Nonminority female	12.90	21.17	60.97 ***
M/WBE Total	26.37	27.03	97.56
Automobile Dealers (NAICS 4411)			
African American	0.00	0.89	0.00
Hispanic	0.00	0.01	0.00
Asian	0.00	1.27	0.00
Native American	0.00	1.44	0.00
Minority	0.00	3.61	0.00 ***
Nonminority female	0.00	10.73	0.00 ***
M/WBE Total	0.00	14.34	0.00 ***
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	6.59	3.82	
Hispanic	0.00	0.17	0.00 ***
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.00	
Minority	6.59	4.35	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	6.09	19.90	30.62 ***
M/WBE Total	12.69	24.25	52.30 ***
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	6.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	6.17	0.00 ***
Nonminority female	0.00	20.21	0.00 ***
M/WBE Total	0.00	26.37	0.00 ***
Basic Chemical Manufacturing (NAICS 3251)			
African American	0.00	5.74	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.54	0.00
Native American	0.00	0.00	
Minority	0.00	6.28	0.00 ***
Nonminority female	0.00	18.31	0.00 ***
M/WBE Total	0.00	24.59	0.00 ***
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	5.89	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	5.97	0.00 ***
Nonminority female	0.00	20.09	0.00 ***
M/WBE Total	0.00	26.05	0.00 ***
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	3.71	0.00 ***
Hispanic	0.00	0.49	0.00 ***
Asian	3.37	0.65	
Native American	0.00	0.00	
Minority	3.37	4.85	69.50 *
Nonminority female	0.00	20.87	0.00 ***
M/WBE Total	3.37	25.71	13.11 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	2.30	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.43	0.00 ***



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	0.00	2.77	0.00 ***
Nonminority female	0.00	27.28	0.00 ***
M/WBE Total	0.00	30.05	0.00 ***
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	2.81	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.89	0.00 ***
Nonminority female	0.00	18.52	0.00 ***
M/WBE Total	0.00	21.40	0.00 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	5.95	0.68	
Hispanic	0.00	0.17	0.00 ***
Asian	0.00	1.31	0.00 ***
Native American	1.76	1.31	
Minority	7.71	3.47	
Nonminority female	0.97	13.90	7.00 ***
M/WBE Total	8.69	17.37	50.02 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.65	0.00 ***
Hispanic	0.00	0.24	0.00 ***
Asian	0.00	0.30	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.19	0.00 ***
Nonminority female	2.53	19.89	12.72 ***
M/WBE Total	2.53	23.08	10.96 ***
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	4.90	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	4.92	0.00 ***
Nonminority female	0.00	17.43	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	0.00	0.55	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.04	0.00
Asian	0.00	1.71	0.00 ***
Native American	0.00	1.75	0.00 ***
Minority	0.00	4.05	0.00 ***
Nonminority female	0.00	12.89	0.00 ***
M/WBE Total	0.00	16.93	0.00 ***
Motor Vehicle Manufacturing (NAICS 3361)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00
M/WBE Total	0.00	19.72	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	2.58	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.64	0.00 ***
Nonminority female	0.00	19.67	0.00 ***
M/WBE Total	0.00	22.31	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.10	0.00 ***
Hispanic	24.69	0.15	
Asian	0.00	0.30	0.00 ***
Native American	0.00	0.00	
Minority	24.69	3.56	
Nonminority female	15.50	19.39	79.93 *
M/WBE Total	40.18	22.94	
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.74	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.34	0.00 ***
Native American	0.00	0.00	
Minority	0.00	6.07	0.00 ***
Nonminority female	10.02	23.83	42.05 ***
M/WBE Total	10.02	29.91	33.51 ***
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.29	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.27	0.00
Native American	0.00	0.00	
Minority	0.00	2.57	0.00 ***
Nonminority female	0.00	27.54	0.00 ***
M/WBE Total	0.00	30.10	0.00 ***
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	3.00	0.00 ***
Hispanic	0.00	0.07	0.00
Asian	0.00	0.50	0.00
Native American	0.00	0.00	
Minority	0.00	3.57	0.00 ***
Nonminority female	42.44	21.83	
M/WBE Total	42.44	25.40	
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	1.52	0.00 ***
Hispanic	0.00	0.67	0.00 ***
Asian	0.00	1.66	0.00 ***
Native American	0.00	1.34	0.00 ***
Minority	0.00	5.18	0.00 ***
Nonminority female	0.00	12.51	0.00 ***
M/WBE Total	0.00	17.69	0.00 ***
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	3.73	0.00 ***
Hispanic	0.00	0.46	0.00 ***
Asian	0.00	0.28	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.47	0.00 ***
Nonminority female	0.00	21.13	0.00 ***
M/WBE Total	0.00	25.60	0.00 ***
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	0.69	0.00 ***
Hispanic	0.00	0.14	0.00
Asian	0.00	1.36	0.00 ***
Native American	0.00	1.26	0.00 ***
Minority	0.00	3.45	0.00 ***
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	0.00	16.83	0.00 ***
Lawn and Garden Equipment and Supplies			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Stores (NAICS 4442)</b>			
African American	0.00	0.42	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	1.43	0.00 ***
Native American	0.00	1.19	0.00 ***
Minority	0.00	3.10	0.00 ***
Nonminority female	7.52	15.33	49.09 *
M/WBE Total	7.52	18.43	40.83 ***
<b>Other Fabricated Metal Product Manufacturing (NAICS 3329)</b>			
African American	0.00	2.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	2.70	0.00
Nonminority female	0.00	20.97	0.00 ***
M/WBE Total	0.00	23.67	0.00 ***
<b>Rubber Product Manufacturing (NAICS 3262)</b>			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)</b>			
African American	0.00	0.06	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	1.32	0.00 ***
Native American	0.00	1.27	0.00 ***
Minority	0.00	2.70	0.00 ***
Nonminority female	0.00	12.71	0.00 ***
M/WBE Total	0.00	15.41	0.00 ***
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	2.77	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.47	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.28	0.00 ***
Nonminority female	0.23	18.40	1.26 ***
M/WBE Total	0.23	21.68	1.07 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	2.62	0.00 ***
Hispanic	0.00	0.21	0.00
Asian	0.00	0.17	0.00
Native American	0.00	0.00	
Minority	0.00	3.00	0.00 ***
Nonminority female	0.00	21.22	0.00 ***
M/WBE Total	0.00	24.22	0.00 ***
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	0.00	0.00	
Minority	0.00	4.30	0.00 ***
Nonminority female	3.56	21.36	16.66 ***
M/WBE Total	3.56	25.66	13.87 ***
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	4.18	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	4.22	0.00 ***
Nonminority female	0.00	19.35	0.00 ***
M/WBE Total	0.00	23.57	0.00 ***
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	2.72	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	2.76	0.00 ***
Nonminority female	0.00	18.90	0.00 ***
M/WBE Total	0.00	21.66	0.00 ***
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	2.77	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.59	0.00
Native American	0.00	0.00	
Minority	0.00	3.35	0.00 ***
Nonminority female	0.00	17.46	0.00 ***
M/WBE Total	0.00	20.81	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00 ***
Nonminority female	32.04	20.40	
M/WBE Total	32.04	23.69	
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	3.03	0.00 ***
Hispanic	0.00	0.23	0.00
Asian	0.00	0.19	0.00
Native American	0.00	0.00	
Minority	0.00	3.44	0.00 ***
Nonminority female	0.00	21.52	0.00 ***
M/WBE Total	0.00	24.96	0.00 ***
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	3.33	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.97	0.00
Native American	0.00	0.00	
Minority	0.00	5.30	0.00 ***
Nonminority female	0.00	17.99	0.00 ***
M/WBE Total	0.00	23.29	0.00 ***
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	1.97	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.97	0.00 ***
Nonminority female	1.95	41.98	4.63 ***
M/WBE Total	1.95	43.95	4.43 ***
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	2.29	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.21	0.00
Native American	0.00	0.00	
Minority	0.00	2.50	0.00 ***
Nonminority female	0.00	27.79	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	0.00	30.29	0.00 ***
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	2.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.73	0.00
Nonminority female	0.00	20.06	0.00 ***
M/WBE Total	0.00	22.79	0.00 ***
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	3.31	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	3.34	0.00 ***
Nonminority female	0.00	18.48	0.00 ***
M/WBE Total	0.00	21.82	0.00 ***
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***
M/WBE Total	0.00	26.63	0.00 ***
Other Motor Vehicle Dealers (NAICS 4412)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.06	0.00
Asian	0.00	1.59	0.00
Native American	0.00	1.35	0.00
Minority	0.00	3.06	0.00
Nonminority female	0.00	13.08	0.00
M/WBE Total	0.00	16.14	0.00
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00 ***
Nonminority female	0.00	20.10	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	0.00	23.85	0.00 ***
Grocery Stores (NAICS 4451)			
African American	0.00	0.62	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.47	0.00
Native American	0.00	1.40	0.00
Minority	0.00	3.77	0.00 ***
Nonminority female	0.00	13.62	0.00 ***
M/WBE Total	0.00	17.39	0.00 ***
Home Furnishings Stores (NAICS 4422)			
African American	0.00	1.21	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.39	0.00
Native American	0.00	1.27	0.00
Minority	0.00	4.15	0.00 ***
Nonminority female	52.07	12.98	
M/WBE Total	52.07	17.13	
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	2.84	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.27	0.00
Native American	0.00	0.00	
Minority	0.00	3.11	0.00 ***
Nonminority female	0.00	17.81	0.00 ***
M/WBE Total	0.00	20.92	0.00 ***
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	7.88	2.81	
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	7.88	4.12	
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	7.88	23.88	33.00 **
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	2.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.00	0.00
Native American	0.00	0.00	
Minority	0.00	6.31	0.00
Nonminority female	0.00	21.84	0.00 ***
M/WBE Total	0.00	28.15	0.00 ***



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundries (NAICS 3315)			
African American	0.00	2.82	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 ***
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	1.23	0.00 ***
Hispanic	0.00	0.12	0.00
Asian	0.00	1.36	0.00 ***
Native American	0.00	1.23	0.00 ***
Minority	0.00	3.95	0.00 ***
Nonminority female	0.00	18.40	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Other Textile Product Mills (NAICS 3149)			
African American	0.00	2.25	0.00 ***
Hispanic	0.00	2.14	0.00 ***
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	4.52	0.00 ***
Nonminority female	33.82	20.90	
M/WBE Total	33.82	25.42	
Audio and Video Equipment Manufacturing (NAICS 3343)			
African American	0.00	10.80	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	10.85	0.00 ***
Nonminority female	0.00	17.86	0.00 ***
M/WBE Total	0.00	28.71	0.00 ***
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Sawmills and Wood Preservation (NAICS 3211)			
African American	0.00	2.82	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 ***
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Pharmaceutical and Medicine Manufacturing (NAICS 3254)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	2.30	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00 ***
Nonminority female	2.83	27.44	10.31 ***
M/WBE Total	2.83	29.96	9.44 ***
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***
M/WBE Total	0.00	26.63	0.00 ***
Dairy Product Manufacturing (NAICS 3115)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00 ***
M/WBE Total	0.00	9.86	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Bakeries and Tortilla Manufacturing (NAICS 3118)</b>			
African American	0.00	2.06	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.88	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.94	0.00 ***
Nonminority female	0.00	30.94	0.00 ***
M/WBE Total	0.00	34.88	0.00 ***
<b>Clothing Stores (NAICS 4481)</b>			
African American	0.00	0.19	0.00
Hispanic	0.00	0.36	0.00
Asian	0.00	2.40	0.00 ***
Native American	0.00	1.13	0.00
Minority	0.00	4.08	0.00 ***
Nonminority female	0.00	25.01	0.00 ***
M/WBE Total	0.00	29.10	0.00 ***
<b>Other Electrical Equipment and Component Manufacturing (NAICS 3359)</b>			
African American	0.00	2.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	2.78	0.00
Nonminority female	0.00	18.32	0.00 ***
M/WBE Total	0.00	21.10	0.00 ***
<b>Furniture Stores (NAICS 4421)</b>			
African American	0.00	0.11	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	1.36	0.00
Native American	0.00	1.25	0.00
Minority	0.00	3.10	0.00
Nonminority female	0.00	15.97	0.00 ***
M/WBE Total	0.00	19.07	0.00 ***
<b>Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)</b>			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
<b>Industrial Machinery Manufacturing</b>			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
(NAICS 3332)			
African American	0.00	2.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.71	0.00
Nonminority female	0.00	20.70	0.00 ***
M/WBE Total	0.00	23.40	0.00 ***
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	2.36	0.00
Hispanic	0.00	1.38	0.00
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	3.90	0.00
Nonminority female	0.00	23.70	0.00 ***
M/WBE Total	0.00	27.60	0.00 ***
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	3.89	0.00 ***
Hispanic	0.00	1.14	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.00	
Minority	0.00	5.09	0.00 ***
Nonminority female	0.00	19.26	0.00 ***
M/WBE Total	0.00	24.35	0.00 ***
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.60	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.00	0.00
Native American	0.00	0.00	
Minority	0.00	3.60	0.00 ***
Nonminority female	31.71	19.94	
M/WBE Total	31.71	23.54	
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00
M/WBE Total	0.00	19.72	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other General Merchandise Stores (NAICS 4529)			
African American	0.00	0.33	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	1.39	0.00 ***
Native American	0.00	1.29	0.00
Minority	0.00	3.05	0.00 ***
Nonminority female	0.00	12.16	0.00 ***
M/WBE Total	0.00	15.21	0.00 ***

Source and Notes: See Table 7.21.

## Appendix C. Detailed Utilization, Availability & Disparity Tables

**Table AC.40. Industry Group Utilization, Availability, and Disparity Results for City of Cleveland  
Commodities Contracting (Minor Procurements) (Dollars Paid)**

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	3.51	0.00 ***
Hispanic	0.00	0.15	0.00 **
Asian	0.00	0.38	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.04	0.00 ***
Nonminority female	12.81	19.42	65.98 ***
M/WBE Total	12.81	23.46	54.62 ***
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	2.86	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	0.00
Native American	0.00	0.00	
Minority	0.00	2.86	0.00
Nonminority female	0.00	16.99	0.00 ***
M/WBE Total	0.00	19.84	0.00 ***
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	17.33	5.23	
Hispanic	0.00	0.00	
Asian	0.00	0.64	0.00
Native American	0.00	0.00	
Minority	17.33	5.87	
Nonminority female	7.95	21.17	37.54 ***
M/WBE Total	25.28	27.03	93.50
Automobile Dealers (NAICS 4411)			
African American	0.00	0.90	0.00
Hispanic	0.00	0.01	0.00
Asian	0.00	1.27	0.00
Native American	0.00	1.44	0.00
Minority	0.00	3.61	0.00
Nonminority female	0.00	10.71	0.00 ***
M/WBE Total	0.00	14.32	0.00 ***
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	6.05	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	6.17	0.00 **

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonminority female	0.00	20.20	0.00 ***
M/WBE Total	0.00	26.37	0.00 ***
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	6.89	3.85	
Hispanic	0.00	0.20	0.00 **
Asian	0.00	0.36	0.00 ***
Native American	0.00	0.00	
Minority	6.89	4.41	
Nonminority female	7.55	20.41	36.96 ***
M/WBE Total	14.43	24.83	58.14 ***
Basic Chemical Manufacturing (NAICS 3251)			
African American	0.00	5.93	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.62	0.00
Native American	0.00	0.00	
Minority	0.00	6.55	0.00 ***
Nonminority female	0.00	18.59	0.00 ***
M/WBE Total	0.00	25.14	0.00 ***
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	5.88	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	5.96	0.00 ***
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	26.06	0.00 ***
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	2.21	0.00 ***
Hispanic	0.00	0.04	0.00
Asian	0.00	0.45	0.00
Native American	0.00	0.00	
Minority	0.00	2.69	0.00 ***
Nonminority female	0.00	29.01	0.00 ***
M/WBE Total	0.00	31.71	0.00 ***
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	3.73	0.00 ***
Hispanic	0.00	0.51	0.00 ***
Asian	4.65	0.66	

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Native American	0.00	0.00	
Minority	4.65	4.90	94.77
Nonminority female	0.00	20.82	0.00 ***
M/WBE Total	4.65	25.72	18.06 ***
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	2.81	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.88	0.00 ***
Nonminority female	0.00	18.49	0.00 ***
M/WBE Total	0.00	21.37	0.00 ***
Building Material and Supplies Dealers (NAICS 4441)			
African American	5.15	0.68	
Hispanic	0.00	0.17	0.00 *
Asian	0.00	1.31	0.00 ***
Native American	1.86	1.30	
Minority	7.02	3.47	
Nonminority female	1.09	13.90	7.86 ***
M/WBE Total	8.11	17.36	46.70 ***
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	4.90	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	4.92	0.00 *
Nonminority female	0.00	17.43	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.65	0.00 ***
Hispanic	0.00	0.25	0.00
Asian	0.00	0.31	0.00
Native American	0.00	0.00	
Minority	0.00	3.21	0.00 ***
Nonminority female	3.48	19.96	17.42 ***
M/WBE Total	3.48	23.17	15.01 ***
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	0.00	0.55	0.00



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hispanic	0.00	0.04	0.00
Asian	0.00	1.71	0.00
Native American	0.00	1.75	0.00
Minority	0.00	4.05	0.00 **
Nonminority female	0.00	12.89	0.00 ***
M/WBE Total	0.00	16.93	0.00 ***
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	3.10	0.00 ***
Hispanic	23.65	0.15	
Asian	0.00	0.30	0.00 **
Native American	0.00	0.00	
Minority	23.65	3.56	
Nonminority female	14.80	19.39	76.35 *
M/WBE Total	38.45	22.94	
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.69	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.34	0.00 ***
Native American	0.00	0.00	
Minority	0.00	6.03	0.00 ***
Nonminority female	11.62	23.85	48.71 ***
M/WBE Total	11.62	29.88	38.88 ***
Motor Vehicle Manufacturing (NAICS 3361)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00
M/WBE Total	0.00	19.72	0.00
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	1.59	0.00 ***
Hispanic	0.00	0.63	0.00 **
Asian	0.00	1.64	0.00 ***
Native American	0.00	1.33	0.00 ***
Minority	0.00	5.19	0.00 ***
Nonminority female	0.00	12.49	0.00 ***
M/WBE Total	0.00	17.68	0.00 ***
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
African American	0.00	2.58	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.64	0.00
Nonminority female	0.00	19.67	0.00 ***
M/WBE Total	0.00	22.31	0.00 ***
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	2.30	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.28	0.00
Native American	0.00	0.00	
Minority	0.00	2.57	0.00 ***
Nonminority female	0.00	27.52	0.00 ***
M/WBE Total	0.00	30.09	0.00 ***
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	0.69	0.00
Hispanic	0.00	0.14	0.00
Asian	0.00	1.36	0.00 **
Native American	0.00	1.26	0.00 **
Minority	0.00	3.45	0.00 ***
Nonminority female	0.00	13.38	0.00 ***
M/WBE Total	0.00	16.83	0.00 ***
Rubber Product Manufacturing (NAICS 3262)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	2.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	2.70	0.00
Nonminority female	0.00	20.97	0.00
M/WBE Total	0.00	23.67	0.00 ***
Lumber and Other Construction Materials			

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Merchant Wholesalers (NAICS 4233)			
African American	0.00	2.76	0.00 ***
Hispanic	0.00	0.03	0.00
Asian	0.00	0.50	0.00
Native American	0.00	0.00	
Minority	0.00	3.28	0.00 ***
Nonminority female	0.28	18.41	1.52 ***
M/WBE Total	0.28	21.69	1.29 ***
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	1.32	0.00
Native American	0.00	1.27	0.00
Minority	0.00	2.70	0.00 ***
Nonminority female	0.00	12.74	0.00 ***
M/WBE Total	0.00	15.44	0.00 ***
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	2.26	0.00 ***
Hispanic	0.00	0.01	0.00
Asian	0.00	0.26	0.00
Native American	0.00	0.00	
Minority	0.00	2.53	0.00 ***
Nonminority female	46.49	29.48	
M/WBE Total	46.49	32.01	
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	2.62	0.00 ***
Hispanic	0.00	0.14	0.00
Asian	0.00	0.14	0.00
Native American	0.00	0.00	
Minority	0.00	2.90	0.00 ***
Nonminority female	0.00	21.14	0.00 ***
M/WBE Total	0.00	24.04	0.00 ***
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	4.20	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.10	0.00
Native American	0.00	0.00	
Minority	0.00	4.30	0.00 ***
Nonminority female	4.10	21.36	19.19 ***
M/WBE Total	4.10	25.66	15.97 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	3.61	0.00 ***
Hispanic	0.00	0.41	0.00 ***
Asian	0.00	0.26	0.00 ***
Native American	0.00	0.00	
Minority	0.00	4.29	0.00 ***
Nonminority female	0.00	21.36	0.00 ***
M/WBE Total	0.00	25.65	0.00 ***
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	3.33	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.97	0.00
Native American	0.00	0.00	
Minority	0.00	5.30	0.00
Nonminority female	0.00	17.99	0.00 **
M/WBE Total	0.00	23.29	0.00 **
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	3.95	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	4.01	0.00 *
Nonminority female	0.00	20.27	0.00 ***
M/WBE Total	0.00	24.28	0.00 ***
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	3.05	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.24	0.00
Native American	0.00	0.00	
Minority	0.00	3.29	0.00 ***
Nonminority female	34.75	20.40	
M/WBE Total	34.75	23.69	
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	2.98	0.00 ***
Hispanic	0.00	0.22	0.00
Asian	0.00	0.19	0.00
Native American	0.00	0.00	
Minority	0.00	3.39	0.00 ***
Nonminority female	0.00	21.54	0.00 ***
M/WBE Total	0.00	24.93	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.03	0.00
Asian	0.00	1.32	0.00
Native American	0.00	1.21	0.00
Minority	0.00	2.76	0.00 ***
Nonminority female	10.51	15.30	68.67
M/WBE Total	10.51	18.07	58.17 *
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	2.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.04	0.00
Native American	0.00	0.00	
Minority	0.00	2.76	0.00
Nonminority female	0.00	18.90	0.00 ***
M/WBE Total	0.00	21.66	0.00 ***
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	2.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.07	0.00
Native American	0.00	0.00	
Minority	0.00	2.73	0.00
Nonminority female	0.00	20.06	0.00 ***
M/WBE Total	0.00	22.79	0.00 ***
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	2.33	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.74	0.00
Native American	0.00	0.00	
Minority	0.00	5.07	0.00
Nonminority female	0.00	23.18	0.00
M/WBE Total	0.00	28.25	0.00
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
M/WBE Total	0.00	26.63	0.00 ***
Other Motor Vehicle Dealers (NAICS 4412)			
African American	0.00	0.06	0.00
Hispanic	0.00	0.06	0.00
Asian	0.00	1.59	0.00
Native American	0.00	1.35	0.00
Minority	0.00	3.06	0.00
Nonminority female	0.00	13.08	0.00
M/WBE Total	0.00	16.14	0.00
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	3.30	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	3.33	0.00 **
Nonminority female	0.00	18.46	0.00 ***
M/WBE Total	0.00	21.79	0.00 ***
Home Furnishings Stores (NAICS 4422)			
African American	0.00	1.21	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.39	0.00
Native American	0.00	1.27	0.00
Minority	0.00	4.15	0.00 ***
Nonminority female	40.91	12.98	
M/WBE Total	40.91	17.13	
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	2.29	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.21	0.00
Native American	0.00	0.00	
Minority	0.00	2.50	0.00 ***
Nonminority female	0.00	27.79	0.00 ***
M/WBE Total	0.00	30.29	0.00 ***
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	9.92	2.81	
Hispanic	0.00	0.58	0.00
Asian	0.00	0.74	0.00
Native American	0.00	0.00	
Minority	9.92	4.12	
Nonminority female	0.00	19.76	0.00 ***
M/WBE Total	9.92	23.88	41.55 **

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	2.92	0.00 ***
Hispanic	0.00	0.34	0.00
Asian	0.00	0.49	0.00
Native American	0.00	0.00	
Minority	0.00	3.75	0.00 ***
Nonminority female	0.00	20.10	0.00 ***
M/WBE Total	0.00	23.85	0.00 ***
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	2.14	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.14	0.00 *
Nonminority female	2.56	37.00	6.92 ***
M/WBE Total	2.56	39.14	6.54 ***
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	2.84	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.25	0.00
Native American	0.00	0.00	
Minority	0.00	3.09	0.00
Nonminority female	0.00	17.73	0.00 ***
M/WBE Total	0.00	20.82	0.00 ***
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	2.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.95	0.00
Native American	0.00	0.00	
Minority	0.00	4.61	0.00 *
Nonminority female	0.00	18.75	0.00 ***
M/WBE Total	0.00	23.35	0.00 ***
Other Textile Product Mills (NAICS 3149)			
African American	0.00	2.25	0.00
Hispanic	0.00	2.14	0.00
Asian	0.00	0.12	0.00
Native American	0.00	0.00	
Minority	0.00	4.52	0.00 **
Nonminority female	23.38	20.90	
M/WBE Total	23.38	25.42	92.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	1.23	0.00
Hispanic	0.00	0.12	0.00
Asian	0.00	1.36	0.00
Native American	0.00	1.23	0.00
Minority	0.00	3.95	0.00 ***
Nonminority female	0.00	18.40	0.00 ***
M/WBE Total	0.00	22.35	0.00 ***
Audio and Video Equipment Manufacturing (NAICS 3343)			
African American	0.00	10.80	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	10.85	0.00 ***
Nonminority female	0.00	17.86	0.00 ***
M/WBE Total	0.00	28.71	0.00 ***
Foundries (NAICS 3315)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 *
M/WBE Total	0.00	19.72	0.00 *
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 **
M/WBE Total	0.00	19.72	0.00 **
Sawmills and Wood Preservation (NAICS 3211)			
African American	0.00	2.82	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00 *
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***



## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	2.61	0.00
Nonminority female	0.00	24.01	0.00 ***
M/WBE Total	0.00	26.63	0.00 ***
Pharmaceutical and Medicine Manufacturing (NAICS 3254)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00 ***
M/WBE Total	0.00	19.72	0.00 ***
Dairy Product Manufacturing (NAICS 3115)			
African American	0.00	1.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.41	0.00
Nonminority female	0.00	8.45	0.00 ***
M/WBE Total	0.00	9.86	0.00 ***
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	2.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.03	0.00
Native American	0.00	0.00	
Minority	0.00	2.78	0.00
Nonminority female	0.00	18.32	0.00 ***
M/WBE Total	0.00	21.10	0.00 ***
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)			
African American	0.00	2.82	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.82	0.00
Nonminority female	0.00	16.90	0.00
M/WBE Total	0.00	19.72	0.00

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Grocery Stores (NAICS 4451)			
African American	0.00	0.62	0.00
Hispanic	0.00	0.29	0.00
Asian	0.00	1.47	0.00
Native American	0.00	1.40	0.00
Minority	0.00	3.77	0.00
Nonminority female	0.00	13.62	0.00 ***
M/WBE Total	0.00	17.39	0.00 ***
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	2.30	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	0.22	0.00
Native American	0.00	0.00	
Minority	0.00	2.52	0.00 **
Nonminority female	2.59	27.44	9.43 ***
M/WBE Total	2.59	29.96	8.64 ***
Bakeries and Tortilla Manufacturing (NAICS 3118)			
African American	0.00	2.06	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.88	0.00 ***
Native American	0.00	0.00	
Minority	0.00	3.94	0.00 ***
Nonminority female	0.00	30.94	0.00 ***
M/WBE Total	0.00	34.88	0.00 ***
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.60	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	1.00	0.00
Native American	0.00	0.00	
Minority	0.00	3.60	0.00 ***
Nonminority female	33.95	19.94	
M/WBE Total	33.95	23.54	
Clothing Stores (NAICS 4481)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.36	0.00
Asian	0.00	2.40	0.00
Native American	0.00	1.13	0.00
Minority	0.00	4.08	0.00
Nonminority female	0.00	25.01	0.00 ***
M/WBE Total	0.00	29.10	0.00 ***

## Appendix C. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group / M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Industrial Machinery Manufacturing (NAICS 3332)</b>			
African American	0.00	2.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.08	0.00
Native American	0.00	0.00	
Minority	0.00	2.71	0.00
Nonminority female	0.00	20.70	0.00 ***
M/WBE Total	0.00	23.40	0.00 ***
<b>Cement and Concrete Product Manufacturing (NAICS 3273)</b>			
African American	0.00	2.36	0.00
Hispanic	0.00	1.38	0.00
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	0.00	3.90	0.00
Nonminority female	0.00	23.70	0.00
M/WBE Total	0.00	27.60	0.00 ***
<b>Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)</b>			
African American	0.00	3.89	0.00
Hispanic	0.00	1.14	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.00	
Minority	0.00	5.09	0.00
Nonminority female	0.00	19.26	0.00 ***
M/WBE Total	0.00	24.35	0.00 ***
<b>Gasoline Stations (NAICS 4471)</b>			
African American	0.00	0.28	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	1.29	0.00
Native American	0.00	1.27	0.00
Minority	0.00	2.92	0.00 ***
Nonminority female	0.00	11.60	0.00 ***
M/WBE Total	0.00	14.52	0.00 ***

Source and Notes: See Table 7.21.



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