Anne Arundel County Disparity Study 2022

CH ADVISORS, INC.

ANNE ARUNDEL COUNTY DISPARITY STUDY

2022

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About the Study Team

CH Advisors, Inc. ("CHA"), is a national law and consulting firm specializing in issues related to Minority, Women and Disadvantaged Business Enterprise programs, business diversity initiatives, and affirmative action issues. The firm has conducted court-approved disparity studies and designed court-approved programs for over 30 years, including for numerous governments. CHA also provides training, monitoring and investigative services across the country to agencies and businesses. CHA is led by Colette Holt, J.D., the founding principal of Colette Holt & Associates and a nationally recognized attorney and expert. Ms. Holt is also a frequent expert witness, and a media author, on these issues. In addition to Ms. Holt, the firm consists of Steven C. Pitts, Ph. D., who serves as the team's economist and statistician; Ilene Grossman, B.S., Project Administrator; Glenn Sullivan, B.S., Director of Technology; Victoria Farrell, MBA, Director Qualitative Data Collection; and Joanne Lubart, J.D., Associate Counsel.

Koba Consulting, LLC is a M/W/DBE professional firm with expertise in providing public relations, community outreach and marketing. Koba serves city and state government agencies and prime contractors.

Acknowledgments

We wish to express special appreciation to Diana Cox, Elisa Brown, Andrew Himes and the staff at Anne Arundel County for their assistance in conducting this study.

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I. Executive Summary

Colette Holt & Associates ("CHA") was retained by Anne Arundel County ("County") to perform a disparity study in conformance with strict constitutional scrutiny. In this Study, we determined Anne Arundel County's utilization of Minority- and Woman-owned Business Enterprises ("M/WBEs") during fiscal years 2017 through 2021; the availability of these firms as a percentage of all firms in the County's geographic and industry market areas; and any disparities between the County's utilization of M/WBEs and M/WBE availability. We further analyzed disparities in the Anne Arundel County's marketplace and the wider Maryland economy, where contracting affirmative action is rarely practiced, to evaluate whether barriers continue to impede opportunities for minorities and women when remedial intervention is not imposed. We also gathered qualitative data about the experiences of M/WBEs in obtaining Anne Arundel County contracts and associated subcontracts. Based on these findings, we evaluated whether the use of race- and gender-conscious measures is supported by the results of this analysis.

The methodology for this Study embodies the constitutional principles of *City of Richmond v. J.A. Croson Co.*,[1] *Adarand Constructors, Inc. v. Peña,*[2] Fourth Circuit Court of Appeals case law, and best practices for designing race- and gender-conscious programs. The CHA approach has been specifically upheld by the federal courts. It is also the approach developed by Ms. Holt for the National Academy of Sciences that is now the recommended standard for designing legally defensible disparity studies.

A. Summary of Strict Constitutional Standards Applicable to an Anne Arundel County Minority- and Woman-owned Business Enterprise Program

To be effective, enforceable, and legally defensible, a race-based program for public sector con-tracts must meet the judicial test of constitutional "strict scrutiny". Strict scrutiny is the highest level of judicial review. The County must meet this test to ensure that any race- and gender-conscious program is in legal compliance.

Strict scrutiny analysis has two prongs:

1. The government must establish its "compelling interest" in remediating race discrimination by current "strong evidence" of the persistence of

1. 488 U.S. 469 (1989).
2. 515 U.S. 200 (1995).

discrimination. Such evidence may con-sist of the entity's "passive participation" in a system of racial exclusion.

2. Any remedies adopted must be "narrowly tailored" to that discrimination; the program must be directed at the types and depth of discrimination identified.[3]

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

1. Statistical evidence of the underutilization of minority or woman firms by the agency and/or throughout the agency's geographic and industry market area compared to their availability in the market area.
2. Anecdotal evidence of race- or gender-based barriers to the full and fair participation of minority and woman firms in the market area and seeking contracts with the agency. Anecdotal data can consist of interviews, surveys, public hearings, academic literature, judicial decisions, legislative reports, and other information.

The narrow tailoring prong has been met by satisfying five factors to ensure that the remedy "fits" the evidence:

1. The necessity of relief;
2. The efficacy of race-neutral remedies at overcoming identified discrimination;
3. The flexibility and duration of the relief, including the availability of waiver provisions;
4. The relationship of numerical goals to the relevant market; and
5. The impact of the relief on the rights of third parties.

Most federal courts have subjected preferences for Woman-Owned Business Enterprises to "intermediate scrutiny". Gender-based classifications must be supported by an "exceedingly persuasive justification" and be "substantially related to the objective".[4] The quantum of evidence necessary to satisfy intermediate scrutiny is less than that required to satisfy strict scrutiny. However, appellate courts have applied strict scrutiny to the gender-based presumption of social disadvantage in reviewing the constitutionality of the Disadvantaged Business Enterprise ("DBE") Program or held that the results would be the same under strict scrutiny.

Proof of the negative effects of economic factors on M/WBEs and the unequal treatment of such firms by actors critical to their success will meet strict scrutiny. Studies have been conducted to gather the statistical and anecdotal evidence necessary to support the use of race- and gender-conscious measures to combat dis-

3. *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).
4. *Cf. United States v. Virginia,* 518 U.S. 515, 532 n.6 (1996).

crimination. These are commonly referred to as “disparity studies” because they analyze any disparities between the opportunities and experiences of minority- and woman-owned firms and their actual utilization compared to White male-owned businesses. 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. High quality studies also examine the elements of the agency’s program to determine whether it is sufficiently narrowly tailored.

B. Utilization, Availability and Disparity Analyses of Anne Arundel County’s Contracts

We analyzed data from the Anne Arundel County’s contracts for fiscal years 2017 through 2021. The Initial Contract Data File contained 1,987 contracts. Because of the large number of contracts, we developed a stratified random sample (“Sample”) from the initial 1,987 contracts. The Sample consisted of 779 contracts.

To conduct the analysis of the Sample, we constructed all the fields necessary where they were missing in the County’s contract records (*e.g.*, industry type; zip codes; six-digit North American Industry Classification System (“NAICS”) codes of prime contractors and subcontractors; and M/WBE information, including payments, race, gender; etc.). The resulting Final Contract Data File (“FCDF”) for the County’s contracts contained 714 prime contracts and 187 subcontracts.[5] The net dollar value of the contracts to prime contractors and subcontractors was $548,556,806.

Table 1-1 presents data on the 110 NAICS codes contained in the FCDF. The third column represents the share of all contracts to firms performing work in a particular NAICS code. The fourth column presents the cumulative share of spending from the NAICS code with the largest share to the NAICS code with the smallest share.

5. While CHA reached out to all of the primes covering the 779 contracts in the sample, only primes covering 714 responded.

Table 1-1: Industry Percentage Distribution of Anne Arundel County Contracts by Dollars

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
236220	Commercial and Institutional Building Construction	11.9%	11.9%
532112	Passenger Car Leasing	9.7%	21.7%
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	7.0%	28.6%
424710	Petroleum Bulk Stations and Terminals	5.1%	33.7%
237310	Highway, Street, and Bridge Construction	4.6%	38.3%
423830	Industrial Machinery and Equipment Merchant Wholesalers	4.4%	42.7%
238210	Electrical Contractors and Other Wiring Installation Contractors	3.6%	46.3%
424690	Other Chemical and Allied Products Merchant Wholesalers	3.2%	49.5%
517312	Wireless Telecommunications Carriers (except Satellite)	3.2%	52.7%
541330	Engineering Services	3.0%	55.7%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	3.0%	58.7%
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	2.7%	61.4%
524210	Insurance Agencies and Brokerages	2.7%	64.1%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	2.5%	66.5%
488490	Other Support Activities for Road Transportation	2.4%	69.0%
562111	Solid Waste Collection	2.2%	71.2%
238910	Site Preparation Contractors	2.2%	73.4%
562212	Solid Waste Landfill	2.1%	75.6%
621999	All Other Miscellaneous Ambulatory Health Care Services	1.8%	77.4%
237990	Other Heavy and Civil Engineering Construction	1.7%	79.1%
541511	Custom Computer Programming Services	1.7%	80.7%

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	1.3%	82.0%
811111	General Automotive Repair	1.0%	83.0%
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	0.9%	83.9%
518210	Data Processing, Hosting, and Related Services	0.9%	84.8%
238120	Structural Steel and Precast Concrete Contractors	0.9%	85.7%
541310	Architectural Services	0.9%	86.6%
541512	Computer Systems Design Services	0.7%	87.3%
541620	Environmental Consulting Services	0.6%	87.9%
561612	Security Guards and Patrol Services	0.6%	88.5%
237110	Water and Sewer Line and Related Structures Construction	0.6%	89.1%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	0.5%	89.6%
423910	Sporting and Recreational Goods and Supplies Merchant Wholesalers	0.5%	90.1%
423210	Furniture Merchant Wholesalers	0.5%	90.6%
323111	Commercial Printing (except Screen and Books)	0.5%	91.1%
541611	Administrative Management and General Management Consulting Services	0.5%	91.5%
481211	Nonscheduled Chartered Passenger Air Transportation	0.4%	92.0%
561320	Temporary Help Services	0.4%	92.4%
444190	Other Building Material Dealers	0.4%	92.8%
561730	Landscaping Services	0.4%	93.2%
238220	Plumbing, Heating, and Air-Conditioning Contractors	0.4%	93.6%
238990	All Other Specialty Trade Contractors	0.4%	94.0%
327992	Ground or Treated Mineral and Earth Manufacturing	0.4%	94.4%
423840	Industrial Supplies Merchant Wholesalers	0.4%	94.7%
424210	Drugs and Druggists' Sundries Merchant Wholesalers	0.3%	95.0%
238320	Painting and Wall Covering Contractors	0.3%	95.3%

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	0.3%	95.6%
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	0.3%	95.9%
484220	Specialized Freight (except Used Goods) Trucking, Local	0.3%	96.2%
334118	Computer Terminal and Other Computer Peripheral Equipment Manufacturing	0.3%	96.5%
811490	Other Personal and Household Goods Repair and Maintenance	0.2%	96.7%
238110	Poured Concrete Foundation and Structure Contractors	0.2%	96.9%
423690	Other Electronic Parts and Equipment Merchant Wholesalers	0.2%	97.1%
423130	Tire and Tube Merchant Wholesalers	0.2%	97.3%
541320	Landscape Architectural Services	0.2%	97.5%
524298	All Other Insurance Related Activities	0.2%	97.6%
336111	Automobile Manufacturing	0.1%	97.8%
424130	Industrial and Personal Service Paper Merchant Wholesalers	0.1%	97.9%
444120	Paint and Wallpaper Stores	0.1%	98.0%
423440	Other Commercial Equipment Merchant Wholesalers	0.1%	98.1%
238160	Roofing Contractors	0.1%	98.2%
238290	Other Building Equipment Contractors	0.1%	98.3%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	0.1%	98.4%
561720	Janitorial Services	0.1%	98.5%
562219	Other Nonhazardous Waste Treatment and Disposal	0.1%	98.6%
238140	Masonry Contractors	0.1%	98.7%
454390	Other Direct Selling Establishments	0.1%	98.8%
423410	Photographic Equipment and Supplies Merchant Wholesalers	0.1%	98.9%
611420	Computer Training	0.1%	99.0%

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.1%	99.0%
424120	Stationery and Office Supplies Merchant Wholesalers	0.1%	99.1%
561621	Security Systems Services (except Locksmiths)	0.1%	99.1%
541350	Building Inspection Services	0.05%	99.2%
541380	Testing Laboratories	0.05%	99.2%
541199	All Other Legal Services	0.05%	99.3%
424320	Men's and Boys' Clothing and Furnishings Merchant Wholesalers	0.04%	99.3%
238170	Siding Contractors	0.04%	99.4%
238190	Other Foundation, Structure, and Building Exterior Contractors	0.04%	99.4%
423460	Ophthalmic Goods Merchant Wholesalers	0.04%	99.4%
424590	Other Farm Product Raw Material Merchant Wholesalers	0.04%	99.5%
541370	Surveying and Mapping (except Geophysical) Services	0.04%	99.5%
541612	Human Resources Consulting Services	0.04%	99.6%
541613	Marketing Consulting Services	0.04%	99.6%
325180	Other Basic Inorganic Chemical Manufacturing	0.04%	99.6%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	0.03%	99.7%
423710	Hardware Merchant Wholesalers	0.03%	99.7%
448210	Shoe Stores	0.03%	99.7%
236210	Industrial Building Construction	0.03%	99.7%
541922	Commercial Photography	0.02%	99.8%
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	0.02%	99.8%
926130	Regulation and Administration of Communications, Electric, Gas, and Other Utilities	0.02%	99.8%
424920	Book, Periodical, and Newspaper Merchant Wholesalers	0.02%	99.8%

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
561611	Investigation Services	0.02%	99.8%
423940	Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers	0.02%	99.9%
541990	All Other Professional, Scientific, and Technical Services	0.02%	99.9%
237130	Power and Communication Line and Related Structures Construction	0.01%	99.9%
441310	Automotive Parts and Accessories Stores	0.01%	99.9%
424490	Other Grocery and Related Products Merchant Wholesalers	0.01%	99.9%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	0.01%	99.9%
519130	Internet Publishing and Broadcasting and Web Search Portals	0.01%	99.9%
541720	Research and Development in the Social Sciences and Humanities	0.01%	100.0%
441222	Boat Dealers	0.01%	100.0%
213111	Drilling Oil and Gas Wells	0.01%	100.0%
541690	Other Scientific and Technical Consulting Services	0.01%	100.0%
621330	Offices of Mental Health Practitioners (except Physicians)	0.01%	100.0%
561990	All Other Support Services	0.01%	100.0%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	0.004%	100.0%
541618	Other Management Consulting Services	0.002%	100.0%
423390	Other Construction Material Merchant Wholesalers	0.001%	100.0%
512110	Motion Picture and Video Production	0.0003%	100.0%
TOTAL		**100.0%**	

Source: CHA analysis of Anne Arundel County data

To determine the geographic market area, we applied the standard of identifying the firm locations that account for close to 75% of contract and subcontract dollar payments in the FCDF.[6] Firm location was determined by zip code and aggregated into counties as the geographic unit. The state of Maryland captured 75.9% of the

FCDF. Nine counties in the state – Anne Arundel, Baltimore, Howard, Prince George's, Baltimore City, Montgomery, Calvert, Queen Anne's and Carroll – captured 73.6% of the FCDF. Therefore, we used these nine counties as the geographic market.

We next determined the dollar value of the County's utilization of M/WBEs, as measured by payments to prime firms and subcontractors and disaggregated by race and gender.[7] Table 1-2 presents the summary of distribution of contract dollars. Chapter III provides detailed breakdowns of these results.

Table 1-2: Percentage Distribution of Contract Dollars by Race and Gender (share of total dollars)

Black	Hispanic	Asian	Native American	MBE	White Women	M/WBE	Non-M/WBE	Total
3.3%	0.9%	0.3%	0.2%	4.8%	3.4%	8.1%	91.9%	100.0%

Source: CHA analysis of Anne Arundel County data

Using the modified "custom census" approach to estimating availability and the further assignment of race and gender using the FCDF, the Master M/WBE Directory and other sources, we determined the unweighted availability of M/WBEs in the County's market area. For further explanation of the role of unweighted and weighted availability and how these are calculated, please see Appendix D.[8]

We next determined the aggregated unweighted availability of M/WBEs, and then the availability of M/WBEs weighted by the County's spending in its geographic and industry markets. Table 1-3 presents these results.

Table 1-3: Aggregated Weighted Availability for Anne Arundel County Contracts

Black	Hispanic	Asian	Native American	MBE	White Women	M/WBE	Non-M/WBE	Total
10.42%	3.29%	3.01%	0.25%	16.97%	5.17%	22.15%	77.85%	100.00%

Source: CHA analysis of Anne Arundel County data; Hoovers; CHA Master Directory

We calculated disparity ratios for total M/WBE utilization compared to the total weighted availability of M/WBEs, measured in dollars paid.

6. J. Wainwright and C. Holt, *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*, National Academies of Sciences, Engineering, and Medicine, 2010 ("*National Disparity Study Guidelines*"), at p. 29.
7. For our analysis, the term "M/WBE" includes firms that are certified by government agencies and minority- and woman-owned firms that are not certified.
8. The USDOT "Tips for Goal Setting" urges recipients to weight their headcount of firms by dollars spent. *See* Tips for Goal-Setting in the Disadvantaged Business Enterprise Program, ttps://www.transportation.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise.

A *disparity ratio* is the relationship between the utilization and weighted availability, determined above. Mathematically, this is represented by:

DR = U/WA

Where DR is the disparity ratio; U is utilization rate; and WA is the weighted availability.

The courts have held that disparity results must be analyzed to determine whether the results are "significant". There are two distinct methods to measure a result's significance. First, a "large" or "substantively significant" disparity is commonly defined by courts as utilization that is equal to or less than 80% of the availability measure. A substantively significant disparity supports the inference that the result may be caused by the disparate impacts of discrimination.[9] Second, statistically significant disparity means that an outcome 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.[10] A more in-depth discussion of statistical significance is provided in Chapter III and Appendix C.

Table 1-4 presents the calculated disparity ratios for each demographic group. The disparity ratios for Hispanics, MBEs, White women, and M/WBEs are substantively significant and statistically significant at the 0.001 level.

Table 1-4: Disparity Ratios by Demographic Group

	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE
Disparity Ratio	31.7%‡***	27.3%‡***	10.0%‡	81.1%	28.3%‡***	65.7%‡***	36.6%‡***	118.0%***

Source: CHA analysis of Anne Arundel County data

‡ Indicates substantive significance

**** Statistically significant at the 0.001 level*

9. *See* U.S. Equal Employment Opportunity Commission regulation, 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.").

10. A chi-square test – examining if the utilization rate was different from the weighted availability – was used to determine the statistical significance of the disparity ratio.

C. Analysis of Disparities in Anne Arundel County's Marketplace

Evidence of the experiences of minority- and woman-owned firms outside of M/WBE programs is relevant and probative of the likely results of the County continuing to use only race- and gender-neutral measures. To examine the outcomes throughout Anne Arundel County's Marketplace, we explored two Census Bureau datasets and the government and academic literature relevant to how discrimination in the County's industry market and throughout the wider economy affects the ability of minorities and women to fairly and fully engage in the County's prime contract and subcontract opportunities.

We analyzed the following data and literature:

- The Census Bureau's *American Community Survey* from 2015 through 2019 for the nine-county Anne Arundel County geographic market. This rich data set establishes with greater certainty any causal links between race, gender and economic outcomes. We employed a multiple regression statistical technique to examine the rates at which minorities and women form firms. In general, we found that even after considering potential mitigating factors, business formation rates by Blacks, Hispanics and White women are lower compared to White males. The data indicate that non-Whites and White women receive lower wages and Blacks and White women receive lower business earnings after controlling for possible explanatory factors. These analyses support the conclusion that barriers to business success do affect non-Whites and White women entrepreneurs.
- State of Maryland Industry Data from the Census Bureau's 2017 *Annual Business Survey,* the most recent data available. This dataset indicated large disparities between M/WBE firms and non-M/WBE firms when examining the sales of all firms, the sales of employer firms (firms that employ at least one worker), and the payroll of employer firms.
- Surveys and literature on barriers to access to commercial credit and the development of human capital. These sources further establish that minorities and women continue to face constraints on their entrepreneurial success based on race. These constraints negatively impact the ability of firms to form, to grow, and to succeed. These results support the conclusions drawn from the anecdotal interviews and analysis of the County's contract data that M/WBEs face obstacles to achieving success on contracts outside of M/WBE programs.

All three types of evidence have been found by the courts to be relevant and probative of whether a government will be a passive participant in overall marketplace discrimination without some type of affirmative intervention. This evidence supports the conclusion that the County should consider the use of race- and gender-conscious contract goals to ensure a level playing field for all firms.

D. Business Owners' Experiences in Anne Arundel County's Market and in Doing Business with Anne Arundel County

In addition to quantitative data, anecdotal evidence of firms' marketplace experiences is relevant to evaluating whether the effects of current or past discrimination continue to impede opportunities for M/WBEs such that race-conscious contract goals are needed to ensure equal opportunities to compete for agency prime contracts. This evidence is relevant to the question of whether observed statistical disparities are due to discrimination and not to some other non-discriminatory cause or causes, as well as the likely efficacy of any race- and gender-neutral remedies employed by the County. To explore this type of anecdotal evidence, we received input from 73 participants in four small group and two individual business owner interviews.

Most minority and woman owners reported that they continue to encounter discriminatory attitudes, stereotypes and negative perceptions of their qualifications, professionalism and capabilities from other business owners. The assumption is that minority firms are less qualified. While sometimes subtle, these biases about minorities' and women's lack of competence affect all aspects of their attempts to obtain contracts and to be treated equally in performing contract work. These types of barriers led minorities and women to near unanimous agreement that M/WBE contract goals are necessary to level the playing field and equalize opportunities. The following are brief summaries of the views expressed by many of the participants.

1. Qualitative Evidence of Race and Gender barriers in Anne Arundel County's Market

- Minority and woman owners reported they face biases about their capabilities and competencies.
- New business relationships often involved proving oneself over and over again.
- These types of barriers led minorities and women to almost unanimous agreement that M/WBE goals will be necessary to level the playing field and provide fair and equal opportunities on County prime contracts and subcontracts.

- Most M/WBEs reported that contractors that use them on projects with goals do not use them on projects without goals. One minority owner, however, reported being able to obtain work outside of contract goals.
- Prime contracts were reported to be especially difficult to achieve.

2. Doing Business with Anne Arundel County

- Firms that have done business with Anne Arundel County almost universally reported that the County pays promptly. Change orders, however, were a different story.
- Some County policies and processes were reported to be barriers to getting County work. Contract size was an often-repeated barrier to all small firms. Contract size is a major impediment to M/WBEs performing as prime vendors. Bonding requirements were another impediment to obtaining contracts.
- Many business owners reported that it is difficult to get information on County opportunities and to network with County officials.
- Several owners found it difficult to interface with County decisionmakers. Many participants described entrenched relationships between incumbent firms and County staff as major impediments to obtaining agency work.
- Many M/WBEs had recommendations for how the County should administer a race- and gender-based program. The most widely shared suggestion was the need to monitor the new program to ensure that prime vendors keep their M/WBE contractual commitments. Another recommendation was for the County to conduct more outreach to M/WBEs and small local firms.
- Many prime contractors reported positive experiences with race- and gender-conscious programs. Standard, unrealistic or inflexible goals, however, presented problems that the County should seek to avoid.

E. Recommendations to Ensure Equal Opportunities for a Minority- and Woman-Owned Business Enterprise Program for Anne Arundel County

The study results support the County's compelling interest in implementing a race- and gender-conscious contracting program. The record– both quantitative and qualitative– establishes that M/WBEs in the County's market area continue to experience significant disparities in their access to County contracts and private sector opportunities and to the resources necessary for business success. These results provide the constitutionally required information to sustain a new and broad approach to contracting equity and inclusion.

The findings support the inference that discrimination remains a barrier to full and fair opportunities for all firms, and in the absence of contract goals, M/WBEs suffer large and statistically significant disparities on County funded contracts. Without the use of contract goals to level the playing field, the County would likely function as a "passive participant" in the "market failure" of discrimination. We therefore recommend the implementation of a program that contains the necessary elements for greater success in reducing barriers and that employs national best practices to increase inclusion in government contracting.

As a general matter, Anne Arundel County should model its program on the elements of the DBE Program for federally assisted transportation contracts.[11] Courts have pointed to an agency's reliance on Part 26 as a guide as evidence that the local agency's program is constitutionally narrowly tailored and employs best practices.

Based on case law and national best practices for M/WBE programs, we recommend the following elements of a narrowly tailored M/WBE program.

1. Implement Race- and Gender-Neutral Measures

The courts require that governments use race- and gender-neutral approaches to the maximum feasible extent to address identified discrimination. This is a critical element of narrowly tailoring the program, so that the burden on non-M/WBEs is no more than necessary to achieve the County's remedial purposes. Increased participation by M/WBEs through race-neutral measures will also reduce the need to set M/WBE contract goals and will assist firms to obtain prime contracts with the County. We therefore suggest the following enhancements of the County's current efforts, based on the business owner interviews, the input from senior Anne Arundel County staff, and national best standards for M/WBE programs.

a. Implement an Electronic Contracting Data collection, Monitoring and Notification System

One challenge in the Study was data collection of full and complete prime contract and associated subcontractor records. As is very common, the County did not have the information needed for the inclusion of subcontractor payments in the analysis. Implementation of a good electronic con-

11. 49 C.F.R. Part 26.

tracting data collection, monitoring and notification system is the foundation for a good program and the most critical first step that Anne Arundel County should take to implement a program. The County should immediately procure an electronic data collection system with the following functionality:

- Capability to gather full contract information for all firms.
- Contract/project-specific goal setting (using data from this Study).
- Utilization plan capture for prime contractor and subcontractor utilization plans.
- Contract compliance monitoring for certified and non-certified prime contract and subcontract payments for all formally procured contracts for all tiers of all subcontractors.
- Program report generation that provides data on utilization by industries, race, gender, dollar amount, procurement method, etc.
- An integrated email notification and reminder engine to inform contractors of required actions, including reporting mandates and dates.
- Outreach tools for eBlasts and related communications, and event management.
- Access by authorized County staff, prime contractors and subcontractors to perform all necessary activities.

b. Increase Vendor Communication

Many interviewees expressed frustration with difficulties in accessing information about County contracting opportunities. Even those registered in the County's vendor system reported that they often did not receive timely or useful information.

c. Create an Office of Business Opportunity

Anne Arundel County should create an Office of Business Opportunity to oversee all efforts towards contracting diversity and inclusion. The new Office will build on the work of the Minority Business Enterprise Program already underway. It is important that this new Office report directly to the County Executive[12] and have the same level of authority as other Depart-

12. *See* 49 C.F.R. §26.45 ("You must have a DBE liaison officer, who shall have direct, independent access to your Chief Executive Officer concerning DBE program matters. The liaison officer shall be responsible for implementing all aspects of your DBE program. You must also have adequate staff to administer the program in compliance with this part.").

ments. This independence will signal the importance of this function and provide it with the bureaucratic stature necessary to move new initiatives forward.

To ensure that the County is following best practices for the M/WBE program, staff should be responsible for program elements of the contract award process and contract performance process. This will ensure that the County is following the requirements of the M/WBE program.

d. Increase Vendor Communication and Outreach to M/WBEs and Small Firms

New program initiatives will require increased communication with the contracting community. The County should conduct regularly scheduled vendor outreach events to provide information and address questions regarding upcoming opportunities, as well as facilitate "matchmaking" sessions between prime contractors and subcontractors. These events should include general fairs as well as meetings targeted towards specific industries or communities, e.g., engineering projects.

Another important initiative would be creating an annual contracting forecast on the County's website[13] to permit vendors to plan their work and form teams. While not a quick or easy feature to implement, a page that provides information on upcoming bid opportunities is one race- and gender-neutral measure that will assist all firms to access information.

As is the case with many governments, the study revealed that M/WBEs are receiving few opportunities in many industry codes. We therefore suggest that special outreach for larger projects be conducted to firms in those sectors so that they are aware of opportunities and can make connections with other vendors as subcontractors or joint venture partners. Activities could include targeted emails about future contracts, matchmaking events focusing on those industries, and identification of firms that are not currently certified, but might be eligible for inclusion, to encourage applications.

Further, potential vendors requested training and information on how to do business with Anne Arundel County and on all aspects of contracting. In addition to written materials now on the website, the County could hold virtual or in person sessions and create training videos that provide information on all aspects of County contracting.

13. See, for example, the City of Chicago's Buying Opportunities page. https://www.chicago.gov/city/en/depts/dps/provdrs/contract/svcs/city-of-chicago-consolidated-buying-plan.html [chicago.gov].

e. Focus on Reducing Barriers to M/WBE Prime Contract Awards

Many interviewees reported that their firms would like to perform as prime vendors on County contracts. Several experienced a "good ole' boys" network for County contracts which creates a barrier to their fair access to competitive opportunities. A focus on prime contracting opportunities will reduce the need to set contract goals to meet the County's overall, annual M/WBE goal; this is an important race- and gender-neutral measure that has been approved by several courts. Several steps should be implemented:

- Develop contract specifications with an eye towards unbundling projects into less complex scopes and lower dollar values. Not only will this permit smaller firms to perform in general, it will also reduce the barriers of surety bonding (for construction projects) and financing the jobs (for all industries).
- Review experience requirements with the goal of reducing them to the lowest level necessary to ensure the bidder has adequate experience, perhaps by recognizing similar though not identical types of work, including work performed for other governments and private sector clients.
- Review surety bonding and insurance requirements so that they are no greater than necessary to protect Anne Arundel County's interests. These possible barriers to contracting by small firms have been mentioned by the courts as areas to be considered. Steps might include reducing or eliminating insurance requirements on smaller contracts and removing the cost of the surety bonds from the calculation of the lowest apparent bidder on appropriate solicitations.
- Evaluate the pre-qualification process to ensure that applications are processed in a timely manner and does not serve as a barrier to inclusion of new firms eligible for County contracts.

f. Consider Partnering with Other Agencies and Local Organizations to Provide Bonding, Financing and Technical Assistance Programs

Both M/WBEs and non-M/WBEs requested services to assist M/WBEs to increase their skills and capabilities. Bonding and financing programs assist small firms by providing loans and issuing surety bonds to certified contractors, with low interest rates. The programs may also provide general banking services on favorable terms to applicant firms.

Technical assistance with critical business skills such as estimating, bidding, accounting, marketing, legal compliance, etc. could be made available in conjunction with the existing efforts of Anne Arundel County area organizations such as chambers of commerce, professional associations, community-based organizations, etc. Partnering with these types of programs will allow the County to leverage their expertise, knowledge and experience in assisting these types of businesses.

2. Adopt a Minority- and Woman-Owned Business Enterprise Program

The study's results support the determination that the County has a strong basis in evidence to implement a race- and gender-conscious M/WBE program. The record– both quantitative and qualitative– establishes that M/WBEs in the County's market area experience significant disparities in their access to contracts without M/WBE goals, private sector opportunities and to resources necessary for business success. The disparity results are stark:

Table 1-5: Disparity Ratios by Demographic Group

	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE
Disparity Ratio	31.7%‡***	27.3%‡***	10.0%‡	81.1%	65.7%‡***	36.6%‡***	118.0%***

Source: CHA analysis of the County data.
‡ Indicates substantive significance
****Indicates statistical significance at the 0.001 level*[14]

These results fully meet the requirement of strict constitutional scrutiny that the agency establish its compelling interest in remedying discrimination through large and statistically significant disparities between its utilization of M/WBEs and their availability.

The results of the economy-wide analyses are equally compelling. The data show very large disparities between M/WBE firms and non-M/WBE firms and indicate lower wages and business earnings for Blacks, Hispanics and White women compared to White men. Our interviews with 73 individuals about their experiences in the County's market area further revealed the existence of persistent barriers on the basis of race and/or gender. Many M/WBEs reported that they still encounter barriers based on race and/or gender and that without affirmative intervention to increase opportunities through contract goals, they will continue to be denied fair and full opportunities to compete.

We therefore recommend the adoption of a new program with the following major elements.

14. Appendix C discusses the meaning and role of statistical significance.

a. Adopt an Overall, Annual M/WBE Goal for a New M/WBE Program

The County should set an annual, overall target for M/WBE utilization in County contracts (prime contracts and subcontracts combined). The availability estimates in Chapter III should be the basis for consideration of overall, annual spending targets for County funds. We found the weighted availability of M/WBEs to be 22.1%. This can be the County's goal (or a figure rounded to a whole number) for its overall spending with certified firms across all industry categories.

b. Use the Study to Set M/WBE Contract Goals

In addition to setting an overall, annual target, Anne Arundel County should use the study's detailed unweighted availability estimates as the starting point for contract specific goals. As discussed in Chapter II of the study, the County's constitutional responsibility is to ensure that goals are narrowly tailored to the specifics of the project. A comprehensive contracting data collection, monitoring and notification system should include a goal setting module that incorporates the study data as its source.

c. Adopt Narrowly Tailored Program Eligibility Criteria

We recommend that all racial and ethnic groups and White women be eligible for participation in the program on a presumptive basis. The study found that each racial and ethnic group and White women, and M/WBEs as a whole, continue to suffer disparities in their access to County contracts. Program eligibility should be limited to firms that have a business presence in the County's market area, as established by this study, or that can demonstrate their attempts to do business within the County's market area.[15]

The County's new program should accept M/W/DBE certifications from the Maryland Unified Certification Program and the State of Maryland's MBE program. It will be the County's constitutional responsibility, to ensure that the certifications it accepts are from narrowly tailored programs with demonstrated integrity, *i.e.*, programs that set limits on the amount of a firm's annual, gross receipts and on the personal net worth of the applicant's owner.

d. Develop Compliance and Monitoring Policies and Procedures

To ensure that the new M/WBE program sets narrowly tailored goals and eligibility requirements, the County should adopt contract award and per-

15. The County's market consists of Anne Arundel, Baltimore, Howard, Prince George's, Baltimore (city), Montgomery, Calvert, Queen Anne's and Carroll Counties.

formance standards for program compliance and monitoring that are likewise narrowly tailored and embody best practices. Elements should include the following:

- Clearly delineated policies and forms by which a bidder or proposer can establish that it has either met the contract goal(s) or made good faith efforts to do so.
- Rules for how participation by certified firms will be counted towards the goal(s). For example, a firm must perform a "commercially useful function" in order to be counted for goal attainment. The manner in which various types of goods or services will be credited towards meeting goals also must be clearly spelled out. Further, certified prime vendors should be permitted to count their self-performance towards meeting the contract goal.
- Contract monitoring policies, procedures and data collection processes. This must include tracking the utilization of certified and non-certified subcontractors at all tiers of performance and monitoring prompt payment obligations of prime contractors to subcontractors. County staff must perform site visits to meet these requirements.
- Criteria and processes for how non-performing, certified firms can be substituted during performance.
- Contract closeout procedures and standards for sanctions for firms that fail to meet their contractual requirements under the program.
- A process to appeal adverse determinations under the program that meets due process standards.

e. Provide Training for all County Staff with Contracting Responsibilities or Vendor Interface

These significant changes will require a County-wide roll out of new initiatives, as well as training of all Anne Arundel County personnel with contracting responsibilities and vendor management. In addition to providing technical information on compliance, it is also an opportunity to reaffirm the County's commitment to supplier diversity and to encourage all departments to buy into these values and objectives.

f. Provide Training for Vendors on the New Program

It will be important for the County to provide some formal training on these proposed new program elements. This could consist of in-person sessions, as well as web-based seminars that would answer questions such as who is eligible; how to become certified; how to meet goals or establish good faith efforts to do so; how to use the new electronic system; prompt payment obligations; subcontractor substitution; and contract close out. Information should further cover resources to assist small businesses, such as a loan program, accessing local Procurement Technical Assistance Centers, and other support.

3. Develop Performance Standards and Review Timetables

To meet the requirements of strict constitutional scrutiny and to ensure that best practices in program administration continue to be applied, the County should conduct a full and thorough review of the evidentiary basis for a new M/WBE program approximately every five to seven years.

Anne Arundel County should adopt a sunset date when the M/WBE program will end unless reauthorized. This is a constitutional requirement to meet the narrow tailoring test that race- and gender-conscious measures be used only when necessary. A new disparity study or other applicable research should be commissioned in time to meet the sunset date.

The County should develop quantitative performance measures for overall success of its race- and gender-neutral measures and any M/WBE program to evaluate the effectiveness of various approaches in reducing the systemic barriers identified by the study. In addition to meeting goals, possible benchmarks might be:

- Progress towards meeting the overall, annual M/WBE goal.
- The number of bids or proposals, industry and the dollar amount of the awards and the goal shortfall, where the bidder was unable to meet the goals and submitted good faith efforts to do so.
- The number, dollar amount and the industry code of bids or proposals rejected as non-responsive for failure to make good faith efforts to meet the goal.
- The number, industry and dollar amount of M/WBE substitutions during contract performance.
- Increased bidding by certified firms as prime vendors.
- Increased prime contract awards to certified firms.
- Increased "capacity" of certified firms, as measured by bonding limits, size of jobs, profitability, complexity of work, etc.
- Increased variety in the industries in which M/WBEs are awarded prime contracts and subcontracts.

II. Legal Standards for Local Government Contracting Equity Programs

A. Summary of Constitutional Equal Protection Standards

To be effective, enforceable, and legally defensible, a race-conscious procurement program that is designed to promote equity in public sector contracting must meet the judicial test of constitutional "strict scrutiny".[16,17] Strict scrutiny constitutes the highest level of judicial review.[18] Strict scrutiny analysis is comprised of two prongs:

1. The government must establish its "compelling interest" in remediating 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.
2. Any remedies adopted must be "narrowly tailored" to that discrimination; the program must be directed at the types and depth of discrimination identified.[19]

The compelling governmental interest prong can be met through two types of proof:

1. Quantitative or statistical evidence of the underutilization of minority-owned or woman-owned firms by the governmental agency and/or throughout the governmental agency's geographic and industry market area compared to their availability in the market area.
2. Qualitative or anecdotal evidence of race-based or gender-based barriers to the full and fair participation of minority-owned and woman-owned firms in

16. *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).
17. The County commissioned this Study to examine whether minority- and woman-owned business enterprises have equal opportunities to compete for the County's prime and subcontracting opportunities. The Study will be used to review the County's current policies and activities and to make recommendations for future initiatives and enhancements.
18. Strict scrutiny is used by courts to evaluate governmental action that classifies persons on a "suspect" basis, such as race. It is also used in actions purported to infringe upon fundamental rights. Legal scholars frequently note that strict scrutiny constitutes the most rigorous form of judicial review. *See, for example,* Richard H. Fallon, Jr., *Strict Judicial Scrutiny,* 54 UCLA Law Review 1267, 1273 (2007).
19. *Croson*, 488 U.S. at 510; *H.B. Rowe Co., v. W. Lyndo Tippett, NCDOT,* 615 F. 3d 233, 243 (4th Cir. 2010).

the market area or in seeking contracts with the governmental agency.[20] Anecdotal data can consist of interviews, surveys, public hearings, academic literature, judicial decisions, legislative reports, and other information.

The narrow tailoring prong has been met by satisfying the following five factors. These elements ensure that the remedy "fits" the evidence:

1. The necessity of relief;[21]
2. The efficacy of race-neutral remedies at overcoming identified discrimination;[22]
3. The flexibility and duration of the relief, including the availability of waiver provisions;[23]
4. The relationship of numerical goals to the relevant labor market;[24] and
5. The impact of the relief on the rights of third parties.[25]

In *Adarand v. Peña*,[26] the United States Supreme Court extended the analysis of strict scrutiny, the most exacting standard of review, to race-conscious federal enactments such as the United States Department of Transportation ("USDOT") Disadvantaged Business Enterprise ("DBE") program for federally assisted transportation contracts. Similar to the local government context, the national legislature must have a compelling governmental interest for the use of race, and the remedies adopted must be narrowly tailored to that evidence.[27,28]

Most federal courts, including the Fourth Circuit,[29] have subjected preferences for Woman-Owned Business Enterprises ("WBEs") to "intermediate scrutiny".[30] The Fourth Circuit has ruled that the intermediate scrutiny standard is met by showing that the discriminatory means employed are substantially related to the achievement of those objectives.[31] Gender-based classifications must be supported by an

20. *Id.* at 509.
21. *Id*. at 507.
22. *United States v. Paradise,* 480 U.S. 149, 171 (1987).
23. *Id*.
24. *Id*.
25. *Croson*, 488 U.S. at 506.
26. *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200 (1995) ("*Adarand III*").
27. *See, for example, Croson*, 488 U.S. at 492-493; *Adarand III*, 515 U.S. at 227; *see generally Fisher v. University of Texas*, 133 S. Ct. 2411 (2013).
28. Programs that fail to satisfy the constitutional strict scrutiny standard generally fail to meet the compelling government interest requirement, the narrow tailoring requirement, or both. Affirmative action programs are among the most heavily litigated issues involving race and the United States Constitution. Nonetheless, many of these programs meet both prongs, particularly those based upon solid statistical and anecdotal data. *See*, Mary J. Reyburn, *Strict Scrutiny Across the Board: The Effect of Adarand Constructors, Inc. v. Pena on Race-Based Affirmative Action Programs,* 45 Catholic University L. Rev. 1405, 1452 (1996).
29. *H.B. Rowe*, 615 F.3d at 242; *W.H. Scott Construction Co., Inc., v. City of Jackson, Mississippi*, 199 F.3d 206, 215 n.9 (5th Cir. 1999).

"exceedingly persuasive justification" and be "substantially related to the objective".[32] The quantum of evidence necessary to satisfy intermediate scrutiny is less than that required to satisfy strict scrutiny. However, appellate courts have applied strict scrutiny to the gender-based presumption of social disadvantage in reviewing the constitutionality of the USDOT DBE program[33] or have held that the results would be the same under strict scrutiny.[34]

Classifications not based upon a suspect class (race, ethnicity, religion, national origin or gender) are subject to the lesser standard of review referred to as "rational basis" scrutiny.[35,36] The courts have held there are no equal protection implications under the Fourteenth Amendment of the United States Constitution for groups not subject to systemic discrimination.[37] In contrast to strict scrutiny and to intermediate scrutiny, rational basis means the governmental action or statutory classification must be "rationally related" to a "legitimate" government interest.[38]

The strict scrutiny standard is a substantial burden but not automatically fatal in fact. A governmental agency need not conclusively prove the existence of past or present racial discrimination to establish a strong basis in evidence for concluding that remedial action is necessary to the discrimination. It may meet its burden by relying on a significant statistical disparity between the availability of qualified, willing, and able minority subcontractors. The courts further require that such evidence be "corroborated by significant anecdotal evidence of racial discrimination."[39]

Unlike most legal challenges, the government defendant bears the initial burden of producing "strong evidence" in support of its race-conscious program.[40] As held

30. *See, e.g., Associated Utility Contractors of Maryland, Inc. v. Mayor and City Council of Baltimore and Maryland Minority Contractors Ass'n*, 83 F. Supp. 2d 613, 620 (D. Md. 2000) ("*Baltimore I*"); *W.H. Scott Construction*, 199 F.3d at 206, 215; *Engineering Contractors Ass'n of South Florida, Inc. v. Metropolitan Dade County*, 122 F.3d 895, 907-911 (11th Cir. 1997) ("*Engineering Contractors II*"); *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, 1519 (10th Cir. 1994) ("*Concrete Works II*"); *Contractors Ass'n of Eastern Pennsylvania v. City of Philadelphia*, 6 F.3d 990, 1009-1011 (3rd Cir. 1993) ("*Philadelphia II*"); *Coral Construction Co. v. King County*, 941 F.2d 910, 930-931 (9th Cir. 1991).
31. *H.B. Rowe,* 615 F. 3d at 242.
32. *Cf. United States v. Virginia,* 518 U.S. 515, 532 n.6 (1996).
33. *Northern Contracting, Inc. v. Illinois Department of Transportation,* 473 F.3d 715, 720 (7th Cir. 2007), ("*Northern Contracting III*").
34. *Western States Paving Co., Inc. v. Washington Department of Transportation,* 407 F.3d 983 (9th Cir. 2005), cert. denied, 546 U.S. 1170 (2006).
35. *Coral Construction Co. v. King County*, 941 F.2d. 910, 921 (9th Cir. 1991); *see generally Equality Foundation v. City of Cincinnati,* 128 F. 3d 289 (6th Cir. 1997).
36. The Supreme Court first introduced this level of scrutiny in *Nebbia v. New York*, 291 U.S. 502, 537 (1934). The Court held that if laws passed have a reasonable relationship to a proper legislative purpose and are neither arbitrary nor discriminatory, the requirements of due process are satisfied.
37. *See generally United States v. Carolene Products Co*., 304 U.S. 144 (1938).
38. *Heller v. Doe*, 509 U.S. 312, 320 (1993).
39. *H.B. Rowe,* 613 F. 3d at 241, quoting *Maryland Troopers Association, Inc. v. Evans,* 993 F.2d 1072, 1077 (4th Cir. 1993).

by the Fourth Circuit,[41] the plaintiff must then proffer evidence to rebut the government's case, and bears the ultimate burden of production and persuasion that the race-conscious program is unconstitutional.[42] "[W]hen the proponent of a race-conscious plan produces sufficient evidence to support an inference of discrimination, the plaintiff must rebut that inference in and the utilization of such subcontractors by the governmental entity or its prime contractors in order to prevail."[43]

A plaintiff "cannot meet its burden of proof through conjecture and unsupported criticism of [the government's] evidence."[44] To successfully rebut the government's evidence, a plaintiff must introduce "credible, particularized evidence" that rebuts the government's showing of a strong basis in evidence.[45] For example, in the challenge to the Minnesota and Nebraska DBE programs, "plaintiffs 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, federally assisted highway contracts. Therefore, they failed to meet their ultimate burden to prove that the USDOT DBE program is unconstitutional on this ground."[46] When the statistical information is sufficient to support the inference of discrimination, the plaintiff must prove that the statistics are flawed.[47] A plaintiff cannot rest upon general criticisms of studies or other related evidence; it must meet its burden that the government's proof is inadequate to meet strict scrutiny, rendering the legislation or government program illegal.[48]

To meet strict scrutiny, studies such as those listed in the recent U.S. Department of Justice Report,[49] as well as this Report, have been conducted to gather the statistical and anecdotal evidence necessary to support the use of race-conscious and gender-conscious measures to combat discrimination. These are commonly

40. *Aiken v. City of Memphis*, 37 F.3d 1155, 1162 (6th Cir. 1994).
41. *See generally Podberesky v. Kirwan*, 38 F. 3d 147 (4th Cir. 1994); *H.B Rowe*, 615 F.3d 233 (4th Cir. 2010).
42. *See, e.g., Associated Utility Contractors v. Baltimore*, 83 F. Supp. 2d at 620; *W.H. Scott Construction*, 199 F.3d at 206, 215; *Engineering Contractors II*, 122 F. 3d at 907-911; *Concrete Works II*, 36 F.3d at 1519; *Philadelphia II*, 6 F. 3d at 1009-1011; *Coral Construction*, 941 F. 2d at 930-931.
43. *Engineering Contractors II*, 122 F.3d at 916.
44. *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 989 (10th Cir. 2003), *cert. denied*, 540 U.S. 1027 (10th Cir. 2003) ("*Concrete Works IV*").
45. *H.B. Rowe*, 615 F.3d at 241-242; *Midwest Fence Corp. v. U.S. Department of Transportation, Illinois Department of Transportation, Illinois State Toll Highway Authority*, 84 F. Supp. 3d 705 (N.D. Ill. 2015) ("*Midwest Fence I*"), aff'd, 840 F.3d 932 (7th Cir. 2016) ("*Midwest Fence II*").
46. *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation,* 345 F.3d. 964, 970 (8th Cir. 2003), cert. denied, 541 U.S. 1041 (2004).
47. *Coral Construction*, 941 F. 2d at 921; *Engineering Contractors II*, 122 F.3d at 916.
48. *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147 (10th Cir. 2000), *cert. granted*, 532 U.S. 941, 166, *then dismissed as improvidently granted*, 534 U.S. 103 (2001) ("*Adarand VII*"); *Engineering Contractors II*, 122 F.3d at 916; *Concrete Works II,* 36 F.3d at 1513, 1522-1523; *Webster v. Fulton County, Georgia*, 51 F.Supp.2d 1354, 1364 (N.D. Ga. 1999), *aff'd per curiam*, 218 F. 3d 1267 (11th Cir. 2000); *see also Wygant v. Jackson Board of Education*, 476 U.S. 267, 277-278 (1986).

referred to as “disparity studies” because they analyze any disparities between the opportunities and experiences of minority-owned and woman-owned firms and their actual utilization compared to White male-owned businesses. More rigorous studies also examine the elements of the governmental agency’s program to determine whether it is sufficiently narrowly tailored. However, “[t]here is no ‘precise mathematical formula to assess the quantum of evidence that rises to the Croson ‘strong basis in evidence benchmark.’”[50] The following is a detailed discussion of the legal parameters and the requirements for conducting studies to support legally defensible programs.

B. Elements of Strict Constitutional Scrutiny

In its decision in *City of Richmond v. J.A. Croson Co.*, the United States Supreme Court established the constitutional contours of permissible race-conscious public contracting programs. Reversing long established Equal Protection jurisprudence,[51] the 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 inures to the benefit of these victims of historic, invidious discrimination. Strict scrutiny requires that a government entity prove both its “compelling governmental interest” in remediating identified discrimination based upon “strong evidence”[52] 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 (“Plan”) because it failed to satisfy the strict scrutiny analysis applied to “race-based” government programs. The City’s “setaside” Plan required prime contractors awarded City construction contracts to subcontract at least 30% of the dollar amount of contracts to one or more Minority-Owned Business Enterprises

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49. A recent Report issued by the U.S. Department of Justice’s Civil Rights Division, https://www.justice.gov/crt/page/file/1463921/download, provides a summary of recent evidence that justifies the continued appropriate use of race or sex by federal agencies to remedy the current effects of past discrimination in federal contracting programs. The Report summarizes evidence since 2010. It notes that a substantial body of quantitative and qualitative evidence demonstrates the continued pervasiveness of discriminatory barriers that impede the full and fair participation of minority- and woman-owned businesses in government contracting. The Appendices identify the congressional hearings from 2010 to 2021 that addressed challenges facing businesses owned by M/WBEs; dozens of disparity studies published between 2010 and 2021; and additional studies and documentation pertaining to the issues. In addition to discussing the cases cited in this Chapter, the report includes a summary of recent challenges to federal race-and gender-conscious COVID-related relief, which included several race-and gender-conscious remedial plans to assist businesses owned by women, minorities, and veterans in the restaurant and agricultural venues. The Report identifies dozens of disparity studies published between 2010 and 2021 and includes recent CHA studies.
50. *H.B. Rowe,* 615 F.3d 233 at 241, *quoting Croson,* 488 U.S. at 504 and *Wygant v. Jackson Board of Education,* 476 U.S. 267, 277 (1986).
51. U.S. Const. Amend. XIV, §1.
52. There is no precise mathematical formula to assess what rises to the level of “strong evidence”.

("MBEs").[53] A business located anywhere in the nation was eligible to participate so long as it was at least 51% owned and controlled by minority citizens or lawfully-admitted permanent residents.

The Plan was adopted following a public hearing during which no direct evidence was presented that the City had discriminated on the basis of race in contracts or that its prime contractors had discriminated against minority subcontractors. The only evidence before the City Council was: (a) Richmond's population was 50% Black, 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) generalized 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 active participation in discrimination:

> [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.[54]

Strict scrutiny of race-conscious remedies is required to determine whether racial classifications are in fact motivated by notions of racial inferiority or blatant racial politics. This highest level of judicial review "smokes out" illegitimate uses of race by ensuring that the legislative body is pursuing an important enough goal to warrant use of a highly suspect tool.[55] It also ensures that the means chosen "fit" this compelling goal so closely that there is little or no likelihood that the motive for the classification was illegitimate racial prejudice or stereotype. The Court made clear that strict scrutiny is designed to expose racial stigma; racial classifications are said to create racial hostility if they are based on notions of racial inferiority.

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53. The City described its Plan as remedial. It was enacted to promote greater participation by minority business enterprises in public construction projects.
54. 488 U.S. at 491-92.
55. *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 decisionmaker for the use of race in that particular context.").

Richmond's evidence was found to be lacking in every respect.[56] 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 Blacks' 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, the City 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 of the United States Constitution. Local governments are further constrained by the Amendment's Equal Protection Clause.

> 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."[57]

This analysis was applied only to Blacks. The Court emphasized that there was "absolutely no evidence" of discrimination 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."[58]

Having found that Richmond had not presented evidence in support of its compelling interest in remediating discrimination—the first prong of strict scrutiny—the Court made 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% quota had no basis in evidence, and

56. The City cited past discrimination and its desire to increase minority business participation in construction projects as the factors giving rise to the Plan.
57. *Croson*, 488 U.S. at 510.
58. *Id*.

was applied regardless of whether the individual MBE had suffered discrimination.[59] The Court noted that the City "does not even know how many MBEs in the relevant market are qualified to undertake prime or subcontracting work in public construction projects."[60]

Recognizing that her opinion might be misconstrued to 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.[61]

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.[62] 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.

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 Blacks in the City's population to a requirement that only firms that bid or have the "capacity" or "willingness" to bid on a particular contract at a particular time can

59. *See Grutter*, 529 U.S. at 336-337 (quotas are not permitted; race must be used in a flexible, non-mechanical way).
60. *Croson,* 488 U.S. at 502.
61. *Id*. at 509 (citations omitted).
62. *Id*. at 502.

be considered in determining whether discrimination against Black businesses infects the local economy.[63]

This argument has been rejected explicitly by some courts. In denying the plaintiff's summary judgment motion to enjoin the City of New York's Minority-Owned and Woman-Owned Business Enterprise ("M/WBE") construction ordinance, the court stated:

> [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 (0.67%). There were no statistics presented regarding the 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*.[64]

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 goals based upon the availability of MBEs to perform the scopes of the contract in the government's local market area. In contrast, the USDOT DBE program avoids these pitfalls. 49 C.F.R. Part 26 "provides for a flexible system of contracting goals that contrasts sharply with the rigid quotas invalidated in *Croson*."

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

63. *See, for example, Northern Contracting III*, 473 F.3d at 723.
64. *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 (2nd Cir. 1992) ("Croson made only broad pronouncements concerning the findings necessary to support a state's affirmative action plan"); *cf. Concrete Works II*, 36 F.3d at 1528 (City may rely on "data reflecting the number of MBEs and WBEs in the marketplace to defeat the challenger's summary judgment motion").

C. Establishing a "Strong Basis in Evidence" for an Anne Arundel Program for M/WBEs

The case law on the U.S. Department of Transportation's DBE program should guide the County's program for locally funded contracts.[65] Whether the program is called an M/WBE program or a DBE program or any other moniker, the strict scrutiny test applies. The USDOT DBE program regulations[66] have been upheld by every court that has reviewed them[67], and local programs for Minority- and Woman-Owned Business Enterprises will be judged against the following legal framework.[68]

All courts have held that Congress had strong evidence of widespread racial discrimination in the construction industry. This included:

- Disparities between the earnings of minority-owned firms and similarly situated non-minority owned firms;
- Disparities in commercial loan denial rates between Black 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.[69]

The regulations were facially narrowly tailored. Unlike the prior program,[70] the revised Part 26 provides that:

- The overall goal must be based upon demonstrable evidence of the number of ready, willing, and able DBEs.
- The goal may be adjusted to reflect the availability of DBEs "but for" the effects of the DBE program and of discrimination.

65. The North Carolina Department of Transportation's M/WBE program largely mirrored the federal DBE program and has withstood an equal protection challenge. See Fourth Circuit case law discussion section of this Chapter.
66. 49 C.F.R. Part 26.
67. *See, for example, Midwest Fence II*, 840 F.3d at 932; *Northern Contracting III*, 473 F.3d at 715; *Associated General Contractors of America, San Diego Chapter, Inc., v. California Department of Transportation, et al.*, 713 F. 3d 1187, 1198 (9th Cir. 2013); *Western States Paving*, 407 F.3d at 983, 994; *Adarand VII*, 228 F.3d at 1147; *M.K. Weeden Construction v. Montana Department of Transportation*, 2013 WL 4774517 (D. Mont.) (September 4, 2013).
68. *Midwest Fence II*, 840 F.3d. at 953.
69. *Western States Paving,* 407 F.3d at 992-93.
70. The DBE program regulation in effect prior to March of 1999 was set forth in 49 C.F.R. Part 23.

- The recipient must meet the maximum feasible portion of the goal through race-neutral measures.
- The use of quotas and setasides is limited to only those situations where there is no other remedy.
- The overall, triennial goals are to be adjusted during the year to remain narrowly tailored.
- 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."[71]

It is well established that disparities between a governmental agency's utilization of M/WBEs and their availability in the relevant marketplace provide a sufficient basis for the consideration of race-conscious or gender-conscious remedies. Proof of the disparate impacts of economic factors such as access to capital and bonding on M/WBEs[72] and the disparate treatment of such firms by actors critical to their success will 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.[73] 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.[74] A 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, has been held to support the use of race-conscious goals.[75]

Croson's admonition that "mere societal" discrimination is not enough to meet strict scrutiny is met 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 of the identified discrimination is irrelevant." There is no requirement to "show the existence of spe-

71. *Sherbrooke*, 345 F.3d. at 973.
72. *Northern Contracting, Inc. v. Illinois Department of Transportation, et al*, 2005 U.S. Dist. LEXIS 19868 at *69 (Sept. 8, 2005) ("*Northern Contracting II*").
73. *Adarand VII*, 228 F.3d at 1166 ("statistical and anecdotal evidence are appropriate").
74. *Id*.
75. *Northern Contracting II* at 80 ("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 the presence of discrimination); *see Croson*, 488 U.S. at 492.

cific discriminatory policies and that those policies were more than a reflection of societal discrimination."[76]

The County need not prove that it is itself guilty of discrimination to meet its burden. In upholding Denver's M/WBE construction program, the Tenth Circuit stated that 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."[77] 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 Denver projects with M/WBE goals but refused to use them on private projects without goals.

The following are the necessary disparity study elements to determine the constitutional validity of race-conscious and gender-conscious local programs. Programs based upon studies similar to the methodology employed for this Report have been deemed a rich and relevant source of data and have been upheld repeatedly. This includes 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.[78]

1. Define Anne Arundel County's Market Area

The first step is to determine the market area in which the County operates. *Croson* states that a state or local government may only remedy discrimination within its own contracting market area. The City of Richmond was specifically faulted for including minority contractors from across the country in its program, based on national data considered by Congress.[79] The County must therefore empirically establish the geographic and product dimensions of its contracting and procurement market area to ensure that the program meets strict scrutiny. This is a fact driven inquiry; it may or may not be the case that the market area is the government's jurisdictional boundaries.[80] This Study employs long established economic principles to empirically establish the County's geographic and product market area to ensure that any program based on the Study satisfies strict scrutiny.

76. *Concrete Works IV*, 321 F.3d at 976.
77. *Id*. at 977.
78. The Illinois Department of Transportation's ("IDOT's") DBE program was upheld based on this approach combined with other economy-wide and anecdotal evidence. 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. *Northern Contracting III,* 473 F.3d at 720. The USDOT's institutional guidance for Part 26 refers approvingly to this case. https://www.transportation.gov/sites/dot.gov/files/docs/Western_States_Paving_Company_Case_Questions_and_Answers.pdf.
79. *Croson*, 488 U.S. at 508.
80. *Concrete Works II*, 36 F.3d at 1520 (to confine data to strict geographic boundaries would ignore "economic reality").

A commonly accepted definition of geographic market area for disparity studies is the locations that account for at least 75% of the agency's contract and subcontract dollar payments.[81] Likewise, the accepted approach is to analyze those detailed industries that make up at least 75% of the prime contract and associated subcontract payments for the Study period.[82] This produces the utilization results within the geographic market area.[83]

2. Determine Anne Arundel County's Utilization of M/WBEs

The Study should next determine the County's utilization of M/WBEs in its market area. Generally, this analysis should be limited to formally procured contracts, since it is unlikely that it is realistic or useful to set goals on small dollar purchases. Developing the file for analysis involves the following steps, regardless of funding source:

1. Develop the Initial Contract Data File. This involves first gathering the County's records of its payments to prime contractors, and if available, associated subcontractors.
2. Develop the Sample Contract Data File, if necessary. If the Initial Contract Data File is too large to complete all the missing contract records, a sample should be drawn. Standard statistical procedures should be utilized that result in a sample whose basic parameters (distribution of the number of contracts and the value of contract dollars) mirror the broad industry sectors (*i.e.*, construction; construction-related services; goods; and services) in the Initial Contract Data File. In addition, the total number of contracts must allow for a statistically representative sample at the 95% confidence level and a five percent confidence interval. These parameters are the norm in statistical sample procedures.
3. Develop the Final Contract Data File. Whatever data are missing (often race and gender ownership, North American Industry Classification System ("NAICS") or other industry codes, work descriptions or other important information not collected by the agency) must be fully reconstructed by the consultant. While painstaking and labor intensive, this step cannot be skipped. Using surveys is unlikely to yield sufficient data, and so each contract must be examined, and the record completed to ensure a full and accurate picture of the agency's activities. It is also important to research whether a firm that has an address outside the

81. J. Wainwright and C. Holt, *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*, National Academies of Sciences, Engineering, and Medicine, 2010 ("*National Disparity Study Guidelines*").
82. *Id*.
83. *See National Disparity Study Guidelines*, at 29-30. For this Report, we found the County's market area to be Anne Arundel, Baltimore, Howard, Prince George's, Baltimore (city), Montgomery, Calvert, Queen Anne's and Carroll counties. Please see Chapter III for further discussion.

market area has a location in the market area (contract records often have far flung addresses for payments). All necessary data for at least 80% of the contract dollars in the final contract data files should be collected to ensure a comprehensive file that mirrors the County's contracting and procurement activities.

3. Determine the Availability of M/WBEs in Anne Arundel County's Market Area

A Study must estimate the availability of minorities and women in the County's market area to participate in the County's contracts as prime contractors and associated subcontractors. Based on the product and geographic utilization data, the Study should calculate unweighted and weighted M/WBE availability estimates of ready, willing and able firms in the County's market. These results will be a narrowly tailored, dollar-weighted average of all the underlying industry availability numbers; larger weights will be applied to industries with relatively more spending and lower weights applied to industries with relatively less spending. The availability figures should be sub-divided by race, ethnicity, and gender.

The availability analysis involves the following steps:

1. The development of the Merged Business Availability List. Three data sets are used to develop the Merged Business Availability List:
2. The firms in the M/W/DBE Master Directory developed for the County. This methodology includes both certified firms and non-certified firms owned by minorities or women.[84] The Master Directory consists of all available government and private directories, limited to firms within the County's' geographic and product market.
3. The firms contained in the County's contract data files. This will require the elimination of any duplications because a firm might have received more than one contract for work in a given NAICS code during the Study period.
4. Firms extracted from the Dun & Bradstreet MarketPlace/Hoovers database, using the relevant geographic and product market definitions.
5. The estimation of unweighted availability. The Merged Business Availability List will be the available universe of relevant firms for the Study. This process will significantly improve the identification of minority-owned and woman-owned businesses in the business population. Race and sex must be assigned to any firm not already classified.[85] This will produce estimates of minority and woman business

84. *Id*. at 33-34.

availability in markets for each NAICS code in the product market; for woman and minority business availability for all NAICS codes combined; and for the broad industry categories of goods, services and construction. The detailed results should also be the basis for contract specific goal setting methodology.

6. The estimation of weighted availability. Using the weights from the utilization analysis, the unweighted availability should be adjusted for the share of spending in each NAICS code. The unweighted availability determination will be weighted by the share of dollars the agency actually spends in each NAICS code, derived from the utilization analysis. These resulting weighted availability estimates will be used in the calculation of disparity indices for contracts.

   This adjustment is important for two reasons. First, disparity analyses compare utilization and availability. The utilization metrics are shares of dollars. The unweighted availability metrics are shares of firms. In order to make comparable analyses, the dollar shares are used to weight the unweighted availability. Second, any examination of the overall usage of available firms must be conducted with an understanding of what NAICS codes received what share of agency spending. Absent this, a particular group's availability share (high or low) in an area of low spending would carry equal weight to a particular group's availability share (high or low) in an area of large spending.

This three-part methodology for estimating availability is usually referred to as the "custom census" approach with refinements. This approach is favored for several reasons. As recognized by the courts and the *National Disparity Study Guidelines*,[86] this methodology in general is superior to other methods for at least four reasons.

- First, it provides an internally consistent and rigorous "apples to apples" comparison between firms in the availability numerator and those in the denominator. Other approaches often have different definitions for the firms in the numerator (e.g., certified M/WBEs or firms that respond to a survey) and the denominator (e.g., registered vendors or the Census Bureau's County Business Patterns data).
- Second, by examining a comprehensive group of firms, it "casts a broader net" beyond those known to the agency. As held by the federal court of

85. We note this is an improvement over the approach described in the *National Disparity Study Guidelines*, which recommended a survey to assign classifications. While it is more labor intensive to actually assign race, gender and industry code to each firm than using a mathematical formula derived from survey results, it greatly improves the accuracy of the assignments, resulting in more narrowly tailored results.
86. *National Disparity Study Guidelines*, at 57-58.

appeals in finding the Illinois Department of Transportation's program to be constitutional, the "remedial nature of [DBE programs] militates in favor of a method of D/M/W/SBE availability calculation that casts a broader net" than merely using bidders lists or other agency or government directories. A broad methodology is also recommended by the USDOT for the federal DBE program, which has been upheld by every court.[87] A custom census is less likely to be tainted by the effects of past and present discrimination than other methods, such as bidders lists, because it seeks out firms in the agency's market areas that have not been able to access its opportunities.

- Third, this approach is less impacted by variables affected by discrimination. Factors such as firm age, size, qualifications, and experience are all elements of business success where discrimination would be manifested. Several courts have held that the results of discrimination – which impact factors affecting capacity – should not be the benchmark for a program designed to ameliorate the effects of discrimination. They have acknowledged that minority-owned and woman-owned firms 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.[88]
- Fourth, this methodology has been upheld by every court that has reviewed it, including the failed challenge to the Illinois Department of Transportation's DBE program[89] and the more recent successful defense of the Illinois State Toll Highway's DBE program.[90]

Other methodologies relying only on vendor or bidder lists may overstate or understate availability as a proportion of the County's actual markets because they reflect only the results of the governmental agency's own activities, not an accurate portrayal of marketplace behavior. Other methods of whittling down availability by using assumptions based on surveys with limited response rates or guesses about firms' capacities easily lead to findings that woman and minority businesses no longer face discrimination or are unavailable, even when the firm is actually working on agency contracts.

87. *See Tips for Goal Setting in the Disadvantaged Business Enterprise (DBE) Program*, https://www.transportation.gov/sites/dot.gov/files/docs/Tips_for_Goal-Setting_in_DBE_Program_20141106.pdf.
88. For a detailed discussion of the role of capacity in disparity studies, see the *National Disparity Study Guidelines,* Appendix B, "Understanding Capacity".
89. *Northern Contracting III*, 473 F.3d at 721.
90. *See generally Midwest Fence II*, 840 F.3d 932; *Northern Contracting III*, 473 F.3d 715.

Many plaintiffs have tried to argue that studies must somehow control for "capacity" of M/WBEs to perform specific agency contracts. The definition of "capacity" has varied based upon the plaintiff's particular point of view, but it has generally meant firm age, firm size (full time employees), firm revenues, bonding limits and prior experience on agency projects (no argument has been made outside of the construction industry).

This test has been rejected by the courts when directly addressed by the plaintiff and the agency. As recognized by the courts and the *National Disparity Study Guidelines*, these capacity factors are not race-neutral and gender-neutral variables. Discriminatory barriers depress the formation rates of firms by minorities and women and the rates of success of such firms in doing business in both the private and public sectors. In a perfectly discriminatory system, M/WBEs would have no "capacity" because they would have been prevented from developing any "capacity". That certainly would not mean that there was no discrimination or that the government must sit by helplessly and continue to award tax dollars within the "market failure" of discrimination and without recognition of systematic, institutional race- and gender-based barriers. It is these types of "capacity" variables where barriers to full and fair opportunities to compete will be manifested. Capacity limitations on availability would import the current effects of past discrimination into the model, because if M/WBEs are newer or smaller because of discrimination, then controlling for those variables will mask the phenomenon of discrimination that is being studied. In short, identifiable indicators of capacity are themselves impacted and reflect discrimination. The courts have agreed. Based on expert testimony, judges understand that factors such as size and experience reflect outcomes influenced by race and gender: "M/WBE construction firms are generally smaller and less experienced *because* of discrimination."[91]

To rebut this framework, a plaintiff must proffer its own study showing that the disparities disappear when whatever variables it believes are important are held constant and that controlling for firm specialization explained the disparities.[92] Significantly, *Croson* does not "require disparity studies that measure whether construction firms are able to perform a *particular contract*."[93]

There are also practical reasons not to circumscribe availability through "capacity" limitations. First, there is no agreement concerning what variables are relevant or how those variables are to be measured for the purpose of examining whether race and gender barriers impede the success of minority

91. *Concrete Works IV*, 321 F.3d at 983 (emphasis in the original).
92. Conjecture and unsupported criticism of the government are not enough. The plaintiff must rebut the government's evidence and introduce "credible, particularized evidence" of its own. *See Midwest Fence II*, 840 F.3d at 942 (upholding the Illinois Tollway's program for state funded contracts modeled after Part 26 and based on CHA's expert testimony).
93. *Croson*, 488 U.S. at 508 (emphasis in the original).

and woman entrepreneurs. For example, a newly formed firm might be the result of the merger of much older entities or have been formed by highly experienced owners; it is unclear how such variations would shed light on the issues in a disparity study. Second, since the amount of necessary capacity will vary from contract to contract, there is no way to establish universal standards that would satisfy the capacity limitation. Third, firms' capacities are highly elastic. Businesses can add staff, rent equipment, hire subcontractors or take other steps to be able to perform a particular scope on a particular contract. Whatever a firm's capacity might have been at the time of the Study, it may well have changed by the time the agency seeks to issue a specific solicitation. Fourth, there are no reliable data sources for the type of information usually posited as important by those who seek to reduce availability estimates using capacity factors. While a researcher might have information about firms that are certified as M/WBEs or that are prequalified by an agency (which usually applies only to construction firms), there is no database for that information for non-certified firms, especially White male-owned firms that usually function as subcontractors. Any adjustment to the numerator (M/WBEs) must also be made to the denominator (all firms), as a researcher cannot assume that all White male-owned firms have adequate capacity but that M/WBEs do not.

Capacity variables should be examined at the economy-wide level of business formation and earnings, discussed in Chapter IV not at the first stage of the analysis. To import these variables into the availability determination would confirm the downward bias that discrimination imposes on M/WBEs' availability and the upward bias enjoyed by non-M/WBEs. These factors should also be explored during anecdotal data collection, discussed in Chapter V. They are also relevant to contract goal setting, where the agency must use its judgment about whether to adjust the initial goal that results from the Study data to reflect current market conditions and current firm availability, discussed in Chapter VI.

4. Examine Disparities between Anne Arundel County's Utilization of M/WBEs and the Availability of M/WBEs

A disparity study for a local government must analyze whether there are statistically significant disparities between the availability of M/WBEs and their utilization on agency contracts.

> 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.[94]

This is known as the "disparity ratio" or "disparity index". A disparity ratio measures the participation of a group in the government's contracting opportunities by dividing that group's utilization by the availability of that group and multiplying that result by 100. Courts have looked to disparity indices in determining whether strict scrutiny is satisfied.[95] An index of less than 100% indicates that a given group is being utilized less than would be expected based on its availability.

The courts have held that disparity results must be analyzed to determine whether the results are "significant". There are two distinct methods to measure a result's significance. First, a "large" or "substantively significant" disparity is commonly defined by courts as utilization that is equal to or less than 80% of the availability measure. This is based on the Equal Employment Opportunity Commission's "Eighty Percent Rule" that a ratio less than 80% presents a *prima facie* case of discrimination by supporting the inference that the result may be caused by the disparate impacts of discrimination.[96] Second, statistically significant disparity means that an outcome 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.[97] A more in-depth discussion of statistical significance is provided in Appendix C.

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, known as an "economy-wide" disparity analysis.[98]

The County 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

94. *Croson*, 488 U.S. at 509; *see Webster*, 51 F.Supp.2d at 1363, 1375.
95. *W. H. Scott Construction*, 199 F.3d at 218; *see also Concrete Works II*, 36 F.3d at 1526-1527; *O'Donnell Construction Co., Inc, v. District of Columbia*, 963 F.2d 420, 426 (D.C. Cir. 1992); *Cone Corporation v. Hillsborough County*, 908 F.2d 908, 916 (11th Cir. 1990), *cert. denied*, 498 U.S. 983 (1990).
96. 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."); *see Engineering Contractors II*, 122 F3d at 914.
97. A chi-square test – examining if the utilization rate was different from the weighted availability - is used to determine the statistical significance of the disparity ratio.
98. *Northern Contracting II,* 2005 U.S. Dist. LEXIS 19868 at *69 (IDOT's custom census approach was supportable because "discrimination in the credit and bonding markets may artificially reduce the number of M/WBEs").

discrimination. Statistical evidence creating inferences of discriminatory motivations was sufficient and therefore evidence of market area discrimination was properly used to meet strict scrutiny. To rebut this type of evidence, the plaintiff must prove by a preponderance of the evidence that such proof does not support those inferences.[99]

Nor must the County 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.[100]

The County need not prove that private firms directly engaged in any discrimination in which the government 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.[101]

Similarly, statistical evidence by its nature cannot identify the individuals responsible for the discrimination; there is no need to do so to meet strict scrutiny, as opposed to an individual or class action lawsuit.[102]

5. Analyze Economy-Wide Evidence of Race-Based and Gender-Based Disparities in Anne Arundel County's Market Area

The courts have repeatedly held that 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 are highly relevant to the determination of 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 Chicago's

99. *Concrete Works IV*, 321 F. 3d at 971.
100. *Id*. at 973 (emphasis in the original).
101. *Id*. at 971.
102. *Id*. at 973.

construction program.[103] As similarly explained by the Tenth Circuit, this type of 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 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.[104]

Business discrimination studies and lending 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.”[105] Despite the contentions of plaintiffs that possibly dozens of factors might influence the ability of any individual to succeed in business, the courts have rejected such impossible tests and held that business formation studies are not flawed because they cannot control for subjective descriptions such as “quality of education”, “culture” and “religion”.[106]

For example, in unanimously upholding the USDOT DBE Program for federal-aid transportation contracts, the courts agree that disparities between the

103. *Builders Ass’n of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725, 740 (N.D. Ill. 2003).
104. *Adarand VII*, 228 F.3d at 1147, 1167-68.
105. *Id*.
106. *Concrete Works IV*, 321 F.3d at 980.

earnings of minority-owned firms and similarly situated non-minority-owned firms and the disparities in commercial loan denial rates between Black business owners compared to similarly situated non-minority business owners are strong evidence of the continuing effects of discrimination.[107] The Eighth Circuit Court of Appeals took a "hard look" at the evidence Congress considered, and concluded that the legislature had

> spent 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.[108]

This analysis is especially useful for an agency such as the County which has been implementing a race-conscious and gender-conscious program for many years, which might partially ameliorate market wide barriers through the use of contracting diversity tools.

6. Evaluate Anecdotal Evidence of Race-Based and Gender-Based Barriers to Equal Opportunities Anne Arundel County's Market Area

A study should further explore anecdotal evidence of experiences with discrimination in contracting opportunities because it is relevant to the question of whether observed statistical disparities are due to discrimination and not to some other non-discriminatory cause or causes. As observed by the United States Supreme Court, anecdotal evidence can be persuasive because it can bring "cold [statistics] convincingly to life."[109] Testimony about discrimination practiced by prime contractors, bonding companies, suppliers, and lenders has been found relevant regarding barriers both to minority firms' business formation and to their success on governmental projects.[110] While anecdotal evi-

107. *Id*.; *Western States*, 407 F.3d at 993; *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*").

108. *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.").

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

dence 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."[111] "[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."[112]

There is no requirement that anecdotal testimony 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 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."[113] 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."[114]

D. Narrowly Tailoring an M/WBE Program for Anne Arundel County

Even if the County has a strong basis in evidence to believe that race-conscious measures are needed to remedy identified discrimination, the program must still be narrowly tailored to that evidence. As discussed above, programs that closely mirror those of the USDOT DBE Program[115] have been upheld using that framework.[116] The courts have repeatedly examined the following factors in determin-

110. *Adarand VII*, 228 F.3d at 1167-1168.
111. *Concrete Works II*, 36 F.3d at 1520,1530.
112. *Engineering Contractors of South Florida v. Metropolitan Dade County,* 943 F. Supp. 1546 (S.D. Fla. 1996) ("*Engineering Contractors I*") 488 U.S. 488 U.S. 488 U.S. This case is one of the leading lower court cases on the sufficiency of anecdotal evidence to meet the compelling interest requirement. The record contained anecdotal complaints of discrimination by M/WBEs which described incidents in which suppliers quoted higher prices to M/WBEs than to their non-M/WBE competitors, and in which non-M/WBE prime contractors unjustifiably replaced the M/WBE subcontractor with a non-M/WBE subcontractor.
113. *Id.* at 1579-1580.
114. *Concrete Works IV*, 321 F.3d at 989.
115. 49 C.F.R. Part 26.

ing whether race-conscious remedies are narrowly tailored to achieve their purpose:

- The necessity of relief;[117]
- The efficacy of race-neutral and gender-neutral remedies at overcoming identified discrimination;[118]
- The relationship of numerical benchmarks for government spending to the availability of minority-owned and woman-owned firms and to subcontracting goal setting procedures;[119]
- The flexibility of the program requirements, including the provision for good faith efforts to meet goals and contract specific goal setting procedures;[120]
- The relationship of numerical goals to the relevant market;[121]
- The impact of the relief on third parties;[122] and
- The over-inclusiveness of racial classifications.[123]

1. Consider Race-Neutral and Gender-Neutral Remedies

Race-neutral and gender-neutral approaches are necessary components of a defensible and effective M/WBE program.[124] The failure to seriously consider such remedies has proven fatal to several programs.[125] Difficulty in accessing procurement opportunities, restrictive bid specifications, excessive experience requirements, and overly burdensome insurance and/or bonding requirements, for example, might be addressed without resorting to the use of race or gender in its decision-making. Effective remedies include unbundling of con-

116. *See, e.g., Midwest Fence II,* 840 F.3d at 953 (upholding the Illinois Tollway's program for state funded contracts modelled after Part 26 and based on CHA's expert testimony).
117. *Croson*, 488 U.S at 507; *Adarand III*, 515 U.S. at 237-238.
118. *Paradise* at 171.
119. *Id*.
120. *Id*.
121. *Id*.
122. *Croson*, 488 U.S. at 506.
123. *Paradise*, 480 U.S. at 171; *see also, Sherbrooke*, 345 F.3d at 971-972.
124. *Croson*, 488 U.S. at 507 (Richmond considered no alternatives to race-based quota); *Associated General Contractors of Ohio v. Drabik*, 214 F.3d 730, 738 (6th Cir. 2000) ("*Drabik II*"); *Contractors Association of Eastern Pennsylvania v. City of Philadelphia*, 91 F.3d 586, 609 (3rd Cir. 1996) ("*Philadelphia III*") (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).
125. *See, e.g., Florida A.G.C. Council, Inc. v. State of Florida*, 303 F.Supp.2d 1307, 1315 (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.

tracts into smaller units, providing technical support, and developing programs to address issues of financing, bonding, and insurance important to all small and emerging businesses.[126] Further, governments have a duty to ferret out and punish discrimination against minorities and women by their contractors, staff, lenders, bonding companies or others.[127]

The requirement that the agency must meet the maximum feasible portion of the goal through race-neutral measures, as well as estimate that portion of the goal that it predicts will be met through such measures, has been central to the holdings that the USDOT DBE program regulations meet narrow tailoring.[128] The highly disfavored remedy of race-conscious decision making should be used only as a last resort.

However, strict scrutiny does not require that every race-neutral approach be implemented and then proven ineffective before race-conscious remedies may be utilized.[129] 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."[130]

2. Set Targeted M/WBE Goals

Numerical goals or benchmarks for M/WBE participation must be substantially related to their availability in the relevant market.[131] For example, the USDOT DBE program rule requires 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.[132] "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*."[133]

Goals can be set at various levels of particularity and participation. The County may set an overall, aspirational goal for its annual, aggregate spending. Annual goals can be further disaggregated by race and gender. Approaches range

126. *See* 49 C.F.R. §26.51.0.
127. *Croson*, 488 U.S. at 503 n.3; *Webster*, 51 F.Supp.2d at 1380.
128. *See, e.g., Sherbrooke*, 345 F.3d. at 973.
129. *Grutter*, 529 U.S. at 339.
130. *Coral Construction*, 941 F.2d at 923.
131. *Webster*, 51 F.Supp.2d at 1379, 1381 (statistically insignificant disparities are insufficient to support an unexplained goal of 35% M/WBE participation in County contracts); *see also Baltimore I*, 83 F.Supp.2d at 621.
132. 49 C.F.R. §26.45 (b).
133. *Id*.

from a single M/WBE or DBE goal that includes all racial and ethnic minorities and non-minority women,[134] to separate goals for each minority group and women.[135]

Goal setting is not an absolute science. In holding the USDOT DBE regulations to be narrowly tailored, the Eighth Circuit Court of Appeals noted that "[t]hough 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."[136] However, sheer speculation cannot form the basis for an enforceable measure.[137]

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. "Standard" goals are not defensible, nor should the annual aspirational goals function as a predetermined floor. Contract goals must be based upon availability of M/WBEs to perform the anticipated scopes of the contract, location, progress towards meeting annual goals, and other factors. Not only is this legally mandated,[138] 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 meet unreasonable contract goals. While this is more labor intensive than defaulting to the annual or standard goals, there is no option to avoid meeting the narrow tailoring standard.

3. Ensure Flexibility of Goals and Requirements

It is imperative that remedies not operate as fixed quotas.[139] A race-conscious and gender-conscious program must provide for contract awards to firms who fail to meet the contract goals but make good faith efforts to do so.[140] In *Croson*, the Court refers approvingly to the contract-by-contract waivers used in the USDOT's DBE program.[141] This feature has been central to the holding that the DBE program meets the narrow tailoring requirement.[142] Further, firms

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134. *See* 49 C.F.R. §26.45(h) (overall goal must not be subdivided into group-specific goals).
135. *See Engineering Contractors II*, 122 F.3d at 900 (separate goals for Blacks, Hispanics and women).
136. *Sherbrooke*, 345 F.3d. at 972.
137. *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).
138. *See Sherbrooke*, 345 F.3d at 972; *Coral Construction*, 941 F.2d at 924.
139. *See* 49 C.F.R. §26.43 (quotas are not permitted and setaside contracts may be used only in limited and extreme circumstances "when no other method could be reasonably expected to redress egregious instances of discrimination").
140. *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.").
141. *Croson*, 488 U.S. at 508; *see also Adarand VII*, 228 F.3d at 1181.
142. *See, e.g., Sherbrooke*, 345 F.3d. at 972; *Webster*, 51 F. Supp. 2d at 1354, 1380.

that meet the goals cannot be favored over those who made good faith efforts and firms that exceed the goals cannot be favored over those that did not exceed the goals.

4. Review Program Eligibility Over-Inclusiveness and Under-Inclusiveness

The over-inclusiveness or under-inclusiveness of those persons to be included in the County's program is an additional consideration and addresses whether the remedies truly target the evil identified. 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.[143] 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".[144] In striking down Cook County, Illinois' construction program, the Seventh Circuit 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."[145] However, at least one court has held 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.[146] Therefore, remedies should be limited to those firms owned by the relevant minority groups, as established by the evidence, that have suffered actual harm in the market area.[147]

Next, the firm's owner(s) must be disadvantaged. The USDOT DBE Program's rebuttable presumptions of social and economic disadvantage, including the requirement that the disadvantaged owner's personal net worth not exceed a certain ceiling and that the firm meet the Small Business Administration's size definitions for its industry, have been central to the courts' holdings that it is narrowly tailored.[148] "[W]ealthy minority owners and wealthy minority-owned

143. *Philadelphia II*, 6 F.3d 990, 1007-1008 (strict scrutiny requires data for each minority group; data was insufficient to include Hispanics, Asians or Native Americans).
144. *Webster*, 51 F.Supp.2d at 1380–1381.
145. *Builders Association of Greater Chicago v. County of Cook*, 256 F.3d 642, 646 (7th Cir. 2001) ("*Cook II*").
146. *Concrete Works IV*, 321 F.3d at 971 (Denver introduced evidence of bias against each group; that is sufficient).
147. *H. B. Rowe*, 615 F.3d at 233, 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.").
148. *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 of Connecticut 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).

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."[149] Further, anyone must be able to challenge the disadvantaged status of any firm.[150] The certifications accepted by a local program must meet these criteria.

5. Evaluate the Burden on 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.[151] However, "innocent" parties can be made to share some of the burden of the remedy for eradicating racial discrimination.[152] 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". As described by the court in upholding the Illinois Tollway's program for non-federally assisted contracts,

> [t]he Court reiterates that setting goals as a percentage of total contract dollars does not demonstrate an undue burden on non-DBE subcontractors. The Tollway's method of goal setting is identical to that prescribed by the Federal Regulations, which this Court has already found to be supported by "strong policy reasons" [citation omitted].... Here, where the Tollway Defendants have provided persuasive evidence of discrimination in the Illinois road construction industry, the Court finds the Tollway Program's burden on non-DBE subcontractors to be permissible.[153]

Burdens must be proven and cannot constitute mere speculation by a plaintiff.[154] "Implementation of the race-conscious contracting goals for which [the federal authorizing legislation] provides will inevitably result in bids submitted

149. *Sherbrooke*, 345 F.3d. at 973.
150. 49 C.F.R. §26.87.
151. *See Engineering Contractors I*, 943 F. Supp. at 1581-1582 (County chose not to change its procurement system).
152. *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.").
153. *Midwest Fence I,* 84 F. Supp. 3d at 739.
154. *H.B. 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).

by non-DBE firms being rejected in favor of higher bids from DBEs. Although the result places a very real burden on non-DBE firms, this fact alone does not invalidate [the statute]. If it did, all affirmative action programs would be unconstitutional because of the burden upon non-minorities."[155]

Narrow tailoring does permit certified firms acting as prime contractors to count their self-performance towards meeting contract goals, if the Study finds discriminatory barriers to prime contract opportunities and there is no requirement that a program be limited only to the subcontracting portions of contracts. The USDOT DBE program regulations provide this remedy for discrimination against DBEs seeking prime work,[156] and the regulations do not limit the application of the program to only subcontracts.[157] The trial court in upholding the Illinois DOT's DBE program explicitly recognized that barriers to subcontracting opportunities also affect the ability of DBEs to compete for prime work on a fair basis.

> 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, 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.[158]

6. Review the Duration of the Program

Race-conscious programs must have durational limits. A race-conscious remedy must "not last longer than the discriminatory effects it is designed to elim-

155. *Western States Paving*, 407 F.3d at 995.
156. 49 C.F.R. §26.53(g) ("In determining whether a DBE bidder/offeror for a prime contract has met the contractor 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.").
157. 49 C.F.R. §26.45(a)(1).
158. *Northern Contracting II,* 2005 U.S. Dist. LEXIS 19868 at 74.

inate."[159] The unlimited duration and lack of review were factors in the court's holding that the City of Chicago's M/WBE construction program was no longer narrowly tailored; 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 2004.[160] How old is too old is not definitively answered,[161] but governments would be wise to analyze data at least once every five or six years.

In contrast, the USDOT DBE program's periodic review by Congress has been repeatedly held to provide adequate durational limits.[162,163] Similarly, "two 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 five years."[164]

E. H.B. Rowe Co., v. W. Lyndo Tippett, NCDOT[165]

This is the most recent relevant opinion from the Fourth Circuit Court of Appeals, which governs the County, as it considers whether to establish an M/WBE program. Both the trial and appellate courts upheld the constitutionality of the State of North Carolina's M/WBE program for its state funded contracts, finding that there was a sufficient basis in evidence to employ race-conscious remedies for Blacks and Native Americans and that the statute[166] was narrowly tailored to that evidence.

Plaintiff, a non-minority prime contractor and low bidder on a North Carolina Department of Transportation ("NCDOT") road construction project, was denied a contract because it failed to demonstrate good faith efforts to meet the 10% MBE goal and the 5% WBE goal.[167] These goals were based on the approximate dollar

159. *Adarand III*, 515 U.S. at 238.
160. *BAGC v. Chicago*, 298 F.Supp.2d at 739.
161. *See, e.g., Associated General Contractors of Ohio, Inc. v. Drabik*, 50 F.Supp.2d 741, 747, 750 (S.D. Ohio 1999) ("*Drabik I*") ("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 v. City of Columbus*, 1 F.3d 390, 409 (6th Cir. 1993), *cert. denied sub nom Brunet v. Tucker*, 510 U.S. 1164 (1994) (fourteen-year-old evidence of discrimination "too remote to support a compelling governmental interest.").
162. *See Western States*, 407 F.3d at 995.
163. *See* Fixing America's Surface Transportation ("FAST") Act, Pub. L. No. 114-94 (2015).
164. *H.B. Rowe*, 615 F.3d at 253.
165. 615 F. 3d 233 (4th Cir. 2010).
166. §136-28.4 of the North Carolina General Statutes.
167. Plaintiff's bid included 6.6% WBE participation and no MBE participation.

value and the geographical location of the project, the number of eligible firms in the geographical area, and the anticipated value of the work items included in the contract. NCDOT specifically determined that the Plaintiff's submission did not demonstrate solicitation of enough minority subcontractors to allow for consideration of a fair number of quotes; did not adequately describe the subcontracting work available for the project; and failed to evince a strategy for meeting NCDOT's participation goals.

In upholding the statute, the Fourth Circuit Court of Appeals relied heavily on the State's 2004 Disparity Study, which included statistical and anecdotal evidence of past discrimination in the relevant industry and locality. Although there was anecdotal information about the continuing effects of discrimination against all of the racial and ethnic groups and White women, the Study found statistical underutilization of only Black and Native American subcontractors.

The court concluded that this was a "strong basis in evidence" to conclude that the goals were necessary to remedy discrimination in North Carolina against Black and Native American subcontractors. A state may meet its burden by relying on a significant statistical disparity between the availability of qualified, willing, and able minority subcontractors and the utilization of such subcontractors by the governmental entity or its prime contractors.

The court next determined that the NCDOT program was narrowly tailored:

1. NCDOT employed numerous significant race-neutral measures to enhance the development and competitiveness of small or otherwise disadvantaged businesses in North Carolina. These included a Small Business Enterprise Program and waiving the institutional barriers of bonding and licensing requirements on certain contracts of less than $500,000.
2. The program set a specific expiration date and required that a new disparity study be performed every five years.
3. Goals were related to the percentage of minority subcontractors and NCDOT took steps to ensure that goals accurately reflected the availability of MBEs on a project-by-project basis.
4. The program was flexible because it provided for a waiver of project-specific goals when contractors made good faith efforts to meet these goals.

However, the court found insufficient evidence to justify including White female, Asian American and Hispanic subcontractors in the program under strict scrutiny.[168]

Applying intermediate scrutiny to the program's inclusion of White women, the court found that the 2004 Study demonstrated overutilization of woman-owned

168. *Id.* at 245, 258 (noting that the study found that female subcontractors were overutilized during the study period and that underutilization of Hispanic Americans and Asian American subcontractors was not statistically significant).

subcontractors and that North Carolina failed to provide empirical or anecdotal evidence that woman-owned businesses were disadvantaged. Therefore, the Court invalidated the part of the statute aimed at woman-owned businesses.

III. Contract Data Analysis for Anne Arundel County

A. Contract Data Overview

We analyzed data from Anne Arundel County's ("the County") contracts for fiscal years 2017 through 2021. The Initial Contract Data File (the "universe") contained 1,987 contracts. Because of the large number of contracts, we developed a stratified random sample from the initial 1,987 contracts. The sample consisted of 779 contracts.

To conduct the analysis of the sample, we constructed all the fields necessary where they were missing in the County's contract records (*e.g.*, industry type; zip codes; six-digit North American Industry Classification System ("NAICS") codes of prime contractors and subcontractors; and Minority- and Woman-owned Business Enterprise ("M/WBE") information, including payments, race, gender; etc.). Tables 3-1 and 3-2 provide data on the resulting Final Contract Data File ("FCDF") for the County's contracts.

Table 3-1: Final Contract Data File
Number of Contracts

Contract Type	Total Contracts	Share of Total Contracts
Prime Contracts	714[a]	79.2%
Subcontracts	187	20.8%
TOTAL	**901**	**100.0%**

a. While CHA reached out to all of the primes covering the 779 contracts in the sample, only primes covering 714 responded.

Source: CHA analysis of Anne Arundel County data

Table 3-2: Final Contract Data File
Net Dollar Value of Contracts

Business Type	Total Contract Dollars	Share of Total Contract Dollars
Prime Contracts	$502,588,840	91.6%
Subcontracts	$45,967,966	8.4%
TOTAL	**$548,556,806**	**100.0%**

Source: CHA analysis of Anne Arundel County data

The following sections present our analysis, which consisted of five steps:

1. The determination of the geographic and product markets for the analysis.
2. The estimation of the utilization of M/WBEs by the County.
3. The calculation of the M/WBE unweighted and weighted availability in the County's marketplace.
4. The examination of concentration of contract dollars among M/WBE and non-M/WBE firms.
5. The presentation of the M/WBE disparity analysis.

B. The Product and Geographic Markets for Anne Arundel County Contracts

As discussed in Chapter II, the federal courts[169] require that a local government narrowly tailor its M/WBE program elements to its geographic market area. This element of the analysis must be empirically established.[170] The accepted approach is to analyze those detailed industries, as defined by six-digit NAICS codes,[171] that make up at least 75% of the prime contract and subcontract pay-

169. *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 508 (1989) (Richmond was specifically faulted for including minority contractors from across the country in its program based on the national evidence that supported the USDOT M/WBE program); *see* 49 C.F.R. §26.45(c); https://www.transportation.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise ("D. Explain How You Determined Your Local Market Area.... your local market area is the area in which the substantial majority of the contractors and subcontractors with which you do business are located and the area in which you spend the substantial majority of your contracting dollars.").

170. *Concrete Works of Colorado, Inc. v. the County and the County of Denver*, 36 F.3d 1513, 1520 (10th Cir. 1994) (to confine data to strict geographic boundaries would ignore "economic reality").

171. www.census.gov/eos/www/naics.

ments for the study period.[172] The determination of the County's geographic and product market required three steps:

1. Develop the FCDF to determine the product market. Table 3-3 presents these results.
2. Identify the geographic market.
3. Determine the product market
4. constrained by the geographic parameters. Table 3-4 presents these results.

1. Product Market for Anne Arundel County Contracts

The FCDF, which establishes the County's product market, consisted of 110 NAICS codes, with a total contract dollar value of $548,556,806. Table 3-3 presents each NAICS code with its share of the total contract dollar value. The NAICS codes are presented in the order of the code with the largest share to the code with the smallest share.

Table 3-3: Industry Percentage Distribution of Anne Arundel County Contracts by Dollars

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
236220	Commercial and Institutional Building Construction	11.9%	11.9%
532112	Passenger Car Leasing	9.7%	21.7%
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	7.0%	28.6%
424710	Petroleum Bulk Stations and Terminals	5.1%	33.7%
237310	Highway, Street, and Bridge Construction	4.6%	38.3%
423830	Industrial Machinery and Equipment Merchant Wholesalers	4.4%	42.7%
238210	Electrical Contractors and Other Wiring Installation Contractors	3.6%	46.3%
424690	Other Chemical and Allied Products Merchant Wholesalers	3.2%	49.5%
517312	Wireless Telecommunications Carriers (except Satellite)	3.2%	52.7%
541330	Engineering Services	3.0%	55.7%

172. J. Wainwright and C. Holt, *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*, National Academies of Sciences, Engineering, and Medicine, 2010 ("*National Disparity Study Guidelines*").

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	3.0%	58.7%
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	2.7%	61.4%
524210	Insurance Agencies and Brokerages	2.7%	64.1%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	2.5%	66.5%
488490	Other Support Activities for Road Transportation	2.4%	69.0%
562111	Solid Waste Collection	2.2%	71.2%
238910	Site Preparation Contractors	2.2%	73.4%
562212	Solid Waste Landfill	2.1%	75.6%
621999	All Other Miscellaneous Ambulatory Health Care Services	1.8%	77.4%
237990	Other Heavy and Civil Engineering Construction	1.7%	79.1%
541511	Custom Computer Programming Services	1.7%	80.7%
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	1.3%	82.0%
811111	General Automotive Repair	1.0%	83.0%
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	0.9%	83.9%
518210	Data Processing, Hosting, and Related Services	0.9%	84.8%
238120	Structural Steel and Precast Concrete Contractors	0.9%	85.7%
541310	Architectural Services	0.9%	86.6%
541512	Computer Systems Design Services	0.7%	87.3%
541620	Environmental Consulting Services	0.6%	87.9%
561612	Security Guards and Patrol Services	0.6%	88.5%
237110	Water and Sewer Line and Related Structures Construction	0.6%	89.1%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	0.5%	89.6%
423910	Sporting and Recreational Goods and Supplies Merchant Wholesalers	0.5%	90.1%

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
423210	Furniture Merchant Wholesalers	0.5%	90.6%
323111	Commercial Printing (except Screen and Books)	0.5%	91.1%
541611	Administrative Management and General Management Consulting Services	0.5%	91.5%
481211	Nonscheduled Chartered Passenger Air Transportation	0.4%	92.0%
561320	Temporary Help Services	0.4%	92.4%
444190	Other Building Material Dealers	0.4%	92.8%
561730	Landscaping Services	0.4%	93.2%
238220	Plumbing, Heating, and Air-Conditioning Contractors	0.4%	93.6%
238990	All Other Specialty Trade Contractors	0.4%	94.0%
327992	Ground or Treated Mineral and Earth Manufacturing	0.4%	94.4%
423840	Industrial Supplies Merchant Wholesalers	0.4%	94.7%
424210	Drugs and Druggists' Sundries Merchant Wholesalers	0.3%	95.0%
238320	Painting and Wall Covering Contractors	0.3%	95.3%
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	0.3%	95.6%
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	0.3%	95.9%
484220	Specialized Freight (except Used Goods) Trucking, Local	0.3%	96.2%
334118	Computer Terminal and Other Computer Peripheral Equipment Manufacturing	0.3%	96.5%
811490	Other Personal and Household Goods Repair and Maintenance	0.2%	96.7%
238110	Poured Concrete Foundation and Structure Contractors	0.2%	96.9%
423690	Other Electronic Parts and Equipment Merchant Wholesalers	0.2%	97.1%
423130	Tire and Tube Merchant Wholesalers	0.2%	97.3%
541320	Landscape Architectural Services	0.2%	97.5%
524298	All Other Insurance Related Activities	0.2%	97.6%
336111	Automobile Manufacturing	0.1%	97.8%

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
424130	Industrial and Personal Service Paper Merchant Wholesalers	0.1%	97.9%
444120	Paint and Wallpaper Stores	0.1%	98.0%
423440	Other Commercial Equipment Merchant Wholesalers	0.1%	98.1%
238160	Roofing Contractors	0.1%	98.2%
238290	Other Building Equipment Contractors	0.1%	98.3%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	0.1%	98.4%
561720	Janitorial Services	0.1%	98.5%
562219	Other Nonhazardous Waste Treatment and Disposal	0.1%	98.6%
238140	Masonry Contractors	0.1%	98.7%
454390	Other Direct Selling Establishments	0.1%	98.8%
423410	Photographic Equipment and Supplies Merchant Wholesalers	0.1%	98.9%
611420	Computer Training	0.1%	99.0%
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.1%	99.0%
424120	Stationery and Office Supplies Merchant Wholesalers	0.1%	99.1%
561621	Security Systems Services (except Locksmiths)	0.1%	99.1%
541350	Building Inspection Services	0.05%	99.2%
541380	Testing Laboratories	0.05%	99.2%
541199	All Other Legal Services	0.05%	99.3%
424320	Men's and Boys' Clothing and Furnishings Merchant Wholesalers	0.04%	99.3%
238170	Siding Contractors	0.04%	99.4%
238190	Other Foundation, Structure, and Building Exterior Contractors	0.04%	99.4%
423460	Ophthalmic Goods Merchant Wholesalers	0.04%	99.4%
424590	Other Farm Product Raw Material Merchant Wholesalers	0.04%	99.5%
541370	Surveying and Mapping (except Geophysical) Services	0.04%	99.5%

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
541612	Human Resources Consulting Services	0.04%	99.6%
541613	Marketing Consulting Services	0.04%	99.6%
325180	Other Basic Inorganic Chemical Manufacturing	0.04%	99.6%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	0.03%	99.7%
423710	Hardware Merchant Wholesalers	0.03%	99.7%
448210	Shoe Stores	0.03%	99.7%
236210	Industrial Building Construction	0.03%	99.7%
541922	Commercial Photography	0.02%	99.8%
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	0.02%	99.8%
926130	Regulation and Administration of Communications, Electric, Gas, and Other Utilities	0.02%	99.8%
424920	Book, Periodical, and Newspaper Merchant Wholesalers	0.02%	99.8%
561611	Investigation Services	0.02%	99.8%
423940	Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers	0.02%	99.9%
541990	All Other Professional, Scientific, and Technical Services	0.02%	99.9%
237130	Power and Communication Line and Related Structures Construction	0.01%	99.9%
441310	Automotive Parts and Accessories Stores	0.01%	99.9%
424490	Other Grocery and Related Products Merchant Wholesalers	0.01%	99.9%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	0.01%	99.9%
519130	Internet Publishing and Broadcasting and Web Search Portals	0.01%	99.9%
541720	Research and Development in the Social Sciences and Humanities	0.01%	100.0%
441222	Boat Dealers	0.01%	100.0%

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
213111	Drilling Oil and Gas Wells	0.01%	100.0%
541690	Other Scientific and Technical Consulting Services	0.01%	100.0%
621330	Offices of Mental Health Practitioners (except Physicians)	0.01%	100.0%
561990	All Other Support Services	0.01%	100.0%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	0.004%	100.0%
541618	Other Management Consulting Services	0.002%	100.0%
423390	Other Construction Material Merchant Wholesalers	0.001%	100.0%
512110	Motion Picture and Video Production	0.0003%	100.0%
TOTAL		**100.0%**	

Source: CHA analysis of Anne Arundel County data

2. Geographic Market for Anne Arundel County Contracts

To determine the geographic market area, we applied the standard of identifying the firm locations that account for close to 75% of contract and subcontract dollar payments in the FCDF.[173] Firm location was determined by zip code and aggregated into counties as the geographic unit. The state of Maryland captured 75.9% of the FCDF. Nine counties in the state – Anne Arundel, Baltimore, Howard, Prince George's, Baltimore (city), Montgomery, Calvert, Queen Anne's and Carroll – captured 73.6% of the FCDF. Therefore, we used these nine counties as the geographic market.

C. Utilization of MWBEs in Anne Arundel County's Geographic and Product Markets

Having determined the County's geographic market area, the next step was to determine the dollar value of its utilization of M/WBEs[174] as measured by net payments to prime firms and subcontractors and disaggregated by race and gender.

173. *National Disparity Study Guidelines*, at p. 29.

174. For our analysis, the term "M/WBE" includes firms that are certified by government agencies and minority- and woman-owned firms that are not certified. The inclusion of all minority- and female-owned businesses in the pool casts the broad net approved by the courts and that supports the remedial nature of these programs. *See Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715, 723 (7th Cir. 2007) (The "remedial nature of the federal scheme militates in favor of a method of M/WBE availability calculation that casts a broader net.").

There were 79 NAICS codes after constraining the FCDF by the geographic market; the dollar value of the contracts in these codes was $403,715,505. Table 3-4 presents these data. We note that the contract dollar shares in Table 3-4 are equivalent to the weight of spending in each NAICS code. These data were used to calculate weighted availability[175] from unweighted availability, as discussed below.

Table 3-4: NAICS Code Distribution of Contract Dollars in the Constrained Product Market

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
532112	Passenger Car Leasing	$53,325,792	13.2%
236220	Commercial and Institutional Building Construction	$36,781,468	9.1%
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	$33,541,236	8.3%
424710	Petroleum Bulk Stations and Terminals	$27,667,430	6.9%
423830	Industrial Machinery and Equipment Merchant Wholesalers	$22,093,460	5.5%
237310	Highway, Street, and Bridge Construction	$20,548,384	5.1%
517312	Wireless Telecommunications Carriers (except Satellite)	$16,324,064	4.0%
524210	Insurance Agencies and Brokerages	$14,353,845	3.6%
238210	Electrical Contractors and Other Wiring Installation Contractors	$14,244,183	3.5%
424690	Other Chemical and Allied Products Merchant Wholesalers	$13,836,439	3.4%
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	$13,782,508	3.4%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	$12,534,187	3.1%
562111	Solid Waste Collection	$12,235,606	3.0%

175. *See* "Tips for Goal Setting in the Disadvantaged Business Enterprise Program" ("F. Wherever Possible, Use Weighting. Weighting can help ensure that your Step One Base Figure is as accurate as possible. While weighting is not required by the rule, it will make your goal calculation more accurate. For instance, if 90% of your contract dollars will be spent on heavy construction and 10% on trucking, you should weight your calculation of the relative availability of firms by the same percentages.") (emphasis in the original), https://www.transportation.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise.

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	$11,916,058	3.0%
238910	Site Preparation Contractors	$11,851,168	2.9%
562212	Solid Waste Landfill	$11,789,585	2.9%
237990	Other Heavy and Civil Engineering Construction	$8,742,582	2.2%
488490	Other Support Activities for Road Transportation	$8,598,604	2.1%
541330	Engineering Services	$7,548,630	1.9%
811111	General Automotive Repair	$5,300,280	1.3%
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	$5,150,586	1.3%
541310	Architectural Services	$4,738,131	1.2%
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	$4,136,411	1.0%
541620	Environmental Consulting Services	$3,204,727	0.8%
237110	Water and Sewer Line and Related Structures Construction	$3,086,386	0.8%
423210	Furniture Merchant Wholesalers	$2,570,257	0.6%
518210	Data Processing, Hosting, and Related Services	$2,040,236	0.5%
561730	Landscaping Services	$1,936,711	0.5%
238220	Plumbing, Heating, and Air-Conditioning Contractors	$1,915,186	0.5%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	$1,731,488	0.4%
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	$1,577,999	0.4%
811490	Other Personal and Household Goods Repair and Maintenance	$1,228,444	0.3%
238110	Poured Concrete Foundation and Structure Contractors	$1,165,797	0.3%
541320	Landscape Architectural Services	$960,370	0.2%
524298	All Other Insurance Related Activities	$870,427	0.2%
327992	Ground or Treated Mineral and Earth Manufacturing	$787,925	0.2%

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	$783,328	0.2%
423130	Tire and Tube Merchant Wholesalers	$738,688	0.2%
238990	All Other Specialty Trade Contractors	$632,648	0.2%
424130	Industrial and Personal Service Paper Merchant Wholesalers	$610,000	0.2%
541512	Computer Systems Design Services	$546,160	0.1%
561720	Janitorial Services	$522,155	0.1%
238320	Painting and Wall Covering Contractors	$519,756	0.1%
562219	Other Nonhazardous Waste Treatment and Disposal	$517,971	0.1%
238290	Other Building Equipment Contractors	$494,163	0.1%
238160	Roofing Contractors	$394,578	0.1%
561320	Temporary Help Services	$356,054	0.1%
541611	Administrative Management and General Management Consulting Services	$355,024	0.1%
424120	Stationery and Office Supplies Merchant Wholesalers	$300,000	0.1%
561621	Security Systems Services (except Locksmiths)	$295,940	0.1%
541350	Building Inspection Services	$268,964	0.1%
541199	All Other Legal Services	$215,550	0.1%
541370	Surveying and Mapping (except Geophysical) Services	$204,269	0.1%
541613	Marketing Consulting Services	$196,828	0.05%
423710	Hardware Merchant Wholesalers	$151,590	0.04%
423840	Industrial Supplies Merchant Wholesalers	$140,000	0.03%
541380	Testing Laboratories	$132,643	0.03%
541511	Custom Computer Programming Services	$127,028	0.03%
423440	Other Commercial Equipment Merchant Wholesalers	$114,577	0.03%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	$101,640	0.03%
236210	Industrial Building Construction	$99,900	0.02%
541990	All Other Professional, Scientific, and Technical Services	$99,434	0.02%

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
423690	Other Electronic Parts and Equipment Merchant Wholesalers	$92,740	0.02%
323111	Commercial Printing (except Screen and Books)	$74,262	0.02%
441310	Automotive Parts and Accessories Stores	$71,310	0.02%
424490	Other Grocery and Related Products Merchant Wholesalers	$66,927	0.02%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	$64,350	0.02%
541720	Research and Development in the Social Sciences and Humanities	$61,004	0.02%
441222	Boat Dealers	$54,000	0.01%
448210	Shoe Stores	$50,000	0.01%
561990	All Other Support Services	$31,272	0.01%
484220	Specialized Freight (except Used Goods) Trucking, Local	$27,285	0.01%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	$24,413	0.01%
238120	Structural Steel and Precast Concrete Contractors	$18,830	0.005%
519130	Internet Publishing and Broadcasting and Web Search Portals	$13,679	0.003%
541618	Other Management Consulting Services	$11,660	0.003%
237130	Power and Communication Line and Related Structures Construction	$9,000	0.002%
238140	Masonry Contractors	$7,090	0.002%
423410	Photographic Equipment and Supplies Merchant Wholesalers	$2,209	0.001%
TOTAL		**$403,715,505**	**100.0%**

Source: CHA analysis of Anne Arundel County data

Tables 3-5 and 3-6 present data on the County's M/WBE utilization, measured in contract dollars and percentage of contract dollars.

Table 3-5: Distribution of Contract Dollars by Race and Gender (total dollars)

NAICS	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE	Total
236210	$0	$0	$0	$0	$0	$0	$0	$99,900	$99,900
236220	$0	$603,046	$0	$744,469	$1,347,515	$539,692	$1,887,207	$34,894,262	$36,781,469
237110	$0	$175,464	$0	$0	$175,464	$0	$175,464	$2,910,922	$3,086,386
237130	$0	$0	$0	$0	$0	$0	$0	$9,000	$9,000
237310	$0	$916,920	$0	$0	$916,920	$353,972	$1,270,892	$19,277,491	$20,548,383
237990	$0	$0	$0	$0	$0	$338,186	$338,186	$8,404,396	$8,742,582
238110	$32,095	$24,300	$0	$0	$56,395	$0	$56,395	$1,109,403	$1,165,797
238120	$0	$0	$0	$0	$0	$0	$0	$18,830	$18,830
238140	$0	$0	$0	$0	$0	$0	$0	$7,090	$7,090
238160	$0	$0	$389,069	$0	$389,069	$0	$389,069	$5,509	$394,578
238210	$0	$0	$0	$0	$0	$752,294	$752,294	$13,491,889	$14,244,183
238220	$0	$0	$0	$0	$0	$0	$0	$1,915,186	$1,915,186
238290	$0	$0	$0	$0	$0	$0	$0	$494,163	$494,163
238320	$0	$0	$0	$0	$0	$0	$0	$519,756	$519,756
238910	$0	$0	$0	$0	$0	$280,886	$280,886	$11,570,282	$11,851,168
238990	$352,500	$0	$0	$0	$352,500	$94,013	$446,513	$186,135	$632,648
323111	$0	$0	$2,115	$0	$2,115	$0	$2,115	$72,147	$74,262
327992	$0	$0	$0	$0	$0	$0	$0	$787,925	$787,925
423110	$0	$0	$0	$0	$0	$0	$0	$33,541,237	$33,541,237
423120	$0	$0	$0	$0	$0	$0	$0	$13,782,508	$13,782,508
423130	$0	$0	$0	$0	$0	$738,688	$738,688	$0	$738,688

NAICS	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE	Total
423210	$0	$0	$0	$0	$0	$0	$0	$2,570,257	$2,570,257
423320	$0	$314,130	$0	$0	$314,130	$14,406	$328,536	$11,587,522	$11,916,058
423410	$0	$0	$0	$0	$0	$0	$0	$2,209	$2,209
423430	$0	$0	$101,640	$0	$101,640	$0	$101,640	$0	$101,640
423440	$0	$0	$0	$0	$0	$0	$0	$114,577	$114,577
423450	$0	$0	$0	$0	$0	$208,411	$208,411	$3,928,000	$4,136,411
423510	$0	$0	$0	$0	$0	$24,413	$24,413	$0	$24,413
423610	$0	$0	$0	$0	$0	$1,127,357	$1,127,357	$604,131	$1,731,488
423690	$0	$0	$0	$0	$0	$0	$0	$92,740	$92,740
423710	$0	$0	$0	$0	$0	$0	$0	$151,590	$151,590
423740	$0	$0	$0	$0	$0	$0	$0	$64,350	$64,350
423830	$0	$0	$0	$0	$0	$0	$0	$22,093,459	$22,093,459
423840	$0	$0	$0	$0	$0	$0	$0	$140,000	$140,000
423850	$0	$0	$0	$0	$0	$0	$0	$783,328	$783,328
423990	$1,270,000	$0	$0	$0	$1,270,000	$6,769,434	$8,039,434	$4,494,753	$12,534,187
424120	$0	$0	$0	$0	$0	$0	$0	$300,000	$300,000
424130	$0	$0	$0	$0	$0	$610,000	$610,000	$0	$610,000
424490	$0	$0	$0	$0	$0	$66,927	$66,927	$0	$66,927
424690	$0	$0	$0	$0	$0	$109,020	$109,020	$13,727,419	$13,836,439
424710	$0	$0	$0	$0	$0	$0	$0	$27,667,429	$27,667,429
441222	$0	$0	$0	$0	$0	$0	$0	$54,000	$54,000
441310	$0	$0	$0	$0	$0	$0	$0	$71,310	$71,310
448210	$0	$0	$0	$0	$0	$0	$0	$50,000	$50,000

NAICS	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE	Total
453998	$0	$0	$0	$0	$0	$0	$0	$5,150,586	$5,150,586
484220	$27,285	$0	$0	$0	$27,285	$0	$27,285	$0	$27,285
488490	$1,662,772	$1,017,480	$0	$0	$2,680,252	$395,510	$3,075,762	$5,522,842	$8,598,604
517312	$0	$0	$0	$0	$0	$0	$0	$16,324,064	$16,324,064
518210	$0	$0	$130,432	$0	$130,432	$0	$130,432	$1,909,803	$2,040,236
519130	$2,624	$0	$0	$0	$2,624	$0	$2,624	$11,055	$13,679
524210	$0	$0	$0	$0	$0	$0	$0	$14,353,845	$14,353,845
524298	$0	$0	$0	$0	$0	$623,212	$623,212	$247,215	$870,427
532112	$0	$0	$0	$0	$0	$0	$0	$53,325,794	$53,325,794
532120	$0	$70,044	$0	$0	$70,044	$0	$70,044	$1,507,955	$1,577,999
541199	$111,838	$0	$0	$0	$111,838	$103,712	$215,550	$0	$215,550
541310	$0	$0	$0	$0	$0	$0	$0	$4,738,131	$4,738,131
541320	$0	$0	$0	$0	$0	$0	$0	$960,370	$960,370
541330	$0	$0	$483,421	$0	$483,421	$68,300	$551,722	$6,996,908	$7,548,630
541350	$0	$0	$0	$0	$0	$0	$0	$268,964	$268,964
541370	$0	$0	$0	$0	$0	$22,125	$22,125	$182,144	$204,269
541380	$0	$9,000	$0	$0	$9,000	$960	$9,960	$122,683	$132,643
541511	$0	$0	$0	$0	$0	$0	$0	$127,028	$127,028
541512	$0	$0	$0	$0	$0	$0	$0	$546,160	$546,160
541611	$0	$0	$0	$0	$0	$0	$0	$355,024	$355,024
541613	$0	$0	$164,600	$0	$164,600	$32,228	$196,828	$0	$196,828
541618	$11,660	$0	$0	$0	$11,660	$0	$11,660	$0	$11,660
541620	$0	$0	$0	$0	$0	$0	$0	$3,204,727	$3,204,727

NAICS	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE	Total
541720	$0	$0	$0	$0	$0	$61,004	$61,004	$0	$61,004
541990	$0	$0	$0	$0	$0	$32,538	$32,538	$66,896	$99,434
561320	$0	$0	$0	$0	$0	$0	$0	$356,054	$356,054
561621	$0	$0	$0	$0	$0	$295,940	$295,940	$0	$295,940
561720	$0	$522,155	$0	$0	$522,155	$0	$522,155	$0	$522,155
561730	$0	$0	$0	$0	$0	$0	$0	$1,936,711	$1,936,711
561990	$0	$31,272	$0	$0	$31,272	$0	$31,272	$0	$31,272
562111	$10,026,307	$0	$0	$0	$10,026,307	$0	$10,026,307	$2,209,299	$12,235,606
562212	$0	$0	$0	$0	$0	$0	$0	$11,789,585	$11,789,585
562219	$0	$0	$0	$0	$0	$0	$0	$517,971	$517,971
811111	$0	$0	$0	$0	$0	$0	$0	$5,300,280	$5,300,280
811490	$0	$0	$0	$0	$0	$0	$0	$1,228,444	$1,228,444
Total	**$13,497,081**	**$3,683,811**	**$1,271,277**	**$744,469**	**$19,196,637**	**$13,663,228**	**$32,859,865**	**$370,855,640**	**$403,715,505**

Source: CHA analysis of Anne Arundel County data

Table 3-6: Percentage Distribution of Contract Dollars by Race and Gender (share of total dollars)

NAICS	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE	Total
236210	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
236220	0.0%	1.6%	0.0%	2.0%	3.7%	1.5%	5.1%	94.9%	100.0%
237110	0.0%	5.7%	0.0%	0.0%	5.7%	0.0%	5.7%	94.3%	100.0%
237130	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
237310	0.0%	4.5%	0.0%	0.0%	4.5%	1.7%	6.2%	93.8%	100.0%

NAICS	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE	Total
237990	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%	3.9%	96.1%	100.0%
238110	2.8%	2.1%	0.0%	0.0%	4.8%	0.0%	4.8%	95.2%	100.0%
238120	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
238140	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
238160	0.0%	0.0%	98.6%	0.0%	98.6%	0.0%	98.6%	1.4%	100.0%
238210	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	5.3%	94.7%	100.0%
238220	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
238290	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
238320	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
238910	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	2.4%	97.6%	100.0%
238990	55.7%	0.0%	0.0%	0.0%	55.7%	14.9%	70.6%	29.4%	100.0%
323111	0.0%	0.0%	2.8%	0.0%	2.8%	0.0%	2.8%	97.2%	100.0%
327992	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423110	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423120	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423130	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
423210	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423320	0.0%	2.6%	0.0%	0.0%	2.6%	0.1%	2.8%	97.2%	100.0%
423410	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423430	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
423440	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423450	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	95.0%	100.0%
423510	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
423610	0.0%	0.0%	0.0%	0.0%	0.0%	65.1%	65.1%	34.9%	100.0%
423690	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423710	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423740	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423830	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423840	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423850	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%

NAICS	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE	Total
423990	10.1%	0.0%	0.0%	0.0%	10.1%	54.0%	64.1%	35.9%	100.0%
424120	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
424130	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
424490	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
424690	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.8%	99.2%	100.0%
424710	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
441222	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
441310	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
448210	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
453998	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
484220	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
488490	19.3%	11.8%	0.0%	0.0%	31.2%	4.6%	35.8%	64.2%	100.0%
517312	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
518210	0.0%	0.0%	6.4%	0.0%	6.4%	0.0%	6.4%	93.6%	100.0%
519130	19.2%	0.0%	0.0%	0.0%	19.2%	0.0%	19.2%	80.8%	100.0%
524210	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
524298	0.0%	0.0%	0.0%	0.0%	0.0%	71.6%	71.6%	28.4%	100.0%
532112	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
532120	0.0%	4.4%	0.0%	0.0%	4.4%	0.0%	4.4%	95.6%	100.0%
541199	51.9%	0.0%	0.0%	0.0%	51.9%	48.1%	100.0%	0.0%	100.0%
541310	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541320	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541330	0.0%	0.0%	6.4%	0.0%	6.4%	0.9%	7.3%	92.7%	100.0%
541350	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541370	0.0%	0.0%	0.0%	0.0%	0.0%	10.8%	10.8%	89.2%	100.0%
541380	0.0%	6.8%	0.0%	0.0%	6.8%	0.7%	7.5%	92.5%	100.0%
541511	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541512	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541611	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541613	0.0%	0.0%	83.6%	0.0%	83.6%	16.4%	100.0%	0.0%	100.0%

NAICS	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE	Total
541618	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
541620	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541720	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541990	0.0%	0.0%	0.0%	0.0%	0.0%	32.7%	32.7%	67.3%	100.0%
561320	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
561621	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
561720	0.0%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
561730	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
561990	0.0%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
562111	81.9%	0.0%	0.0%	0.0%	81.9%	0.0%	81.9%	18.1%	100.0%
562212	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
562219	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
811111	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
811490	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Total	**3.3%**	**0.9%**	**0.3%**	**0.2%**	**4.8%**	**3.4%**	**8.1%**	**91.9%**	**100.0%**

Source: CHA analysis of Anne Arundel County data

D. The Availability of M/WBEs for Anne Arundel County Contracts

1. The Methodological Framework

Estimates of the availability of M/WBEs in the County's geographic and product market are a critical component of the County's compliance with its constitutional obligation to determine whether it has a strong basis in evidence to support the use of race- and gender-conscious measures. The courts require that the availability estimates reflect the number of "ready, willing and able" firms that can perform on specific types of work involved in the recipient's prime contracts and associated subcontracts; general population is legally irrelevant.[176]

176. 49 C.F.R. §25.45(c).

We applied the "custom census" approach, with refinements, to estimating availability. The courts and the National Model Disparity Study Guidelines[177] have recognized this methodology as superior to the other methods for at least four reasons:

- First, it provides an internally consistent and rigorous "apples to apples" comparison between firms in the availability numerator and those in the denominator. Other approaches often have different definitions for the firms in the numerator (*e.g.*, certified M/WBEs or firms that respond to a survey) and the denominator (*e.g.*, registered vendors or the Census Bureau's County Business Patterns data).
- Second, by examining a comprehensive group of firms, it "casts a broader net" beyond those known to the agency. As recognized by the courts, this comports with the remedial nature of contracting affirmative action programs by seeking to bring in businesses that have historically been excluded. Our methodology is less likely to be tainted by the effects of past and present discrimination than other methods, such as bidders' lists, because it seeks out firms in the County's market area that have not been able to access the agency's opportunities.
- Third, this approach is less impacted by variables affected by discrimination. Factors such as firm age, size, qualifications, and experience are all elements of business success where discrimination would be manifested. Several courts have held that the results of discrimination – which impact factors affecting capacity – should not be the benchmark for a program designed to ameliorate the effects of discrimination. They have acknowledged that minority and woman firms 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.[178]
- Fourth, it has been upheld by every court that has reviewed it, including most recently in the successful defense of the Illinois State Toll Highway's M/WBE program, for which we served as testifying experts.[179]

177. *National Disparity Study Guidelines*, pp.57-58. This was also the approach used in the successful defense of th4e Illinois Department of Transportation's Disadvantaged Business Enterprise Program in the *Northern Contracting* case, discussed in Chapter II.
178. For a detailed discussion of the role of capacity in disparity studies, *see the National Disparity Study Guidelines*, Appendix B, "Understanding Capacity."
179. *Midwest Fence, Corp. v. U.S. Department of Transportation et al*., 840 F.3d 932 (2016); *see also Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7th Cir. 2007), *cert. denied*, 137 S.Ct. 2292 (2017).

Using this framework, CHA utilized three databases to estimate availability:

1. The Final Contract Data File
2. The Master M/W/DBE Directory compiled by CHA
3. Dun & Bradstreet/Hoovers Database

First, we eliminated any duplicate entries in the geographically constrained FCDF. Some firms received multiple contracts for work performed in the same NAICS codes. Without this elimination of duplicate listings, the availability database would be artificially large. This list of unique firms comprised the first component of the Study's availability determination.

To develop the Master Directory, we utilized the Maryland Unified Certification Program Directory and the County Contract Data File to compile the Master Directory. We limited the firms we used in our analysis to those operating within the County's product market.

We next developed a custom database from Hoovers, a Dun & Bradstreet company, for minority- and woman-owned firms and non-M/WBEs. Hoovers maintains a comprehensive, extensive and regularly updated listing of all firms conducting business. The database includes a vast amount of information on each firm, including location and detailed industry codes, and is the broadest publicly available data source for firm information. We purchased the information from Hoovers for the firms in the NAICS codes located in the County's market area to form our custom Dun & Bradstreet/Hoovers Database. In the initial download, the data from Hoovers simply identified a firm as being minority-owned.[180] However, the company does keep detailed information on ethnicity (*i.e.*, is the minority firm owner Black, Hispanic, Asian, or Native American). We obtained this additional information from Hoovers by special request.

The Hoovers database is the most comprehensive list of minority-owned and woman-owned businesses available. It is developed from the efforts of a national firm whose business is collecting business information. Hoovers builds its database from over 250 sources, including information from government sources and various associations, and its own efforts. Hoovers conducts an audit of the preliminary database prior to the public release of the data. That audit must result in a minimum of 94% accuracy. Once published, Hoovers has an established protocol to regularly refresh its data. This protocol involves updating any third-party lists that were used and contacting a selection of firms via Hoover's own call centers.

We merged these three databases to form an accurate estimate of firms available to work on the County contracts.

180. The variable is labeled: "Is Minority Owned" and values for the variable can be either "1" (for yes) or blank.

2. The Availability Data and Results

Tables 3-7 through 3-9 present data on:

1. The unweighted availability percentages by race and gender and by NAICS codes for the County's product market;
2. The weights used to adjust the unweighted numbers;[181] and
3. The final estimates of the weighted averages of the individual six-digit level NAICS availability estimates in the County's market area.

We "weighted" the availability data for two reasons. First, the weighted availability represents the share of total possible contractors for each demographic group, weighted by the distribution of contract dollars across the NAICS codes in which the County spends its dollars.

Second, weighting also reflects the importance of the availability of a demographic group in a particular NAICS code, that is, how important that NAICS code is to the County's contracting patterns.[182] For example, in a hypothetical NAICS Code 123456, the total available firms are 100 and 60 of these firms are M/WBEs; hence, M/WBE availability would be 60%. However, if the County spends only one percent of its contract dollars in this NAICS code, then this high availability would be offset by the low level of spending in that NAICS code. In contrast, if the County spent 25% of its contract dollars in NAICS Code 123456, then the same availability would carry a greater weight. For an extended explanation of how unweighted and weighted availability are calculated, please see Appendix D.

To calculate the weighted availability for each NAICS code, we first determined the unweighted availability for each demographic group in each NAICS code, presented in Table 3-7. In the previous example, the unweighted availability for M/WBEs in NAICS Code 123456 is 60%. We then multiplied the unweighted availability by the share of the County spending in that NAICS code, presented in Table 3-8. This share is the *weight.* Using the previous example, where the County spending in NAICS Code 123456 was one percent, the component of M/WBE weighted availability for NAICS Code 123456 would be 0.006: 60% multiplied by one percent. We say "the component of M/WBE weighted availability for NAICS Code 123456" because this process is repeated for each NAICS code and then the components are summed to generate an overall weighted availability estimate. The results of this calculation are presented in Table 3-9.

181. These weights are equivalent to the share of contract dollars presented in the previous section.
182. https://www.transportation.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise.

Table 3-7: Unweighted M/WBE Availability for Anne Arundel County Contracts

NAICS	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE	Total
236210	29.2%	7.7%	11.3%	0.6%	48.8%	13.7%	62.5%	37.5%	100.0%
236220	17.5%	6.7%	6.0%	1.5%	31.7%	6.9%	38.7%	61.3%	100.0%
237110	18.9%	11.2%	6.3%	0.0%	36.4%	9.0%	45.5%	54.5%	100.0%
237130	30.0%	16.0%	5.0%	1.0%	52.0%	14.0%	66.0%	34.0%	100.0%
237310	14.8%	11.9%	6.6%	0.5%	33.8%	8.6%	42.4%	57.6%	100.0%
237990	17.2%	4.7%	14.6%	0.4%	36.9%	12.4%	49.4%	50.6%	100.0%
238110	9.2%	15.4%	1.5%	0.2%	26.4%	2.9%	29.3%	70.7%	100.0%
238120	29.0%	23.7%	5.4%	2.2%	60.2%	11.8%	72.0%	28.0%	100.0%
238140	9.0%	10.2%	1.1%	0.5%	20.8%	4.8%	25.6%	74.4%	100.0%
238160	4.0%	2.9%	1.9%	0.0%	8.8%	2.9%	11.7%	88.3%	100.0%
238210	13.5%	2.7%	1.3%	0.4%	17.9%	3.4%	21.3%	78.7%	100.0%
238220	5.2%	0.8%	0.8%	0.1%	7.0%	2.6%	9.6%	90.4%	100.0%
238290	24.0%	4.8%	7.2%	0.0%	36.0%	7.2%	43.2%	56.8%	100.0%
238320	6.2%	4.5%	1.1%	0.1%	11.8%	3.3%	15.2%	84.8%	100.0%
238910	25.2%	11.3%	4.3%	0.3%	41.1%	9.0%	50.2%	49.8%	100.0%
238990	4.6%	2.2%	0.6%	0.0%	7.4%	2.7%	10.1%	89.9%	100.0%
323111	3.8%	0.3%	1.0%	0.0%	5.2%	9.7%	14.8%	85.2%	100.0%
327992	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423110	2.7%	0.0%	0.0%	0.0%	2.7%	2.7%	5.4%	94.6%	100.0%
423120	0.7%	0.4%	0.0%	0.0%	1.1%	3.2%	4.3%	95.7%	100.0%
423130	5.6%	2.8%	0.0%	0.0%	8.3%	2.8%	11.1%	88.9%	100.0%
423210	8.8%	1.2%	2.9%	0.0%	12.9%	11.8%	24.7%	75.3%	100.0%
423320	16.0%	3.8%	4.2%	0.0%	23.9%	11.3%	35.2%	64.8%	100.0%
423410	7.7%	7.7%	0.0%	0.0%	15.4%	7.7%	23.1%	76.9%	100.0%
423430	17.3%	1.6%	6.5%	0.0%	25.5%	10.1%	35.6%	64.4%	100.0%
423440	2.3%	1.7%	0.8%	0.3%	5.1%	4.0%	9.1%	90.9%	100.0%
423450	12.9%	0.5%	1.7%	0.0%	15.0%	9.1%	24.1%	75.9%	100.0%
423510	6.8%	1.4%	3.4%	0.7%	12.2%	6.1%	18.2%	81.8%	100.0%
423610	7.1%	0.8%	3.6%	0.5%	12.0%	9.0%	21.0%	79.0%	100.0%

NAICS	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE	Total
423690	5.7%	0.4%	1.9%	0.0%	8.0%	5.7%	13.8%	86.2%	100.0%
423710	7.5%	0.9%	3.7%	0.0%	12.1%	14.0%	26.2%	73.8%	100.0%
423740	10.3%	0.0%	6.9%	0.0%	17.2%	6.9%	24.1%	75.9%	100.0%
423830	2.5%	0.4%	1.7%	0.0%	4.6%	4.0%	8.6%	91.4%	100.0%
423840	3.6%	0.0%	3.6%	0.0%	7.1%	6.1%	13.2%	86.8%	100.0%
423850	6.9%	0.3%	1.8%	0.0%	8.9%	8.1%	17.0%	83.0%	100.0%
423990	1.9%	0.2%	0.4%	0.1%	2.6%	3.8%	6.4%	93.6%	100.0%
424120	12.7%	1.3%	5.1%	0.0%	19.1%	14.0%	33.1%	66.9%	100.0%
424130	12.6%	0.0%	4.6%	1.1%	18.4%	9.2%	27.6%	72.4%	100.0%
424490	3.7%	0.5%	2.1%	0.0%	6.4%	7.7%	14.1%	85.9%	100.0%
424690	11.9%	1.4%	3.5%	0.0%	16.8%	7.0%	23.8%	76.2%	100.0%
424710	16.7%	0.0%	0.0%	0.0%	16.7%	0.0%	16.7%	83.3%	100.0%
441222	0.8%	0.0%	0.0%	0.0%	0.8%	4.1%	4.9%	95.1%	100.0%
441310	1.6%	0.0%	0.4%	0.0%	2.0%	2.2%	4.3%	95.7%	100.0%
448210	0.2%	0.0%	0.0%	0.0%	0.2%	2.9%	3.1%	96.9%	100.0%
453998	0.9%	0.2%	0.1%	0.0%	1.2%	4.3%	5.5%	94.5%	100.0%
484220	49.1%	11.4%	2.9%	0.0%	63.4%	8.8%	72.1%	27.9%	100.0%
488490	34.5%	12.6%	2.9%	0.0%	50.0%	8.1%	58.1%	41.9%	100.0%
517312	0.1%	0.0%	0.3%	0.1%	0.5%	0.5%	1.1%	98.9%	100.0%
518210	22.8%	2.1%	10.3%	0.0%	35.2%	10.1%	45.2%	54.8%	100.0%
519130	38.5%	1.5%	7.7%	0.0%	47.7%	7.7%	55.4%	44.6%	100.0%
524210	1.9%	0.1%	0.1%	0.0%	2.1%	5.1%	7.2%	92.8%	100.0%
524298	16.8%	0.0%	0.7%	0.0%	17.5%	6.3%	23.8%	76.2%	100.0%
532112	0.0%	4.3%	4.3%	0.0%	8.7%	4.3%	13.0%	87.0%	100.0%
532120	1.5%	1.5%	0.0%	0.0%	3.0%	3.0%	6.0%	94.0%	100.0%
541199	29.7%	0.5%	0.5%	0.0%	30.6%	10.0%	40.6%	59.4%	100.0%
541310	7.9%	1.3%	8.0%	0.0%	17.2%	9.1%	26.3%	73.7%	100.0%
541320	1.5%	0.6%	0.7%	0.1%	2.9%	3.0%	5.9%	94.1%	100.0%
541330	9.5%	2.4%	8.5%	0.5%	20.8%	5.8%	26.6%	73.4%	100.0%
541350	15.8%	2.2%	7.2%	0.0%	25.1%	6.5%	31.5%	68.5%	100.0%

NAICS	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE	Total
541370	9.3%	2.1%	8.8%	0.0%	20.2%	10.4%	30.6%	69.4%	100.0%
541380	5.5%	0.5%	3.2%	0.2%	9.3%	3.0%	12.3%	87.7%	100.0%
541511	17.0%	1.6%	12.6%	0.1%	31.3%	6.6%	37.8%	62.2%	100.0%
541512	21.7%	1.6%	10.1%	0.4%	33.8%	6.6%	40.4%	59.6%	100.0%
541611	20.1%	1.5%	3.6%	0.3%	25.5%	9.9%	35.4%	64.6%	100.0%
541613	9.6%	0.9%	1.3%	0.0%	11.8%	8.7%	20.5%	79.5%	100.0%
541618	5.1%	0.4%	1.1%	0.1%	6.7%	5.0%	11.7%	88.3%	100.0%
541620	10.3%	3.1%	7.6%	0.3%	21.3%	15.6%	36.9%	63.1%	100.0%
541720	7.5%	0.7%	2.0%	0.0%	10.1%	11.3%	21.5%	78.5%	100.0%
541990	3.1%	0.3%	0.9%	0.0%	4.4%	7.7%	12.1%	87.9%	100.0%
561320	32.9%	2.8%	8.0%	0.1%	43.8%	10.5%	54.3%	45.7%	100.0%
561621	11.7%	1.0%	1.1%	0.0%	13.8%	3.6%	17.4%	82.6%	100.0%
561720	14.2%	4.0%	0.7%	0.1%	19.0%	6.7%	25.7%	74.3%	100.0%
561730	5.2%	1.8%	0.2%	0.0%	7.2%	3.2%	10.4%	89.6%	100.0%
561990	5.6%	0.6%	0.8%	0.1%	7.1%	7.5%	14.6%	85.4%	100.0%
562111	57.4%	5.2%	2.6%	0.9%	66.1%	7.0%	73.0%	27.0%	100.0%
562212	6.9%	0.8%	0.0%	0.0%	7.7%	2.3%	10.0%	90.0%	100.0%
562219	9.7%	1.6%	1.6%	0.0%	12.9%	0.0%	12.9%	87.1%	100.0%
811111	0.8%	0.2%	0.2%	0.0%	1.2%	1.6%	2.8%	97.2%	100.0%
811490	2.0%	0.6%	0.2%	0.0%	2.8%	7.5%	10.4%	89.6%	100.0%
Total	**8.5%**	**1.6%**	**2.4%**	**0.1%**	**12.7%**	**6.0%**	**18.6%**	**81.4%**	**100.0%**

Source: CHA analysis of Anne Arundel County data; Hoovers; CHA Master Directory

These unweighted estimates can be used by the County as the starting point for setting narrowly tailored M/WBE contract goals.

Table 3-8: Distribution of the Anne Arundel County's Spending by NAICS Code (the Weights)

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
236210	Industrial Building Construction	0.02%
236220	Commercial and Institutional Building Construction	9.1%
237110	Water and Sewer Line and Related Structures Construction	0.8%
237130	Power and Communication Line and Related Structures Construction	0.002%
237310	Highway, Street, and Bridge Construction	5.1%
237990	Other Heavy and Civil Engineering Construction	2.2%
238110	Poured Concrete Foundation and Structure Contractors	0.3%
238120	Structural Steel and Precast Concrete Contractors	0.005%
238140	Masonry Contractors	0.002%
238160	Roofing Contractors	0.1%
238210	Electrical Contractors and Other Wiring Installation Contractors	3.5%
238220	Plumbing, Heating, and Air-Conditioning Contractors	0.5%
238290	Other Building Equipment Contractors	0.1%
238320	Painting and Wall Covering Contractors	0.1%
238910	Site Preparation Contractors	2.9%
238990	All Other Specialty Trade Contractors	0.2%
323111	Commercial Printing (except Screen and Books)	0.02%
327992	Ground or Treated Mineral and Earth Manufacturing	0.2%
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	8.3%
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	3.4%
423130	Tire and Tube Merchant Wholesalers	0.2%
423210	Furniture Merchant Wholesalers	0.6%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	3.0%
423410	Photographic Equipment and Supplies Merchant Wholesalers	0.001%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	0.03%
423440	Other Commercial Equipment Merchant Wholesalers	0.03%

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	1.0%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	0.01%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	0.4%
423690	Other Electronic Parts and Equipment Merchant Wholesalers	0.02%
423710	Hardware Merchant Wholesalers	0.04%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	0.02%
423830	Industrial Machinery and Equipment Merchant Wholesalers	5.5%
423840	Industrial Supplies Merchant Wholesalers	0.03%
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	0.2%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	3.1%
424120	Stationery and Office Supplies Merchant Wholesalers	0.1%
424130	Industrial and Personal Service Paper Merchant Wholesalers	0.2%
424490	Other Grocery and Related Products Merchant Wholesalers	0.02%
424690	Other Chemical and Allied Products Merchant Wholesalers	3.4%
424710	Petroleum Bulk Stations and Terminals	6.9%
441222	Boat Dealers	0.01%
441310	Automotive Parts and Accessories Stores	0.02%
448210	Shoe Stores	0.01%
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	1.3%
484220	Specialized Freight (except Used Goods) Trucking, Local	0.01%
488490	Other Support Activities for Road Transportation	2.1%
517312	Wireless Telecommunications Carriers (except Satellite)	4.0%
518210	Data Processing, Hosting, and Related Services	0.5%
519130	Internet Publishing and Broadcasting and Web Search Portals	0.003%
524210	Insurance Agencies and Brokerages	3.6%
524298	All Other Insurance Related Activities	0.2%
532112	Passenger Car Leasing	13.2%

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	0.4%
541199	All Other Legal Services	0.1%
541310	Architectural Services	1.2%
541320	Landscape Architectural Services	0.2%
541330	Engineering Services	1.9%
541350	Building Inspection Services	0.1%
541370	Surveying and Mapping (except Geophysical) Services	0.1%
541380	Testing Laboratories	0.03%
541511	Custom Computer Programming Services	0.03%
541512	Computer Systems Design Services	0.1%
541611	Administrative Management and General Management Consulting Services	0.1%
541613	Marketing Consulting Services	0.05%
541618	Other Management Consulting Services	0.003%
541620	Environmental Consulting Services	0.8%
541720	Research and Development in the Social Sciences and Humanities	0.02%
541990	All Other Professional, Scientific, and Technical Services	0.02%
561320	Temporary Help Services	0.1%
561621	Security Systems Services (except Locksmiths)	0.1%
561720	Janitorial Services	0.1%
561730	Landscaping Services	0.5%
561990	All Other Support Services	0.01%
562111	Solid Waste Collection	3.0%
562212	Solid Waste Landfill	2.9%
562219	Other Nonhazardous Waste Treatment and Disposal	0.1%
811111	General Automotive Repair	1.3%
811490	Other Personal and Household Goods Repair and Maintenance	0.3%
TOTAL		**100.0%**

Source: CHA analysis of Anne Arundel County data

Table 3-9 presents the weighted availability results for each of the racial and gender categories. The aggregated availability of M/WBEs, weighted the County's spending in its geographic and industry markets, is 22.1%.

Table 3-9: Aggregated Weighted Availability for the County Contracts

Black	Hispanic	Asian	Native American	MBE	White Women	M/WBE	Non-M/WBE	Total
10.4%	3.3%	3.0%	0.2%	16.97%	5.17%	22.1%	77.9%	100.0%

Source: CHA analysis of Anne Arundel County data; Hoovers; CHA Master Directory

E. Disparity Analysis of M/WBEs for Anne Arundel County Contracts

As required by strict constitutional scrutiny, we next calculated disparity ratios for each demographic group, comparing the group's total utilization compared to its total weighted availability.

A *disparity ratio* is the relationship between the utilization and weighted availability (as determined in the section above). Mathematically, this is represented by:

$$DR = U/WA$$

Where DR is the disparity ratio; U is utilization rate; and WA is the weighted availability.

The courts have held that disparity results must be analyzed to determine whether the results are "significant". There are two distinct methods to measure a result's significance. First, a "large" or "substantively significant" disparity is commonly defined by courts as utilization that is equal to or less than 80% of the availability measure. A substantively significant disparity supports the inference that the result may be caused by the disparate impacts of discrimination.[183] Second, statistically significant disparity means that an outcome is unlikely to have occurred as the result of random chance alone. The greater the statistical significance, the

183. *See* U.S. Equal Employment Opportunity Commission regulation, 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.").

smaller the probability that it resulted from random chance alone.[184] A more in-depth discussion of statistical significance is provided in Appendix C.

Substantive and Statistical Significance

‡ Connotes these values are substantively significant. Courts have ruled the disparity ratio less or equal to 80 percent represent disparities that are substantively significant. (See Footnote 183 for more information.)

* Connotes these values are statistically significant at the 0.05 level. (See Appendix C for more information.)

** Connotes these values are statistically significant at the 0.01 level. (See Appendix C for more information.)

*** Connotes these values are statistically significant at the 0.001 level. (See Appendix C for more information.)

Table 3-10 presents the disparity ratios for each demographic group. All of the disparity ratios are substantively significant except for Native Americans and non-M/WBEs. All of the disparity ratios are statistically significant at the 0.001 level except for the disparity ratios for Asians and Native Americans where the sample size was too small to properly test for statistical significance.

Table 3-10: Disparity Ratios by Demographic Group

	Black	Hispanic	Asian	Native American	MBE	White Woman	M/WBE	Non-M/WBE
Disparity Ratio	31.7%‡***	27.3%‡***	10.0%‡	81.1%	28.3%‡***	65.7%‡***	36.6%‡***	118.0%***

Source: CHA analysis of Anne Arundel County data

‡ Indicates substantive significance

**** Statistically significant at the 0.001 level*

F. Conclusion

This Chapter examines the County's utilization of M/WBEs compared to non-M/WBEs; provides estimates of the availability of M/WBEs and non-M/WBEs to perform the types of goods and services utilized by the County in its geographic market area; and tests for whether there are significant disparities in the results of utilization compared to availability. Overall, we found high disparity ratios that were driven by low levels of M/WBE utilization.

184. A chi-square test – examining if the utilization rate was different from the weighted availability - was used to determine the statistical significance of the disparity ratio.

IV. Analysis of Disparities in Anne Arundel County's Marketplace

A. Introduction

The late Nobel Prize Laureate Kenneth Arrow, in his seminal paper on the economic analysis of discrimination, observed:

> Racial discrimination pervades every aspect of a society in which it is found. It is found above all in attitudes of both races, but also in social relations, in intermarriage, in residential location, and frequently in legal barriers. It is also found in levels of economic accomplishment; this is income, wages, prices paid, and credit extended.[185]

This Chapter explores the data and literature relevant to how discrimination in the State of Maryland economy affects the ability of minorities and women to fairly and fully engage in Anne Arundel County's ("County") contract opportunities. First, we analyze the rates at which Minority- and Woman-Owned Business Enterprises ("M/WBEs") in Anne Arundel County's Marketplace form firms and their earnings from those firms. Next, we summarize the literature on barriers to equal access to commercial credit. Finally, we summarize the literature on barriers to equal access to human capital. All three types of evidence have been found by the courts to be relevant and probative of whether a government will be a passive participant in discrimination without some type of affirmative intervention.

A key element to determine the need for the County to intervene in its market through contract goals is an analysis of the extent of disparities independent of the County's intervention through its contracting affirmative action program.

The courts have repeatedly held that analysis of disparities in the rate of M/WBE formation in the government's markets as compared to similar non-M/WBEs, disparities in M/WBE earnings, and barriers to access to capital markets are highly relevant to a determination of whether market outcomes are affected by race or gender ownership status.[186] Similar analyses supported the successful legal

185. Arrow, Kenneth J., "What Has Economics to say about racial discrimination?" *Journal of Economic Perspectives*, 12, 2, (1998), 91-100.
186. See the discussion in Chapter II of the legal standards applicable to contracting affirmative action programs.

defense of the Illinois Tollway's Disadvantaged Business Enterprise ("DBE") Program from constitutional challenge.[187]

Similarly, the Tenth Circuit Court of Appeals also upheld the U.S. Department of Transportation's DBE program, and in doing so, stated that this type of 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 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.[188]

Business discrimination studies and lending 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. In unanimously upholding the USDOT DBE Program, federal courts agree that disparities between the earnings of minority-owned firms and similarly situated non-minority-owned firms and the disparities in commercial loan denial rates between Black business owners compared to similarly situated non-minority business owners are strong evidence of the continuing effects of discrimination.[189] As recognized by the Seventh Circuit Court of Appeals, "[e]vidence that private discrimination results in barriers to business formation is relevant because it demonstrates that M/WBEs

187. *Midwest Fence Corp. v. Illinois Department of Transportation, Illinois State Toll Highway Authority et al*, 840 F.3d 942 (7th Cir. 2016) (upholding the Illinois Tollway's program for state funded contracts modeled after Part 26 and based on CHA's expert testimony, including about disparities in the overall Illinois construction industry); *Midwest Fence Corp. v. Illinois Department of Transportation, Illinois State Toll Highway Authority et al*, 2015 WL 1396376 at * 21 (N.D. Ill.) ("Colette Holt [& Associates'] updated census analysis controlled for variables such as education, age, and occupation and still found lower earnings and rates of business formation among women and minorities as compared to white men."); *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 satisfied "compelling interest" standards using this framework).

188. *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1168-1169 (10th Cir. 2000), *cert. granted then dismissed as improvidently granted*, 532 U.S. 941 (2001).

189. *Northern Contracting, Inc. v. Illinois Department of Transportation,* 2005 U.S. Dist. LEXIS 19868, at *64 (Sept. 8, 2005).

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."[190]

To explore the question of whether firms owned by non-Whites and White women face disparate treatment in the County's marketplace outside of Anne Arundel County contracts, we examined two data sets. The first data set was the U.S. Bureau of the Census' *American Community Survey* ("ACS"), which provided data to analyze disparities using individual entrepreneurs as the basic unit of analysis.[191] Using the ACS, we will address four basic questions:

- What are the business formation rates for the different demographic groups? We ask this question to establish a basic baseline of business formation outcomes in the private sector.
- What is the probability of a group forming a business once the analysis considers education, age, industry, and occupation? We want to explore the issue of demographic business formation difference once we statistically tease out possible non-demographic explanations for these differences.
- Do business earnings vary by demographic group once the analysis considers education, age, industry, and occupation? This question explores the issue of demographic differences in the central business outcome (earnings) once we statistically tease out possible non-demographic explanations for these differences.
- Do wages vary by demographic group once the analysis considers education, age, industry, and occupation? This question is similar to the third in examining wages instead of business earnings. It is important because economic research indicates that wage levels can impact the future business formation behavior of individual.
- We used the nine-county Anne Arundel County geographic market (as we did in Chapter III) as the geographic unit of analysis. We found disparities in wages, business earnings and business formation rates for minorities and women in all industry sectors in the County's marketplace.[192]

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190. *Id*.
191. Data from 2015 - 2019 American Community Survey are the most recent for a five-year period.
192. Possible disparities in wages are important to explore because of the relationship between wages and business formation. Research by Alicia Robb and others indicate non-White firms rely on their own financing to start businesses compared to White firms who rely more heavily on financing provided by financial institutions. To the extent non-Whites face discrimination in the labor market, they would have reduced capacity to self-finance their entrepreneurial efforts and, hence, impact business formation. *See, for example,* Robb's "Access to Capital among Young Firms, Minority-owned Firms, Woman-owned Firms, and High-tech Firms" (2013), https://www.sba.gov/sites/default/files/files/rs403tot(2).pdf.

The second data set was the U.S. Bureau's Annual Business Survey ("ABS"). The ABS supersedes the more well-known Survey of Business Owners ("SBO"). The SBO was last conducted in 2012 and historically had been reported every five years. In contrast, the ABS was first conducted in 2017 and it is the Census Bureau's goal to release results annually. As of the writing of this report, the most recent complete ABS contains 2017 data. With the ABS data, six key variables are used in this analysis:

- The number of all firms
- The sales and receipts of all firms
- The number of firms with employees (employer firms)
- The sales and receipts of all employer firms
- The number of paid employees
- The annual payroll of employer firms

CHA examined these data in two ways: First, we calculated the minority- and woman-owned business share of each variable. Second, we calculated three disparity ratios for each grouping of minority- and woman-owned businesses and for the grouping of firms that are not non-White or White woman-owned:

- Ratio of sales and receipts share for all firms over the share of total number of all firms
- Ratio of sales and receipts share for employer firms over the share of total number of employer firms
- Ratio of annual payroll share over the share of total number of employer firms

We explored the data to see if an M/WBE's share of sales/receipts and payroll approximates its share of firms. For example, Black firms might represent 10% of all firms but the sales for Black firms might capture just 2% of the sales of all firms. The ratio of Black share of sales over Black share of firms would be .2 (2% divided by 10%), indicating that the sales levels for Black firms in the industry is less than one would expect given the number of Black firms in the industry. As this ratio approaches 1, we interpret that as a sign of approaching parity.

Results of the analysis of the ABS data indicate that non-Whites and White women share of all employer firms is greater than their share of sales, payrolls, and employees. This supports the conclusion that barriers to business success disproportionately affect non-Whites and White women.

B. Disparate Treatment in Anne Arundel County's Marketplace: Evidence from the Census Bureau's 2015 - 2019 American Community Survey

As discussed in the beginning of this Chapter, the key question is whether firms owned by non-Whites and White women face disparate treatment in the marketplace without the intervention of the County's M/WBE Program (discussed in Chapter III). In this section, we use the Census Bureau's ACS data to explore this and other aspects of this question. One element asks if demographic differences exist in the wage and salary income received by private sector workers. Beyond the issue of bias in the incomes generated in the private sector, this exploration is important for the issue of possible variations in the rate of business formation by different demographic groups. One of the determinants of business formation is the pool of financial capital at the disposal of the prospective entrepreneur. The size of this pool is related to the income level of the individual either because the income level impacts the amount of personal savings that can be used for start-up capital, or the income level affects one's ability to borrow funds. Consequently, if particular demographic groups receive lower wages and salaries, then they would have access to a smaller pool of financial capital, and thus reduce the likelihood of business formation.

The *American Community Survey Public Use Microdata Sample* ("PUMS") is useful in addressing these issues. The ACS is an annual survey of one percent of the population and the PUMS provides detailed information at the individual level. In order to obtain robust results from our analysis, we used the file that combines the most recent data available for years 2015 through 2019.[193] With this rich data set, our analysis can establish with greater certainty any causal links between race, gender and economic outcomes.

The Census Bureau classifies Whites, Blacks, Native Americans, and Asians as racial groupings. CHA developed a fifth grouping, "Other", to capture individuals who are not a member of the above four racial categories. In addition, Hispanics are an ethnic category whose members could be of any race, *e.g.*, Hispanics could be White or Black. In order to avoid double counting – *i.e.*, an individual could be counted once as Hispanic and once as White – CHA developed non-Hispanic subset racial categories: non-Hispanic Whites; non-Hispanic Blacks; non-Hispanic Native Americans; non-Hispanic Asians; and non-Hispanic Others. When those five groups are added to the Hispanic group, the entire population is counted and there is no double-counting. When Whites are disaggregated into White men and

193. Initially, the Census Bureau contacted approximately 3.5M households. For the analysis reported in this Chapter, we examined over 224,000 observations. For more information about the ACS PUMS, see https://www.census.gov/programs-surveys/acs/.

White women, those groupings are non-Hispanic White men and non-Hispanic White women. For ease of exposition, the groups in this report are referred to as Black, Native American, Asian, Other, White women, and White men, while the actual content is the non-Hispanic subset of these racial groups.

Often, the general public sees clear associations between race, gender, and economic outcomes and assumes this association reflects a tight causal connection. However, economic outcomes are determined by a broad set of factors including, and extending beyond, race and gender. To provide a simple example, two people who differ by race or gender may receive different wages. This difference may simply reflect that the individuals work in different industries. If this underlying difference is not known, one might assert the wage differential is the result of race or gender difference. To better understand the impact of race or gender on wages, it is important to compare individuals of different races or genders who work in the same industry. Of course, wages are determined by a broad set of factors beyond race, gender, and industry. With the ACS PUMS, we have the ability to include a wide range of additional variables such as age, education, occupation, and state of residence in the analysis.

We employ a multiple regression statistical technique to process this data. This methodology allows us to perform two analyses: an estimation of how variations in certain characteristics (called independent variables) will impact the level of some particular outcome (called a dependent variable), and a determination of how confident we are that the estimated variation is statistically different from zero. We have provided a more detailed explanation of this technique in Appendix A.

With respect to the first result of regression analysis, we examine how variations in the race, gender, and industry of individuals impact the wages and other economic outcomes received by individuals. The technique allows us to determine the effect of changes in one variable, assuming that the other determining variables are the same. That is, we compare individuals of different races, but of the same gender and in the same industry; or we compare individuals of different genders, but of the same race and the same industry; or we compare individuals in different industries, but of the same race and gender. We determine the impact of changes in one variable (*e.g.*, race, gender or industry) on another variable (wages), "controlling for" the movement of any other independent variables.

With respect to the second result of regression analysis, we determine the statistical significance of the relationship between the dependent variable and independent variable. For example, the relationship between gender and wages might exist (*e.g.*, holding all other factors constant, women earn less than men), but we find that it is not statistically different from zero. In this case, we are not confident that there is not any relationship between the two variables. If the relationship is not statistically different from zero, then a variation in the independent variable has no impact on the dependent variable. The regression analysis allows us to say with varying degrees of statistical confidence that a relationship is different from zero. If the estimated relationship is statistically significant at the 0.05 level, that indicates that we are 95% confident that the relationship is different from zero; if the estimated relationship is statistically significant at the 0.01 level, that indicates that we are 99% confident that the relationship is different from zero; if the estimated relationship is statistically significant at the 0.001 level, that indicates that we are 99.9% confident that the relationship is different from zero.[194]

In the following presentation of results, each sub-section first reports data on the share of a demographic group that forms a business (business formation rates); the probabilities that a demographic group will form a business relative to White men (business formation probabilities); the differences in wages received by a demographic group relative to White men (wage differentials); and the differences in business earnings received by a demographic group relative to White men (business earnings differentials). Because the ACS contained limited observations for certain groups in particular industries, we were unable to provide reliable estimates for business outcomes for these groups. However, there were always sufficient observations in the sample of wage earners in each group in each industry to permit us to develop reliable estimates.

1. All Industries Combined in Anne Arundel County's Marketplace

One method of exploring differences in economic outcomes is to examine the rate at which different demographic groups form businesses. We developed these business formation rates using data from the U.S. Bureau of the Census' ACS for Anne Arundel County's marketplace. Table 4-1 presents these results.

The business formation rate represents the share of a population that forms businesses. When developing industry-specific rates, we examine the population that works in that particular industry and identify what share of that subpopulation form businesses. For example, Table 4-1 indicates that 2.2% of Blacks forms businesses; this is less than the 5.8% business formation rate for White men. There were low numbers of Native American firms in the ACS sample; consequently, reliable estimates of firm outcomes could not be made for this group. In Table 4-1, this was indicated by the symbol "-----".[195] The table indicates that White men have higher business formation rates compared to non-Whites and White women. Table 4-2 utilizes probit regression analysis to examine the probability of forming a business after controlling for important factors beyond race and gender.[196] This Table indicates that non-Whites and

194. Most social scientists do not endorse utilizing a confidence level of less than 95%. Appendix C explains more about statistical significance.

195. This symbol was used through the chapter when there were insufficient observations to establish reliable estimates.

White women are less likely to form businesses compared to White men; the reduced probability ranges from 1.1% for Others to 3.1% for Blacks.[197] These results were statistically significant at the 0.001 level for Blacks and White women; the 0.01 level for Hispanics.

With respect to the interpretation of the level of statistical significance of a result, as indicated in the latter part of the previous section, we are exploring whether the result of the regression analysis is statistically different from zero; if the finding is statistically significant, we also indicate the level of statistical confidence at which the result is accurate. Table 4-2 indicates that the probability that Blacks form businesses is 3.1% less than the probability that White men form businesses, once we control for age, education, and occupation. The statistical significance of this result is at the 0.001 level, which means we are 99.9% statistically confident the result is true. If a result is non-zero but the result is not statistically significant, then we cannot rule out zero being the true result. Note: this does not mean the result is wrong, only there is not a statistically significant level of confidence in the result.

Another way to measure equity is to examine how the wage and salary incomes and business earnings of particular demographic groups compare to White men. Multiple regression statistical techniques allowed us to examine the impact of race and gender on economic outcomes while controlling for other factors, such as education and age.[198] Tables 4-3 and 4-4 present this data on wage and salary incomes and business earnings respectively. Table 4-3 indicates that non-Whites and White women earned less than White men. The reduction in earnings ranged from 15.5% to 3.3% and all of the results were statistically significant at the 0.001 level except that for Native Americans where the coefficient was statistically significant at the 0.05 level. Table 4-4 indicates that the coefficients for Blacks and White women were statistically significant and negative; indicating that those firms received business earnings less than White men.

196. Appendix B provides a “Further Explanation of Probit Regression Analysis.”
197. The sole exception was Asian/Pacific Islanders where the statistically insignificant coefficient was 0.01%.
198. See Appendix A for more information on multiple regression statistical analysis.

Table 4-1: Business Formation Rates
All Industries, 2015 - 2019

Demographic Group	Business Formation Rates
Black	2.2%
Hispanic	3.3%
Native American	-----
Asian/Pacific Islander	5.3%
Other	2.8%
White Women	3.2%
M/WBE	3.0%
White Male	5.8%

Source: CHA calculations from the American Community Survey

Table 4-2: Business Formation Probabilities
Relative to White Males, All Industries, 2015 - 2019

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-3.1%***
Hispanic	-1.7%**
Native American	-----
Asian/Pacific Islander	0.01%
Other	-1.1%
White Women	-2.3%***

Source: CHA calculations from the American Community Survey
**** Indicates statistical significance at the 0.001 level*
*** Indicates statistical significance at the 0.01 level*

Table 4-3: Wage Differentials for Selected Groups Relative to White Men, All Industries, 2015 - 2019

Demographic Group	Wages Relative to White Men (% Change)
Black	-27.6%***
Hispanic	-16.8%***
Native American	-15.5%*
Asian/Pacific Islander	-32.3%***
Other	-23.0%***
White Women	-32.7%***

Source: CHA calculations from the American Community Survey
**** Indicates statistical significance at the 0.001 level*
** Indicates statistical significance at the 0.05 level*

Table 4-4: Business Earnings Differentials for Selected Groups Relative to White Men, All Industries

Demographic Group	Earnings Relative to White Men (% Change)
Black	-43.5%**
Hispanic	-27.0%
Native American	-----
Asian/Pacific Islander	-16.3%
Other	-71.8%
White Women	-41.6%**

Source: CHA calculations from the American Community Survey
*** Indicates statistical significance at the 0.01 level*

2. The Construction Industry in Anne Arundel County's Marketplace

There were low numbers of Native American and Other firms in the sample of the construction industry; consequently, reliable estimates of firm outcomes could not be made for these groups. Table 4-5 indicates that White men had higher business formation rates compared to Blacks, Hispanics, and White women. Table 4-6 indicates that Blacks, Hispanics, and White women were less likely to form businesses compared to similarly situated White men. The reduced probabilities of business formation ranged from 3.8% to 3.4%. Only the Hispanic coefficient was statistically significant and that was at the 0.05 level. Table 4-7 indicates that Blacks, Hispanics, Asians, Others and White women earned less than White men. The Black, Hispanic, and White Woman coefficients were statistically significant at the 0.01 level. Table 4-8 indicates that only the Asian coefficient was statistically significant.

Table 4-5: Business Formation Rates
Construction, 2015 - 2019

Demographic Group	Business Formation Rates
Black	7.8%
Hispanic	4.4%
Native American	-----
Asian/Pacific Islander	13.2%
Other	-----
White Women	9.2%
M/WBE	6.0%
White Male	12.5%

Source: CHA calculations from the American Community Survey

Table 4-6: Business Formation Probability Differentials for Selected Groups Relative to White Men, Construction, 2015 - 2019

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-3.5%
Hispanic	-3.8%*
Native American	-----
Asian/Pacific Islander	1.2%
Other	-----
White Women	-3.4%

Source: CHA calculations from the American Community Survey
** Indicates statistical significance at the 0.05 level*

Table 4-7: Wage Differentials for Selected Groups Relative to White Men, Construction, 2015 - 2019

Demographic Group	Wages Relative to White Men (% Change)
Black	-26.2%***
Hispanic	-17.2%***
Native American	6.9%
Asian/Pacific Islander	-18.0%
Other	-25.7%
White Women	-29.8%***

Source: CHA calculations from the American Community Survey
**** Indicates statistical significance at the 0.001 level*

Table 4-8: Business Earnings Differentials for Selected Groups Relative to White Men, Construction, 2015 - 2019

Demographic Group	Earnings Relative to White Men (% Change)
Black	-72.5%
Hispanic	37.5%
Native American	-----
Asian/Pacific Islander	119.0%*,[a]
Other	-----
White Women	6.3%

a. The proper way to interpret a coefficient that is less than negative 100% (e.g., the value of the coefficient Asians in Table 4-8), is the percentage amount non-M/WBEs earn that is more than the group in question. In this case, White Men receive business earnings 119% more than Asians in Construction.

Source: CHA calculations from the American Community Survey
** Indicates statistical significance at the 0.05 level*

3. The Construction-Related Services Industry in Anne Arundel County's Marketplace

The sample of firms in the construction-related services industry contained too few numbers of Black, Hispanic, Native American, Asian, and Other firms to produce reliable estimates of these groups' business outcomes. White women formed businesses at a lower rate than White men. – as seen in Table 4-9 – and the probability of forming a business after controlling for other key factors was 0.4% less than White men as seen in Table 4-10. The coefficients for the wages for Blacks, Hispanics, Asian, and White women were statistically significant and they ranged from -29.1% to -15.0%.

Table 4-9: Business Formation Rates
Construction-Related Services, 2015 - 2019

Demographic Group	Business Formation Rates
Black	-----
Hispanic	-----
Native American	-----
Asian/Pacific Islander	-----
Other	-----
White Women	3.4%
M/WBE	3.7%
White Male	5.0%

Source: CHA calculations from the American Community Survey

Table 4-10: Business Formation Probability Differentials for Selected Groups Relative to White Men, Construction-Related Services, 2015 - 2019

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-----
Hispanic	-----
Native American	-----
Asian/Pacific Islander	-----
Other	-----
White Women	-0.4%

Source: CHA calculations from the American Community Survey

Table 4-11: Wage Differentials for Selected Groups Relative to White Men, Construction-Related Services, 2015 - 2019

Demographic Group	Wages Relative to White Men (% Change)
Black	-29.1%***
Hispanic	-15.0%*
Native American	-----
Asian/Pacific Islander	-22.4%***
Other	15.3%
White Women	-26.6%***

Source: CHA calculations from the American Community Survey
**** Indicates statistical significance at the 0.001 level*
** Indicates statistical significance at the 0.05 level*

Table 4-12: Business Earnings Differentials for Selected Groups Relative to White Men, Construction-Related Services, 2015 - 2019

Demographic Group	Earnings Relative to White Men (% Change)
Black	-----
Hispanic	-----
Native American	-----
Asian/Pacific Islander	-----
Other	-----
White Women	-66.1%

Source: CHA calculations from the American Community Survey

4. The Goods Industry in Anne Arundel County's Marketplace

The sample of Native American and Other firms in the goods industry contained too few numbers to produce reliable estimates of these groups' business outcomes. Table 4-13 indicates that Blacks, Hispanics and White women have lower business formation rates compared to White men. Table 4-14 indicates that Blacks and White women had a lower probability of forming businesses compared to White men. Table 4-15 indicates that statistically significant results were found for four groups (Black; Asian; Other; and White women) and all indicate lower wages relative to White men. Table 4-16 indicates that none of the business earnings coefficients were statistically significant.

Table 4-13: Business Formation Rates Goods, 2015 - 2019

Demographic Group	Business Formation Rates
Black	1.4%
Hispanic	2.5%
Native American	-----
Asian/Pacific Islander	8.2%
Other	-----
White Women	3.2%
M/WBE	2.7%
White Male	4.9%

Source: CHA calculations from the American Community Survey

Table 4-14: Business Formation Probabilities Relative to White Males, Goods, 2015 - 2019

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-3.6%*
Hispanic	0.0%[a]
Native American	-----
Asian/Pacific Islander	1.6%
Other	-----
White Women	-1.4%

a. The actual coefficient value for Hispanics was 0.00006.

Source: CHA calculations from the American Community Survey
** Indicates statistical significance at the 0.05 level*

Table 4-15: Wage Differentials for Selected Groups Relative to White Men, Goods, 2015 - 2019

Demographic Group	Wages Relative to White Men (% Change)
Black	-29.9%***
Hispanic	-11.6%
Native American	2.3%
Asian/Pacific Islander	-57.0%***
Other	-43.1%*
White Women	-35.8%***

Source: CHA calculations from the American Community Survey
**** Indicates statistical significance at the 0.001 level*
** Indicates statistical significance at the 0.05 level*

Table 4-16: Business Earnings Differentials for Selected Groups Relative to White Men, Goods, 2015 - 2019

Demographic Group	Earnings Relative to White Men (% Change)
Black	-151.0%
Hispanic	40.1%
Native American	-----
Asian/Pacific Islander	73.7%
Other	-----
White Women	-96.0%

Source: CHA calculations from the American Community Survey

5. The Services Industry in Anne Arundel County's Marketplace

Table 4-17 indicates that White men had higher business formation rates compared to non-Whites and White women. Table 4-18 indicates that Blacks, Hispanics, Asian, and White women were less likely to form businesses compared to similarly situated White men and the coefficients for Blacks, Hispanics, and White women were statistically significant. Table 4-19 indicates that non-Whites and White women earned less than White men – ranging from 32.9% to 11.1% – and the coefficients for all but Native Americans were statistically significant. Table 4-20 indicates that only Black-owned firms had a statistically significant coefficient.

Table 4-17: Business Formation Rates Services, 2015 - 2019

Demographic Group	Business Formation Rates
Black	2.5%
Hispanic	3.3%
Native American	-----
Asian/Pacific Islander	5.6%
Other	4.2%
White Women	4.2%
M/WBE	3.5%
White Male	7.1%

Source: CHA calculations from the American Community Survey

Table 4-18: Business Formation Probability Differentials for Selected Groups Relative to White Men, Services, 2015 - 2019

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-3.0%***
Hispanic	-1.5%*
Native American	-----
Asian/Pacific Islander	-0.4%
Other	-0.6%
White Women	-2.2%***

Source: CHA calculations from the American Community Survey
**** Indicates statistical significance at the 0.001 level*
** Indicates statistical significance at the 0.05 level*

Table 4-19: Wage Differentials for Selected Groups Relative to White Men, Services, 2015 - 2019

Demographic Group	Wages Relative to White Men (% Change)
Black	-28.9%***
Hispanic	-14.7%***
Native American	-11.1%
Asian/Pacific Islander	-31.0%***
Other	-19.0%**
White Women	-32.9%***

Source: CHA calculations from the American Community Survey
**** Indicates statistical significance at the 0.001 level*
*** Indicates statistical significance at the 0.01 level*

Table 4-20: Business Earnings Differentials for Selected Groups Relative to White Men, Services, 2015 - 2019

Demographic Group	Earnings Relative to White Men (% Change)
Black	-43.0%*
Hispanic	-48.6%
Native American	-----
Asian/Pacific Islander	-27.7%
Other	14.7%
White Women	-14.5%

Source: CHA calculations from the American Community Survey
** Indicates statistical significance at the 0.05 level*

6. The Information Technology Industry in Anne Arundel County's Marketplace

There were low numbers of Hispanic, Native American and Other firms sampled in the information technology industry. Therefore, reliable estimates of firm outcomes could not be made in this sector. Table 4-21 indicates that White men had higher business formation rates compared to Blacks, Asians, and White women. Table 4-22 indicates that none of the coefficients were statistically significant. Table 4-23 indicates that non-Whites and White women earned less than White men and the coefficients for Blacks, Hispanics, Asians, and White women were statistically significant. Table 4-24 indicates that none of the coefficients were statistically significant.

Table 4-21: Business Formation Rates
Information Technology, 2015 – 2019

Demographic Group	Business Formation Rates
Black	3.3%
Hispanic	-----
Native American	-----
Asian/Pacific Islander	4.9%
Other	-----
White Women	4.5%
M/WBE	3.8%
White Male	5.0%

Source: CHA calculations from the American Community Survey

Table 4-22: Business Formation Probability Differentials for Selected Groups Relative to White Men, Information Technology, 2015 – 2019

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-0.9%
Hispanic	-----
Native American	-----
Asian/Pacific Islander	0.5%
Other	-----
White Women	-1.7%

Source: CHA calculations from the American Community Survey

Table 4-23: Wage Differentials for Selected Groups Relative to White Men, Information Technology, 2015 – 2019

Demographic Group	Wages Relative to White Men (% Change)
Black	-22.8%***
Hispanic	-11.1%*
Native American	-65.2%
Asian/Pacific Islander	-17.5%***
Other	-19.4%
White Women	-21.6%***

Source: CHA calculations from the American Community Survey
**** Indicates statistical significance at the 0.001 level*
** Indicates statistical significance at the 0.05 level*

Table 4-24: Business Earnings Differentials for Selected Groups Relative to White Men, Information Technology, 2015 – 2019

Demographic Group	Earnings Relative to White Men (% Change)
Black	-123.0%
Hispanic	-----
Native American	-----
Asian/Pacific Islander	-73.3%
Other	-----
White Women	-93.9%

Source: CHA calculations from the American Community Survey

Overall, the data presented in the above Tables indicate that non-Whites and White women form businesses less than White men and their wage and business earnings are less than those of White men. These analyses support the conclusion that barriers to business success do affect non-Whites and White women.

C. Disparate Treatment in Anne Arundel County's Marketplace: Evidence from the Census Bureau's 2017 Annual Business Survey

We further examined whether non-Whites and White women have disparate outcomes when they are active in Anne Arundel County's marketplace. This question is operationalized by exploring if the share of business receipts, number of firms, and payroll for firms owned by non-Whites and White women is greater than, less than, or equal to the share of all firms owned by non-Whites and White women.

To answer this question, we examined the ABS. The ABS surveyed about 850,000 employer firms and collected data on a variety of variables documenting ownership characteristics including race, ethnicity, and gender. It also collected data on the firms' business activity with variables marking the firms' number of employees, payroll size, sales and industry.[199] For this analysis, we examined firms in the State of Maryland. The State was the geographic unit of analysis because the ABS does not present data at the sub-state level.

With these data, we grouped the firms into the following ownership categories:[200,201]

- Hispanics
- Non-Hispanic Blacks
- Non-Hispanic Native Americans
- Non-Hispanic Asians
- Non-Hispanic White women
- Non-Hispanic White men
- Firms equally owned by non-Whites and Whites
- Firms equally owned by men and women
- Firms that were either publicly-owned or where the ownership could not be classified

For purposes of this analysis, the first four groups were aggregated to form a non-White category. Since our interest is the treatment of non-White-owned firms and White woman-owned firms, the last four groups were aggregated to form one cat-

199. For more information on the Annual Business Survey see https://www.census.gov/programs-surveys/abs/about.html.
200. Race and gender labels reflect the categories used by the Census Bureau.
201. For expository purposes, the adjective "non-Hispanic" will not be used in this Chapter; the reader should assume that any racial group referenced does not include members of that group who identify ethnically as Hispanic.

egory. To ensure this aggregated group is described accurately, we label this group "not non-White/non-White women". While this label is cumbersome, it is important to be clear this group includes firms whose ownership extends beyond White men, such as firms that are not classifiable or that are publicly traded and thus have no racial ownership. In addition to the ownership demographic data, the Survey also gathers information on the sales, number of paid employees, and payroll for each reporting firm.

We analyzed the ABS data on the following sectors:

- Construction
- Professional, Scientific and Technical Services
- Goods
- Other services

The ABS data – a sample of all businesses, not the entire universe of all businesses – required some adjustments. In particular, we had to define the sectors at the two-digit North American Industry Classification System ("NAICS") code level, and therefore our sector definitions do not exactly correspond to the definitions used to analyze the County contract data in Chapter IV, where we are able to determine sectors at the six-digit NAICS code level. At a more detailed level, the number of firms sampled in particular demographic and sector cells may be so small that the Census Bureau does not report the information, either to avoid disclosing data on businesses that can be identified or because the small sample size generates unreliable estimates of the universe. We therefore report two-digit data.

Table 4-25 presents information on which NAICS codes were used to define each sector.

Table 4-25: Two-Digit NAICS Code Definition of Sector

ABS Sector Label	Two-Digit NAICS Codes
Construction	23
Professional, Scientific, and Technical Services[a]	54
Goods	31,42, 44
Other Services	48, 52, 53, 56, 61, 62, 71, 72, 81

a. This sector includes (but is broader than just) construction-related services. It is impossible to narrow this category to construction-related services without losing the capacity to conduct race and gender specific analyses.

The balance of this Chapter reports the findings of the ABS analysis.

1. All Industries

For a baseline analysis, we examined all industries. Table 4-26 presents data on the percentage share that each group has of the total of each of the following four business outcomes:

- The number of firms with employees (employer firms)
- The sales and receipts of all employer firms
- The number of paid employees
- The annual payroll of employer firms

Panel A of Table 4-26 presents data for the four basic non-White racial groups:

- Black
- Hispanic
- Native American
- Asian

Panel B of Table 4-26 presents data for the following types of firm ownership:

- Non-White
- White women
- Not non-White/non-White women[202]

Categories in the second panel are mutually exclusive. Hence, firms that are non-White and equally owned by men and women are classified as non-White and firms that are equally owned by non-Whites and Whites and equally owned by men and women are classified as equally owned by non-Whites and Whites.

Since the central issue is the possible disparate treatment of non-White firms and White woman firms, we calculate three disparity ratios each for Black, Hispanic, Asian, Native American, non-White, and White woman firm respectively (a total of 18 ratios), presented in Table 4-27:

- Ratio of sales and receipts share for all employer firms over the share of total number of all employer firms.

202. Again, while a cumbersome nomenclature, it is important to remain clear that this category includes firms other than those identified as owned by White men.

- Ratio of sales and receipts share for employer firms over the share of total number of employer firms.
- Ratio of annual payroll share over the share of total number of employer firms.

For example, the disparity ratio of sales and receipts share for all firms over the share of total number of all employer firms for Black firms is 21.6% (as shown in Table 4-27). This is derived by taking the Black share of sales and receipts for all employer firms (1.3%) and dividing it by the Black share of total number of all employer firms (6.0%) that are presented in Table 4-26.[203] If Black-owned firms earned a share of sales equal to their share of total firms, the disparity index would have been 100%. An index less than 100% indicates 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% rule" that a ratio less than 80% presents a *prima facie* case of discrimination.[204] All of the 18 disparity ratios for non-White firms and White woman firms (presented in Table 4-27) were below this threshold.[205]

Table 4-26: Demographic Distribution of Sales and Payroll Data – Aggregated Groups All Industries, 2017

	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts - All Firms with Paid Employees (Employer Firms) ($1,000)	Number of Paid Employees	Annual payroll ($1,000)
Panel A: Distribution of Non-White Firms				
Black	6.0%	1.3%	2.7%	2.0%
Hispanic	3.6%	0.9%	1.3%	1.0%
Asian	12.7%	3.2%	4.7%	3.7%
Native American	0.3%	0.1%	0.2%	0.2%

203. Please note that while the numbers presented in 4-26 are rounded to the first decimal place, the calculations resulting in the numbers presented in Table 4-27 are based on the actual (non-rounded) figures. Therefore, the Black ratio presented in Table 4-27 of 21.6% is not the same figure as that which would be derived when you divided 1.3 by 6.0 (the numbers presented in Table 4-26).
204. 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 80%) 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.").
205. Because the data in the subsequent tables are presented for descriptive purposes, significance tests on these results are not conducted.

	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts - All Firms with Paid Employees (Employer Firms) ($1,000)	Number of Paid Employees	Annual payroll ($1,000)
Panel B: Distribution of All Firms				
Non-White	22.7%	5.5%	8.9%	6.8%
White Women	14.2%	4.4%	6.8%	5.4%
Not Non-White/ Not White Women	63.1%	90.1%	84.3%	87.7%
All Firms	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: CHA calculations from American Business Survey

Table 4-27: Disparity Ratios of Firm Utilization Measures All Industries, 2017

	Ratio of Sales to Number of Employer Firms	Ratio of Employees to Number of Employer Firms	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratio for Non-White Firms			
Black	21.6%	44.6%	33.6%
Hispanic	24.2%	35.9%	26.6%
Asian	25.2%	37.2%	28.9%
Native American	35.8%	58.1%	59.3%
Panel B: Disparity Ratios for All Firms			
Non-White	24.2%	39.2%	30.2%
White Women	31.0%	47.7%	38.1%
Not Non-White/Not White Women	142.8%	133.6%	139.0%
All Firms	**100.0%**	**100.0%**	**100.0%**

Source: CHA calculations from American Business Survey

This same approach was used to examine the Construction, Professional, Scientific and Technical Services, Goods, and Other Services sectors. The following are summaries of the results of the disparity analyses.

2. Construction Industry

Of the 18 disparity ratios for non-White firms and White woman firms presented in Table 4-28, 13 were under the 80% threshold.

Table 4-28: Disparity Ratios – Aggregated Groups
Construction, 2017

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	62.5%	71.3%	62.8%
Hispanic	31.3%	49.3%	33.0%
Asian	46.7%	31.0%	30.7%
Native American	177.5%	223.8%	256.6%
Panel B: Disparity Ratios for All Firms			
Non-White	43.7%	54.0%	43.4%
White Women	73.3%	110.3%	105.6%
Not Non-White/Not White Women	111.7%	106.8%	108.9%
All Firms	**100.0%**	**100.0%**	**100.0%**

Source: CHA calculations from American Business Survey

3. Professional, Scientific and Technical Services Industry

The 15 disparity ratios for non-White firms and White woman firms presented in Table 4-29 were under the 80% threshold.

Table 4-29: Disparity Ratios – Aggregated Groups
Professional, Scientific and Technical Services, 2017

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	61.3%	70.3%	55.5%
Hispanic	79.8%	77.3%	70.9%

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Asian	77.3%	71.5%	74.0%
Native American	-----	-----	-----
Panel B: Disparity Ratios for All Firms			
Non-White	71.7%	71.6%	66.9%
White Women	40.4%	41.4%	35.2%
Not Non-White/Not White Women	126.9%	126.6%	129.9%
All Firms	**100.0%**	**100.0%**	**100.0%**

Source: CHA calculations from American Business Survey

4. Goods Industry

The 18 disparity ratios for non-White firms and White woman firms presented in Table 4-30 were under the 80% threshold.

Table 4-30: Disparity Ratios – Aggregated Groups

Goods, 2017

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	10.5%	14.4%	11.8%
Hispanic	15.6%	28.4%	21.6%
Asian	15.3%	20.6%	13.5%
Native American	22.5%	45.3%	59.9%
Panel B: Disparity Ratios for All Firms			
Non-White	14.8%	20.5%	14.1%
White Women	25.9%	35.8%	34.6%
Not Non-White/Not White Women	144.2%	140.4%	142.9%
All Firms	**100.00%**	**100.00%**	**100.00%**

Source: CHA calculations from American Business Survey

5. Services Industry

The 18 disparity ratios for non-White firms and White woman firms presented in Table 4-31 were under the 80% threshold.

Table 4-31: Disparity Ratios – Aggregated Groups
Services, 2017

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	20.8%	42.6%	28.1%
Hispanic	15.8%	32.9%	20.8%
Asian	20.5%	36.7%	22.9%
Native American	7.9%	7.2%	8.4%
Panel B: Disparity Ratios for All Firms			
Non-White	19.9%	37.9%	24.2%
White Women	35.3%	51.6%	38.8%
Not Non-White/Not White Women	152.7%	140.4%	149.9%
All Firms	**100.0%**	**100.0%**	**100.0%**

Source: CHA calculations from American Business Survey

6. Conclusion

Overall, the analysis of the ABS data indicates that the non-White and White woman share of all employer firms is greater than their share of sales, payrolls, and employees. This supports the conclusion that barriers to business success disproportionately affect non-Whites and White women.

D. Evidence of Disparities in Access to Business Capital

Capital is the lifeblood of any business. Participants in the anecdotal data collection universally agreed to this fundamental fact. The interviews with business owners conducted as part of this Study confirmed that small firms, especially minority- and woman-owned firms, had difficulties obtaining needed working capital to perform on County contracts and subcontracts, as well as expand the capacities of their firms. As demonstrated by the analyses of Census Bureau data, above, discrimination may even prevent firms from forming in the first place.

There are extensive federal agency reports and much scholarly work on the relationship between personal wealth and successful entrepreneurship. There is a general consensus that disparities in personal wealth translate into disparities in business creation and ownership.[206] The most recent research highlights the magnitude of the COVID-19 pandemic's disproportionate impact on minority-owned firms.

1. Federal Reserve Board Small Business Credit Surveys[207]

The Development Office of the 12 Reserve Banks of the Federal Reserve System has conducted Small Business Credit Surveys ("SBCS") to develop data on small business performance and financing needs, decisions, and outcomes.

a. 2022 Small Business Credit Survey

The 2022 Small Business Credit Survey ("2022 Survey")[208] gathered insights about the COVID-19 pandemic's continuing impact on small businesses, including workforce challenges, business performance, and credit conditions. The 2022 Survey yielded 10,914 responses from a nationwide convenience sample of small business firms with 1-499 full- or part-time employees across all 50 states and the District of Columbia. The 2022 Survey was fielded during September through November of 2021 and was the second survey conducted during the global pandemic.

The 2022 Survey found that the pandemic continues to significantly impact firms, with 77% reporting negative effects. While pandemic-related financial assistance programs, including the Paycheck Protection Program ("PPP"), were widely used in 2020 and 2021, the 2022 Survey found a decline in their use in the 12 months prior to the Survey. Personal funds and cash reserves remain an important source of financial stability for small businesses, while financing approval rates continue to decline relative to pre-pandemic levels. Although two-thirds of employer firms received pandemic-related financial assistance in the prior 12 months, firms were less likely to seek financial assistance than they were earlier in the pandemic. Approval rates on loans, lines of credit and cash advance applications declined for the second consecutive year. Other key findings include:

206. *See*, *e.g.*, Evans, David S. and Jovanovic, Boyan, "An Estimated Model of Entrepreneurial Choice under Liquidity Constraints," *Journal of Political Economy*, Vol. 97, No. 4, 1989, pp. 808-827; David S. Evans and Linda S. Leighton, "Some empirical aspects of entrepreneurship," *The American Economic Review*, Vol. 79, No. 3, 1989, pp. 519-535.

207. This survey offers baseline data on the financing and credit positions of small firms before the onset of the pandemic. *See* fedsmallbusiness.org.

208. https://www.fedsmallbusiness.org/medialibrary/FedSmallBusiness/files/2021/2022-sbcs-employer-firms-report.

- More than half of firms were in fair or poor financial condition at the time of the Survey, and nearly all firms faced at least one operational or financial challenge in the prior 12 months.
- Firms owned by people of color, smaller firms, and leisure and hospitality firms were most likely to be in fair or poor financial condition.

Application rates for traditional financing were lower in 2021 than in prior years, and those who applied were less likely to receive the financing they sought. Firms owned by people of color, firms with fewer employees, and leisure and hospitality firms were least likely to receive the full amount of financing sought.

b. 2021 Report on Firms Owned by People of Color

i. Overview

The *2021 Report on Firms Owned by People of Color* [209] compiles results from the 2020 SBCS. The SBCS provides data on small business performance, financing needs, and decisions and borrowing outcomes.[210,211] The Report provides results by four race/ethnicity categories: White, Black or African American, Hispanic or Latino, and Asian or Pacific Islander. For select key statistics, it also includes results for 4,531 non-employer firms, which are firms with no employees on payroll other than the owner(s) of the business.

Patterns of geographic concentration emerged among small business ownership by race and ethnicity. This was important given the progressive geographic spread of the novel coronavirus throughout 2020 and variations in state government responses to limit its spread. The Report found that 40% of Asian-owned small employer firms are in the Pacific census division, and another 28% are in the Middle Atlantic. Early and aggressive efforts by the impacted states may have affected the revenue performance of Asian-owned firms in the aggregate given their geographic concentration. Black-owned and Hispanic-owned small employer firms are more concentrated in the South Atlantic region, which includes states with a mix of pandemic responses. For example, while Florida lifted COVID-19 restrictions relatively quickly, the South Atlantic, including North Carolina, maintained more strict guidelines.

209. https://www.fedsmallbusiness.org/medialibrary/FedSmallBusiness/files/2021/sbcs-report-on-firms-owned-by-people-of-color.
210. The SBCS is an annual survey of firms with fewer than 500 employees.
211. The 2020 SBCS was fielded in September and October 2020 and yielded 9,693 responses from small employer firms in all 50 states and the District of Columbia.

The Report found that firms owned by people of color continue to face structural barriers in acquiring the capital, business acumen, and market access needed for growth. At the time of the 2020 SBCS – six months after the onset of the global pandemic – the U.S. economy had undergone a significant contraction of economic activity. As a result, firms owned by people of color reported more significant negative effects on business revenue, employment, and operations. These firms anticipated revenue, employment, and operational challenges to persist into 2021 and beyond. Specific findings are, as follows:

ii. Performance and Challenges

Overall, firms owned by people of color were more likely than White-owned firms to report that they reduced their operations in response to the pandemic. Asian-owned firms were more likely than others to have temporarily closed and to have experienced declines in revenues and employment in the 12 months prior to the survey. In terms of sales and the supply chain, 93% of Asian-owned firms and 86% of Black-owned firms reported sales declines as a result of the pandemic. Relative to financial challenges for the prior 12 months, firms owned by people of color were more likely than White-owned firms to report financial challenges, including paying operating expenses, paying rent, making payments on debt, and credit availability. Black-owned business owners were most likely to have used personal funds in response to their firms' financial challenges. Nearly half of Black-owned firms reported concerns about personal credit scores or the loss of personal assets. By contrast, one in five White-owned firms reported no impact on the owners' personal finances. Asian-owned firms were approximately twice as likely as White-owned firms to report that their firms were in poor financial condition.

iii. Emergency Funding

The Report finds that PPP loans were the most common form of emergency assistance funding that firms sought during the period. Black-owned and Hispanic-owned firms were less likely to apply for a PPP loan. Only six in ten Black-owned firms actually applied. Firms owned by people of color were more likely than White-owned firms to report that they missed the deadline or were unaware of the program. Firms owned by people of color were less likely than White-owned firms to use a bank as a financial services provider. Regardless of the sources at which they applied for PPP loans, firms that used banks were more likely to apply for PPP loans than firms that did not have a relationship with a bank. While firms across race and ethnicity were similarly likely to apply for PPP loans at large banks, White- and Asian-owned firms more often applied at small banks than did Black- and Hispanic-owned firms. Black-owned firms were nearly half as likely as White-owned firms to receive all of the PPP funding they sought and were approximately five times as likely to receive none of the funding they sought.

iv. Debt and Financing

Black-owned firms have smaller amounts of debt than other firms. About one in ten firms owned by people of color do not use financial services.

On average, Black-owned firms completed more financing applications than other applicant firms. Firms owned by people of color turned more often to large banks for financing. By contrast, White-owned firms turned more often to small banks. Black-owned applicant firms were half as likely as White-owned applicant firms to be fully approved for loans, lines of credit, and cash advances.

Firms owned by people of color were less satisfied than White-owned firms with the support from their primary financial services provider during the pandemic. Regardless of the owner's race or ethnicity, firms were less satisfied with online lenders than with banks and credit unions.

In the aggregate, 63% of all employer firms were non-applicants – they did not apply for non-emergency financing in the prior 12 months. Black-owned firms were more likely than other firms to apply for non-emergency funding in the 12 months prior to the survey. One-quarter of Black- and Hispanic-owned firms that applied for financing sought $25,000 or less. In 2020, firms owned by people of color were more likely than White-owned firms to apply for financing to meet operating expenses. The majority of non-applicant firms owned by people of color needed funds but chose not to apply, compared to 44% of White-owned firms. Financing shortfalls were most common among Black-owned firms and least common among White-owned firms.

Firms of color, and particularly Asian-owned firms, were more likely than White-owned firms to have unmet funding needs. Just 13% of Black-owned firms received all of the non-emergency financing they sought in the 12 months prior to the survey, compared to 40% of White-owned firms. Black-owned firms with high credit scores were half as likely as their White counterparts to receive all of the non-emergency funding they sought.

v. Findings for Non-employer Firms

Non-employer firms, those that have no paid employees other than the owner, represent the overwhelming majority of small businesses across the nation. In all, 96% of Black- and 91% of Hispanic-owned firms are non-employer firms, compared to 78% of White-owned and 75% of Asian-owned firms.[212]

Compared to other non-employer firms, Asian-owned firms reported the most significant impact on sales as a result of the pandemic. They were most likely to report that their firm was in poor financial condition at the time of the survey.

Compared to other non-employer firms that applied for financing, Black-owned firms were less likely to receive all of the financing they sought. Black-owned non-employer firms that applied for PPP loans were less likely than other firms to apply at banks and more often turned to online lenders. Among PPP applicants, White-owned non-employer firms were twice as likely as Black-owned firms to receive all of the PPP funding they sought.

c. 2021 Small Business Credit Survey

The 2021 SBCS[213] reached more than 15,000 small businesses, gathering insights about the COVID-19 pandemic's impact on small businesses, as well as business performance and credit conditions. The 2021 Survey yielded 9,693 responses from a nationwide convenience sample of small employer firms with between one and 499 full- or part-time employees across all 50 states and the District of Columbia. The 2021 Survey was fielded in September and October 2020, approximately six months after the onset of the pandemic. The timing of the 2021 Survey is important to the interpretation of the results. At the time of the 2021 survey, the PPP authorized by the Coronavirus Relief and Economic Security Act had recently closed applications, and prospects for additional stimulus funding were uncertain. Additionally, many government-mandated business closures had been lifted as the number of new COVID-19 cases plateaued in advance of a significant increase in cases by the year's end.

The 2021 Survey findings highlight the magnitude of the pandemic's impact on small businesses and the challenges they anticipate as they navigate changes in the business environment. Few firms avoided the negative impacts of the pandemic. Furthermore, the findings reveal disparities in

212. The Report notes that a future report will describe findings from the 2020 SBCS for non-employers in greater detail.
213. https://www.fedsmallbusiness.org/medialibrary/FedSmallBusiness/files/2021/2021-sbcs-employer-firms-report.

experiences and outcomes across firm and owner demographics, including race and ethnicity, industry, and firm size.

Overall, firms' financial conditions declined sharply and those owned by people of color reported greater challenges. The most important anticipated financial challenge differed by race and ethnicity of the owners. Among the findings for employer firms relevant to discriminatory barriers were the following:

- For Black-owned firms, credit availability was the top expected challenge, while Asian-owned firms disproportionately cited weak demand.
- The share of firms in fair or poor financial conditions varied by race: 79% of Asian-owned firms, 77% of Black-owned firms, 66% of Hispanic-owned firms and 54% of White-owned firms reported this result.
- The share of firms that received all the financing sought to address the impacts of the pandemic varied by race: 40% of White-owned firms received all the funding sought, but only 31% of Asian-owned firms, 20% of Hispanic-owned firms and 13% of Black-owned firms achieved this outcome.

d. 2018 Small Business Credit Survey

The 2018 SBCS[214] focused on minority-owned firms. The analysis was divided into two types: employer firms and non-employer firms.

i. Employer firms

Queries were submitted to businesses with fewer than 500 employees in the third and fourth quarters of 2018. Of the 7,656 firms in the unweighted sample, five percent were Asian, ten percent were Black, six percent were Hispanic, and 79% were White. Data were then weighted by number of employees, age, industry, geographic location (census division and urban or rural location), and minority status to ensure that the data is representative of the nation's small employer firm demographics.[215]

Among the findings for employer firms relevant to discriminatory barriers were the following:

214. Small Business Credit Survey, https://www.fedsmallbusiness.org/survey/2017/report-on-minority-owned-firms.
215. *Id* at 22. Samples for SBCS are not selected randomly. To control for potential biases, the sample data are weighted so that the weighted distribution of firms in the SBCS matches the distribution of the small firm population in the United States by number of employees, age industry, geographic location, gender of owner, and race or ethnicity of owners.

- Not controlling for other firm characteristics, fewer minority-owned firms were profitable compared to non-minority-owned firms during the past two years.[216] On average, minority-owned firms and non-minority-owned firms were about as likely to be growing in terms of number of employees and revenues.[217]
- Black-owned firms reported more credit availability challenges or difficulties obtaining funds for expansion—even among firms with revenues of more than $1M. For example, 62% of Black-owned firms reported that obtaining funds for expansion was a challenge, compared to 31% of White-owned firms.[218]
- Black-owned firms were more likely to report relying on personal funds of owner(s) when they experienced financial challenges to fund their business. At the same time, White- and Asian-owned firms reported higher debt levels than Black- and Hispanic-owned firms.[219]
- Black-owned firms reported more attempts to access credit than White-owned firms but sought lower amounts of financing. Forty percent of Black-owned firms did not apply because they were discouraged, compared to 14% of White-owned firms.[220]
- Low credit score and lack of collateral were the top reported reasons for denial of applications by Black- and Hispanic-owned firms.[221]

ii. Non-employer firms[222]

Queries were submitted to non-employer firms in the third and fourth quarters of 2018. Of the 4,365 firms in the unweighted sample, five percent were Asian, 24% were Black, seven percent were Hispanic, and 64% were White. Data were then weighted by age, industry, geographic location (census division and urban or rural location), and minority status.[223]

Among the findings for non-employer firms relevant to discriminatory barriers were the following:

216. *Id*. at 3.
217. *Id*. at 4.
218. *Id*. at 5.
219. *Id*. at 6.
220. *Id*. at 9.
221. *Id*. at 15.
222. *Id*. at 18.
223. *Id*. at 18.

- Black-owned firms were more likely to operate at a loss than other firms.[224]
- Black-owned firms reported greater financial challenges, such as obtaining funds for expansion, accessing credit and paying operating expenses than other businesses.[225]
- Black- and Hispanic-owned firms submitted more credit applications than White-owned firms.[226]

e. 2016 Small Business Credit Survey

The 2016 Small Business Credit Survey[227] obtained 7,916 responses from employer firms with race/ethnicity information and 4,365 non-employer firms in the 50 states and the District of Columbia. Results were reported with four race/ethnicity categories: White, Black or African American, Hispanic, and Asian or Pacific Islander.[228] It also reported results from woman-owned small employer firms, defined as firms where 51% or more of the business is owned by women, and compared their experiences with male-owned small employer firms.

2. Small Business Administration Loans to African American Businesses (2020)

As detailed in a 2021 article published in the *San Francisco Business Times*,[229] the number of loans to Black businesses through the SBA's 7(a) program[230] decreased 35% in 2020.[231] This was the largest drop in lending to any race or ethnic group tracked by the SBA. The 7(a) program is the SBA's primary program for financial assistance to small businesses. Terms and conditions, like the guaranty percentage and loan amount, vary by the type of loan. Lenders and borrowers can negotiate the interest rate, but it may not exceed the SBA maximum.[232]

224. *Id*.
225. *Id.* at 19.
226. *Id.* at 20.
227. https://www.fedsmallbusiness.org/survey/2017/report-on-minority-owned-firms.
228. When the respondent sample size by race for a survey proved to be too small, results were communicated in terms of minority vis-à-vis non-minority firms.
229. SBA Loans to African American Businesses Decrease 35%, San Francisco Business Times (August 11, 2021) at: https://www.bizjournals.com/sanfrancisco/news/2021/08/11/sba-loans-to-african-american-businesses-decrease.html. Data were obtained through a Freedom of Information Act request.
230. Section 7(a) of the Small Business Act of 1953 (P.L. 83-163, as amended).
231. The total number of 7(a) loans declined 24%.
232. The SBA caps the maximum spread lenders can charge based on the size and maturity of the loan. Rates range from prime plus 4.5% to prime plus 6.5%, depending on how much is borrowed.

Bankers, lobbyists, and other financial professionals attributed the 2020 decline to the impact of the PPP pandemic relief effort.[233] The PPP loan program provided the source of relief to underserved borrowers through a direct incentive for small businesses to keep their workers on payroll.[234] Approximately 5.2M PPP loans were made in 2020, as compared with roughly 43,000 loans made through the 7(a) program.

In a published statement to the *Portland Business Journal,* the American Bankers Association, an industry trade group, noted that the 2020 decline in SBA 7(a) loans to Black-owned businesses is not a one-year anomaly; it has been declining for years at a much faster rate than 7(a) loans to other borrowers. The 2020 data[235] reveal that the number of SBA loans made annually to Black businesses has declined 90% since a 2007 peak, more than any other group tracked by the SBA. In that interval, the overall number of loans decreased by 65%.

The nation's four largest banks (JP Morgan Chase, Bank of America, Citigroup, and Wells Fargo), which hold roughly 35% of national deposits, made 41% fewer SBA 7(a) loans to Blacks in 2020.[236]

PPP loans served as a lifeline during the pandemic for millions of businesses. However, industry experts maintained that PPP loans detracted from more conventional SBA lending efforts that year. Wells Fargo provided more than 282,000 PPP loans to small businesses nationwide in 2020, with an average loan size of $50,000. Wells Fargo, the most active lender for Black businesses nationwide in 2020, saw its SBA loans to Blacks drop from 263 in 2019 to 162 in 2020. Bank of America, Chase, and Citigroup also reported fewer SBA loans to African American businesses in 2020.

While PPPs have been heralded for providing needed monies to distressed small and mid-size businesses, data reveals disparities in how loans were distributed.[237] An analysis in 2020 by the *Portland Business Journal*, found that of all 5.2M PPP loans, businesses in neighborhoods of color received fewer loans and delayed access to the program during the early critical days of the pandemic.[238] More recent analysis released by the Associated Press indicates that access for borrowers of color improved exponentially during the later rounds

233. The Coronavirus Act, Relief, and Economic Security Act ("CARES Act"), required the SBA to issue guidance to PPP lenders to prioritize loans to small businesses owned by socially and economically disadvantaged individuals including Black-owned businesses. *See* 116-136, §1, March 27, 2020, 134 Stat. 281.
234. PPP loans were used to help fund payroll costs, including benefits, and to pay for mortgage interest, rent, utilities, workers protection costs related to COVID-19, uninsured property damage costs caused by looting or vandalism during 2020 as well as certain supplier costs and operational expenses.
235. The SBA denied the original request for information; however, the publication prevailed on appeal.
236. Data obtained by the *Business Journal* does not include information from lenders who made less than ten loans in 2020.
237. While PPP loans are administered by the SBA, they are disbursed primarily through banks.

of PPP funding, following steps designed to make the program more accessible to underserved borrowers.

3. The 2016 Report on Minority-Owned Businesses[239]

The Report on Minority-Owned Businesses provided results for White-, Black- or African American-, Hispanic-, and Asian- or Pacific Islander-owned firms.

a. Demographics[240]

The Report found that Black-, Asian-, and Hispanic-owned firms tended to be younger and smaller in terms of revenue size, and they were concentrated in different industries. Black-owned firms were concentrated in the healthcare and education industry sectors (24%). Asian-owned firms were concentrated in professional services and real estate (28%). Hispanic-owned firms were concentrated in non-manufacturing goods production and associated services industry, including building trades and construction (27%). White-owned firms were more evenly distributed across several industries but operated most commonly in the professional services industry and real estate industries (19%), and non-manufacturing goods production and associated services industry (18%).[241]

b. Profitability Performance Index[242]

After controlling for other firm characteristics, the Report found that fewer minority-owned firms were profitable compared to non-minority-owned firms during the prior two years. This gap proved most pronounced between White-owned (57%) and Black-owned firms (42%). On average, however, minority-owned firms and non-minority-owned firms were nearly as likely to be growing in terms of number of employees and revenues.

c. Financial and Debt Challenges/Demands[243]

The number one reason for financing was to expand the business or pursue a new opportunity. Eighty-five percent of applicants sought a loan or line of

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238. Many industry experts have observed that businesses that already had strong relationships with lenders were the most successful in accessing PPP loans. The nation's long history of systemic racism in banking fostered disparities in PPP loan distribution. *See* Alicia Plerhoples, *Correcting Past Mistakes: PPP Loans and Black-Owned Small Businesses*, at https://www.acslaw.org/expertforum/correcting-past-mistakes-ppp-loans-and-black-owned-small-businesses/.
239. https://www.fedsmallbusiness.org/survey/2017/report-on-minority-owned-firms.
240. 2016 SBCS, at 2.
241. *Id.* Forty-two percent of Black-owned firms, 21% of Asian-owned firms, and 24% of Hispanic-owned firms were smaller than $100K in revenue size compared with 17% of White-owned firms.
242. *Id*. at 3-4.
243. *Id.* at 8-9; 11-12; 13; 15.

credit. Black-owned firms reported more attempts to access credit than White-owned firms but sought lower amounts of financing.

Black-, Hispanic-, and Asian-owned firms applied to large banks for financing more than they applied to any other sources of funds. Having an existing relationship with a lender was deemed more important to White-owned firms when choosing where to apply compared to Black-, Hispanic- and Asian-owned firms.

The Report also found that small Black-owned firms reported more credit availability challenges or difficulties for expansion than White-owned firms, even among firms with revenues in excess of $1M. Black-owned firm application rates for new funding were ten percentage points higher than White-owned firms; however, their approval rates were 19 percentage points lower. A similar but less pronounced gap existed between Hispanic- and Asian-owned firms compared with White-owned firms. Of those approved for financing, only 40% of minority-owned firms received the entire amount sought compared to 68% of non-minority-owned firms, even among firms with comparably good credit scores.

Relative to financing approval, the Report found stark differences in loan approvals between minority-owned and White-owned firms. When controlling for other firm characteristics, approval rates from 2015 to 2016 increased for minority-owned firms and stayed roughly the same for non-minority-owned firms. Hispanic- and Black-owned firms reported the highest approval rates at online lenders.[244]

Low credit score and lack of collateral were the top reported reasons for denial of Black- and Hispanic-owned firms' applications. Satisfaction levels were lowest at online lenders for both minority- and non-minority-owned firms. A lack of transparency was cited as one of the top reasons for dissatisfaction for minority applicants and borrowers.

Forty percent of non-applicant Black-owned firms reported not applying for financing because they were discouraged (expected not to be approved), compared with 14% of White-owned firms. The use of personal funds was the most common action taken in response to financial challenges, with 86% of Black-owned firms, 77% of Asian-owned firms, 76% of White-owned firms, and 74% of Hispanic-owned firms using this as its source.

A greater share of Black-owned firms (36%) and of Hispanic-owned firms (33%) reported existing debt in the past 12 months of less than $100,000, compared with 21% of White-owned firms and 14% of Asian-owned firms.

244. The share of minority-owned firms receiving at least some financing was lower across all financing products, compared with non-minority firms.

Black-owned firms applied for credit at a higher rate and tended to submit more applications, compared with White-owned firms. Black-, Hispanic-, and Asian-owned firms applied for higher-cost products and were more likely to apply to online lenders compared to White-owned firms.

d. Business Location Impact[245]

Controlling for other firm characteristics, minority-owned firms located in low-income minority zip codes reported better credit outcomes at large banks, compared with minority-owned firms in other zip codes. By contrast, at small banks, minority-owned firms located in low- and moderate-income minority zip codes experienced lower approval rates than minority-owned firms located in other zip codes.

e. Non-employer Firms[246]

Non-employer firms reported seeking financing at lower rates and experienced lower approval rates than employer firms, with Black-owned non-employer firms and Hispanic-owned non-employer firms experiencing the most difficulty. White-owned non-employer firms experienced the highest approval rates for new financing, while Black-owned non-employer firms experienced the lowest approval rates for new financing.

4. The 2016 Report on Woman-Owned Businesses[247]

The Report on Woman-Owned Businesses provides results from woman-owned small employer firms where 51% or more of the business is owned by women. These data compared the experience of these firms compared with male-owned small employer firms.

a. Firm Characteristics: Woman-Owned Firms Start Small and Remain Small and Concentrate in Less Capital-Intensive Industries[248]

The Report found that 20% of small employer firms were woman-owned, compared to 65% male-owned and 15% equally owned. Woman-owned firms generally had smaller revenues and fewer employees than male-owned small employer firms. These firms tended to be younger than male-owned firms.

245. *Id.* at 17.
246. *Id.* at 21.
247. https://www.newyorkfed.org/medialibrary/media/smallbusiness/2016/SBCS-Report-WomenOwnedFirms-2016.pdf.
248. 2016 SBCS, at 1-5.

Woman-owned firms were concentrated in less capital-intensive industries. Two out of five woman-owned firms operated in the healthcare and education or professional services and real estate industries. Male-owned firms were concentrated in professional services, real estate, and non-manufacturing goods production and associated services.[249]

b. Profitability Challenges and Credit Risk Disparities[250]

Woman-owned firms were less likely to be profitable than male-owned firms. These firms were more likely to report being medium or high credit risk compared to male-owned firms. Notably, gender differences by credit risk were driven by woman-owned startups. Among firms older than five years, credit risk was indistinguishable by the owner's gender.

c. Financial Challenges During the Prior Twelve Months[251]

Woman-owned firms were more likely to report experiencing financial challenges in the prior twelve months: 64% compared to 58% of male-owned firms. They most frequently used personal funds to fill gaps and make up deficiencies. Similar to male-owned firms, woman-owned firms frequently funded operations through retained earnings. Ninety percent of woman-owned firms relied upon the owner's personal credit score to obtain financing.

d. Debt Differences[252]

Sixty-eight percent of woman-owned firms had outstanding debt, similar to that of male-owned firms. However, woman-owned firms tended to have smaller amounts of debt, even when controlled for the revenue size of the firm.

e. Demands for Financing[253]

Forty-three percent of woman-owned firms applied for financing. Woman-owned applicants tended to seek smaller amounts of financing even when their revenue size was comparable.

Overall, woman-owned firms were less likely to receive all financing applied for compared to male-owned firms. Woman-owned firms received a higher

249. Non-manufacturing goods production and associated services refers to firms engaged in Agriculture, Forestry, Fishing, and Hunting; Mining, Quarrying, and Oil and Gas Extraction; Utilities; Construction; Wholesale Trade; Transportation and Warehousing (NAICS codes: 11, 21, 22, 23, 42, 48-49).
250. *Id*. at 6-7.
251. *Id*. at 8.
252. *Id*. at 10.
253. *Id*. at 16.

approval rate for U.S. Small Business Administration loans compared to male-owned firms. Low-credit, woman-owned firms were less likely to be approved for business loans than their male counterparts with similar credit (68% compared to 78%).

f. Firms That Did Not Apply for Financing[254]

Woman-owned firms reported being discouraged from applying for financing for fear of being turned down at a greater rate: 22% compared to 15% for male-owned firms. Woman-owned firms cited low credits scores more frequently than male-owned firms as their chief obstacle in securing credit. By contrast, male-owned businesses were more likely to cite performance issues.

g. Lender Satisfaction[255]

Woman-owned firms were most consistently dissatisfied by lenders' lack of transparency and by long waits for credit decisions. However, they were notably more satisfied with their borrowing experiences at small banks rather than large ones.

5. 2010 Minority Business Development Agency Report[256]

The 2010 Minority Business Development Agency Report, "Disparities in Capital Access Between Minority and non-Minority Owned Businesses: The Troubling Reality of Capital Limitations Faced by MBEs", summarizes results from the Kauffman Firm Survey, data from the U.S. Small Business Administration's Certified Development Company/504 Guaranteed Loan Program and additional extensive research on the effects of discrimination on opportunities for minority-owned firms. The report found that:

> low levels of wealth and liquidity constraints create a substantial barrier to entry for minority entrepreneurs because the owner's wealth can be invested directly in the business, used as collateral to obtain business loans or used to acquire other businesses.[257]

254. *Id*. at 14.
255. *Id*. at 26.
256. Robert W. Fairlie and Alicia Robb, Disparities in Capital Access Between Minority and non-Minority Businesses: The Troubling Reality of Capital Limitations Faced by MBEs, Minority Business Development Agency, U.S. Department of Commerce, 2010 ("MBDA Report" (https://archive.mbda.gov/sites/mbda.gov/files/migrated/files-attachments/DisparitiesinCapitalAccessReport.pdf).
257. *Id.* at 17.

It also found, "the largest single factor explaining racial disparities in business creation rates are differences in asset levels."[258]

Some additional key findings of the Report include:

- Denial of Loan Applications. Forty-two percent of loan applications from minority firms were denied compared to 16% of loan applications from non-minority-owned firms.[259]
- Receiving Loans. Forty-one percent of all minority-owned firms received loans compared to 52% of all non-minority-owned firms. MBEs are less likely to receive loans than non-minority-owned firms regardless of firm size.[260]
- Size of Loans. The size of the loans received by minority-owned firms averaged $149,000. For non-minority-owned firms, loan size averaged $310,000.
- Cost of Loans. Interest rates for loans received by minority-owned firms averaged 7.8%. On average, non-minority-owned firms paid 6.4% in interest.[261]
- Equity Investment. The equity investments received by minority-owned firms were 43% of the equity investments received by non-minority-owned firms even when controlling for detailed business and owner characteristics. The differences are large and statistically significant. The average amount of new equity investments in minority-owned firms receiving equity is 43% of the average of new equity investments in non-minority-owned firms. The differences were even larger for loans received by high sales firms.[262]

6. Federal Reserve Board Surveys of Small Business Finances

The Federal Reserve Board and the U.S. Small Business Administration have conducted surveys of discrimination in the small business credit market for years 1993, 1998 and 2003.[263] These Surveys of Small Business Finances are based on a large representative sample of firms with fewer than 500 employees. The main finding from these Surveys is that MBEs experience higher loan

258. *Id.* at 22.
259. *Id*. at 5.
260. *Id.*
261. *Id*.
262. *Id*.
263. https://www.federalreserve.gov/pubs/oss/oss3/nssbftoc.htm. These Surveys have been discontinued. They are referenced to provide some historical context.

denial probabilities and pay higher interest rates than White-owned businesses, even after controlling for differences in credit worthiness and other factors. Blacks, Hispanics and Asians were more likely to be denied credit than Whites, even after controlling for firm characteristics like credit history, credit score and wealth. Blacks and Hispanics were also more likely to pay higher interest rates on the loans they did receive.[264]

7. Other Reports

- Dr. Timothy Bates found venture capital funds focusing on investing in minority firms provide returns that are comparable to mainstream venture capital firms.[265]
- According to the analysis of the data from the Kauffman Firm Survey, minority-owned firms' investments into their own firms were about 18% lower in the first year of operations compared to those of non-minority-owned firms. This disparity grew in the subsequent three years of operations, where minorities' investments into their own firms were about 36% lower compared to those of non-minority-owned firms.[266]
- Another study by Fairlie and Robb found minority entrepreneurs face challenges (including lower family wealth and difficulty penetrating financial markets and networks) directly related to race that limit their ability to secure financing for their businesses.[267]

E. Evidence of Disparities in Access to Human Capital

There is a strong intergenerational correlation with business ownership. The probability of self-employment is significantly higher among the children of the self-employed. A generational lack of self-employment capital disadvantages minorities, whose earlier generations were denied business ownership through either *de jure* segregation or *de facto* exclusion.

There is evidence that current racial patterns of self-employment are in part determined by racial patterns of self-employment in the previous generation.[268]

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264. *See* Blanchflower, D.G., Levine. P. and Zimmerman, D., "Discrimination In The Small Business Credit Market," *Review of Economics and Statistics*, (2003); Cavalluzzo, K. S. and Cavalluzzo, L. C., "Market structure and discrimination, the case of small businesses," *Journal of Money, Credit, and Banking*, (1998).
265. *See* Bates, T., "Venture Capital Investment in Minority Business," *Journal of Money Credit and Banking* 40, 2-3 (2008).
266. Fairlie, R.W. and Robb, A, Race and Entrepreneurial Success: Black-, Asian- and White-Owned Businesses in the United States, (Cambridge: MIT Press, 2008).
267. *Id.*
268. Fairlie, R W., "The Absence of the African-American Owned Business, An Analysis of the Dynamics of Self-Employment," *Journal of Labor Economics*, Vol. 17, 1999, pp 80-108.

Black men have been found to face a “triple disadvantage” in that they are less likely than White men to: 1. Have self-employed fathers; 2. Become self-employed if their fathers were not self-employed; and 3. To follow their fathers into self-employment.[269]

Intergenerational links are also critical to the success of the businesses that do form.[270] Working in a family business leads to more successful firms by new owners. One study found that only 12.6% of Black business owners had prior work experiences in a family business as compared to 23.3% of White business owners.[271] This creates a cycle of low rates of minority ownership and worse outcomes being passed from one generation to the next, with the corresponding perpetuation of advantages to White-owned firms.

Similarly, unequal access to business networks reinforces exclusionary patterns. The composition and size of business networks are associated with self-employment rates.[272] The U.S. Department of Commerce has reported that the ability to form strategic alliances with other firms is important for success.[273] Minorities and women in our interviews reported that they felt excluded from the networks that help to create success in their industries.

F. Conclusion

The economy-wide data, taken as a whole, paint a picture of systemic and endemic inequalities in the ability of firms owned by minorities and women to have full and fair access to Anne Arundel County contracts and associated subcontracts. This evidence supports the conclusion that absent the use of narrowly tailored contract goals, these inequities create disparate impacts on M/WBEs.

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269. Hout, M. and Rosen, H. S., “Self-employment, Family Background, and Race,” *Journal of Human Resources,* Vol. 35, No. 4, 2000, pp. 670-692.
270. Fairlie, R.W. and Robb, A., “Why Are Black-Owned Businesses Less Successful than White-Owned Businesses? The Role of Families, Inheritances, and Business Human Capital,” *Journal of Labor Economics*, Vol. 24, No. 2, 2007, pp. 289-323.
271. *Id*.
272. Allen, W. D., “Social Networks and Self-Employment,” *Journal of Behavioral and Experimental Economics (formerly The Journal of Socio-Economics)*, Vol. 29, No. 5, 2000, pp. 487-501.
273. “Increasing MBE Competitiveness through Strategic Alliances” (Minority Business Development Agency, 2008).

V. Business Owner' Experiences in Anne Arundel County's Market and Doing Business with Anne Arundel County

A. Qualitative Evidence of Race and Gender barriers in Anne Arundel County's Market

In addition to the quantitative data presented in Chapter III and Chapter IV, a disparity study should further explore anecdotal evidence of experiences with discrimination in contracting opportunities in Anne Arundel County. This evidence is relevant to the question of whether observed statistical disparities are due to discrimination and not to some other non-discriminatory cause or causes, as well as the likely efficacy of any race- and gender-neutral remedies employed by the County. As discussed in Chapter II, this type of anecdotal data has been held by the courts to be relevant and probative under the Fourteenth Amendment of whether the County has a "strong basis in evidence" to enact a race- and gender-conscious program, and if so, what narrowly tailored remedies are supportable to reduce the effects of past and current discrimination and create a level playing field for contract opportunities for all firms.

The Supreme Court has held that anecdotal evidence can be persuasive because it "brought the cold [statistics] convincingly to life."[274] Evidence about discriminatory practices engaged in by prime contractors, agency personnel, and other actors relevant to business opportunities has been found relevant regarding barriers both to minority firms' business formation and to their success on governmental projects.[275] 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

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

275. *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1168-1172 (10th Cir. 2000), *cert. granted,* 532 U.S. 941*, then dismissed as improvidently granted*, 534 U.S. 103 (2001).

of a [government's] institutional practices that exacerbate discriminatory market conditions are [sic] often particularly probative."[276] [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."[277]

There is no requirement that anecdotal testimony 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 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."[278] 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."[279]

To explore this type of anecdotal evidence of possible discrimination against minorities and women in Anne Arundel County's geographic and industry markets and the effectiveness of its current procurement policies, we conducted a public webinar, and small group business owner and stakeholder interviews in person and by telephone. Seventy three individuals participated. We met with a broad cross section of business owners from the County's geographic and industry markets. Firms ranged in size from large national businesses to established family-owned firms to new start-ups. We sought to explore their experiences in seeking and performing public and private sector prime contracts and subcontracts with the County, other government agencies, and in the private sector. We also elicited recommendations for effective measures to reduce barriers and create equal opportunities.

Most minority and women owners reported that they continue to encounter discriminatory attitudes, stereotypes and negative perceptions of their qualifications, professionalism and capabilities from other business owners. The assumption is that minority firms are less qualified. While sometimes subtle,[280] these biases about minorities' and women's lack of competence affect all aspects of their

276. *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, 1120, 1530 (10th Cir. 1994) ("*Concrete Works II*").
277. *Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County*, 122 F.3d 895, 926 (11th Cir. 1997).
278. *H.B. Rowe Co., Inc. v. Tippett,* 615 F.3d 233, 249 (4th Circ. 2010).
279. *Concrete Works II*, 321 F.3d at 989.
280. *See, e.g.*, http://www.sciencedirect.com/science/article/pii/S0191308509000239.

attempts to obtain contracts and to be treated equally in performing contract work. These types of barriers led minorities and women to near unanimous agreement that M/WBE contract goals are necessary to level the playing field and equalize opportunities.

The following are summaries of the issues discussed. Quotations are indented and may have been shortened for readability. The statements are representative of the views expressed over the many sessions by numerous participants.

1. Discriminatory Attitudes and Negative Perceptions of Competency

Many minority and woman owners reported that they face biases about their capabilities and competency.

> There is some apprehension that's there, around whether or not I can perform as an African American female in a White male dominant space.

> The gentleman would call the male in my firm every time and it would have to get sent to me, and then I usually handled it through email, not on the phone because it was very clear to me that I wasn't going to get phone calls from this gentleman.

> One of the reasons why my company is called [name] was because of what it sounds like. It sounds like some big, fat, old White man that's running the company. And it's interesting, because early on I would show up, and they were like, "Oh, is [name] coming?" And I'm like, "Mm-hmm. Yeah, [name is] coming. [Name is] here, matter of fact." "Oh, where? Well, where is he?"… My husband also works in the industry, and he does much larger projects to the tune of $20, $30M projects. So, they're pretty big, and you have to be on your toes to do this. When he walked into the general contractor's trailer, it was just him and the superintendent. And the superintendent actually said, "So you're the HNIC [Head Nigger in Charge], are you?"

> It was usually when I got to a site or something, doing something, that they was like, "She's not here for that. She doesn't know what she's doing." And I don't know how often that happened to others, but in the earlier days, it happened to me, and they thought it was okay to do. Until they had to deal with me.

> People still will not take seriously the fact that I am a woman. Especially as a general [contractor], because I'm a general. So, it's a little harder because I'm going head-to-head with the big dogs. Because they're like, "Oh, you think you're qualified to be here?" So, it's a minority thing, it's a small [business] thing, and then it's a woman thing. You know? So, I get it quite often, but I try to beat them to the punch.... I don't have no cut cards, I stand toe-to-toe like I'm one of them. And so, then before they can call out my name, I say, "Hey sunshine, how you doing?" So, I kind of break the ice on them that you're not going to say sweetie pie, all that. I'm going to come right there toe-to-toe with you. But, I do have to be more aggressive because again, being a woman, they are looking down.

> There is a bit of a stigma at some point with being certified. I mean, I've actually had people question, do I actually have employees, or am I just on paper, a certified mechanical contractor? And when I tell them, "Yes, I do have employees, we actually install work and do perform." They can get taken a bit back, because they just assume being female and a minority, that I'm probably just here to push paper, is some of the assumptions that we get.

> First coming into business, I got the same thing. "She's a woman, she's a minority. She can't possibly know plumbing or HVAC." But I did work in the industry for years before I started this business, so I had a little clout. But I think just starting out, you do get the people that'll doubt you. I mean, I was told before, I was just the secretary, and wasn't worth speaking to someone about estimating. When in fact, I was the estimator.

> As minority companies, I mean, it almost seems like we're held at a higher flame now. We cannot have any mistakes. Even if the prime contractors have a mistake, it's almost like they get slapped on the wrist. But for us, if we have something, the same thing goes wrong, basically it's the end of the world for us.... They look at our business almost as being a threat. And we're not. We're here to help, and do a good job, and things like that, but it seems like we're almost a threat to them sometimes.

New business relationships often involved proving oneself over and over again.

> When I come up against someone who doesn't know me, or who hasn't necessarily heard of my brand, I'm back at ground zero again about, "Oh, is [name] coming? Oh, are you the assistant? Are you the assistant, this? Are you the assistant,

> that?" And I'm like, "No, I'm president and CEO, the founder." I was at a job site last week, and I had a gentleman say to me, "I don't see you doing any work." And I literally showed him my hands, which are manicured. And I said, "You see these fingers right here? They do the pointing, that's what I do. I'm the one that signs the checks. I'm the one who tells people what to do. So, no. These hands are not going to get dirty, let's be very clear about that. I will have someone come over. I will send the super, I'll send the PM [Project Manager] at 8:00 PM or what have you.

Some interviewees recounted that race- and gender-based assumptions ease over time.

> Always be smart, be the lady, be the gentleman and work with it afterwards, so that it doesn't happen anymore. They may still have it in them, but it will break that shell for you, and hopefully for others to walk through.

> Until I proved myself, and so those same ones who see me now, they'll, "Oh [name], why you here? Don't you have enough work?" They're trying to push it off.

> You're going to find those people that like you, because they see that you are ready to work. And I thrived.

> Having a proven track record, now it's not as bad. Some days I still do have to prove my worth to people who see me and just automatically assume.

2. Obtaining Work on an Equal Basis

These types of barriers led minorities and women to almost unanimous agreement that M/WBE goals will be necessary to level the playing field and equalize opportunities on County prime contracts and subcontracts.

> In the absence of the requirements, we would probably be squeezed out in many [places].

> If there is no required goal, you don't get a call. Nobody will ask you.... We always hear is that we don't need to show anybody on the team because it's not required.

> [Prime contractors] cherry pick the contractors that we work with and we cherry pick the projects that we work on based on where they are. And we don't cherry pick anything that doesn't have a minority quota associated with it.

[To survive], I was certified in Baltimore City, I was certified with MDOT [Maryland Department of Transportation]. And I was MBE, DBE, WBE. I was all of them. And I still have them, and I still work them. And I got that certification. I went out, I met people. I mean, I was out until 9:00 at night at meetings, mixers. I joined the Maryland Minority [Contractors], met a lot of people.

I can assure you with a hundred percent confidence, having worked for large firms where I was looking for MBE and SBE firms, if there's not a requirement for it, large firms will absolutely not waste their time involving MBE or SBE firms. That's my experience from both sides of the equation.... They would not necessarily look to another small firm. They would just look to the firm with whom they have regular business dealings. And oftentimes that's not other small firms it's usually medium or other large firms with whom they team up with on procurements on responses to proposals. So, these programs are absolutely critical. In fact, I wouldn't have even started or even thought about starting my business were it not for these certifications and the benefits they provided.

Going back to that good old boy network. The same ones get the contract every time, and they use who they want to use, and without any incentive, particularly on the maintenance side.... In the absence of having a minority program, or woman-owned program, there's no requirement. So, there's no incentive. And that Public Works department falls under engineering in Anne Arundel County. There's no incentive for them to share the wealth, if I can say that. Because they're not penalized if they use someone other than who they've been using.

In the absence of some sort of mandated participation, the majority firms, they eat up all the work immediately. So, something needs to be in place to ensure that there's at least the opportunity to compete.

We are MDOT certified as a WBE, MBE contractor. Which, I'll tell you, it does help for us, because having those goals or requirements on the contracts, it makes it so the general contractors do have to seek us out. And being mechanical, we're typically about 25% of a project for production. So, it definitely helps, we get a lot of work that way. We still have to

> be competitive, but having the certification also is desirable for them, so it's in their best interest to seek us out.

In response to the question, “Do contractors that use you on projects with goals, call you and use you on projects without goals?” many M/WBEs responded in the negative.

> No, [prime contractors would not reach out if we were not M/DBE certified]. So, there's only a couple of contractors that do what we do, so I do get a lot of contracts based off of being the minority. So, if it was down to if they needed the minority or not, it probably at that point, would come down to the price. It still has to be competitive at the end of the day. So, it also requires the type of company that we are and the performance that we do, that at the end of the day makes that decision. So, just having a really good work ethic and having good relationships with contractors. But the MBE [certification] definitely does help with getting contracts.

> If [the County] would establish the MBE program, I think it would be a good thing.

One minority owner had been able to obtain work outside of contract goals.

> [Prime contractors} will [solicit us on contracts without goals], yes. We typically work for the same group of general contractors. It's a lot of repeat business.

Prime contracts were reported to be especially difficult to achieve.

> I think for those who are interested in playing a prime position, [a race- and gender-based program is] going to be absolutely necessary. Those that are subs, it's definitely helpful when you have percentages or goals.… But to get the small, and minority, and disadvantaged business into prime position? Right? Because I think that's what ideally, some of us kind of strive for.… One of the only ways that door is going to open is by having a program that does set aside for, be it woman-owned, be it minority-owned, be it local based, or what have you, and to have that true distinction. Because as an MDOT, MBE, SBE, DBE, that really hasn't served me [as a prime contractor] at all.… But without, as a prime, having a program that let me get my foot in the door, it's not going to happen. And then once that's been established, creating some level of percentage of goal against dollar spend, which would allow the second and below tiers to have that opportunity that could be guaranteed.

> Unless we are given the contracts, we can't grow. So obviously, we can't increase our capacity without the contract. So, I feel like it's almost like a chicken and the egg kind of situation.... But it's so much easier for them to target small businesses and say, "Well, you have these two contracts, so now you can't get a third contract" when in fact you may be well in a position to do so and to grow your business as well.
>
> We have the capacity, we have the bonding capacity, so we're able to do more work [if we could get it].

B. Doing Business with Anne Arundel County

1. Payment

Firms that have done business with Anne Arundel County almost universally reported the County pays promptly.

> Anne Arundel County did pay very promptly.... They do leverage ACH for payments, which makes it very, very quick to get it, so I would get paid in about a net 20 situation.
>
> Pay is usually not an issue, it's very prompt, unless the general contractor has a problem.
>
> Haven't had any issues at all getting paid.
>
> We pretty regularly get paid. We're set up for ACH and regularly get paid within 30 days. Anne Arundel County does have a very specific invoicing format protocols. And if you don't follow those specific protocols, your invoice will get rejected. And we go out of our way to not try to get down, to not get our invoices rejected, but pretty regularly pretty happy with the frequency with which the County does provide payment to us.
>
> Timely payment makes a big difference with anybody, but especially the small and diverse firms.

Change orders, however, were a different story.

> Change orders can take a year before they get processed. And the rule is you don't start the work until you have a change order in your hand, but you can't function like that. There's a lot of issues that come with processing any paperwork through the county... The legal departments, it just takes forever and it makes life impossible. What I find is dealing with my

> consultants is that I have to pay them. I can't sit around waiting for a change order to be processed. I pay them within 30 days or less of their billing. And if they're consultants that I want to work with, I pay them within 10 days because that's the way life is these days. I've been fortunate enough to be able to do that with the consultants that I normally work with, I get them paid. And then I deal with the county and eventually I'll get reimbursed for the money that I've laid out.
>
> [Change order processing is] very much [slow].

Working with small firms can be a payment challenge.

> The biggest struggle I've had over the past three years now when we try to introduce new MBE firms, because we're trying to help them. It's usually friends that've started their firms and stuff like that. Sometimes we go through five, six iterations of corrections on invoices and we just end up delaying the invoice because we can't submit it for some and not others. We have to have one invoice that combines everybody. And it's just a battle because a lot of the startups don't have those capacities and they're doing those invoices on the weekends, at nights or whatever, bring in, maybe part-timers to do it, but it's been a huge struggle.

2. Solicitation Requirements

Some County policies and processes were reported to be barriers to getting County work.

> I opened my firm a few years ago and I was a little bit, it left a bad taste in my mouth that the County took over a year to review my pre-qualification forms.... The purchasing department was taking over a year to look over a two page form and get me qualified. So, that was a little bit kind of suspect, a little bit distasteful, and I'm not sure if they were just overwhelmed at the time, but it certainly makes it seem as though they weren't interested in additional firms bidding on contracts.

Contract size was an oft repeated barriers to all small firms. Contract size is a major impediment to M/WBEs performing work for the County, especially as prime vendors.

> Not just one big contract that says, "Okay, you have to do all of these." So, there's things that we don't do in there that we can't

> get anybody to come to do for us, or we got to go look for people, and that's when it becomes difficult. So, I think they really need to break it down.
>
> If they break them up and say we're going to set aside these particular smaller parcels and let small businesses bid in them, or at least break it up into sectors where at least I could try to bid on one section.

Bonding requirements were another impediment to obtaining contracts.

> $25,000 for the bid. Based upon how it was written, it was required that a bid bond be provided with that small size contract. But upon award, we were not required to produce a performance or payment bond, but that's what seemed to be their standard. When it came up for recompete again, that was a requirement, to have a bid bond.

3. Access to Information about County Contracts

Many business owners reported that it is difficult to get information on County opportunities and to network with County officials.

> I don't think [the County does] a good job, in my opinion, of publicizing what's available. As far as what contracts they have out that would require us to be a prime, or even a partner, or team member, with some of the contracts. It would be good if we could look at what contracts are available, all their contracts, to maybe team up with a prime. But I don't think they do a good job with solicitation, or promotion, or outreach of what is available for our community, for MBE, DBE people.... Let the MBEs know what's being advertised. So, we can know when they know, and we can start doing our networking with different prime contractors that may be bidding on it, or may put in solicitations for them. Let the MBEs know what's being advertised. So, we can know when they know, and we can start doing our networking with different prime contractors that may be bidding on it or may put in solicitations for them.
>
> I have not received anything from [the County]. I think, like everybody's been saying, they could do a better job at just helping us and guiding us a little bit. You know, letting us know the projects that are there, who are bidding it, and how to access those general contractors.

> To know what's happening in Anne Arundel County, I have to be registered in PORT. And I have to select more than just my standard NAICS code. So, I literally have to go in, and anything that is related to any service that I provide, so that I can get proper notice. But even with that being said, I still have to have on schedule, time to go in the system to see. Because even with all of that, you still don't get notified of all the opportunities.
>
> Anne Arundel County does have an economic development corporation, but they're silent.
>
> Our biggest challenge has been figuring out who to go to because there doesn't seem to be anyone in Anne Arundel County … who's advocating for minority- and women-owned businesses.

4. Access to County Decisionmakers

Several owners found it difficult to interface with County decisionmakers. Many participants described entrenched relationships at Anne Arundel County as major impediments to obtaining agency work.

> It is a sense of good old boy network that's there. And the demographics of the County is such that, it is the White male, particularly in the construction and construction related space. So, when I'm at the pre-bids, African Americans, or those that are not White male, are in the minority, at the pre bids. And even so much so where, a lot of them won't even bid. The minority won't bid, because of what the makeup of the room is. What I seemed to have found that was helpful is, once I got in, having the relationships. But then, of course, once those individuals retired, or they in turn were no longer in play, then I was starting back at ground zero again, having to try to find a way in the door to demonstrate that we can, in fact, perform.
>
> It's who you know.
>
> Anne Arundel County is just a hard nut to crack.
>
> There are insiders and there are outsiders. And that really is a significant problem we have to tackle.
>
> We've been trying to get ourselves involved in doing some work for Anne Arundel County, and we haven't been successful with that. So, I don't know what's happening with procurement over there for Public Works…. They outsource to a non-MBE

> company right now. We would like to get involved in that process. And I think there isn't even a contract for it, they just call them and give them their work.
>
> It is hard to get into the Public Works for some reason and I don't know why. I don't believe it's a contract, it's just per job they call you when they need you.
>
> The County also had contracts that were up that they would want certain Anne Arundel County properties and things cleaned off. And I could not touch them, because they could not even fathom that me, a Black woman, would know anything about it.… All through it all, it was really horrible. All of the companies that had the contracts with the County, I couldn't get near them. I couldn't touch them.… So, I proved myself over, and over, and over again.… What changed is, I stopped messing around with Anne Arundel County, because they already had [name], who had most of the contracts.
>
> As far as construction, there seems to be some construction companies that bid on [County] contracts a lot, so it's very hard to be competitive with the ones that seem to be, I guess you could say, the favorites, or just have a really good relationship with the County. So, we seem to have a little bit of trouble just being competitive, because they have their fixed prices, they're used to those other contractors. So, sometimes it's just hard getting into the door and getting those contracts.

5. New Program Initiatives

Many M/WBEs had recommendations for how the County should administer a race- and gender-based program. The most widely shared comments were about the need to monitor the new program to ensure that prime vendors keep their M/WBE contractual commitments.

> A set aside with no compliance review by the agency is like having no set aside, because we will get put on, and this happens on a large number of our contracts across counties and states, depending on how good the agency is at policing their own program really. We are on a lot of state contracts. We do a lot of state work. And they over the last decade have gotten pretty good about making sure that the firms are meeting their goals, and that has been very good for our business and keeps everybody honest in their compliance. For the agencies that don't do that, we will have five years, 10 years

> of contracts with them and never see any work out of it.... There is a stigma that comes with escalating those things to the agencies. If we were to go to complain to MBE, we did that with one agency and it did not end well for us. In fact, the agency got very displeased, it seemed, with us. And then the primes, we are not going to be their selection next time. If you complain, you're not going to get picked again to be on their team.
>
> I get offers to be the minority person on a prime's contract. However, there's no way I can track whether or not that person has received the contract. And when I presented the question to the City [of Baltimore], there's no answer.... I'm hoping that that would not be the same case with [Anne Arundel County].
>
> Is [the program] enforceable? That's the key. If it's not enforceable, you can't mandate anything. You can't hold people in compliance. They can set up little workshops and invite small businesses out and talk and this, that, and the other, but you can't force them to do anything.
>
> There has got to be an enforcement component.

One suggestion was for the County to conduct more outreach to M/WBEs and small local firms.

> Have frequent outreach program between the vendors and the buyers. I think it will help new business owners, small business owners to establish that contact with the purchasers.

Many prime contractors reported positive experiences with race- and gender-conscious programs.

> I was always able to meet the goals. I developed a cadre of minority consultants that I could participate with on those projects and selected the ones that were appropriate for the project that we were submitting on. So, I never had a problem.
>
> I do think the program has been successful in terms of forcing us to approach other firms that we might otherwise not necessarily, but that initial step then doesn't matter whether you're MBE or non-MBE, you make a relationship with the firm and then you find out whether that relationship works or not.

Standard, unrealistic or inflexible goals, however, presented problems that the County should seek to avoid.

> At times we're trying to meet a 30 or a 35% goal and it's just unattainable.

> We find it challenging to meet, to be able to attract and meet some of the MBE requirements in the solicitations.
>
> We are going as the prime and when you're going into a contract with 45% participation, it makes it challenging, it makes it challenging to meet the requirements, to meet the cost, to find enough firms, qualified firms that can do the work. And some of the contract, it seems like it's a blanket of 45% and some contracts, you just don't have local small firms that can give you the services that you're looking for. So, in my opinion, you need to look at every contract specifically and not having a blanket [goal].
>
> As a prime who's trying to bid as competitively as possible, we found their price to sometimes slightly higher than non-MBE firms. So, it's kind of that double edge sword of do we push to meet the 30% MBE participation goal and go with the MBE firms or do we try to remain as competitively priced as possible and go to non-MBE? Because there are fewer MBE, at least from what we've experienced, we're struggling to find it to the create a larger list of MBE firms that aren't interested in bidding these larger scope factors.

C. Conclusion

Consistent with quantitative evidence reported in this study, anecdotal interview information suggests that minorities and women continue to suffer discriminatory barriers to full and fair access to Anne Arundel County and private sector contracts and subcontracts. While not definitive proof that the County should apply race- and gender-conscious measures to reduce these impediments, M/WBEs' experiences are the type of evidence that, especially when considered alongside the study's strong statistical evidence, the courts have found to be probative of whether the County may use narrowly tailored M/WBE contract goals to address discriminatory barriers. This element of the "strong basis in evidence" necessary for race-conscious relief also provides guidance about what types of narrowly tailored remedies will level the playing field for County funded opportunities.

VI. Recommendations for a Minority- and Woman-Owned Business Enterprise Program for Anne Arundel County

The quantitative and qualitative data presented in this study provide a thorough examination of whether minority- and woman-owned business enterprises ("M/WBEs") operating in Anne Arundel County's geographic and procurement markets have full and fair opportunities to compete for its prime contracts and associated subcontracts. As required by strict constitutional scrutiny, we analyzed evidence of such firms' utilization by the County as compared to their availability in its market area, as well as business owners' experiences in obtaining County work. We further analyzed M/WBEs' opportunities in the overall Anne Arundel County economy. These statistical and anecdotal data provide the evidence necessary to determine whether there is a strong basis in evidence that M/WBEs suffer discrimination in access to County contracts on the basis of race or gender, and if so, what narrowly tailored remedies are appropriate.

The study results support the County's compelling interest in implementing a race- and gender-conscious contracting program. They provide the constitutionally required information to sustain a new and broad approach to contracting equity and inclusion. The record– both quantitative and qualitative– establishes that M/WBEs in the County's market area continue to experience significant disparities in their access to County contracts and private sector opportunities and to the resources necessary for business success. These findings support the inference that discrimination remains a barrier to full and fair opportunities for all firms, and in the absence of contract goals, M/WBEs suffered large and statistically significant disparities on County funded contracts. Without the use of contract goals to level the playing field, the County would likely function as a "passive participant" in the "market failure" of discrimination. We therefore recommend the implementation of a program that contains the necessary elements for greater success in reducing barriers and that employs national best practices to increase inclusion in government contracting.

As a general matter, Anne Arundel County should model its program on the elements of the Disadvantaged Business Enterprise ("DBE") Program for federally assisted transportation contracts.[281] Courts have pointed to an agency's reliance on Part 26 as a guide as evidence that the local agency's program is constitutionally narrowly tailored and employs best practices.

Based on this case law and national best practices for M/WBE programs, we recommend the following elements of a narrowly tailored M/WBE program:

A. Implement Race- and Gender-Neutral Measures

The courts require that governments use race- and gender-neutral approaches to the maximum feasible extent to address identified discrimination. This is a critical element of narrowly tailoring the program, so that the burden on non-M/WBEs is no more than necessary to achieve the County's remedial purposes. Increased participation by M/WBEs through race-neutral measures will also reduce the need to set M/WBE contract goals and will assist firms to obtain prime contracts with the County.

The following initiatives, based on the business owner interviews, the input from senior County management, and national best standards for M/WBE programs, will help to meet these standards.

1. Implement an Electronic Contracting Data Collection, Monitoring and Notification System

A critical element of this study and a major challenge was data collection of full and complete prime contract and associated subcontractor records. As is very common, the County did not have the information needed for the inclusion of subcontractor payments in the analysis. The County did not track subcontractor data. All required information had to be created manually.

In addition to supporting research and current reporting, a system will also make it possible to monitor, enforce and review any new initiatives. A good system is the most critical first step that Anne Arundel County can take.

The County should immediately procure an electronic data collection system with the following functionality:

- Full contact information for all firms, including email addresses, six-digit North American Industry Classification System ("NAICS") codes, race and gender ownership, and M/WBE certification status.

281. 49 C.F.R. Part 26.

- Contract/project-specific goal setting, using the data from this study.
- Utilization plan capture for prime contractor submission of subcontractor utilization plans, including real-time verification of M/WBE certification status and NAICS codes, and proposed utilization/goal validation.
- Contract compliance for certified and non-certified prime contract and subcontract payments for all formally procured contracts for all tiers of all subcontractors, both M/WBEs and non-M/WBEs; verification of prompt payments to subcontractors; and information sharing between the County, prime vendors and subcontractors about the status of pay applications.
- Program report generation that provides data on utilization by industries, race, gender, dollar amount, procurement method, etc.
- Collection of various certification directories.
- An integrated email notification and reminder engine to inform contractors of required actions, including reporting mandates and dates.
- Outreach tools for eBlasts and related communications, and event management for tracking registration and attendance.
- Access by authorized County staff, prime contractors and subcontractors to perform all necessary activities.

2. Increase Vendor Communication

Many interviewees expressed frustration with difficulties in accessing information about County contracting opportunities. Even those registered in the County's vendor system reported that they often did not receive timely or useful information.

3. Create an Office of Business Opportunity

The County should create an Office of Business Opportunity to oversee all efforts towards contracting diversity and inclusion. The new Office will build on the work of the Minority Business Enterprise Program already underway.

It is important that this new Office report directly to the County Executive[282] and have the same level of authority as other Departments. This independence

282. *See* 49 C.F.R. §26.45 ("You must have a DBE liaison officer, who shall have direct, independent access to your Chief Executive Officer concerning DBE program matters. The liaison officer shall be responsible for implementing all aspects of your DBE program. You must also have adequate staff to administer the program in compliance with this part.").

will signal the importance of this function and provide it with the bureaucratic stature necessary to move new initiatives forward.

Staff should be responsible for the M/WBE program elements of the contract award process (outreach, goal setting, bid and proposal review for compliance, etc.) and the contract performance process (goal attainment, substitution reviews, prompt payment tracking, etc.). This will ensure that the County is following the requirements of the M/WBE program.

4. Increase Vendor Communication and Outreach to M/WBEs and Small Firms

The MBE Program currently creates networking opportunities for local businesses, County staff and private sector companies. However, many potential vendors stated that it is difficult to access information about County contracts and to network with County decisionmakers. The County should conduct regularly scheduled vendor outreach events to provide information and to address questions regarding upcoming opportunities, as well as to facilitate “matchmaking” sessions between prime contractors and subcontractors. These events should include general fairs as well as meetings targeted towards specific industries or communities, *e.g.*, engineering projects.

Also useful, would be an annual procurement forecast on the County’s website[283] which would permit vendors to plan their work and form teams. While not a quick or easy feature to implement, a page that provides information on upcoming bid opportunities is one race- and gender-neutral measure that will assist all firms to access information.

As is the case with many governments, the study revealed that M/WBEs are receiving few opportunities in many industry codes. We suggest that special outreach for larger projects be conducted to firms in those sectors so that they are aware of opportunities and can make connections with other vendors as subcontractors or joint venture partners. Activities could include targeted emails about future contracts, matchmaking events focusing on those industries, and identification of firms that are not currently certified, but might be eligible for inclusion, to encourage applications.

Further, potential vendors requested training in how to do business with Anne Arundel County. In addition to written materials now on the website, the County could hold virtual or in-person sessions and create training videos that provide information on all aspects of County contracting.

283. *See, for example*, the City of Chicago’s Buying Opportunities page. https://www.chicago.gov/city/en/depts/dps/provdrs/contract/svcs/city-of-chicago-consolidated-buying-plan.html [chicago.gov].

5. Focus on Reducing Barriers to M/WBE Prime Contract Awards

Many interviewees reported that their firms would like to perform as prime vendors on County contracts. Several experienced a "good ole' boys" network for County contracts which creates a barrier to their fair access to competitive opportunities. A focus on prime contracting opportunities will reduce the need to set contract goals to meet the County's overall, annual M/WBE goal; this is an important race- and gender-neutral measure that has been approved by several courts. Several steps should be implemented:

- Develop contract specifications with an eye towards unbundling projects into less complex scopes and lower dollar values. Not only will this permit smaller firms to perform in general, it will also reduce the barriers of surety bonding (for construction projects) and financing the jobs (for all industries). Examples could include maintenance and landscaping contracts; professional services contracts such as information technology consulting and hardware; and commodities purchases.
- Review experience requirements with the goal of reducing them to the lowest level necessary to ensure the bidder has adequate experience, perhaps by recognizing similar though not identical types of work, including work performed for other governments and private sector clients.
- Review surety bonding and insurance requirements so that they are no greater than necessary to protect Anne Arundel County's interests. These possible barriers to contracting by small firms have been mentioned by the courts as areas to be considered. Steps might include reducing or eliminating insurance requirements on smaller contracts and removing the cost of the surety bonds from the calculation of the lowest apparent bidder on appropriate solicitations.
- Evaluate the pre-qualification process to ensure that applications are processed in a timely manner and does not serve as a barrier to inclusion of new firms eligible for County contracts.

6. Consider Partnering with Other Agencies and Local Organizations to Provide Bonding, Financing and Technical Assistance Programs

Both M/WBEs and non-M/WBEs requested services to assist M/WBEs to increase their skills and capabilities. Bonding and financing programs assist small firms by providing loans and issuing surety bonds to certified contractors, with low interest rates. The programs may also provide general banking services on favorable terms to applicant firms. In addition, technical assistance with critical business skills such as estimating, accounting, safety, marketing, legal compliance, etc., could be made available in conjunction with the existing efforts of Anne Arundel County area organizations such as chambers of commerce, professional associations, community-based organizations, etc. Partnering with these types of programs will allow the County to leverage their expertise, knowledge and experience in assisting these types of businesses.

B. Adopt a Minority- and Woman-Owned Business Enterprise Program

The study's results support the determination that the County has a strong basis in evidence to implement a race- and gender-conscious M/WBE Program. The record– both quantitative and qualitative– establishes that M/WBEs in the County's market area experience significant disparities in their access to contracts without M/WBE goals, private sector opportunities and to resources necessary for business success. The disparity results are stark:

Table 6-32: Disparity Ratios by Demographic Group

	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE
Disparity Ratio	31.7%‡***	27.3%‡***	10.0%‡	81.1%	65.7%‡***	36.6%‡***	118.0%***

Source: CHA analysis of the County data.
‡ Indicates substantive significance
****Indicates statistical significance at the 0.001 level*[284]

These results fully meet the requirement of strict constitutional scrutiny that the agency establish its compelling interest in remedying discrimination through large and statistically significant disparities between its utilization of M/WBEs and their availability. This is the type of proof that courts have examined to determine whether an agency might function as a passive participant in the market failure of discrimination.

The results of the economy-wide analyses are equally compelling. Data from the Census Bureau's *Survey of Business Owners* indicate very large disparities between M/WBE firms and non-M/WBE firms when examining the sales of all firms, the sales of employer firms (firms that employ at least one worker), or the payroll of employer firms. Similarly, data from the Census Bureau's *American Community Survey* ("ACS") indicate that Blacks, Hispanics and White women were underutilized relative to White men. Controlling for other factors relevant to business outcomes, wages and business earnings were lower for these groups compared to

284. Appendix C discusses the meaning and role of statistical significance.

White men. Data from the ACS further indicate that non-Whites and White women are less likely to form businesses compared to similarly situated White men.

Our interviews with 73 individuals about their experiences in the County's market area further revealed the existence of persistent barriers on the basis of race and/or gender. Many M/WBEs reported that they still encounter barriers based on race and/or gender and that without affirmative intervention to increase opportunities through contract goals, they will continue to be denied fair and full opportunities to compete.

This overwhelming quantitative and anecdotal evidence presents the "strong basis in evidence" that the courts require to support race- and gender-conscious relief. Without targeted efforts to reduce discriminatory barriers, minorities and women will likely continue to face diminished opportunities to compete for County contracts and associated subcontracts. We therefore recommend the adoption of a new program with the following major elements.

1. Adopt an Overall, Annual M/WBE Goal for a New M/WBE Program

The County should set an annual, overall target for M/WBE utilization in County contracts (prime contracts and subcontracts combined). The availability estimates in Chapter III should be the basis for consideration of overall, annual spending targets for County funds. We found the weighted availability of M/WBEs to be 22.1%. This can be the County's goal (or a figure rounded to a whole number) for its overall spending with certified firms across all industry categories.

2. Use the Study to Set M/WBE Contract Goals

In addition to setting an overall, annual target, Anne Arundel County should use the study's detailed unweighted availability estimates as the starting point for contract specific goals. As discussed in Chapter II of the study, the County's constitutional responsibility is to ensure that goals are narrowly tailored to the specifics of the project. The detailed availability estimates in the study can serve as the starting point for contract goal setting. A comprehensive electronic contracting data collection, monitoring and notification system should include a goal setting module that incorporates the study data as its source. Correct contract specific goal setting involves four steps:

- Weight the estimated dollar value of the scopes of the contract by six-digit NAICS codes, as determined during the process of creating the solicitation. To increase understanding and compliance, these industry codes could be listed in the solicitation as a guide to how the goal was determined and where the County expects bidders to seek M/WBE participation. Good faith efforts could be defined as, among several other elements, an adequate solicitation of firms certified in these codes.

- Determine the unweighted availability of M/WBEs in those scopes as estimated in the study.
- Calculate a weighted goal based upon the scopes and the availability of firms.
- Adjust the resulting percentage based on current market conditions.

3. Adopt Narrowly Tailored Program Eligibility Criteria

The study found that each racial and ethnic group and White women, and M/WBEs as a whole, continue to suffer disparities in their access to County contracts. We therefore recommend that all racial and ethnic groups and White women be eligible for participation in the program on a presumptive basis. Program eligibility should be limited to firms that have a business presence in the County's market area, as established by this study, or that can demonstrate their attempts to do business within the County's market area.[285]

The County's new program should accept M/W/DBE certifications from the Maryland Unified Certification Program and the State of Maryland's MBE program. It will be the County's constitutional responsibility to ensure that the certifications it accepts are from narrowly tailored programs with demonstrated integrity, *i.e.*, programs that set limits on the amount of a firm's annual, gross receipts and on the personal net worth of the applicant's owner.

4. Develop Compliance and Monitoring Policies and Procedures

In addition to ensuring that the new M/WBE program sets narrowly tailored goals and eligibility requirements, it is essential that the County adopt contract award and performance standards for program compliance and monitoring that are likewise narrowly tailored and embody best practices. In general, compliance and monitoring should include the following elements:

- Clearly delineated policies and forms by which a bidder or proposer can establish that it has either met the contract goal(s) or made good faith efforts to do so.

285. The County's market consists of Anne Arundel, Baltimore, Howard, Prince George's, Baltimore (city), Montgomery, Calvert, Queen Anne's and Carroll Counties.

- Rules for how participation by certified firms will be counted towards the goal(s). A firm must perform a "commercially useful function" in order to be counted for goal attainment. How various types of goods or services will be credited towards meeting goals must be clearly spelled out (for example, whether full credit will be given for purchases from certified regular dealers or suppliers). Certified prime vendors should be permitted to count their self-performance towards meeting the contract goal.
- Contract monitoring policies, procedures and data collection processes. This must include tracking the utilization of certified and non-certified subcontractors at all tiers of performance and monitoring prompt payment obligations of prime contractors to subcontractors. County staff must perform site visits to meet these requirements.
- Criteria and processes for how non-performing, certified firms can be substituted during performance.
- Contract closeout procedures and standards for sanctions for firms that fail to meet their contractual requirements under the program.
- A process to appeal adverse determinations under the program that meets due process standards.

5. Provide Training for all County Staff with Contracting Responsibilities or Vendor Interface

These significant changes will require a County-wide roll out of new initiatives, as well as training of all Anne Arundel County personnel with contracting responsibilities and vendor management. In addition to providing technical information on compliance, it is also an opportunity to reaffirm the County's commitment to supplier diversity and to encourage all departments to buy into these values and objectives.

6. Provide Training for Vendors on the New Program

It will be important for the County to provide some formal training on these proposed new program elements. This could consist of in-person sessions, as well as web-based seminars that would answer questions such as who is eligible; how to become certified; how to meet goals or establish good faith efforts to do so; how to use the new electronic system; prompt payment obligations; subcontractor substitution; and contract close out. Information should further cover resources to assist small businesses, such as a loan program, accessing local Procurement Technical Assistance Centers, and other support.

C. Develop Performance Standards and Review Timetables

To meet the requirements of strict constitutional scrutiny and to ensure that best practices in program administration continue to be applied, the County should conduct a full and thorough review of the evidentiary basis for a new M/WBE program approximately every five to seven years.

Anne Arundel County should adopt a sunset date when the M/WBE program will end unless reauthorized. This is a constitutional requirement to meet the narrow tailoring test that race- and gender-conscious measures be used only when necessary. A new disparity study or other applicable research should be commissioned in time to meet the sunset date.

The County should develop quantitative performance measures for overall success of its race- and gender-neutral measures and any M/WBE program to evaluate the effectiveness of various approaches in reducing the systemic barriers identified by the study. In addition to meeting goals, possible benchmarks might be:

- Progress towards meeting the overall, annual M/WBE goal.
- The number of bids or proposals, industry and the dollar amount of the awards and the goal shortfall, where the bidder was unable to meet the goals and submitted good faith efforts to do so.
- The number, dollar amount and the industry code of bids or proposals rejected as non-responsive for failure to make good faith efforts to meet the goal.
- The number, industry and dollar amount of M/WBE substitutions during contract performance.
- Increased bidding by certified firms as prime vendors.
- Increased prime contract awards to certified firms.
- Increased “capacity” of certified firms, as measured by bonding limits, size of jobs, profitability, complexity of work, etc.
- Increased variety in the industries in which M/WBEs are awarded prime contracts and subcontracts.

Appendix A: Further Explanation of the Multiple Regression Analysis

As explained in the report, multiple regression statistical techniques seek to explore the relationship between a set of independent variables and a dependent variable. The following equation is a way to visualize this relationship:

$$DV = f(D, I, O)$$

where DV is the dependent variable; D is a set of demographic variables; I is a set of industry & occupation variables; and O is a set of other independent variables.

The estimation process takes this equation and transforms it into:

$$DV = C + (\beta 1 * D) + (\beta 2 * I) + (\beta 3 * O) + \mu$$

where C is the constant term; β1, β2 and β3 are coefficients, and μ is the random error term.

The statistical technique seeks to estimate the values of the constant term and the coefficients.

In order to complete the estimation, the set of independent variables must be operationalized. For demographic variables, the estimation used race, gender and age. For industry and occupation variables, the relevant industry and occupation were utilized. For the other variables, age and education were used.

A coefficient was estimated for each independent variable. The broad idea is that a person's wage or earnings is dependent upon the person's race, gender, age, industry, occupation, and education. Since this report examined Anne Arundel County the analysis was limited to data from the Baltimore-Columbia-Towson (Central Maryland) MSA. The coefficient for the new variable showed the impact of being a member of that race or gender in the metropolitan area.

APPENDIX B: FURTHER EXPLANATION OF THE PROBIT REGRESSION ANALYSIS

Probit regression is a special type of regression analysis. Probit regression analysis is used to explore the determinants of business formation because the question of business formation is a “yes’ or “no” question: the individual does or does not form a business. Hence, the dependent variable (business formation) is a dichotomous one with a value of “one” or “zero”. This differs from the question of the impact of race and gender of wages, for instance, because wage is a continuous variable and can have any non- negative value. Since business formation is a “yes/no” issue, the fundamental issue is: how do the dependent variables (race, gender, etc.) impact the probability that a particular group forms a business? Does the race or gender of a person raise or lower the probability he or she will form a business and by what degree does this probability change? The standard regression model does not examine probabilities; it examines if the level of a variable (*e.g.*, the wage) rises or fall because of race or gender and the magnitude of this change.

The basic probit regression model looks identical to the basic standard regression model:

$$DV = f(D, I, O)$$

where DV is the dependent variable; D is a set of demographic variables; I is a set of industry and occupation variables; and O is a set of other independent variables.

The estimation process takes this equation and transforms it into:

$$DV = C + (\beta 1 * D) + (\beta 2 * I) + (\beta 3 * O) + \mu$$

where C is the constant term; β1, β2, and β3 are coefficients, and μ is the random error term.

As discussed above, the dependent variable in the standard regression model is continuous and can take on many values while in the probit model, the dependent variable is dichotomous and can take on only two values: zero or one. The two models also differ in the interpretation of the independent variables’ coefficients, in the standard model, the interpretation is fairly straightforward: the unit change in the independent variable impacts the dependent variable by the amount of the coefficient.[286] However, in the probit model, because the model is examining changes in probabilities, the initial coefficients cannot be interpreted this way. One additional computation step of the initial coefficient must be undertaken in order to yield a result that indicates how the change in the independent variable affects the probability of an event (*e.g.*, business formation) occurring. For instance, with the question of the impact of gender on business formation, if the independent variable was WOMAN (with a value of 0 if the individual was male and 1 if the individual was female) and the additional computation chance of the coefficient of WOMAN yielded a value of -0.12, we would interpret this to mean that women have a 12 percent lower probability of forming a business compared to men.

286. The exact interpretation depends upon the functional form of the model.

APPENDIX C: SIGNIFICANCE LEVELS

Many tables in this Report contain asterisks indicating that a number has statistical significance at 0.001, 0.01, or 0.05 levels (sometimes, this is presented as 99.9 percent; 99 percent and 95 percent, respectively) and the body of the report repeats these descriptions. While the use of the term seems important, it is not self-evident what the term means. This Appendix provides a general explanation of significance levels.

This Report seeks to address the question of whether or not non-Whites and White women received disparate treatment in the economy relative to White males. From a statistical viewpoint, this primary question has two sub-questions:

- What is the relationship between the independent variable and the dependent variable?
- What is the probability that the relationship between the independent variable and the dependent variable is equal to zero?

For example, an important question facing Anne Arundel County as it explores whether each racial and ethnic group and White women continue to experience discrimination in its markets is do non-Whites and White women receive lower wages than White men? As discussed in Appendix A, one way to uncover the relationship between the dependent variable (e.g., wages) and the independent variable (e.g., non-Whites) is through multiple regression analysis. An example helps to explain this concept.

Let us say, for example, that this analysis determines that non-Whites receive wages that are 35 percent less than White men after controlling for other factors, such as education and industry, which might account for the differences in wages. However, this finding is only an estimate of the relationship between the independent variable (e.g., non-Whites) and the dependent variable (e.g., wages) – the first sub-question. It is still important to determine how accurate the estimation is. In other words, what is the probability that the estimated relationship is equal to zero – the second sub-question.

To resolve the second sub-question, statistical hypothesis tests are utilized. Hypothesis testing assumes that there is no relationship between belonging to a particular demographic group and the level of economic utilization relative to White men (e.g., non-Whites earn identical wages compared to White men or non-Whites earn 0 percent less than White men). This sometimes is called the null hypothesis. We then calculate a confidence interval to find the probability that the observed relationship (e.g., -35 percent) is between 0 and minus that confidence interval.[287] The confidence interval will vary depending upon the level of confidence (statistical significance) we wish to have in our conclusion. When a number is statistically significant at the 0.001 level, this indicates that we can be 99.9 percent certain that the number in question (in this example, -35 percent) lies outside of the confidence interval. When a number is statistically significant at the 0.01 level, this indicates that we can be 99.0 percent certain that the number in question lies outside of the confidence interval. When a number is statistically significant at the 0.05 level, this indicates that we can be 95.0 percent certain that the number in question lies outside of the confidence interval.

287. Because 0 can only be greater than -35 percent, we only speak of “minus the confidence level”. This is a one-tailed hypothesis test. If, in another example, the observed relationship could be above or below the hypothesized value, then we would say “plus or minus the confidence level” and this would be a two-tailed test.

APPENDIX D: UNWEIGHTED AND WEIGHTED AVAILABILITY

Central to the analysis, under strict constitutional scrutiny, of an agency's contracting activity is understanding what firms could have received contracts. Availability has two components: unweighted availability and weighted availability. Below we define these two terms; why we make the distinction; and how to convert unweighted availability into weighted availability.

Defining Unweighted and Weighted Availability

Unweighted availability measures a group's share of all firms that could receive a contract or subcontract. If 100 firms could receive a contract and 15 of these firms are minority-owned, then MBE unweighted availability is 15 percent (15/100). *Weighted availability* converts the unweighted availability through the use of a weighting factor: the share of total agency spending in a particular NAICS code. If total agency spending is $1,000,000 and NAICS Code AAAAAA captures $100,000 of the total spending, then the weighting factor for NAICS code AAAAAA is 10 percent ($100,000/$1,000,000).

Why Weight the Unweighted Availability

It is important to understand *why* weighted availability should be calculated. A disparity study examines the overall contracting activity of an agency by looking at the firms that *received* contracts and the firms that *could have received* contracts. A proper analysis does not allow activity in a NAICS code that is not important an agency's overall spending behavior to have a disproportionate impact on the analysis. In other words, the availability of a certain group in a specific NAICS code in which the agency spends few of its dollars should have less importance to the analysis than the availability of a certain group in another NAICS code where the agency spends a large share of its dollars.

To account for these differences, the availability in each NAICS code is weighted by the agency's spending in the code. The calculation of the weighted availability compares the firms that received contracts (utilization) and the firms that could receive contracts (availability). Utilization is a group's share of total spending by an agency; this metric is measure in dollars, *i.e.*, MBEs received 8 percent of all dollars spent by the agency. Since utilization is measured in dollars, availability must be measures in dollars to permit an “apples-to-apples” comparison.

How to Calculate the Weighted Availability

Three steps are involved in converting unweighted availability into weighted availability:

- Determine the unweighted availability
- Determine the weights for each NAICS code
- Apply the weights to the unweighted availability to calculate weighted availability

The following is a hypothetical calculation.

Table A contains data on unweighted availability measured by the number of firms:

Table A

NAICS	Black	Hispanic	Asian	Native American	White Women	Non-M/W/DBE	Total
AAAAAA	10	20	20	5	15	400	470
BBBBBB	20	15	15	4	16	410	480
CCCCCC	10	10	18	3	17	420	478
TOTAL	**40**	**45**	**53**	**12**	**48**	**1230**	**1428**

Unweighted availability measured as the share of firms requires us to divide the number of firms in each group by the total number of firms (the last column in Table A). For example, the Black share of total firms in NAICS code AAAAAA is 2.1 percent (10/470). Table B presents the unweighted availability measure as a group’s share of all firms.

Table B

NAICS	Black	Hispanic	Asian	Native American	White Women	Non-M/W/DBE	Total
AAAAAA	2.1%	4.3%	4.3%	1.1%	3.2%	85.1%	100.0%

NAICS	Black	Hispanic	Asian	Native American	White Women	Non-M/W/DBE	Total
BBBBBB	4.2%	3.1%	3.1%	0.8%	3.3%	85.4%	100.0%
CCCCCC	2.1%	2.1%	3.8%	0.6%	3.6%	87.9%	100.0%
TOTAL	**2.8%**	**3.2%**	**3.7%**	**0.8%**	**3.4%**	**86.1%**	**100.0%**

Table C presents data on the agency's spending in each NAICS code:

Table C

NAICS	Total Dollars	Share
AAAAAA	$1,000.00	22.2%
BBBBBB	$1,500.00	33.3%
CCCCCC	$2,000.00	44.4%
TOTAL	**$4,500.00**	**100.0%**

Each NAICS code's share of total agency spending (the last column in Table C) is the weight from each NAICS code that will be used in calculating the weighted availability. To calculate the overall weighted availability for each group, we first derive the every NAICS code component of a group's overall weighted availability. This is done by multiplying the NAICS code weight by the particular group's unweighted availability in that NAICS code. For instance, to determine NAICS code AAAAAA's component of the overall Black weighted availability, we would multiply 22.2 percent (the NAICS code weight) by 2.1 percent (the Black unweighted availability in NAICS code AAAAAA). The resulting number is 0.005 and this number is found in Table D under the cell which presents NAICS code AAAAAA's share of the Black weighted availability. The procedure is repeated for each group in each NAICS code. The calculation is completed by adding up each NAICS component for a particular group to calculate that group's overall weighted availability. Table D presents this information:

Table D

NAICS	Black	Hispanic	Asian	Native American	White Women	Non-M/W/ DBE
AAAAAA	0.005	0.009	0.009	0.002	0.007	0.189
BBBBBB	0.014	0.010	0.010	0.003	0.011	0.285
CCCCCC	0.009	0.009	0.017	0.003	0.016	0.391
TOTAL	**0.028**	**0.029**	**0.037**	**0.008**	**0.034**	**0.864**

To determine the overall *weighted availability*, the last row of Table D is converted into a percentage (*e.g.*, for the Black weighted availability: 0.028 * 100 = 2.8 percent). Table E presents these results.

Table E

Black	Hispanic	Asian	Native American	White Women	Non-MWBE	Total
2.8%	2.9%	3.7%	0.8%	3.4%	86.4%	100.0%

